

VACUUM CUPS

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3D drawings available at www.vuototecnica.net

These traditional cup-shaped vacuum cups are suited for gripping and handling small objects with flat, slightly concave or convex surfaces.

This series of widely used cups have diameters ranging from 4 to 9 mm and are normally available in standard compounds: natural para rubber N, oil-resistant rubber A and silicon S. They can be cold-assembled with no adhesive onto a nickelplated brass support.

The support has been specially shaped to perfectly fit with the cup and it is equipped with a male threaded pin to optimise the fastening to the machine.

These cups are extremely easy to replace; for the spare part, in fact, all you have to do is request the cup indicated in the table in the desired compound.

Cups in special compounds indicated at page 21 and supports in different materials can be provided upon request in minimum quantities to be defined in the order.



COPS							
Art	Force	А	В	D	E	F	Н
Alta	Kg	Ø	Ø	Ø			
01 04 10 *	0.03	3	1.5	4	6.0	7.0	7.5
01 05 10 *	0.05	3	1.5	5	6.0	7.0	8.0
01 06 10 *	0.07	3	1.5	6	6.0	7.0	8.0
01 07 07 *	0.10	5	2.0	7	6.0	6.0	7.0
01 08 10 *	0.12	5	2.5	8	6.0	7.0	8.0
01 09 07 *	0.15	5	2.0	9	5.5	6.0	7.0

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon





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CUPS WITH SUPPORT

Art	Force	Α	В	D	Е	F	G	Н	Сир	Support	Weight
ALC	Kg	Ø	Ø	Ø					Art.	Art.	g
08 04 10 *	0.03	M5	7	4	3	5	13.0	21.0	01 04 10	00 08 01	4
08 05 10 *	0.05	M5	7	5	3	5	13.5	21.5	01 05 10	00 08 01	4
08 06 10 *	0.07	M5	7	6	3	5	13.5	21.5	01 06 10	00 08 01	4
08 07 07 *	0.10	M5	7	7	3	5	13.5	21.5	01 07 07	00 08 02	4
08 08 10 *	0.12	M5	7	8	3	5	13.5	21.5	01 08 10	00 08 02	4
08 09 07 *	0.15	M5	7	9	3	5	12.5	20.5	01 09 07	00 08 02	4

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon





3D drawings available at www.vuototecnica.net

1.01

 $\frac{mm}{25.4}$ pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

Conversion ratio: inch

These traditional cup-shaped vacuum cups are suited for gripping and handling small objects with flat, slightly concave or convex surfaces. This series of widely used cups have diameters

ranging from 10 to 45 mm and are normally available in standard compounds: natural para rubber N, oilresistant rubber A and silicon S.

They can be cold-assembled with no adhesive onto a nickel-plated brass or anodised aluminium support. The support has been specially shaped to perfectly fit with the cup and it is equipped with a male threaded pin to optimise the fastening to the machine. These cups are extremely easy to replace; for the spare part, in fact, all you have to do is request the cup indicated in the table in the desired compound. Cups in special compounds indicated at page 21 and supports in different materials can be provided upon request in minimum quantities to be defined in the order.





Art	Force	Α	В	D	E	F	Н
Alta	Kg	Ø	Ø	Ø			
01 10 10 *	0.19	7	4.0	10	8.5	8.5	11.0
01 12 10 *	0.28	8	4.0	12	8.0	9.0	11.0
01 15 10 *	0.44	8	4.0	15	8.0	9.5	12.0
01 18 10 *	0.63	8	4.0	18	8.0	9.5	12.0
01 20 10 *	0.78	8	4.0	20	8.0	9.5	12.0
01 22 10 *	0.95	8	4.0	22	8.0	10.0	13.0
01 25 15 *	1.23	12	6.0	25	10.0	11.5	16.0
01 30 15 *	1.76	12	6.0	30	10.0	12.5	17.0
01 35 15 *	2.40	15	10.0	35	10.0	11.5	16.0
01 40 15 *	3.14	15	10.0	40	10.0	12.5	18.0
01 45 15 *	3.98	15	10.0	45	10.0	14.5	23.0

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

SUPP	ORTS									
Δrt	А	D	Е	F	G	Н	Т	Support	Сир	Weight
Alta	Ø	Ø						material	art.	g
00 08 03	G1/8"	5.5	5	8	7.0	20.0	12	brass	01 10 10	9
									01 12 10	
									01 15 10	
									01 18 10	
									01 20 10	
									01 22 10	
00 08 05	G1/8"	7.5	5	8	9.5	22.5	12	brass	01 25 15	10
									01 30 15	
00 08 20	G1/4"	12.0	8	14	10.0	32.0	17	aluminium	01 35 15	11
									01 40 15	
									01 45 15	





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CUPS WITH SUPPORT

Δrt	Force	Α	D	E	F	G	н	T	Cup	Support	Weight
Alta	Kg	Ø	Ø						Art.	Art.	g
08 10 10 *	0.19	G1/8"	10	5	8	11	24	12	01 10 10	00 08 03	9.0
08 12 10 *	0.28	G1/8"	12	5	8	11	24	12	01 12 10	00 08 03	9.6
08 15 10 *	0.44	G1/8"	15	5	8	12	25	12	01 15 10	00 08 03	9.7
08 18 10 *	0.63	G1/8"	18	5	8	12	25	12	01 18 10	00 08 03	9.7
08 20 10 *	0.78	G1/8"	20	5	8	12	25	12	01 20 10	00 08 03	9.8
08 22 10 *	0.95	G1/8"	22	5	8	13	26	12	01 22 10	00 08 03	10.2
08 25 15 *	1.23	G1/8"	25	5	8	16	29	12	01 25 15	00 08 05	12.0
08 30 15 *	1.76	G1/8"	30	5	8	17	30	12	01 30 15	00 08 05	12.7
08 35 15 *	2.40	G1/4"	35	8	14	16	38	17	01 35 15	00 08 20	13.6
08 40 15 *	3.14	G1/4"	40	8	14	18	40	17	01 40 15	00 08 20	14.1
08 45 15 *	3.98	G1/4"	45	8	14	23	45	17	01 45 15	00 08 20	17.6

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

These traditional cup-shaped vacuum cups are suited for gripping and handling small objects with flat, slightly concave or convex surfaces.

This series of widely used cups have diameters ranging from 10 to 45 mm and are normally available in standard compounds: natural para rubber N, oil-resistant rubber A and silicon S.

They can be cold-assembled with no adhesive onto a nickelplated brass or anodised aluminium support.

The support has been specially shaped to perfectly fit with the cup and it is equipped with a male threaded pin to optimise the fastening to the machine.

These cups are extremely easy to replace; for the spare part, in fact, all you have to do is request the cup indicated in the table in the desired compound.

Cups in special compounds indicated at page 21 and supports in different materials can be provided upon request in minimum quantities to be defined in the order.



CUPS							
Art	Force	А	В	D	E	F	Н
ALC.	Kg	Ø	Ø	Ø			
01 10 10 *	0.19	7	4.0	10	8.5	8.5	11.0
01 12 10 *	0.28	8	4.0	12	8.0	9.0	11.0
01 15 10 *	0.44	8	4.0	15	8.0	9.5	12.0
01 18 10 *	0.63	8	4.0	18	8.0	9.5	12.0
01 20 10 *	0.78	8	4.0	20	8.0	9.5	12.0
01 22 10 *	0.95	8	4.0	22	8.0	10.0	13.0
01 25 15 *	1.23	12	6.0	25	10.0	11.5	16.0
01 30 15 *	1.76	12	6.0	30	10.0	12.5	17.0
01 35 15 *	2.40	15	10.0	35	10.0	11.5	16.0
01 40 15 *	3.14	15	10.0	40	10.0	12.5	18.0
01 45 15 *	3.98	15	10.0	45	10.0	14.5	23.0

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

SUPI	PORTS	6								
Art.	Α	D	Е	F	G	Н	Т	Support	Сир	Weight
7.1.4	Ø	Ø						material	art.	g
00 08 04	G1/8"	5.5	13	10	7.0	20.0	12	brass	01 10 10	8.1
									01 12 10	
									01 15 10	
									01 18 10	
									01 20 10	
									01 22 10	
00 08 14	G1/8"	7.5	13	10	9.5	22.5	12	brass	01 25 15	9.8
									01 30 15	
00 08 21	G1/4"	12.0	17	13	10.0	27.0	17	aluminium	01 35 15	9.3
									01 40 15	
									01 45 15	

CUPS	WITH S	SUPPOI	RT								
Art	Force	Α	D	Е	F	G	Н	Т	Cup	Support	Weight
Alu	Kg	Ø	Ø						Art.	Art.	g
08 10 25 *	0.19	G1/8"	10	13	10	11	24	12	01 10 10	00 08 04	8.1
08 12 25 *	0.28	G1/8"	12	13	10	11	24	12	01 12 10	00 08 04	8.7
08 15 25 *	0.44	G1/8"	15	13	10	12	25	12	01 15 10	00 08 04	8.8
08 18 25 *	0.63	G1/8"	18	13	10	12	25	12	01 18 10	00 08 04	8.8
08 20 25 *	0.78	G1/8"	20	13	10	12	25	12	01 20 10	00 08 04	9.3
08 22 25 *	0.95	G1/8"	22	13	10	13	26	12	01 22 10	00 08 04	9.3
08 25 25 *	1.23	G1/8"	25	13	10	16	29	12	01 25 15	00 08 14	11.8
08 30 25 *	1.76	G1/8"	30	13	10	17	30	12	01 30 15	00 08 14	12.5
08 35 25 *	2.40	G1/4"	35	17	13	16	33	17	01 35 15	00 08 21	11.9
08 40 25 *	3.14	G1/4"	40	17	13	18	35	17	01 40 15	00 08 21	12.4
08 45 25 *	3.98	G1/4"	45	17	13	23	40	17	01 45 15	00 08 21	15.9

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

GAS - NPT thread adapters available at page 1.117

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$







3D drawings available at www.vuototecnica.net

These traditional cup-shaped vacuum cups are suited for gripping and handling small objects with flat, slightly concave or convex surfaces.

This series of widely used cups have diameters ranging from 25 to 35 mm and are normally available in standard compounds: natural para rubber N, oil-resistant rubber A and silicon S.

They can be cold-assembled with no adhesive onto a nickel-plated brass support.

The support has been specially shaped to perfectly fit with the cup and it is equipped with a male threaded pin to optimise the fastening to the machine.

These cups are extremely easy to replace; for the spare part, in fact, all you have to do is request the cup indicated in the table in the desired compound.

Cups in special compounds indicated at page 21 and supports in different materials can be provided upon request in minimum quantities to be defined in the order..





CUPS							
Art	Force	А	В	D	E	F	Н
ALC	Kg	Ø	Ø	Ø			
01 25 10 *	1.23	12	6	25	2	3.5	8
01 30 10 *	1.76	12	6	30	1	3.5	8
01 35 10 *	2.40	12	6	35	1	3.5	8

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



SUPF	PORTS							
Δrt	Α	E	F	Н	SW	Support	Cup	Weight
Alta	Ø					material	art.	g
80 80 00	M6	3.5	10	14.5	3	brass	01 25 10	2.7
							01 30 10	
							01 35 10	
00 08 60	G1/8"	4.0	10	14.5	4	brass	01 25 10	5.6
							01 30 10	
							01 35 10	

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CUPS	WITH SU	PPORT					
Art	Force	А	SW	D	Сир	Support	Weight
Alti	Kg	Ø		Ø	Art.	Art.	g
08 25 10 *	1.23	M6	3	25	01 25 10	00 08 08	3.9
08 25 11 *	1.23	G1/8"	4	25	01 25 10	00 08 60	6.8
08 30 10 *	1.76	M6	3	30	01 30 10	00 08 08	4.6
08 30 11 *	1.76	G1/8"	4	30	01 30 10	00 08 60	7.5
08 35 10 *	2.40	M6	3	35	01 35 10	00 08 08	5.1
08 35 11 *	2.40	G1/8"	4	35	01 35 10	00 08 60	8.0

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

These traditional cup-shaped vacuum cups are suited for gripping and handling small objects with flat, slightly concave or convex surfaces.

This series of widely used cups have diameters ranging from 45 to 60 mm and are normally available in standard compounds: natural para rubber N, oil-resistant rubber A and silicon S. They can be cold-assembled with no adhesive onto an anodised

aluminium support. The support has been specially shaped to perfectly fit with the cup and it is equipped with a male threaded pin to optimise the fastening to the machine. Moreover, those with 1/4" thread have an M8 threaded hole, to allow the possible insertion of a calibrated grub screw (see page 1.118) to reduce the amount of sucked air. These cups are extremely easy to replace; for the spare part, in fact, all you have to do is request the cup indicated in the table in the desired compound.

Cups in special compounds indicated at page 21 and supports in different materials can be provided upon request in minimum quantities to be defined in the order.

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SW.8

SW





С ø12 Ø25

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CUPS	;									
Art	Force	Α	В	С	D	E	F	G	Н	Ι
AIG	Kg	Ø	Ø	Ø	Ø					
01 45 10 *	3.98	15	10		45	5	9.5		18	
01 60 10 *	7.06	15	10	25	60	4		10	22	2.5

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

SUPP	ORTS					
Art	А	E	C	Support	Сир	Weight
AIG	Ø		Ø	material	art.	g
00 08 22	G1/4"	10	M8	aluminium	01 45 10	5.9
					01 60 10	
00 08 44	G1/8"			aluminium	01 45 10	5.1
					01 60 10	

CUP	S WITH S	UPPORT					
Art	Force	А	D	М	Сир	Support	Weight
Alt	Kg	Ø	Ø	Ø	Art.	Art.	g
08 45 10	* 3.98	G1/4"	45	M8	01 45 10	00 08 22	12.6
08 45 11	* 3.98	G1/8"	45		01 45 10	00 08 44	11.8

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

CUPS	WITH S	UPPORT					
Art	Force	А	D	М	Cup	Support	Weight
AIL.	Kg	Ø	Ø	Ø	Art.	Art.	g
08 60 10 *	7.06	G1/4"	60	M8	01 60 10	00 08 22	20.8
08 60 11 *	7.06	G1/8"	60		01 60 10	00 08 44	20.0

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

These traditional cup-shaped vacuum cups are suited for gripping and handling small objects with flat, slightly concave or convex surfaces.

This series of widely used cups have diameters of 85 mm and are normally available in standard compounds: natural para rubber N, oil-resistant rubber A and silicon S.

They can be cold-assembled with no adhesive onto an anodised aluminium support.

The support has been specially shaped to perfectly fit with the cup and it is equipped with a male threaded pin to optimise the fastening to the machine. Moreover, those with ¼" thread have an M8 threaded hole, to allow the possible insertion of a calibrated grub screw (see page 1.118) to reduce the amount of sucked air.

These cups are extremely easy to replace; for the spare part, in fact, all you have to do is request the cup indicated in the table in the desired compound.

Cups in special compounds indicated at page 21 and supports in different materials can be provided upon request in minimum quantities to be defined in the order.





CUPS									
Art.	Force	Α	В	С	D	E	G	Н	I
AIL.	Kg	Ø	Ø	Ø	Ø				
01 85 10 *	14.18	25	15	25	85	16	23	41	4.0

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



SUPPOR	RTS					
Δrt	А	D	Support	Сир	Weight	
AIL.	ØØ		material	art.	g	
00 08 28	G1/4"	25	aluminium	01 85 10	13.4	
00 08 136	G1/8"	25	aluminium	01 85 10	9.2	



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drawings available

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CUPS	WITH SUP	PORT				
Art.	Force	Α	D	Сир	Support	Weight
	Kg	Ø	Ø	Art.	Art.	g
08 85 10 *	14.18	G1/4"	85	01 85 10	00 08 28	49.3
08 85 12 *	14.18	G1/8"	85	01 85 10	00 08 136	45.1

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

These traditional cup-shaped vacuum cups are suited for gripping and handling small objects with flat, slightly concave or convex surfaces.

This series of widely used cups have diameters of 85 mm and are normally available in standard compounds: natural para rubber N, oil-resistant rubber A and silicon S.

They can be cold-assembled with no adhesive onto an anodised aluminium support.

IThe support has been specially shaped to perfectly fit with the cup and it is equipped with a female threaded pin to optimise the fastening to the machine.

These cups are extremely easy to replace; for the spare part, in fact, all you have to do is request the cup indicated in the table in the desired compound.

Cups in special compounds indicated at page 21 and supports in different materials can be provided upon request in minimum quantities to be defined in the order.





CUPS									
Δrt	Force	Α	В	С	D	E	G	Н	1
ALC	Kg	Ø	Ø	Ø	Ø				
01 85 10 *	14.18	25	15	25	85	16	23	41	4.0

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



SI	IPP	ORI	LS.	

SUFFU	SID					
Art	А	В	Support	Cup	Weight	
AIG.	Ø	ØØ		art.	g	
00 08 29	15.5	M12	aluminium	01 85 10	6.6	
00 08 46	15.5	G1/4"	aluminium	01 85 10	6.5	

CUP	S WITH	SUPPORT					
Art.	Force	Α	D	Н	Cup	Support	Weight
ALC	Kg	Ø	Ø		Art.	Art.	g
08 85 25 *	14.18	G1/4"	85	41	01 85 10	00 08 46	42.4
08 85 26 *	14.18	M12	85	41	01 85 10	00 08 29	42.5

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



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Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

GAS - NPT thread adapters available at page 1.117

1.07

3D drawings available at www.vuototecnica.net

CUPS WITH VULCANISED SUPPORT

These sturdy and rather deep cups are designed to handle bodywork components in moulded sheet steel.

These cups are produced with a special compound called BENZ, which can resist to heavy loads and to the chlorine usually contained in the oil used for moulding and drawing of the sheet steel.

The galvanised steel support is vulcanised onto the cup. Galvanised steel adapters are also available to allow modifying the suction connection from M10 to gas or NPT threads.

Cups in special compounds indicated at page 21 can be provided upon request in minimum quantities to be defined in the order.





CUPS WITH VULCANISED SUPPORT

Art	Force	D	E	F	G	Н	Support	Weight
Alti	Kg	Ø					material	g
08 30 38 *	1.80	30	20	17	10	37	steel	20.8
08 40 41 *	3.20	40	23	18	12	41	steel	24.9

* Complete the code indicating the compound: B= BENZ rubber; N= natural para rubber; S= silicon



CUPS WITH VULCANISED SUPPORT

Art.	Force	А	F	Н	Support	Weight
-	Kg	Ø			material	g
08 60 45 *	7.10	M10	18	44	steel	29.5
08 60 45 1/4"*	7.10	G1/4"	10	36	steel	34.4

* Complete the code indicating the compound: B= BENZ rubber; N= natural para rubber; S= silicon



D

CUPS WITH VULCANISED SUPPORT

Art.	Force	E	F	G	Н	Support	Weight
	Kg					material	g
08 80 50	* 12.60	33	18	26	51	steel	58.0

* Complete the code indicating the compound: B= BENZ rubber; N= natural para rubber; S= silicon

REDUCT	TONS				
Art	D	d	Н	Reduction	Weight
ALC.	Ø	Ø		material	g
00 08 130 *	G1/4"	M10	14	steel	4.9
00 08 131 *	G3/8"	M10	14	steel	12.8
00 08 254 *	1/4" NPT	M10	14	steel	4.8
00 08 255 *	3/8" NPT	M10	14	steel	12.7

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

GAS - NPT thread adapters available at page 1.117

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CUPS WITH VULCANISED SUPPORT

These cups are specially designed for gripping moulded or drawn sheet metal and are largely used in the automotive sector. Their ground lip allows an immediate gripping of the load to be lifted as soon as contact is made and ensures perfect vacuum seal.

These cups are produced in a special compound called BENZ, able to withstand chlorine usually contained in the oils used for moulding and drawing the sheet metal.

The galvanised steel support is vulcanised onto the cup. They are obviously available also in natural para rubber and silicon.



CUPS WITH MALE VULCANISED SUPPORT

Art	Force	Α	В	C	D	E	G	Н	Support	Weight
A10	Kg	Ø	Ø		Ø				material	g
08 50 40 *	4.90	31	G3/8"		50	16.0	6.5	29.0	steel	38.5
08 50 40 GR *	4.90	31	G3/8"	G1/8"	50	16.0	6.5	29.0	steel	38.5
08 75 40 *	11.04	31	G3/8"		75	25.0	9.0	38.0	steel	57.9
08 75 40 GR *	11.04	31	G3/8"	G1/8"	75	25.0	9.0	38.0	steel	57.9
08 100 40 *	19.62	32	G3/8"		100	26.0	9.0	39.0	steel	78.3
08 100 40 GR *	19.62	32	G3/8"	G1/8"	100	26.0	9.0	39.0	steel	78.3
08 100 50 *	19.62	32	G3/8"		100	30.5	15.0	43.5	steel	74.8
08 100 50 GR *	19.62	32	G3/8"	G1/8"	100	30.5	15.0	43.5	steel	74.8
08 50 40 1/4" *	4.90	31	G1/4"		50	16.0	6.5	29.0	steel	37.4
08 75 40 1/4" *	11.04	31	G1/4"		75	25.0	9.0	38.0	steel	57.6
08 100 40 1/4" *	19.62	32	G1/4"		100	26.0	9.0	39.0	steel	76.8
08 100 50 1/4" *	19.62	32	G1/4"		100	30.5	15.0	43.5	steel	74.3
08 50 40 M10 *	4.90	31	M10		50	16.0	6.5	29.0	steel	32.7
08 75 40 M10 *	11.04	31	M10		75	25.0	9.0	38.0	steel	49.9
08 100 40 M10 *	19.62	32	M10		100	26.0	9.0	39.0	steel	72.1
08 100 50 M10 *	19.62	32	M10		100	30.5	15.0	43.5	steel	70.2
08 50 40 M14 *	4.90	31	M14		50	16.0	6.5	29.0	steel	34.8
08 75 40 M14 *	11.04	31	M14		75	25.0	9.0	38.0	steel	54.9
08 100 50 M14 *	19.62	32	M14		100	30.5	15.0	43.5	steel	74.9



* Complete the code indicating the compound: B= BENZ rubber; N= natural para rubber; S= silicon

CUPS WI	TH FEMA	LE VUI	CANISED	SUPPO	RT				
Δrt	Force	Α	В	D	E	G	Н	Support	Weight
Alu	Kg	Ø	Ø	Ø				material	g
08 50 40 F *	4.90	31	G3/8"	50	16.0	6.5	32.5	steel	49.5
08 75 40 F *	11.04	31	G3/8"	75	25.0	9.0	41.5	steel	68.3
08 100 40 F *	19.62	32	G3/8"	100	26.0	9.0	42.5	steel	89.3
08 100 50 F *	19.62	32	G3/8"	100	30.5	15.0	47.0	steel	88.8

* Complete the code indicating the compound: B= BENZ rubber; N= natural para rubber; S= silicon

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$



CUPS WITH VULCANISED SUPPORT

These cups are very similar to those described in the previous page, they differ only for their round lip and their internal cleats.

These features allow them to be used even in the heaviest conditions.

The field of use is the same.

They are also made with BENZ compond and the galvanised steel support is vulcanised onto the cup. These cups are also available in natural para rubber and silicon.





CUPS WITH MALE VULCANISED SUPPORT

Art	Force	А	В	D	E	G	Н	Support	Weight
	Kg	Ø	Ø	Ø				material	g
08 50 99 *	4.90	30	G3/8"	50	23.5	9	36.5	steel	43.2
08 75 99 *	11.04	35	G3/8"	75	23.5	9	36.5	steel	59.2
08 100 99 *	19.62	35	G3/8"	100	40.0	12	53.0	steel	113.2
08 50 99 1/4" *	4.90	30	G1/4"	50	23.5	9	36.5	steel	39.4
08 75 99 1/4" *	11.04	35	G1/4"	75	23.5	9	36.5	steel	55.2
08 100 99 1/4" *	19.62	35	G1/4"	100	40.0	12	53.0	steel	109.2

 * Complete the code indicating the compound: B= BENZ rubber; N= natural para rubber; S= silicon



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1.10

CUPS WITH FEMALE VULCANISED SUPPORT

Art	Force	Α	В	D	E	G	Н	Support	Weight
Alta	Kg	Ø	Ø	Ø				material	g
08 50 99 F *	4.90	31	G3/8"	50	23.5	9	40.0	steel	55.6
08 75 99 F *	11.04	35	G3/8"	75	23.5	9	40.0	steel	70.5
08 100 99 F *	19.62	35	G3/8"	100	40.0	12	56.5	steel	118.8

* Complete the code indicating the compound: B=BENZ rubber; N= natural para rubber; S= silicon

MAXIGRIP CUPS

These cups have been created as an alternative to the ordinary cups used in the robot-automotive field and they offer an excellent solution to gripping and handling problems that could arise on vacuum-driven handlers in every industry sector.

They can be both flat and bellow-type, round and oval and equipped with support. The extremely flexible outside lip, can be associated with the typical features of the bellow cups, allow them to adapt themselves on flat, concave and convex surfaces with no risk of deforming or breaking even the thinnest objects to be handled.

The innovative design of the inside of the cups, which facilitates the drainage of oil and water, ensures a high friction coefficient with the gripping surface and, in particular, a unique grip on oil-covered metal sheets or wet glass or marble sheets. This particular feature guarantees a firm grip and, therefore, an accurate placemet of the load to be handled.

The MAXIGRIP standard cups are made with our

exclusive BENZ compound:

- Hardness 60÷75°Sh.;

- Working temperature between -40 and +170 °C;

- Stain-resistant;

 Excellent resistance to abrasion, water and to oils containing chlorine. Their galvanised steel support is vulcanised onto the cup.
A wide range of accessories, such as adapters, couplers and articulated joints, allows them to be installed on any vacuum-driven handler. Because of their universality of use, these cups can also be provided

in the special compounds listed at page 21.

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CIRCULAR FLAT AND BELLOW CUPS

Ch D



Δrt	10100	n		011		u	-	•	u			011	ouppoir	
ALL	Kg	Ø	Ø		Ø	Ø							material	(
VRP 40 *	3.14	26	G1/4"	15	40	17	16	14	4.0	31	15	6	steel	33
VRP 50 *	4.90	30	G3/8"	19	50	21	18	14	5.0	33	15	6	steel	49
VRP 60 *	7.06	30	G3/8"	19	60	21	21	14	6.0	36	15	6	steel	55
VRP 80 *	12.56	35	G3/8"	19	80	21	25	14	7.5	40	15	6	steel	74
VRP 100 *	19.62	35	G3/8"	19	100	21	25	14	9.5	40	15	6	steel	80
VRP 125 *	30.66	35	G3/8"	19	125	21	33	14	12.5	48	15	6	steel	139

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* Complete the code indicating the compound: B= BENZ rubber; N= natural para rubber; S= silicon

° Available with NPT thread. Order example: VRP 80 NPT B

CUPS WITH VULCANISED SUPPORT

Δ °B

BELL	ow cu	JP V	VITH	VULC	AN	SED	SUPF	PORT							
Δrt	Force	A	В	°C	Ch	D	d	Е	F	G	Н	Ι	Μ	Support	Weight
ALC	Kg	Ø	Ø	Ø		Ø	Ø						Ø	material	g
VRS 40 *	3.14	43	30	G1/4"	17	40	24	21.0	10	7.0	35.0	14	G1/8"	steel	56.3
VRS 50 *	4.90	53	40	G3/8"	22	50	34	21.0	10	7.0	36.0	15	G1/4"	steel	77.6
VRS 60 *	7.06	63	50	G3/8"	22	60	44	21.0	10	7.0	36.0	15	G1/4"	steel	107.9
VRS 80 *	12.56	83	70	G3/8"	22	80	64	23.0	10	9.0	38.0	15	G1/4"	steel	205.9
VRS 100 *	19.62	103	80	G3/8"	22	100	79	29.0	10	13.0	44.0	15	G1/4"	steel	269.0
VRS 125 *	30.66	128	105	G3/8"	22	125	100	32.5	10	16.5	47.5	15	G1/4"	steel	464.2

* Complete the code indicating the compound: B= BENZ rubber; N= natural para rubber; S= silicon

° Available with NPT thread. Order example: VRS 80 NPT B



GAS - NPT thread adapters available at page 1.117

1.11

3D drawings available at www.vuototecnica.net

OVAL FLAT AND BELLOW MAXIGRIP CUPS



OVAL CUPS WITH VULCANISED SUPPORT

Art.	Force	А	В	°C	Ch	D	E	F	G	Н	I	L	М	Support	Weight
744	Kg			Ø									Ø	Material	g
VEP 30 60 *	4.01	47	17	G1/4"	17	60	13	10	3	27	14	30	G1/8"	steel	42.6
VEP 30 90 *	6.26	77	17	G1/4"	17	90	13	10	3	27	14	30	G1/8"	steel	63.5
VEP 40 80 *	7.14	70	30	G1/4"	17	80	14	10	4	28	14	40	G1/8"	steel	68.0
VEP 50 100 *	11.15	80	30	G3/8"	22	100	16	10	5	31	15	50	G1/4"	steel	110.0
VEP 60 120 *	16.06	95	35	G3/8"	22	120	18	10	6	33	15	60	G1/4"	steel	156.1
VEP 70 140 *	21.86	110	40	G3/8"	22	140	19	10	7	34	15	70	G1/4"	steel	199.4

* Complete the code indicating the compound: B= BENZ rubber; N= natural para rubber; S= silicon

 $^{\circ}$ Available with NPT thread. Order example: VEP 40 80 NPT B



OVAL B	ELLOW	CUPS	WITH V	ULCANI	SED S	SUPPOR	Т											
Art.	Force	Α	В	0°	Ch	D	E	F	G	Н	K	I	L	М	Ν	0	Support	Weight
	Kg			Ø										Ø			material	g
VES 30 60 *	4.01	50	20	G1/4"	17	60	21	10	7.0	35	63	14	33	G1/8"	30	44.5	steel	49.5
VES 40 80 *	7.14	70	30	G1/4"	17	80	23	10	9.0	37	83	14	43	G1/8"	40	64.0	steel	91.9
VES 50 1 <mark>00 *</mark>	11.15	80	30	<mark>G3</mark> /8"	22	100	29	10	13.0	44	103	15	53	G1/4"	50	79.0	steel	125.3
VES 70 1 <mark>40 *</mark>	21.86	110	40	G3/8"	22	140	33	10	16.5	48	143	15	73	G1/4"	70	109.0	steel	227.8

* Complete the code indicating the compound: B= BENZ rubber; N= natural para rubber; S= silicon

° Availab<mark>le with N</mark>PT thread. Order example: VES <mark>4</mark>0 80 NPT B

1.12



GAS-NPT thread adapters available at page 1.117

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MAXIGRIP CUP ADAPTERS

These standard accessories provide various MAXIGRIP CUP assembly options. The galvanised steel adapters transform the female

standard support thread connections into male and the gas ones into metric. The internal hexagonal housing allows for an easy screwing on the supports.



MF REI	DUCTIONS FOR	R VRP CUPS				
Art.	D	d	F	Н	SW	Weight
	Ø	Ø				g
00 08 215	G3/8"	G1/4"	8	14	6	11.5

MF RE	DUCTIONS FO	R VRS - VEP -	VES CUPS			
Art.	D	d	F	Н	SW	Weight
Alta	Ø	Ø				g
00 08 216	G3/8"	G1/4"	8	11.5	6	6.0

MM RED	UCTIONS FO	OR VRP CUPS				
Art	D	d	E	F	SW	Weight
Alta	Ø	Ø				g
00 08 217	G1/4"	G1/4"	15	10	6	16.7
00 08 218	G1/4"	M10 x 1.5	15	12	6	10.2
00 08 219	G1/4"	M14 x 1.5	15	12	6	16.0
00 08 220	G3/8"	G1/4"	14	10	6	18.4
00 08 221	G3/8"	M10 x 1.5	14	12	6	16.3
00 08 222	G3/8"	M14 x 1 5	14	12	6	22.5

MM REI	DUCTIONS FO	DR VRS - VEP - VE	S CUPS			
Δrt	D	d	E	F	SW	Weight
Altu	Ø	Ø				g
00 08 223	G1/4"	G1/4"	11.5	10	6	13.9
00 08 224	G1/4"	M10 x 1.5	13.0	12	6	10.1
00 08 225	G1/4"	M14 x 1.5	13.0	12	6	15.8
00 08 226	G3/8"	G1/4"	10.5	11	6	16.6
00 08 227	G3/8"	M10 x 1.5	10.5	13	6	14.2
00 08 228	G3/8"	M14 x 1.5	10.5	13	6	20.2









Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

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GAS-NPT thread adapters available at page 1.117

1.13

MAXIGRIP CUP ACCESSORIES

In this page are described accessories for MAXIGRIP CUPS. The galvanised steel MF reduction is suited for all cups with female 1/4" gas thread connection and allows increasing it to 3/8" gas, always female.

The AQ adapters with square, flange and male and female thread connections are made with anodised aluminium and are suited for robotic gripping systems. They allow quick installation of the cups on the profiles used in the automotive sector.

The built-in seal guarantees perfect vacuum seal.









Art.	E	F	D	d	Ch	Reduction	Weight
, uu			Ø	Ø		material	g
00 08 208	15	9	G1/4"	G3/8"	22	steel	31

SQUARE REDUCTION FOR VRP-VRS-VEP-VES CUPS

Δrt	Н	E	F	D	d	Material	Weight	Spare
Alta								0-ring
				Ø	Ø		g	art.
AQ 32 1/8"	13	4.6	8.4	G1/8"	5	aluminium	11.8	00 08 214
AQ 32 1/4"	13	4.6	8.4	G1/4"	5	aluminium	13.2	00 08 214
AQ 32 3/8"	13	4.6	8.4	G3/8"	5	aluminium	15.6	00 08 214
AQ 32 1/2"	13	4.6	8.4	G3/8"	5	aluminium	17.2	00 08 214

SQUARE REDUCTION FOR VRP-VRS-VEP-VES CUPS

Art.	Н	E	F	D	d	Material	Weight	Spare
<i>r</i> uu								0-ring
				Ø	Ø		g	art.
AQS 32 1/8"	16.1	4.6	11.5	G1/8"	5	aluminium	12.2	00 08 214
AQS 32 1/4"	20.0	4.6	15.4	G1/4"	5	aluminium	13.6	00 08 214
AQS 32 3/8"	20.0	4.6	15.4	G3/8"	5	aluminium	16.2	00 08 214
AQS 32 1/2"	20.0	4.6	15.4	G1/2"	5	aluminium	17.8	00 08 214

SQUA	RE REDU	CTION FO	or vrp-vi	RS-VEP-VE	S CUPS				
Art	Н	E	F	D	d	Material	Weight	Spare	
Alta								0-ring	
				Ø	Ø		g	art.	
AQ 32 1/4"	F 17.9	4.6	13.3	G1/4"	11	aluminium	15.2	00 08 214	
AQ 32 3/8"	F 17.9	4.6	13.3	G3/8"	11	aluminium	14.1	00 08 214	





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Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

GAS - NPT thread adapters available at page 1.117

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1.14

3D drawings available at www.vuototecnica.net

ARTICULATED JOINTS

These articulated joints made with anodised aluminium allow rotating the cup they are installed on by 360° and tilt them up to 35°, in order to adapt it and lock it correctly into position, guaranteeing, at the same time, air flow through the joint and a perfect seal.





Art.	Α	В	С	D	d	E	F	G	Н	I	L	Max load	Material	Weight
	Ø	Ø	Ø	Ø	Ø							allowed Kg		g
SV 1/8"	40	20		G1/8"	G1/8"	11.5	10	24.5	51.5	20	7	18.24	aluminium	77.6
SV 1/4"	45	25		G1/4"	G1/4"	14.5	12	28.5	60.5	25	7	23.54	aluminium	126.7
SV 3/8"	50	30		G3/8"	G3/8"	14.0	12	34.5	69.5	25	10	33.91	aluminium	171.2
SVF 1/8"	40	20	15	G1/8"	G1/8"	11.5	10	24.5	51.5	20	7	18.24	aluminium	80.4
SVF 1/4"	45	25	20	G1/4"	G1/4"	14.5	12	28.5	60.5	25	7	23.54	aluminium	129.2
SVF 3/8"	50	30	21	G3/8"	G3/8"	17.0	12	34.5	69.5	25	10	33.91	aluminium	167.6

Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6}$ = $\frac{\text{Kg}}{0.4536}$ GAS - NPT thread adap

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GAS - NPT thread adapters available at page 1.117

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The cups described in this page have been designed to solve most of the gripping problems that can arise handling wooden or plastic panels, thin glass or marble sheets, fragile metal sheets, ceramic or baked clay tiles, etc.

Their low, stong and slightly tilted lip does not swipe on the loading surface during the gripping phase.

The cleats on the inside of these cups, along with reducing the volume of air to be sucked, create a perfect supporting surface which prevents any gripping surface deformation as well as the vertically lifted load from slipping. These cups can be cold-assembled, with no adhesives, onto their anodised aluminium support and locked by the ring nut.

These cups are extremely easy to replace; for the spare part, in fact, all you have to do is request the cup indicated in the table in the desired compound.





CUPS									
Art	Force	А	В	C	D	F	G	Н	Μ
ALC.	Kg	Ø	Ø	Ø	Ø				Ø
01 76 24 *	11.33	54	35	16	76	4.5	10	24	36
01 90 24 *	15.89	64	35	16	90	4.5	10	24	36
01 110 24 *	23.74	79	35	16	110	4.5	10	24	36
01 150 36 *	45.00	98	70	16	150	6.0	17	36	70

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



SUPPORTS												
Art	А	С	D	Е	F	G	Н	Ι	Support/ring nut	Сир	Ring nut	Weight
Alt	Ø	Ø	Ø						material	art.	art.	g
00 08 108	G1/4"	34	35	9	19.5	4.5	33.0	4.5	aluminium	01 76 24	00 08 109	31.2
										01 90 24		
										01 110 24		
00 08 110	G3/8"	34	35	9	19.5	4.5	33.0	4.5	aluminium	01 76 24	00 08 111	33.7
										01 90 24		
										01 110 24		
00 08 112	G3/8"	69	69	15	22.0	5.5	42.5	6.0	aluminium	01 150 36	00 08 113	132.1

Note: By ordering the support, the ring nut will be automatically provided

3D

						SI	W6 \				
CU	PS WITH S	UPPORT			•	[D				
Art		Force	Α	D	E	F	Н	Сир	Support	Ring nut	Weight
Art.		Kg	Ø	Ø				Art.	Art.	Art.	g
08 76 24	l 1/4" *	11.33	G1/4"	76	24	14	38	01 76 24	00 08 108	00 08 109	83.1
08 90 24	l 1/4" *	15.89	G1/4"	90	24	14	38	01 90 24	00 08 108	00 08 109	112.0
08 110 2	24 1/4" *	23.74	G1/4"	110	24	14	38	01 110 24	00 08 108	00 08 109	168.2
08 76 24	<mark>3/8" *</mark>	11.33	G3/8"	76	24	14	38	01 76 24	00 08 110	00 08 111	85.6
08 90 24	<mark>3/8" *</mark>	15.89	G3/8"	90	24	14	38	01 90 24	00 08 110	00 08 111	114.5
08 110 2	2 <mark>4 3/8" *</mark>	23.74	G3/8"	110	24	14	38	01 110 24	00 08 110	00 08 111	170.7
08 150 3	86 *	45.00	G3/8"	150	36	14	50	01 150 36	00 08 112	00 08 113	436.5

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

1.16





Conversion ratio: inch = $\frac{mm}{25.4}$; pounds $\frac{g}{453.6} = \frac{Kg}{0.4536}$ GAS -

F

The cups described in this page has been designed for gripping soft drink cans. They can obviously be also used for gripping other objects with flat smooth or slightly rough surfaces. The shape of its lip allows a firm grip of the load to be handled, eliminating any oscillation and reducing the air volume contained within, thus allowing a quicker grip and release. These cups can be cold-assembled, with no adhesives, onto their anodised aluminium support equipped with a threaded hole in the centre to allow their fastening to the machine. These cups are extremely easy to replace; for the spare part, in fact, all you have to do is request the cup indicated in the table in the desired compound.

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3D drawings available at www.vuototecnica.net

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3.5





* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

											•	
SUPP	OBT										<u>B</u>	•
Art	A	В	C	D	F	Н	Support	Сир	Weight	4		7
Altu	Ø	Ø	Ø	Ø			material	art.	g	□ 7.5 1		
00 08 83	48.5	M12	5	48.5	11	14.5	aluminium	01 56 15	67.4	• •		
												1



* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6}$ = $\frac{\text{Kg}}{0.4536}$

These cups feature a particularly thin and soft lip, which allows it to grip very rough surfaces. Its supporting surface with cleats guarantees a firm grip on the load to be handled. These cups have been specially designed for gripping ceramic tiles with smooth, rough and non-slip surfaces, although, due to their features, they can also be used for handling glass, marble and cement manufactures. These cups can be cold-assembled, with no adhesives, onto their anodised aluminium support equipped with a threaded hole in the centre to allow their fastening to the machine.

These cups are extremely easy to replace; for the spare part, in fact, all you have to do is request the cup indicated in the table in the desired compound



М
Ø
17
-

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



SUPPO	ORTS							
Δrt	Α	В	D	E	Н	Support	Сир	Weight
Alta	Ø	Ø	Ø			material	art.	g
00 08 126	45	M12	54	3	10	aluminium	01 80 20	45.5
00 08 143	45	G1/2"	54	3	10	aluminium	01 80 20	41.5



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1.18

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	CUPS WITI	H SUPPO	ORTS								
	Art.	Force	Α	В	D	F	G	Н	Сир	Support	Weight
_	Alu	Kg	Ø	Ø	Ø				Art.	Art.	g
F	08 80 20 *	12.56	58	M12	80	10	6	20	01 80 20	00 08 126	70.7
	08 80 20 1/2" *	12.56	58	G1/2"	80	10	6	20	01 80 20	00 08 143	66.7

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



These cups have been designed, in particular, for handling metal sheets, glass, wooden panels, marble granite and other similar materials.

The shape of its lip allows a firm grip of the load to be handled, eliminating any oscillation and reducing the air volume contained within, thus allowing a quicker grip and release. These cups are provided with cleats which, besides avoiding the load to bend in correspondence of the gripping point, also have the purpose to increase the friction surface with the vertically lifted load, preventing it from slipping. They are normally available in the three standard compounds, but can be supplied in special compounds and in a minimum amount to be

defined in the order, upon request. These cups can be cold-assembled, with no adhesives, on their anodised aluminium support equipped with a threaded hole in the

centre to allow its fastening to the machine and, upon request, it can be supplied with a side hole with gas thread for the suction fitting. These cups are extremely easy to replace; for the spare part, in fact, all you have to do is request the cup indicated in the table in the desired compound.





CLIPS											
Art	Force	A	В	C	D	E	F	Н	М	Ν	0
ALC.	Kg	Ø	Ø	Ø	Ø					Ø	Ø
01 65 15 *	8.29	68	63	59	65	3	7	17		27	
01 65 16 *	8.29	68	63	59	65	3	7	17	21	27	4.5

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



Art.	~	D	0	D	L		141	oup	ouppoir	worgin
74.4	Ø	Ø	Ø	Ø				art.	material	g
00 08 32	60	M12		64	3	10		01 65 15	aluminium	80.6
00 02 36	60	M8	G1/4"	64	3	10	21	01 65 16	aluminium	78.1
00 06 13	60	M12	G1/4"	64	3	10	21	01 65 16	aluminium	77.1

Ш

M

Cun

Cunnort

Woight

E

CUPS WITH SUPPORTS												
Art	Force	А	В	С	D	F	Н	М	0	Сир	Support	Weight
ALL	Kg	Ø	Ø	Ø	Ø				Ø	Art.	Art.	g
08 65 15 *	8.29	69	M12		65	10	17			01 65 15	00 08 32	102.0
08 65 16 *	8.29	69	M8	G1/4"	65	10	17	21	4.5	01 65 16	00 02 36	100.0
08 65 17 *	8.29	69	M12	G1/4"	65	10	17	21	4.5	01 65 16	00 06 13	98.5

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

SUPPORTS

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D

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GAS - NPT thread adapters available at page 1.117

3D drawings available at www.vuototecnica.net

1.19



0010											
Δrt	Force	Α	В	С	D	E	F	Н	Μ	Ν	0
AIG.	Kg	Ø	Ø	Ø	Ø					Ø	Ø
01 85 15 *	14.18	68	63	59	85	3	7	17		27	
01 85 16 *	14.18	68	63	59	85	3	7	17	21	27	4.5

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



Art	А	В	С	D	E	Н	М	Сир	Support	Weight
A10	Ø	Ø	Ø	Ø				art.	material	g
00 08 32	60	M12		64	3	10		01 85 15	aluminium	80.6
00 02 36	60	M8	G1/4"	64	3	10	21	01 85 16	aluminium	78.1
00 06 13	60	M12	G1/4"	64	3	10	21	01 85 16	aluminium	77.1

В

С

0

F



* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

Η

1.20



Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$



* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



SUPPO	ORTS									
Art	А	В	С	D	E	Н	М	Сир	Support	Weight
ALC	Ø	Ø	Ø	Ø				art.	material	g
00 08 33	88	M12		92	3	11		01 110 10	aluminium	188.9
00 02 37	88	M8	G1/4"	92	3	11	26	01 110 10	aluminium	188.8
00 06 14	88	M12	G1/4"	92	3	11	26	01 110 10	aluminium	185.8
00 08 123	88	G3/8"		92	3	11		01 110 10	aluminium	186.1



		Н				M D			F		
CUPS WIT	TH SUPPORT	-	·								
Art	Force	Α	В	С	D	F	Н	М	Сир	Support	Weight
Art.	Force Kg	A Ø	B Ø	С Ø	D Ø	F	H	М	Cup Art.	Support Art.	Weight g
Art. 08 110 10 *	Force Kg 23.74	A Ø 97	В Ø M12	C Ø	D Ø 114	F 11	H 17	M 	Cup Art. 01 110 10	Support Art. 00 08 33	Weight g 233.2
Art. 08 110 10 * 08 110 11 *	Force Kg 23.74 23.74	A Ø 97 97	B Ø M12 M8	C Ø G1/4"	D Ø 114 114	F 11 11	H 17 17	M 26	Cup Art. 01 110 10 01 110 10	Support Art. 00 08 33 00 02 37	9 233.2 233.1
Art. 08 110 10 * 08 110 11 * 08 110 12 *	Force Kg 23.74 23.74 23.74	A Ø 97 97 97	B Ø M12 M8 M12	C Ø G1/4" G1/4"	D Ø 114 114 114	F 11 11 11	H 17 17 17	M 26 26	Cup Art. 01 110 10 01 110 10 01 110 10	Support Art. 00 08 33 00 02 37 00 06 14	Weight g 233.2 233.1 230.1

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

Х

1.21



Art	Force	А	В	С	D	E	F	Н	N
AIG.	Kg	Ø	Ø	Ø	Ø				Ø
01 150 10 *	45.00	133	125	118	154	4	11	23	64

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



SUPPOF	RTS									
Art	А	В	С	D	E	Н	М	Сир	Support	Weight
ALL	Ø	Ø	Ø	Ø				art.	material	g
00 08 35	120	M12		127	4	15		01 150 10	aluminium	471.3
00 08 107	120	M12	G3/8"	127	4	15	30	01 150 10	aluminium	476.9
00 08 119	120	G3/8"		127	4	15		01 150 10	aluminium	478.9
00 08 145	120	G3/8"	G3/8"	127	4	15	27	01 150 10	aluminium	471.9
00 06 15	120	M12	G1/4"	127	4	15	30	01 150 10	aluminium	476.3



CU	PS WI	TH SUPPOR	RT									
Art		Force	А	В	С	D	F	Н	М	Сир	Support	Weight
Aitu		Kg	Ø	Ø	Ø	Ø				Art.	Art.	g
08 150 1	0 *	45.00	135	M12		154	15	23		01 150 10	00 08 35	583.3
08 150 1	2 *	45.00	135	M12	G3/8"	154	15	23	30	01 150 10	00 08 107	588.9
08 150 1	3 *	45.00	135	G3/8"		154	15	23		01 150 10	00 08 119	590.9
08 150 1	4 *	45.00	135	G3/8"	G3/8"	154	15	23	27	01 150 10	00 08 145	583.9
08 150 1	6 *	45.00	135	M12	G1/4"	154	15	23	30	01 150 10	00 06 15	588.3

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

1.22



Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$





Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$ GAS - NPT thread adapters available at page 1.117

X

1.23



Art. Ø Ø Ø Art. Kg Ø 08 250 2<mark>0 *</mark> 122.60 01 250 20 237 M12 G3/8" 254 23 70 15

С

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

В

Н

CUPS WITH SUPPORT

Force

Α





F

D

D

М

Н

М

Cup

GAS - NPT thread adapters available at page 1.117

Support

Art.

00 08 115

Weight

Kg

1.78

F

FLAT CIRCULAR FOAM RUBBER CUPS WITH SUPPORT

These foam rubber cups are made with a special compound called GERANIUM, with a density that allows them to grip even uneven and very rough surfaces maintaining their

elasticity also after many working cycles. They are provided with self-adhesive side for a quick fixing to their support. This series of cups has been designed for handling loads with raw or very rough surfaces (sawn, bushammered or flamed marble, textured, non-slip or profiled metal sheets, striped plexiglas, raw cement manufactures, garden tiles with fret, etc.) and in all those cases in which traditional cups cannot be used.

In case of lubricated gripping surfaces, we recommend using NF neoprene foam rubber. The working temperature range is between -40 °C and +80 °C for OF GERANIUM foam rubber and between -20 °C and +80 °C for NF neoprene.

Their supports are made with anodised aluminium and are provided with a threaded hole in the centre for fastening them to the machine. The larger ones, on the other hand, have a side threaded hole for vacuum connection.

For the spare part, all you have to do is request the self-adhesive foam rubber cup indicated in the table, in the required compound.



Δrt	Force	D	d	E
Alt	Kg	Ø	Ø	
01 42 15 *	0.78	40	20	15
01 64 15 *	3.5	64	40	15
01 92 15 *	8.5	92	64	15

* Complete the code indicating the compound: OF= geranium foam rubber; NF= neoprene foam rubber

SUPPORTS

CUPS

Art	Α	В	D	F	Н	Support	Сир	Weight
AIL.	Ø	Ø	Ø			material	art.	g
00 08 147	40	M12	40		10	aluminium	01 42 15	32.8
00 08 32	60	M12	64	3	10	aluminium	01 64 15	80.6
00 08 33	88	M12	92	3	11	aluminium	01 92 15	188.9
00 08 123	88	G3/8"	92	3	11	aluminium	01 92 15	186.1



CUPS WITH	- SUPP	ORT								
Δrt	Force	Α	В	D	d	Е	F	Сир	Support	Weight
A14	Kg	Ø	Ø	Ø	Ø			Art.	Art.	g
08 42 15 *	0.78	40	M12	40	20	15	10	01 42 15	00 08 147	35.6
08 64 15 *	3.5	60	M12	64	40	15	10	01 64 15	00 08 32	86.5
08 92 15 *	8.5	88	M12	92	64	15	11	01 92 15	00 08 33	199.1
08 92 15 3/8" *	8.5	88	G3/8"	92	64	15	11	01 92 15	00 08 123	196.3

* Complete the code indicating the compound: OF= geranium foam rubber; NF= neoprene foam rubber



GAS - NPT thread adapters available at page 1.117

3D drawings available at www.vuototecnica.net







CUPS				
Art.	Force	D	d	E
A16	Kg	Ø	Ø	
01 127 15 *	17.5	127	92	15
01 180 15 *	38.5	180	140	15
01 220 15 *	63.6	220	180	15

* Complete the code indicating the compound: OF= geranium foam rubber; NF= neoprene foam rubber



SUPPORTS

A	A	В	С	D	F	Н	М	Support	Cup	Weight
Art.	Ø	Ø	Ø	Ø				material	art.	Kg
00 08 107	120	M12	G3/8"	127	4	15	30	aluminium	01 127 15	0.48
00 08 58	160	M12	G3/8"	180	5	12	60	aluminium	01 180 15	0.74



le at www.vuototecnica.net									M		F			
ailat	CU	PS WII	Force	A	В	C	D	d	E	F	М	Сир	Support	Weight
s av	Art.		Kg	Ø	Ø	Ø	Ø	Ø	-	·		Art.	Art.	Kg
'ing	08 127	15 *	17.5	120	M12	G3/8"	127	92	15	15	30	01 127 15	00 08 107	0.49
raw	08 180	15 *	38.5	160	M12	G3/8"	180	140	15	12	60	01 180 15	00 08 58	0.78
3D d	* Compl	ete the c	ode indicatir	ng the comp	oound: 0F= g	jeranium foam r	rubber; NF= ne	eopropene foam	rubber					

1.26



FLAT CIRCULAR FOAM RUBBER CUPS WITH SUPPORT

The distinctive feature of these cups is its lip made with nitrile rubber associated with GERANIUM or neoprene compounds. This allows a perfect grip on very rough or slotted surfaces. For this reason they are particularly suited for gripping and handling cement manufactures with with grit finished surfaces, marbles and bushammered or flamed granites.

The working temperature ranges between -40 °C and +80 °C for the GERANIUM OF compound and between -20 °C and +80 °C for the neoprene NF compound.

The anodised aluminium support has a central threaded hole for fastening it to the machine and a side one, also threaded, for the vacuum connection. The cup is cold-assembled onto the support with no adhesives.

For the spare part, you can simply request the desired cup indicated in the table in the desired compound.





CUPS						
Art.	Force	А	В	D	Н	Compound
	Kg	Ø	Ø	Ø		
01 220 10 OF	63.6	180	180	220	35	geranium foam rubber
01 220 10 NF	63.6	180	180	220	35	neoprene foam rubber



SUPPO	ORTS									
Art.		Α	В	C	D	Н	М	Support	Cup	Weight
		Ø	Ø	Ø	Ø			material	art.	Kg
00 08 37		180	M12	G3/8"	206	12	70	aluminium	01 220 10	0.95



CUPS WIT	H SUPPORT							
Art.	Force	A	В	D	Н	Support	Сир	Weight
A14	Kg	Ø	Ø	Ø		Art.	Art.	Kg
08 220 10 OF	63.6	180	180	220	35	00 08 37	01 220 10 OF	0.98
08 220 10 NF	63.6	180	180	220	35	0 <mark>0 08</mark> 37	01 220 10 NF	0.97

1.27

Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6}$ = $\frac{\text{Kg}}{0.4536}$ GAS - NPT thread adapters available at page 1.117

X

FLAT CIRCULAR CUPS WITH VULCANISED SUPPORT, FOR CLAMPING GLASS AND MARBLE

The manufacturers of glass and marble machining centres require increasingly accurate and safe clamping systems. This has led us to creating this new series of cups.

They are vulcanised onto a steel support and are provided with a hole in the centre for vacuum connection or for a BALL VALVE, as well as with $3 \div 4$ holes on the internal circumference for housing allen screws.

Their extremely flexible lip allows them to easily adapt themselves to the sheets to be held, with no risk of deformation or rupture, even for the thinnest ones. The particular internal support plane of these cups ensure a high friction coefficient with the gripping surface and especially a considerable grip on wet glass and marble sheets, thanks to the water drainage. All this guarantees a firm and safe grip.

Furthermore, these cups feature the highest accuracy of their thickness, whose nominal height has a tolerance of only five hundredths of millimetre.

They are normally produced with oil-resistant rubber A, but they can be ordered in other compounds, listed at page 21, upon request and in minimum quantities to be defined in the order.





CLIPS	WITH	VIII CANISED	SUPPORT
CUPS		VULGANISED	JUFFURI

Δrt	Force	А	В	C	D	E	F	Н	М	Support	Weight
Alta	Kg	Ø	Ø	Ø	Ø				Ø	material	Kg
08 65 11 A	6.7	50	40	20.5	65	10	15	17.5	29.5	steel	0.09
08 85 11 A	12.0	70	60	40.5	85	10	15	17.5	49.5	steel	0.14





CU	P WITH	I VULCANI	SED SUP	PORT								
Δrt		Force	А	В	C	D	E	F	Н	М	Support	Weight
74.4		Kg	Ø	Ø	Ø	Ø				Ø	material	Kg
)8 150 1	1 A	42.7	139	130	41	150	10	15	17.5	115	steel	1.0



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Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

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FLAT CIRCULAR CUPS WITH VULCANISED SUPPORT

These cups have been designed for lifting and handling heavy loads, both vertically and horizontally. They are vulcanised onto a steel support and are provided with a central threaded hole for its fastening to the machine and with a side threaded hole for vacuum connection.

These cups have a labyrinth graved face made with the same compound as the cup, which allows gripping even the thinnest and most fragile glass and marble sheets, with no bending in the gripping area. The shape of its lip and the choice of the compound whith which they are made with, ensure a firm grip on uneven and corrugated surfaces. The 08 .. 40 series, along with sharing the same features, have an internal vertical lip which allows them to grip extremely rough surfaces, such as embossed or profiled metal sheets, sawn marble or granite, wooden boards, precast cement, etc.





CUPS WITI	H VULCAI	VISED SU	PPORT										
Art	Force	А	В	С	D	E	F	G	Н	М	Ν	Support	Weight
ALC.	Kg	Ø	Ø	Ø	Ø						Ø	material	Kg
08 110 15 M8 *	23.7	74	70	M8	110	2	14	10	26	26.0	G1/4"	steel	0.35
08 110 15 *	23.7	74	70	M12	110	2	14	10	26	26.0	G1/4"	steel	0.33
08 150 15 *	45.0	115	110	M12	150	2	14	10	26	40.0	G3/8"	steel	0.83
08 200 10 *	78.5	164	160	M12	200	3	14	11	28	47.5	G3/8"	steel	1.75
08 250 10 *	122.6	214	210	M12	250	3	14	11	28	72.5	G3/8"	steel	3.00
08 300 10 *	176.6	266	260	M16	300	5	15	11	31	89.0	G1/2"	steel	4.70
08 350 10 *	240.4	316	310	M16	350	5	15	11	31	89.0	G1/2"	steel	6.60

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



		_				()	М	•	•	G			
CUPS WIT	H VULCA	NISED SU		C	D	() E	6	<u>ц</u>	Μ		0	Support	Weight
Art.	Kg	Ø	Ø	Ø	Ø	Ľ	Г	u	п	IVI	Ø	Ø	material	Kg
8 110 40 M8*	15.5	74	70	M8	110	3	16	7	26	26.0	G1/4"	68	steel	0.36
8 110 40 *	15.5	74	70	M12	110	3	16	7	26	26.0	G1/4"	68	steel	0.34
8 150 40 *	22.8	115	110	M12	150	3	16	7	26	40.0	G3/8"	105	steel	0.85
8 200 40 *	45.0	164	160	M12	200	3	17	8	28	47.5	G3/8"	148	steel	1.70
8 250 40 *	78.5	214	210	M12	250	3	17	8	28	72.5	G3/8"	196	steel	3.00
8 300 40 *	122.6	266	260	M16	300	3	18	10	31	89.0	G1/2"	248	steel	4.60
8 350 40 *	176.6	316	310	M16	350	З	18	10	31	89.0	G1/2"	208	steel	6 50

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

1.29

Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6}$ = $\frac{\text{Kg}}{0.4536}$ GAS - NPT thread adapters available at page 1.117



FLAT CIRCULAR CUP WITH VULCANISED SUPPORT

These cups are recommended for handling very heavy loads both vertically and horizontally.

They are vulcanised onto a steel support and have a labyrinth graved face made in the same compound as the cup.

The support is provided with four steel pins with self-locking nuts for guiding the cups and fastening them to the machine, as well as with a threaded sleeve for vacuum connection.

Morever, these cups are provided with four springs to cushion its impact with the load to be lifted.

These cups are available in the three standard compounds.





3D

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

1.30

Art.



GAS - NPT thread adapters available at page 1.117

Weight

Kg

4.75

CIRCULAR RIM CUPS WITH SUPPORT

These cups have been designed for lifting objects with a central hole. Their very thin lip allow them to grip very rough surfaces, such as grinding wheels and discs.

They are particularly recommended for handling CDs,perforated discs, toothed wheels, pulleys and other similar objects.

Their supports are made with anodised aluminium and are provided with a threaded hole in the centre to allow suction, as well as its fastening to the machine.

The cups are cold-assembled onto them, with no adhesives. To guarantee maximum flexibility, the cups for gripping grinding discs are made with natural para rubber N, while those for handling CDs are made with silicon S. Cups in special compounds indicated at page 21 can be provided upon request in minimum quantities to be defined in the order.

For the spare part, all you have to do is request the cup indicated in the table in the desired compound.





CUP							
Art	Force	Α	В	D	d	F	Н
ALC	Kg	Ø	Ø	Ø	Ø	Ø	
01 24 06 S	0.6	25.5	15.5	24	16.5	20	6



SUPF	PORTS								
Δrt	Α	В	D	E	F	Н	Support	Сир	Weight
ALC	Ø	Ø	Ø				material	art.	g
00 08 232	15	G1/8"	30	10	4	14	aluminium	01 24 06	16.7



Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6}$ = $\frac{\text{Kg}}{0.4536}$ GAS - NPT thread adapters available at page 1.117

X

1.31



1.32

3D drawings available at www.vuototecnica.net



Co	nversion rat	tio: incl	$h = \frac{mm}{25}$	pounds =	$= \frac{g}{452.6}$	$= \frac{\text{Kg}}{4526}$	
			25.4		453.6	0.4536	

GAS - NPT thread adapters available at page 1.117

CUPS	WITH SU	PPORT						
Δrt	Α	D	d	E	Н	Сир	Support	Weight
Alta	Ø	Ø	Ø			Art.	Art.	g
08 31 06 S	15	31	18	3.6	17.6	01 31 06 S	00 08 231	26.6



SUPPO	ORTS								
Art	Α	В	D	E	F	Н	Support	Сир	Weight
Altu	Ø	Ø	Ø				material	art.	g
00 08 231	15	G1/8"	36	10	4	14	aluminium	01 31 06	24.9



CUPS							
Δrt	Force	А	В	D	d	F	Н
Alta	Kg	Ø	Ø	Ø	Ø	Ø	
01 31 06 S	1.25	31.5	21.5	31	18	24.5	6



CIRCULAR RIM CUPS WITH SUPPORT



CUPS									
Δrt	Force	Α	В	С	D	d	E	Н	М
ЛЦ	Kg	Ø	Ø	Ø	Ø	Ø			Ø
01 46 13 N	3.87	35	23	3	46	12	8.5	12.5	29
01 73 14 N	9.02	60	40	5	73	27	10.0	14.0	50
01 95 14 N	16.28	71	51	6	95	27	10.0	14.5	61



SUPP	ORTS	;										
Art	Α	В	С	D	Е	F	G	Н	Ν	Support	Cup	Weight
Alt	Ø	Ø	Ø	Ø					Ø	material	art.	g
00 08 68	40	M12	23	35	7	10	18	25	20	aluminium	01 46 13	47.2
00 08 72	65	G3/8"	40	60	10	15	25	35	25	aluminium	01 73 14	169.1
00 08 73	76	G3/8"	51	71	10	15	27	37	25	aluminium	01 95 14	266.0



CUPS	WITH	SUPF	PORT									
Art	Force	Α	В	D	d	Е	F	Н	Ν	Сир	Support	Weight
Alt	Kg	Ø	Ø	Ø	Ø				Ø	Art.	Art.	g
08 46 13 N	3.87	40	M12	46	12	4.5	10	29.5	20	01 46 13 N	00 08 68	53.1
08 73 14 N	9.02	65	G3/8"	73	27	4.0	15	39.0	25	01 73 14 N	00 08 72	189.4
08 95 14 N	16.28	76	G3/8"	95	27	5.5	15	42.5	25	01 95 14 N	00 08 73	292.9



(f)

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

X

GAS - NPT thread adapters available at page 1.117

1.33

FLAT RECTANGULAR CUPS WITH SUPPORT

These cups are recommended for working surfaces for clamping wooden panels, marble, granite, ceramic, glass, etc. They are obviously used to handle these materials. Their vertical and low lip allows for a firm grip on the surface to be clamped or handled, eliminating any oscillation and considerably reduces the air volume contained within, thus ensuring a quicker gripping and release. Cups in special compounds indicated at page 21 can be provided upon request in minimum quantities to be defined in the order.

They can be cold-assembled, with no adhesives, onto an anodised aluminium support, provided with a central threaded hole to ease its fastening to the machine.

Larger supports are provided with two threaded holes equidistant from the centre, to allow the possible insertion of guiding anti-rotation pins. For the spare part, all you have to do is request the cup indicated in the table in the desired compound.



CUPS													
Art	Force	Α	В	E	F	G	Н	L	М	Ν	0	Р	Q
	Kg												
01 40 75 *	6.7	64	29	3	7.5	6.5	16.0	75	40	59	24	54	19
01 120 90 *	24.0	107	78	3	7.5	7.5	17.5	117	87	102	73	97	68
01 150 65 *	21.5	137	52	3	7.5	7.5	16.5	147	62	132	47	127	42
01 150 75 *	25.0	137	62	3	7.5	7.5	16.5	147	72	132	57	127	52

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon





55

01 150 75

00 08 59

259.6

SUPPORTS

Art	Ν	0	Р	Q	Support	Сир	Weight
ALC.					material	art.	g
00 08 31	60	25	55	20	aluminium	01 40 75	34.1
00 08 34	107	75	102	70	aluminium	01 120 90	215.5
00 08 144	135	50	130	45	aluminium	01 150 65	176.1
00 08 59	135	60	130	55	aluminium	01 150 75	218.4



3D

Х



150

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

7.5

16.5

65

08 150 7<mark>5 *</mark>

25.0

140



75

130
FLAT RECTANGULAR CUPS WITH SUPPORT

3 8





	14				*1			
SUPPORT	rs							
Art.	D	Ν	0	Р	Q	Support	Сир	Weight
	Ø					material	art.	Kg
00 08 116	G3/8"	290	68	284	62	aluminium	01 300 80	0.53
00 08 117	G1/2"	290	140	284	134	aluminium	01 300 150	1.13



 * Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

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FLAT RECTANGULAR CUPS WITH NON-SLIP SUPPORT

These cups share the same technical and mechanical features with the ones described above, but their support has a special non-slip plastic coating that make them particularly suited for clamping glass and smooth marble.

A built-in stainless steel mesh filter in the suction hole and an O-ring seal at the base of their support are the other main features of these cups.

They are also provided with two or for housings for TCCE screws, according to their size, for fixing them to the workstation.



* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon





SUPPORT							
Art.	N	0	Р	Q	Support	Сир	Weight
7					material	art.	g
00 08 184	60	25	55	20	aluminium	01 40 75	38.7



* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

drawings available at www.vuototecnica.net

3D

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FLAT RECTANGULAR CUPS WITH NON-SLIP SUPPORTS



* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon





Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6}$ = $\frac{\text{Kg}}{0.4536}$

X

FLAT RECTANGULAR FOAM RUBBER CUPS WITH SUPPORT

Foam rubber cups are made with a special compound called GERANIUM indicated with OF, with a density that allows them to grip uneven and very rough surfaces and still maintain their elasticity even after many working cycles.

These foam rubber cups have a self-adhesive side for a quick fixing to their support. These cups have been designed for handling loads with raw or very rough surfaces (sawn, bushammered or flamed marble, textured, non-slip or profiled metal sheet, striped plexiglas, raw cement manufactures, garden tiles with fret, etc.) and for all those cases in which traditional cups cannot be used. In case of lubricated gripping surfaces, we recommend using neoprene foam rubber NF.

The working temperature ranges from -40 °C to +80 °C for GERANIUM foam rubber OF and from -20 °C to +80 °C for neoprene foam rubber NF. Their supports are made with anodised aluminium and they are provided with a

central threaded hole to allow its fastening to the machine. Larger supports, on the other hand, are provided with two threaded holes equidistant from the centre, for the possible insertion of guiding, anti-rotation pins.

For the spare part, all you have to do is request the cup indicated in the table in the desired compound.





CUPS					
Art	Force	Α	В	C	E
AIL.	Kg				
01 107 75 *	9.0	107	75	15	15
01 135 50 *	6.0	135	50	15	15
01 135 60 *	8.0	135	60	15	15

* Complete the code indicating the compound: OF= geranium foam rubber; NF= neoprene foam rubber



SUPPOR	15									
Art	A B		D	E	Н	М	Ν	Support	Support Cup	
AIL.								material	art.	g
00 08 34	107	75	70	3	11	102	70	aluminium	01 107 75	215.5
00 08 144	135	50	45	3	11	130	45	aluminium	01 135 50	176.1
00 08 59	135	60	55	3	11	130	55	aluminium	01 135 60	218.4



CU	PS WITH	SUPPORT		¢ C		¢ C →					
Art.		Force	Α	В	C	E	F	Ν	Cup	Support.	Weight
Altu		Kg							Art.	Art.	g
08 107 7	′5 *	9	107	75	15	15	11	70	01 107 75	00 08 34	229.5
08 135 5	i0 *	6	135	50	15	15	11	45	01 135 50	00 08 144	190.6
08 135 6	i0 * 0i	8	135	60	15	15	11	55	01 135 60	00 08 59	233.0

* Compl<mark>ete the c</mark>ode indicating the compound: OF= geranium foam rubber; NF= neoprene foam rubber



at www.vuototecnica.net

drawings available

3D





FLAT RECTANGULAR FOAM RUBBER CUPS WITH SUPPORT



CUPS

Art.	Force	Α	В	C	E
	Kg				
01 290 68 *	25	290	68	15	15
01 290 140 *	72	290	140	15	15

 * Complete the code indicating the compound: OF= geranium foam rubber; NF= neoprene foam rubber





SUPPOR	TS									
Art	А	В	D	E	Н	Μ	Ν	Support	Сир	Weight
AIL.			Ø					material	art.	Kg
00 08 116	290	68	G3/8"	3	11	284	62	aluminium	01 290 68	0.53
00 08 117	290	140	G1/2"	3	11	284	134	aluminium	01 290 140	1.13





GAS - NPT thread adapters available at page 1.117

* Complete the code indicating the compound: OF= geranium foam rubber; NF= neoprene foam rubber

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

X

FLAT RECTANGULAR CUPS WITH VULCANISED SUPPORT, FOR CLAMPING GLASS AND MARBLE

The manufacturers of glass and marble machining centres require increasingly accurate and safe clamping systems. This has led us to creating this new series of cups.

They are vulcanised onto a steel support and are provided with a hole in the centre for vacuum connection or for a BALL VALVE, as well as with 2 holes on the internal circumference for housing allen screws.

Their extremely flexible lip allows them to easily adapt themselves to the sheets to be held, with no risk of deformation or rupture, even for the thinnest ones. The particular internal support plane of these cups ensure a high friction coefficient with the gripping surface and a considerable grip on wet glass and marble sheets, thanks to the water drainage. All this guarantees a firm and safe grip. Furthermore, these cups feature the highest accuracy of their thickness, whose nominal height has a tolerance of only five hundredths of millimetre.

They are normally produced with oil-resistant rubber A, but they can be ordered in other compounds, listed at page 21, upon request and in minimum quantities to be defined in the order.







CUP WI	TH VULCA	NISED S	SUPPOR	Т										
Art.	Force	А	В	D	E	F	Н	L	М	Ν	Р	Q	Support	Weight
	Kg			Ø									material	g
08 50 75 A	7.5	60	35	20.5	10	15	17.5	75	50	39.5	50	25	steel	92

Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$



1.40

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FLAT OVAL CUPS WITH SUPPORT

These oval cups are are recessed on moulders in order to hold a side of the cardboard box during the moulding process by means of traditional cups on the opposite side. Once assembled with their support, they can be used for handling boxes, plastic objects or anything with a limited gripping suface.

Their anodised aluminium support have a central threaded hole to fasten it to the machine. They are also provided with a nickelplated brass plate to hold the cup in its housing and with one or two stainless steel screws for fixing them. For the spare part, all you have to do is request the cup indicated in the table in the desired compound.





CUP					
Art	Force	А	В	С	D
Alt	Kg				
01 12 20 *	0.52	15	11.5	17	20

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

F

6.5

Support

material

aluminium







3D drawings available at www.vuototecnica.net

1.41

16

Note: By ordering art. 00 08 70, the fixing plate and the TSP screw will also be provided.

Cup

art.

01 12 20

Weight

q

5.4

fixing plate art. 00 08 97

TSP M3x5 screw art. 00 08 103

CUP W	ITH SUPPOR	г			
Art.	Force	D	Сир	Support	Weight
Altu	Kg		Art.	Art.	g
08 12 20 *	0.52	20	01 12 20	00 08 70	5.8

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

GAS - NPT thread adapters available at page 1.117

SUPPORT

Art.

00 08 70

В

Ø

G1/8"

Ε





CUPS					
Art.	Force	А	В	С	D
Juu	Kg				
01 12 30 *	0.82	25	21.5	27	30
01 12 40 *	1.12	35	31.5	37	40
01 12 50 *	1.57	50	46.5	52	55





SUPPO	RTS							
Δrt	А	В	С	E	F	Support	Сир	Weight
Alta		Ø				material	art.	g
00 08 71	30	G1/8"	25	8.5	6.5	aluminium	01 12 30	7.8
00 08 75	40	G1/8"	35	8.5	6.5	aluminium	01 12 40	11.4
00 08 76	55	G1/8"	50	8.5	6.5	aluminium	01 12 50	15.5

fixing plate art. 00 08 98	for supp. 00 08 71
art. 00 08 99	for supp. 00 08 75
art. 00 08 10	0 for supp. 00 08 76

2 TSP screws M3x5 art. 00 08 102

3D drawings available at www.vuototecnica.net

X

1.42

Note: By ordering the art. referring to the support, the fixing plate and the TSP screws will also be provided

CUPS WITH SUPPORT

Convertion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

Art	Force	D	Сир	Support	Weight
ALC.	Kg		Art.	Art.	g
08 12 30 *	0.82	30	01 12 30	00 08 71	8.3
08 12 40 *	1.12	40	01 12 40	00 08 75	12.0
08 12 50 *	1.57	55	01 12 50	00 08 76	16.2

GAS-NPT thread adapters available at page 1.117

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

OVAL CUPS WITH VULCANISED SUPPORT

The cups described in this page have been designed for for handling X-ray sheets in hospital or other electrostatically charged films.

Their shape allows them to pick up one sheet at a time without deforming or crumpling the gripping surface and without leaving stains or prints, thanks to the special compound with which they are made. Their aluminium supports are vulcanised onto the cups. One with a smooth hole for fixing the cup to the machine with an allen screw, with the housing on the inside and one with a threaded hole. A side slot on the support prevents the cup from rotating. These cups are recommended for gripping and handling magnetic sheets, plastic sheets, thiin rubber sheets, laminated cardboard ,etc.





Weight g

12.1

CUP WITH V	ULCANISED SUPPORT		
Art.	Force	Support	
	Kg	material	
08 32 52 *	3.00	aluminium	

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

CUP WIT	H VULCA	NISED SUPPORT		
Art		Force	Support	Weight
ALL		Kg	material	g
08 32 99 *		3.00	aluminium	11.9

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



Convertion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

CONCAVE CUPS WITH VULCANISED SUPPORT

These cups have been designed for handling cylindrical objects, such as pipes, bottles, round profiles, etc. Its aluminium support is vulanised onto the cup and it is provided with a central threaded hole to ease its fastening to the machine and with a side hole for the possible insertion of a guiding, anti-rotation pin.

These cups can be provided in the three standard compounds: oil-resistant rubber A, natural para rubber N and silicon S.







CONCA	VE CUPS	WITH	VULC	ANISE	ED SI	JPPOR	Т											
Art.	Force	gripp	oing Ø		Α	В	С	D	Е	F	G	Н	Ι	L	М	Ν	Support	Weight
Altu	Kg	min	max					Ø								Ø	material	g
08 30 60 *	3.5	30	45		26	15	10	M8	8	16	19	20.0	20	60	50	4.1	aluminium	20.3
08 40 90 *	8.6	50	80		40	20	14	M12	10	23	28	25.0	30	92	80	5.1	aluminium	54.8
08 50 <mark>90 *</mark>	10.5	60	95		48	22	14	M12	10	28	34	28.5	30	92	80	5.1	aluminium	62.5

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



Convertion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

FOAM RUBBER SHEETS AND STRIPS

The foam rubber used for our cups can be provided in sheets or strips of the sizes indicated in the table. Both the strips and the sheets have a self-adhesive side which allows a quick and easy fixing to the metal support. These sheets and strips can be used to make cups of every shape and to handle loads with raw or very rough surfaces. They can be supplied in different sizes and density upon request and in quantities to be defined in the order. The working temperature ranges from -40 °C to +80 °C. Note: GERANIUM foam rubber is obtained from the expansion of a natural rubber via a chemical-thermal treatment. The surface porosity can, therefore, vary without affecting its efficiency.

Self-adhesive side





1 O/MI HOBBEH OHEETO	٨	D	C
Art.	A	b	L
LGS 10 OF	2000	900	10
LGS 15 OF	2000	900	15
LGS 20 OF	2000	900	20
LGS 25 OF	2000	900	25
LGS 30 OF	2000	900	30
LGS 40 OF	2000	900	40
LGS 45 OF	2000	900	45

Note: minimum format: mm 1000 x 900



Convertion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

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BELLOW CUPS WITH MALE AND FEMALE SUPPORTS

The BELLOW CUPS described in these pages have been specially designed for handling baked goods, such as bisuits, bread, pizza, etc., as well as plastic or paper bags containing chocolates, sweets, pasta, flour, powder, etc. Thanks to their great flexibility, they can also be used to compensate flatness errors or for gripping on inclined surfaces. Their anodised aluminium supports are provided with a threaded male or female central pin to allow suction and to fasten it to the machine. The cups can be assembled onto them with no adhesives.

For the spare part, all you have to do is request the cup indicated in the table in the desired compound.





CUPS								
Δrt	Force	А	В	С	D	E	F	Н
Alta	Kg	Ø	Ø	Ø	Ø			
01 20 23 *	0.78	14.5	5.0	14	20	5	4	23
01 30 32 *	1.76	20.0	6.5	21	30	7	5	32
01 40 42 *	3.14	20.0	6.5	28	40	7	5	42
01 50 53 *	4.90	27.0	10.5	35	50	10	6	53

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



MALE S	UPPOR	TS									
Art	Α	В	С	D	Е	F	G	Н	Support	Сир	Weight
ALC	Ø		Ø	Ø					material	art.	g
00 08 133	14.5	13	G1/8"	8.5	5.5	8	5.0	18.5	aluminium	01 20 23	3.5
00 08 135	20.0	17	G1/4"	10.0	7.5	12	7.5	27.0	aluminium	01 30 32	9.5
										01 40 42	
00 08 142	27.0	22	G1/4"	14.0	7.5	12	9.5	29.0	aluminium	01 50 53	15.7



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CUPS WITH MALE SUPPORTS												
Art	Force	Α	В	С	D	Е	F	G	Н	Сир	Support	Weight
Alta	Kg	Ø		Ø	Ø					Art.	Art.	g
08 20 23 *	0.78	14.5	13	G1/8"	20	5.5	8	23	36.5	01 20 23	00 08 133	5.3
08 30 32 *	1.76	20.0	17	G1/4"	30	7.5	12	32	51.5	01 30 32	00 08 135	15.1
08 40 42 *	3.14	20.0	17	G1/4"	40	7.5	12	42	61.5	01 40 42	00 08 135	21.1
08 50 53 *	4.90	27.0	22	G1/4"	50	7.5	12	53	72.5	01 50 53	00 08 142	40.1

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

BELLOW CUPS WITH FEMALE SUPPORTS



CUPS								
Δrt	Force	А	В	C	D	E	F	Н
Alti	Kg	Ø	Ø	Ø	Ø			
01 20 23 *	0.78	14.5	5.0	14	20	5	4	23
01 30 32 *	1.76	20.0	6.5	21	30	7	5	32
01 40 42 *	3.14	20.0	6.5	28	40	7	5	42
01 50 53 *	4.90	27.0	10.5	35	50	10	6	53



* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

FEMAL	E SUPF	PORTS	S								
Art	Α	В	С	D	Е	F	G	Н	Support	Сир	Weight
Alta	Ø		Ø	Ø					material	art.	g
00 08 132	14.5	13	G1/8"	8.5	12	8	5.0	17.0	aluminium	01 20 23	3.8
00 08 134	20.0	17	G1/4"	10.0	14	10	7.5	21.5	aluminium	01 30 32	8.3
										01 40 42	
00 08 141	27.0	22	G1/4"	14.0	14	10	9.5	23.5	aluminium	01 50 53	19.7



Ch.B

CUPS	WITH F	FEMAI	_E S	UPPOF	RT							
Δrt	Force	Α	В	С	D	Е	F	G	Н	Сир	Support	Weight
Aitu	Kg	Ø		Ø	Ø					Art.	Art.	g
08 20 23 F *	0.78	14.5	13	G1/8"	20	12	8	23	35	01 20 23	00 08 132	5.6
08 30 32 F *	1.76	20.0	17	G1/4"	30	14	10	32	46	01 30 32	00 08 134	13.9
08 40 42 F *	3.14	20.0	17	G1/4"	40	14	10	42	56	01 40 42	00 08 134	19.9
08 50 53 F *	4.90	27.0	22	G1/4"	50	14	10	53	67	01 50 53	00 08 141	44.1

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

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GAS - NPT thread adapters available at page 1.117

REINFORCED BELLOW CUPS WITH MALE AND FEMALE SUPPORT

The particular shape of these BELLOW CUPS allows them to quickly crumple up when in contact with the surface of the load to be lifted and in presence of a vacuum. this quick movement prevents the load below from remaining stuck to the surfaces or load underneath. Thanks to this particular feature, these BELLOW CUPS are recommended for handling paper and cardboard sheets, thin metal sheets, wooden panels, glass sheets etc. Thanks to their great flexibility, they can also be used to compensate flatness errors or for gripping on inclined surfaces. Their anodised aluminium supports are provided with a threaded male or female central pin to allow suction and to fasten it to the machine.

The cups can be assembled onto them with no adhesives. For the spare part, all you have to do is request the cup indicated in the table in the desired compound.





CUPS								
Δrt	Force	Α	В	С	D	E	F	Н
Altu	Kg	Ø	Ø	Ø	Ø			
01 22 19 *	0.95	14.5	5.0	11.0	22	4	5.5	19
01 34 26 *	2.26	14.5	5.0	17.0	34	4	5.5	26
01 43 28 *	3.62	20.0	6.5	21.5	43	4	7.0	28
01 53 35 *	5.51	27.0	10.5	30.5	53	6	9.5	35

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



MALE	SUPPO	ORTS									
Art	Α	В	С	D	Е	F	G	Н	Support	Cup	Weight
Alti	Ø		Ø	Ø					material	art.	g
00 08 133	14.5	13	G1/8"	8.5	5.5	8	5.0	18.5	aluminium	01 22 19	3.5
										01 34 26	
00 08 135	20.0	17	G1/4"	10.0	7.5	12	7.5	27.0	aluminium	01 43 28	9.5
00 08 142	27.0	22	G1/4"	14.0	7.5	12	9.5	29.0	aluminium	01 53 35	15.7



drawings available at www.vuototecnica.net

3D

X

CUPS	WITH	MALE	SU	PPOR	Г							
Art	Force	Α	В	C	D	Е	F	G	Н	Сир	Support	Weight
Altu	Kg	Ø		Ø	Ø					Art.	Art.	g
08 22 19 *	0.95	14.5	13	G1/8"	22	5.5	8	19	32.5	01 22 19	00 08 133	6.2
08 34 26 *	2.26	14.5	13	G1/8"	34	5.5	8	26	39.5	01 34 26	00 08 133	15.2
08 43 28 *	3.62	20.0	17	G1/4"	43	7.5	12	28	47.5	01 43 28	00 08 135	18.5
08 53 35 *	5.51	27.0	22	G1/4"	53	7.5	12	35	54.5	01 53 35	00 08 142	33.3

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

REINFORCED BELLOW CUPS WITH FEMALE SUPPORT



CUPS								
Art	Force	А	В	С	D	E	F	Н
AIL.	Kg	Ø	Ø	Ø	Ø			
01 22 19 *	0.95	14.5	5.0	11.0	22	4	5.5	19
01 34 26 *	2.26	14.5	5.0	17.0	34	4	5.5	26
01 43 28 *	3.62	20.0	6.5	21.5	43	4	7.0	28
01 53 35 *	5.51	27.0	10.5	30.5	53	6	9.5	35

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



Х

FEMA	E SUP	PORT	S								
Art	А	В	C	D	Е	F	G	Н	Support	Сир	Weight
Alta	Ø		Ø	Ø					material	art.	g
00 08 132	14.5	13	G1/8"	8.5	8	12	5.0	17.0	aluminium	01 22 19	3.8
										01 34 26	
00 08 134	20.0	17	G1/4"	10.0	10	14	7.5	21.5	aluminium	01 43 28	8.3
00 08 141	27.0	22	G1/4"	14.0	10	14	9.5	23.5	aluminium	01 53 35	19.7



CUPS W	ITH FEN	/IALE	SUP	PORT								
Art	Force	Α	В	С	D	Е	F	G	Η	Сир	Support	Weight
Alu	Kg	Ø		Ø	Ø					Art.	Art.	g
08 22 19 F *	0.95	14.5	13	G1/8"	22	8	12	19	31	01 22 19	00 08 132	6.5
08 34 26 F *	2.26	14.5	13	G1/8"	34	8	12	26	38	01 34 26	00 08 132	9.5
08 43 28 F *	3.62	20.0	17	G1/4"	43	10	14	28	42	01 43 28	00 08 134	17.3
08 53 35 F *	5.51	27.0	22	G1/4"	53	10	14	35	49	01 53 35	00 04 141	37.3

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$ GAS - NPT

GAS - NPT thread adapters available at page 1.117

3D drawings available at www.vuototecnica.net

REINFORCED BELLOW CUPS WITH SUPPORT

The cups described in these pages share the same features with the previously described BELLOW CUPS, only these have larger dimensions that allow them to lift much heavier loads; moreover, their anodised aluminium supports also have a central threaded hole for their fastening to the machine. The larger ones also have an additional side hole for vacuum connection. The difference is that these supports are provided with a disc instead of with a pin. These cups can be cold-assembled onto their supports with

These cups can be cold-assembled onto their supports with no adhesives.

For the spare part, all you have to do is request the cup indicated in the table in the desired compound.





CUP								
Δrt	Force	Α	В	С	D	G	Н	М
Art.	Kg	Ø	Ø	Ø	Ø			Ø
01 75 42 *	11.93	59	54	45	78	22.5	42	56

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



SUPPO	ORTS							
Δrt	Α	В	D	E	Н	Support	Сир	Weight
Art.	Ø	Ø	Ø			material	art.	g
00 08 126	45	M12	54	3	10	aluminium	01 75 42	45.5
00 08 143	45	G1/2"	54	3	10	aluminium	01 75 42	41.5



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_	CUPS WITH	SUPPOR	Т							
) _	Δrt	Force	Α	В	D	G	Н	Сир	Support	Weight
		Kg	Ø	Ø	Ø			Art.	Art.	g
0	8 75 42 *	11.93	59	M12	78	22.5	42	01 75 42	00 08 126	94.8
0	8 75 42 1/2" *	11.93	59	G1/2"	78	22.5	42	01 75 42	00 08 143	90.8

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

REINFORCED BELLOW CUPS WITH SUPPORT



SUPPORTS В С D Ε Ν Н Support Cup Weight А Art. Ø Ø Ø Ø material art. g 00 08 162 61 G1/2' G1/8" 70 3 23 10 aluminium 01 110 58 78.9 00 08 163 98 G1/2" G1/8" 107 3 35 10 aluminium 01 150 74 211.8



D

CUPS	WITH S	UPPOI	RT							
Δrt	Force	Α	В	С	D	Н	Ν	Cup.	Support	Weight
Art.	Kg	Ø	Ø	Ø	Ø			Art.	Art.	g
08 110 58 *	23.70	75	G1/2"	G1/8"	110	58	23	01 110 58	00 08 162	190.7
08 150 74 *	45.00	112	G1/2"	G1/8"	150	74	35	01 150 74	00 08 163	458.7

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

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BELLOW CUPS FOR GLASS WITH SUPPORT

This range of cups has been designed for gripping vertically stocked glass sheets.

By laying the cup on the glass surface and opening the vacuum, the sheet will place itself orthogonally to the floor perfectly adhering to the cup internal face. The glass sheet can then be handled in any direction in full safety. Their aluminium aluminium support has a central threaded hole for fastening it to the machine and for the vacuum connection.

The cups can be cold-assembled onto their support with no adhesives.



0010									
Art	Force	А	В	С	D	G	Н	Μ	Ν
AIL.	Kg	Ø	Ø	Ø	Ø			Ø	Ø
01 150 55 *	45.00	78	70	58	150	33	55	120	125
01 210 60 *	86.50	138	130	118	210	38	61	180	185

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



SUPPOF	RTS								
Art	А	В	C	D	E	Н	Support	Сир	Weight
ALC	Ø	Ø	Ø	Ø			material	art.	g
00 08 280	35	G1/2"		70	12.5	22.5	aluminium	01 150 55	120
00 08 281	65	G1/2"		130	12.5	23.5	aluminium	01 210 60	465
00 08 286	35		8	70	12.5	22.5	aluminium	01 150 55	125
00 08 287	65		8	130	12.5	23.5	aluminium	01 210 60	470

3D



CUPS WITH SUPPOR	1
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Art	Force	А	В	С	D	G	Н	Сир	Support	Weight
ALC.	Kg	Ø	Ø	Ø	Ø			Art.	Art.	g
08 150 5 <mark>5 *</mark>	45.00	78	G1/2"		150	33	60	01 150 55	00 08 280	245
08 210 6 <mark>0 *</mark>	86.50	138	G1/2"		210	38	67	01 210 60	00 08 281	650
08 150 5 <mark>6 *</mark>	45.00	78		8	150	33	60	01 150 55	00 08 286	250
08 210 6 <mark>1 *</mark>	86.50	138	>	8	210	38	67	01 210 60	00 08 287	655

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

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1.52



VACUUM CUP WITH ONE BELLOW AND WITH VULCANISED SUPPORT

The cups described in this page, unlike the previous ones, are vulcanised onto an aluminium hexagonal support with a male or female threaded connector, inside of which there is an M8 threaded hole for the possible insertion of a calibrated grub screw (see page 1.118).

The main feature of these BELLOW CUPS is that they quickly crumple up during the grip, thus lifting the load for a few centimetres, independently of the movements of the lifting frame; this quick movement avoids that the load beneath, remains stuck to the lifted one.

Due to this feature they are particularly suited for handling thin metal sheets, glass sheets, chipboard or compressed wood panels, laminated plastic etc.

Due to their high flexibility they can also be used to compensate flatness errors or for the grip of inclined surfaces.

These cups are available in the standard compounds and can be supplied in special compounds listed at page 21 in minimum amounts to be defined in the order.





CUPS WITH ONE BELLOW WITH FEMALE VULCANISED SUPPORT

Art	Force	D	E	F	G	Н	Support	Weight
Alta	Kg	Ø					material	g
08 40 30 *	3.14	40	35	17	18	52	aluminium	32.4
08 50 30 *	4.90	50	37	17	20	54	aluminium	40.9
08 60 30 *	7.06	60	39	17	21	56	aluminium	53.6
08 85 30 *	14.08	85	50	17	31	67	aluminium	122.0

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



				N	P 1			
CUPS W	ITH ONE BEL	LOW WITH MALE V	ULCANISED S	UPPORT				
Art.	Force	D	E	F	G	н	Support	Weight
Alta	Kg	Ø					material	g
08 40 30 M *	3.14	40	35	13.5	18	56.5	aluminium	29.1
08 50 30 M *	4.90	50	37	13.5	20	58.5	aluminium	39.0
08 60 30 M *	7.06	60	39	13.5	21	<mark>60</mark> .5	aluminium	51.2
08 85 30 M *	14.08	85	50	13.5	31	71.5	aluminium	115.0

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$

3D drawings available at www.vuototecnica.net

1.53

VACUUM CUP WITH TWO BELLOWS AND WITH VULCANISED SUPPORT

These cups are the same as the ones described in the previous page, only with an additional bellow. The technical features and availability are the same. A M8 Hex. 20 13 F



CUPS WITH TWO BELLOWS WITH VULCANISED FEMALE SUPPORT

Δrt	Force	А	D	E	F	G	Н	Support	Weight
Ald	Kg	Ø	Ø					material	g
08 40 60 *	3.14	G1/4"	40	52	17	35	69	aluminium	39.6
08 50 50 *	4.90	G1/4"	50	55	17	38	72	aluminium	49.6
08 60 50 *	7.06	G1/4"	60	58	17	41	75	aluminium	72.4
08 60 50M12 *	7.06	M12	60	58	17	41	75	aluminium	73.0
08 85 50 *	14.08	G1/4"	85	78	17	58	95	aluminium	168.0
08 85 50M12 *	14.08	M12	85	78	17	58	95	aluminium	169.0

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



CUPS WITH TWO BELLOWS WITH VULCANISED MALE SUPPORT

vw.vuototecnica.net				Н		G	E		
at wv	CUPS WI	TH TWO BE	LLOWS WITH VUL		SUPPORT	0		Quant	W/- :
able	Art.	Force Kg	Ø	E	F	G	Н	material	g
vail	08 40 60M *	3.14	40	52	13.5	35	73.5	aluminium	35.5
s a	08 50 50 <mark>M *</mark>	4.90	50	55	13.5	38	76.5	aluminium	49.3
ing	08 60 50 <mark>M *</mark>	7.06	60	58	13.5	41	79.5	aluminium	66.0
draw	08 85 50 <mark>M *</mark>	14.08	85	78	13.5	58	99.5	aluminium	157.0

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

1.54

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BELLOW CUP WITH VULCANISED SUPPORT

The main feature of these BELLOW CUPS is that they quickly crumple up during the grip, thus lifting the load for a few centimetres, independently of the movements of the lifting frame; this quick movement avoids that the load beneath, remains stuck to the lifted one.

Due to this feature they are particularly suited for handling thin metal sheets, glass sheets, chipboard or compressed wood panels, laminated plastic etc.

Due to their high flexibility they can also be used to compensate flatness errors or for the grip of inclined surfaces.

These BELLOW CUPS are vulcanised onto a galvanised steel or aluminium support provided with a central threaded hole for fastening it to the machine and a side one for the vacuum connection or for detecting the vacuum level. Also these cups are available in the three standard compounds.





BELLOW	CUP WITI	H VULCA	NISED SU	PPORT								
Art	Force	Α	В	С	D	E	G	Н	М	N	Support	Weight
ALC	Kg	Ø	Ø	Ø	Ø				Ø		material	Kg
8 110 30 *	23.7	78	65	G1/8"	110	10	23	45	55	23	steel	0.35
8 150 30 *	45.0	78	65	G1/8"	150	10	33	60	75	23	steel	0.49
0 100 00			00	C1/0"	190	10	33	70	84	30	steel	0.81
8 180 30 *	63.5	94	80	61/6	100	10	00	10	0.	00	01001	0101

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Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$ GAS - NPT thread adapters available at page 1.117

SPECIAL CUPS WITH SUPPORT

These cups have been designed to solve many of the gripping and handling problems we have encountered in over thirty years of activity. They differ from all the other cups for the variety of their shapes. They are suited for gripping CDs, labels, bags, paper or plastic sheets, stickers, cardboard, metal and plastic objects, biscuits, chocolates, etc. Their nickel-plated brass or anodised aluminium supports are provided with a threaded male or female pin to enable suction and to fasten them to the machine. These cups can be manually assembled onto their supports with no adhesives. They are available in the standard compounds, but they can also be provided in the special compounds listed at page 21 in minimum amounts to be defined in the order.







Cup	Force	Support	Support	Weight	Cup with support	Weight
Art.	Kg	Art.	material	g	Art.	g
01 07 13 *	0.10	00 08 236	brass	3	08 07 13 *	3.6

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

1.56



SPECIAL CUPS WITH SUPPORT



* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



 * Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

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GAS - NPT thread adapters available at page 1.117





* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

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1.58





* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$ GAS - N

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GAS - NPT thread adapters available at page 1.117





* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

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* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$ GAS - NPT thread adapters available at page 1.117

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SPECIAL CUPS WITH SUPPORT



* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

1.62



Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

SPECIAL CUPS WITH SUPPORT



* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

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* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

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1.64

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$





* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6}$ = $\frac{\text{Kg}}{0.4536}$ GAS - NPT thread a

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SPECIAL CUPS WITH SUPPORT



Cup	Force	Support	Support	Weight	Cup with support	Weight
Art.	Kg	Art.	material	g	Art.	g
01 22 45 *	0.95	00 08 10	brass	30.3	08 22 45 *	35.4

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

1.66



Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

SPECIAL CUPS WITH SUPPORT



* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



Cup with vulcanised support	Force	Support	Weight
art.	Kg	material	g
08 25 22 *	1.23	steel	5.0

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6}$ = $\frac{\text{Kg}}{0.4536}$ GAS - NPT thread adapters available at page 1.117

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* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

GAS - NPT thread adapters available at page 1.117

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

3D drawings available at www.vuototecnica.net

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SPECIAL CUPS WITH SUPPORT



* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

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GAS - NPT thread adapters available at page 1.117



Cup	Force	Support	Support	Weight	Cup with support	Weight
Art.	Kg	Art.	material	g	Art.	g
01 32 30 *	2.00	00 08 250	aluminium	8.6	08 32 30 *	14.5

Support

Art.

00 08 19

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



Force

Kg

2.00



Support

material

brass

Weight

g

22.7



Cup with support

Art.

08 32 36 *

Weight

g

27.8

Cup

Art.

01 32 36 *



1.70

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$




* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

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GAS - NPT thread adapters available at page 1.117



Cup	Force	Support	Support	Weight	Cup with support	Weight
Art.	Kg	Art.	material	g	Art.	g
01 40 25 *	3.14	00 08 127	aluminium	15.2	08 40 24 *	24.7

Support

Art.

00 08 09

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



Support

material

aluminium

Weight

g

18.1

X

Cup

Art.

01 40 70 *

Force

Kg

3.14

- 1.72

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

GAS - NPT thread adapters available at page 1.117

Cup with support

Art.

08 40 70 *

Weight

g



Cup	Force	Support	Support	Weight	Cup with support	Weight
Art.	Kg	Art.	material	g	Art.	g
01 48 18 *	4.52	00 08 81	aluminium	8.8	08 48 18 *	17.5



Cup	Force	Support	Support	Weight	Cup with support	Weight
Art.	Kg	Art.	material	g	Art.	g
1 50 20 *	1 00	00.08.24	aluminium	10.0	00 50 00 *	20.2
Complete the c	code indicating the com	pound: A= oil-resistant rubber	; N= natural para rubber; S= si	licon	08 50 20	20.3

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

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GAS - NPT thread adapters available at page 1.117



Cup	Force	Support	Support	Weight	Cup with support	Weight
Art.	Kg	Art.	material	g	Art.	g
01 54 18 *	5.72	00 08 248	aluminium	5.8	08 54 18 *	16.4



Cup	Force	Support	Support	Weight	Cup with support	Weight
Art.	Kg	Art.	material	g	Art.	g
01 65 28 *	8.20	00 08 24	aluminium	10.3	08 65 28 *	26.0

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

1.74

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

SPECIAL BELLOW CUPS WITH SUPPORT

The main feature of these BELLOW CUPS is that they crumple up when in contact with surface to be gripped and in presence of a vacuum, thus creating a quick lifting movement independently from the machine. This rapid movement prevents the load beneath from remaining stuck to the lifted one. Due to their high flexibility they can also be used to compensate flatness errors or for the grip of inclined surfaces. The cups shown in these pages are the ideal solution for our customers; in fact,

they have been designed for handling biscuits, chocolate, eggs, stickers, labels, metal and plastic objects, laminated plastic, paper and plastic bags, etc. Their nickel-plated brass or anodised aluminium supports are provided with a central male or female threaded pin that enables suction and allows to fasten them to the machine.

These cups can be manually assembled onto their supports with a simple pressure and with no adhesives.

They are available in the standard compounds and in the special ones listed at page 21 upon request.





* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

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1.75





* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

1.76

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$





* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

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GAS - NPT thread adapters available at page 1.117





* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

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1.78





* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

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GAS - NPT thread adapters available at page 1.117





* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

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* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

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SPECIAL BELLOW CUPS WITH SUPPORT



* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

1.82



Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

SPECIAL BELLOW CUPS WITH SUPPORT



* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

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GAS - NPT thread adapters available at page 1.117





* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

X

1.84



Cup	Force	Support	Support	Weight	Cup with support	Weight
Art.	Kg	Art.	material	g	Art.	g
01 20 60 *	0.78	00 08 61	brass	6.5	08 20 61 *	10.7



Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

Cup

Art.

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GAS - NPT thread adapters available at page 1.117



Cup	Force	Support	Support	Weight	Cup with support	Weight
Art.	Kg	Art.	material	g	Art.	g
01 25 35 *	1.23	00 08 15	aluminium	12.3	08 25 35 *	17.3



Cup with vulcanised support	Force	Support	Weight
art.	Kg	material	g
08 25 40 *	1.23	steel	13.0

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



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Cup	Force	Support	Support	Weight	Cup with support	Weight
Art.	Kg	Art.	material	g	Art.	g
01 30 50 *	1.76	00 08 50	aluminium	8.5	08 30 50 F *	16.1







Cup	Force	Support	Support	Weight	Cup with support	Weight
Art.	Kg	Art	material	g	Art	g
01 30 99 *	1.76	00 08 18	aluminium	10.3	08 30 99 *	18.5

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



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GAS - NPT thread adapters available at page 1.117

1.87

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Cup	Force	Support	Support	Weight	Cup with support	Weight
Art.	Kg	Art.	material	g	Art.	g
01 30 99 *	1.76	00 08 50	aluminium	8.5	08 30 99 F *	16.7



Cup	Force	Support	Support	Weight	Cup with support	Weight
Art.	Kg	Art.	material	g	Art.	g
01 30 55 *	1.76	00 08 18	aluminium	10.3	08 30 55 *	23.1

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

1.88

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Cup	Force	Support	Support	Weight	Cup with support	Weight
Art.	Kg	Art.	material	g	Art.	g
01 30 55 *	1.76	00 08 50	aluminium	8.5	08 30 55 F *	21.3









* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

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Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$ GAS

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GAS - NPT thread adapters available at page 1.117

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Cup	Force	Support	Support	Weight	Cup with support	Weight
Art.	Kg	Art.	material	g	Art.	g
01 42 90 *	3.00	00 08 05	brass	10.0	08 42 90 *	34.5



Cup	Force	Support	Support	Weight	Cup with support	Weight
Art.	Kg	Art.	material	g	Art.	g
01 42 90 *	3.00	00 08 14	brass	9.8	08 42 90 F *	34.3

Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$

GAS - NPT thread adapters available at page 1.117

* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

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Cup	Force	Support	Support	Weight	Cup with support	Weight
Art.	Kg	Art.	material	g	Art.	g
01 50 70 *	4.90	00 08 148	aluminium	14.5	08 50 70 *	36.8



Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6}$ = $\frac{\text{Kg}}{0.4536}$ GAS - NPT

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GAS - NPT thread adapters available at page 1.117

SPECIAL BELLOW CUPS WITH SUPPORT



* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



* Complete the code indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

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In the following pages are listed the cups for which each support is suited. They are specially shaped to perfectly adhere to the internal profile of the cups and they are provided with a male or female axial pin in order to allow suction, as well

as to fasten them to the machine. These cups can be manually assembled onto them with a simple pressure, with no adhesives. They are made with nickel-plated brass or anodised aluminium or with special materials upon request.

Hex. 7

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Δrt	D	E	F	G	Н	Support	Сир	Weight
ALC	Ø					material	art.	g
00 08 01	2.90	3	5	10	18	brass	01 04 10	4.0
							01 05 10	
							01 06 10	
00 08 02	4.75	3	5	10	18	brass	01 08 10	4.0
							01 09 07	

Art.	D	E	F	G	Н	Support	Сир	Weight
	Ø					material	art.	g
00 08 03	5.5	5	8	7	20	brass	01 10 10	9.0
							01 11 16	
							01 12 10	
							01 14 10	
							01 14 32	
							01 15 10	
							01 16 20	
							01 17 12	
							01 18 10	
							01 20 10	
							01 20 24	
							01 22 10	
							01 25 28	







Convertion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6}$ = $\frac{\text{Kg}}{0.4536}$ GAS-NPT

GAS-NPT thread adapters available at page 1.117

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Δrt	D	E	F	G	Н	Support	Сир	Weight
ла	Ø					material	art.	g
00 08 05	7.5	5	8	9.5	22.5	brass	01 15 15	10.0
							01 25 15	
							01 30 15	
							01 40 80	
							01 42 90	



Art	D	E	F	G	Н	Support	Сир	Weight
Alt	Ø					material	art.	g
00 08 06	5.25	4.5	4	8.5	17	brass	01 06 50	2.6
							01 08 50	
							01 11 50	
							01 11 16	
							01 16 20	
							01 17 12	



Art.	D	E	F	Н	Support	Сир	Weight
Juu	Ø				material	art.	g
00 08 07	10	5	9.5	14.5	brass	01 18 50	4.8
						01 20 60	



Art.	D	E	F	Н	Support	Сир	Weight
7111	Ø				material	art.	g
80 80 00	12	4.5	10	14.5	brass	01 19 17	2.7
						01 25 10	
						01 30 10	
						01 35 10	
						01 35 10	



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Art	D	E	F	G	Н	Support	Сир	Weight
AIL.	Ø					material	art.	g
00 08 09	16	8	14	15	37	aluminium	01 19 31	18.1
							01 40 70	
							01 75 31	



GAS - NPT thread adapters available at page 1.117



Δrt	D	E	F	G	H	Support	Сир	Weight
Aitu	Ø					material	art.	g
00 08 10	10.5	8	14	14	36	brass	01 22 24	30.3
							01 22 45	
							01 22 99	



Art.	D	E	F	G	Н	Support	Cup	Weight
	Ø					material	art.	g
00 08 14	7.5	13	9	9.5	22.5	brass	01 25 15	9.8
							01 30 15	
							01 40 80	
							01 42 90	



Art.	D	E	F	G	Н	Support	Cup	Weight
00 08 15	12	8	14	15	37	aluminium	01 25 35	12.3
							01 27 24	
							01 30 24	



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Art.	D	E	F	G	Н	Support	Cup	Weight
	Ø					material	art.	g
00 08 18	9.5	8	14	10	32	aluminium	01 16 26	10.3
							01 30 50	
							01 30 55	
							01 30 99	
							01 40 50	

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

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Art.	D Ø	E	F	G	H	Support material	Cup art.	Weight g
00 08 19	9	5	12	18	35	brass	01 32 36	22.7



Δrt	D	E	F	G	Н	Support	Сир	Weight
Alta	Ø					material	art.	g
00 08 20	12	8	14	10	32	aluminium	01 35 15	11.0
							01 40 15	
							01 45 15	



Art	D	E	F	G	Н	Support	Cup	Weight
Art.	Ø					material	art.	g
00 08 21	12	17	13	10	27	aluminium	01 35 15	9.3
							01 40 15	
							01 45 15	



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Δrt	D	E	F	G	Н	Support	Сир	Weight
Alta	Ø					material	art.	g
00 08 22	25	10	14	7.5	25	aluminium	01 45 10	5.9
							01 60 10	



GAS - NPT thread adapters available at page 1.117



Art.	D	E	F	G	Н	Support	Cup	Weight
74.4	Ø					material	art.	g
00 08 24	12	8	14	12	34	aluminium	01 50 20	10.3
							01 65 28	



Art.	D	E	F	G	Н	Support	Сир	Weight
	Ø					material	art.	g
00 08 26	14.5	8	14	13.5	35.5	aluminium	01 52 50	13.5



Art.	D	E	F	G	Н	Support	Сир	Weight
	Ø					material	art.	g
00 08 28	25	12	14	8	37.3	aluminium	01 85 10	13.4





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Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$ GAS - NPT thread adapters available at page 1.117

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Convertion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$









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Art.	 Α	В	D	F	H	Support	Сир	Weight
AIG.	Ø	Ø	Ø			material	art.	g
00 08 46	15.5	G1/4"	25	18	23.5	aluminium	01 85 10	6.5



Art.	D	E	F	G	Н	Support	Сир	Weight
	Ø					material	art.	g
00 08 50	9.5	17	13	10	27	aluminium	01 16 26	8.5
							01 30 50	
							01 30 55	
							01 30 99	
							01 40 50	





Δrt	D	E	F	Н	Support	Сир	Weight
Aitu	Ø				material	art.	g
00 08 60	12	6.5	8	14.5	brass	01 19 17	5.6
						01 20 08	
						01 20 60	
						01 25 08	
						01 25 10	
						01 26 10	
						01 30 10	
						01 35 10	



	G1/8		
F E		_SW4	H
	Ø7 D		

Art	D	E	F	Н	Support	Сир	Weight
AIG	Ø				material	art.	g
00 08 61	10	4.5	10	14.5	brass	01 18 50	6.5
					01 20 60		

Art.	D	E	F	G	Н	Support	Сир	Weight
	Ø					material	art.	g
00 08 62	10	13	9	3	16	brass	01 18 50	9.4
							01 20 60	



Art	D	E	F	G	Н	Support	Сир	Weight
ALC	Ø					material	art.	g
00 08 64	6.5	13	10	7.5	20.5	brass	01 14 15	13.9
							01 15 23	
							01 18 12	
							01 18 23	
							01 18 29	
							01 18 35	

Art	D	E	F	G	Н	Support	Сир	Weight
ALL	Ø		Ø			material	art.	g
00 08 65	6.5	13	M5	7.5	20.5	brass	01 14 15	13.7
							01 15 23	
							01 18 12	
							01 18 23	
							01 18 29	
							01 18 35	





Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$ GAS - NPT thread adapters available at page 1.117

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Δrt	D	E	F	G	Н	Support	Cup	Weight
Alta	Ø		Ø			material	art.	g
00 08 66	6.5	13	M5	7.5	20.5	brass	01 14 15	13.5
							01 15 23	
							01 18 12	
							01 18 23	
							01 18 29	
							01 18 35	



Art	D	E	F	G	Н	Support	Сир	Weight
AIL.	Ø					material	art.	g
00 08 67	6.5	5	8	7.5	20.5	brass	01 14 15	11.4
							01 15 23	
							01 18 12	
							01 18 23	
							01 18 29	
							01 18 35	



Δrt	А	В	C	D	E	F	G	Н	Ν	Support	Сир	Weight
ли	Ø	Ø	Ø	Ø					Ø	material	art.	g
00 08 68	40	M12	23	35	7	10	18	25	20	aluminium	01 46 13	47.2
00 08 72	65	G3/8"	40	60	10	15	25	35	25	aluminium	01 73 14	169.1
00 08 73	76	G3/8"	51	71	10	15	27	37	25	aluminium	01 95 14	266.0



Art.	B Ø	E	F	Support material	Cup art.	Weight g
00 08 70	G1/8"	8.5	6.5	aluminium	01 12 20	5.4

Fixing plate art. 00 08 97

TSP perforated screw M3x5 art. 00 08 103

Note: By ordering art. 00 08 70 you will also receive the fixing plate and the TSP perforated screw



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Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$



Art	А	В	С	E	F	Support	Cup	Weight
Altu		Ø				material	art.	g
00 08 71	30	G1/8"	25	8.5	6.5	aluminium	01 12 30	7.8
00 08 75	40	G1/8"	35	8.5	6.5	aluminium	01 12 40	11.4
00 08 76	55	G1/8"	50	8.5	6.5	aluminium	01 12 50	15.5





Fixing plate art. 00 08 98 for supp. 00 08 71 art. 00 08 99 for supp. 00 08 75 art. 00 08 100 for supp. 00 08 76

2 TSP screws M3x5 art. 00 08 102

Note: By ordering the article associated with the support, the fixing plate and the TSP screws will also be provided.



٨+	D	E	F	G	Н	Support	Сир	Weight
AIL.	Ø					material	art.	g
00 08 81	22	8.5	14	3.5	22.5	aluminium	01 40 18	8.8
							01 48 18	
							01 54 18	



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Art.	D	E	F	G	Н	Support	Сир	Weight
	Ø					material	art.	g
00 08 82	8.5	5	8	9.5	22.5	brass	01 25 12	11.2
							01 33 50	

Art.	F	G	Н	Support	Сир	Weight
				material	art.	g
00 08 83	11	7.5	14.5	aluminium	01 56 15	67.4

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

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И	D	N
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		н
	С	

RING	NUT							
Art.	А	В	С	D	Н	Ring nut	Support	Weight
	Ø	Ø	Ø	Ø		material	art.	g
00 08 109	G1/4"	2.5	25.5	34	4.5	aluminium	00 08 108	9.8
00 08 111	G3/8"	2.5	25.5	34	4.5	aluminium	00 08 110	8.7
00 08 113	G3/8"	4.0	45.0	69	6.0	aluminium	00 08 112	58.2



SUPPO	DRT								
Δrt	А	D	Е	F	G	Н	Support	Cup	Weight
Alta	Ø	Ø					material	art.	g
00 08 108	G1/4"	35	9	19.5	4.5	33.0	aluminium	01 76 24	21.4
								01 90 24	
								01 110 24	
00 08 110	G3/8"	35	9	19.5	4.5	33.0	aluminium	01 76 24	25.0
								01 90 24	
								01 110 24	
00 08 112	G3/8"	69	15	22.0	5.5	42.5	aluminium	01 150 36	73.9

Note: By ordering the support, you will automatically receive its associated ring nut.

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3D drawings available at www.vuototecnica.net



Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$




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Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6}$ = $\frac{\text{Kg}}{0.4536}$ GAS - NPT thread adapters available at page 1.117

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Art	D	E	F	G	Н	Support	Сир	Weight
Alta	Ø					material	art.	g
00 08 127	13.5	8	14	15	37	aluminium	01 40 25	24.7
							01 56 30	
							01 75 30	



Δrt	D	E	F	G	Н	Support	Сир	Weight
ALC	Ø					material	art.	g
00 08 132	8.5	12	8	5	17	aluminium	01 20 23	3.8
							01 22 19	
							01 34 26	



Art	D	E	F	G	Н	Support	Сир	Weight
Alt	Ø					material	art.	g
00 08 133	8.5	5.5	8	5	18.5	aluminium	01 20 23	3.5
							01 22 19	
							01 34 26	



Δrt	D	E	F	G	Н	Support	Сир	Weight
AI 6	Ø					material	art.	g
00 08 134	10	14	10	7.5	21.5	aluminium	01 30 32	8.3
							01 40 42	
							01 43 28	

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

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GAS - NPT thread adapters available at page 1.117



Art.	E	F	G	Н	Support	Сир	Weight
Alta					material	art.	g
00 08 135	7.5	12	7.5	27	aluminium	01 30 32	9.5
						01 40 42	
						01 43 28	



Art.	E	F	G	Н	Support	Сир	Weight
					material	art.	g
00 08 136	12	14	8	37.3	aluminium	01 85 10	9.2



Art.	E	F	G	Н	Support	Сир	Weight
					material	art.	g
00 08 141	14	10	9.5	23.5	aluminium	01 50 53	19.7
						01 53 35	



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Art.	E	F	G	Н	Support	Сир	Weight
74.4					material	art.	g
00 08 142	7.5	12	9.5	29	aluminium	01 50 53	15.7
						01 53 35	



GAS - NPT thread adapters available at page 1.117





Art	D	E	F	G	Н	Support	Сир	Weight
Alt	Ø					material	art.	g
00 08 146	8	5	8	5	18	brass	01 20 12	9.8
							01 20 14	
							01 20 15	



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Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$ GAS - NPT thread adapters available at page 1.117

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Art.	В	D	Н	Support	Сир	Weight
Art.	Ø	Ø		supporto	art.	g
00 08 147	M12	40	10	aluminium	01 42 15	32.8



Art.	D	E	F	G	Н	Support	Cup	Weight
	Ø					material	art.	g
00 08 148	12	7.5	12	15	34.5	aluminium	01 50 70	14.5



Art	D	E	F	G	Н	Support	Сир	Weight
ALC	Ø					material	art.	g
00 08 155	8	13	9	5	18	brass	01 20 12	9.1
							01 20 14	
							01 20 15	







Art	С	E	F	G	Н	Support	Сир	Weight
Alt	Ø					material	art.	g
00 08 172	M8	8	14	15	37	aluminium	01 40 25	15.2
							01 56 30	
							01 75 30	

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Art	А	В	D	E	F	Н	Support	Сир	Weight
Alta	Ø	Ø	Ø				material	art.	g
00 08 232	15	G1/8"	30	10	4	14	aluminium	01 24 06	16.7



Art.	D	E	F	G	Н	Support	Сир	Weight
Alta	Ø					material	art.	g
00 08 236	8	5	5	5	15	brass	01 07 13	3.0



Art.	D	E	F	G	Н	Support	Сир	Weight
	Ø					material	art.	g
00 08 237	6	5	5	4	14	brass	01 08 07	3.0



Δrt	D	E	F	G	Н	Support	Сир	Weight
Art.	Ø					material	art.	g
00 08 238	5.7	7	7	6	20	brass	01 11 08	7.0



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Art.	D	E	F	G	Н	Support	Сир	Weight
74.4	Ø					material	art.	g
00 08 239	4	5	8	6.5	19.5	brass	01 14 09	8.0



Art.	D	E	F	G	Н	Support	Сир	Weight
AIL.	Ø					material	art.	g
00 08 240	4	13	9	6.5	19.5	brass	01 14 09	7.0

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

GAS - NPT thread adapters available at page 1.117



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Art.	D Ø	F	H	Support material	Cup Art.	Weight a
00 08 241	8	9	10	brass	01 15 04	1.5

Δrt	D	F H		Support	Сир	Weight	
Art.	Ø			material	Art.	g	
00 08 242	11	9	9.5	brass	01 20 04	1.8	

Art.	D	F	Н	Support	Сир	Weight	
	Ø			material	Art.	g	
00 08 243	15	10	13	brass	01 20 06	6.0	

Art.	D	E	F	Н	Support	Сир	Weight
Art.	Ø				material	Art.	g
00 08 244	14	6.5	8	14.5	brass	01 35 12	5.9

Art	D	E	F	G	Н	Support	Сир	Weight
Art.	Ø					material	Art.	g
00 08 245	6.5	4.5	6	8	18.5	brass	01 20 11	2.7

Art.	D	F	Н	Support	Cup	Weight
AIL.	Ø			material	Art.	g
00 08 246	14	8	10	brass	01 22 06	5.0

Art.	D	F	Н	Support	Сир	Weight
AIL.	Ø			material	Art.	g
00 08 247	14	8	17	brass	01 40 14	8.4

Conversion ratio: inch = $\frac{\text{mm}}{25.4}$, pounds = $\frac{\text{g}}{453.6}$ = $\frac{\text{Kg}}{0.4536}$ GAS - NPT thread adapters available at page 1.117

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Art	D	F	Н	Support	Сир	Weight
ALC.	Ø			material	art.	g
00 08 248	24	14	23.5	aluminium	01 54 18	5.8



Art.	D	E	F	Н	Support	Сир	Weight
AIL.	Ø				material	art.	g
00 08 249	8	8.5	5	13.5	brass	01 31 12	1.8



Art.	D	F	Н	Support	Сир	Weight
	Ø			material	art.	g
00 08 250	21	14	23	aluminium	01 32 30	8.6









SUPPO	RTS								
Δrt	А	В	C	D	E	Н	Support	Сир	Weight
Alt	Ø	Ø	Ø	Ø			material	art.	g
00 08 280	35	G1/2"		70	12.5	22.5	aluminium	01 150 55	120
00 08 281	65	G1/2"		130	12.5	23.5	aluminium	01 210 60	465
00 08 286	35		8	70	12.5	22.5	aluminium	01 150 55	125
00 08 287	65		8	130	12.5	23.5	aluminium	01 210 60	470



GAS - NPT ADAPTERS

These adapters allow using NPT threaded fittings on vacuum components with gas threads, such as cups, valves and solenoid valves, filtres etc.

FEMA	LE GAS - M	ALE NPT	ADAPTER					
Δrt	Α	D	E	F	Н	Т	Adapter	Weight
Alt	Ø	Ø					material	g
00 08 259	1/8" NPT	G1/8"	10	12	22	14	brass	10
00 08 260	1/4" NPT	G1/4"	11	13	24	20	brass	15
00 08 261	3/8" NPT	G3/8"	12	14	26	22	brass	28
00 08 262	1/2" NPT	G1/2"	14	16	30	25	brass	47
00 08 263	3/4" NPT	G3/4"	14	16	30	34	brass	60
00 08 264	1" NPT	G1"	15	20	35	42	brass	92
00 08 265	1" 1/4 NPT	G1" 1/4	15	20	35	52	brass	132
00 08 266	1" 1/2 NPT	G1" 1/2	16	20	36	60	brass	200
00 08 267	2" NPT	G2"	16	20	36	72	brass	277



MALE GAS - FEMALE NPT ADAPTER

Art	А	D	E	F	Н	Т	Adapter	Weight
ALL	Ø	Ø					material	g
00 08 268	G1/8"	1/8" NPT	10	12	22	14	brass	10
00 08 269	G1/4"	1/4" NPT	11	13	24	20	brass	15
00 08 270	G3/8"	3/8" NPT	12	14	26	22	brass	28
00 08 271	G1/2"	1/2" NPT	14	16	30	25	brass	47
00 08 272	G3/4"	3/4" NPT	14	16	30	34	brass	60
00 08 273	G1"	1" NPT	15	20	35	42	brass	92
00 08 274	G1" 1/4	1" 1/4 NPT	15	20	35	52	brass	132
00 08 275	G1" 1/2	1" 1/2 NPT	16	20	36	60	brass	200
00 08 276	G2"	2" NPT	16	20	36	72	brass	277



1.117

3D drawings available at www.vuototecnica.net

THREADED GRUB SCREW WITH CALIBRATED HOLE

These threaded grub screws with calibrated hole are used to reduce the cup suction section, thus reducing vacuum losses in case the cup fails to grip.

They are made with brass and can be inserted in all the cup supports set for this application.





Art	Α	D	F	Н	Grub screw	Weight
AIL.	Ø	Ø			material	g
00 08 122	M8	0.9	5	11	brass	2.5
00 08 121	M8	1.2	5	11	brass	2.4
00 08 120	M8	1.5	5	11	brass	2.3
Art	A	D	F	Н	Grub screw	Weight
AIL.	Ø	Ø			material	g
00 08 164	G1/8"	1.2	5	11	brass	3.0
00 08 165	G1/8"	1.5	5	11	brass	3.0
00 08 176	G1/4"	1.2	5	11	brass	4.0

REDUCTION

These standard accessories provide various cup assembly options.

These brass or galvanised steel reductions screwed onto the cup standard support connectors can vary the thread from gas to metric or vice-versa, from male to female or vice-versa, and they can also increase or reduce the size of their threaded diameter.

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D

Н



Art	D	d	Н	Support	Weight
ALL	Ø	Ø		material	g
00 08 130	G1/4"	M10	14	steel	4.0
00 08 131	G3/8"	M10	14	steel	12.0
00 08 230	G3/8"	G1/4"	14	steel	6.0
00 08 254	1/4" NPT	M10	14	steel	3.9
00 08 255	3/8" NPT	M10	14	steel	11.9
00 08 258	3/8" NPT	G1/4"	14	steel	5.9



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3D drawings available at www.vuototecnica.net

X

MM RI	EDUCTION	l					
Art.	D	E	F	G	Н	Reduction	Weight
AIL.	Ø					material	g
00 08 129	M12	15	14	11	40	brass	4.0

FF REDUCTION FOR GS ARTICULATED JOINT

Δrt	D	E	F	G	Н	Reduction	Weight
Alta	Ø			Ø		material	g
00 08 54	M10	13	13.5	M5	36	brass	72
00 08 251	M8	16	15.0	G1/8"	48	brass	102
00 08 252	M12	16	15.0	G1/8"	48	brass	90

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

GAS - NPT thread adapters available at page 1.117

MAXIGRIP CUP REDUCTIONS



MF RE	EDUCTIONS	FOR VRP CUP	S			
Art.	D	d	F	Н	SW	Weight
Altu	Ø	Ø				g
00 08 215	G3/8"	G1/4"	8	14	6	11.5



MF RE	EDUCTIONS	FOR VRS - VE	P - VES CUP	S		
Art	D	d	F	Н	SW	Weight
Alta	Ø	Ø				g
00 08 216	G3/8"	G1/4"	8	11.5	6	6.0



MM RI	EDUCTION	S FOR VRP CUP	S			
Δrt	D	d	E	F	SW	Weight
Aitu	Ø	Ø				g
00 08 217	G1/4"	G1/4"	15	10	6	16.7
00 08 218	G1/4"	M10 x 1.5	15	12	6	10.2
00 08 219	G1/4"	M14 x 1.5	15	12	6	16.0
00 08 220	G3/8"	G1/4"	14	10	6	18.4
00 08 221	G3/8"	M10 x 1.5	14	12	6	16.3
00 08 222	G3/8"	M14 x 1.5	14	12	6	22.5

MM R	EDUCTION	S FOR VRS - VE	P - VES CUP	S		
Art	D	d	E	F	SW	Weight
Alt	Ø	Ø				g
00 08 223	G1/4"	G1/4"	11.5	10	6	13.9
00 08 224	G1/4"	M10 x 1.5	13.0	12	6	10.1
00 08 225	G1/4"	M14 x 1.5	13.0	12	6	15.8
00 08 226	G3/8"	G1/4"	10.5	11	6	16.6
00 08 227	G3/8"	M10 x 1.5	10.5	13	6	14.2
00 08 228	G3/8"	M14 x 1.5	10.5	13	6	20.2





Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

X

GAS - NPT thread adapters available at page 1.117

SELF-LOCKING CUPS WITH TRACTION RELEASE

These cups do not require a connection to any vacuum source, since the object onto which they are laid on evacuates the air inside them. A built-in non-return valve prevents the air from entering again, thus maintaining the vacuum. To release the piece, it is sufficient to lift it a few millimetres, so to open the non-return valve, which restores the atmospheric pressure inside the cup, by letting the air in.

Since possible losses cannot be recovered, these cups a recommended only for holding objects with smooth and impermeable surfaces, such as glass, polished sheets, and other similar objects. They are particularly suited for glass carrying trolleys feeding trolleys for robotic systems. They are made with nickel-plated brass with a steel drive bush, which can be provided in the anti-rotation version upon request.





SPARE CUPS WITH VULCANISED SUPPORT

Art	Force	Α	В	D	E	G	Н	Support	Weight
	Kg	Ø	Ø	Ø				material	g
08 50 40 *	4.90	31	G3/8"	50	16.0	6.5	29.0	steel	38.5
08 75 40 *	11.04	31	G3/8"	75	25.0	9.0	38.0	steel	57.9
08 100 40 *	19.62	32	G3/8"	100	26.0	9.0	39.0	steel	78.3
08 100 50 *	19.62	32	G3/8"	100	30.5	15.0	43.5	steel	74.8

* Complete the code by indicating the compound: B= BENZ rubber; N= natural para rubber; S= silicon



drawings available at www.vuototecnica.net

3D

SELF-LOCKING CUPS WITH TRACTION RELEASE

	Art.	Force	D	E	Н	Сир	Weight
		Kg	Ø			Art.	g
	17 50 40 *	4.90	50	16	90	08 50 40	436
	17 75 40 *	11.04	75	25	99	08 75 40	458
)	17 100 4 <mark>0 *</mark>	19.62	100	26	100	08 100 40	474
	17 100 5 <mark>0 *</mark>	19.62	100	30	104	08 100 50	473

* Complete the code by indicating the compound: B= BENZ rubber; N= natural para rubber; S= silicon





SELF-LOCKING CUPS WITH TRACTION RELEASE



SPARE	CUPS WITH	SUPPORT									
Art	Force	Α	В	D	E	G	Н	Сир	Support	Support	Weight
ALC	Kg	Ø	Ø	Ø				Art.	Art.	material	g
08 60 10 *	7.06	15	G1/4"	60	22	9.5	36	01 60 10	00 08 22	aluminium	20.8
08 85 10 *	14.18	25	G1/4"	85	41	14.0	55	01 85 10	00 08 28	aluminium	49.3

* Complete the code by indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



1.121

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

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BUILT-IN CUPS WITH BALL VALVE

The main feature of these cups is that they open, and therefore they produce vacuum, only when the load to be handled activates the sealing ball. In this version, the gripping surface is limited by a silicon O-ring which guarantees the vacuum seal. They have been specially designed for vacuum beds and they are fully made with anodised aluminium.





3D drawings available at www.vuototecnica.net

BUI	LT-IN	CUPS WIT	TH BALL VALV	E								
Art		Force	В	d	D	E	F	G	Н		0-ring	Weight
Arti		Kg	Ø	Ø	Ø						Art.	g
05 01 10		9.80	35 x 1.5	50	59	9	3	27	66	27	00 05 14	248
05 02 10		13.60	35 x 1.5	59	68	9	3	27	66	27	00 05 15	268
05 03 10		18.10	35 x 1.5	68	77	9	3	27	66	27	00 05 16	294
05 04 10		29.70	35 x 1.5	87	96	9	3	27	66	27	00 05 19	358

1.122



Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6}$ = $\frac{\text{Kg}}{0.4536}$

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BUILT-IN CUPS WITH BALL VALVE

ade up by the table. industries cannot be ut can be n request.

SPARE CUP Force A B C D E F H N Art. Kg Ø Ø Ø Ø Ø Ø 01 65 15* 8.29 68 63 59 65 3 7 17 27							They and fou used.	e cups uner are especially r all those case They are made	the flat recommended es in which ma e with anodised supplied in oth	a, which is the cups listed in for the glass i agnetic tables o d aluminium, b er metals upor
Art. Force A B C D E F H N Kg Ø	SDVDE	= CLIP			M		₽			
Kg Ø Ø Ø Ø Ø 01 65 15 * 8.29 68 63 59 65 3 7 17 27	Art	Force	A	В	C	D	E	F	Н	N
01 65 15 * 8.29 68 63 59 65 3 7 17 27	ALL.	Kg	Ø	Ø	Ø	Ø				Ø
	01 65 15 *	8.29	68	63	59	65	3	7	17	27

* Complete the code by indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

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1.123

Weight g 21.4

BUILT-IN CUPS WITH BALL VALVE





SPARE C	CUPS									
Art	Force	А	В	С	D	E	F	Н	Ν	Weight
ALC.	Kg	Ø	Ø	Ø	Ø				Ø	g
01 85 15 *	14.18	68	63	59	85	3	7	17	27	29.7
01 110 10 *	23.74	96	91	87	114	3	8	17	54	44.3
01 150 10 *	45.00	133	125	118	154	4	11	23	64	112.0

* Complete the code by indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



BUILT-IN CUPS WITH BALL VALVE

DOILI II	00101111	I DI LEE II L									
Art	Force	Α	В	С	D	E	Н	М	Ring nut	Cup	Weight
744	Kg	Ø	Ø	Ø	Ø					art.	g
05 85 15 *	14.18	69	25 x 1.5	40	85	19	80	22	KM 5	01 85 15	272
05 110 1 <mark>0 *</mark>	23.74	97	25 x 1.5	40	114	19	80	22	KM 5	01 110 10	422
05 150 1 <mark>0 *</mark>	45.00	135	35 x 1.5	80	154	25	86	32	KM 7	01 150 10	894

* Complete the code by indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

1.124

3D drawings available at www.vuototecnica.net



Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6}$ = $\frac{\text{Kg}}{0.4536}$

(J)

SPECIAL BUILT-IN CUPS WITH BALL VALVE

The main feature of the special built-in cups is that they open, and therefore produce vacuum, only when the load to be clamped activates the sealing ball. Especially designed for the vacuum operated beds of woodworking machines, they differ from the previously described ones because of the high precision of their cylindrical support, which is ground to size, and because of their square closing block, which prevents the cup from rotating and enables connection to vacuum. The cold-assembled cups are the flat ones listed in the table in the various compounds. Their support is made with anodised aluminium, while the closing block is made with brass.



				•	A					
SPARE	CUP	Δ	B	<u> </u>	n	F	F	н	N	Weight
Art.	10100	~	D	U	D	L	1		IN	weight
	Kg	Ø	Ø	Ø	Ø				Ø	g
65 15 *	8.29	68	63	59	65	3	7	17	27	21.4

С В

D Ν

 $\overline{\mathbf{n}}$

E F

* Complete the code by indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

Н



* Complete the code by indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



SPECIAL BUILT-IN CUPS WITH BALL VALVE



* Complete the code by indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

D Ø31 Ø5.5 Cup I F H B G (1/8* G (1/8* G

3D drawings available at www.vuototecnica.net

SP	ECIAL BUILT-IN C	UPS WITH	BALL VALVE							
Art	Force	А	В	D	E	F	G	Н	Сир	Weight
AIL.	Kg	Ø	Ø	Ø					Art.	g
05 65 6	5 * 8.29	69	40	65	19	47.5	14.5	67.5	01 65 15	528

* Complete the code by indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

1.126

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Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6}$ = $\frac{\text{Kg}}{0.4536}$







SPARE (CUPS									
Art.	Force	А	В	C	D	E	F	Н	Ν	Weight
	Kg	Ø	Ø	Ø	Ø				Ø	g
01 85 15 *	14.18	68	63	59	85	3	7	17	27	29.7
01 110 10 *	23.74	96	91	87	114	3	8	17	54	44.3

* Complete the code by indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



						M	G1/8·	G	¥			
SPECIAL	BUILT-IN	CUPS WI	TH BALL V	4	40	×40						
Art	Force	Α	В	С	D	E	F	G	Н	М	Cup	Weight
Alt	Kg	Ø	Ø	Ø	Ø						Art.	g
05 85 15 M *	14.18	69	40	M5	85	19	31.5	16.0	51.5	20	<mark>01 85 1</mark> 5	466
05 110 10 M *	23.74	97	40	M5	114	19	32.0	16.0	52.0	20	<mark>01 110</mark> 10	614
* Complete the o	code by indi	cating the co	ompound: A=	oil-resistant ri	ıbber; N= natu	ral para rubbe	r; S= silicon					

* Complete the code by indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

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SPARE (CUPS									
Art.	Force	Α	В	C	D	E	F	Н	Ν	Weight
AIL.	Kg	Ø	Ø	Ø	Ø				Ø	g
01 85 15 *	14.18	68	63	59	85	3	7	17	27	29.7
01 110 10 *	23.74	96	91	87	114	3	8	17	54	44.3

* Complete the code by indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



3D drawings available at www.vuototecnica.net

SPECIA	AL BUILT-IN C	CUPS WITH	BALL VALVE							
Art	Force	Α	В	D	E	F	G	Н	Сир	Weight
- AI C.	Kg	Ø	Ø	Ø					Art.	g
05 85 65 *	14.18	69	40	85	19	47.5	14.5	67.5	01 85 15	536
05 110 6 <mark>5 *</mark>	23.74	97	40	114	19	48.0	14.5	68.0	01 110 10	674

* Complete the code by indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

1.128



Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$



SUPPORTS WITH RETRACTABLE STRIKING PIN



Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

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CIRCULAR CUPS WITH SELF-LOCKING SUPPORT

These cups represent a true mobile clamping system. They are composed of:

- A sturdy anodised aluminium support with a wide surface at the base limited by a seal whose purpose is to fix it to the bearing surface.
- A standard circular flat cup which is cold-assembled onto the upper part of the support for gripping the load.
- Two quick couplings for vacuum connection.

The detection of vacuum, for gripping and releasing the support, can be made via three-way vacuum valves or solenoid valves.

All cups with self-locking support of this and other ranges with the gripping plane at the same height can be used simultaneously, even if they are of different types or have different sizes.





SPARE C	CUPS									
Art	Force	А	В	С	D	E	F	Н	Ν	Weight
AIL.	Kg	Ø	Ø	Ø	Ø				Ø	g
01 85 15 *	14.18	68	63	59	85	3	7	17	27	29.7
01 110 10 *	23.74	96	91	87	114	3	8	17	54	44.3
01 150 10 *	45.00	133	125	118	154	4	11	23	64	112.0

* Complete the code by indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



CUPS W	ITH SELF-L	OCKING S	UPPORT									
Art	Force	Α	В	С	D	E	F	G	Н	Сир	0-ring	Weight
	Kg	Ø	Ø		Ø					Art.	Art.	Kg
16 85 15 *	14.5	98	60	41	85	17	49.0	56.0	54.5	01 85 15	00 16 06	0.542
16 110 1 <mark>0 *</mark>	24.0	125	88	58	114	17	50.0	56.0	54.5	01 110 10	00 16 07	1.056
16 150 1 <mark>0 *</mark>	45.0	165	120	76	154	23	49.5	57.5	54.5	01 150 10	00 16 08	1.858

* Complete the code by indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

1.130

drawings available at www.vuototecnica.net

3D



Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$



RECTANGULAR CUPS WITH SELF-LOCKING SUPPORT

These cups represent a true mobile clamping system. They are composed of:

- A sturdy anodised aluminium support with a wide surface at the base limited by a seal whose purpose is to fix it to the bearing surface.

- A standard rectangular flat cup which is cold-assembled onto the upper part of the support for gripping the load. - Two quick couplings for vacuum connection.

The detection of vacuum, for gripping and releasing the support, can be made via three-way vacuum valves or solenoid valves.

All cups with self-locking support of this and other ranges with the gripping plane at the same height can be used simultaneously, even if they are of different types or have different sizes.







SPARE C	CUPS													
Art.	Force	А	В	E	F	G	Н	L	М	Ν	0	Р	Q	Weight
74.4	Kg													g
01 40 75 *	6.7	64	29	3	7.5	6.5	16.0	75	40	59	24	54	19	15.6
01 120 90 *	24.0	107	78	3	7.5	7.5	17.5	117	87	102	73	97	68	38.8
01 150 75 *	25.0	137	62	3	7.5	7.5	16.5	147	72	132	57	127	52	41.2

* Complete the code by indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon





1.131

		For int. G	Ø 6 pipe ★			61/4*			F -ring	Н	M	*	30 M	M		
CUPS W	ITH SELF-	LOCKI	IG SUPI	PORT							M			×		
CUPS W	ITH SELF-	LOCKI	IG SUPI B	PORT	D	E	F	G	Н	1	H L	М	N	Cup	0-ring	Weight
CUPS W	<mark>'ITH SELF-</mark> Force Kg	LOCKII A	ig supi B	PORT C	D	E	F	G	Н	I	L	М	N	Cup Art.	O-ring Art.	Weight Kg
CUPS W Art. 16 40 75 *	<mark>ITH SELF- Force Kg 6.7</mark>	LOCKIN A 41	NG SUPP B 76	PORT C	D 83	E 16.0	F 51	G 56.5	H 54.5	I 30.5	L 55	M 26.5	N 20	Cup Art. 01 40 75	0-ring Art. 00 16 09	Weight Kg 0.260
CUPS W Art. 16 40 75 * 16 120 90 *	TITH SELF- Force Kg 6.7 24.0	LOCKIN A 41 90	NG SUPP B 76 120	PORT C 48 98	D 83 128	E 16.0 17.5	F 51 50	G 56.5 57.0	H 54.5 54.5	I 30.5 56.0	L 55 102	M 26.5 49.0	N 20 70	Cup Art. 01 40 75 01 120 90	O-ring Art. 00 16 09 00 16 10	Weight Kg 0.260 1.166

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CIRCULAR CUPS WITH BALL VALVE AND SELF-LOCKING SUPPORT

These cups represent a true mobile clamping system. They are composed of:

- A sturdy anodised aluminium support with a wide surface at the base limited by a seal, whose purpose is to fix it to the bearing surface.
- A standard circular flat cup which is cold-assembled onto the upper part of the support for gripping the load.
- A ball valve that opens up creating vacuum, only when activated by the load to be gripped.
- Two quick couplings for vacuum connection.

The detection of vacuum, for gripping and releasing the support, can be made via three-way vacuum valves or solenoid valves. All cups with self-locking support of this and other ranges with the gripping plane at the same height can be used simultaneously, even if they are of different types or have different sizes.





SPARE (CUPS									
Δrt	Force	А	В	С	D	E	F	Н	Ν	Weight
A10	Kg	Ø	Ø	Ø	Ø				Ø	g
01 85 15 *	14.18	68	63	59	85	3	7	17	27	29.7
01 110 10 *	23.74	96	91	87	114	3	8	17	54	44.3
01 150 10 *	45.00	133	125	118	154	4	11	23	64	112.0

* Complete the code by indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



CUPS WITH BALL VALVE AND SELF-LOCKING SUPPORT

	Force	A	В	C	D	E	F	G	Н	1	Cup	0-rina	Weight
Art.	Kg	Ø	Ø		Ø	_	-	-			Art.	Art.	Kg
18 85 15 *	14.5	98	60	41	85	17	49.0	56.0	54.5	1	01 85 15	00 16 06	0.580
18 110 1 <mark>0 *</mark>	24.0	125	88	58	114	17	50.0	56.0	54.5	1	01 110 10	00 16 07	1.106
18 150 1 <mark>0 *</mark>	45.0	165	120	76	154	23	49.5	57.5	54.5	1	01 150 10	00 16 08	1.926

* Complete the code by indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

1.132

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at

drawings available

3D



Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6}$ = $\frac{\text{Kg}}{0.4536}$

RECTANGULAR CUPS WITH BALL VALVE AND SELF-LOCKING SUPPORT

These cups represent a true mobile clamping system. Sono They are composed of:

- A sturdy anodised aluminium support with a wide surface at the base limited by a seal whose purpose is to fix it to the bearing surface.

- A standard rectangular flat cup which is cold-assembled onto the upper part of the support for gripping the load. - A ball valve that opens up creating vacuum, only when activated by the load to be gripped.

- Two quick couplings for vacuum connection. The detection of vacuum, for gripping and releasing the support, can be made via three-way vacuum valves or solenoid valves.

All cups with self-locking support of this and other ranges with the gripping plane at the same height can be used simultaneously, even if they are of different types or have different sizes.

G

Q

0 В





SPARE C	UPS													
Art.	Force	А	В	E	F	G	Н	L	М	Ν	0	Р	Q	Weight
	Kg													g
01 40 75 *	6.7	64	29	3	7.5	6.5	16.0	75	40	59	24	54	19	15.6
01 120 90 *	24.0	107	78	3	7.5	7.5	17.5	117	87	102	73	97	68	38.8
01 150 75 *	25.0	137	62	3	7.5	7.5	16.5	147	72	132	57	127	52	41.2

* Complete the code by indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon





Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

CLIPS									-ring	J 4 . J			30 ×	M			
00101	Eoreo		B	C	D	E	F	G	I	L	М	N	0	Р	Сир	0-rina	Woight
Art	LOICE	~	-													J	weigin
Art.	Kg	~	-												Art.	Art.	Kg
Art. 18 40 75 *	Kg 6.7	41	76	48	83	16.0	51	56.5	41.5	55	26.5	15.0	2	21.0	Art. 01 40 75	Art. 00 16 09	Kg 0.352
Art. 18 40 75 * 18 120 90 *	Kg 6.7 24.0	41 90	76 120	48 98	83 128	16.0 17.5	51 50	56.5 57.0	41.5 56.0	55 102	26.5 49.0	15.0 35.0	2 1	21.0 35.0	Art. 01 40 75 01 120 90	Art. 00 16 09 00 16 10	Kg 0.352 1.224

* Complete the code by indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

CIRCULAR CUPS WITH BALL VALVE AND SELF-LOCKING SUPPORT

These cups represent a true mobile clamping system. They are composed of:

- A sturdy anodised aluminium support with a wide surface at the base limited by a seal, whose purpose is to fix it to the bearing surface.
- A standard circular flat cup which is cold-assembled onto the upper part of the support for gripping the load.
- A ball valve that opens up creating vacuum, only when activated by the load to be gripped.
- Two quick couplings for vacuum connection.

The gripping plane of these cups is covered with a special non-slip plastic coating, which is particularly suited for clamping glass and smooth marble.

The detection of vacuum, for gripping and releasing the support, can be made via three-way vacuum valves or solenoid valves.

All cups with self-locking support of this and other ranges with the gripping plane at the same height can be used simultaneously, even if they are of different types or have different sizes.

Note: Available with support for mechanical fixing with code 28, instead of 18.





SPARE C	UPS									
Art	Force	Α	В	С	D	E	F	Н	Ν	Weight
A10	Kg	Ø	Ø	Ø	Ø				Ø	g
01 85 15 M *	14.18	68	63	59	85	3	7	17	53	26.2
01 110 10 M *	23.74	96	91	87	114	3	8	17	80	40.1
01 150 10 M *	45.00	133	125	118	154	4	11	23	117	98.3
01 250 20 *	122.60	235	227	220	254	4	11	23	220	188.6

* Complete the code by indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon; BA= stain-resistant Biond

Н



CUPS WITH BALL VALVE AND SELF-LOCKING SUPPORT

Art	Force	Α	В	C	D	F	G	I	L	М	Cup	0-ring	Weight
Alti	Kg	Ø	Ø		Ø						Art.	Art.	Kg
18 85 15/90 MT *	14.18	60	98	42	85	17	85.0	1	30	12	01 85 15 M	00 16 06	0.880
18 110 1 <mark>0/90 M</mark> T	* 23.74	88	125	51	114	17	85.5	1	30	12	01 110 10 M	00 16 07	1.704
18 150 1 <mark>0/90 M</mark> T	* 45.00	120	165	68	154	23	85.0	1	30	12	01 150 10 M	00 16 08	3.158
18 250 2 <mark>0/90 M</mark> T	* 122.60	223	270	121	254	23	85.0	1	33	15	01 250 20	00 18 09	10.322

* Complete the code by indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon; BA= stain-resistant Biond

1.134

at www.vuototecnica.net

drawings available

3D



RECTANGULAR CUPS WITH BALL VALVE AND SELF-LOCKING SUPPORT

These cups represent a true mobile clamping system. They are composed of:

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- A ball valve that opens up creating vacuum, only when activated by the load to be gripped.

- Two quick couplings for vacuum connection.

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All cups with self-locking support of this and other ranges with the gripping plane at the same height can be used simultaneously, even if they are of different types or have different sizes.

Note: Available with support for mechanical fixing with code 28, instead of 18.







SPARE CU	IPS													
Art	Force	Α	В	E	F	G	Н	L	М	Ν	0	Р	Q	Weight
	Kg													g
01 40 75 *	6.7	64	29	3	7.5	6.5	16.0	75	40	59	24	54	19	15.6
01 120 90 *	24.0	107	78	3	7.5	7.5	17.5	117	87	102	73	97	68	38.8
01 150 75 *	25.0	137	62	3	7.5	7.5	16.5	147	72	132	57	127	52	41.2
01 300 80 *	60.0	288	68	3	7.5	7.5	17.5	297	77	284	64	278	58	80.0
01 300 150 *	113.0	288	138	3	7.5	7.5	17.5	297	147	284	134	278	128	90.0

* Complete the code by indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon; BA= stain-resistant Biond





CUPS WITH B	ALL VA	LVE A	ND S	ELF-I	LOCK	ING SI	JPPO	RT											
Art.	Force	Α	В	С	D	Е	F	G	I	L	М	Ν	0	Р	Q	R	Сир	0-ring	Weight
	Kg																Art.	Art.	Kg
18 40 75/90 MT *	6.7	41	76	48	83	16.0	55	92.0	2	86.5	26.5	37.0	21.0	15.0	30	17	01 40 75	00 16 09	0.570
18 120 90/90 MT *	24.0	90	120	98	128	17.5	102	92.5	1	85.5	49.0	51.0	35.0	35.0	30	12	01 120 90	<mark>00</mark> 16 10	1.898
18 150 75/90 MT *	25.0	75	150	83	144	16.5	130	92.5	1	85.5	57.0	43.5	27.5	27.5	30	12	01 150 75	<mark>00</mark> 16 10	1.924
18 300 80/90 MT *	60.0	80	300	90	310	17.5	284	92.5	1	85.5	140.0	47.0	31.0	<mark>31.</mark> 0	33	15	01 300 80	<mark>00</mark> 18 10	4.632
18 300 150/90 MT *	113.0	150	300	160	310	17.5	284	92.5	1	85.5	140.0	83.0	67.0	<mark>67</mark> .0	33	15	01 300 150	<mark>00</mark> 18 11	9.534

* Complete the code by indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon; BA= stain-resistant Biond

 $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

Conversion ratio: inch =

CIRCULAR CUPS WITH BALL VALVE AND HIGH SELF-LOCKING SUPPORT

These cups represent a true mobile clamping system. Their distinctive feature, with respect to the previous ones, is their exceptional height.

They are composed of:

- A sturdy anodised aluminium support with a wide surface at the base limited by a seal, whose purpose is to fix it to the bearing surface.
- A standard circular flat cup which is cold-assembled onto the upper part of the support for gripping the load.
- A ball valve that opens up creating vacuum, only when activated by the load to be gripped.
- Two quick couplings for vacuum connection.

The gripping plane of these cups is covered with a special non-slip plastic coating, which is particularly suited for clamping glass and smooth marble.

The detection of vacuum, for gripping and releasing the support, can be made via three-way vacuum valves or solenoid valves.

All cups with self-locking support of this and other ranges with the gripping plane at the same height can be used simultaneously, even if they are of different types or have different sizes. **Note:** Available with support for mechanical fixing with code 28, instead of 18.





SPARE	CUPS									
Art	Force	Α	В	С	D	E	F	Н	N	Weight
AIL.	Kg	Ø	Ø	Ø	Ø				Ø	g
01 110 10 M	* 23.74	96	91	87	114	3	8	17	80	40.1
01 150 10 M	* 45.00	133	125	118	154	4	11	23	117	98.3
01 250 20 *	122.60	235	227	220	254	4	11	23	220	188.6

* Complete the code by indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon; BA= stain-resistant Biond



CUPS WITH BALL VALVE AND HIGH SELF-LOCKING SUPPORT

Art.	Force	Α	В	С	D	E	F	I	L	М	Сир	0-ring	Weight
	Kg	Ø	Ø		Ø						art.	art.	Kg
18 110 10/160 MT *	24.0	88	125	51	114	17	30	1	155.5	12	01 110 10 M	00 16 07	2.986
18 150 1 <mark>0/160 M</mark> T *	45.0	120	165	68	154	23	30	1	155.5	12	01 150 10 M	00 16 08	5.042
18 250 2 <mark>0/160 M</mark> T *	122.6	223	270	121	254	23	33	1	155.5	15	01 250 20	00 18 09	12.634

* Complete the code by indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon; BA= stain-resistant Biond

drawings available at www.vuototecnica.net



RECTANGULAR CUPS WITH BALL VALVE AND HIGH SELF-LOCKING SUPPORT

These cups represent a true mobile clamping system. Their distinctive feature, with respect to the previous ones, is their exceptional height.

They are composed of:

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- A ball valve that opens up creating vacuum, only when activated by the load to be gripped.

- Two quick couplings for vacuum connection.

The detection of vacuum, for aripping and releasing the support, can be made via three-way vacuum valves or solenoid valves.

All cups with self-locking support of this and other ranges with the gripping plane at the same height can be used simultaneously, even if they are of different types or

have different sizes.

Note: Available with support for mechanical fixing with code 28, instead of 18.



Н



SPARE CU	JPS													
Δrt	Force	А	В	E	F	G	Н	L	М	Ν	0	Р	Q	Weight
Alu	Kg													g
01 120 90 *	24.0	107	78	3	7.5	7.5	17.5	117	87	102	73	97	68	38.8
01 150 75 *	25.0	137	62	3	7.5	7.5	16.5	147	72	132	57	127	52	41.2
01 300 80 *	60.0	288	68	3	7.5	7.5	17.5	297	77	284	64	278	58	80.0
01 300 150 *	113.0	288	138	3	7.5	7.5	17.5	297	147	284	134	278	128	90.0

* Complete the code by indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon; BA= stain-resistant Biond





	3		0.5				G O-ring				M	30 D		M		
CUPS WITH BA	LL VALV	E AND I A	HIGH S B	ELF-LC	DCKING D	G SUPP E	ORT F	G	Н	М	N	0	Р	Cup	0-ring	Weight
CUPS WITH BA	LL VALV Force Kg	E AND I A	HIGH S B	ELF-LO C	DCKING	E SUPP	ORT F	G	Н	М	N	0	Р	Cup Art.	0-ring Art.	Weight Kg
CUPS WITH BA Art. 18 120 90/160 MT *	LL VALVI Force Kg 24.0	E AND I A 90	HIGH S B 120	ELF-LC C 98	DCKING D 128	E 17.5	ORT F 102	G 12	Н 30	M 49.0	N 51.0	0 35.0	P 35.0	Cup Art. 01 120 90	0-ring Art. 00 16 10	Weight Kg 3.450
CUPS WITH BA Art. 8 120 90/160 MT * 8 150 75/160 MT *	LL VALV Force Kg 24.0 25.0	E AND I A 90 75	HIGH S B 120 150	ELF-LC C 98 83	DCKING D 128 144	E 17.5 16.5	ORT F 102 130	G 12 12	H 30 30	M 49.0 57.0	N 51.0 43.5	0 35.0 27.5	P 35.0 27.5	Cup Art. 01 120 90 01 150 75	0-ring Art. 00 16 10 00 16 10	Weight Kg 3.450 3.262
CUPS WITH BA Art. 18 120 90/160 MT * 18 150 75/160 MT * 18 300 80/160 MT *	LL VALVI Force Kg 24.0 25.0 60.0	E AND I A 90 75 80	HIGH S B 120 150 300	ELF-LC C 98 83 90	DCKING D 128 144 310	E 17.5 16.5 17.5	ORT F 102 130 284	G 12 12 15	H 30 30 33	M 49.0 57.0 140	N 51.0 43.5 47.0	0 35.0 27.5 31.0	P 35.0 27.5 31.0	Cup Art. 01 120 90 01 150 75 01 300 80	0-ring Art. 00 16 10 00 16 10 00 18 10	Weight Kg 3.450 3.262 7.906

* Complete the code by indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon; BA= stain-resistant Biond

CIRCULAR CUPS WITH BALL VALVE AND SELF-LOCKING SUPPORT, FOR GLASS

Glass machinery manufacturers require increasingly accurate and safe clamping machines. This has led us to the creation of this series of cups.

The specially designed shape of this cup guarantees a firm grip. The other main feature is the utmost precision in the height, whose nominal size has a tolerance of only five hundredths of millimetre.

They are composed of:

- A sturdy anodised aluminium support with a wide surface at the base limited by a seal, whose purpose is to fix it to the bearing surface.
- A standard circular flat cup which is cold-assembled onto the upper part of the support for gripping the load.
- A ball valve that opens up creating vacuum, only when activated by the load to be gripped.
- Two quick couplings for vacuum connection.

The gripping plane of these cups is covered with a special non-slip plastic coating, which is particularly suited for clamping glass and smooth marble. The detection of vacuum, for gripping and releasing the support, can be made via three-way vacuum valves or solenoid valves.





SPARE	E CUP										
Art.	Force	Α	В	С	D	E	F	Н	М	Support	Weight
Alta	Kg	Ø	Ø	Ø	Ø				Ø	material	g
08 65 11 A	6.7	50	40	20.5	65	10	15	17.5	29.5	steel	90



RECTANGULAR CUPS WITH BALL VALVE AND SELF-LOCKING SUPPORT, FOR GLASS

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They are composed of:

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A standard rectangular flat cup which is cold-assembled onto the upper part of the support for gripping the load.

- A ball valve that opens up creating vacuum, only when activated by the load to be gripped.

- Two quick couplings for vacuum connection.

E F

E 0.5

The detection of vacuum, for gripping and releasing the support, can be made via three-way vacuum valves or solenoid valves.

М

Q B





SPARE	CUP													
Art.	Force	Α	В	D	E	F	Н	L	М	Ν	Р	Q	Support	Weight
	Kg			Ø									material	g
08 50 75 A	7.5	60	35	20.5	10	15	17.5	75	50	39.5	50	25	steel	92



Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

X



CIRCULAR CUPS WITH BALL VALVE, SELF-LOCKING SUPPORT AND RELEASE BUTTON, FOR GLASS

Glass machinery manufacturers require increasingly accurate and safe clamping machines. This has led us to the creation of this series of cups.

The specially designed shape of this cup guarantees a firm grip. The other main feature is the utmost precision in the height, whose nominal size has a tolerance of only five hundredths of millimetre.

They are composed of:

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- A standard circular flat cup which is cold-assembled onto the upper part of the support for gripping the load.
- A ball valve that opens up creating vacuum, only when activated by the load to be gripped.
- A release button that allows placing the support even with the vacuum inserted.
- Two quick couplings for vacuum connection.
- The gripping plane of these cups is covered with a special non-slip plastic

coating, which is particularly suited for clamping glass and smooth marble. The detection of vacuum, for gripping and releasing the support, can be made via three-way vacuum valves or solenoid valves.





SPARE	E CUP										
Art.	Force	А	В	С	D	E	F	Н	М	Support	Weight
Alta	Kg	Ø	Ø	Ø	Ø				Ø	material	g
08 85 11 A	12	70	60	40.5	85	10	15	17.5	49.5	steel	92



CU	P WITH	RALL Y	JD SEL	F-LOCI	KING S	IPPORT	RELEASE	RUTTON
00		DALL	ID OLL	-LOO			ILLLAUL	DOTION

MIN	Art.		Force	А	В	C	D	G	I	L	Сир	0-ring	Weight
ara			Kg	Ø	Ø		Ø				art.	art.	Kg
30	21 85 11	/90 A	12.0	70	98	42	85	92.5	1	75	08 85 11 A	00 16 06	1.090

1.140

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at

available

SC



Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

CIRCULAR CUPS WITH BALL VALVE, SELF-LOCKING SUPPORT AND RELEASE BUTTON, FOR GLASS



CIRCULAR CUPS WITH BALL VALVE, SELF-LOCKING SUPPORT AND RELEASE BUTTON

These cups represent a true mobile clamping system. They are composed of:

- A sturdy anodised aluminium support with a wide surface at the base limited by a seal, whose purpose is to fix it to the bearing surface.
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- A ball valve that opens up creating vacuum, only when activated by the load to be gripped.
- A release button that allows placing the support even with the vacuum inserted.
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All cups with self-locking support of this and other ranges with the gripping plane at the same height can be used simultaneously, even if they are of different types or have different sizes.





|--|

	501.0									
Art.	Force	Α	В	С	D	E	F	Н	Ν	Weight
	Kg	Ø	Ø	Ø	Ø				Ø	g
01 110 10 M *	23.74	96	91	87	114	3	8	17	80	40.1
01 150 10 M *	45.00	133	125	118	154	4	11	23	117	98.3

* Complete the code by indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



CUI	PS WI	TH BALL	VALVE, SE	ELF-LOCK	ING SUPP	ORT AND	RELEASE	BUTTON						
Art		Force	Α	В	C	D	E	G	Н	L	М	Сир	0-ring	Weight
A1 U		Kg	Ø	Ø		Ø						Art.	Art.	Kg
21 110 1	0 *	24	88	125	58	114	17	56.0	54.5	50.0	10	01 110 10 M	00 16 07	1.148
21 150 1	0 *	45	120	165	76	154	23	57.5	54.5	49.5	28	01 150 10 M	00 16 08	2.042

* Complete the code by indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

1.142

at www.vuototecnica.net

drawings available

3D

Х



Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$
RECTANGULAR CUPS WITH BALL VALVE. SELF-LOCKING SUPPORT AND RELEASE BUTTON

These cups represent a true mobile clamping system. They are composed of:

- A sturdy anodised aluminium support with a wide surface at the base limited by a seal, whose purpose is to fix it to the bearing surface. - A standard rectangular flat cup which is cold-assembled onto the upper part of the support for gripping the load.

- A ball valve that opens up creating vacuum, only when activated by the load to be gripped.

- A release button that allows placing the support even with the vacuum inserted.

> k E L F

- Two quick couplings for vacuum connection.

The detection of vacuum, for gripping and releasing the support, can be made via three-way vacuum valves or solenoid valves. All cups with self-locking support of this and other ranges with the gripping plane at the same height can be used simultaneously, even if they are of different types or have different sizes.



т 6 Q 0 В

SPARE	CUPS													
Art.	Force	Α	В	E	F	G	Н	L	М	N	0	Р	Q	Weight
	Kg	0.1			7.5	0.5	10.0	75	10	50	0.4	54	10	g
01 40 75 *	6.7	64	29	3	7.5	6.5	16.0	/5	40	59	24	54	19	15.6

* Complete the code by indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

Art. 21 40 75 PL









Р

Ν

A



				7.0.12 1.0		
CUPS WITH BALL V	VALVE. SELF	-LOCKING	SUPPORT	f and ri	ELEASE BI	JTTON

Δrt	Force	Α	В	С	G	Н	L	M	N	Cup	0-ring	Weight :
Alt	Kg									Art.	Art.	Kg :
21 40 75 PL	6.7	41	55	7	56.5	54.5	51	45.5	12	01 40 75	00 16 09	0.460
21 40 75/84 PL *	6.7	41	55	7	86.5	84.0	81	45.5	12	01 40 75	00 16 <mark>0</mark> 9	0.702
21 40 75 PP *	6.7	41	55	25	56.5	54.5	51	45.5	45	01 40 75	00 16 <mark>0</mark> 9	0.460
21 40 75/ 84 PP *	6.7	41	55	25	86.5	84.0	81	45.5	45	01 40 75	00 16 09	0.702

* Complete the code by indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

 $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$ Conversion ratio: inch =

X

1.143



RECTANGULAR CUPS WITH BALL VALVE, SELF-LOCKING SUPPORT AND RELEASE BUTTON



* Complete the code by indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon

X





CUPS WITH BALL VALVE, SELF-LOCKING SUPPORT AND RELEASE BUTTON

Art	Force	Α	В	С	D	F	G	Н	L	М	Ν	0	Р	Q	Т	Сир	0-ring	Weight
	Kg															Art.	Art.	Kg
21 120 9 <mark>0 *</mark>	24	90	120	56	102	17.5	57.0	54.5	50	98	128	70	24	25	49	01 120 90	00 16 10	1.320
21 150 7 <mark>5 *</mark>	25	75	120	48	130	16.5	57.0	54.5	50	83	144	55	25	32	57	01 150 75	00 16 10	1.236
21 150 7 <mark>5/84 *</mark>	25	75	150	48	130	16.5	86.5	84.0	80	83	144	55	25	32	57	01 150 75	00 16 10	1.924

* Complete the code by indicating the compound: A= oil-resistant rubber; N= natural para rubber; S= silicon



CUPS BASED ON BERNOULLI'S THEOREM

Bernoulli's theorem explains many phenomena, such as the lifting of a plane's wing or of a light disc in front of a tube end from which air flows out quickly.

This apparently paradoxical phenomenon is exploited for manufacturing vacuum gripping systems (vacuum cups) and handling, with no contact, fragile objects, such as semiconductor plates, silica discs, solar cells, precious metal foils, films and whatever needs to be handled with the greatest care.

Our cups based on Bernoulli's principle are made with anodised aluminium, with stainless steel centre thrust disc.

The antistatic silicon spacers, located on the cup gripping plane, prevent transverse movements of the gripped object.

The compressed air supply connections can be axial and radial and the quick coupler for the flexible pipe is included in the package. The unused holes are closed with brass threaded caps.

On the rear part of the cup there are 3 or 4 threaded holes for fiving it to the machine.







Lifting of a light disc in front of a tube end from which air flows out at high speed: 1) Air duct 2) Body of the device 3) Disc to be lifted





Art.	max.	Transversal	Operating	Air	Noise	Weight	Included	Spare
	Force	Force	pressure	consumption	level		coupler	spacer
	g	g	bar (g)	NI/s	dB(A)	g	art.	art.
BEC 30	380	250	5	2.5	72	31	00 BEC 13	00 BEC 10





1.146

X

Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6}$ = $\frac{\text{Kg}}{0.4536}$

Company					VACUUM	CUP	QUESTIONNAIR
Address				Fc	or a correct dimens important to kno	sioning of w and as	f a vacuum cup handler, it sess the features of the lo to be handle
Zip Code / City	Country			For T	this reason, pleas his way, we will be	e fill in ti e able to	he following form and send back to us via fax or e-ma suggest you the best cups
Contact person:				A di	rawing of the prod	uct to be	solve your proble handled or the product its
Telephone	Fax				WO	ula allow E-m	ail: tecnico@vuototecnica.r Fax: +39 039 53200
E-mail							
1) In which industrial se	ector are the cups used?						
 Plastic CD/DVD Electronics Food 	 Packaging Glass/Solar Graphic Arts Bottling 			Woodwo Marble/S Medical/ Other se	rking Stone (Pharmaceutical ctors		Cosmetics Automotive Ceramic/China
2) With which material	is the product to be handle	ed made with?					
PlasticSheet metal	□ Glass □ Marble/Gran	ite		Wood Rubber			Paper/Cardboard Other
<i>3) How is the surface o</i>	f the product to be handled	1?					
□ Dry □ Corrugated	□ Damp □ Flaked	□ Smooth □ Porous			Rough Coarsed		Crimpled Bushammered
4) On the gripping surfa	nce there are substances si	uch as:					
🗆 Dust	□ Water	□ Oil			Solvents		Other
5) What's the shape of	the product to be handled?	,					
□ Square □ Uneven	RectangleOther			Triangle			Circle
6) What are its dimensi	ons and weight?						
□ Length mm	🗆 Width mm			Thicknes	ss mm		□ Weight Kg
7) In what position will	the cups be placed with re	espect to the lifting	g forc	e?			
□ Horizontal cups, v	ertical force					Horizonta	l cups, horizontal force
↑ _E	J.						
	↓ ↑			in.	_→		Ť
			-	Ţ			
				•			

1

VACUUM CUP QUESTIONNAIRE

□ Vertical cups, vertical force

X

□ Flip

8) What is the temperature of the object to be lifted?	
From°C to +°C \square Briefly °C	D Continuously °C
9) Other technical data	
□ Gripping time sec □ Cycle time sec	\Box Acceleration m/s ²
10) At what height above the sea level will the vacuum cup handler be installed?	
□ <i>m</i>	
11) By which means would you like the vacuum to be created?	
 Electric vacuum cup (dry or lubricated) single-stage pneumatic vacuum generator 	 □ Side channel blowers □ Multi-stage pneumatic vacuum generator
12) Vacuum cup plant already in operation	
□ Manufacturer	Country
13) Previously used vacuum cup models	
□ Manufacturer	□ <i>Code</i>
14) Estimated annual amount and required delivery period	
Approx. nr pieces	□ Set period
15) Gripping trials and samples	
We can carry out gripping and handling trials free of charge, on product samples you provide us. request vacuum cup samples to carry out the trials at your premises.	Alternatively, you can
ing 16) Contacts	
Beneficial and a second acted? Yes □ No □	
B Are you interested in a visit? Yes □ No If so, in which date? B B B B B B	
1.148	

VACUUM CUP HOLDERS

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MINI CUP HOLDERS

The main feature of the cup holders described in these pages is their reduced size, which results in a reduced weight and bulk. They allow using even very small cups, guaranteeing, given the same diameter, the same performance as the larger series. They are composed of: - A brass stem for fastening the cup; - A threaded sleeve equipped with nuts, for mounting the cup holder

on the machine; - A spring to cushion the impact of the cup and to

keep, at the same time, a constant pressure with the load to be lifted; - A quick coupling for connection with the suction hose.



18



VERSION 20 . . 30 L





VERSION 20 . . 30 L



						VERS	SION 20 3	30 L	
Art	Force	d	D	E	F	L	Cup	Support included	Weight
AIL.	Kg	Ø	Ø		Ø		art.	art.	g
D 04 30	0.03	2.90	4.0	21.0	M12 x 1.25	109.0	01 04 10	00 08 01	74
05 30	0.05	2.90	5.0	21.5	M12 x 1.25	109.5	01 05 10	00 08 01	74
06 30	0.07	2.90	6.0	21.5	M12 x 1.25	109.5	01 06 10	00 08 01	74
	0.12	4.75	8.0	21.5	M12 x 1.25	109.5	01 08 10	00 08 02	74
08 30				00 5	M10 v 1 05	109.5	01 00 07	00.00.00	74

Conversion ratio: inch = $\frac{\text{mm. pounds}}{25.4}$ = $\frac{\text{g}}{453.6}$ = $\frac{\text{Kg}}{0.4536}$



VERSION 20 . . L

11

RLM5





VERSION 20 . . T

CUP HOLDERS WITH STRAIGHT QUICK COUPLER FOR PLASTIC HOSE Ø 4 X 6

Δrt	Force	C	d	D	E	F	L	Сир	Weight
A10	Kg		Ø	Ø		Ø		art.	g
20 10 30	0.19	7.0	5.5	10.0	11.0	M12 x 1.25	99.0	01 10 10	70.0
20 12 30	0.28	7.0	5.5	12.0	11.0	M12 x 1.25	99.0	01 12 10	70.6
20 14 15	0.38	7.5	6.5	14.0	15.0	M12 x 1.25	103.0	01 14 15	70.5
20 14 30	0.38	7.0	5.5	14.0	10.0	M12 x 1.25	98.0	01 14 10	70.4
20 15 30	0.44	7.0	5.5	15.0	12.0	M12 x 1.25	100.0	01 15 10	70.7
20 17 30	0.60	7.0	5.5	17.0	11.0	M12 x 1.25	99.0	01 17 12	70.7
20 18 12	0.63	7.5	6.5	18.0	10.0	M12 x 1.25	98.0	01 18 12	70.8
20 18 30	0.63	7.0	5.5	18.0	12.0	M12 x 1.25	100.0	01 18 10	70.7
20 20 30	0.78	7.0	5.5	20.0	12.0	M12 x 1.25	100.0	01 20 10	70.8
20 22 30	0.95	7.0	5.5	22.0	13.0	M12 x 1.25	101.0	01 22 10	71.2
Note: Cup Add	os are not an integral pa I the letter L or T to th <mark>e</mark>	rt of the cup holder code to order cup h	s, therefore, they m olders with L or T-1	ust be ordered sep ype fitting.	erately.				













VERSION 20 . . 15 T

2.03

Altu	10106	С	d	D	E	F	L	Сир	Weight
	Kg		Ø	Ø		Ø		art.	g
0 25 15	1.23	10	7.5	25	16	M12 x 1.25	104	01 25 15	76.0
0 30 15	1.76	10	7.5	30	17	M12 x 1.25	105	01 30 15	76.7
0 35 15	2.40	10	12.0	35	16	M12 x 1.25	104	01 35 15	76.6
0 40 15	3.14	10	12.0	40	18	M12 x 1.25	106	01 40 15	77.1
0 45 15	3.98	10	12.0	45	23	M12 x 1.25	111	01 45 15	80.6

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

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VERSION 20 . . 30





CUP HOLDERS WITH STRAIGHT QUICK COUPLER FOR PLASTIC HOSE Ø 4 X 6

Art	Force	D	E	F	L	Сир	Screw included	Weight
Alti	Kg	Ø		Ø		art.	art.	g
20 25 30	1.23	25.0	8	M12 x 1.25	96	01 25 10	00 20 12	75.2
20 30 30	1.76	30.0	8	M12 x 1.25	96	01 30 10	00 20 12	75.9
20 35 30	2.40	35.0	8	M12 x 1.25	96	01 35 10	00 20 12	76.4

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately. Add the letter L or T to the code to order cup holders with L or T-type fitting.

2.04

3D drawings available at www.vuototecnica.net









VERSION 20 . . 24 L



VERSION 20 . . 24





CUP HOLDERS WITH STRAIGHT QUICK	COUPLER FOR PLAST	IC HOSE Ø 4 X 6 F	L	Cup	Weight
Kg Ø		Ø		art.	g
20 27 24 1.43 27	.0 24	M12 x 1.25	112	01 27 24	76.8
20 30 24 1.76 30	.0 24	M12 x 1.25	112	01 30 24	76.9

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

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VERSION 20 . . 30 L







VERSION 20 . . 30 T

CUP HOLDERS WITH STRAIGHT QUICK COUPLER FOR PLASTIC HOSE Ø 4 X 6

Art	Force	D	E	F	L	Сир	Screw included	Weight
Alt	Kg	Ø		Ø		art.	art.	g
20 45 30	3.9 <mark>8</mark>	45	18	M12 x 1.25	106	01 45 10	00 20 13	80.7
20 60 30	7.06	60	22	M12 x 1.25	110	01 60 10	00 20 13	88.9

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately. Add the letter L or T to the code to order cup holders with L or T-type fitting.

2.06

3D drawings available at www.vuototecnica.net















2.07

						RTM5	20	
						VERSION	20 T	
CUP HOLD	ERS WITH STRAI	GHT QUICK CC	UPLER FOR F	PLASTIC HOSE Ø 4	X 6			
	ERS WITH STRAI	GHT QUICK CO D	UPLER FOR F	PLASTIC HOSE Ø 4 F	X 6 L	Сир	Screw included	Weight
CUP HOLD	ERS WITH STRAI Force Kg	GHT QUICK CC D Ø	UPLER FOR F	PLASTIC HOSE Ø 4 F Ø	L X 6	Cup art.	Screw included art.	Weight
CUP HOLD Art. 20 50 20	ERS WITH STRAM Force Kg 4.90	<u>GHT QUICK CC</u> D Ø 50	DUPLER FOR F E 20	PLASTIC HOSE Ø 4 F Ø M12 x 1.25	L 108	Cup art. 01 50 20	Screw included art. 00 20 14	Weight g 82.0

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

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VERSION 20 . . L

11

RLM5





20 RTM5

a.net								RTM5		
otecnica								VERSION	N 20 T	
'vuo	CUP HOL	DERS WITH STR	AIGHT QUIC	K COUPLER FO	OR PLASTIC H	OSE Ø 4 X 6				
No.	Art	Force	C	d	D	E	F	L	Сир	Weight
ž	Aru	Kg		Ø	Ø		Ø		art.	g
e at	20 06 50	0.07	7	5.5	6	15	M12 x 1.25	103	01 06 50	70.4
able	20 08 50	0.12	7	5.5	8	15	M12 x 1.25	103	01 08 50	70.5
/ail	20 11 16	0.23	7	5.5	11	20	M12 x 1.25	108	01 11 16	70.7
s al	20 11 50	0.23	7	5.5	11	15	M12 x 1.25	103	01 11 50	70.6
ing	20 16 30	0.50	7	5.5	16	20	M12 x 1.25	108	01 16 20	71.0
3D draw	Note: Cups are Add the le	not an integral part of etter L or T to the code	the cup holders to order cup ho	, therefore, they m olders with L or T-t	ust be ordered sep ype fitting.	erately.				







VERSION 20 . . L







VERSION 20 T

							VERSION	20 1	
CUP HOL	DERS WITH STF	AIGHT QUICH	COUPLER F	OR PLASTIC H	OSE Ø 4 X 6				
	Force	С	d	D	E	F	L	Сир	Weight
Art									
Art.	Kg			Ø				art.	g
Art. 15 23	Kg 0.44	7.5	6.5	Ø 15	23	M12 x 1.25	111	art. 01 15 23	g 71.3
Art. 15 23 18 23	Kg 0.44 0.63	7.5 7.5	6.5 6.5	Ø 15 18	23 23	M12 x 1.25 M12 x 1.25	111 111	art. 01 15 23 01 18 23	g 71.3 71.5
Art. 15 23 18 23 18 29	Kg 0.44 0.63 0.63	7.5 7.5 7.5	6.5 6.5 6.5	Ø 15 18 18	23 23 29	M12 x 1.25 M12 x 1.25 M12 x 1.25	111 111 117	art. 01 15 23 01 18 23 01 18 29	g 71.3 71.5 71.8

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

X









VERSION 20





VERSION 20 T

CUP HOLDERS WITH STRAIGHT QUICK COUPLER FOR PLASTIC HOSE Ø 4 X 6

Art		Force	C	d	D	E	F	L	Сир	Support included	l Weight
Altu		Kg		Ø	Ø		Ø		art.	art.	g
20 18 50	1	0.63	9	12	18	21.5	M12 x 1.25	109.5	01 18 50	00 08 61	82.7
20 20 60		0.78	9	12	20	56.5	M12 x 1.25	144.5	01 20 60	00 08 61	86.2

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately. Add the letter L or T to the code to order cup holders with L or T-type fitting.

2.10

3D drawings available at www.vuototecnica.net









17.5

ch10

For int. Ø 4 pipe

VERSION 20 19 17 L RLM5 11 M5 20

RMM5



35.5

ch 17

Stroke 25.5

30

ch19

VERSION 20 19 17

						RTM5	20	
						VERSIO	N 20 19 17 T	
	S WITH STRAI	GHT QUICK CO D	UPLER FOR F E	PLASTIC HOSE Ø 4 F	X 6 L	Сир	Screw included	Weight
AIL.	Kg	Ø		Ø		art.	art.	g
20 19 17	0.70	19	17	M12 x 1.25	105	01 19 17	00 20 12	75.3

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

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Е

Screw

D

Cup

5

Cup





VERSION 20 ... L



VERSION 20



RMM5



CUP HOLDERS WITH STRAIGHT QUICK COUPLER FOR PLASTIC HOSE Ø 4 X 6

ecnica.net								<u>RTM5</u>	20	
tot								VERSION	20 T	
www.vuk										
at	COP HOLL	JERS WITH STR	AIGHT QUIC	K COUPLER F	UK PLASTIC H	USE Ø 4 X 6	-		0	Weinha
le at I	Art.	Force	C	d	DR PLASTIC H	E	F	L	Сир	Weight
able at I	Art.	Force Kg	C	d Ø	D D Ø	E	F Ø	L	Cup art.	Weight g
vailable at v	Art. 20 20 23	Force Kg 0.78	C 5	d Ø 8.5	0 0 20	E 23	F Ø M12 x 1.25	L 111	Cup art. 01 20 23	Weight g 73.8
s available at I	Art. 20 20 23 20 22 19	Force Kg 0.78 0.95	C 5 5	d Ø 8.5 8.5	DR PLASTIC H 0 20 22	23 19	F Ø M12 x 1.25 M12 x 1.25	L 111 107	Cup art. 01 20 23 01 22 19	Weight g 73.8 74.7
ings available at v	Art. 20 20 23 20 22 19 20 34 26	Force Kg 0.78 0.95 2.26	5 5 5 5	d Ø 8.5 8.5 8.5 8.5	0 PLASHC H 0 20 22 34	23 19 26	F Ø M12 x 1.25 M12 x 1.25 M12 x 1.25	L 111 107 114	Cup art. 01 20 23 01 22 19 01 34 26	Weight g 73.8 74.7 77.7

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$







VERSION 20 25 35 L



VERSION 20 25 35





VERSION 20 25 35 T

3D drawings available at www.vuototecnica.net

2.13

CUP HOLDERS WITH STRAIGHT QUICK COUPLER FOR PLASTIC HOSE Ø 4 X 6 Weight Cup Force D Е F L Art. Ø Kg art. g 20 25 35 M12 x 1.25 01 25 35 1.23 24 112 79 25 Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately. Add the letter L or T to the code to order cup holders with L or T-type fitting.

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

X





VERSION 20 ... L



VERSION 20





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CUP HOLDERS WITH STRAIGHT QUICK COUPLER FOR PLASTIC HOSE Ø 4 X 6

Art.	Force	C	d	D	E	F	L	Сир	Weight
	Kg		Ø	Ø		Ø		art.	g
20 30 32	1.76	7.5	10	30	32	M12 x 1.25	120	01 30 32	79.6
20 40 42	3.14	7.5	10	40	42	M12 x 1.25	130	01 40 42	85.6
20 43 28	3.62	7.5	10	43	28	M12 x 1.25	116	01 43 28	83.0

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately. Add the letter L or T to the code to order cup holders with L or T-type fitting.

2.14

3D drawings available at www.vuototecnica.net







VERSION 20 .. 50 L

11

RLM5







VERSION 20 .. 50 T

							RTM5	20	
CUP HOL	LDERS WITH STR	AIGHT QUIC	K COUPLER F	OR PLASTIC H	OSE Ø 4 X 6		VERSION	20 50 T	
Art	Force	C	d	D	E	F	L	Сир	Weight
ALC.	Kg		Ø	Ø		Ø		art.	g
		10	9.5	30	38	M12 x 1.25	126	01 30 50	81.6
20 30 50	1.76	10							
20 30 50	1.76	10	0.5	40	22	M12 v 1 25	111	01 40 50	70

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

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MINI CUP HOLDERS FOR CUPS WITH SUPPORT

The cup holders described in these pages share the same features as the previously described ones, but differ for their brass stem, which has 1/8" and 1/4" gas threaded female connection, for the exclusive installation of cups with male threaded support and for the vacuum connection, which can either be radial or axial.





VERSION 20 10 ... T

CUP HOLDERS WITH STRAIGHT QUICK COUPLER FOR PLASTIC HOSE Ø 4 X 6

Art	d	D	E	F	L	Weight
A16	Ø	Ø		Ø		g
20 10 38	G1/8"	14.0	9	M12 x 1.25	97	78
20 10 48	G1/4"	16.5	9	M12 x 1.25	97	78

Note: Add the letter L or T to the code to order cup holders with L or T-type fitting.





MINI CUP HOLDERS WITH IN-BUILT SPRING

For a further bulk and weight reduction, as well as to meet the requirements of discharge machines for plastic moulding presses manufacturers, these cup holders are made with an in-built spring and an anodised aluminium cup fixing stem. Also these cup holders allow the installation of cups with male threaded support only. The particular shape of the brass drive bush for fastening the cup holder to the machine prevents any rotation of the stem and, therefore, of the cup. The vacuum connection is radial.

VERSION 20 80 ...



		*	version	N 2080	L		totecnica.net
CUP HOLE	DERS WITH STRA	IGHT QUICK COUP	LER FOR PLASTIC H	OSE Ø 4 X 6	E		Weight
Art.	b	stroke	Ø	Ø	Ø		g
20 80 15	22	15	G1/8"	15	M10 x 0.75	72	26
20 80 20	32	20	G1/8"	15	M15 x 1.00	87	42
Note: Add the let Note: Add the let	ters FC to the code to ter L to the code to or	order chromed iron cup I der cup holders with L-ty	nolders. pe fittings.				3D drav

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

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MINI CUP HOLDERS WITH COMPACT STROKE

The shorter stroke and their particular shape allow for a further bulk and weight reduction of these cup holders.

The components are practically the same, only the vacuum fittings are differents, since in these cup holders they are a radial standard hose-end fitting (two upon request).

They are particularly suited for small cups to be manually assembled with diameters ranging between 10 and 30 mm.



VERSION 20 07 13





CUP H	OLDERS WITH STRAI	GHT COUPLER	FOR PLASTIC I	HOSE				
Art	Force	В	С	E	F	L	Сир	Weight
Aru	Kg	stroke			Ø		art.	g
20 07 13	0.09	12.4	15	23	M12 x 1.25	53	01 07 13	56.6

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately.

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MINI CUP HOLDERS WITH COMPACT STROKE



VERSION 20 .. 10







CUP HOLD	DERS WITH STRAI	GHT COUPLER	FOR PLASTIC I	HOSE				
rt.	Force	В	D	E	F	L	Сир	Weight
-	Kg	stroke	Ø		Ø		art.	g
0 10	0.19	12.4	10	21	M12 x 1.25	51	01 10 10	56.0
2 10	0.28	12.4	12	21	M12 x 1.25	51	01 12 10	56.6
5 10	0.44	12.4	15	22	M12 x 1.25	52	01 15 10	56.7
8 10	0.63	12.4	18	22	M12 x 1.25	52	01 18 10	56.7
20 10	0.78	12.4	20	22	M12 x 1.25	52	01 20 10	56.8
	0.05	10.4	00	23	M12 x 1 25	53	01 22 10	57.0

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

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2.19

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VERSION 20 .. 10





Weight g

58.0

58.7

3D drawings available at www.vuototecnica.net

CU	P HOLE	DERS WITH ST	FRAIGHT COUP	LER FOR PLA	STIC HOSE			
Art.		Force	В	D	E	F	L	Сир
70.0		Kg	stroke	Ø		Ø		art.
20 25 10)	1.23	12.4	25	26	M12 x 1.25	56	01 25 15
20 30 10)	1.76	1 <mark>2</mark> .4	30	26	M12 x 1.25	56	01 30 15

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately.

2.20





MINI CUP HOLDERS WITH BUILT-IN BUSH

The reduced size and the particular shape of these cup holders allow them to be directly assembled to the vacuum manifold, saving time and eliminating pipes and fittings. The hexagonal bush, for the cup holder assembly with the vacuum manifold, is equipped with a seal. It's function is to guide and seal the brass cup fixing stem.



VERSION 20 .. 11





				roke 16.4		- M5 F		uototecnica.net
								lable at www.v
Art.	Force	D	E	F	L	Сир	Weight	Ivai
	Kg	Ø		Ø		art.	g	S 3
20 25 11	1.23	25	21	G3/8"	74	01 25 15	70.0	ving
20 30 11	1.76	30	22	G3/8"	75	01 30 15	70.7	draw
Note: Cups are no	ot an integral part of the c	up holders, therefor	e, they must be ordered s	seperately.				3D (

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately.

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

X



VERSION 20 .. 11





6

Art	Force	D	E	F	L	Сир	Weight
Altu	Kg	Ø		Ø		art.	g
20 35 11	2.40	35	21	G3/8"	74	01 35 15	76.6
20 40 11	3.14	40	23	G3/8"	76	01 40 15	77.1
20 45 11	3.98	45	28	G3/8"	81	01 45 15	80.6

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately.



MINI CUP HOLDERS WITH BUILT-IN BUSH, WITH FEMALE THREADED CONNECTOR



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VERSION 20 .. 11



Art	d	D	E	F	L	Weight
ALC	Ø	Ø		Ø		g
20 08 11	G1/8"	14.0	9	G3/8"	67	74
20 10 11	G1/4"	16.5	9	G3/8"	67	73



MINI CUP HOLDERS WITH PLUNGER VALVE

They share the same mechanical features at the other mini cup holders. Their distinctive feature is the plunger valve solidly connected to a conical spear valve, which activates suction, and therefore creates vacuum, only when the cup comes into contact with the load to be lifted.





VERSION 20 .. 60 L







VERSION 20 .. 60 T

CUP HOLDERS WITH STRAIGHT QUICK COUPLER FOR PLASTIC HOSE Ø 4 X 6

Art.	Force	В	С	D	E	F	L	Сир	Weight
	Kg			Ø		Ø		art.	g
20 12 60	0.28	4.5	8.5	12	11	M12 x 1.25	118	01 12 10	78.6
20 15 60	0.44	4.5	8.5	15	12	M12 x 1.25	119	01 15 10	78.7
20 18 60	0.63	4.5	8.5	18	12	M12 x 1.25	119	01 18 10	78.7

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately. Add the letter L or T to the code to order cup holders with L or T-type fitting.

2.24

drawings available at www.vuototecnica.net

3D







VERSION 20 .. 60 L







VERSION 20 .. 60 T

3D drawings available at www.vuototecnica.net

2.25

CUP HOL	DERS WITH STF	RAIGHT QUIC	K COUPLER	FOR PLASTIC	HOSE Ø 4 X	6			
Δrt	Force	В	С	D	E	F	L	Сир	Weight
ALL	Kg			Ø		Ø		art.	g
20 20 60	0.78	5.5	8.5	20	12	M12 x 1.25	119	01 20 10	80.8
20 22 60	0.95	5.5	8.5	22	13	M12 x 1.25	120	01 22 10	81.2

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately. Add the letter L or T to the code to order cup holders with L or T-type fitting.

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

X





VERSION 20 25 60 L







VERSION 20 25 60 T

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CUF	HOLDERS WITH ST	RAIGHT QUI	CK COUPLER	FOR PLASTIC	HOSE Ø 4 X	Κ 6			
Art.	Force	В	С	D	E	F	L	Сир	Weight
	Kg			Ø		Ø		art.	g
20 25 60	1.23	6	11	25	16	M12 x 1.25	123	01 25 15	84

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately. Add the letter L or T to the code to order cup holders with L or T-type fitting.

2.26

3D drawings available at www.vuototecnica.net



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VERSION 20 30 60 T

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CUP HOLDERS WITH STRAIGHT QUICK COUPLER FOR PLASTIC HOSE Ø 4 X 6 D L Cup Force В С Е F Art. Ø Kg Ø art. 20 30 60 M12 x 1.25 1.76 11 30 17 124 01 30 15

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately. Add the letter L or T to the code to order cup holders with L or T-type fitting.

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

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2.27

3D drawings available at www.vuototecnica.net

Weight

g











VERSION 20 .. 60 T

CUP HOLDERS WITH STRAIGHT QUICK COUPLER FOR PLASTIC HOSE Ø 4 X 6

Art	Force	В	С	D	E	F	L	Сир	Weight
	Kg			Ø		Ø		art.	g
20 35 60	2.40	7	11	35	16	M12 x 1.25	123	01 35 15	90.6
20 40 60	3.14	7	11	40	18	M12 x 1.25	125	01 40 15	91.1

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately. Add the letter L or T to the code to order cup holders with L or T-type fitting.

2.28



Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$



MINI CUP HOLDERS WITH PLUNGER VALVE AND BUILT-IN BUSH

The technical and mechanical features are the same as for the mini cup holders with plunger valve. Their distinctive feature is their threaded hexagonal bush, which allows them to be directly assembled to the vacuum manifold, thus saving time and eliminating pipes and fittings.



VERSION 20 .. 65





									ototecnica.net
									e at www.vu
Art	Force	В	С	D	E	F	L	Сир	Weight
Alta	Kg			Ø		Ø		art.	d Vai
20 12 65	0.28	4.5	8.5	12	11	G3/8"	88	01 12 10	76.6
20 15 65	0.44	4.5	8.5	15	12	G3/8"	89	01 15 10	76.7
20 18 65	0.63	4.5	8.5	18	12	G3/8"	89	01 18 10	76.7 Weil
Note: Cups are	not an integral part	of the cup holder	s, therefore, they	must be ordered	seperately.				30.0

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately.

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VERSION 20 .. 65





3D drawings available at www.vuototecnica.net

Art.		Force	В	С	D	E	F	L	Сир	Weight
Aiu		Kg			Ø		Ø		art.	g
20 20 65	j	0.78	5.5	8.5	20	12	G3/8"	89	01 20 10	76.8
20 22 65	;	0.95	5.5	8.5	22	13	G3/8"	90	01 22 10	77.2

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Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately.







VERSION 20 25 65





					Stroke 16 4			M5 F		ototecnica.net
						<u> </u>				able at www.vu
Art.	Force	В	C	D	E	F	L	Сир	Weight	ivai
	Kg			Ø		Ø		art.	g	s a
20 25 65	1.23	6	11	25	16	G3/8"	93	01 25 15	80	ving
Note: Cups are	not an integral part c	of the cup hold	lers, therefore, they	must be orde	red seperately.					3D draw

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

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MINI CUP HOLDERS WITH PLUNGER VALVE AND BUILT-IN BUSH



VERSION 20 30 65





3D drawings available at www.vuototecnica.net

Art	Force	В	С	D	E	F	L	Сир	Weight
	Kg			Ø		Ø		art.	g
20 30 65	1.76	7	11	30	17	G3/8"	94	01 30 15	82.7

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately.

2.32

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Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$





VERSION 20 .. 65





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										lable at www.vu
Art.	Force	В	С	D	E	F	L	Сир	Weight	Ivail
7.0.0	Kg			Ø		Ø		art.	g	S a
20 35 65	2.40	7	11	35	16	G3/8"	93	01 35 15	82.6	ving
20 40 65	3.14	7	11	40	18	G3/8"	95	01 40 15	83.1	raw
Note: Cups are	not an integral part	of the cup holde	rs, therefore, the	ey must be ordered	seperately.	4				3D d

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately.

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

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They have the same function as the mini cup holders with plunger valve but, for further bulk reduction, the cushioning spring, the threaded pipe with nuts for fixing to the machine and the quick coupler have been removed. This type of cup holders is to be directly assembled to the vacuum manifold. To allow a quick assembly, its end is provided with a threaded male shank.



VERSION 20 .. 61





totecnica.net								F		
e at www.vuo										
able	Art	Force	В	С	D	E	F	L	Сир	Weight
vail	Alt	Kg			Ø		Ø		art.	g
s a	20 12 61	0.28	4.5	8.5	12	11	G1/8"	43	01 12 10	24.6
ing	20 15 61	0.44	4.5	8.5	15	12	G1/8"	44	01 15 10	24.7
raw	20 18 61	0.63	4.5	8.5	18	12	G1/8"	44	01 18 10	24.7
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Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately.

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VERSION 20 .. 61





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	Force	P	6	D	E			Cup	Woight
Art.	Force	D	U	D	E	F	Ľ	Cup	weight
	Kg			Ø		Ø		art.	g
20 20 61	0.78	5.5	8.5	20	12	G1/8"	44	01 20 10	26.8
20 22 61	0.95	5.5	8.5	22	13	G1/8"	45	01 22 10	27.2
Note: Cups are	not an integral part (of the cup holder	rs, therefore, they	must be ordered	seperately.				3D drai

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

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VERSION 20 25 61





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Art.	Force	В	C	D	E	F	L	Сир	Weight
7.1.1	Kg			Ø		Ø		art.	g
20 25 61	1.23	6	11	25	16	G1/8"	48	01 25 15	26

Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately.





VERSION 20 30 61





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											ailable at www.vu
Art		Force	В	C	D	E	F	L	Сир	Weight	s al
AIG		Kg			Ø		Ø		art.	g	'ing
20 30 61		1.76	7	11	30	17	G1/8"	49	01 30 15	28.6	raw
Note: Cups	are not a	n integral part c	of the cup holder	rs, therefore, they	must be ordered	seperately.					3D d

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

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VERSION 20 .. 61





	Art.	Force	В	C	D	E	F	L	Сир	Weight
Alt	Kg			Ø		Ø		art.	g	
	20 35 61	2.40	7	11	35	16	G1/8"	48	01 35 15	34.6
	20 40 61	3.14	7	11	40	18	G1/8"	50	01 40 15	35.1

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Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately.



MINI CUP HOLDERS WITH BUILT-IN SHUT-OFF VALVE

The distinctive feature of these cup holders, that share all the technical features of the other mini cup holders, is the built-in shut-off valve. Its function is to deactivate suction when the cup is not on the surface of the load to be lifted, in case of a defective grip or in presence of a considerable transpiration, thus preventing reduction of

the vacuum level on the other cups of the plant that are regularly gripping a load.

All this results in a great advantage, since, with this system, the placement or the exclusion of the non-gripping cups is no longer binding. Cups with diameters ranging from 10 mm to 50 mm can be assembled onto these cup holders, as long as they are equipped with a 1/8" gas threaded male support.



VERSION 20 99 35 L

VERSION

20 99 35 T

3D drawings available at www.vuototecnica.net

2.39



Δrt	Α	С	D	E	F	L	Weight
Altu			Ø		Ø		g
20 99 35	17.5	35.5	G1/8"	24	G1/8"	107	84

Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6}$ = $\frac{\text{Kg}}{0.4536}$

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MINI ANTI-ROTATION CUP HOLDERS

The distinctive features of these cup holders are the brass stem with hexagonal section and the steel drive bush with hexagonal hole. This prevents the stem from rotating on its axis, and, as a consequence, also the cup and its support from rotating. They are suited for cups with male or female support with diameters

ranging from 10 mm to 60 mm, but they have been specially designed for the installation of rectangular, concave and oval cups.



VERSION 20 95 08 L



VERSION 20 95 08 T

(CUP HOI	LDER:	S WITH STR	AIGHT QUICK	COUP	LER FOR P	PLASTIC HOSE Ø 4 X 6				
Ar	t.		А	В		С	D	E	F	L	Weight
					Δ		Ø		Ø		g
20 95	<mark>08</mark>	1	17.5	30		35.5	M8	6	M12 x 1.25	83	58

Note: add the letter L or T to order cup holders with L-type or T-type fittings.

2.40

drawings available at www.vuototecnica.net

3D



Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$



VERSION 20 95 28 L



VERSION 20 95 28 T

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CUP HO	OLDERS	WITH STRA	IGHT QUICK	COUPLER FOR	PLASTIC HOSI	EØ4X6				
Δrt		А	В	С	D	E	F	G	L	Weight
ALC					Ø		Ø			g
20 95 28		17.5	30	35.5	G1/8"	8	M12 x 1.25	5	83	60

Note: add the letter L or T to order cup holders with L-type or T-type fittings.

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

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3D drawings available at www.vuototecnica.net



VERSION 20 95 38 L







VERSION 20 95 38 T

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CL	J <mark>P HOL</mark> E	DERS WITH STRAIG		UPLER FOR PL	ASTIC HOSE Ø 4 X	(6			
Art		Α	В	С	D	E	F	L	Weight
Aitu					Ø		Ø		g
20 95 3	8	17.5	30	35.5	G1/8"	16	M12 x 1.25	83	68

Note: add the letter L or T to order cup holders with L-type or T-type fittings.



2.42

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

MINI CUP HOLDERS WITH MAGNETIC SENSOR

These cup holders share the same technical features of the other mini cup holders. Their distinctive feature is a magnetic sensor which provides an electric signal to the machine every time the vacuum cup grips the load to be handled.

This is the reason why they are recommended to be used on piece counter handlers, boxing machines and in all those cases in which the presence of the gripped object is to be guaranteed.

These cup holders have been designed for gripping chocolate bars, snacks, and similar products and they are currently made in the version represented in this page. However, they can be made with different vacuum cups upon request.







VERSION 20 99 02 L

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RLM5

RMM5

RMM5

M5 1

RTM5

M5



VERSION 20 99 02



H		<u>Cup</u>		-			VERSION	20 99 02 T	
CUP HO	OLDERS WITH STRA	AIGHT QUI	ICK COUPLER FO	R PLASTIC H	OSE Ø 4 X 6				
rt	Force	D	F	G	Н		М	Сир	Weight
	Kg	Ø	Ø					art.	g
9 02	0.70	19	M12 x 1.25	18	20	10	28	01 19 17	163.3

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately. Add the letter L or T to order cup holders with L-type or T-type fittings.

Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6}$ = $\frac{\text{Kg}}{0.4536}$

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Art.

20 99 02

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2.43

3D drawings available at www.vuototecnica.net

MINI CUP HOLDERS FIX

They are simply nickel-plated brass threaded bushes with screwing nuts for height adjustment and with threaded ends, one to assemble the vacuum cup with support and the other for the quick coupling connecting the suction hose.



VERSION 20 70 01



Weight

g

45

CUP HOLDERS WITH STRAIGHT QUICK COUPLER FOR PLASTIC HOSE Ø 4 X 6

Art.	D	E	F	L	Weight
	Ø		Ø		g
20 70 01	M5	6	G1/8"	46	19

Note: Add the letter L to the code to order L-type fittings.



2.44

drawings available at www.vuototecnica.net

3D



These cup holders are built in a simple and rational way, guaranteeing maximum sturdiness and duration. They are composed of: - A brass stem for fastening the cup; - A steel threaded sleeve equipped with two hexagonal nuts for a quick assembly of the cup to the machine; - A spring for cushioning the impact of the cup, as well as for maintaining a constant pressure with the load to be lifted; - A quick coupling for the connection to the suction hose. The actual springing stroke is: - For height C= 28 mm 16 mm - For height C= 65 mm 49 mm - For height C= 95 mm 74 mm







VERSION 02 .. 10

VERSION 02 .. 10 L

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43

	VERSION 02 10								VERSION UZ 10 L					
												ototecnic		
CUP H	OLDERS WI	TH STRA	IGHT QU	ICK COU	PLER FOR	PLASTIC H	IOSE Ø 6 X 8			C = 65 mm	C = 95 mm	VIIIV.W		
Art	Force	*C	D	E	F	L	Cup	Screw included	Weight	Weight	Weight			
Alt	Kg		Ø		Ø		art.	art.	g	g	g	+		
02 25 10	1.23	28	25	23	M20	123	01 25 10	00 20 12	213.2	253.2	280.2	٩		
02 30 10	1.76	28	30	23	M20	123	01 30 10	00 20 12	213.9	253.9	280.9	i clia		
02 35 10	2.40	28	35	23	M20	123	01 35 10	00 20 12	214.4	254.4	281.4	SVE 2VE		
Note: Cups a	re not an integ	ral nart of t	he cun holo	lers therefo	re they must	he ordered se	nerately					SDU		
Add th	e letter L to the	code to or	der L-type	fittinas.	io, incy musi		peratory.					iwe		
, , , , , , , , , , , , , , , , , , , ,			uo: = tjpo									dr		
* Also	available with I	neight C of	65 mm and	95 mm										

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X

-	For height C= 28 mm	16 mm
-	For height C= 65 mm	49 mm

- For height C= 65 mm - For height C= 95 mm 74 mm







VERSION 02 .. 15

VERSION 02 .. 15 L

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NWN	CUP H	OLDERS WITH	H STRAIGHT	QUICK CO	UPLER FO	R PLASTIC H	HOSE Ø 6 X 8	8		C = 65 mm	C = 95 mm
at	Art	Force	*C	D	E	F	L	Сир	Weight	Weight	Weight
ole	Alti	Kg		Ø		Ø		art.	g	g	g
liat	02 25 15	1.23	28	25	31	M20	131	01 25 15	216.0	270.0	287.0
ava	02 30 15	1.76	28	30	32	M20	132	01 30 15	216.7	270.7	287.7
awings	Note: Cups a	are not an integral e letter L to the co	part of the cup ode to order L-t								
3D dr	* Also	available with hei	ght C of 65 mm	and 95 mm							

2.46



Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

The actual springing	g stroke is:
For height C= 28 mm	16 mm
For height C= 65 mm	49 mm
For height C= 95 mm	74 mm







VERSION 02 .. 24

VERSION 02 .. 24 L

			VENSION 02 24					VERSION	UZ 24 L		
CUP H	OLDERS WIT	H STRAIGH	IT QUICK CO	OUPLER FO	OR PLASTIC	HOSE Ø 6 X 8			C = 65 mm	C = 95 mm	
Art	Force	*C	D	E	F	L	Сир	Weight	Weight	Weight	
ALC.	Kg		Ø		Ø		art.	g	g	g	
02 27 24	1.43	28	27	39	M20	139	01 27 24	216.8	228.8	287.8	
02 30 24	1.76	28	30	39	M20	139	01 30 24	216.9	228.9	287.9	
Note: Cups a Add th	re not an integra e letter L to the	al part of the c code to order l	up holders, the -type fittings.	refore, they mu	ust be ordered s	eperately.					

Conversion ratio: inch = $\frac{mm}{25.4}$ pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

X

The actual	springing	stroke is:
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- For height C= 28 mm 16 mm
- For height C= 65 mm For height C= 95 mm







VERSION 02 32 36

VERSION 02 32 36 L

L

CUF	P HOLDERS WIT	TH STRAIGH	T QUICK C	OUPLER FO	R PLASTIC I	HOSE Ø 6 X 8	3		C = 65 mm	C = 95 mm
Art	Force	*C	D	E	F	L	Сир	Weight	Weight	Weight
Alta	Kg		Ø		Ø		art.	g	g	g
02 32 36	2.00	28	32	51	M20	151	01 32 36	221.1	269.1	289.1

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately. Add the letter L to the code to order L-type fittings.

* Also available with height C of 65 mm and 95 mm

3D drawings available at www.vuototecnica.net

2.	48	



Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

	The actual sprin	nging stroke is:
- Fo	r height C= 28 mm	16 mm
- Fo	r height C= 65 mm	49 mm
- Fo	r height C= 95 mm	74 mm







<u>RL1/4</u>

<u>RF1/4</u>

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2.49

			VERSION	02	15			VERSION	02 15 L	
CUP HO	OLDERS WIT	H STRAIGH	IT QUICK CO	OUPLER FO	OR PLASTIC	HOSE Ø 6 X 8	3		C = 65 mm	C = 95 mm
Art	Force	*C	D	E	F	L	Сир	Weight	Weight	Weight
ALC	Kg		Ø		Ø		art.	g	g	g
02 35 15	2.40	28	35	31	M20	131	01 35 15	218.6	266.6	293.6
02 40 15	3.14	28	40	33	M20	133	01 40 15	219.1	267.1	294.1
Note: Cups a Add the	re not an integra e letter L to the	al part of the c code to order L	up holders, the type fittings.	refore, they m	ust be ordered s	eperately.				

* Also available with height C of 65 mm and 95 mm

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

X

The actual springing stroke is:

- For height C= 28 mm
- For height C= 65 mm For height C= 95 mm







VERSION 02 .. 10

VERSION 02 .. 10 L

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43

CUP H	OLDERS WIT	H STRA	IGHT QUI	CK COU	PLER FOR	PLASTIC H	IOSE Ø 6 X 8			C = 65 mm	C = 95 mm
Art.	Force	*C	D	E	F	L	Сир	Screw included	Weight	Weight	Weight
Altu	Kg		Ø		Ø		art.	art.	g	g	g
02 45 10	3.98	28	45	33	M20	133	01 45 10	00 20 13	222.7	270.7	336.7
02 60 10	7.06	28	60	37	M20	137	01 60 10	00 20 13	230.9	78.9	344.9

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately. Add the letter L to the code to order L-type fittings.

* Also available with height C of 65 mm and 95 mm

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3D drawings available at www.vuototecnica.net



The actual springing	stroke is:
- For height C= 28 mm	16 mm
- For height C= 65 mm	49 mm
- For height C= 95 mm	74 mm







43

			VERS	ION 02	45 15			VERSION	02 45 15 L	
CUP HO	OLDERS WIT	H STRAIGH	IT QUICK CO	OUPLER FC	OR PLASTIC I	HOSE Ø 6 X 8			C = 65 mm	C = 95 mm
Art.	Force	*C	D	E	F	L	Сир	Weight	Weight	Weight
Altu	Kg		Ø		Ø		art.	g	g	g -
02 45 15	3.98	28	45	38	M20	138	01 45 15	222.6	272.6	295.6
Note: Cups a Add the * Also a	re not an integra e letter L to the o available with he	al part of the c code to order l eight C of 65 n	up holders, ther type fittings. nm and 95 mm	refore, they mu	ust be ordered se	eperately.				

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

X

16 mm

- The actual springing stroke is:
- For height C= 28 mm
- For height C= 65 mm For height C= 95 mm







VERSION 02

VERSION 02 ... L

 \mathbf{D}

CUP H	OLDERS WI	TH STRA	IGHT QU	ICK COU	PLER FOR	PLASTIC	HOSE Ø 6 X 8			C = 65 mm	C = 95 mm
Art.	Force	*C	D	E	F	L	Сир	Screw included	Weight	Weight	Weight
	Kg		Ø		Ø		art.	art.	g	g	g
02 50 20	4.90	28	50	35	M20	135	01 50 20	00 20 14	226.0	277.0	300.0
02 65 28	8.29	28	65	43	M20	143	01 65 28	00 20 14	231.7	282.7	305.7

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately. Add the letter L to the code to order L-type fittings.

* Also available with height C of 65 mm and 95 mm



The actual springing	stroke is:
- For height C= 28 mm	16 mm
- For height C= 65 mm	49 mm
- For height C= 95 mm	74 mm







VERSION 02

VERSION 02 L

CUP HO		H STRAIGH		OUPLER FO	R PLASTIC	HOSE Ø 6 X 8			C = 65 mm	C = 95 mm
Art.	Force	*C	D	E	F	L	Cup	Weight	Weight	Weight
	Kg		Ø		Ø		art.	g	g	g
2 50 40	4.90	28	50	41.0	M20	141.0	08 50 40	258.5	288.5	320.5
2 75 40	11.04	28	75	50.0	M20	150.0	08 75 40	277.9	307.9	339.9
2 100 40	19.62	28	100	51.0	M20	151.0	08 100 40	298.3	328.3	360.3
2 100 50	19.62	28	100	55.5	M20	155.5	08 100 50	294.8	324.8	356.8

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

X

- The actual springing stroke is:
- For height C= 28 mm
- For height C= 65 mm
- For height C= 95 mm







VERSION 02 56 15

VERSION 02 56 15 L

 \mathbf{G}

43

CUP H	OLDERS WI	ITH STRA	IGHT QU	ск сои	PLER FOR	PLASTIC	HOSE Ø 6 X 8			C = 65 mm	C = 95 mm
Art	Force	*C	D	E	F	L	Сир	Support included	Weight	Weight	Weight
Alt	Kg		Ø		Ø		art.	art.	g	g	g
02 56 15	6.15	28	56	34	M20	134	01 56 15	00 08 83	305.0	352.6	379.6

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately. Add the letter L to the code to order L-type fittings.

* <mark>Also avai</mark>lable with height C of <mark>65</mark> mm and 95 mm

2.54

3D drawings available at www.vuototecnica.net



Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$



X



- For height C= 28 mm
- For height C= 65 mm
- For height C= 95 mm





16 mm





VERSION 02 .. 24

VERSION 02 ... 24 L

(1)

CUP H	CUP HOLDERS WITH STRAIGHT QUICK COUPLER FOR PLASTIC HOSE Ø 6 X 8											
Art.	Force	*C	D	E	F	L	Cup	Support included	Ring nuts included	Weight	Weight	Weight
	Kg		Ø		Ø		art.	art.	art.	g	g	g
02 76 24	11.33	28	76	49	M20	149	01 76 24	00 08 110	00 08 111	298	338	361
02 90 24	15.89	28	90	49	M20	149	01 90 24	00 08 110	00 08 111	323	363	390
02 110 2 <mark>4</mark>	23.74	28	110	49	M20	149	01 110 24	00 08 110	00 08 111	373	413	439

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately.

Add the letter L to the code to order L-type fittings.

* Also available with height C of 65 mm and 95 mm

2.56

3D drawings available at www.vuototecnica.net



Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$



Art.

02 80 20

Х

The actual	springing	stroke	İS.
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- For height C= 28 mm

16 mm

49 mm

74 mm

- For height C= 65 mm
- For height C= 95 mm









VERSION 02 85 10

VERSION 02 85 10 L

(1)

CUP H	OLDERS WI	TH STRA	IGHT QUI	ск сои	PLER FOR	PLASTIC I	HOSE Ø 6 X 8			C = 65 mm	C = 95 mm
Art	Force	*C	D	E	F	L	Сир	Screw included	Weight	Weight	Weight
Alt	Kg		Ø		Ø		art.	art.	g	g	g
02 85 10	14.18	28	85	56	M20	156	01 85 10	00 20 13	318.0	347.9	369.9

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately. Add the letter L to the code to order L-type fittings.

51 - 5

* <mark>Also avai</mark>lable with height C of <mark>65</mark> mm and 95 mm

2.58



Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$



Art.

X



С	UP HO	DLDERS WI	TH STR/	AIGHT QUI	ск сои	PLER FOR	PLASTIC	HOSE Ø 6 X 8			C = 65 mm	C = 95 mm
Art.		Force	*C	D	Е	F	L	Сир	Support included	Weight	Weight	Weight
744		Kg		Ø		Ø		art.	art.	g	g	g
02 110) 1 <mark>0</mark>	23.74	28	114	32	M20	132	01 110 10	00 08 33	456	494	521

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately. Add the letter L to the code to order L-type fittings.

* Also available with height C of 65 mm and 95 mm

2.60





X

2

The actual	springing	stroke is	7
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- For height C= 28 mm 16 mm
- For height C= 65 mm For height C= 95 mm







VERSION 02 20 23

VERSION 02 20 23 L

L

43

CUP H	OLDERS WITH	STRAIGHT	QUICK CO	UPLER FOI	R PLASTIC H	HOSE Ø 6 X	8		C = 65 mm	C = 95 mm
Art	Force	*C	D	E	F	L	Сир	Weight	Weight	Weight
Alta	Kg		Ø		Ø		art.	g	g	g
02 20 23	0.78	28	20	38	M20	138	01 20 23	213.8	256.8	283.8

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately.

Add the letter L to the code to order L-type fittings.

* Also available with height C of 65 mm and 95 mm

2.62

3D drawings available at www.vuototecnica.net



Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$







VERSION 02 ... L

22

43

			v	ERSION	02			VERSION	02	L
CUP H	OLDERS WITH	H STRAIGHT	QUICK CO	UPLER FO	R PLASTIC I	HOSE Ø 6 X 8	3		C = 65 mm	C = 95 mm
Art	Force	*C	D	E	F	L	Сир	Weight	Weight	Weight
AIL.	Kg		Ø		Ø		art.	g	g	g 🗧
02 22 19	0.95	28	22	34	M20	134	01 22 19	214.7	257.7	284.7
02 34 26	2.26	28	34	41	M20	141	01 34 26	217.7	260.7	287.7
Note: Cups a Add the * Also	re not an integra e letter L to the c available with he	l part of the cup ode to order L-t	holders, there ype fittings. and 95 mm	efore, they mu	ist be ordered si	eperately.				

* Also available with height C of 65 mm and 95 mm

X

The actual springing stroke	IS:
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- For height C= 28 mm
- For height C= 65 mm For height C= 95 mm







VERSION 02 25 35

VERSION 02 25 35 L

CU	P HOLDERS WITH	I STRAIGH	Г QUICK CO	UPLER FOR	R PLASTIC H	HOSE Ø 6 X	8		C = 65 mm	C = 95 mm
Art	Force	*C	D	E	F	L	Сир	Weight	Weight	Weight
Alt	Kg		Ø		Ø		art.	g	g	g
02 25 35	1.23	28	25	50	M20	150	01 25 35	219	231	290

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately.

Add the letter L to the code to order L-type fittings.

* Also available with height C of 65 mm and 95 mm

2.64

3D drawings available at www.vuototecnica.net



The actual springing	stroke is:
- For height C= 28 mm	16 mm
- For height C= 65 mm	49 mm
- For height C= 95 mm	74 mm







VERSION 02

VERSION 02 ... L

2.65

3D drawings available at www.vuototecnica.net CUP HOLDERS WITH STRAIGHT QUICK COUPLER FOR PLASTIC HOSE Ø 6 X 8 C = 65 mm C = 95 mm Weight Force *C D Ε F L Cup Weight Weight Art. Ø Ø Kg art. g g g 02 30 32 30 1.76 28 47 M20 147 01 30 32 219.6 264.6 294.6 02 40 42 28 40 01 40 42 270.6 300.6 3.14 57 M20 157 215.6

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately.

Add the letter L to the code to order L-type fittings.

* Also available with height C of 65 mm and 95 mm

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

X
The actual	springing	stroke is:	
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- For height C= 28 mm 16 mm
- For height C= 65 mm For height C= 95 mm







VERSION 02 30 ..

VERSION 02 30 .. L

L

CUP H	OLDERS WIT	H STRAIGHT	QUICK CO	UPLER FO	R PLASTIC H	HOSE Ø 6 X 8	3		C = 65 mm	C = 95 mm
Art	Force	*C	D	E	F	L	Сир	Weight	Weight	Weight
Alta	Kg		Ø		Ø		art.	g	g	g
02 30 50	1.76	28	30	53	M20	153	01 30 50	221.6	258.6	285.6
02 30 99	1.76	28	30	53	M20	153	01 30 99	222.2	259.2	286.2

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately.

Add the letter L to the code to order L-type fittings.

* <mark>Also avai</mark>lable with height C of 65 mm and 95 mm

2.66

3D drawings available at www.vuototecnica.net



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Art.

Х

2.67

- The actual springing stroke is:
- For height C= 28 mm
- For height C= 65 mm For height C= 95 mm







VERSION 02 .. 30

VERSION 02 .. 30 L

 \mathbf{D}

CUP HO	OLDERS WITH	STRAIGHT	QUICK CO	UPLER FO	R PLASTIC F	IOSE Ø 6 X 8	8		C = 65 mm	C = 95 mm
Art.	Force	*C	D	E	F	L	Сир	Weight	Weight	Weight
	Kg		Ø		Ø		art.	g	g	g
02 40 30	3.14	28	40	67	M20	167	08 40 30	256.4	296.4	325.4
02 50 30	4.90	28	50	69	M20	169	08 50 30	264.9	304.9	333.9
02 60 30	7.06	28	60	71	M20	171	08 60 30	277.6	317.6	346.6
02 85 30	14.18	28	85	82	M20	182	08 85 30	346.0	386.0	415.0

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately.

Add the letter L to the code to order L-type fittings.

* Also available with height C of 65 mm and 95 mm

2.68

3D drawings available at www.vuototecnica.net







Х

The actual	springing	stroke	is:
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- For height C= 28 mm 16 mm 49 mm
- For height C= 65 mm For height C= 95 mm







VERSION 02

VERSION 02 ... L

 \mathbf{D}

CUP HOLDERS WITH STRAIGHT QUICK COUPLER FOR PLASTIC HOSE Ø 6 X 8										C = 95 mm
Art.	Force	*C	D	E	F	L	Сир	Weight	Weight	Weight
74.4	Kg		Ø		Ø		art.	g	g	g
02 40 60	3.14	28	40	84	M20	184	08 40 60	265.6	304.6	334.6
02 50 50	4.90	28	50	87	M20	187	08 50 50	275.6	314.6	344.6
02 60 50	7.06	28	60	91	M20	191	08 60 50	248.4	337.4	367.4
02 85 50	14.18	28	85	110	M20	210	08 85 50	394.0	433.0	463.0

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately.

Add the letter L to the code to order L-type fittings.

* Also available with height C of 65 mm and 95 mm

2.70

3D drawings available at www.vuototecnica.net

X



The actual spring	ing stroke is:
- For height C= 28 mm	16 mm
- FUT HEIGHT C= 05 HIIH For beight C= 05 mm	49 IIIII 74 mm
	74 11111





VERSION 02 43 28

 \mathbf{X}

VERSION 02 43 28 L

CUP H						HOSEØ6X	8		C = 65 mm	C - 95 mm
00F11	Force	*C	D	E	F	L	Cup	Weight	Weight	Weight
Art.	Kg		Ø		Ø		art.	g	g	g
2 43 28	3.62	28	43	43	M20	143	01 43 28	225	269	299
* Also	available with he	ght C of 65 mm	i and 95 mm							
Conversion rat	tio: inch = $\frac{mm}{25.4}$;	pounds $=\frac{g}{453.6}$	<u>Kg</u> 0.4536							2

The	act	ual	S	prii	ngi	ing	stroke	is:	
				_					

	, , ,	
-	For height C= 28 mm	16 mm
_	For height C= 65 mm	49 mm

- For height C= 65 mm
- For height C= 95 mm

74 mm







VERSION 02 50 53

VERSION 02 50 53 L

 \mathbf{D}

CUP H	HOLDERS WITH	I STRAIGHT	r QUICK CC	UPLER FOI	R PLASTIC I	HOSE Ø 6 X 8			C = 65 mm	C = 95 mm
Art	Force	*C	D	E	F	L	Сир	Weight	Weight	Weight
AIL.	Kg		Ø		Ø		art.	g	g	g
02 50 53	4.90	28	50	68	M20	168	01 50 53	247.4	286.4	315.4

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately. Add the letter L to the code to order L-type fittings.

* Also available with height C of 65 mm and 95 mm

2.72

3D drawings available at www.vuototecnica.net



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The actual springin	g stroke is:
- For height C= 28 mm	16 mm
- For height C= 65 mm	49 mm
- For height C= 95 mm	74 mm





VERSION 02 52 50

X

VERSION 02 52 50 L

3D drawings available at www.vuototecnica.net CUP HOLDERS WITH STRAIGHT QUICK COUPLER FOR PLASTIC HOSE Ø 6 X 8 C = 65 mm C = 95 mm Weight Weight Force *C D Ε L Cup Weight F Art. Ø Ø art. Kg g g g 02 52 50 5.30 28 52 M20 01 52 50 57 157 248.7 298.7 325.7 Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately. Add the letter L to the code to order L-type fittings. * Also available with height C of 65 mm and 95 mm Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$ 2.73

The a	actual	springin	g stroke	İS:
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- For height C= 28 mm
- For height C= 65 mm For height C= 95 mm







VERSION 02 53 35

VERSION 02 53 35 L

(J)

CUP H	OLDERS WITH	STRAIGHT	QUICK CO	UPLER FOI	R PLASTIC H	IOSE Ø 6 X 8	8		C = 65 mm	C = 95 mm
Art	Force	*C	D	E	F	L	Сир	Weight	Weight	Weight
AIL.	Kg		Ø		Ø		art.	g	g	g
02 53 35	5.51	28	<mark>5</mark> 3	41	M20	141	01 53 35	241.6	279.6	308.6

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately.

Add the letter L to the code to order L-type fittings.

* Also available with height C of 65 mm and 95 mm

2.74

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$







VERSION 02 .. 30

VERSION 02 .. 30 L

			VERS	10N U2	30			VERSION	02 30 L	
CUP H	OLDERS WITH	H STRAIGHT	QUICK CO	UPLER FC	R PLASTIC	HOSE Ø 6 X 8	3		C = 65 mm	C = 95 mm
Art	Force	*C	D	E	F	L	Сир	Weight	Weight	Weight
ALC.	Kg		Ø		Ø		art.	g	g	g
02 56 30	6.15	28	56	33	M20	133	01 56 30	236.0	243.0	264.0
02 75 30	11.04	28	75	69	M20	169	01 75 30	255.6	262.6	283.6
Note: Cups a Add th	are not an integra e letter L to the c	l part of the cup ode to order L-1	holders, there type fittings.	efore, they mu	ist be ordered s	eperately.				

* Also available with height C of 65 mm and 95 mm

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

X

2.75

- The actual springing stroke is:
- For height C= 28 mm
- For height C= 65 mm
- For height C= 95 mm
- 16 mm 49 mm 74 mm







VERSION 02 75 42

VERSION 02 75 42 L

(1)

22

43

CUP H	HOLDERS W	ITH STR	AIGHT QUI	ск сои	PLER FOR	PLASTIC	HOSE Ø 6 X 8			C = 65 mm	C = 95 mm
Art	Force	*C	D	E	F	L	Сир	Support included	Weight	Weight	Weight
Alt	Kg		Ø		Ø		art.	art.	g	g	g
02 75 42	11.04	28	75	57	M20	157	01 75 42	00 08 126	317.8	355.8	382.8

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately. Add the letter L to the code to order L-type fittings.

* Also available with height C of 65 mm and 95 mm

2.76

3D drawings available at www.vuototecnica.net



The distinctive feature of these cup holders is the brass stem with a threaded male or female end. The cups to be assmbled onto these cup holders must be equipped with the suited threaded support. The actual springing stroke is: - For height C= 28 mm 16 mm - For height C= 65 mm 49 mm - For height C= 95 mm 74 mm



B For int. ø 6 pipe <u>ch17</u> <u>ch17</u> ch30 RL1/4" 22 D 43 8 RF1/4"

VERSION 02 08 .. L

Basic cup holders with threaded female connectors

VERSION 02 08 .. CUP HOLDERS WITH STRAIGHT QUICK COUPLER FOR PLASTIC HOSE Ø 6 X 8

Art.	А	В	C	D	E	F	L	Weight
				Ø		Ø		g
02 08 28	32	40	28	G1/8"	15	M20	115	207
02 08 65	32	40	65	G1/8"	15	M20	152	243
02 08 95	32	40	95	G1/8"	15	M20	182	272

Note: Add the letter L to the code to order L-type fittings.



Note: Add the letter L to the code to order L-type fittings.

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

The actual springing stroke is:

- For height C= 28 mm	16 mm
- For height C= 65 mm	49 mm
- For height C= 95 mm	74 mm

Basic cup holders with threaded female connectors

Е

15





43

VERSION 02 10 ...

VERSION 02 10 .. L

CUP HOLDERS WITH STRAIGHT QUICK COUPLER FOR PLASTIC HOSE Ø 6 X 8

Art.	А	В	C	D	E	F	L	Weight
				Ø		Ø		g
02 10 28	32	40	28	G1/4"	20	M20	120	224
02 10 65	32	40	65	G1/4"	20	M20	157	262
02 10 95	32	40	95	G1/4"	20	M20	187	289

Note: Add the letter L to the code to order L-type fittings.

D

Basic cup holders with threaded male connectors

drawings available at www.vuototecnica.net

3D

X





CUP HOLDERS WITH STRAIGHT QUICK COUPLER FOR PLASTIC HOSE Ø 6 X 8

Art	А	В	С	D	E	F	L	Weight
Altu				Ø		Ø		g
02 10 28 M	32	40	28	G1/4"	15	M20	124	225
02 10 65 M	32	40	65	G1/4"	15	M20	161	266
02 10 95 M	32	40	95	G1/4"	15	M20	191	295

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

Note: Add the letter L to the code to order L-type fittings.

2.78



	The actual sprin	nging stroke is:
	- For height C= 28 mm	16 mm
	- For height C= 65 mm	49 mm
	- For height C= 95 mm	74 mm
Basic cup holders	with threaded female co	nnectors
B A OLD C C C C C C C C C C C C C C C C C C C	RE 1/4 · 22	

VERSION 02 11 ...

VERSION 02 11 .. L

CUP HOLDERS WITH STRAIGHT QUICK COUPLER FOR PLASTIC HOSE Ø 6 X 8

Art.	А	В	C	D	E	F	L	Weight
				Ø		Ø		g
02 11 28	32	40	28	M12	20	M20	120	226
02 11 65	32	40	65	M12	20	M20	157	264
02 11 95	32	40	95	M12	20	M20	187	291

Note: Add the letter L to the code to order L-type fittings.



M12

M12

15

15

M20

M20

161

191

32 Note: Add the letter L to the code to order L-type fittings.

32

40

40

65

95

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

02 11 65 M

02 11 95 M

2.79

264

293

3D drawings available at www.vuototecnica.net

The actua	l springing	stroke is:
-----------	-------------	------------

- For height C= 28 mm	16 mm
- For height C= 65 mm	49 mm
- For height C= 95 mm	74 mm

D

Basic cup holders with threaded female connectors

Ε

17

<u>ch20</u>



VERSION 02 12 ...

VERSION 02 12 .. L

22

43

CUP HOLDERS WITH STRAIGHT QUICK COUPLER FOR PLASTIC HOSE Ø 6 X 8

Art.	А	В	C	D	E	F	L	Weight
				Ø		Ø		g
02 12 28	32	40	28	G3/8"	25	M20	125	220
02 12 65	32	40	65	G3/8"	25	M20	162	259
02 12 95	32	40	95	G3/8"	25	M20	192	285

Note: Add the letter L to the code to order L-type fittings.

Basic cup holders with threaded male connectors

drawings available at www.vuototecnica.net

3D





Art	A	В	C	D	E	F	L	Weight
Altu				Ø		Ø		g
02 12 28 M	32	40	28	G3/8"	15	M20	125	237
02 12 65 M	32	40	65	G3/8"	15	M20	162	274
02 12 95 M	32	40	95	G3/8"	15	M20	192	303

Note: Add the letter L to the code to order L-type fittings,

2.80



These cup holders share the same technical features as the other basic cup holders. Their distinctive feature is the plunger valve solidly connected to a conical valve, which activates the suction, thus creating vacuum, only when the cups come in contact with the load to be lifted.

The actual springing stroke is:- For height C= 28 mm16 mm- For height C= 65 mm49 mm- For height C= 95 mm74 mm







VERSION 03 45 10

VERSION 03 45 10 L

43

.vuototecnica.net

Art.	Force	*C	D	E	F	L	Сир	Screw included	Weight	Weight	Weight	_
	Kg		Ø		Ø		art.	art.	g	g	g	
3 45 10	3.98	28	45	70	M20	170	01 45 10	00 20 13	344.7	381.7	415.7	
Note: Cups are Add the	e not an integ letter L to the	ral part of t code to or	he cup holo der L-type	lers, therefo fittings.	re, they must	be ordered se	eperately.					
Note: Cups an Add the * Also av	e not an integ letter L to the vailable with h	ral part of t code to or neight C of	he cup hold der L-type 65 mm and	lers, therefo fittings. I 95 mm	re, they must	be ordered se	eperately.					
Note: Cups and Add the * Also an	e not an integ letter L to the vailable with f	ral part of t code to or neight C of (he cup hold der L-type 65 mm and	lers, therefo fittings. I 95 mm	re, they must	be ordered se	perately.					

Th	e actual	springing	stroke	İS:
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- For height C= 28 mm 16 mm
- For height C = 65 mm 49 mm
- For height C= 95 mm









VERSION 03 60 10

VERSION 03 60 10 L

 \mathbf{D}

CUP HOL	DERS WITH	I STRA	IGHT	QUICK	COUF	PLER F	OR PLASTIC	HOSE Ø6X8			C = 65 mm	C = 95 mm
Art	Force	*C	D	E	F	L	Сир	Screw included	Disc included	Weight	Weight	Weight
	Kg		Ø		Ø		art.	art.	art.	g	g	g
03 60 10	7.06	28	60	72	M20	172	01 60 10	00 20 13	00 03 22	361.9	399.9	432.9

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately.

Add the letter L to the code to order L-type fittings.

* Also available with height C of 65 mm and 95 mm

2.82

3D drawings available at www.vuototecnica.net





X

 The actual springing stroke is:

 - For height C= 28 mm

 - For height C= 65 mm

 - For height C= 95 mm

 74 mm





VERSION 03 80 20

VERSION 03 80 20 L

 \mathbf{D}

CUP HOL	DERS WITH	STRA	IGHT	QUICK	COUF	PLER F	OR PLASTIC	HOSE Ø6X8			C = 65 mm	C = 95 mm
Art	Force	*C	D	E	F	L	Сир	Support included	Disc included	Weight	Weight	Weight
	Kg		Ø		Ø		art.	art.	art.	g	g	g
03 80 20	12.56	28	80	73	M20	173	01 80 20	00 08 126	00 03 22	432.2	470.2	503.2

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately.

Add the letter L to the code to order L-type fittings.

* Also available with height C of 65 mm and 95 mm

2.84

3D drawings available at www.vuototecnica.net









X

				۷	ERSI	0 N 1	03 85 10		VER	SION 03	85 10 L	- -
CUP HO	LDERS WITH	I STRA	IGHT (QUIC	(COUF	PLER F	OR PLASTIC	CHOSE Ø6X8			C = 65 mm	C = 95 mm
Art	Force	*C	D	E	F	L	Сир	Screw included	Disc included	Weight	Weight	Weight 🧧
ALL	Kg		Ø		Ø		art.	art.	art.	g	g	g Tei
03 85 10	14.18	28	85	92	M20	192	01 85 10	00 20 13	00 03 22	420.9	462.9	4 <mark>83.9</mark>
Note: Cups are Add the	e not an integral letter L to the co	part of t ode to or	he cup l der L-ty	nolders, pe fittin	, therefor Igs.	e, they i	must be ordered	seperately.				
* Also av Conversion ratio:	inch = $\frac{mm}{25.4}$;	ght C of counds =	65 mm : <u>9</u> : 453.6	and 95 = <u>Kg</u> 0.453	mm 16							2.85
												◀ 2



- For height C= 28 mm
- For height C= 65 mm
- For height C= 95 mm







VERSION 03 85 15

VERSION 03 85 15 L

L

CUP HO	LDERS WITH	I STRA	IGHT	QUICH		PLER	FOR PLASTIC	HOSE Ø6X8			C = 65 mm	C = 95 mm
Art	Force	*C	D	E	F	L	Сир	Support included	Disc included	Weight	Weight	Weight
ALC.	Kg		Ø		Ø		art.	art.	art.	g	g	g
03 85 15	14.18	28	85	70	M20	170	01 85 15	00 08 32	00 03 22	477.7	515.7	548.7

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately. Add the letter L to the code to order L-type fittings.

* <mark>Also avai</mark>lable with height C of <mark>65</mark> mm and 95 mm

2.86

3D drawings available at www.vuototecnica.net





Х

BASIC CUP HOLDERS WITH PLUNGER VALVE, WITH NO SPRINGING

They have the same function as the previously described basic cup holders with plunger valve, but for a further reduction of overall dimensions, the cushioning spring, the threaded pipe with nuts for fixing to the machine and the rapid coupler have been removed. This type of cup holder must be assembled onto the vacuum manifold by means of a threaded male shank on its end.







VERSION 03 45 11

N A										
0	Δrt	Force	А	D	E	F	L	Сир	Screw included	Weight
ĥIII/	AI 1.	Kg		Ø		Ø		art.	art.	g
0	3 45 11	3.98	15	45	70	G1/4"	85	01 45 10	00 20 13	174.7

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately.

2.88

lable at www.vuototecnica.net

3D









				VI	ERSION	03 60 11				
Art	Force	Α	D	E	F	L	Сир	Screw included	Disc included	Weight
ALC.	Kg		Ø		Ø		art.	art.	art.	g
02 60 11	7.06	15	60	72	G1/4"	87	01 60 10	00 20 13	00 03 22	191.9

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

X

2.89

BASIC CUP HOLDERS WITH PLUNGER VALVE, WITH NO SPRINGING







VERSION 03 65 16

otecnica.net						Di	sc	L				
vailable at www.vuot							VERS	ION 03	65 16			
gs av	Art.		Force	A	D	E	F	L	Cup	Support included	Disc included	Weight
vin			Kg		Ø		Ø		art.	art.	art.	g
drav	03 65 16		8.29	15	65	70	G1/4"	85	01 65 15	00 08 32	00 03 22	287.4
3D (Note: Cu	ips are i	not an integ	gral part of the cu	ip ho <mark>ld</mark> ers, th <mark>e</mark> i	refor <mark>e,</mark> they mu	ist be ordered se	perately.				

2.90



Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$







VERSION 03 80 21

3D drawings available at www.vuototecnica.net Weight Force А D Е F L Cup Support included Disc included Art. Kg Ø Ø art. art. art. g 03 80 21 G1/4" 01 80 20 00 08 126 00 03 22 12.56 15 80 73 88 260.2

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately.

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

X

2.91

BASIC CUP HOLDERS WITH PLUNGER VALVE, WITH NO SPRINGING







otecnica.net						Disc	 −	L				
ailable at www.vuol							VERSI	ON 038	95 11			
gs av	Art.		Force	A	D	E	F	L	Cup	Screw included	Disc included	Weight
VID			Kg		0		Ø		art.	art.	art.	g
drav	03 85 11		14.18	15	85	92	G1/4"	107	01 85 10	00 20 13	00 03 22	247.9
3D C	Note: Cu	ups are i	not an integ	gral part of the c	up ho <mark>ld</mark> ers, the	refore, they mu	st be ordered se	perately.				

2.92



(f)

ί

BASIC CUP HOLDERS WITH PLUNGER VALVE, WITH NO SPRINGING







				Disc		L				
					VERSION	03 89	5 16			
Δrt	Force	A	D	E	F	L	Cup	Support included	Disc included	Weight
ALC.	Kg		Ø		Ø		art.	art.	art.	g
03 85 16	14.18	15	85	70	G1/4"	85	01 85 15	00 08 32	00 03 22	302.7

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately.

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

X

2.93



Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately.











			•	VERSION	L 03				
	Force	Α	В	D	F	F		Cup	Weight
Art.	Kg		U U	Ø	-	Ø	_	art.	g
03 50 41	4.90	13	18.0	50	46.0	G3/8"	59.0	08 50 40	100.6
03 75 41	11.04	13	27.0	75	55.0	G3/8"	68.0	08 75 40	120.0
03 100 41	19.62	13	28.0	100	56.0	G3/8"	69.0	08 100 40	140.4
03 100 41						00/01	70 5	00 100 50	100.0

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

X

2.95

(f)

BASIC CUP HOLDERS WITH BUILT-IN SHUT-OFF VALVE

Along with all the other features they share with the other basic cup holders, these have a built-in shut-off valve. The purpose of the shut-off valve is to automatically close suction when the cup is not in contact with the surface of the load to be handled or in case of a faulty grip or of considerable transpiration, thus preventing the reduction of the vacuum level on the remaining cups of the system which are regularly handling the load. The clear advantage of this system is that the positioning or the exclusion of the non-gripping cups are no longer binding. Cups with diameters ranging from 35 mm to 85 mm can be assembled onto these cup holders, as long as they are provided with a threaded 1/4" gas male support. The actual springing stroke is: - For height C= 28 mm 16 mm

49 mm

74 mm

- For height C= 65 mm

- For height C= 95 mm

ø 6 pipe F С В <u>RL</u>1/4 * 22 int. For D <u>ch17</u> ch20 ch30

43 RF1/4 *



28

65

95

VERSION 02 99 .. L

F

Ø

M20

M20

M20



40

40

40



32

32

32





Art.

02 99 28

02 99 65

02 99 95



Ø

G1/4"

G1/4"

G1/4"

30

30

30

L

130

167

197

Weight

g

256

301

The distinctive feature of these cup holders is their articulated joint in hardened steel, which allows the flat cups installed on these cup holders to adapt themselves to the loads to be lifted with slightly tilted surfaces, as well as to compensate possible verticality errors that can arise between the cup holder and the machine fixing support.

	0 11
- For height C= 28 mm	16 mm
- For height C= 65 mm	49 mm
- For height C= 95 mm	74 mm



2.97





	VERSION	02	65	20
--	---------	----	----	----

						•	B		or int. ø 6				
									μ				
							VEF	RSION	02 65 20				
CUP HO	LDERS W	ITH ST	TRAIG	HT QU	ICK CO	OUPLER	VEF FOR F	RSION PLASTIC	02 65 20 HOSE Ø6X8			C = 65 mm	C = 95 mm
CUP HO	LDERS W Force	ITH ST A	TRAIG B	HT QU *C	ICK CO	DUPLER F	VEF FORF G	SION PLASTIC L	02 65 20 HOSE Ø6X8 Cup	Support included	Weight	C = 65 mm Weight	C = 95 mm Weight
CUP HO Art.	DERS W Force Kg	ITH ST A	traig B	HT QU *C	ICK CO D Ø	DUPLER F Ø	VEF FORF G	RSION PLASTIC L	0 2 6 5 2 0 HOSE Ø 6 X 8 Cup art.	Support included art.	Weight g	C = 65 mm Weight g	C = 95 mm Weight g

11111

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

X

The actual springing stroke is: - For height C= 28 mm - For height C= 65 mm - For height C= 95 mm - For height C= 95 mm - For height C= 95 mm - T4 mm





VERSION 02 85 20

Cl	JP HOL	DERS W	ITH S	TRAIG	HT QI	JICK CO	OUPLER	FOR F	PLASTIC	HOSE Ø6X8			C = 65 mm	C = 95 mm
Art		Force	Α	В	*C	D	F	G	L	Сир	Support included	Weight	Weight	Weight
Alta		Kg				Ø	Ø			art.	art.	g	g	g
02 85 2	20	14.18	21	37	28	85	M20	52	130	01 85 15	00 02 36	400.7	449.7	479.7

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately.

* <mark>Also avai</mark>lable with height C of 65 mm an<mark>d</mark> 95 m<mark>m</mark>.

2.98







Art.

02 110 20

X

 The actual springing stroke is:

 - For height C= 28 mm
 16 mm

 - For height C= 65 mm
 49 mm

 - For height C= 95 mm
 74 mm





VERSION 02 110 22

	CUF	P HOLI	DERS WI	TH STRA	IGHT (QUICK CC	UPLER F	OR PLAS	TIC HOSE	EØ6X8			C = 65 mm	C = 95 mm
	Art.		Force	Α	В	*C	D	F	G	L	Сир	Weight	Weight	Weight
Alt		Kg				Ø	Ø			art.	g	g	g	
02	110 2	2	23.74	26	46	28	110	M20	61	139	08 110 40 M8	603	654	683

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately.

* <mark>Also avai</mark>lable with height C of 65 mm an<mark>d</mark> 95 m<mark>m</mark>.

2.100

3D drawings available at www.vuototecnica.net







BASIC ANTI-ROTATION CUP HOLDERS

The distinctive features of these cup holders are their brass stem with hexagonal section and the steel drive bush, also with hexagonal hole. This structure prevents the stem and, as a consequence, the cup assembled onto it from rotating on its axis. The drive bush is provided with two fine thread ring nuts to guarantee an accurate fastening of the cup holder to the machine. They are suited for cups with diameters between 45 mm and 110 mm, although they have been specially designed for assembling rectangular, concave or oval cups.

The actual springing stroke is:- For height C= 28 mm16 mm- For height C= 65 mm49 mm

- For height C= 95 mm 74 mm





VERSION 02 95 ...

VERSION 02 95 .. L

CUP HOLD	ERS WITH	STRAIGHT QU	ICK COUPLER	FOR PLASTIC F	IOSE Ø6X8				
Art	Α	В	C	D	E	F	G	L	Weight
ALC				Ø		Ø			g
02 95 28	32	40	28	M12	15	M20 x 1	10	125	180
02 95 65	32	40	65	M12	15	M20 x 1	10	162	225
02 95 95	32	40	95	M12	15	M20 x 1	10	192	246
02 95 28 1/4"	32	40	28	G1/4"	15	M20 x 1	10	125	181
02 95 65 1/4"	32	40	65	G1/4"	15	M20 x 1	10	162	226
02 95 95 1/4"	32	40	95	G1/4"	15	M20 x 1	10	192	247

Note Add the letter L to the code to order L-type fittings.

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

3D
BASIC CUP HOLDERS FIX

They are simply nickel-plated brass threaded bushes, with screwing nuts for height adjustment and with threaded ends, one to assemble the vacuum cup with support and the other for the quick coupling connecting the suction hose.





VERSION 02 91 01

VERSION 02 91 01 L

CUP HOLDERS WITH STRAIGHT QUICK COUPLER FOR PLASTIC HOSE Ø 6 X 8

Art.	D	E	F	L	Weight		
	Ø		Ø				
02 91 01	G1/4"	10	M20 x 1	74	162		

Note: Add the letter L to the code to order L-type fittings.



CUP HOLDERS WITH STRAIGHT QUICK COUPLER FOR PLASTIC HOSE Ø 6 X 8 Weight D L Ε F Art. Ø Ø g 02 91 05 G1/4" M20 x 1 84 170 10 02 91 06 G3/8" 10 M20 x 1 84 174

Note: Add the letter L to the code to order L-type fittings.

2.102



Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$



drawings available at www.vuototecnica.net

3D

These special cup holders have been designed to lift and handle heavy loads and to withstand intensive and continuous workloads in dusty or damp environments. They are composed of: - A chromed steel stem for fastening the cup. - A brass threaded support with self-lubricating bushes, equipped with two ring nuts for fastening the cup holder to the machine. - A spring to cushion the impact of the cup with the load to be lifted. - A quick coupler for connection to the suction hose. The actual springing stroke is: - For height C= 55 mm 37 mm - For height C= 110 mm 84 mm







					VE	RSION	06	85 10		VERSION	06 85 10	L
CUP HO	DLDERS WIT	TH STRA A	AIGHT O B	OUICK C	OUPL D	ER FOR P F	LAST	IC HOSE	Ø 6 X 8 Cup	Support included	Weight	<u>C = 110 mm</u> Weight
06 85 10	Kg 14.18	46	39	55	Ø 85	Ø M35 x 1.5	50	190	01 85 10	00 08 29	g 731.9	g 853.9
Note: Cups a Add the	re not an integr e letter L to the	al part of code to o	the cup h rder L-typ	olders, the e fittings.	refore,	they must be	ordere:	ed seperately				
* Also a Conversion rati	available with h	eight C of ; pounds :	f 110 mm = <u>g</u> 453.6	Kg 0.4536								2.10
												2

The actual springing stroke is:	
- For height C= 55 mm	37 mn
- For height C= 110 mm	84 mn









VERSION 06 85 15

VERSION 06 85 15 L

22

T

43

CUP	HOLDERS WI	TH STR	AIGHT	QUICK C	OUPLI	ER FOR P	LAST	IC HOSE	Ø 6 X 8			C = 110 mm
Art.	Force	А	В	*C	D	F	G	L	Сир	Support included	Weight	Weight
Art.	Kg				Ø	Ø			art.	art.	g	g
06 85 15	14.18	22	39	55	85	M35 x 1.5	50	166	01 85 15	00 08 32	779.7	899.7

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately.

Add the letter L to the code to order L-type fittings.

* Also available with height C of 110 mm

2.104

3D drawings available at www.vuototecnica.net



Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

The actual springing stroke is: - For height C= 55 mm 37 mm - For height C= 110 mm 84 mm







X

				N		VE	ERSION	06	90 24	·		VERSION	06 90 24	L	
CUP F	-10L	LDERS V Force	<u>NITH S</u>	STRAIC B	<u>3HT QL</u> *C	<u>JICK (</u>	COUPLER F	FOR G	PLASTIC L	HOSE Ø 6 X	8 Support included	Ring nut ir	Icluded Wei	<u> </u>	<u>110 mm</u> Veight
AI L.		Kg				Ø	Ø			art.	art.	art.	g	J	g
06 90 24	Ī	15.89	29	39	55	90	M35 x 1.5	50	173	01 90 24	00 08 110	00 08 1	11 85	2.8	974.8
Note: Cups Add ti * Alsc	are the le o av:	not an inte etter L to t /ailable wit	egral par the code th height	t of the to orde C of 11	cup hold r L-type 10 mm	Jers, the fittings	erefore, they	must	be ordered	seperately.					
Conversion ra	atio:	inch = $\frac{m}{2}$	<u>1m</u> ; pour :5.4	nds =	$\frac{g}{453.6} = 0$	<u>Kg</u>).4536									2.1

The actual springing stroke is: - For height C= 55 mm

- For height C= 110 mm









22

<u>RL1/4</u>

VERSION 06 100 40 L

 \mathbf{D}

CUF	HOLDERS WI	TH STRA	NIGHT QU	ІСК СОО	PLER FOR	PLASTIC HO	DSE Ø6	X 8			C = 110 mm
Art	Force	Α	В	*C	D	F	G	L	Сир	Weight	Weight
Altu	Kg				Ø	Ø			art.	g	g
06 100 4	D 19.62	31	39	55	100	M35 x 1.5	50	175	08 100 40	736	858

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately. Add the letter L to the code to order L-type fittings.

* Also available with height C of 110 mm

2.106

3D drawings available at www.vuototecnica.net







The actual springing stroke is: 37 mm - For height C= 55 mm - For height C= 110 mm 84 mm





VERSION 06 100 50

VERSION 06 100 50 L

RL1/4*

<u>RF1/4</u>

22

43













VERSION 06 110 10

RE1/4[•] 22 G1/4[•] 43

VERSION 06 110 10 L

CUP HOLDERS WITH STRAIGHT QUICK COUPLER FOR PLASTIC HOSE Ø 6 X 8													
Art	Force	Α	В	*C	D	F	G	L	Сир	Support included	Weight	Weight	
Art.	Kg				Ø	Ø			art.	art.	g	g	
06 110 1 <mark>0</mark>	23.74	22	39	55	114	M35 x 1.5	50	166	01 110 10	00 08 33	912.3	1034.3	

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately. Add the letter L to the code to order L-type fittings.

71

* Also available with height C of 110 mm

2.108







3D drawings available at www.vuototecnica.net







VERSION 06 110 15

X

VERSION 06 110 15 L

43

3D drawings available at www.vuototecnica.net CUP HOLDERS WITH STRAIGHT QUICK COUPLER FOR PLASTIC HOSE Ø 6 X 8 C = 110 mm Weight Cap included Weight Force А В *C D F G L Cup Art. Kg Ø Ø art. art. g g 06 110 15 23.74 110 M35 x 1.5 50 08 110 15 00 11 06 980 31 39 55 175 1100 Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately. Add the letter L to the code to order L-type fittings. * Also available with height C of 110 mm Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$ 2.109

37 mm

84 mm

The actual springing stroke is: - For height C= 55 mm - For height C= 110 mm







VERSION 06 110 24



CUF	HOLDERS	WITH S	STRAI	GHT QI		OUPLER	FOR	PLASTIC	HOSE Ø6X8				C = 110 mm
Art	Force	А	В	*C	D	F	G	L	Сир	Support included	Ring nut included	Weight	Weight
Art.	Kg				Ø	Ø			art.	art.	art.	Kg	Kg
06 110 2	4 2 3.74	29	39	55	110	M35 x 1.5	50	173	01 110 24	00 08 110	00 08 111	1.07	1.19

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately. Add the letter L to the code to order L-type fittings.

* Also available with height C of 110 mm

2.110

3D drawings available at www.vuototecnica.net







Х



* Also available with height C of 110 mm

2.112

3D

X

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$ Kg

(LL)



Force А В *C D F G L Cup Weight Weight Art. Ø Ø Kg art. Kg Kg 06 150 15 M35 x 1.5 08 150 15 1.51 45.00 26 40.0 55 150 50 144 1.64 06 200 10 78.50 55 146 08 200 10 2.42 2.54 28 47.5 200 M35 x 1.5 52 06 250 10 122.60 55 250 M35 x 1.5 146 08 250 10 3.68 3.80 28 72.5 52

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately.

* Also available with height C of 110 mm

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

X



Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately.

* Also available with height C of 110 mm

2.114



Kg

1.99

L



X



CUP H	CUP HOLDERS WITH HOSE-END FITTING FOR PLASTIC HOSE Ø 16 X 18													
Δrt	Force	А	В	*C	D	F	G	L	Сир	Weight	Weight			
Alt	Kg				Ø	Ø			art.	Kg	Kg			
06 300 10	176.6	31	89	55	300	M35 x 1.5	61	149	08 300 10	5.42	5.56			
06 350 1 <mark>0</mark>	240.0	31	89	55	350	M35 x 1.5	61	149	08 350 10	7.30	7.43			

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately.

* <mark>Also avai</mark>lable with height C of 110 mm

2.116

3D drawings available at www.vuototecnica.net







F

The actual springing stroke is: - For height C= 55 mm 37 mm - For height C= 110 mm 84 mm







VERSION 06 75 42

Х

VERSION 06 75 42 L

3D drawings available at www.vuototecnica.net CUP HOLDERS WITH STRAIGHT QUICK COUPLER FOR PLASTIC HOSE Ø 9 X 12 C = 110 mm Weight Support included Weight Force А В *C D F G L Cup Art. Kg Ø Ø art. art. Kg Kg 06 75 42 00 08 143 78 M35 x 1.5 50 01 75 42 0.76 0.<mark>87</mark> 11.93 42 45 55 197 Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately. Add the letter L to the code to order L-type fittings. * Also available with height C of 110 mm Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$ 2.117

37 mm

The actual springing stroke is: - For height C= 55 mm - For height C= 110 mm 84 mm







VERSION 06 ... 30

VERSION 06 ... 30 L

(LL)

	CUP HOLDERS WITH STRAIGHT QUICK COUPLER FOR PLASTIC HOSE Ø 9 X 12													
	Art.	Force	А	В	*C	D	F	G	L	Сир	Cap included	Weight	Weight	
		Kg				Ø	Ø			art.	art.	Kg	Kg	
0	6 110 30	23.74	45	45	55	110	M35 x 1.5	50	200	08 110 30	00 11 44	0.97	1.08	
0	6 150 30	45.00	60	45	55	150	M35 x 1.5	50	215	08 150 30	00 11 44	1.09	1.20	
0	6 180 3 <mark>0</mark>	63.50	70	45	55	180	M35 x 1.5	50	225	08 180 30	00 11 44	1.45	1.56	

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately.

Add the letter L to the code to order L-type fittings.

* Also available with height C of 110 mm

2.118

3D drawings available at www.vuototecnica.net







The actual springing stroke is: - For height C= 55 mm 37 mm - For height C= 110 mm 84 mm





VERSION 06 110 58

VERSION 06 110 58 L

3D drawings available at www.vuototecnica.net CUP HOLDERS WITH STRAIGHT QUICK COUPLER FOR PLASTIC HOSE Ø 9 X 12 <u>C = 110 mm</u> В *C D F Cup Support included Cap included Weight Weight Force А G L Art. Ø Ø art. art. art. Kg Kg Kg 06 110 58 00 08 162 23.74 58 45 55 110 M35 x 1.5 50 213 01 110 58 00 11 44 0.93 1.04 Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately. Add the letter L to the code to order L-type fittings. * Also available with height C of 110 mm 2.119 Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$



VERSION 06 150 74

VERSION 06 1150 74 L

CUP H	OLDERS N	WITH S	TRAIC	AHT QU	лск с	OUPLER	FOR	PLASTIC	HOSE Ø9X	(12			C = 110 mm
Art.	Force	А	В	*C	D	F	G	L	Сир	Support included	Cap included	Weight	Weight
Art.	Kg				Ø	Ø			art.	art.	art.	Kg	Kg
06 150 7 <mark>4</mark>	<mark>4</mark> 5.00	74	45	55	150	M35 x 1.5	50	229	01 150 74	00 08 163	00 11 44	1.34	1.45

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately. Add the letter L to the code to order L-type fittings.

* Also available with height C of 110 mm

K

2.120

3D









X

These cup holders share the same technical features as the other basic cup holders. Their distinctive feature is the plunger valve solidly connected to a conical valve, which activates the suction, thus creating vacuum, only when the cups come into contact with the load to be lifted. With these cup holders it is no longer necessary to install cocks on the suction hoses; for this reason, they are recommended in all those cases in which there is a chance that not all the cups come into contact with the load to be lifted (because of an uneven or incomplete load). The actual springing stroke is:

- For height C= 55 mm
- For height C= 110 mm

37 mm 84 mm







VERSION 06 85 20

VERSION 06 85 20 L

CUP H	OLDERS WIT	TH STRA		UICK C	OUPLER F	OR PLA	STIC HOSE Ø6	X 8			C = 110 mm
Art	Force	Α	*C	D	F	L	Сир	Screw included	Disc included	Weight	Weight
Art.	Kg			Ø	Ø		art.	art.	art.	Kg	Kg
06 85 20	13.50	81	55	85	M35 x 1.5	225	01 85 10	00 20 13	00 03 22	0.83	0.95

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately. Add the letter L to the code to order L-type fittings.

* Also available with height C of 110 mm

2.122

at www.vuototecnica.net

drawings available

3D











X

22

43

<u>RL1/4°</u>

RF1/4 *

G1/4'

CUP HOLDERS WITH STRAIGHT QUICK COUPLER FOR PLASTIC HOSE Ø 6 X 8 C = 110 mm Art. Force A *C D F L Cup Support included Disc included Weight Weight Mat. Kg Ø Ø art. art. art. art. Kg Kg 06 85 22 1 4.18 65 55 85 M35 x 1.5 209 01 85 15 00 08 32 00 03 22 0.89 1.01 Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately. Add the letter L to the code to order L-type fittings. * Also available with height C of 110 mm Conversion ratio: inch = mm ; pounds = g Kg 0.4536 Kg 0.4536 Conversion Conversion ratio Mathematical part of the cup holders, therefore part of the cup holders, therefore part of the cup holders, therefore part of the cup holders, therefore part of the cup holders, therefore part of the cup holders, therefore part of the cup holders, therefore part of the cup holders, therefore part of the cup holders, therefore part of the cup holders, therefore part of the cup holders, therefore part of the cup holders, therefore part of the cup holders, therefore part of the cup holders, therefore part of the cup holders, therefore part of the cup holders, therefore part of the cup holders, therefore part of the cup holders, therefore part of the cup holders						VERSION	068	5 22		VERSION 06	85 22 L	
Art.Force KgA*CDFLCupSupport includedDisc includedWeightWeight06852214.18655585M35 x 1.52090185150008320003220.891.01Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately. Add the letter L to the code to order L-type fittings.* Also available with height C of 110 mmConversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$ 2	CUP HC)LDERS WI	TH STRA	IGHT QL	JICK C	OUPLER F	OR PLAS	TIC HOSE Ø 6	5 X 8			C = 110 mm
KgØØart.art.art.KgKg06 85 2214.18655585M35 x 1.520901 85 1500 08 3200 03 220.891.01Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately. Add the letter L to the code to order L-type fittings.* Also available with height C of 110 mmConversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ $\frac{Kg}{0.4536}$	Art.	Force	А	*C	D	F	L	Cup	Support included	Disc included	Weight	Weight
06 85 22 14.18 65 55 85 M35 x 1.5 209 01 85 15 00 08 32 00 03 22 0.89 1.01 Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately. Add the letter L to the code to order L-type fittings. * Also available with height C of 110 mm Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ $\frac{Kg}{0.4536}$ 2		Kg			Ø	Ø		art.	art.	art.	Kg	Kg
Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately. Add the letter L to the code to order L-type fittings. * Also available with height C of 110 mm Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$	06 85 22	14.18	65	55	85	M35 x 1.5	209	01 85 15	00 08 32	00 03 22	0.89	1.01
Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$	Note: Cups ar Add the	e not an integr e letter L to the	al part of the code to or code to	ne cup hol der L-type 110 mm	ders, the fittings.	refore, they m	lust be orde	ered seperately.				
	* Also a	wailable with h										

37 mm

84 mm



Add the letter L to the code to order L-type fittings.

* Also available with height C of 110 mm

2.124

3D

X

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$ Kg



C = 110 mm

Weight

Kg

The actual springing stroke is: - For height C= 55 mm 37 mm - For height C= 110 mm 84 mm







VERSION 06 110 22

VERSION 06 110 22 L

43



* Also available with height C of 110 mm

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

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X



Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately.

Add the letter L to the code to order L-type fittings.

* Also available with height C of 110 mm

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3D



The distinctive feature of these cup holders is the push valve on the cup support, which activates suction, and therefore creates vacuum, only when the cup is in contact with the load to be lifted. With these cup holders it is no longer necessary to install cocks on the suction hoses; for this reason, they are recommended in all those cases in which there is a chance that not all the cups come into contact with the load to be lifted (because of an uneven or incomplete load). The same push valve can also be applied with no modification to the special articulated cup holders. The actual springing stroke is: 37 mm

- For height C= 55 mm - For height C= 110 mm 84 mm



				2		63 2	For int. ø 9 pi	VERSION 06.		
CUP HC	LDERS WIT		IGHT QUIC	K COUPLEF	FOR PLA	STIC HOSE ØS	9 X 12	Cup	Weight	C = 110 mm
Art.	Ka	A	Б	U	Ø	Ø	L	art.	Ka	Ka
06 150 22	45.0	26	40.0	55	150	M35 x 1.5	144	08 150 15	1.68	1.80
06 200 20	78.5	28	47.5	55	200	M35 x 1.5	146	08 200 10	2.58	2.71
06 250 20	122.6	28	72.5	55	250	M35 x 1.5	146	08 250 10	3.84	3.97
Note: Cups ar * Also a	e not an integra vailable with he	al part of th	ne cup holders	s, therefore, the	y must be orc	lered seperately.				

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

X



	CUP HO	OLDERS WIT	TH STRAIG		K COUPLER	R FOR PLAS	STIC HOSE ØS	9 X 12			C = 110 mm
	Art	Force	А	В	*C	D	F	L	Сир	Weight	Weight
	Alt	Kg				Ø	Ø		art.	Kg	Kg
1	06 300 2 <mark>0</mark>	176.6	31	89	55	300	M35 x 1.5	149	08 300 10	5.56	5.69
(06 350 2 <mark>0</mark>	240.0	31	89	55	350	M35 x 1.5	149	08 350 10	7.42	7.55

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately.

* Also available with height C of 110 mm





SPECIAL CUP HOLDERS WITH BUILT-IN SHUT-OFF VALVE

Along with all the other features they share with the other basic cup holders, these have a built-in shut-off valve. The purpose of the shut-off valve is to automatically close suction when the cup is not in contact with the surface of the load to be handled or in case of a faulty grip or of considerable transpiration, thus preventing the reduction of the vacuum level on the remaining cups of the system which are regularly handling the load. The clear advantage of this system is that the positioning or the exclusion of the non-gripping cups are no longer binding. Cups with diameters between 85 mm and 150 mm can be assembled onto these cup holders, as long as they are provided with a threaded 3/8" gas female support. The actual springing stroke is:

- For height C=	55 mm	37	тт
- For height C= 1	110 mm	84	тт





VERSION 06 ... L

2.129

VERSION 06

CUP HOLDE	ERS WITH STRAIGI	HT QUICK COUPLE	ER FOR PLASTIC H	OSEØ6X8			
Art	А	В	С	D	F	L	Weight
ALL				Ø	Ø		
				U	V		Kg
06 99 55	16	11	55	G3/8"	M35 x 1.5	160	Kg 0.63
D6 99 55 D6 99 110	16 16	11 11	55 110	G3/8" G3/8"	M35 x 1.5 M35 x 1.5	160 215	Kg 0.63 0.77
06 99 55 06 99 110	16 16	11 11	55 110	G3/8" G3/8"	M35 x 1.5 M35 x 1.5	160 215	Kg 0.63 0.77
06 99 55 06 99 110 Note: Add the lette	16 16 er L to the code to order	11 11 L-type fittings.	55 110	G3/8" G3/8"	M35 x 1.5 M35 x 1.5	160 215	Kg 0.63 0.77

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

The distinctive feature of these cup holders is their articulated joint in hardened steel, which allows the flat cups installed on these cup holders to adapt themselves to the loads to be lifted even if not completely parallel with the cup plane, as well as to compensate possible verticality errors that can arise between the cup holder and the machine fixing support. Technical and constructive features are the same as the other special cup holders.

The actual springing stroke is:

- For height C= 55 mm
- For height C= 110 mm

37 mm 84 mm







VERSION 06 110 12

CUF	P HOLDERS WI	TH STRA	IGHT C	ουιςκ ςοι	JPLER F	OR PLASTI	C HOSE	E Ø 6 X 8			C = 110 mm
Art	Force	А	В	*C	D	F	L	Сир	Support included	Weight	Weight
Aru	Kg				Ø	Ø		art.	art.	Kg	Kg
06 110 1	2 23.74	26	77	55	114	M35 x 1.5	195	01 110 10	00 06 14	1.15	1.27

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately.

* Also available with height C of 110 mm

2.130

drawings available at www.vuototecnica.net

3D













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					VER	SION 06 1	10 17				ototecni
											WWW.VU
CUP H	IOLDERS WIT	H STRAIG	GHT QUICK		R FOR PLAS		6 X 8	0.0	William	C = 110 mm	able at v
Art.	Force	А	В	^ ن	D	۴	L	Cup	Weight	weight	Ivail
06 110 17	23.74	26	86	55	110	M35 x 1.5	204	08 110 15	1.22	1.34	ngs 8
Note: Cups	are not an integra	al part of the	e cup holders,	therefore, the	ey must be ord	ered seperately.					rawii
* Δlso	available with he	Piaht C of 11	0 mm		-						3D d
7100		Jight o of Th									
Conversion ra	tio: inch = $\frac{mm}{25-i}$;	pounds =	$\frac{g}{4500} = \frac{Kg}{4500}$							<mark>2.</mark> 13	31
	25.4]	453.6 0.453	b						2	

X

37 mm

84 mm





VERSION 06 150 12												
CUP H	IOLDERS WIT	TH STF	R <mark>AIGHT</mark> C	UICK CO	UPLER F	OR PLAST	C HOSE	Ø 6 X 8			C = 110 mm	
Art	Force	А	В	*C	D	F	L	Сир	Support included	Weight	Weight	
Alta	Kg				Ø	Ø		art.	art.	Kg	Kg	
06 150 12	45.00	30	83	55	154	M35 x 1.5	201	01 150 10	00 06 15	1.56	1.69	

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Ring Nuts KM7

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Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately.

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For int. ø 6 pipe

* Also available with height C of 110 mm









VERSION 06

				4	For int.	L				teonica net
					VE	RSION 06				
CUP HC	DLDERS WIT	TH STRAIG	HT QUICH	< COUPLEF	R FOR PLA	STIC HOSE Ø	9 X 12			C = 110 mm
Δrt	Force	Α	В	*C	D	F	L	Сир	Weight	Weight t
Alt	Kg				Ø	Ø		art.	Kg	Kg 🔤
06 150 17	45.00	40.0	86	55	150	M35 x 1.5	204	08 150 15	1.73	1.85
06 200 12	78.50	47.5	88	55	200	M35 x 1.5	206	08 200 10	2.63	2.75
06 250 12	122.60	72.5	88	55	250	M35 x 1.5	206	08 250 10	3.89	4.02
Note: Cups ar	re not an integr	al part of the	cup holders	, therefore, the	ey must be orc	lered seperately.				iwer
* Also a	wailable with h	eight C of 11	0 mm							30.0

* Also available with height C of 110 mm

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

X

37 mm

84 mm



CUP HOLDERS WITH STRAIGHT QUICK COUPLER FOR PLASTIC HOSE Ø 9 X 12												
Δrt		Force	Α	В	*C	D	F	L	Сир	Support included	Weight	Weight
Art	_	Kg				Ø	Ø		art.	art.	Kg	Kg
06 220	12 OF	63.60	70	97	55	220	M35 x 1.5	215	01 220 10 OF	00 08 37	2.08	2.21
06 220	12 NF	63.60	70	97	55	220	M35 x 1.5	215	01 220 10 NF	00 08 37	2.07	2.20

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately.

* Also available with height C of 110 mm









Art.

X

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CUP	P HOI		C = 110 mm								
Δrt		Force	А	В	*C	D	F	L	Сир	Weight	Weight
Aru		Kg				Ø	Ø		art.	Kg	Kg
06 300 12	2	176.6	89	115	55	300	M35 x 1.5	233	08 300 10	6.09	6.22
06 350 1 <mark>2</mark>	2	240.0	89	115	55	350	M35 x 1.5	233	08 350 10	7.95	8.08

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately.

* Also available with height C of 110 mm





SPECIAL ARTICULATED CUP HOLDERS WITHOUT GS ARTICULATED JOINT

Unlike the ones previously described, these special articulated cup holders have the articulated joint housed in the cup support; this has allowed reducing the overall dimensions, without affecting performance. The actual springing stroke is:

- For height C= 55 mm 37 mm - For height C= 110 mm 84 mm







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-	11.2		014	00		10	J Z

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CUP HO	OLDERS WI	TH STR/	AIGHT QU	JICK CO	UPLER F	OR PLAST	IC HOSE	Ø 6 X 8			C = 110 mm
Art.	Force	А	В	*C	D	F	L	Сир	Support included	Weight	Weight
	Kg				Ø	Ø		art.	art.	Kg	Kg
06 110 32	23.74	33	42.5	55	114	M35 x 1.5	160.5	01 110 10	00 06 62	1.15	1.27

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately.

* Also available with height C of 110 mm

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

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3D drawings available at www.vuototecnica.net
SPECIAL ARTICULATED CUP HOLDERS



CUP	P HOI	LDERS WIT	H HOSE-E	IND FITTI	NG FOR PL	ASTIC HOS	EØ16X18				C = 110 mm
Δrt		Force	А	В	*C	D	F	L	Сир	Weight	Weight
Aru		Kg				Ø	Ø		art.	Kg	Kg
06 300 12	2	176.6	89	115	55	300	M35 x 1.5	233	08 300 10	6.09	6.22
06 350 1 <mark>2</mark>	2	240.0	89	115	55	350	M35 x 1.5	233	08 350 10	7.95	8.08

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately.

* Also available with height C of 110 mm





SPECIAL ARTICULATED CUP HOLDERS WITH COMPACT STROKE

Marble and glass sheets are usually handled with cups that take them from a horizontal plane and place them vertically or vice versa. These special cup holders with compact stroke have been designed to minimise the lever forces between the cup and the machine fixing bush during the rotation of the sheets, as well as their sliding on the cups. They share all the technical features of the other special cup holders but their overall dimensions are reduced to the minimum, by housing the articulated joint in the cup support, thus reducing the steel stem and the spring stroke length and modifying the brass bush, in order to allow it to be screwed directly onto the machine. Moreover, a special non-slip plastic coating fixed onto the cup support prevents the lifted load from slipping.





Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately.

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

Art.

06 110 42

X

2.139

3D drawings available at www.vuototecnica.net

Weight

Kg



Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately.

2.140

Art.

06 127 4<mark>2</mark>

drawings available at www.vuototecnica.net

3D



Weight

Kg

0.76

SPECIAL ARTICULATED CUP HOLDERS WITH COMPACT STROKE



Art.

X

SPECIAL STAINLESS STEEL ANTI-ROTATION CUP HOLDERS

Designed for the robot-automotive sector, these cup holders offer ideal solutions to various handling problems that arise in all industrial sectors. The distinctive features of these cup holders are their brass stem with hexagonal section and the steel drive bush. also with hexagonal hole. This structure prevents the stem and, as a consequence, the cup assembled onto it from rotating on its axis. The drive bush is provided with two fine thread ring nuts to guarantee an accurate fastening of the cup holder to the machine. Moreover, the two ends of the stem, also in stainless steel, are threaded male or female and interchangeable. The straight quick coupler for the connection to the suction hose is screwed to one end, while the cup with support is assembled onto the other end.

They are suited for cups with a diameter between 40 mm and 200 mm, and they are necessary for assembling rectangular and oval cups. The actual springing stroke is:

37 mm

84 mm

- For height C= 55 mm
- For height C= 110 mm





VERSION 06



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RL

RM

Weight

0

Art	А	В	С	D	d	E	F	L
ALC				a	a	a	a	

CUP HOLDERS WITH STRAIGHT QUICK COUPLER FOR PLASTIC HOSE

S AIG				Ø	Ø	Ø	Ø							g
06 55 80	13	34	55	G1/4"	6	G1/4"	M25 x 1.5	142	21.0	32.0	18.5	G1/4"	G1/4"	318
06 55 81	15	40	55	G3/8"	9	G3/8"	M25 x 1.5	150	21.5	35.5	22.0	G3/8"	G3/8"	330
06 55 82	15	34	<u>5</u> 5	G3/8"	6	G1/4"	M25 x 1.5	144	21.0	32.0	18.5	G1/4"	G1/4"	320
06 110 8 <mark>0</mark>	13	34	110	G1/4"	6	G1/4"	M25 x 1.5	197	21.0	32.0	18.5	G1/4"	G1/4"	386
ຍິມ 06 110 8 <mark>1</mark>	15	40	110	G3/8"	9	G3/8"	M25 x 1.5	205	21.5	35.5	22.0	G3/8"	G3/8"	398
ಹ 06 110 8 <mark>2</mark>	15	34	110	G3/8"	6	G1/4"	M25 x 1.5	199	21.0	32.0	18.5	G1/4"	G1/4"	388
Note: Add the le	etter L to the c	code to or	rder L-type	fittings.										

Note: Add the letter L to the code to order L-type fittings.





SPECIAL ANTI-ROTATION CUP HOLDERS WITH THREADED MALE CONNECTOR



VERSION 06

VERSION 06 ... L

CUP HOLDERS WITH STRAIGHT QUICK COUPLER FOR PLASTIC HOSE

Art	Α	В	C	D	d	E	F	L	Μ	Ν	0	RL	RM	Weight
Alt				Ø	Ø	Ø	Ø							g
6 55 90	15	34	55	G1/4"	6	G1/4"	M25 x 1.5	144	21.0	32.0	18.5	G1/4"	G1/4"	314
06 55 91	15	34	55	G3/8"	6	G1/4"	M25 x 1.5	144	21.0	32.0	18.5	G1/4"	G1/4"	320
6 55 92	15	40	55	G3/8"	9	G3/8"	M25 x 1.5	150	21.5	35.5	22.0	G3/8"	G3/8"	330
6 55 93	15	40	55	G1/2"	9	G3/8"	M25 x 1.5	150	21.5	35.5	22.0	G3/8"	G3/8"	332
6 55 94	15	34	55	M12	6	G1/4"	M25 x 1.5	144	21.0	32.0	18.5	G1/4"	G1/4"	318
6 55 95	15	40	55	M12	9	G3/8"	M25 x 1.5	150	21.5	35.5	22.0	G3/8"	G3/8"	328
6 55 96	15	40	55	M16	9	G3/8"	M25 x 1.5	150	21.5	35.5	22.0	G3/8"	G3/8"	330
6 110 90	15	34	110	G1/4"	6	G1/4"	M25 x 1.5	199	21.0	32.0	18.5	G1/4"	G1/4"	374
6 110 91	15	34	110	G3/8"	6	G1/4"	M25 x 1.5	199	21.0	32.0	18.5	G1/4"	G1/4"	380
6 110 92	15	40	110	G3/8"	9	G3/8"	M25 x 1.5	205	21.5	3 <u>5</u> .5	22.0	G3/8"	G3/8"	390
6 110 93	15	40	110	G1/2"	9	G3/8"	M25 x 1.5	205	21.5	35.5	22.0	G3/8"	<mark>G3</mark> /8"	392
6 110 94	15	34	110	M12	6	G1/4"	M25 x 1.5	199	21.0	32.0	18.5	G1/4"	<mark>G1</mark> /4"	378
6 110 95	15	40	110	M12	9	G3/8"	M25 x 1.5	205	21.5	35.5	22.0	G3/8"	<mark>G3</mark> /8"	388
6 110 96	15	40	110	M16	6	G3/8"	M25 x 1.5	205	21.5	35.5	22.0	G3/8"	G3/8"	390

Note: Add the letter L to the code to order L-type fittings.

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$ Ľ

SPECIAL ANTI-ROTATION CUP HOLDERS WITH SPHERICAL SWIVEL SUPPORT

Along with all the features of the special anti-rotation cup holders described above, these cup holders are provided with a nylon spherical swivel support which allows to place and keep the cup in the desired place.

Their fixing support is made with aluminium and is composed of two parts that, screwed together, allow to block the spherical joint, thus keeping the cup holder in place.

They are suited for cups with a diameter between 40 mm and 200 mm, but they are necessary for assembling rectangular and oval cups. The actual springing stroke is:

- For height C = 55 mm
- 84 mm
- 37 mm
- For height C= 110 mm



RL

Ν

RM

For int. ø d pipe

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20

L



VERSION 06



			VER	SION 06				VE	RSION O	6	L		
CUP HOLD	ERS WITH	STRAI	GHT QUI	CK COUPL	ER FOR	PLASTIC H	HOSE						
Art	А	В	C	D	d	E	L	М	Ν	0	RL	RM	Weight
Aru				Ø	Ø	Ø							g
06 55 100	13	34	55	G1/4"	6	G1/4"	142	21.0	32.0	18.5	G1/4"	G1/4"	338
06 55 101	15	40	55	G3/8"	9	G3/8"	150	21.5	35.5	22.0	G3/8"	G3/8"	350
06 55 102	15	34	55	G3/8"	6	G1/4"	144	21.0	32.0	18.5	G1/4"	G1/4"	340
06 110 1 <mark>00</mark>	13	34	110	G1/4"	6	G1/4"	197	21.0	32.0	18.5	G1/4"	G1/4"	406
06 110 1 <mark>01</mark>	15	40	110	G3/8"	9	G3/8"	205	21.5	35.5	22.0	G3/8"	G3/8"	418
06 110 1 <mark>02</mark>	15	34	110	<mark>G3/8</mark> "	6	G1/4"	199	21.0	32.0	18.5	G1/4"	G1/4"	408
	CUP HOLD Art. 06 55 100 06 55 101 06 55 102 06 110 100 06 110 101 06 110 102	CUP HOLDERS WITH Art. A 06 55 100 13 06 55 101 15 06 55 102 15 06 110 100 13 06 110 101 15 06 110 102 15	Art. A B 06 55 100 13 34 06 55 101 15 40 06 55 102 15 34 06 110 100 13 34 06 110 101 15 40 06 110 102 15 34	VER CUP HOLDERS WITH STRAIGHT QUIC Art. A B C 06 55 100 13 34 55 06 55 101 15 40 55 06 55 102 15 34 55 06 110 100 13 34 110 06 110 101 15 40 110 06 110 102 15 34 110	VERSION 06 CUP HOLDERS WITH STRAIGHT QUICK COUPL Art. A B C D Ø 06 55 100 13 34 55 G1/4" 06 55 101 15 40 55 G3/8" 06 55 102 15 34 55 G3/8" 06 110 100 13 34 110 G1/4" 06 110 15 40 110 G3/8" 06 06 110 12 15 34 110 G3/8"	VERSION 06 CUP HOLDERS WITH STRAIGHT QUICK COUPLER FOR Art. A B C D d Ø<	VERSION 06 CUP HOLDERS WITH STRAIGHT QUICK COUPLER FOR PLASTIC F Art. A B C D d E Art. 0 0 0 0 0 0 0 06 55 100 13 34 55 G1/4" 6 G1/4" 06 55 101 15 40 55 G3/8" 9 G3/8" 06 55 102 15 34 55 G3/8" 6 G1/4" 06 110 100 13 34 110 G1/4" 6 G1/4" 06 110 101 15 40 110 G3/8" 9 G3/8" 06 110 101 15 34 110 G3/8" 6 G1/4"	VERSION 06 CUP HOLDERS WITH STRAIGHT QUICK COUPLER FOR PLASTIC HOSE Art. A B C D d E L Ø	VERSION 06 VERSION 06 CUP HOLDERS WITH STRAIGHT QUICK COUPLER FOR PLASTIC HOSE Art. A B C D d E L M 06 55 100 13 34 55 G1/4" 6 G1/4" 142 21.0 06 55 101 15 40 55 G3/8" 9 G3/8" 150 21.5 06 55 102 15 34 55 G3/8" 6 G1/4" 144 21.0 06 110 100 13 34 110 G1/4" 6 G1/4" 197 21.0 06 110 101 G3/8" 9 G3/8" 205 21.5 06 110 102 15 34 110 G3/8" 9 G3/8" 205 21.5 06 110 102 15 34 110 G3/8" 6 G1/4"	VERSION 06 VERSION 0 CUP HOLDERS WITH STRAIGHT QUICK COUPLER FOR PLASTIC HOSE Art. A B C D d E L M N 06 0 <th>VERSION 06 VERSION 06 VERSION 06 CUP HOLDERS WITH STRAIGHT QUICK COUPLER FOR PLASTIC HOSE Art. A B C D d E L M N O 06 55 100 13 34 55 G1/4" 6 G1/4" 142 21.0 32.0 18.5 06 55 101 15 40 55 G3/8" 9 G3/8" 150 21.5 35.5 22.0 18.5 06 101 15 40 55 G3/8" 6 G1/4" 144 21.0 32.0 18.5 06 5102 15 34 55 G3/8" 6 G1/4" 197 21.0 32.0 18.5 06 110 100 G3/8" 9 G3/8" 205 21.5 35.5 22.0 06 110 10 G3/8" 9 G3/8" 20</th> <th>VERSION 06 L VERSION 06 L CUP HOLDERS WITH STRAIGHT QUICK COUPLER FOR PLASTIC HOSE Art. A B C D d E L M N O RL 0</th> <th>VERSION 06L VERSION 06L CUP HOLDERS WITH STRAIGHT QUICK COUPLER FOR PLASTIC HOSE Art. A B C D d E L M N O RL RM 06 0</th>	VERSION 06 VERSION 06 VERSION 06 CUP HOLDERS WITH STRAIGHT QUICK COUPLER FOR PLASTIC HOSE Art. A B C D d E L M N O 06 55 100 13 34 55 G1/4" 6 G1/4" 142 21.0 32.0 18.5 06 55 101 15 40 55 G3/8" 9 G3/8" 150 21.5 35.5 22.0 18.5 06 101 15 40 55 G3/8" 6 G1/4" 144 21.0 32.0 18.5 06 5102 15 34 55 G3/8" 6 G1/4" 197 21.0 32.0 18.5 06 110 100 G3/8" 9 G3/8" 205 21.5 35.5 22.0 06 110 10 G3/8" 9 G3/8" 20	VERSION 06 L VERSION 06 L CUP HOLDERS WITH STRAIGHT QUICK COUPLER FOR PLASTIC HOSE Art. A B C D d E L M N O RL 0	VERSION 06L VERSION 06L CUP HOLDERS WITH STRAIGHT QUICK COUPLER FOR PLASTIC HOSE Art. A B C D d E L M N O RL RM 06 0

Note: Add the letter L to the code to order L-type fittings.

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SPECIAL ANTI-ROTATION CUP HOLDERS WITH SPHERICAL SWIVEL SUPPORT



Art.	A	В	C	D	d	E	L	М	Ν	0	RL	RM	Weigh
				Ø	Ø	Ø							g
06 55 110	15	34	55	G1/4"	6	G1/4"	144	21.0	32.0	18.5	G1/4"	G1/4"	334
06 55 111	15	34	55	G3/8"	6	G1/4"	144	21.0	32.0	18.5	G1/4"	G1/4"	340
06 55 112	15	40	55	G3/8"	9	G3/8"	150	21.5	35.5	22.0	G3/8"	G3/8"	350
06 55 113	15	40	55	G1/2"	9	G3/8"	150	21.5	35.5	22.0	G3/8"	G3/8"	352
06 55 114	15	34	55	M12	6	G1/4"	144	21.0	32.0	18.5	G1/4"	G1/4"	338
06 55 115	15	40	55	M12	9	G3/8"	150	21.5	35.5	22.0	G3/8"	G3/8"	348
06 55 116	15	40	55	M16	9	G3/8"	150	21.5	35.5	22.0	G3/8"	G3/8"	350
06 110 110	15	34	110	G1/4"	6	G1/4"	199	21.0	32.0	18.5	G1/4"	G1/4"	394
06 110 111	15	34	110	G3/8"	6	G1/4"	199	21.0	32.0	18.5	G1/4"	G1/4"	400
06 110 112	15	40	110	G3/8"	9	G3/8"	205	21.5	35.5	22.0	G3/8"	G3/8"	410
06 110 113	15	40	110	G1/2"	9	G3/8"	205	21.5	35.5	22.0	G3/8"	<mark>G3</mark> /8"	412
06 110 114	15	34	110	M12	6	G1/4"	199	21.0	32.0	18.5	G1/4"	<mark>G1</mark> /4"	398
06 110 115	15	40	110	M12	9	G3/8"	205	21.5	35.5	22.0	G3/8"	<mark>G3</mark> /8"	408
06 110 116	15	40	110	M16	9	G3/8"	205	21.5	35.5	22.0	G3/8"	<mark>G3</mark> /8"	410

Note: Add the letter L to the code to order L-type fittings.

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

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<mark>2.</mark>145

3D drawings available at www.vuototecnica.net

All the special cup holders previously described can be provided in the double springing version.

The cup holder fixing bush is located between two springs: the lower one cushions the impact of the cup with the load to be lifted during the approach phase, while the upper one cushions the impact of the bush with the cup holder end and gradually loads the cup during the lifting phase. These cup holders are especially recommended when the load to be lifted is very heavy, rough or not perfectly flat.

37 mm

84 mm

The actual springing stroke is:

- For height C = 55 mm
- For height C= 110 mm







VERSION 06 85 13

VERSION 06 85 13 L

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CUP H	HOLDERS WIT	H STRAIG	HT QUICH	COUPLE	R FOR PLAS	TIC HOSE	E Ø 6 X 8			C = 110 mm
Art	Force	А	*C	D	F	L	Cup	Support included	Weight	Weight
Alt	Kg			Ø	Ø		art.	art.	Kg	Kg
06 85 13	13.50	46	55	85	M35 x 1.5	245	01 85 10	00 08 29	0.87	0.99

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately.

Add the letter L to the code to order L-type fittings.

* Also available with height C of 110 mm

2.146

drawings available at www.vuototecnica.net

3D



Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$



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Add the letter L to the code to order L-type fittings.

* Also available with height C of 110 mm

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3D



C = 110 mm

Weight

Kg





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VERSION 06 110 16

VERSION 06 110 16 L

3D drawings available at www.vuototecnica.net CUP HOLDERS WITH STRAIGHT QUICK COUPLER FOR PLASTIC HOSE Ø 6 X 8 C = 110 mm Cap included Weight Weight Force А *C D F L Cup Art. Kg Ø Ø art. art. Kg Kg 06 110 16 23.74 M35 x 1.5 08 110 15 00 11 06 31 55 110 230 1.12 1.25 Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately. Add the letter L to the code to order L-type fittings. * Also available with height C of 110 mm Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$ 2.149 Ľ







RL1/4[•] 22 61/4[•] 43 RF1/4[•] 43

VERSION 06 150 13

VERSION 06 150 13 L

6

	CUP H	HOLDERS WIT	H STRAIGH		COUPLE	R FOR PLAS	TIC HOSE	E Ø 6 X 8			C = 110 mm
Δ	rt.	Force	Α	*C	D	F	L	Сир	Support included	Weight	Weight
~		Kg			Ø	Ø		art.	art.	Kg	Kg
06 1	50 1 3	45.00	28	55	154	M35 x 1.5	227	01 150 10	00 08 35	1.46	1.58

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately. Add the letter L to the code to order L-type fittings.

* Al<mark>so availa</mark>ble with height C of 110 mm

2.150

3D drawings available at www.vuototecnica.net



Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$



Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately.

* Also available with height C of 110 mm

X



CUP	HOLDER	S WITH	STRA	IGHT (QUICK CO	UPLER F	OR PLAST	IC HOS	E Ø9X12			C = 110 mm
Δrt	Fo	ce	Α	В	*C	D	F	L	Сир	Support included	Weight	Weight
Aru	k	g				Ø	Ø		art.	art.	Kg	Kg
06 220 13	63 OF	.6	35	70	55	220	M35 x 1.5	208	01 220 10 OF	00 08 37	2.01	2.15
06 220 1 <mark>3</mark>	B NF 63	.6	35	70	55	220	M35 x 1.5	208	01 220 10 NF	00 08 37	2.00	2.14

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately.

* Also available with height C of 110 mm







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89 Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately.

55

* Also available with height C of 110 mm

31

240.0

2.154

3D

06 350 1<mark>3</mark>



M35 x 1.5

204

08 350 10

350



7.43

C = 110 mm

Weight

Kg

5.70

The distinctive feature of these cup holders is their articulated joint in hardened steel, which allows the flat cups installed on these cup holders to adapt themselves to the loads to be lifted even if not completely parallel with the cup plane, as well as to compensate possible verticality errors that can arise between the cup holder and the machine fixing support. The cup holder fixing bush is located between two springs: the lower one cushions the impact of the cup with the load to be lifted during the approach phase, while the upper one cushions the impact of the bush with the cup holder end and gradually loads the cup during the lifting phase. These cup holders are especially recommended when the load to be lifted is very heavy, rough or not perfectly flat. The actual springing stroke is:

- For height	t C= 55 mm	37 mm
- For height	C= 110 mm	84 mm







					4 <u>38</u>	For in		L			
						VERSI	ON 06	110 14			
CUP H	OLDERS W	ITH STRA	AIGHT Q	UICK CO	UPLER F	OR PLAST	IC HOSE	Ø 6 X 8			C = 110 mm
CUP H	HOLDERS W Force	ITH STRA A	AIGHT Q B	UICK COI	UPLER F D	FOR PLAST	IC HOSE	Ø 6 X 8 Cup	Support included	Weight	C = 110 mm Weight
CUP H Art.	HOLDERS W Force Kg	ITH STRA A	AIGHT Q B	UICK COI *C	UPLER F D Ø	FOR PLAST	IC HOSE L	Ø 6 X 8 Cup art.	Support included art.	Weight Kg	<u>C = 110 mm</u> Weight Kg
CUP H Art. 06 110 14	HOLDERS W Force Kg 23.74	ITH STRA A 26	AIGHT Q B 77	UICK COI *C 55	UPLER F D Ø 114	FOR PLAST F Ø M35 x 1.5	L 250	Ø 6 X 8 Cup art. 01 110 10	Support included art. 00 06 14	Weight Kg 1.29	C = 110 mm Weight Kg 1.39

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

The actual springing stroke is: - For height C= 55 mm 37 mm - For height C= 110 mm 84 mm







drawings available at www.vuototecnica.net

3D

CUI	P HOLDERS WIT	TH STRAIG	HT QUIC	K COUPLEF	R FOR PLAS	STIC HOSE Ø	6 X 8			C = 110 m
Art.	Force	Α	В	*C	D	F	L	Сир	Weight	Weight
7	Kg				Ø	Ø		art.	Kg	Kg
06 110 1	8 23.74	26	86	55	110	M35 x 1.5	259	08 110 15	1.36	1.46

VERSION 06 110 18

110 mm

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Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately.

* Also available with height C of 110 mm







			¥		¥	44	For int. ø 6 p		L			รับ เมื่อน เมื่อ เปล้ เมื่อ เมื่อ เมื่อ เมื่อ เป เป เป เป เป เป เป เป เป เป เป เป เป
CUP I	łOI	_DERS W	ITH STR/	AIGHT Q		UPLER I	VERSION	06 IC HOS	150 14 EØ6X8			C = 110 mm
Art		Force	А	В	*C	D	F	L	Сир	Support included	Weight	Weight
AIL.		Kg				Ø	Ø		art.	art.	Kg	Kg
06 150 14		45.00	30	83	55	154	M35 x 1.5	256	01 150 10	00 06 15	1.71	1.81
Note: Cups * Alse	are	not an integ ailable with	gral part of height C of	the cup ho 110 mm	lders, there	fore, they	must be ordere	ed sepera	tely.			n drawi

* Also available with height C of 110 mm

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VERSION 06

CUF	CUP HOLDERS WITH STRAIGHT QUICK COUPLER FOR PLASTIC HOSE Ø 9 X 12											C = 110 mm
Art		Force	Α	В	*C	D	E	F	L	Сир	Weight	Weight
Alta		Kg				Ø		Ø		art.	Kg	Kg
06 150 1	9	45.00	40.0	86	55	150	50	M35 x 1.5	259	08 150 15	1.86	1.97
06 200 1	4	78.50	47.5	88	55	200	52	M35 x 1.5	261	08 200 10	2.77	2.87
06 250 1 <mark>4</mark>	4	122.60	72.5	88	55	250	52	M35 x 1.5	261	08 250 10	4.03	4.14

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately.

* Also available with height C of 110 mm









Ø Kg Ø art. art. 06 220 14 OF 70 220 M35 x 1.5 01 220 10 OF 00 08 37 2.22 63.6 97 55 270 06 220 14 NF M35 x 1.5 00 08 37 63.6 70 97 220 270 01 220 10 NF 2.21 55

Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately.

* Also available with height C of 110 mm

Force

Art.

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Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

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2.159

2.32



Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately.

* Also available with height C of 110 mm

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2.160



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Note: Cups are not an integral part of the cup holders, therefore, they must be ordered seperately.

* Also available with height C of 110 mm

Art.

X

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

2.161

SPHERICAL ARTICULATED JOINTS

Our spherical articulated joints are made with hardened steel. Assembled to the cup holders, they compensate offsets, orthogonality and flatness errors that often arise between the cups and the surface of the load to be lifted.



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CUP HOLDER FIXING SUPPORTS

The first two supports shown in this page are made with stainless steel and are suited for fastening the cup holder to the machine by means of a slotted cylindrical pin or a spherical pin housed in the machine. The third support, on the other hand, is made with aluminium and it is composed of two parts that, screwed together, block the spherical joint, allowing to keep the cup holder in the desired position.



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016	2
A	
В	\rightarrow
26.5	

B

SUPPORTS W	ITH SLOTTED CYLIND	RICAL PIN				
Δrt	А	В	D	Н	Cup holder	Weight
			Ø			g
00 FCH 10	35	39.5	25.5	79.5	special anti-rotation	102
00 FCH 11	30	33.5	20.5	73.5	basic	90





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19

SUPPORTS WITH SPHERICAL PIN

Art.

FCH 16

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Art.	А	В	D	Н	Cup holder	Weight
			Ø			g
00 FCH 20	35	39.5	25.5	79.5	special anti-rotation	168
00 FCH 21	30	33.5	20.5	73.5	basic	154

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CUP HOLDER FIXING SUPPORTS

The supports decribed in the following in these pages are made with galvanised sheet steel and they are used to fasten the various types of cup holders to the machine, generally made up of a square tube frame. The screw or the handle with which they are equipped quickly block the support in position.







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TUBU	LAR SUPPORTS	40 - 50										
Δrt	Tubular section	А	В	С	D	E	F	G	Н	L	Cup holder	Weight
Altu	\square											g
SFP 02	40	40.2	23	23	21	56	106	60	99	159	basic	350
SFP 03	40	40.2	23	23	25	56	106	60	99	159	special anti-rotation	338
SFP 04	40	40.2	30	30	36	70	120	60	99	173	special	438
SFP 05	50	50.2	23	23	21	56	116	70	109	169	basic	370
SFP 06	50	50.2	23	23	25	56	116	70	109	169	special anti-rotation	377
SFP 07	50	50.2	30	30	36	70	130	70	109	183	special	490

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VACUUM MEASUREMENT, CONTROL AND ADJUSTMENT INSTRUMENTS

VACUUM AND PRESSURE UNIT CONVERSION TABLE	PAG. 3.00
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MINI PNEUMATIC VACUUM SWITCHES	PAG. 3.06
MINI ELECTROMECHANICAL VACUUM SWITCHES	PAG. 3.07
ELECTROMECHANICAL VACUUM - PRESSURE SWITCHES	PAG. 3.08
MICRO DIGITAL VACUUM SWITCHES	PAG. 3.09 ÷ 3.10
ANALOG VACUUM SWITCHES	PAG. 3.11 ÷ 3.12
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VACUUM ADJUSTMENT VALVES	PAG. 3.23

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3D drawings available at www.vuototecnica.net

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CONVERSION TABLE

mbar	torr	inch. Hg	mmHg	bar (g)	-KPa	mbar
abs.	abs.	vacuum	vacuum	vacuum	vacuum	abs.
1012.05	760	0	0	0	0	1012.05
1013.25 = 1000	F /00		F	F	F	F 1000
F	500		-	F	F	F
500	-	15	-	0,5	50	500
-			-	L'		E
L		_ 20	_ 500	L	L	L
	-				Γ	
F			-	F	-	F
	100	_ 25				
100	E	26		0.0	00	100
	E	– <i>"</i>	700	- 0.9	- 30	- 100
F	_ 50	_ 28	_ 100	F	F	F
50	-		F	0,95	95	50
	-			Ľ		Ľ
Γ		29			L	Γ
F	-	F	-			Γ
F		E		F	-	-
	10	_ 29.5	750			
10	E		- 750	0.00	aa	10
	E	29.7	E	- 0.55	F 33	E
F	_ 5	L	- 755	Ę	F	F
L₅	-			0.005	99.5	5
	-			L 0.335	-	L L
L		_ 29,9				L
	F	F	-	F		
-		E		-	-	F
1.33	_1	-	_ 759			1.33
1	0.75		750 2/	0 999	99.9	1
E'	E	29.97	- 735.24	E	E	E
F	_ 0.5			-	F	F
0.5	-	E .	_	0.9995	99.95	0.5
	-		_	Ļ		Ľ
		_ 29.99				
Γ	F	E	-			Γ
F		E		-	F	-
0.122	_ 0.1		759,86			
0.1	0.075	F 00.007	E 750 0	0.9999	99.99	
E	E	29.997		E	E	E
E	_ 0.05			E	-	E
_ 0,05	-	Γ	F	0.99995	_ 99.995	_ 0.05
F	-		L	F	-	F
F		_ 29.999		F	Ļ	F
	F	Ę	F			
F		E		F	-	F
0.0133	0.01	L	750.00			0.0122
	E 0.0075	20 0007	750 00	0 00000	00.000	L 0.01

PRESSURE UNIT CONVERSION FACTORS (ABSOLUTE VALUES)

a.net	PRI	ESSL	JRE	UNIT CONV	ERSION FAC	CTORS (ABS	SOLUTE VAL	UES)					
Snic				= mbar	= bar (g)	= torr	= inch. Hg	= psi	= atm	= Kg/cm ²	$= \text{mm H}_20$	= m H ₂ 0	= Pa
tec								(lbf/in²)		(at)			(N/m²)
oto	mbar		х	1	10 ⁻³	0.75	2.95x 10 ⁻²	14.5 x 10 ⁻³	9.87 x 10 ⁻⁴	1.02 x 10 ⁻³	10.2	1.02 x 10 ⁻²	100.0
NN.	bar (g)		х	1000.0	1	750.0	29.53	14.6	0.987	1.02	10197.0	10.19	100000
M	torr		X	1.33	1.33 x 10⁻³	1	3.94 x 10 ⁻²	1.93 x 10 ⁻²	1.316 x 10 ⁻³	1.359 x 10 ⁻³	13.59	1.359 x 10 ⁻³	133.32
Ă	inch. Hg		X	33.9	33 <mark>.9 x</mark> 10⁻³	25.4	1	0.491	3.34 x 10 ⁻²	3.45 x 10 ⁻²	345.0	0.345	3386.0
e at	psi (lbf/ii	n²)	х	68.9	6.89 x 10 ⁻²	51.7	2.04	1	6.8 x 10 ⁻²	7.03 x 10 ⁻²	703	0.703	6897
able	atm		х	1013.25	1.013	760.0	30.0	14.696	1	1.033	10332	10.332	101325.0
vail	Kg/cm ² (at)	X	981	0.981	735.6	28.96	14.2	0.968	1	10000	10	98067.0
s a	mm H ₂ 0		x	9.81 x 10 ⁻²	9.81 x 10⁵	7.35 x 10⁻²	2.89 x 10 ⁻³	1.42 x 10 ⁻³	9.67 x 10⁻⁵	10 ⁻⁴	1	10 ⁻³	9.8067
/ing	m H ₂ 0		x	98.067	9.81 x 10 ⁻²	73.5	2.89	1.42	9.67 x 10 ⁻²	10	10000	1	9806.7
rav	Pa (N/m ²	²)	х	0.01	10-5	7.5 x 10⁻³	2.95 x 10 ⁻⁴	1.45 x 10⁴	9.87 x 10⁻ ⁶	1.02 x 10 ⁻⁵	0.102	1.02 x 10 ⁻⁴	1
3D d	Examp	le: T	o cor	wert 10 mb	ar into <mark>T</mark> orr	$= 10 \ x \ 0.7$	5 = 7.5 Tori						

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3.00



VACUUM AND PRESSURE GAUGES

The measurement method of our vacuum gauges is based on the principle of the Bourdon spring (Eugène Bourdon,

France, 1808–1884).

It is made using section tubes in special copper alloy, one end is welded to the threaded pin of the vacuum-pressure gauge, thus forming a single body with it, while the other closed end is free

As the vacuum or the pressure inside increases, it tends

to shift from the initial position (Bourdon effect).

The movement of the free end of the spring determines the vacuumpressure measurement.

In order to allow an easier reading, this movement is amplified by means of a connection lever and transmitted to the pointer.

All is enclosed in a sturdy metal casing which contains the dial and the pointer, that can be seen through a glass.

They are available in various versions,

with coaxial or radial connectors, with built-in or external flange,

dry or glycerine filled. Except for vacuum gauges with diameter Ø 40 mm, all the

other models have a double scale dial.

All the vacuum and pressure gauges we will describe in these pages are made in compliance with all the safety standards and measurement units in

force in the European Union.







VACUL	UM GAUGE					
Art.	Scale	Double Scale	Scale error	Operating	Notes	Weight
ALC.	Кра		allowed	temperature		g
09 03 15	0 ÷ -100		2.5%	-10 °C ÷ +50 °C	dry	52



PRE55	URE GAUGES					đ
Art.	Scale	Double Scale	Scale error	Operating	Notes	Weight g
	bar (g)		allowed	temperature		g ·
09 03 20	0 ÷ 1.6	0 ÷ 23 psi	2.5%	-10 °C ÷ +50 °C	dry	54
09 03 25	0 ÷ 10	0 ÷ 1.0 MPa	2.5%	-10 °C ÷ +50 °C	dry	54 5

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

GAS-NPT thread adapters available at page 1.117

VACUUM GAUGES





VACUL	JM GAUGE					
Δrt	Scale	Double Scale	Scale error	Operating	Notes	Weight
Altu	mbar	KPa	allowed	temperature		g
09 03 10	0 ÷ -1000	0÷-100	2.5%	-10 °C ÷ +50 °C	dry	134





24

4

3D drawings available at www.vuototecnica.net

Δrt	Scale	Double Scale	Scale error	Operating	Notes	Weight
Aita	mbar	Кра	allowed	temperature		g
09 01 10	0 ÷ -1000	0 ÷ -100	2.5%	-10 °C ÷ +50 °C	dry	162
3.02			Conversion ratio: inch = $\frac{\text{mr}}{25}$	$\frac{n}{4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$	GAS-NPT thread adapters availabl	e at page 1.117





Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

X





VACUL	JM GAUGE					
Δrt	Scale	Double Scale	Scale error	Operating	Notes	Weight
Altu	mbar	KPa	allowed	temperature		g
09 01 16	0 ÷ -1000	0 ÷ -100	1.6%	-10 °C ÷ +50 °C	glycerine bath	348



VACU	JM GAUGE					
Art.	Scale	Double Scale	Scale error	Operating	Notes	Weight
Altu	mbar	KPa	allowed	temperature		g
09 02 10	0 ÷ -1000	0 ÷ -100	1%	-10 °C ÷ +50 °C	dry	346

GAS-NPT thread adapters available at page 1.117

3.03

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VACUUM GAUGES





VACUL	JM GAUGE					
Art.	Scale	Double Scale	Scale error	Operating	Notes	Weight
	mbar	KPa	allowed	temperature		g
09 05 10	0 ÷ -1000	0 ÷ -100	2.5%	-10 °C ÷ +50 °C	dry	136





3

3D drawings available at www.vuototecnica.net

VAC	CUUM	GAUGE					
Art.		Scale	Double Scale	Scale error	Operating	Notes	Weight
74.4		mbar	KPa	allowed	temperature		g
09 05 16	;	0 ÷ -1000	0 ÷ -100	1.6%	-10 °C ÷ +50 °C	glycerine bath	218
3.04				Conversion ratio: inch = $\frac{1}{2}$	$\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$	GAS-NPT thread adapters availab	le at page 1.117



VACUUM GAUGE WITH STEEL PUNCH

This vacuum gauge has been designed to allow the immediate detection of the vacuum level inside tin cans and food containers in general.

The glycerine bath vacuum gauge art. 09 05 16 used for this application (features described in the previous page), is provided with a hardened steel punch to easily perforate the containers and with a vacuum cup in silicon compound to guarantee vacuum seal after perforation.

It is available in the standard version (which is the one shown in this page), but can be provided in other versions upon request.











						ototecnica.net
		art.01	40 15s			os available at www.vu
Art.	Scale	Double Scale	Scale error	Operating	Notes	Weight
7.1.1	mbar	KPa	allowed	temperature		g g
09 05 99	0 ÷ -1000	0÷-100	1.6%	-10 °C ÷ +5 <mark>0 °C</mark>	glycerine bath	250

X

3.05

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MINI PNEUMATIC VACUUM SWITCH

These vacuum switches feature reduced overall dimensions and, according to the model, they give or remove a pneumatic signal when a certain adjustable vacuum level is reached. The pressure differential between the set maximum value and the value of reset of the rest signal is not adjustable. They are particularly suited for controlling vacuum generators and for activating pneumatic valves.









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Art.		12 01 30	12 02 30
Adjustment range	mbar abs.	930 ÷ 50	900 ÷ 40
Fixed differential	mbar	70	100
Repeatability	mbar	±5	±5
Idle signal		NC	NO
Supply p <mark>ressure</mark>	bar (g)	2 ÷ 8	2 ÷ 8
Pneuma <mark>tic micro</mark> valve	art.	00 12 17	00 12 18
Max. cap <mark>acity of</mark> the 6 bar (g) microvalve	NI / s	1.2	1.2
Working <mark>temper</mark> ature	°C	-10 ÷ +60	-10 ÷ +60
Weight	g	104	102

3.06

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3D drawings available at www.vuototecnica.net

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Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

GAS-NPT thread adapters available at page 1.117
MINI ELECTROMECHANICAL VACUUM SWITCHES

These vacuum switches feature reduced overall dimensions and give an electric signal when a certain adjustable vacuum level is reached. The pressure differential existing between the set maximum value and the value of reset of the rest signal is 50 ÷60 mbar and it is not adjustable.

They are particularly suited when an electrical signal is needed when a certain vacuum level is reached, for safety, for starting a cycle, for checking the cup grip, etc.





Art.		12 02 10
Adjustment range	mbar abs.	930 ÷ 10
Fixed differential	mbar	50 ÷ 60
Repeatability	mbar	±1.5
Microswitch	art.	00 12 12
Contacts		one change-over
Contact capacity	А	3 a 250 V in A.C.
Electrical connections		110-type fast-on terminals
Working temperature	°C	-25 ÷ +80
Protection		IP 55
Weight	g	102

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

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GAS-NPT thread adapters available at page 1.117

3.07

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ELECTROMECHANICAL VACUUM - PRESSURE SWITCHES

The vacuum - pressure switches of the 836 series are compact, sturdy and accurate units that can be adapted to many applications. The feature of the control is a quick tripping precision microswitch, equipped with silver contacts. Normal industrial vibrations have no effect on the efficient opening and closing of the contacts.

The particular linear construction, relatively friction free, assures a precise and reliable operation independent of the pressure switch mounting angle.

The "Long Life" bellows with which they are equipped, are made of copper alloy and can be used for air, water, oil, liquid, vapour and gas circuits, provided that all these agents are not corrosive.

These devices are included in the U.L. lists and approved by C.S.A.







GAS-NPT thread adapters available at page 1.117

Art.		836 - C6A	836 - C2A
Adjustment range	bar abs.	0 ÷ 8	0 ÷ 1.7
Adjustable differential	mbar	from 133 to 1200	from 26 to 1280
Max. line pressure	bar abs.	21	4.5
Repeatability	measuring range %	±0.5	±0.5
Contacts		one cha	nge-over
Contact features		unipolar with do	uble interruption
		125 VA with ac fro	om 24 to 600 Volts
		57.5 VA with ac fro	m 115 to 230 Volts
		Rated current for	non inductive loads
Contact capacity	A	5 a 240	V in A.C.
	А	3 a 600	V in A.C.
Electrica <mark>l conne</mark> ctions		with te	rminals
Working <mark>temper</mark> ature	°C	-25 -	: +70
Protection		IP	54
Weight	Kg	0.984	1.130

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

3.08

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MICRO DIGITAL VACUUM SWITCHES

These small devices, if accurately calibrated and compensated for temperatures, are able to give very precise digital signals to the set maximum measuring value.

The commutation point, which is within the scale value, can be easily programmed by means of an adjustment screw located on the upper part of the device. A red LED near the screw indicates the digital output signal commutation status.

The pressure differential (hysteresis) between the set maximum value and the value of reset of the rest signal is 2% of the set value and cannot be adjusted.

They are composed of a polycarbonate enclosure, which includes the sensor and the electric circuit, and of a coupler or a small aluminium manifold with the vacuum connections.

Art. 12 05 10 can also be rotated freely to place the display in the desired position, without having to unscrew it from the vacuum connection. The vacuum connection can be carried out via male or female M5 connectors, while the electrical connection is made via a three-connector cable which they are equipped with. Mini digital vacuum switches are suited for controlling dry air and non-corrosive gasses and they are recommended in all those cases that require a signal when a certain vacuum level is reached, for safety, for starting a cycle, for checking the cup grip, etc.



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Cable colour	Connection
brown	positive pole \oplus
black	output signal
blue	negative pole \odot



INTERNAL ELECTRIC DIAGRAMS

OUTPUT CONTACT DIAGRAM

• NPN on

The LED lights up at the preset pressure and turns off at the preset pressure minus the hysteresis



3.10

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ANALOG VACUUM SWITCHES

These compact and extremely light switches come enclosed in a sturdy ABS casing; these features allow their installation on the machine and close to the application. If accurately calibrated, these analog switches provide very precise measurements values. The adjustment range is from 0 to -1 bar (g) and can be interfaced with external logics via an analog output from 1 to 5 Volts and a digital PNP output, configurable via Teach-In.

The commutation point, as well as the hysterisis from 0 to 100% of the set value, can be easily programmed via push buttons located on the control panel; the two two-colour LEDs on the control panel signal the commutation status and the error code, if any. These devices can be rotated freely to place the display in the desired position, without having to unscrew them from the vacuum connection.

The vacuum connection is dual threaded: male G 1/8" or female M5. The electrical connection is an M8 4-pin threaded plug and upon request the connection cable is available in PUR, with an axial or radial connector.

These vacuum switches are suited for measuring and controlling dry air and non-corrosive gasses. They are recommended in all those cases that require a measurement and commutation to be installed on safety or energy-saving devices, on systems for optimising the work cycle time and in circuit vacuum level adjustment circuits.







ELECTRIC DIAGRAM

WALL-FIXING KIT



3D

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3.12

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

GAS-NPT thread adapters available at page 1.117

DIGITAL VACUUM AND PRESSURE SWITCHES

These compact and extremely light digital vacuum and pressure switches are enclosed in a sturdy ABS casing. These features allow installation on the machine and close to the application.

These digital switches, accurately calibrated and compensated for temperatures, is able to give very precise measurements values. The measured values are shown on the display, making the vacuum gauge redundant. The two LEDs, one red and one green, built-in the control panel, indicate the commutation status of the two digital output signals. The two commutation outputs are completely independent. The switch point between the scale values as well as the hysteresis from 0 to 100% of the set up value can be easily programmed via the push buttons on the control panel.

Other additional functions can be configured, such as the comparison between two values, NO and NC contacts, choice of the measurement unit, locking the programmed values and functions, display reversal, etc. These devices can be rotated freely to place the display in the desired position, without having to unscrew them from the vacuum connection. The vacuum or the pressure connections can be carried out via a dual male G 1/8" or female M5 thread. The electrical connection is carried out via M8-4 pin threaded plug and upon request the connection cable is available in PUR, with an axial or radial connector. These switches are suited for measuring and controlling dry air and non-corrosive gasses. They are recommended in all those cases that require a signal when a certain vacuum level is reached set for safety, for starting a cycle, for checking the cup grip, etc. Moreover, the hysteresis function allows managing the vacuum generator compressed air supply, allowing considerable energy saving.





ELECTRIC DIAGRAM

WALL-FIXING KIT



Electrical features	Art. 12 10 10	Art. 12 25 11
and specifications	Vacuum switch	Pressure switch
Adjustment range	from 0 to -1 bar (g)	from 0 to 10 bar (g)
maximum overpressure	5 bar (g)	16 bar (g)
Minimum detected values	0.01 bar (g)	0.01 bar (g)
	1 KPa	
	1 mmHg	
	0.1 InHg	
Operating voltage	10.8 ÷ 30 VDC (Protection against polarit	y reversal)
Electrical absorption	≤35 mA	
Commutation output	2 digital PNP,NO or NC,max commutation po	wer 125 mA
Display tolerance	≤ ±1% F.S.	
Reaction time	≤2.5 ms	
Commutation frequency	400Hz	
Hysteresis	Adjustable from 0 to 100% of the set maxi	mum value
Repeatability	$\pm 0.2\%$ of the measuring range	
Display	3-digit, 7-segment LED	
Insulation resistance	100 MΩ a 500 VDC	
Proof voltage	1000 VDC, 1 min	
Protection class	IP 65	
Working environment conditions		
Installation position	Any	
Measurable fluids	Non-corrosive gasses and dry ai	r
Operating temperature	0 ÷ +50 °C	
Storage temperature	-20 ÷ +80 °C	
Emitted interference	In compliance with DIN EN 50081	- 1
Interference immunity	In compliance with DIN EN 50082	- 2
Mechanical features and specifications		
Container material	ABS/PC plastic	
Connection material	Nickel-plated brass	
Weight	20 g	
Electrical connection	M8-4 pin plug	
Connection to fluid	Male G1/8", female M5 threads	
Accessor <mark>ies</mark>		
Electrical connection cable	With axial connector, mt. 5 - PUR M8 x 1x 0.25 mm	- Art. 00 12 20
Electrical connection cable	With radial connector, mt. 5 - PUR M8 x 1x 0.25 mm	- Art. 00 12 21

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

3.14



GAS-NPT thread adapters available at page 1.117

DIGITAL VACUUM AND PRESSURE SWITCHES

These compact and extremely light digital vacuum and pressure switches are enclosed in a sturdy ABS casing. These features allow installation on the machine and close to the application.

These digital switches, accurately calibrated and compensated for temperatures, is able to give very precise measurements values. The measured values are shown on the display, making the vacuum gauge redundant. The two LEDs, one red and one green, built-in the control panel, indicate the commutation status of the two digital output signals. The two commutation outputs are completely independent. The switch point between the scale values as well as the hysteresis can be easily programmed via the push buttons on the control panel. Other additional functions can be configured, such as the comparison between two values, NO and NC contacts, choice of the measurement unit, locking the programmed values and functions, display reversal, etc. The vacuum or the pressure connections can be carried out via a dual connection with female G 1/8" thread, while the electrical connection is carried out through the 4-conductor cable which they are equipped with. Digital vacuum and pressure switches are suited for measuring and controlling dry air and non-corrosive gasses. They are recommended in all those cases that require a signal when a

certain vacuum level is reached, for safety, for starting a cycle, for checking the cup grip, etc. Moreover, the hysteresis function allows managing the vacuum generator compressed air supply, allowing considerable energy saving.





DIGITAL VACUUM AND PRESSURE SWITCHES

PNP

NPN



Electrical features	Art. 12 20 10 P	Art. 12 35 10 P
and specifications	Vacuum switch	Pressure switch
Adjustment range	da 0 a -101.3 KPa	da 0 a 1 MPa
maximum overpressure	500 KPa	1.5 MPa
Minimum detected values	0.1 KPa	
		0.001 MPa
	0.001 Kgf/cm ²	0.01 Kgf/cm ²
	0.001 bar (g)	0.01 bar (g)
	0.01 psi	0.1 psi
	0.1 InHg	
	1 mmHg	
	10 mmH ₂ 0	
Operating voltage	12 ÷ 24 VDC, ±10% (Protection against polarity reversal)	
Electrical absorption	≤55 mA	
Commutation output	2 digital PNP, NO or NC, max. commutation power 80 mA	
Display tolerance	≤ ±2% F.S. ±1 digit	
Reaction time	≤2.5 ms	
Hysteresis	Adjustable	
Repeatability	±0.2% of the measuring range	
Display	3 1/2 digit, 7-segment LED	
Insulation resistance	50 MΩ a 500 VDC	
Proof voltage	1000 VDC, 1 min	
Protection class	IP 40	
Working environment conditions		
Installation position	Any	
Measurable fluids	Non-corrosive gasses and dry air	
Operating temperature	0 ÷ +50 °C	
Storage temperature	-20 ÷ +60 °C	
Emitted interference	In compliance with EN 55011 Group 1, class B	
Interference immunity	In compliance with EN 61326 - 1	
Mechanical features and specifications		
Container material	ABS/PC plastic	
Connection material	Nickel-plated brass	
Weight	105 g, electric cable included	
Electrical connection	With 4-conductor cable	
Connection to fluid	Female G1/8" thread	
Accessories		
Fixing kit	wall	- Art. 00 12 30
	plane	- Art. 00 12 31
	panel	- Art. 00 12 32

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Note: By adding the letter N after the art. (e.g. 12 20 10 N), the commutation output will be NPN and not PNP.

3.16



3D drawings available at www.vuototecnica.net

ACCESSORIES FOR DIGITAL VACUUM AND PRESSURE SWITCHES

Cable with axial connector



Art.	Description
00 12 20	Electrical connection cable with axial connector
	for digital vacuum and pressure switches

Cable with radial connector



Art. Description 00 12 21 Electrical connection cable with radial connector			
00 12 21		Electrical connection cable with radial connector	
		for digital vacuum and pressure switches	

Wall-mounting kit

X



FIXING KIT

Wall-mounted Art. 00 12 30





Plane Art. 00 12 31







VACUUM REGULATORS

Vacuum regulators are used to adjust the pre-set vacuum level, keeping it constant (secondary vacuum), regardless of the capacity and the oscillations of the network vacuum level (primary vacuum). Their operation is with a membrane-piston and they exploit the pressure

differential between the secondary vacuum and the atmospheric pressure. Unlike the vacuum adjusting valves, regulators do not introduce air into the circuit, thus producing more gripping points with different vacuum values, from only one vacuum source.

The vacuum level is adjusted by rotating the special reeded screw clockwise to increase it, and anti-clockwise to reduce it. Technical features

- Operation:membrane-piston regulator. - Adjustable operating pressure: from 800 to 1 mbar abs. - Capacity: from 2 to 160 cum/h. - Room temperature: from -10 to +80 °C.

- Installation position: any.

Use

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Vacuum regulators are mainly used on centralised plants where, regardless of the plant vacuum level, each grip can be adjusted within that value. Moreover, they are necessary whenever the working vacuum must be lower than the primary vacuum.







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Art.	A	Max. capacity	В	С	D	F	G	Н		L	М	0	Р	Q	Art.	Weight
1 01 10	Ø	cum/h	47	40.0	10	40	<u> </u>	00	0	00.0	40	0	20	0	pressure gau	ige Kg
11 01 10	G1/4"	0	47	42.0	10	40	60	20	6.5	89.0	40	G1/8"	30	40	09 03 15	0.60
	63/8	10	47	42.0	10	40	60	20	0.0	89.0	40	G1/8	30	40	09 03 15	0.58
11 03 10	G1/2″	20	53	52.0	15	55	85	25	8.5	105.0	50	G1/4"	36	63	09 03 10	1.15
1 04 10	G3/4"	40	55	55.5	15	70	100	30	8.5	110.5	50	<mark>G1/4</mark> "	36	63	<mark>09 03 10</mark>	1.39
1 05 10	G1"	80	60	58.0	15	90	120	30	8.5	118.0	60	G1/4"	36	63	<mark>09 03 10</mark>	2.08
11 06 10	G1" 1/2	2 160	54	77.5	15	130	160	20	8.5	131.5	99	G1/4"	36	63	09 03 10	5.49

Note: Pressure gauges are not integral part of the regulators, therfore, they must be ordered seperately.

GAS-NPT thread adapters available at page 1.117

REGULATORS FOR LOW VACUUM LEVELS

The regulators described in this page are based on the same operation principle as the ones described in the previous page and have the same function. The only difference is that in these ones the minimum adjustable vacuum level is close to the atmospheric pressure value. The vacuum level is adjusted by rotating the special reeded screw clockwise to increase it, and anti-clockwise to reduce it. Technical features

- Operation:membrane-piston regulator.
- Adjustable operating pressure: from 980 to 1 mbar abs.
- Capacity: from 20 to 160 cum/h.
- Room temperature: from -10 to +80 °C.
- Installation position: any.

Use

These regulators are used as the previously described ones, but they offer the additional advantage of regulating even vacuum levels close to the atmospheric pressure.







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۵	rt	A N	Aax. capacity	В	С	D	F	G	Н		L	М	0	Р	Q	Art.	Weight
		Ø	cum/h							Ø			Ø		Ø	pressure gau	ge Kg
11 0	3 50	G1/2"	20	53	52.0	15	90	120	25	8.5	105.0	60	G1/4"	36	63	09 03 10	2.07
11 0	5 50	G1"	80	60	58.0	15	90	120	30	8.5	118.0	100	G1/4"	36	63	09 03 10	3.74
11 0	16 50	<mark>G1</mark> " 1/2	160	54	77.5	15	130	160	20	8.5	131.5	99	G1/4"	36	63	09 03 10	5.54

Note: Pressure gauges are not integral part of the regulators, therfore, they must be ordered seperately

3D drawings available at www.vuototecnica.net

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Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

GAS-NPT thread adapters available at page 1.117

VACUUM REGULATORS WITH PNEUMATIC ADJUSTMENT

Vacuum regulators with pneumatic adjustment differ from the previous ones for the way they adjust the vacuum level; in fact, instead of acting manually on the adjustment screw, it is necessary to act on the pneumatic cylinder compressed air supply: the higher the pressure, and the higher the vacuum level and viceversa.

Vacuum regulators are used to adjust the pre-set vacuum level and keep it constant (secondary vacuum), regardless of the pump vacuum level (primary vacuum). Unlike the vacuum adjusting valves, regulators do not introduce air into the circuit, thus producing more gripping points with different vacuum values, from only one vacuum source.

Their operating principle is based on the contrasting action between a pneumatic cylinder with short stroke and a fluctuating piston driven by the pressure differential existing between the secondary vacuum and the atmospheric pressure Technical features

- Operation: membrane-piston regulator.

- Supply pressure: from 0 to 3 bar (g) for regulators art. 11 .. 30;

from 0 to 5 bar (g) for regulators art. 11 .. 80.

- Adjustable working pressure: from 800 to 1 mbar abs. for regulators art. 11 .. 30;

from 980 to 1 mbar abs. for regulators art. 11 .. 80:

- Capacity: from 2 to 160 cum/h.

- Room temperature: from -10 to +80 °C. - Installation position: any.

Use

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Vacuum regulators are mainly used on centralised plants where, regardless of the plant vacuum level, each grip can be adjusted within that value. Moreover, they are necessary whenever the working vacuum must be lower than the primary vacuum and kept constant. Vacuum regulators with pneumatic adjustment can be installed away from the control point, since it is sufficient to have a pressure regulator on the control panel to act on them.



Art	Α	Max. capacity.	В	C	D	E	F	G	Н	Ι	L	М	Ν	0	Р	Q	R	S	Т	Art.	Weight
Alt	Ø	cum/h								Ø			Ø	Ø		Ø			pr	essure gaug	je Kg
1 01 30	G1/4"	6	47	42.0	10	20	10.5	60	20	6.5	89.0	40	G1/8"	G1/8"	30	40	9.0	45	6.0	09 03 15	0.71
1 02 30	G3/8"	10	47	42.0	10	20	10.5	60	20	6.5	89.0	40	G1/8"	G1/8"	30	40	9.0	45	6.0	09 03 15	0.69
1 03 30	G1/2"	20	53	52.0	15	26	16.5	85	25	8.5	105.0	50	G1/8"	G1/4"	36	63	16.5	58	10.5	09 03 10	1.32
1 04 30	G3/4"	40	55	55.5	15	26	16.5	100	30	8.5	110.5	50	G1/8"	G1/4"	36	63	24.0	58	18.0	09 03 10	1.94
1 05 30	G1"	80	60	58.0	15	26	16.5	120	30	8.5	118.0	60	G1/8"	G1/4"	36	63	34.0	58	28.0	09 03 10	2.35
1 06 30	G1" 1/2	160	54	77.5	15	30	19.5	160	20	8.5	131.5	99	G1/4"	G1/4"	36	63	37.5	80	42.5	09 03 10	5.56
1 03 80	G1/2"	20	53	52.0	15	26	16.5	120	25	8.5	105.0	60	G1/8"	G1/4"	36	63	34.0	58	28.0	09 03 10	2.28
1 05 80	G1"	80	60	58.0	15	26	16.5	120	30	8.5	118.0	100	G1/8"	<mark>G1/</mark> 4"	36	63	34.0	58	28.0	09 03 10	3.96
1 06 80	G1" 1/2	2 160	54	77.5	15	30	19.5	160	20	8.5	131.5	99	G1/4"	G1/4"	36	63	37.5	80	42.5	09 03 10	5.60

GAS-NPT thread adapters available at page 1.117

Note: Pressure gauges are not integral part of the regulators, therfore, they must be ordered seperately.

Conversion ratio: inch = $\frac{\text{mm}}{254}$; pounds = $\frac{\text{g}}{4536}$ = $\frac{\text{Kg}}{0.4536}$



3.21

DIAGRAMS REFERRING TO THE VACUUM LEVEL ACCORDING TO THE SERVO-CONTROL SUPPLY PRESSURE



Note: The values shown in these tables are purely indicative, since they depend on the atmospheric pressure, on the capacity of the vacuum source and on the quality of the compressed air supply.

3.22

drawings available at www.vuototecnica.net

3D

VACUUM ADJUSTMENT VALVES

When these valves reach a certain precalibrated vacuum degree, they introduce atmospheric air into the circuit to prevent the increase of the set value and to keep it constant.

They can be used as regulators only on circuits having only one vacuum pump and only one use (or more uses but all working at the same vacuum degree)

In most cases they are used as safety valves on non-commissioned tanks or containers at high vacuum levels and on vacuum cup lifting systems. The vacuum level is adjusted by rotating the knurled bush in both directions. The fine thread with which the valve is provided ensures a very accurate calibration.







Art. 04 01 10



							A P.	
Δrt	Vacuum adj.	А	В	С	Ch	Ch1	Max. capacity	Weight
ALL	mbar abs.			Ø			cum/h	g
04 01 10	670 ÷ 1	45	6.5	G1/8"	12	12	4	30
04 02 10	670 ÷ 1	57	15.0	G1/2"	24	10	20	78
04 03 10	670 ÷ 1	60	12.0	G3/4"	30	17	40	150
04 04 10	670 ÷ 1	65	12.0	G1"	35	17	70	210

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GAS-NPT thread adapters available at page 1.117

3.23

VACUUM VALVES AND SOLENOID VALVES

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SUCTION VALVES FOR VACUUM PRESS BAGS

The suction valves described in this page have been designed for a quick vacuum connection on press bags for composite fibre products. These valves are composed of a steel distributor, to be inserted inside the bag, equipped with a cam housing suitable for the quick coupler for the vacuum connection. The latter is made with reeded and anodised aluminium and is easily coupled with the distributor by simply rotating it on its axis by 90°, once it's been inserted.

A silicon seal to be placed between the two elements and the press bag, guarantees a perfect vacuum seal.

Manual 2-way valves, quick couplers or simply flexible pipe fittings can be assembled onto these valves.

They are currently available in the two versions indicated in the table, but can be provided in different sizes and shapes upon request for a minimum amount.



Quick coupling



			3	c			Dis	stributor						
	Max. capacity	Hole to be made	Manual 2-way	Quick Coupler	TPR pipe									
Art.	recommended	on the sack	valve		fitting	Weight	Α	В	C	D	E	F	G	Ch
	cum/h	Ø	art.	art.	art.	g	Ø					Ø	Ø	
SS 3/8"	10	16	13 02 11	RR3/8"	RTPR3/8"	178	60	32	10	13	9	24	G3/8"	19
CC 1/0	20	19	13 03 11	BR1/2"	RTPR1/2"	218	65	35	10	13	12	30	G1/2"	25

GAS-NPT thread adapters available at page 1.117

4.01

SUCTION VALVES FOR RESIN INFUSION MOULD

These suction valves, once laid on the resin infusion mould connections, allow a quick vacuum connection and guarantee a perfect seal. They are made with silicon rubber, while their support is made with anodised aluminium. Manual 2-way valves, quick couplers or simply flexible pipe fittings can be assembled onto these valves. They are available in the two versions shown below, but can be supplied in different sizes and shapes upon request.



Quick coupling



Note: 2-way valves and couplers are not integral part of the suction valve and therefore, must be ordered separately.

4.02

drawings available at www.vuototecnica.net

3D



GAS-NPT thread adapters available at page 1.117

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PLUNGER VALVES

Plunger valves are composed of a cylindrical brass body, a steel plunger with a conical valve and a thrust spring. Connected to vacuum, they are normally closed. They activate suction, thus creating vacuum, only when the plunger is in contact with the gripping surface. They are available in various versions,

all suitable for our vacuum cups.





Δrt	А	В	C	D	E	Weight	Cup
Alt				Ø	Ø	g	art.
19 01 10	53	9	15.0	G1/4"	G1/4"	160	08 150 16
19 01 11	53	9	15.0	M12	G1/4"	166	08 80 20
19 01 12	53	9	20.0	M12	G1/4"	152	08 127 15



G3/8"

G3/8"

172

182

G1/2"

G1/2"

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

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Art.

19 02 10

19 03 10

19 04 10

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08 300 10

08 350 10

08 360 10

MECHANICALLY OPERATED VALVES

These valves are composed of an anodised aluminium body, a steel pin solidly connected to a conical shutter and of a thrust spring. Connected to vacuum, they are normally closed. They activate suction, thus creating vacuum, only when the pin is activated

by the cams or any other mechanical device.

They can be used as an alternative to plunger valves when these cannot be assembled onto the vacuum cups.





3D drawings available at www.vuototecnica.net

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VALVES WITH BALL SHUTTER

Valves with ball shutters activate suction, creating vacuum in the cups on which they are applied, only when the load to be held activates the sealing shutter.

They are made of an anodised aluminium body, a nylon ball shutter, a calibrated thrust spring and a threaded brass closing plug. When properly calibrated, they guarantee a perfect vacuum seal. They are recommended for making vacuum operated clamping surfaces. They can be supplied in different sizes and shapes upon request and for a minimum quantity to be defined in the order.



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SHUT-OFF VALVES

They are special unidirectional valves that, when properly calibrated, allow a certain quantity of fluid to go through, afterwards, if the fluid continues to go through, they automatically close.

These shut-off valves have been specially designed to be applied on the cups and, in case of lack of objects to be gripped, of defective grips or leaks, they automatically deactivate suction, thus preventing any reduction of the vacuum level on the other gripping cups.

They are provided calibrated and commissioned, ready to be installed. They are made with anodised aluminium and can be supplied in different shapes and sizes upon request and for a minimum quantity to be defined in the order.





Δrt	Α	В	C	D	D1	E	Weight
Alta				Ø	Ø		g
14 01 05	32	26	6	G1/8"	G1/8"	8	8

Minimum ignition capacity = 1.5 cum/h

Minimum vacuum level = -250 mbar



Art.	Α	В	C	D	D1	E	Weight
Altu				Ø	Ø		g
14 01 10	45	30	15	G1/4"	G3/8"	14	28

Minimum ignition capacity = 4 cum/h

Minimum vacuum level = -250 mbar



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Art.	Α	В	С	D	D1	E	Weight
7.1.0				Ø	Ø		g
14 01 15	45	30	15	G1/4"	G1/4"	14	29

Minimum ignition capacity = 4 cum/h

Minimum vacuum level = -250 mbar

GAS-NPT thread adapters available at page 1.117

SHUT-OFF VALVES



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SHUT-OFF VALVES WITH CONTROLLED LEAK

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These shut-off valves are based on the same operating principle as the others, only their sealing shutter allows the vacuum source a minimum suction even when completely closed. This feature allows the cup that has not gripped the object to be handled, for example for the anticipated suction activation, to recreate vacuum inside and, therefore, to grip the object without having to repeat the work cycle. If, on the other hand, there is a lack of an object to be handled, the valve does not prevent the vacuum level reduction on the remaining gripping cups, but the slight leak is easy to control and, therefore, to restore. They are fully made with anodised aluminium.



Art.	Max. leak	Minimum ignition capacity	A	В	С	D	D1	E	F	Weight
	NI/min	cum/h				Ø	Ø			g
14 01 11	7.5	1	36.0	29.5	6.5	G1/8"	G1/8"	10	13	8
14 02 11	7.5	1	37.5	29.5	8.0	G1/4"	G1/4"	15	17	16
14 03 11	24.0	3	42.0	32.5	9.5	G3/8"	G3/8"	17	22	28

Minimum vacuum level = -250 mbar

GAS-NPT thread adapters available at page 1.117

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

4.07

3D drawings available at www.vuototecnica.net

CHECK VALVES

These unidirectional valves are made with bronze and brass with a seal in NBR nitrile rubber or, upon request, in Viton[®].

To ensure a practical assembly they are available in two versions: horizontal and vertical.

Fitted on the vacuum pump suction inlet, as soon as the latter stop, these valves prevent the air from returning in the plant (piping, tanks, autoclaves, vacuum gripping systems, vacuum cups, etc.), guaranteeing a perfect seal and preventing the oil from returning into the pump stator, which would cause considerable damages. Therefore, check valves are mandatory on all vacuum pumps with lubrication that do not have them built-in.





HURIZ	JNIAL				
Δrt	R	Ch	Н	L	Weight
Alta	Ø				Kg
10 02 10	G3/8"	27	49	43	0.19
10 03 10	G1/2"	27	49	43	0.17
10 04 10	G3/4"	34	58	52	0.27
10 05 10	G1"	42	66	62	0.43
10 06 10	G1" 1/4	50	75	72	0.59
10 07 10	G1" 1/2	57	86	80	0.79
10 08 10	G2"	69	99	94	1.08

Note: To order the valve with Viton® seal, add the letter V to the article (E.g.: 10 02 10 V)



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VERTIC	CAL				
Art	R	Ch	D	Н	Weight
ALC	Ø		Ø		Kg
10 01 11	G1/4"	21	28	47	0.10
10 02 11	G3/8"	25	35	59	0.17
10 03 11	G1/2"	26	35	48	0.12
10 04 11	G3/4"	33	42	65	0.28
10 05 11	G1"	40	48	74	0.42
10 06 11	G1" 1/4	50	61	82	0.64
10 07 11	G1" 1/2	55	71	92	0.87
10 08 11	G2"	70	87	100	2.70

Note: To order the valve with Viton[®] seal, add the letter V to the article (E.g.: 10 02 11 V)

GAS-NPT thread adapters available at page 1.117

MEMBRANE CHECK VALVES

These valves have the same features of the other check valves, but they are made with anodised aluminium, which makes them particularly light. The seal is guaranteed by a EPDM membrane instead of the metal shutter with NBR seal.

For these features and for their modern design, they are recommended for pneumatic vacuum generators and, of course, on vacuum pumps.





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Art.	R	Ch	D	Н	Weight
74.4	Ø		Ø		g
10 01 15	G1/4"	20	30	42	46
10 02 15	G3/8"	24	35	50	74
10 03 15	G1/2"	24	37	55	86
10 04 15	G3/4"	33	42	64	110
10 05 15	G1"	40	49	74	162

MANUAL 2-WAY MINIATURE VACUUM VALVES

These small manual valves are suited for intercepting vacuum on vacuum cup holders and any small utility in which solenoid valves cannot be installed. They feature a hexagonal nickel-plated brass body, a chromed brass ball shutter and a seal in plastic material to guarantee a perfect seal. A lever on the ball shutter, rotated by 90°, allows opening or closing the valve with no effort.

Н



Δrt	D	Ch	E	F	Н	Weight	
Alta	Ø					g	
13 01 11	G1/4"	21	7	32	39	80	
13 02 11	G3/8"	21	10	30	40	74	
13 03 11	G1/2"	25	12	33	45	110	

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3D drawings available at www.vuototecnica.net

4.09

MANUAL 2-WAY VACUUM VALVES

These manual valves are used for intercepting vacuum in all those plants where solenoid valves cannot be installed.

They feature a die-cast nickel-plated brass body, a chromed brass ball shutter and teflon seals to guarantee perfect seal even at high temperatures.

A lever on the ball shutter, rotated by 90°, allows opening or closing the valve with no effort.







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MAN	UAL 2-WAY	VALVES							
Art		A B	C	D	E	F	G	L	Weight
Altu				Ø					Kg
13 01 10		19 23	48	G1/4"	24	25	18	80	0.13
13 02 10	Ę	52 23	56	G3/8"	23	29	20	80	0.13
13 03 10	6	61 30	63	G1/2"	30	31	25	88	0.21
13 04 10	E	58 36	72	G3/4"	33	35	31	114	0.32
13 05 10	8	35 44	80	G1"	42	43	38	113	0.47
13 06 10	Į į	99 57	105	G1" 1/4	50	49	47	137	0.74
13 07 10	1()9 70	126	G1" 1/2	55	54	54	156	1.26
13 08 10	13	30 83	135	G2"	62	68	66	156	1.77
13 09 10	16	58 140	210	G3"	84	84	99	246	7.09

4.10



Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

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MANUAI	3-WAY VALVES							
Art	A	В	C	D	E	G	L	Weight
AIG.				Ø				Kg
3 01 15	46	23	58	G1/4"	11	19	109	0.16
3 02 15	52	26	59	G3/8"	12	22	109	0.19
3 03 15	67	33	66	G1/2"	17	27	109	0.30
3 04 15	76	39	79	G3/4"	17	32	130	0.49
3 05 15	90	45	88	G1"	22	41	130	0.85
3 06 15	118	65	134	G1" 1/4	27	50	170	1.76
3 07 15	114	62	138	G1" 1/2	43	55	150	2.45







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PILOT-OPERATED 3-WAY VACUUM VALVES

These 2-position, 3-way valves feature pneumatically activated conical sutters.

They can be normally used either open or closed.

They are recommended in all the cases that require a quick exchange between the vacuum pump suction and the air inlet into the circuit for a quick restoration of the atmospheric pressure.

They are composed of an anodised aluminium body, two vulkollan[®] shutters assembled onto a stainless steel stem, a membrane for servocontrol made with special compounds and a thrust spring for the shutter return.

These valves allow reducing frictions and internal dynamic stresses to the minimum. the result being a high response speed and a guarantee of long lasting duration.

Technical features

Working pressure: from 0.5 to 3000 mbar abs.

Servo-control pressure: see table

Temperature of the sucked fluid: from -5 to +60 °C













A Max. capacity Vacuum level Reaction time Ø Passage Servo-control Weight Art. mbar abs. msec section pressure Ø cum/h min max exc. deexc orifice mm² bar (g) g 07 01 31 G1/4" 6 1000 0.5 5 10 8.5 56.8 $4 \div 7$ 318 07 02 31 G3/8" 10 1000 0.5 5 10 11.5 103.8 308 $4 \div 7$



4.12

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Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$

GAS-NPT thread adapters available at page 1.117

3-WAY VACUUM SOLENOID PILOT VALVES



Δrt	А	Max. capacity	Vacuu	n level	React	tion time	Ø	Passage	Servo-control	Weight
Alta			mbar	abs.	n	nsec		section	pressure	
	Ø	cum/h	min	max	exc.	deexc.	orifice	mm ²	*bar (g)	Kg
07 03 31	G1/2"	20	1000	000 0.5		15	15.0	176	6 ÷ 8	0.490

* Add the letters LP to the article for servo-control pressure 4 \div 6 bar (g).



Art.	А	Max. capacity	Vacuur	Vacuum level		tion time	Ø	Passage	Servo-control	Weight
70.0			mbar	abs.	r	nsec		section	pressure	
	Ø	cum/h	min	max	exc.	deexc.	orifice	mm ²	*bar (g)	Kg
07 04 31	G3/4"	40	1000	0.5	7	16	20	314	6 ÷ 8	1.060
07 05 31	G1"	90	1000	0.5	7	16	25	490	6 ÷ 8	0.964

* Add the letters LP to the article for servo-control pressure 4 \div 6 bar (g).

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

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3D drawings available at www.vuototecnica.net

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GAS-NPT thread adapters available at page 1.117

3-WAY VACUUM SOLENOID PILOT VALVES











Art		A	Max. capacity	Vacuur	n level	React	tion time	Ø	Passage	Servo-control	Weight
				mbar	abs.	n	nsec		section	pressure	
		Ø	cum/h	min	max	exc.	deexc.	orifice	mm ²	*bar (g)	Kg
07 06 31	1	G1" 1/2	180	1000	0.5	65	30	40	1256	6 ÷ 8	4.456

* Add the letters LP to the article for servo-control pressure $4 \div 6$ bar (g).

4.14

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Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

GAS-NPT thread adapters available at page 1.117

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2 AND 3-WAY VACUUM SOLENOID PILOT VALVES

These direct-drive valves have been specially designed for vacuum and are normally closed.

They are composed of an anodised aluminium body, where the connections and the passage orifices are located, and of an actuator which is activated by an electric coil. The solenoid pilot valve shutter in NBR nitrile rubber or Vulkollan[®], is an integral part of the actuator mobile core.

Both the orifices of the 2-way solenoid pilot valves have the same size, while those of the 3-way ones have a 3mm outlet diameter, obtained through the tube.

The very low reaction time allow carrying out a very high number of cycles per minute.

The standard electric coil is fully plasticised with synthetic resin, tight execution, insulation class F (up to 155 °C) compliant with VDE standards, with 6.3 mm 3-terminal electrical connections in compliance with EN 175301-803 (ex DIN 43650). Protection degree IP 54; IP 65 for inserted connector.

Allowed tolerance on the voltage nominal value: $\pm 10\%$ Max. absorption: 16.5 V.A. with AC and 16 W with DC. The electric coil can be rotated by 360°.

The connector can be rotated by 180° on the coil and can be supplied,

upon request, with Led lights, anti-interference circuit and/or with protection devices against overvoltage and polarity reversal. Technical features:

> Working pressure: from 1 to 1500 mbar abs. Temperature of the sucked fluid: from -5 to +60 °C









Note: The coil and the connectors are not integral part of the solenoid pilot valves, therefore, they must be ordered separately (See solenoid valve accessories)

GAS-NPT thread adapters available at page 1.117









P = Pump A = Service R = Passage

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3-WAY SOLENOID PILOT VALVE

Art.		А	Max. capacity	Vacuun	Vacuum level		tion time	Ø	Passage	В	Е	Н	Ι	Weight
				mbar	abs.	n	nsec		section					
		Ø	cum/h	min	max	exc.	deexc.	orifice	mm ²					g
07 02 16	1	G3/8"	8	1000	0.5	22	10	10	78.5	85	98	35	79	392
07 03 16		G1/2"	10	1 <mark>0</mark> 00	0.5	28	10	12	113.0	85	98	35	79	377

Note: The coil and the connectors are not integral part of the solenoid pilot valves, therefore, they must be ordered separately (See solenoid valve accessories).

4.16

3D drawings available at www.vuototecnica.net



Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

GAS-NPT thread adapters available at page 1.117

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									2/2	NC			
										A	W	P = Pu	Imp
										P		A - 36	
2-WAY SC	DLENOID PILO	OT VALVE Max. capacity	Vacuur	n level	React	tion time	Ø	Passage	B	E	Н	A - 36	Weight
2-WAY SC Art.	DLENOID PIL(A Ø	OT VALVE Max. capacity cum/h	Vacuun mbar min	n level abs. max	React n exc.	tion time nsec deexc.	Ø	Passage section mm ²	В	E	Н	I	Weight

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

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GAS-NPT thread adapters available at page 1.117

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2-WAY VACUUM SOLENOID PILOT VALVES









2-WAY SOLENOID PILOT VALVE

		JOLEHOID I I												
	rt.	А	Max. capacity	Vacuur	Vacuum level		tion time	Ø	Passage	В	Е	Н	Ι	Weight
_				mbar	abs.	n	nsec		section					
		Ø	cum/h	min	max	exc.	deexc.	orifice	mm ²					g
07 (2 20	G3/8"	8	1000	0.5	22	10	10	78.5	85	98	35	79	384
07 (3 20	G1/2"	10	1 <mark>0</mark> 00	0.5	28	10	12	113.0	85	98	35	79	372

Note: The coil and the connectors are not integral part of the solenoid pilot valves, therefore, they must be ordered separately (See solenoid valve accessories).

4.18

3D drawings available at www.vuototecnica.net



Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

GAS-NPT thread adapters available at page 1.117

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DIRECT DRIVE 2-WAY VACUUM SOLENOID VALVES

These state of the art solenoid valves feature minimal overall dimensions and high

volumetric efficiency and high response speed at any vacuum level. They are the result of an attentive choice of materials, state of the art constructive techniques and of the in-depth knowledge of our technicians. This series of solenoid valves is patented.

The DDN solenoid valves are direct drive, 2-way, 2-position valves with direct drive, double shutter and they are normally closed. They are

composed of hot pressed brass body where the connections are located, an internal mechanism with double shutter and of an actuator activated by an electric coil. The standard electric coil is fully plasticised with synthetic resin, tight execution, insulation class F (up to 155 °C) compliant with VDE standards, with 6.3 mm 3-terminal electrical connections in compliance with EN 175301-803 (ex DIN 43650). Protection degree IP 54; IP 65 with inserted connector.

Allowed tolerance on the voltage nominal value: $\pm 10\%$.

Max. absorption: 16.5 V.A. with AC and 16 W with DC (except for DDN 25 which cannot be activated with DC).

The electric coil can be rotated by 360°. The connector can be rotated by 180° on the coil and can be supplied, upon request, with Led lights, antiinterference circuit and/or with protection devices against overvoltage and polarity reversal.

For a correct operation, we recommend installing the solenoid valve upside-down.

DDN solenoid valves are particularly indicated for degassers, autoclaves, vacuum thermo-welders and in all applications where suction has to be controlled separately from the air inlet into circuit.

Electric coil

Ε

Technical features

F

P = Pump A = Service

Working pressure: from 0.5 to 1500 mbar abs. Temperature of the sucked fluid: from -5 to +60 $^\circ$ C

С

2/2 NC





Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

										/						
Art.	А	Max. capacity	Vacuu	m level	React	ion time	Ø	Passage	В	С	D	E	F	G	Weight	
			mbai	r abs.	n	nsec		section								
	Ø	cum/h	min	max	exc.	deexc.	orifice	mm ²							Kg	
DDN 14	G1/2"	20	1000	0.5	30	15	14	154	127	35	110	30	63	75	0.83	
DDN 25	G1"	90	1000	0.5	55	33	25	490	142	50	128	43	82	90	1.56	

Note: The coil and the connectors are not integral part of the solenoid valves, therefore, they must be ordered separately (See solenoid valve accessories).



4

3D drawings available at www.vuototecnica.net

4.19

The 3-way vacuum solenoid valves in this series are 2-position valves with pneumatically servo-controlled conical shutters. They can normally be used either open or closed.

They are composed of an anodised aluminium body, two vulkollan[®] shutters assembled onto a stainless steel stem, a membrane for servo-control made with special compounds and a thrust spring for the shutter return; an actuator activated by an electric coil managed the compressed air supply.

These valves allow reducing frictions and internal dynamic stresses to the minimum. the result being a high response speed and a guarantee of long lasting duration. The standard electric coil is fully plasticised with synthetic resin, tight execution, insulation class F (up to 155 °C) compliant with VDE standards, with 6.3 mm 3-terminal electrical connections in compliance with EN 175301-803 (ex DIN 43650). Protection degree IP 54; IP 65 for inserted connector.

Allowed tolerance on the voltage nominal value: $\pm 10\%$.

Max. absorption: 16.5 V.A. in c.a. e 16 W in c.c.

The electric coil can be rotated by 360°. The connector can be rotated by 180° on the coil and can be supplied, upon request, with Led lights, anti-interference circuit and/or with protection devices against overvoltage and polarity reversal.

3-way vacuum solenoid valves are usually used for intercepting vacuum on feeders and cup stackers, robots, sheet feeders, sack openers and in all those cases where a quick response is needed between suction and the air inlet into the circuit, for a quick restoration of the atmospheric pressure.

They can be supplied upon request with an SM device for manually opening and closing the solenoid valves already installed.

Technical features

Working pressure: from 0.5 to 3000 mbar abs.

Servo-control pressure: see table

Temperature of the sucked fluid: from -5 to +60 °C





Note: The coil and the connectors are not integral part of the solenoid valves, therefore, they must be ordered separately (See solenoid valve accessories).

4.20

3D









* Add the letters LP to the article for servo-control pressure 4 \div 6 bar (g).

Note: The coil and the connectors are not integral part of the solenoid valves, therefore, they must be ordered separately (See solenoid valve accessories).

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

X

GAS-NPT thread adapters available at page 1.117

4.21

4









3D

NC	
A	X = Compressed air supply
TON / M	P = Pump
Ľ∯ II ∖ I∳ I VV	A = Service
R F	R = Passage
	U U



Δrt	А	Max. capacity	Vacuui	n level	React	tion time	Ø	Passage	Servo-control	Weight
			mbar	abs.	n	nsec		section	pressure	
	Ø	cum/h	min	max	exc.	deexc.	orifice	mm ²	*bar (g)	Kg
07 04 11	G3/4"	40	1000	0.5	16	40	20	314	6 ÷ 8	1.25
07 05 11	G1"	90	1000	0.5	18	42	25	490	6 ÷ 8	1.16

* Add the letters LP to the article for servo-control pressure $4 \div 6$ bar (g).

Note: The coil and the connectors are not integral part of the solenoid valves, therefore, they must be ordered separately (See solenoid valve accessories).

4.22



Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

GAS-NPT thread adapters available at page 1.117

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NC	X = Compre	essed air supply						NO A X	= Compressed air supply	
	P = Pump A = Service R = Passag	e							= Passage = Service = Pump	
Δrt	Α	Max. capacity	Vacuur	m level	React	tion time	Ø	Passage	Servo-control	Weight
Alt			mbar	rabs.	m	nsec		section	pressure	
	Ø	cum/h	min	max	exc.	deexc.	orifice	mm ²	*bar (g)	Kg
07 06 11	G1" 1/2	180	1000	0.5	60	38	40	1256	6 ÷ 8	4.79
* Add the letters Note: The coil a	s LP to the article	for servo-control p	ressure 4 ÷ 6	6 bar (g).	therefore th	hev must be or	dered separate	elv (See solenoid valve	accessories)	

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

X

GAS-NPT thread adapters available at page 1,117

4.23

4

SERVO-CONTROLLED 3-WAY VACUUM SOLENOID VALVES WITH 2 ELECTRIC COILS

These solenoid valves have the same function and the same structure as the previous ones. Their distinctive features are the two coils that with a simple electric impulse, exchange the shutter positions and keep them in this position till the next impulse even in absence of compressed air at the servo control and of electric current. For this feature, they are especially indicated in all those cases which require a safe connection to the vacuum source, even in absence of electric or pneumatic supply. The standard electric coils are fully plasticised with synthetic resin, tight execution, insulation class F (up to 155 °C) compliant with VDE standards, with 6.3 mm 3-terminal electrical connections in compliance with EN 175301-803 (ex DIN 43650). Protection degree IP 54; IP 65 for inserted connector.

Allowed tolerance on the voltage nominal value: ±10%.

Max. absorption: $8 \div 16.5$ V.A. with AC and $6.5 \div 16$ W with DC.

The electric coils can be rotated by 360°. The connector can be rotated by 180° on the coils and can be supplied, upon request, with Led lights, anti-interference circuit and/or with protection devices against overvoltage and polarity reversal.

Technical features Working pressure: from 0.5 to 3000 mbar abs. Servo-control pressure: see table Temperature of the sucked fluid: from -5 to +60 °C









drawings available at www.vuototecnica.net

3D

NC	
A	X = Compressed air supply
	P = Pump
	A = Service
O R P	R = Passage



A Max. capacity Vacuum level Reaction time Ø Passage Servo-control Weight Art. mbar abs. msec section pressure Ø cum/h min max deexc orifice mm² bar (g) Kg exc 07 01 51 G1/4" 6 1000 0.5 16 27 8.5 56.8 $4 \div 7$ 0.59 07 02 51 1000 103.8 0.58 G3/8' 10 0.5 16 27 11.5 $4 \div 7$

Note: Coils and connectors are not integral part of the solenoid valves, therefore, they must be ordered separately (See solenoid valve accessories).

4.24



SERVO-CONTROLLED 3-WAY VACUUM SOLENOID VALVES WITH 2 ELECTRIC COILS











* Add the letters LP to the article for servo-control pressure 4 \div 6 bar (g).

Note: Coils and connectors are not integral part of the solenoid valves, therefore, they must be ordered separately (See solenoid valve accessories).

4.25

4

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

X

SERVO-CONTROLLED 3-WAY VACUUM SOLENOID VALVES WITH 2 ELECTRIC COILS







NO



3D

Art.	А	Max. capacity	Vacuur	n level	React	tion time	Ø	Passage	Servo-control	Weight
			mbar	abs.	n	nsec		section	pressure	
	Ø	cum/h	min	max	exc.	deexc.	orifice	mm ²	*bar (g)	Kg
07 04 51	G3/4"	40	1000	0.5	16	40	20	314	6 ÷ 8	1.51
07 05 51	G1"	90	1000	0.5	18	42	25	490	6 ÷ 8	1.41

* Add the letters LP to the article for servo-control pressure $4 \div 6$ bar (g).

X = Compressed air supply

P = Pump

A = Service R = Passage

Note: Coils and connectors are not integral part of the solenoid valves, therefore, they must be ordered separately (See solenoid valve accessories).

4.26



NC

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

GAS-NPT thread adapters available at page 1.117

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X = Compressed air supply

P = Passage A = Service

R = Pump

N

SERVO-CONTROLLED 3-WAY VACUUM SOLENOID VALVES WITH 2 ELECTRIC COILS





Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

NC

X

GAS-NPT thread adapters available at page 1.117

4

3D drawings available at www.vuototecnica.net

DIRECT DRIVE 3-WAY VACUUM SOLENOID VALVES

These direct drive 3-way. 2-position vacuum solenoid valves feature conical shutters servocontrolled by the vacuum.

As a standard they are normally closed, but they can be supplied normally open upon request. They are composed of an anodised aluminium body where the connections are located, two silicon shutters assembled onto a stainless steel stem and a membrane in special reinforced compound. An actuator activated by an electric coil manages the vacuum at the servo-control. The operating principle of these solenoid valves is based on the pressure differential between the vacuum pump or generator and the pressure of the sucked air.

By addressing this "differential pressure" to the servo-control via the actuator, the shutters can be controlled without compressed air or springs.

Due to their operating principle, they are not recommended on plants with low vacuum levels (below 850 mbar abs., equal to 15 % of vacuum).

The lack of springs, frictions and internal dynamic stresses favours a high response speed and guarantees long lasting operation.

The standard electric coil is fully plasticised with synthetic resin, tight execution, insulation class F (up to 155 °C) compliant with VDE standards, with 6.3 mm 3-terminal electrical connections in compliance with EN 175301-803 (ex DIN 43650). Protection degree IP 54; IP 65 for inserted connector.

Allowed tolerance on the voltage nominal value: ±10%.

Max. absorption: 16.5 V.A. with AC and 16 W with DC.

The electric coil can be rotated by 360°. The connector can be rotated by 180° on the coil and can be supplied, upon request, with Led lights, anti-interference circuit and/or with protection devices against overvoltage and polarity reversal.

The solenoid valves in this series, along with the uses described for the 07 .. 11 series can be used on plants with no compressed air.

They can be provided, upon request, with SM device for manually opening or closing the solenoid valve already installed.

The solenoid valve must be always chosen according to the capacity and, therefore, to the vacuum pump or generator suction connection.

Technical features

Working pressure: from 0.5 to 850 mbar abs. Temperature of the sucked fluid: from -5 to +60 °C







ww.vuototecnica.net		R = Pump A = Service P = Passage	76			4					R = Passage A = Service P = Pump
M	Art.	А	Max. capacity	Vacuu	m level	React	ion time	Ø	Passage	F	Weight
e at				mba	r abs.	rr	ISEC		section		
able		Ø	cum/h	min	max	exc.	deexc.	orifice	mm ²	Ø	Kg
vail	07 03 40 NC	G1/2"	20	850	0.5	30	15	15	176	6.5	1.53
S a	07 03 40 <mark>NO</mark>					20	18				
/ing	07 04 40 <mark>NC</mark>	G3/4"	40	850	0.5	30	15	20	314	6.5	1.50
lraw	07 04 40 <mark>NO</mark>					20	18				
0											

Note: The coil and the connectors are not integral part of the solenoid valves, therefore, they must be ordered separately (See solenoid valve accessories).

4.28

3D









Note: The coil and the connectors are not integral part of the solenoid valves, therefore, they must be ordered separately (See solenoid valve accessories).

X

GAS-NPT thread adapters available at page 1.117

4.29

DIRECT DRIVE 3-WAY VACUUM SOLENOID VALVES











Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$

Note: The coil and the connectors are not integral part of the solenoid valves, therefore, they must be ordered separately (See solenoid valve accessories).

4.30

3D



GAS-NPT thread adapters available at page 1.117

SOLENOID VALVE ACCESSORIES AND SPARE PARTS

Electric coils

Electric coils are windings of copper wire on nylon coils fully plasticised in synthetic resin which activate the electromagnetic actuators with which the solenoid valves are provided. Crossed by an electric current, these coils generate a magnetic field which activates the mobile core inside the actuators; the mobile core features a built-in or fixed shutter which cause the valve commutation by opening and closing their orifices.

The standard electric coil is fully plasticised with synthetic resin, tight execution, insulation class F (up to 155 °C) compliant with VDE standards, with 6.3 mm 3-terminal electrical connections in compliance with EN 175301-803 (ex DIN 43650). Protection degree IP 54; IP 65 with inserted connector.

Allowed tolerance on the voltage nominal value: ±10%. Allowed tolerance on the frequency value: ±5% Room temperature: from -10 to +45 °C

Fluid temperature: from -10 to +95 °C

Electric absorption: $8 \div 16.5$ V.A. with AC and $6.5 \div 16$ W with DC. Electric coils can be rotated by 360° .







Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

AC AND DC C	COILS				
Art.	Duty	Absorption	Nominal voltage	Weight	Solenoid valves
	cycle			g	art.
00 07 172	100%	6.5 W	V24 CC	54	07 01 51 - 07 02 51
00 07 173	100%	8 V.A.	V24 / 50 - 60Hz	54	07 01 51 - 07 02 51

GAS-NPT thread adapters available at page 1.117





AC AND DC COILS

Art	Duty	Absorption	Nominal voltage	Weight
A10	cycle			g
00 07 03 N	100%	16 W	V12 CC	100
00 07 04 N	100%	16 W	V24 CC	100
00 07 05 N	100%	16 W	V48 CC	100
00 07 06 N	100%	16 W	V110 CC	100
	Solenoid valves art.			
	07 01 11 - 07 02 11 -	07 03 11 - 07 04 11 - 07 05 11 - 07 06 11		
	07 01 16 - 07 02 16 -	07 03 16		
	07 01 20 - 07 02 20 -	07 03 20		
	07 03 40 - 07 04 40 -	07 05 40 - 07 06 40		
	07 03 51 - 07 04 51 -	07 05 51 - 07 06 51		
	DDN 14			
00 07 256 N	100%	16.5 V.A.	V24/50 - 60 Hz	100
00 07 257 N	100%	16.5 V.A.	V48/50 - 60 Hz	100
00 07 258 N	100%	16.5 V.A.	V110/50 - 60 Hz	100
00 07 259 N	100%	16.5 V.A.	V220/50 - 60 Hz	100
	Solenoid valves art.			
	07 01 11 - 07 02 11 -	07 03 11 - 07 04 11 - 07 05 11 - 07 06 11		
	07 01 16 - 07 02 16 -	07 03 16		
	07 01 20 - 07 02 20 -	07 03 20		
	07 03 40 - 07 04 40 -	07 05 40 - 07 06 40		
	0 <mark>7 03</mark> 51 - 07 <mark>0</mark> 4 51 -	07 05 51 - 07 06 51		
	DDN 14 - DDN 25			

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

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3D drawings available at www.vuototecnica.net

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SOLENOID VALVE ACCESSORIES AND SPARE PARTS

Connectors are fundamental for bringing electric current to the solenoid valve coils. They are available in the simple plug version installed as standard and, upon request, with LEDs to signal the presence of voltage, with anti-interference circuits, protection devices against overvoltage and polarity reversal. When correctly installed, all connectors provide full protection against water jets, according to EN 60529 standards (protection class IP 65). Moreover, they meet VDE 0110-1 /89 standards, working voltage up to 250 V, overvoltage category II, Degree of use 3, regarding insulation class.

In all contacts, a snap joint between contact holders and the external protection guarantees a safe locking and easy assembly.

A safe locking is essential for guaranteeing the operator full protection when handling the connector.

The contact holder can be easily extracted from its casing simply using a screwdriver. This operation also allows orienting the earthing contact in the desired direction.

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Art.		Contac car	t nominal	Conductor max_section	Operating temperature	Ø cable	Weight	Notes	Coil
		oup	A	mm ²	°C	mm	g		art.
00 07 174	1	0	max 16	1.5	-40 ÷ +90	6 ÷ 8	24	Standard	00 07 172
00 07 260	1	0	max 16	1.5	-40 ÷ +90	6 ÷ 8	24	with LED	00 07 173 🔗



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SOLENOID VALVE ACCESSORIES AND SPARE PARTS



COIL CONNECTORS

Art	Contact nominal		Conductor	Operating	Ø cable	Weight	Notes
	ca	pacity	max. section	temperature			
		А	mm ²	°C	mm	g	
00 07 63	10	max 16	1.5	-40 ÷ +90	6 ÷ 8	24	Standard
00 07 101	10	max 16	1.5	-40 ÷ +90	6 ÷ 8	24	with LED
00 07 186	10	max 16	1.5	-40 ÷ +90	6 ÷ 8	24	with LED and filtre
	Coil art.						
	00 07 03	3 - 00 07 04 - 00 07	7 05 - 00 07 06 - 00 07 215	- 00 07 216 - 00 07 217 - 00 0	07 218 - 00 07 219		
	00 07 2	56 - 00 07 257 - 00	07 258 - 00 07 259				

SM DEVICE FOR MANUALLY OPENING AND CLOSING THE SOLENOID VALVES

This small cam, which can be activated by a screwdriver, acts on the mobile core of the actuators causing their commutation. This device is installed, upon request, on compressed-air pilot-operated 3-way solenoid valves art. 07 .. 11 or vacuum solenoid valves art. 07 .. 40, to allow their opening and closing in absence of electricity. To order it, all you have to do is add the letters **SM** to the article of the solenoid valve.



VACUUM VALVE AND SOLENOID VALVE SEALING KIT

Sealing kits are composed of a membrane, shutters and standard O-rings installed on our compressed air and vacuum 3-way valves and solenoid valves.

In presence of very hot fluids (up to 250 °C) or corrosive fluids, we can supply sealing kits in special compounds. Please contact our technical department.

Complete kit for valves:	07 01 31 e 07 02 31	art, 00 07 267
	07 03 31	art. 00 07 268
	07 03 31 LP	art. 00 07 287
	07 04 31 e 07 05 31	art. 00 07 269
	07 04 31 LP e 07 05 31 LP	art. 00 07 288
	07 06 31	art. 00 07 270
0	07 06 31 LP	art. 00 07 289
Complete kit for solenoid valves:	07 01 11 e 07 02 11	art 00 07 271
	07 03 11	art 00 07 272
	07 03 11 LP	art 00 07 290
	07 04 11 e 07 05 11	art 00 07 273
	07 04 11 LP e 07 05 11 LP	art. 00 07 291
	07 06 11	art. 00 07 274
0	07 06 11 LP	art. 00 07 292
Complete kit for solenoid valves:	07 01 51 e 07 02 51	art. 00 07 275
	07 03 51	art. 00 07 276
	07 03 51 LP	art. 00 07 293
	07 04 51 e 07 05 51	art. 00 07 277
	07 04 51 LP e 07 05 51 LP	art. 00 07 294
\bigcirc	07 06 51	art. 00 07 278
	07 06 51 LP	art. 00 07 295
Complete kit for solenoid valves:	07 03 40 e 07 04 40	art. 00 07 279
	07 05 40	art. 00 07 280
	07 06 40	art. 00 07 281



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VACUUM VALVE AND SOLENOID VALVE PILOTING MEMBRANE

Δrt	Valves	Connections	Material	Colour	Dimensions mm
	art.				
00 07 104	07 03 40 - 07 04 40	G1/2" - G3/4"	reinforced NBR	Black	Ø 65
00 07 105	07 05 40	G1"	reinforced NBR	Black	Ø 76
00 07 177	07 06 40	G1" 1/2	reinforced NBR	Black	Ø 110
00 07 229	07 01 11 - 07 01 31 - 07 01 51	G1/4" - G3/8"	Vulkollan®	Beige	49 x 35
	07 02 11 - 07 02 31 - 07 02 51				
00 07 230	07 03 11 - 07 03 31 - 07 03 51	G1/2"	Urepan [®] 65	Grey - orange	62 x 39
00 07 296	07 03 11 LP - 07 03 31 LP - 07 03 51 LP	G1/2"	Vulkollan®	Beige	62 x 39
00 07 231	07 04 11 - 07 04 31 - 07 04 51	G3/4" - G1"	Urepan [®] 65	Grey - orange	79 x 49
	07 05 11 - 07 05 31 - 07 05 51				
00 07 297	07 04 11 LP - 07 04 31 LP - 07 04 51 LP	G3/4" - G1"	Vulkollan®	Beige	79 x 49
	07 05 11 LP - 07 05 31 LP - 07 05 51 LP				
00 07 232	07 06 11 - 07 06 31 - 07 06 51	G1"1/2	Urepan [®] 65	Grey - orange	129 x 89
00 07 298	07 06 11 LP - 07 06 31 LP - 07 06 51 LP	G1"1/2	Vulkollan®	Beige	129 x 89

4.35

SERVO-CONTROLLED 3-WAY VACUUM SOLENOID VALVES WITH LOW ABSORPTION ELECTRIC COIL

The 3-way vacuum solenoid valves in this series feature two positions with pneumatically pilot-operated conical shutters.

They can normally be used either open or closed.

They are composed of an anodised aluminium body where the connections are located, two shutters in vulkollan[®] assembled onto a stainless steel stem, a special compound membrane for the servo-control and a spring for the shutter return. A solenoid pilot valve activated by a built-in electric coil, manages the compressed air supply. The particular execution of these valves allows reducing frictions and internal dynamic stresses to the minimum, which results in a high response speed and a guarantee of long lasting operation.

The electric coil of the solenoid pilot valve is fully plasticised plasticised with synthetic resin, tight execution, insulation class F (up to 155 °C) compliant with VDE standards, with 3 mm 2-terminal electrical connections in compliance with EN 175301-803 (ex DIN 43650)-C. Protection degree IP 54; IP 65 for inserted connector.

Available for voltages of 12-24V/50-60Hz and 12-24V/CC. Allowed tolerance on the voltage nominal value: $\pm 10\%$.

Maximum electric power: 2 W

The connector can be rotated by 180° on the coil and can be supplied, upon request, with Led lights, anti-interference circuit and/or with protection devices against overvoltage and polarity reversal.

A push-button device, built-in the solenoid pilot valve, allows manually opening and closing the solenoid valve. 3-way vacuum solenoid valves are usually used for intercepting the vacuum in vacuum cup feeders and paletisers, robots, bag openers and in all those cases which require a quick exchange between the vacuum pump suction and the air inlet in the circuit, for a quick restoration of the atmospheric pressure. **Technical features**

Working pressure: from 0.5 to 3000 mbar abs. Servo-control pressure: see table

Temperature of the sucked fluid: from -5 to +60 °C





X = Compressed air supply

P = Pump

A = Service

R = Passage



NO

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3D

NC

Z

Art	А	Max. capacity	Vacuum level		Reac	tion time	Ø	Passage	Servo-control	Weight
ALC.			mbar	abs.	r	nsec		section	pressure	
	Ø	cum/h	min	max	exc.	deexc.	orifice	mm ²	bar (g)	Kg
07 01 13	G1/4"	6	1000	0.5	16	27	8.5	56.8	4÷7	0.44
07 02 13	G3/8"	10	1000	0.5	16	27	11.5	103.8	4 ÷ 7	0.43

Note: Please specify the electric coil voltage in the order (E.g.: 07 01 13 V24-CC)

The connector is not integral part of the solenoid valve and, therefore, must be ordered separately (See solenoid valve accessories).

4.36



Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

GAS-NPT thread adapters available at page 1.117

X = Compressed air supply

P = Passage

A = Service

R = Pump

SERVO-CONTROLLED 3-WAY VACUUM SOLENOID VALVES WITH LOW ABSORPTION ELECTRIC COIL









NC	¥ -	0						NO	X = Com	pressed air supply	utatenica net
	₩ P= A= R=	Pump Service Passage	e					ZÅ ⊥∕	P = Pass R P A = Serv R = Pur	sage rice np	
Art.		Α	Max. capacity	Vacuur	n level	React	ion time	Ø	Passage	Servo-control	Weight
				mbar abs.		n	nsec		section	pressure	ah lde
		Ø	cum/h	min	max	exc.	deexc.	orifice	mm ²	*bar (g)	Kg
07 03 13		G1/2"	20	1000	0.5	16	40	15.0	176	6 ÷ 7	0.52
* Add the lette Note: Please s The con	ers LP to t specify the nector is	the article e electric not integ	e for servo-control p coil voltage in the c ral part of the solen	ressure 4 ÷ 6 order (E.g.: 07 oid valve and	5 bar (g). 7 03 13 V24-0 I, therefore, m	CC) nust be ord	ered separately	γ (See solenoid valv	/e accessories).		an drawing

The connector is not integral part of the solenoid valve and, therefore, must be ordered separately (See solenoid valve accessories)

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4.37

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

X

GAS-NPT thread adapters available at page 1.117

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SERVO-CONTROLLED 3-WAY VACUUM SOLENOID VALVES WITH LOW ABSORPTION ELECTRIC COIL





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NC	
	X = Compressed air supply P = Pump A = Service
O R P	R = Passage



Art.	A	Max. capacity	Vacuum level mbar abs.		Reaction time msec		Ø	Passage	Servo-control	Weight
								section	pressure	
	Ø	cum/h	min	max	exc.	deexc.	orifice	mm ²	*bar (g)	Kg
07 04 13	G3/4"	40	1000	0.5	16	40	20	314	6 ÷ 7	1.00
07 05 13	G1"	90	1000	0.5	18	42	25	490	6 ÷ 7	0.94

* Add the letters LP to the article for servo-control pressure 4 ÷ 6 bar (g).

Note: Please specify the electric coil voltage in the order (E.g.: 07 04 13 V24-CC)

The connector is not integral part of the solenoid valve and, therefore, must be ordered separately (See solenoid valve accessories).

4.38



GAS-NPT thread adapters available at page 1.117

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SERVO-CONTROLLED 3-WAY VACUUM SOLENOID VALVES WITH LOW ABSORPTION ELECTRIC COIL





NC	
A	X = Compressed air supply
	P = Pump
	A = Service
- кр	R = Passage

Art.	А	Max. capacity	Vacuu	Vacuum level		tion time	Ø	Passage	Servo-control	Weight
7.1.0			mbar	abs.	msec			section	pressure	
	Ø	cum/h	min	max	exc.	deexc.	orifice	mm²	*bar (g)	Kg
07 06 13	G1"1/2	180	1000	0.5	60	38	40	1256	6 : 7	4.50

NO

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* Add the letters LP to the article for servo-control pressure 4 \div 6 bar (g).

Note: Please specify the electric coil voltage in the order (E.g.: 07 06 13 V24-CC)

The connector is not integral part of the solenoid valve and, therefore, must be ordered separately (See solenoid valve accessories).

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

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GAS-NPT thread adapters available at page 1.117

X = Compressed air supply P = Passage A = Service

R = Pump

4

SERVO-CONTROLLED 3-WAY VACUUM SOLENOID VALVES WITH BISTABLE IMPULSE SOLENOID PILOT VALVE AND WITH LOW ABSORPTION ELECTRIC COIL

These solenoid valves have the same functions and structure as the previously described ones.

Their distinctive feature is a bistable impulse solenoid valve activated by a built-in low absorption electric coil which, at a simple electric impulse, exchanges the shutter position even in absence of electricity, until it receives a new impulse of opposite polarity. For this reason, they can only be supplied with DC electric coils.

They are particularly recommended in all those cases that require a safe connection to the vacuum source, even in absence of electricity.

The electric coil of the solenoid pilot valve is fully plasticised plasticised with synthetic resin, tight execution, insulation class F (up to 155 °C) compliant with VDE standards, with 3 mm 2-terminal electrical connections in compliance with EN 175301-803 (ex DIN 43650)-C. Protection degree IP 54; IP 65 for inserted connector.

Available for voltages of 12-24V/CC.

Allowed tolerance on the voltage nominal value: ±10%.

Maximum electric power: 1 W The connector can be rotated by 180° on the coil and can be supplied, upon request, with Led lights, anti-interference circuit and/or with protection devices against overvoltage and polarity reversal.

The push-button device for their manual activation cannot be installed on these solenoid valves.

Technical features

Working pressure: from 0.5 to 3000 mbar abs. Servo-control pressure: see table Temperature of the sucked fluid: from -5 to +60 °C









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Art	A	Max. capacity	Vacuur	um level Reaction time		tion time	Ø	Passage	Servo-control	Weight	
ALC.			mbar abs.		msec			section	pressure		
	Ø	cum/h	min	max	exc.	deexc.	orifice	mm ²	bar (g)	Kg	
07 01 53	G1/4"	6	1000	0.5	16	27	8.5	56.8	4÷7	0.44	
07 02 53	G3/8"	10	1000	0.5	16	27	11.5	103.8	4 ÷ 7	0.43	

Note: Please specify the electric coil voltage in the order (E.g.: 07 01 53 V24-CC)

The connector is not integral part of the solenoid valve and, therefore, must be ordered separately (See solenoid valve accessories).

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Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

SERVO-CONTROLLED 3-WAY VACUUM SOLENOID VALVES WITH BISTABLE IMPULSE SOLENOID PILOT VALVE AND WITH LOW ABSORPTION ELECTRIC COIL





NC $\frac{1}{\sqrt{2}}$ $\frac{1}{\sqrt{2}}$ $\frac{1}{\sqrt{2}}$	X = Com P = Pump A = Servi R = Pass	pressed air supply o ce age		I			N(24	$\begin{array}{c} D \\ A \\ T \\ T \\ R \\ P \\ R \\ R \\ R \\ R \\ R \\ R \\ R \\ R$	ompressed air supply assage ervice ump	
Art.	A	Max. capacity	Vacuu	n level	React	tion time	Ø	Passage	Servo-control	Weight
			mbar	abs.	n	nsec		section	pressure	
	Ø	cum/h	min	max	exc.	deexc.	orifice	mm ²	*bar (g)	Kg
07 03 53	G1/2"	20	1000	0.5	16	40	15.0	176	6 ÷ 8	0.52
* Add the letters I	.P to the article	e for servo-control p	ressure 4 ÷ (6 bar (g).						
Note: Please spec	ify the electric	coil voltage in the o	rder (E.g.: 07	7 03 53 V24-0	CC)					
The connec	tor is not integ	ral part of the solen	oid valve and	l, therefore, m	nust be ord	ered separately	/ (See solenoid v	alve accessories).		

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Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

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GAS-NPT thread adapters available at page 1.117

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SERVO-CONTROLLED 3-WAY VACUUM SOLENOID VALVES WITH BISTABLE IMPULSE SOLENOID PILOT VALVE AND WITH LOW ABSORPTION ELECTRIC COIL









NC	
A .	X = Compressed air supply
	P = Pump
	A = Service
0 R P	R = Passage



X = Compressed air supply P = Passage A = Service

Art.	A	Max. capacity	Vacuum levelReaction timembar abs.msec		tion time	Ø	Passage	Servo-control	Weight	
					msec			section	pressure	
	Ø	cum/h	min	max	exc.	deexc.	orifice	mm ²	*bar (g)	Kg
07 04 53	G3/4"	40	1000	0.5	16	40	20	314	6 ÷ 8	1.00
07 05 53	G1"	90	1000	0.5	18	42	25	490	6 ÷ 8	0.94

* Add the letters LP to the article for servo-control pressure 4 ÷ 6 bar (g).

Note: Please specify the electric coil voltage in the order (E.g.: 07 04 53 V24-CC)

The connector is not integral part of the solenoid valve and, therefore, must be ordered separately (See solenoid valve accessories).

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Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

GAS-NPT thread adapters available at page 1.117

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SERVO-CONTROLLED 3-WAY VACUUM SOLENOID VALVES WITH BISTABLE IMPULSE SOLENOID PILOT VALVE AND WITH LOW ABSORPTION ELECTRIC COIL









	X = Compre W P = Pump A = Service R = Passag	essed air supply					N0	$ \begin{array}{c} A \\ T \\ T \\ T \\ R \\ R \\ P \end{array} \begin{array}{c} X = 0 \\ P \\ R = 0 \\ R = 0 \end{array} $	Compressed air supply Passage Service Pump	
Art.	А	Max. capacity	Vacuur	n level	React	tion time	Ø	Passage	Servo-control	Weight
			mbar	abs.	n	nsec		section	pressure	
	Ø	cum/h	min	max	exc.	deexc.	orifice	mm²	*bar (g)	Kg
07 06 53	G1"1/2	180	1000	0.5	60	38	40	1256	6 ÷ 8	4.5
* Add the letters Note: Please sp The conne	s LP to the article ecify the electric ector is not integr	for servo-control p coil voltage in the c ral part of the solen	ressure 4 ÷ 6 order (E.g.: 07 ioid valve and	6 bar (g). 7 06 53 V24-0 , therefore, m	CC) nust be orde	ered separately	ı (See solenoid valv	ve accessories).		

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

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GAS-NPT thread adapters available at page 1.117

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DIRECT DRIVE 3-WAY VACUUM SOLENOID VALVES WITH LOW ABSORPTION ELECTRIC COIL

The direct drive 3-way vacuum solenoid valves of this series feature two positions with conical shutters servo-controlled by the vacuum.

As a standard they are normally supplied closed, but upon request they can also be provided as normally open.

They are composed of an anodised aluminium body where the connections are located, two silicon shutters assembled onto a stainless steel stem and a membrane in special reinforced compound. A solenoid pilot valve activated by a built-in electric coil manages the servo-control vacuum. The operating principle of these solenoid valves is based upon the pressure differential between the vacuum pump or generator and the pressure of the sucked air. By directing this differential pressure to the servo-control via the solenoid pilot valve, it is possible to control the shutters with no need for compressed air or springs.

Due to their operating principle, these solenoid valves are not recommended for low vacuum level plants (below 850 mbar abs., equal to 15 % of vacuum).

The absence of springs, frictions and internal dynamic stresses favours a high response speed and guarantees a long lasting operation.

The electric coil of the solenoid pilot valve is fully plasticised plasticised with synthetic resin, tight execution, insulation class F (up to 155 °C) compliant with VDE standards, with 3 mm 2-terminal electrical connections in compliance with EN 175301-803 (ex DIN 43650) -C. Protection degree IP 54; IP 65 for inserted connector.

Available for voltages of 12-24V/50-60Hz and 12-24V/CC.

Allowed tolerance on the voltage nominal value: $\pm 10\%$.

Maximum electric power: 2 W

The connector can be rotated by 180° on the coil and can be supplied, upon request, with Led lights, anti-interference circuit and/or with protection devices against overvoltage and polarity reversal. A push-button device built-in the solenoid pilot valve allows the manual opening and closing of the solenoid valve.

The solenoid valves of this series can be used in almost all the cases described for the 07 .. 11 series, and also on plants with no compressed air.

The solenoid valve must always be chosen according to the capacity and, therefore, to the vacuum pump or generator suction connection.

Working pressure: from 0.5 to 850 mbar abs.

Temperature of the sucked fluid: from -5 to +60 °C





A = Service

P = Passage





Art.	A	Max. capacity	Vacuu mba	m level r abs.	Reaction	on time sec	Ø	passage section	F	Weight
	Ø	cum/h	min	max	exc.	deexc.	orifice	mm ²	Ø	Kg
07 03 43 NC	G1/2"	20	850	0.5	33	17	15	176	6.5	1.35
07 03 43 NO					22	20				
07 04 43 NC	G3/4"	40	850	0.5	33	17	20	314	6.5	1.30
07 04 43 <mark>NO</mark>					22	20				

Note: Please specify the electric coil voltage in the order (E.g.: 07 03 43 NC V24-CC)

The connector is not integral part of the solenoid valve and, therefore, must be ordered separately (See solenoid valve accessories).

at www.vuototecnica.net

drawings available

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DIRECT DRIVE 3-WAY VACUUM SOLENOID VALVES WITH LOW ABSORPTION ELECTRIC COIL





	R = Pump A = Service P = Passag	e								= Passage = Service = Pump
Art.	A	Max. capacity	Vacuu	m level r abs.	Reacti	on time sec	Ø	Passage section	F	Weight
	Ø	cum/h	min	max	exc.	deexc.	orifice	mm ²	Ø	Kg
07 05 43 NC 07 05 43 NO	G1"	90	850	0.5	42 28	20 22	25	490	6.5	1.65
Note: Please spec The connec	ify the electric tor is not integ	coil voltage in the o ral part of the solend	rder (E.g.: 03 oid valve and	7 05 43 NC V2 d, therefore, m	24-CC) lust be orde	red separately	(See solenoid va	alve accessories).		

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

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GAS-NPT thread adapters available at page 1.117

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3-WAY VACUUM SOLENOID VALVES WITH BISTABLE IMPULSE SOLENOID PILOT VALVE AND WITH LOW ABSORPTION ELECTRIC COIL

These solenoid valves have the same functions and structure as the previously described ones.

Their distinctive feature is a bistable impulse solenoid valve activated by a built-in low absorption electric coil which, at a simple electric impulse, exchanges the shutter position even in absence of electricity, until it receives a new impulse of opposite polarity. For this reason, they can only be supplied with DC electric coils.

They are particularly recommended in all those cases that require a safe connection to the vacuum source, even in absence of electricity.

The electric coil of the solenoid pilot valve is fully plasticised plasticised with synthetic resin, tight execution, insulation class F (up to 155 °C) compliant with VDE standards, with 3 mm 2-terminal electrical connections in compliance with EN 175301-803 (ex DIN 43650)-C. Protection degree IP 54; IP 65 for inserted connector.

Available for voltages of 12-24V/CC.

Allowed tolerance on the voltage nominal value: ±10%.

Maximum electric power: 1 W The connector can be rotated by 180° on the coil and can be supplied, upon request, with Led lights, anti-interference circuit and/or with protection devices against overvoltage and polarity reversal.

The push-button device for their manual activation cannot be installed on these solenoid valves.

Technical features

Working pressure: from 0.5 to 850 mbar abs.

Temperature of the sucked fluid: from -5 to +60 °C









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R = Pump A = Service R P _ P = Passage	NC	
		R = Pump A = Service P = Passage



А Max. capacity Vacuum level Reaction time Ø Passage Weight F Art. mbar abs. section msec Ø cum/h orifice Ø min max exc deexc mm² Kg 07 03 63 NC G1/2" 20 850 0.5 33 17 15 176 6.5 1.35 07 03 63 NO 22 20 G3/4" 07 04 63 NC 40 850 0.5 33 17 20 314 6.5 1.30 07 04 63 NO 22 20

Note: Please specify the electric coil voltage in the order (E.g.: 07 03 63 NC V24-CC)

The connector is not integral part of the solenoid valve and, therefore, must be ordered separately (See solenoid valve accessories).

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Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$

3-WAY VACUUM SOLENOID VALVES WITH BISTABLE IMPULSE SOLENOID PILOT VALVE AND WITH LOW ABSORPTION ELECTRIC COIL









	R = Pump A = Service P = Passag	e Je								e = Passage = Service = Pump
Art.	Α	Max. capacity	Vacuu	m level	Reacti	on time	Ø	Passage	F	Weight
			mbai	r abs.	m	sec		section		
	Ø	cum/h	min	max	exc.	deexc.	orifice	mm ²	Ø	Kg
07 05 63 NC	G1"	90	850	0.5	42	20	25	490	6.5	1.05
07 05 63 NO					28	22				
Note: Please specify	the electric	coil voltage in the o	rder (E.g.: 07	7 05 63 NC V2	24-CC)					
The connector	r is not integ	ral part of the solend	oid valve and	d, therefore, m	ust be orde	red separately	(See solenoid va	alve accessories).		

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GAS-NPT thread adapters available at page 1,117

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ACCESSORIES AND SPARE PARTS FOR SOLENOID VALVES WITH LOW ABSORPTION COILS

Solenoid pilot valves with built-in low absorption electric coil

Solenoid pilot valves are small 3-way valves activated by a built-in electric coil able to manage the compressed air or the vacuum for piloting the solenoid valves. The electric coil of the solenoid pilot valve is fully plasticised plasticised with synthetic resin, tight execution, insulation class F (up to 155 °C) compliant with VDE standards, with 3 mm 2-terminal electrical connections in compliance with EN 175301-803 (ex DIN 43650)-C. Protection degree IP 54; IP 65 for inserted connector.

Allowed tolerance on the voltage nominal value: $\pm 10\%$ Allowed tolerance on the frequency value: $\pm 5\%$ Room temperature: from -10 to +45 °C Fluid temperature: from -10 to +95 °C Electric power: from 1 to 2 W







SOLENOID PILOT VALVES WITH BUILT-IN LOW ABSORPTION ELECTRIC COIL

Art	Duty	Power	Electric voltage	Pressur	e bar (g)	Weight
Alt	cycle	W	Volt	min	max	g
00 07 301	100%	1	12 / 50 - 60Hz	0	7	32
00 07 302	100%	1	24 / 50 - 60Hz	0	7	32
00 07 303	100%	2	12 / CC	0	7	32
00 07 304	100%	2	24 / CC	0	7	32
	Solenoid valves ar	t.				
	07 01 13 - 07 02 1	3 - 07 03 13 - 07 04 13 - 07 05 1	3 - 07 06 13			
	07 03 13 LP - 07 0	4 13 LP - 07 05 13 LP - 07 06 13	LP			
00 07 305	100%	1	12 / 50 - 60Hz	0	10	32
00 07 306	100%	1	24 / 50 - 60Hz	0	10	32
00 07 307	100%	2	12 / CC	0	10	32
00 07 308	100%	2	24 / CC	0	10	32
	Solenoid valves ar	t.				

07 03 43 - 07 04 43 - 07 05 43





BISTABLE IMPULSE SOLENOID PILOT VALVE WITH BUILT-IN ELECTRIC COIL

Art	Duty	Power	Electric voltage	Pressure	e bar (g)	Weight
Alt	cycle	W	Volt	min	max	g
00 07 309	100%	1	12 / CC	0	8	30
00 07 310	100%	1	24 / CC	0	8	30
	Solenoid valves a	rt.				
	07 01 53 - 07 02	53 - 07 03 <mark>53</mark> - 07 04 53 - 07 05 53	3 - 07 06 53			
	07 03 53 LP - 07	04	_P			
00 07 31 <mark>1</mark>	100%	1	12 / CC	0	5	30
00 15 29 <mark>7</mark>	100%	1	24 / CC	0	5	30
	Solenoid valves a	rt.				
	07 03 63 - 07 04	63 - 07 0 <mark>5</mark> 63				

Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$

vings available at www.vuototecnica.net

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VALVE - INTERFACE						
Δrt	Pressure (bar)		Weight	Solenoid valves		
Alu	min	max	g	art.		
00 15 154	0	7	20	07 06 13 - 07 06 13 LP		
				07 06 53 - 07 06 53 LP		

MICRO CONNECTORS EN 175301 - 803 (EX DIN 43650) - C, FOR SOLENOID PILOT VALVE COILS

Connectors are essential elements for bringing electricity to solenoid pilot valves with built-in low absorption coil. They are available in the plug version, with a LED for signalling the presence of voltage and, upon request, with anti-interference circuits, with protection against overvoltage and polarity inversion. All connectors provide full protection against water jets, according to EN 60529 (protection class IP 65), when correctly installed.

They also meet VDE 0110-1 /89 standard, working voltage up to 250 V, overvoltage category II, degree of use 3 regarding insulation class.

In all contacts, a snap joint between contact holders and the external protection guarantees a safe locking and easy assembly.

A safe locking is essential for guaranteeing the operator full protection when handling the connector.

The contact holder can be easily extracted from its casing simply using a screwdriver. This operation also allows orienting the earthing contact in the desired direction.



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Art	Contact nominal	Conductor max	Operating	Ø cable	Weight	Notes	Solenoi <mark>d pilot</mark>
Alt	capacity	section	temperature				val <mark>ve</mark>
	А	mm	°C	mm	g		art.
00 15 157	6 ÷ 10	0.75	-40 ÷ +90	4 ÷ 6	8	with LED	All





SEALING KIT FOR SOLENOID VALVES WITH LOW ABSORPTION ELECTRIC COILS

Sealing kits are composed of a membrane, shutters and standard O-rings installed on our compressed air and vacuum 3-way valves and solenoid valves. In presence of very hot fluids (up to 250 °C) or corrosive fluids, we can supply sealing kits in special compounds. Please contact our technical department.

Complete kit for solenoid valves:	07 01 13 and 07 02 13	art. 00 07 271
	07 03 13	art. 00 07 272
	07 03 13 LP	art. 00 07 290
	07 04 13 and 07 05 13	art. 00 07 273
	07 04 13 LP and 07 05 13 LP	art. 00 07 291
\bigcirc	07 06 13	art. 00 07 274
· ·	07 06 13 LP	art. 00 07 292
Complete kit for solenoid valves:	07 01 53 and 07 02 53	art. 00 07 275
	07 03 53	art. 00 07 276
	07 03 53 LP	art. 00 07 293
	07 04 53 and 07 05 53	art. 00 07 277
	07 04 53 LP and 07 05 53 LP	art. 00 07 294
\bigcirc \circ	07 06 53	art. 00 07 278
· · · ·	07 06 53 LP	art. 00 07 295
Complete kit for solenoid valves:	07 03 43 and 07 04 43	art. 00 07 279
	07 03 63 and 07 04 63	art. 00 07 279
	07 05 43 and 07 05 63	art. 00 07 280

PILOT MEMBRANE FOR SOLENOID VALVES WITH LOW ABSORPTION ELECTRIC COILS



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Art	Valves	Connections	Material	Colour	Dimensions mm
Alt	art.				
00 07 104	07 03 43 - 07 04 43	G1/2" - G3/4"	reinforced NBR	Black	Ø 65
	07 03 63 - 07 04 63				
0 07 105	07 05 43 - 07 05 63	G1"	reinforced NBR	Black	Ø 76
0 07 229	07 01 13 - 07 01 53	G1/4" - G3/8"	Vulkollan®	Beige	49 x 35
	07 02 13 - 07 02 53				
00 07 230	07 03 13 - 07 03 53	G1/2"	Urepan® 65	Grey - orange	62 x 39
00 07 296	07 03 13 LP - 07 03 53 LP	G1/2"	Vulkollan®	Beige	62 x 39
0 07 231	07 04 13 - 07 04 53	G3/4" - G1"	Urepan [®] 65	Grey - orange	79 x 49
	07 05 13 - 07 05 53				
00 07 29 <mark>7</mark>	07 04 13 LP - 07 04 53 LP	G3/4" - G1	Vulkollan®	Beige	79 x 49
	07 05 13 LP - 07 05 53 LP				
00 07 23 <mark>2</mark>	07 06 13 - 07 06 53	G1" 1/2	Urepan® 65	Grey - orange	129 x 89
00 07 29 <mark>8</mark>	07 06 13 LP - 07 06 53 LP	G1" 1/2	Vulkollan®	Beige	129 x 89

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FCL IN-LINE SUCTION FILTRES, WITH PAPER CARTRIDGE PAG	G. 5.01 ÷ 5.02
PAPER FILTERING CARTRIDGES FOR FCL FILTRES PAG	G. 5.02
FB SUCTION FILTRE WITH METAL CARTRIDGE PAG	G. 5.03 ÷ 5.10
STAINLESS STEEL MESH FILTERING CARTRIDGES FOR FB FILTRES PAG	G. 5.11
FC SUCTION FILTRES WITH PAPER CARTRIDGE PAG	G. 5.12 ÷ 5.15
PAPER FILTERING CARTRIDGES FOR FC FILTRES PAG	G. 5.16 ÷ 5.17
FO OIL-BATH SUCTION FILTRES PAG	G. 5.18
STEEL WOOL FILTERING CARTRIDGES FOR FO FILTRES PAG	G. 5.19
FO LONG OPERATION AUTONOMY OIL-BATH SUCTION FILTRES PAG	G. 5.20
FS SYPHON SUCTION FILTRES PAG	G. 5.21
SYPHON FILTRE SYSTEM WITH AUTOMATIC BY-PASS FS 50 BP PAG	G. 5.22
FP SERIES FILTERING CARTRIDGE CONTAINERS WITH COMPRESSION SEALING PAG	G. 5.23
FILTERING CARTRIDGES WITH COMPRESSION SEALING PAG	G. 5.24
FM SERIES QUICK COUPLING FILTERING CARTRIDGE CONTAINERS PAG	Э. 5.25
FK SERIES QUICK COUPLING FILTERING CARTRIDGE CONTAINERS PAG	G. 5.26
QUICK COUPLING FILTERING CARTRIDGES PAG	G. 5.27

3D drawings available at www.vuototecnica.net

FCL IN-LINE SUCTION FILTRES WITH PAPER CARTRIDGE

These small in-line filtres retain impurities and very fine dust, interfering with the capacity in a negligible manner. Thanks to their reduced size, they can be directly installed onto vacuum piping, close to the services (vacuum cups, vacuum clamping systems etc.) for a fractionated filtration and a better visual control of all the plant suction points. They are composed of a cylindrical transparent plexiglas body closed by two anodised aluminium flanges kept in place by seeger rings, where all the threaded male or female connections and seals are located. Inside there is a filtering cartridge with a filtering degree equal to 7 μ , which is made with a special treated paper that is pleated to increase the filtering surface. The filtres can be inspected by simply removing one of the flanges. Due to the paper filtering element, these filtres are not recommended in presence of water or oil vapours or condensations. Technical features

Working pressure: from 0.5 to 3000 mbar abs. Fluid temperature: from -20 to +60 °C Filtering degree: 7 µ





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Art.	d	А	В	C	D	Max capacity	Spare	Spare	Weight
Alta							cartridge	sealing kit	
	Ø		Ø			cum/h	art.	art.	g
FCL 1	G1/4"	79.2	20.0	17	7.1	7.5	00 FCL 03	00 KIT FCL 1	120
FCL 2	G3/8"	83.6	24.0	20	9.3	20	00 FCL 03	00 KIT FCL 1	136
FCL 3	G1/2"	89.6	26.5	24	12.3	25	00 FCL 03	00 KIT FCL 1	152

В





Art. d A B C D E Max capacity Spare Spare	
cartridge sealing kit	Weight
0 0 cum/h art. art.	g
FCL 1 M G1/4" 103.2 20.0 17 19.1 12 7.5 00 FCL 03 00 KIT FCL 1	122
FCL 2 M G3/8" 103.2 24.0 20 19.1 12 20 00 FCL 03 00 KIT FCL 1	138
FCL 3 M G1/2" 113.6 26.5 24 24.3 15 25 00 FCL 03 00 KIT FCL 1	154

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Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

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GAS-NPT thread adapters available at page 1.117

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FCL IN-LINE SUCTION FILTRES WITH PAPER CARTRIDGE







5

Art.	d	Α	В	С	D	E	F	Max capacity	Spare	Spare	Weight
7									cartridge	sealing kit	
	Ø		Ø					cum/h	art.	art.	g
FCL 1 MF	G1/4"	91.2	20.0	17	19.1	12	7.1	7.5	00 FCL 03	00 KIT FCL 1	120
FCL 2 MF	G3/8"	93.4	24.0	20	19.1	12	9.3	20	00 FCL 03	00 KIT FCL 1	136
FCL 3 MF	G1/2"	101.6	26.5	24	24.3	15	12.3	25	00 FCL 03	00 KIT FCL 1	152

PAPER FILTERING CARTRIDGES FOR FCL FILTRES

The cartridges described below are suited for FCL filtres.

They are made with a special treated paper with a filtering degree equal to 7 μ , which is pleated in order to increase its surface and wrapped on two flanges in plastic material.

They are recommended for retaining impurities and fine dust, but not in

at www.vuototecnica.net drawings available 3D

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FB SUCTION FILTRES WITH METAL CARTRIDGE

Preventing impurities from reaching the vacuum pump is fundamental to guarantee the correct operation and long duration.

This range of filtres, to be placed on the vacuum pump suction inlet or on the plant pipeline, has been designed for this purpose. Their simple and rational structure features threaded connections for the installation and a lid, very easy to open, to allow easily cleaning the filtering cartridge. The lids are made with die-cast aluminium, as are the containers, except for the models FB 5, FB 10 e FB 20 which are in transparent plastic material (cellulose acetate), particularly resistant to shocks.

The standard filtering cartridges are in profiled stainless steel mesh, with a filtering degree equal to 44 μ. Upon request, they can be supplied with a filtering degree equal to 100 or 300 μ.

The capacity of these filtres ranges from 5 to 300 cum/h. Technical features

Working pressure: from 0.5 to 3000 mbar abs.

Fluid temperature: from -20 to +90 °C for filtres with aluminium container from -20 to +50 °C for filtres with containers in transparent plastic material Filtering degree: 44 μ







Art.	d	A	В	C	D	Max capacity	Spare cartridge	Spare sealing kit	Weight
	Ø				Ø	cum/h	art.	art.	g
FB 5	G1/4"	61	74.5	12.5	59	5	00 FB 03	00 KIT FB5	140 8

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

GAS-NPT thread adapters available at page 1.117

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Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

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GAS-NPT thread adapters available at page 1.117

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GAS-NPT thread adapters available at page 1.117

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Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

GAS-NPT thread adapters available at page 1.117











Art.		d	A	В	C	D	Max capacity	Spare cartridge	Sealing kit and small items	Weight
		Ø				Ø	cum/h	art.	art.	Kg
FB 60		G2"	182	260	42	182	300	00 FB 52	00 KIT FB 60	3.18
	Art. FB 60	Art. FB 60	Art. d Ø FB 60 G2"	Art. d A Ø FB 60 G2" 182	Art. d A B Ø FB 60 G2" 182 260	Art. d A B C Ø FB 60 G2" 182 260 42	Art. d A B C D Ø	Art. d A B C D Max capacity Ø Ø Ø Ø cum/h FB 60 G2" 182 260 42 182 300	Art. d A B C D Max capacity Spare cartridge Ø Ø Ø 0 0 art. FB 60 G2" 182 260 42 182 300 00 FB 52	Art. d A B C D Max capacity Spare cartridge Sealing kit and small items Ø Ø Ø 0 Image: Construction of the state of the

3D drawings available at www.vuototecnica.net

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Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

GAS-NPT thread adapters available at page 1.117

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STAINLESS STEEL MESH FILTERING CARTRIDGES FOR FB FILTRES

The cartridges described in this page are suited for FB suction filtres. The standard ones are made with profiled stainless steel mesh with a filtering degree equal to 44 μ . Upon request, the same cartridges can be supplied with a filtering degree equal to 100 or 300 μ .

They are recommended for retaining impurities even in presence of water and oil vapours or condensations, but not for retaining fine and impalpable dust.



Art	Filtre	D	D1	D2	Н	Filtering degree
Alu	art.	Ø	Ø	Ø		micron
00 FB 03	FB 5	35	6	10.0	34	44
00 FB 13	FB 10	58	16	25.5	34	44
00 FB 16	FB 20 - FB 25	58	16	25.5	67	44
00 FB 34	FB 30	74	16	25.5	67	44





Art.	Filtre	D	D1	D2	Н	Filtering degree
7	art.	Ø	Ø	Ø		micron
00 FB 45	FB 40 - FB 50	95	39	49	160	44
00 FB 52	FB 60	95	49	49	160	44

Note: All the cartridges can be supplied with a 100 or 300 micron filtering degree, upon request.

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GAS-NPT thread adapters available at page 1.117

Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$

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FC SUCTION FILTRES WITH PAPER CARTRIDGE

These filtres have been designed to allow vacuum pumps to operate even in very dusty environments. Installed onto the pump suction inlet, they are able to retain fine and impalpable dust interfering with the capacity in a negligible manner.

The filtering cartridge is made with a special treated paper with a filtering degree equal to $5 \div 7 \mu$, which is pleated to increase its surface and is contained in a double perforated sheet steel enclosure. The filtering cartridge container, as well as the lid, is made with sheet steel and varnished with a special anti-oxidation paint.

A seal located between the lid and the container guarantees a perfect vacuum seal between the two elements. The release clamps applied onto the container allow a quick opening of the lid for the filtering cartridge inspection or replacement.

Due to their paper filtering element, these filtres are not recommended in case of water or oil vapours and condensation.

Technical features

Working pressure: from 0.5 to 2000 mbar abs. Fluid temperature: from -20 to +60 °C Filtering degree: 5 \div 7 μ





e at	Art	 d	A	В	С	D	E	F	Max capacity	Spare	Spare	Weight
lab	AIG									cartridge	sealing kit	
aval		Ø				Ø			cum/h	art.	art.	g
ds o	FC 10	G3/8"	79	70	9	72	49	37	15	00 FC 04	00 KIT FC 10	352
NID	FC 20	G1/2"	93	80	13	96	67	51	30	00 FC 08	00 KIT FC 20	774
dra∖	FC 25	G3/4"	93	80	13	96	67	51	50	00 FC 08	00 KIT FC 25	734
30												

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5.12



Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

GAS-NPT thread adapters available at page 1.117

FC SUCTION FILTRES WITH PAPER CARTRIDGE





Art.	d	А	В	C	E	F	G	Max capacity	Spare	Spare	Weight
70.0									cartridge	sealing kit	
	Ø							cum/h	art.	art.	Kg
FC 30	G1"	105	92	13	84	41	64	90	00 FC 15	00 KIT FC 30	1.17
FC 35	G1" 1/4	97	84	13	78	46	51	100	00 FC 15	00 KIT FC 35	1.02
FC 38	G1" 1/2	101	88	13	80	45	56	200	00 FC 15	00 KIT FC 38	0.95
FC 55	G2"	170	157	13	81	79	91	300	00 FC 33	00 KIT FC 55	1.29

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Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

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GAS-NPT thread adapters available at page 1.117

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2												
5	Art	d	Α	_ Β ,	D	E	F	G	Max capacity	Spare	Spare	Weight
	AI 1.									cartridge	sealing kit	
2		Ø			Ø				cum/h	art.	art.	Kg
	FC 40	G1" 1/4	161	125	162	102	77	84	150	00 FC 22	00 KIT FC 40	1.83
5	FC 50	G1" 1/2	197	161	1 <mark>6</mark> 0	100	85	112	200	00 FC 24	00 KIT FC 50	2.11

5.14

Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$

GAS-NPT thread adapters available at page 1.117

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Art.	d	A	В	С	D	E	F	G	Max capacity	Spare cartridge	Spare sealing kit	Weight
	Ø				Ø				cum/h	art.	art.	Kg
FC 60	G2	" 258	235	23	185	115	126	132	300	00 FC 29	00 KIT FC 60	4.62
FC 80	G3	" 270	246	24	185	125	126	144	360	00 FC 29	00 KIT FC 80	3.45
FC 100	G4	" 336	311	25	295	166	134	202	540	00 FC 34	00 KIT FC 100	5.56

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

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GAS-NPT thread adapters available at page 1.117

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PAPER FILTERING CARTRIDGES FOR FC FILTRES

The cartridges described in this page are suited for FC suction filtres. They are made with a special treated paper, with a filtering degree equal to $5 \div 7 \mu$, which is pleated to increase its surface and contained into a double perforated sheet steel enclosure.

They are recommended for retaining fine and impalpable dust, but not in presence of water and oil vapours and condensation.





Art.	Filtre	D	D2	Н	Filtering degree
ALL	art.	Ø	Ø		micron
00 FC 04	FC 10	50	23	59	5 ÷ 7
00 FC 08	FC 20 - FC 25	64	38	69	5 ÷ 7





Art	Filtre	D	D1	D2	Н	Filtering degree
Alt	art.	Ø	Ø	Ø		micron
00 FC 15	FC 30 - FC 35 - FC 38	98	60	60	70	5 ÷ 7
00 FC 22	FC 40	126	64	64	125	5 ÷ 7
00 FC 24	FC 50	126	64	64	156	5 ÷ 7
00 FC 33	FC 55	98	60	60	140	5 ÷ 7

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Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$



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						available at www.vu
Art.	Filtre	D	D1	D2	Н	Filtering degree
	art.	Ø	Ø	Ø		micron .
00 FC 29	FC 60 - FC 80	152	89	89	215	5÷7
00 FC 34	FC 100	227	178	178	278	5÷7

X

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FO OIL-BATH SUCTION FILTRES

In presence of a a considerable amount of fine or impalpable dust, the traditional suction filtre would require a cartridge with a filtering degree so high that, along with reducing its operation autonomy, it would also reduce the vacuum pump suction capacity.

Oil-bath suction filters have been studied in order to overcome this problem.

The main feature of these filtres is the ability to retain the smallest and most impalpable dust particles, without reducing the vacuum pump suction capacity.

Oil-bath filtres are composed of a sheet steel head and container coupled with an interposed seal and clamped by release clamps.

Inside, besides the oil bowl, there are two steel wool filtering cartridges, one of which is detachable and washable, while the other is fixed. The release clamps guarantee easy access for cleaning operations.

They can be used with any kind of oil, even drain oil, as long as it has a minimum viscosity degree. The ideal oil is the same one used for the pump.

Oil-bath suction filtres are not recommended for dry vacuum pumps. They are currently available for capacities up to 300 cum/h. Technical features

Working pressure: from 0.5 to 2000 mbar abs. Fluid temperature: from -20 to +90 °C Filtering degree: $\leq 1 \mu$





lable a	Art.	d	ļ		В	C	D	E	F	G	H	I	Max capacity	Spare cartridge	Spare sealing kit	Weight
avai		Ø					Ø			Ø			cum/h	art.	art.	Kg
gs g	F0 20	G1/2	" 20	15	85	112	106	8	100	40	156	49	30	00 FO 04	00 KIT FO 20	1.44
ving	F0 30	G1"	21	0	88	106	129	16	106	50	151	59	90	00 FO 09	00 KIT FO 30	1.84
drav	F0 50	G1"	1/2 30	15 1	110	135	160	60	128	60	199	106	200	00 FO 14	00 KIT FO 50	2.76
B	F0 60	G2"	34	10 1	140	140	185	60	142	67	217	123	300	00 FO 19	00 KIT FO 60	3.70

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5.18



Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$

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STEEL WOOL FILTERING CARTRIDGES FOR FO FILTRES

The cartridges described in this page are suited for FO oil-bath suction filtres.

They are made with pressed steel wool contained in a double perforated sheet steel enclosure. Their function is to retain fine or impalpable dust impregnated with the filtre oil.





Art	Filtre	D	D1	D2	Н	Filtering degree
Alt						(installed on the filtre)
	art.	Ø	Ø	Ø		micron
00 F0 04	F0 20	110	40	103	70	≤1
00 F0 09	FO 30	134	49	127	72	≤1
00 F0 14	F0 50	165	58	155	86	≤1
00 F0 19	F0 60	190	66	180	104	≤1

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FO LONG OPERATION AUTONOMY OIL-BATH SUCTION FILTRES

In presence of a a considerable amount of fine or impalpable dust, the traditional suction filtre would require a cartridge with a filtering degree so high that, along with reducing its operation autonomy, it would also reduce the vacuum pump suction capacity.

Oil-bath suction filters have been studied in order to overcome this problem.

. The main feature of these filtres is the ability to retain the smallest and most impalpable dust particles, without reducing the vacuum pump suction capacity.

Oil-bath filtres are composed of a sheet steel head and container coupled with an interposed seal and clamped by release clamps.

Inside, besides the oil bowl, there are two steel wool filtering cartridges, one of which is detachable and washable, while the other is fixed. The release clamps guarantee easy access for cleaning operations. Two indicator lights allow monitoring the oil level and the degree of clogging.

They can be used with any kind of oil, even drain oil, as long as it has a minimum viscosity degree. The ideal oil is the same one used for the pump.

Oil-bath suction filtres are not recommended for dry vacuum pumps. They are currently available for capacities of 200 and 300 cum/h. Technical features

Working pressure: from 0.5 to 2000 mbar abs. Fluid temperature: from -20 to +90 °C Filtering degree: $\leq 1 \mu$





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Art.	d	А	В	С	D	E	F	G	Н	Ι	L	Max capacity	Spare	Weight
													seal	
	Ø	Ø			Ø			Ø				cum/h	art.	Kg
FO 160	G1" 1/2	2 250	100	508	290	308	32.5	12	910	356	140	200	00 FO 30	27
FO 300	G2"	350	80	508	3 <mark>9</mark> 0	308	32.5	12	920	356	200	300	00 FO 29	40
						A								

Note: The filtering cartridges are washable and, therefore, are not to be replaced.

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drawings available

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 $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$ Conversion ratio: inch =

GAS-NPT thread adapters available at page 1.117

FS SYPHON SUCTION FILTRES

These filtres retain impurities and liquids extracted through vacuum cups or vacuum clamping systems, preventing them from entering into the vacuum pumps. They are composed of: - A transparent plexiglas cylindrical container with an extractable lid to allow inspection and cleaning.

- A check valve located on the suction inlet for preventing the air from returning in the filtre when the pump is idle.

- A stainless steel mesh filtering cartridge with a filtering degree equal to 44 μ , also located on the suction inlet to retain dust and solid impurities.

- A 2-way manual valve for service vacuum interception. - A 2-way manual valve for restoring the atmospheric pressure inside the filtre.

- A radial vacuum gauge the direct reading of the vacuum level.

- A magnetic level switch that stops the pump when the sucked liquid exceeds the safety

level. - A rigid pipe connected to the service to convey the air flow and the sucked liquid to the bottom of the container.

- A check valve at the bottom of the filtre to automatically drain the sucked liquid and impurities every time the atmospheric pressure is restored inside the filtre.

- A cock applied on the aforementioned check valve for manual liquid drainage.

- A sturdy metal bracket for fixing the filtre to the wall.

Technical features

Working pressure: from 0.5 to 2000 mbar abs. Fluid temperature: from -5 to +50 °C

Filtering degree: 44 µ



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20		M	→ •		⊕ M	ŀ				•	•	•	В		C C		*				iototecnica.net
Art.	d	A	В	С	D	E	G	Н	1	L	М	N	0	Р	Max capacity	Capacity	Spare cartridge	Spare vacuum gauge	Spare seal	Weight	t www.vu
	Ø				Ø								Ø		cum/h	I	art.	art.	art.	Kg	le a
FS 5	G3/8'	' 461	130	175	200	25	100	250	111	150	25	140	10	136	10	6.0	00 FB 13	09 05 10	00 FS 52	5.5	ilab
FS 10	G3/8'	' 551	130	175	200	25	100	340	111	150	25	140	10	136	10	8.5	00 FB 13	09 05 10	00 FS 52	6.0	ava
FS 20	G1/2'	' 630	130	175	200	25	100	410	120	150	25	140	10	145	20	10.5	<mark>00 F</mark> B 22	09 05 10	0 <mark>0</mark> FS 52	6.8	ds
FS 25	G3/4'	'750	150	195	240	25	100	510	140	170	30	170	11	180	40	<mark>19</mark> .5	00 FB 22	09 05 10	0 <mark>0</mark> FS 36	9.1	Win
FS 30	G1"	890	190	225	300	30	120	610	160	200	40	205	11	220	70	<mark>3</mark> 8.0	00 FB 34	09 05 10	00 FS 41	19.2	dra
FS 50	G2"	960	190	225	300	30	120	610	240	200	40	250	11	276	150	38.0	00 FB 45	09 <mark>05 10</mark>	00 FS 41	22.7	3D

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

GAS-NPT thread adapters available at page 1.117

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SYPHON FILTRE SYSTEM WITH AUTOMATIC BY-PASS FS 50 BP

This system is composed of two syphon filtres. It starts working with suction through filtre 1 while filtre 2 is excluded. When the sucked liquid reaches the level switch floater via the 1" 1/2 3-way vacuum interception solenoid valves, the suction is automatically commuted to filtre 2.

The inlet of atmospheric air in filtre 1, via the ½" 3-way solenoid valve installed on its lid allows automatically draining the liquid through the check valve with cock located at the bottom of the filtre. Once the liquid has been drained after a set time (this operation can be timed), the solenoid valve returns to its initial position, thus allowing the recreation of vacuum inside the filtre, through a small flexible pipe connected to the main vacuum piping.

Thanks to this solution, there is no reduction of the vacuum level at the service when the suction exchange between the two filtres occurs. This exchange occurs when the liquid reaches the level switch floater in filtre 2 and from that moment on, the operations described above will be repeated. The filtre system is composed of:

- 2 plexiglas syphon filtres with aluminium lids and with accessories, with a capacity of 38 litres each.

- 2 1" 1/2 gas servo-controlled 3-way vacuum solenoid valves art. 07 06 11.

- 2 1/2" gas servo-controlled 3-way solenoid valves art. 07 03 11.

- 4 1" 1/2 gas 2-way manual valves for vacuum interception art. 13 07 10.

- 2 1/2" gas 2-way manual valves for the inlet of atmospheric air art. 13 03 10.

- 1 switchgear enclosed in a watertight metal casing for Volt 230/ 50 Hz single-phase electric voltage.

- 1 frame in varnished steel profiles for the assembly of all the components described above.

The syphon filtre system with automatic by-pass is recommended when there is a considerable presence of liquid in the sucked fluid and the machines cannot be stopped for draining the sucked liquid with traditional syphon filtres.

Technical features

Working pressure: from 0.5 to 2000 mbar abs. Fluid temperature: from -5 to +50 °C Filtering degree: 44 μ



Н Max capacity А В G Capacity Spare Spare Spare Art. Cartridge vacuum gauge seal art. cum/h art art 1350 1000 G1" 1/2 1180 200 38 x 2 00 FB 45 09 05 10 00 FS 41 FS 50 BP

5.22

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drawings available

3D

Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$

GAS-NPT thread adapters available at page 1.117

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solenoid valve

art 07 03 11

FP SERIES FILTERING CARTRIDGE CONTAINERS WITH COMPRESSION SEALING

The containers of the FP series are suited for the filtering cartridges with compression sealing and are composed of a transparent plastic container and a blue plastic head screwed together with an interposed seal. The number after the article indicates the length in inches of the filtering cartridge. The cartridge can be chosen in various materials:

pleated paper, pleated polypropylene mesh and stainless steel mesh AISI 304. In the following page are described the filtering cartridges with compression sealing, with all the indications regarding

dimensions, materials and filtering degree of each one of them.

Technical features

Working pressure: from 0.5 to 9000 mbar abs. Temperature of the sucked fluid: from -10 to 45 °C









			F								
Art	d	А	В	С	D	E	F	Max capacity	Cartridge	Cartridge	Weight
ALC.	Ø				Ø			cum/h	length	art.	Kg
FP 25/4	G3/4"	130	163	21	130	49	50	70	4"	SP/4 - SS/4 - SA/4	0.84
FP 30/4	G1"	143	169	24	130	50	51	100	4"	SP/4 - SS/4 - SA/4	0.91
NP	Key for c	lamping the	container								
Note: The filt	ering cartridge	is not part (of the filtre,	therefore, it	must be ord	ered separat	ely.				

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Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

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GAS-NPT thread adapters available at page 1.117

FILTERING CARTRIDGES WITH COMPRESSION SEALING

The filtering cartridges described in this page, once installed on their container, are able to retain the impurities and dust contained in the sucked fluid, interfering with the vacuum pump or generator capacity in a negligible manner.

They are produced with different materials that can be identified with the following abbreviations:

- Series SP. Pleated paper filtering cartridge with compression sealing.

- Series SS. Pleated polypropylene mesh filtering cartridge with compression sealing.

- Series SA. AISI 304 stainless steel mesh filtering cartridge with compression sealing.

The number after the article indicates the length in inches of the filtering cartridge.







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Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

GAS-NPT thread adapters available at page 1.117

FM SERIES QUICK COUPLING FILTERING CARTRIDGE CONTAINERS

The containers of the FM series are suited for quick coupling filtering cartridges and are composed of a transparent SAN (Styrene-acrylic nitrile) container and a head with a reinforced polypropylene ring nut, coupled together with an interposed seal.

The number after the article indicates the length in inches of the filtering cartridge.

The cartridge can be chosen in various materials:

pleated paper, pleated polypropylene mesh and AISI 304 stainless steel mesh. The quick coupling filtering cartridges are described at page 5.27, with all the indications regarding dimensions, materials and filtering degree of each one of them.

Technical features

Working pressure: from 0.5 to 9000 mbar abs.

Temperature of the sucked fluid: from -10 to 45 °C









		ſ	F						1 cm		
Art.	d	Α	В	С	D	E	F	Max capacity	Cartridge	Cartridge	Weight
	Ø				Ø			cum/h	length	art.	Kg
·M 20/7	G1/2"	133	241	18	100	48	49	30	7"	RP/7 - RS/7 - RA/7	0.75
M 25/7	G3/4"	133	241	21	100	49	50	70	7"	RP/7 - RS/7 - RA/7	0.87
·M 30/7	G1"	145	247	24	100	50	51	100	7"	RP/7 - RS/7 - RA/7	0.99
·M 25/10	G3/4"	133	315	21	100	49	50	70	10"	RP/10 - RS/10 - RA/10	1.05
M 30/10	G1"	145	321	24	100	50	51	100	10"	RP/10 - RS/10 - RA/10	1.17
IF	Kev for ti	ahtenina the	e rina nut								

GAS-NPT thread adapters available at page 1.117

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FK SERIES QUICK COUPLING FILTERING CARTRIDGE CONTAINERS

The containers of the **FK series are suited for quick coupling filtering cartridges and are composed of a transparent** PET (Polyethylene terephthalate) container and a head with a brass ring nut coupled together with an interposed seal.

The number after the article indicates the length in inches of the filtering cartridge.

The cartridge can be chosen in various materials:

pleated paper, pleated polypropylene mesh and AISI 304 stainless steel mesh. The quick coupling filtering cartridges are described at page 5.27, with all the indications regarding dimensions, materials and filtering degree of each one of them. **Technical features**

Working pressure: from 0.5 to 9000 mbar abs.

Temperature of the sucked fluid: from -10 to 45 °C





4 holes ø 4.2 for fixing



Art	d	А	В	С	D	E	F	Max capacity	Cartridge	Cartridge	Weight
AIL.	Ø				Ø			cum/h	length	art.	Kg
FK 25/7	G3/4"	125	226	24	100	49	50	70	7"	RP/7 - RS/7 - RA/7	1.64
FK 30/7	G1"	130	232	27	100	50	51	100	7"	RP/7 - RS/7 - RA/7	1.88
FK 25/10	G3/4"	125	300	24	100	49	50	70	10"	RP/10 - RS/10 - RA/10	2.12
FK 30/10	G1"	130	306	27	100	50	51	100	10"	RP/10 - RS/10 - RA/10	2.35
FK 50/10	G1" 1/2	140	319	30	100	51	52	200	10"	RP/10 - RS/10 - RA/10	2.58
FK 60/10	G2"	140	336	33	100	52	53	300	10"	RP/10 - RS/10 - RA/10	2.69
FK 30/20	G1"	130	<u>5</u> 64	27	100	50	51	100	20"	RP/20 - RS/20 - RA/20	2.97
FK 50/2 <mark>0</mark>	G1" 1/2	140	576	30	100	51	52	200	20"	RP/20 - RS/20 - RA/20	3.20
FK 60/2 <mark>0</mark>	G2"	140	593	33	100	52	53	300	20"	RP/20 - RS/20 - RA/20	3.31
NK	Key for tig	htening the	ring nut								

Note: The filtering cartridge is not part of the filtre, therefore, it must be ordered separately.

5.26

drawings available at www.vuototecnica.net

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GAS-NPT thread adapters available at page 1.117

QUICK COUPLING FILTERING CARTRIDGES

The filtering cartridges described in this page, once installed on their container, are able to retain the impurities and dust contained in the sucked fluid, interfering with the vacuum pump or generator capacity in a negligible manner.

They are produced with different materials that can be identified with the following abbreviations:

- Series **RP**. Pleated paper quick coupling filtering cartridge with double *O-ring*.

- Series **RS**. Pleated polypropylene mesh quick coupling filtering cartridge with double O-ring.

- Series RA. AISI 304 stainless steel mesh quick coupling filtering cartridge with double 0-ring.

The number after the article indicates the length in inches of the filtering cartridge.





Art.	А	В	D	Length	Container	Filtering degree
74.4	Ø		Ø		art.	micron
RP/7	45	173	70	7"	FM/7 - FK/7	25
RP/10	45	250	70	10"	FM/10 - FK/10	25
RP/20	45	505	70	20"	FM/20 - FK/20	25
RS/7	45	173	70	7"	FM/7 - FK/7	50
RS/10	45	250	70	10"	FM/10 - FK/10	50
IS/20	45	505	70	20"	FM/20 - FK/20	50
RA/7	45	173	70	7"	FM/7 - FK/7	50
RA/10	45	250	70	10"	FM/1 <mark>0 - FK</mark> /10	50
{A/20	45	505	70	20"	FM/20 - FK/20	50

5.27

VACUUM FITTINGS AND HOSES

HOSE ENDS FITTINGS AND CAPS ROTATING QUICK COUPLING FITTINGS COMPRESSED AIR AND VACUUM FLEXIBLE HOSES TPR FLEXIBLE HOSE FITTINGS

X

PAG. 6.01 PAG. 6.02 ÷ 6.03 PAG. 6.04 PAG. 6.05 PAG. 6.06

3D drawings available at www.vuototecnica.net

R

HOSE ENDS

Our hose ends are traditional barbed nickel-plated and brass fittings. They are suited for connecting smooth or reinforced flexible hoses with an internal diameter up to 76 mm.







3D drawings available at www.vuototecnica.net

Weight d А С D Ε F G Н Material Art. Ø Ø Ø g RS 1/4" 20 17 5 5 18 12 35 nickel-plated brass G1/4" 9 RS 3/8" G3/8" 13 9 5 20 8 33 nickel-plated brass 30 19 50 RS 1/2" G1/2" 16 23 12 5 25 10 40 nickel-plated brass 90 RS 3/4" G3/4" 21 16 8 35 12 55 nickel-plated brass 28 G1" 27 35 RS 1" 22 8 12 55 nickel-plated brass 130 36 G1" 1/4 42 67 270 RS 1" 1/4 35 15 44 28 10 nickel-plated brass G1" 1/2 RS 1" 1/2 40 45 15 320 50 33 10 70 nickel-plated brass RS 3" G3" 76 60 30 1450 100 66 10 100 nickel-plated brass



X

7

GAS-NPT thread adapters available at page 1.117

6.01

6

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FITTINGS AND CAPS

The fittings described in this page are particularly indicated for connecting vacuum cup holders to their manifolds and in all those cases that require a connection to vacuum sources via smooth flexible hoses with internal diameters of 4, 6 and 9 mm, which is the maximum allowed for a vacuum hose with no internal reinforcement.

These are semi-rapid fittings. The hose is fixed by manually screwing the reeded bush with no need for keys.

The threaded connections are male and female, according to the requirements. The range is completed by L and T-type fittings and caps with 0-rings.

The fittings are a available in practical 10 or 50-piece packages and are supplied with their nylon seal.







MAL	E FITTING									
Δrt	d	Α	В	С	D	E	L	Fitting	Bush	Weight
AIG	Ø				hose int. Ø	Ø		material	material	g
RM M5	M5	5.0	3.5	10	4	10	19.5	tropicalised iron	anodised aluminium	6
RM 1/8"	G1/8"	7.0	4.5	14	4	13	24.5	anodised aluminium	anodised aluminium	6
RM 1/4"	G1/4"	8.5	5.0	17	6	15	27.0	anodised aluminium	anodised aluminium	10
RM 3/8"	G3/8"	10.5	5.0	19	9	20	32.5	anodised aluminium	anodised aluminium	18





FEMALE	FITTING

ľ

Coupler

Art.	d	А	C	D	E	L	Fitting	Bush	Weight
74.4	Ø			hose int. Ø	Ø		material	material	g
RF 1/8"	G1/8"	14	14	4	13	27.0	anodised aluminium	anodised aluminium	8
RF 1/4"	G1/4"	16	17	6	15	30.0	anodised aluminium	anodised aluminium	12
RF 3/8"	G3/8"	20	19	9	20	32.5	anodised aluminium	anodised aluminium	16

Hex. C

DE

Bush

6.02

3D drawings available at www.vuototecnica.net

X



Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$

GAS-NPT thread adapters available at page 1.117

FITTINGS AND CAPS







L-TYPE FITT	INGS					
Art	d	А	E	L	Fitting	Weight
AIL.	Ø				material	g
RL M5	M5	4.5	10	15.0	anodised aluminium	2
RL 1/8"	G1/8"	7.0	16	24.0	anodised aluminium	10
RL 1/4"	G1/4"	9.0	22	30.0	anodised aluminium	22
RL 3/8"	G3/8"	11.0	25	32.5	anodised aluminium	30

d



0



T-TYPE FITT	INGS					
Art	d	А	E	L	Fitting	Weight
ALC.	Ø				material	g
RT M5	M5	4.5	10	15.0	anodised aluminium	1
RT 1/8"	G1/8"	7.0	16	24.0	anodised aluminium	9
RT 1/4"	G1/4"	9.0	22	30.0	anodised aluminium	21
RT 3/8"	G3/8"	11.0	25	32.5	anodised aluminium	29



		•			D D O-ring			v.vuototecnica.net
CAP W	ITH O-RING d	Α	C	D	L	Fitting	Weight	le at www
ALC.	Ø			Ø		material	g	ilab
00 15 291	M5	4	2.5	8	6.5	nickel-plated brass	1	ava
00 11 44	G1/8"	7	3.0	15	9.5	nickel-plated brass	6	gs
00 11 06	G1/4"	8	6.0	18	11.0	nickel-plated brass	10	win
00 18 33	G3/8"	9	8.0	21	12.5	nickel-plated brass	18	dra
00 15 273	G1/2"	11	10.0	26	14.5	nickel-plated brass	21	3D

X

GAS-NPT thread adapters available at page 1.117

6.03

ROTATING QUICK COUPLING FITTINGS

Quick coupling fittings are composed of a jack with hose end connector and a threaded male coupler which connects itself to the jack.

They are fixed by a ball ring pushed by a spring. A nitrile rubber seal guarantees a perfect vacuum seal.

This type of fitting allows the two components to rotate freely at a low speed and to rapidly couple and disconnect

by manually acting on the jack reeded ring nut. These fittings are fully made with brass and are available in various sizes.

Hose end



Art.	d	А	С	D	E	F	G	Н	L	Material	Hose end	Hose end weight	Coupling	Coupling weight
	Ø	Ø		Ø							art.	g	art.	g
RR 3/8"	G3/8"	30	21	13	29.5	39.5	14	10.5	83.0	brass	00 RR 3/8 02	100	00 RR 3/8 01	38
RR 1/2"	G1/2"	30	21	16	30.5	38.5	14	10.5	83.0	brass	00 RR 1/2 02	104	00 RR 1/2 01	34
RR 3/4"	G3/4"	30	26	20	29.0	38.5	15	10.5	82.5	brass	00 RR 3/4 02	118	00 RR 3/4 01	50
RR 1"	G1"	38	34	25	30.0	40.0	17	12.0	87.0	brass	00 RR 1 02	166	00 RR 1 01	92
RR 1" 1/4	G1" 1/4	68	42	35	49.5	49.5	24	13.5	123.0	brass	00 RR 1 1/4 02	568	00 RR 1 1/4 01	210
RR 1" 1/2	G1" 1/2	68	48	40	49.0	54.0	25	17.0	128.0	brass	00 RR 1 1/2 02	710	00 RR 1 1/2 01	250



Art.	А	С	D	d	E	F	G	Н	L	М	N	R	T	Material	Fitting	Fitting	Coupling	Coupling
	Ø		Ø	Ø								Ø			art.	g	art.	g
RRF 3/8 "	23.5		G3/8"	G3/8"	36.5	20.0	15		71.5		22		22	brass	00 RRF 3/8 02	77	00 RRF 3/8 01	58
RRF 1/2 "	29.0		G1/2"	G1/2"	37.5	18.5	15		71.0		26		22	brass	00 RRF 1/2 02	79	00 RRF 1/2 01	72
RRF 3/4"	37.0		G3/4"	G3/4"	41 .0	20.0	15		76.0		34		28	brass	00 RRF 3/4 02	149	00 RRF 3/4 01	132
RRF 1"	48.0		G1"	G1"	56.5	19.5	16		92.0		43		43	brass	00 RRF 1 02	369	00 RRF 1 01	355
RRFF 3/8"	<mark>23</mark> .5	22	G3/8"			20.0		45		65	22	G3/8"		brass	00 RRFF 3/8 02	82	00 RRF 3/8 01	58
RRFF 1/2 <mark>"</mark>	<mark>29</mark> .0	26	G1/2"			<mark>18</mark> .5		46		64.5	26	G1/2"		brass	00 RRFF 1/2 02	80	00 RRF 1/2 01	72
RRFF 3/4 <mark>"</mark>	<mark>37</mark> .0	34	G3/4"			20.0		57		77	34	G3/4"		brass	00 RRFF 3/4 02	199	00 RRF 3/4 01	132
RRFF 1"	<mark>48</mark> .0	43	G1"			19.5		67		86.5	43	G1"		brass	00 RRFF 1 02	409	00 RRF 1 01	355

3D drawings available at www.vuototecnica.net

X

6.04



Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

GAS-NPT thread adapters available at page 1.117



COMPRESSED AIR AND VACUUM FLEXIBLE HOSES

TPL flexible hoses are made with Polyamide 11 of vegetal derivation and are suited for compressed air and vacuum for internal diameters up to 9 mm, as well as for compressed air only.

They feature a good flexibility and lightness, a very low water absorption and excellent mechanical performance. They also feature an excellent resistance to low and high temperatures, chemical agents, pneumatic pressure and ageing.

Our TPR flexible hoses have been specially designed for vacuum and are composed of a single piece with plastic insulation and self-extinguishing materials, including the hose reinforcement core. Their excellent flexibility ensures minimal bending radius and are very light in relation to their great resistance to crushing.

Their smooth inside allows reducing harmful load losses to the minimum. The excellent functionality of these flexible hoses is associated with a high resistance to abrasion, to weather agents and most chemical products. TPL flexible hose connection is ensured by the previously described fittings. As for TPR hoses, we have created a brand new range of RTPR fittings. RTPR fittings from 3/8" to 1" are made with self-extinguishing polypropylene, while the larger ones are made with nickel-plated metal. All the fittings are very sturdy and ensure a perfect vacuum seal. Moreover, these fittings do not require unpleasant hose clamps and make the connection much quicker and safer. They are available in various sizes according to the diameter of the hose to be connected.







TPL H	OSE						
Art	d	D	Bending	Weight	Package	Material	Standard
AIL.	Ø int.	Ø ext.	radius	g/m	m		colour
TPL 2	2.5	4	20	8.0	100	polyamide 11	sky blue
TPL 4	4.0	6	30	19.5	100	polyamide 11	sky blue
TPL 6	6.0	8	40	20.5	100	polyamide 11	sky blue
TPL 8	8.0	10	60	24.0	100	polyamide 11	sky blue
TPL 9	9.0	12	70	28.0	50	polyamide 11	sky blue
TPL 12	12.0	15	95	67.0	50	polyamide 11	sky blue
TPL 16	16.0	18	130	56.0	50	polyamide 11	sky blue
TPL 18	18.0	22	300	133.0	50	polyamide 11	sky blue







		d		D	0		tornica not
TPR HO	SE		Dending	W	Deskewa	Madadad	Otendard
Art.	d Ø int.	Ø ext.	radius	g/m	Раскаде m	Material	colour
FPR 3/8 "	12.7	17.8	64	150	30	рус	grey
FPR 1/2 "	16.2	21.1	81	170	30	pvc	grey
FPR 3/4"	21.3	26.4	107	230	30	рус	grey
FPR 1"	27.0	33.1	135	370	30	pvc	grey
FPR 1" 1/4	35.7	41.8	179	500	30	рус	grey
FPR 1" 1/2	40.6	47.8	203	630	30	рус	grey
FPR 2"	51.9	59.8	260	900	30	рус	grey
Operating temp	perature: -10°	/ +60 °C					30.0

Operating temperature: -10° / +60 °C



6

Other colours upon request

6.05

TPR FLEXIBLE HOSE FITTINGS





RTPR FI	TTINGS											
Art	d	Α	В	C	D	E	G	Н	L	Material	Colour	Weight
ALC.	Ø				Ø							g
RTPR 3/8"	G3/8"	14.5	8.5	26	12.0	23.5	6	28	46.5	polypropylene	grey	12
RTPR 1/2"	G1/2"	14.5	9.0	28	15.5	26.5	7	33	50.0	polypropylene	grey	18
RTPR 3/4"	G3/4"	14.0	10.5	35	20.8	26.5	9	38	51.0	polypropylene	grey	26
RTPR 1"	G1"	16.0	9.0	41	26.5	32.5	10	44	57.5	polypropylene	grey	36

Art	d	Α	В	С	D	E	G	Н	L	Material	Colour	Weight
Alta	Ø				Ø							g
RTPR 3/8"	G3/8"	14.5	8.5	26	12.0	23.5	6	28	46.5	polypropylene	grey	12
RTPR 1/2"	G1/2"	14.5	9.0	28	15.5	26.5	7	33	50.0	polypropylene	grey	18
RTPR 3/4"	G3/4"	14.0	10.5	35	20.8	26.5	9	38	51.0	polypropylene	grey	26
RTPR 1"	G1"	16.0	9.0	41	26.5	32.5	10	44	57.5	polypropylene	grey	36

Δrt	a	A	В	6	U	E	G	н	L	Iviaterial	Colour	weight
Alta	Ø				Ø							g
RTPR 3/8"	G3/8"	14.5	8.5	26	12.0	23.5	6	28	46.5	polypropylene	grey	12
RTPR 1/2"	G1/2"	14.5	9.0	28	15.5	26.5	7	33	50.0	polypropylene	grey	18
RTPR 3/4"	G3/4"	14.0	10.5	35	20.8	26.5	9	38	51.0	polypropylene	grey	26
RTPR 1"	G1"	16.0	9.0	41	26.5	32.5	10	44	57.5	polypropylene	grey	36

RTPR 3/8"	G3/8"	14.5	8.5	26	12.0	23.5	6	28	46.5	polypropylene	grey
RTPR 1/2"	G1/2"	14.5	9.0	28	15.5	26.5	7	33	50.0	polypropylene	grey
RTPR 3/4"	G3/4"	14.0	10.5	35	20.8	26.5	9	38	51.0	polypropylene	grey
RTPR 1"	G1"	16.0	9.0	41	26.5	32.5	10	44	57.5	polypropylene	grey
Operating temp	erature: -10° /	+60 °C									

	Hose adapte				
Fitting bod	<u>y</u>	Sealing ring	Hex. H A B	 E	

RTPR FITTINGS А В D Ε Н Material Weight d L Art. Ø Ø g RTPR 1" <mark>1/4</mark> G1" 1/4 34.5 28.5 45.5 11 6 52 nickel-plated brass 340 RTPR 1" <mark>1/2</mark> G1" 1/2 7 39.5 34.0 60 55.0 530 14 nickel-plated brass RTPR 2" 50.0 33.0 74 54.0 596 G2" 14 7 nickel-plated brass Operatin<mark>g temper</mark>ature: -20° / +60 °C

X



6.06



GAS-NPT thread adapters available at page 1.117

VACUUM PUMPS AND PUMPSETS

PAG. 7.01 ÷ 7.04 PAG. 7.05 ÷ 7.06

PAG. 7.07 ÷ 7.10

PAG. 7.11 ÷ 7.12

PAG. 7.13 ÷ 7.14

PAG. 7.15 ÷ 7.16

PAG. 7.17 ÷ 7.18

PAG. 7.19 ÷ 7.20

PAG. 7.21 ÷ 7.22

PAG. 7.23 ÷ 7.24 PAG. 7.25 ÷ 7.26

PAG. 7.27 ÷ 7.28 PAG. 7.29 ÷ 7.30

PAG. 7.31 ÷ 7.32

PAG. 7.33 ÷ 7.34 PAG. 7.35 ÷ 7.36

PAG. 7.37 ÷ 7.38 PAG. 7.39 ÷ 7.40

PAG. 7.41 ÷ 7.42

PAG. 7.43 ÷ 7.44

PAG. 7.45 ÷ 7.46

 $\begin{array}{l} \mathsf{PAG.}\ 7.47 \div 7.48\\ \mathsf{PAG.}\ 7.49 \div 7.51\\ \mathsf{PAG.}\ 7.52 \div 7.53\\ \mathsf{PAG.}\ 7.54 \div 7.55\\ \mathsf{PAG.}\ 7.56 \div 7.57\\ \mathsf{PAG.}\ 7.56 \div 7.57\\ \mathsf{PAG.}\ 7.60 \div 7.61\\ \mathsf{PAG.}\ 7.62 \div 7.63\\ \mathsf{PAG.}\ 7.64 \div 7.65\\ \mathsf{PAG.}\ 7.66 \div 7.67\\ \mathsf{PAG.}\ 7.68\\ \mathsf{PAG.}\ 7.69 \div 7.70\\ \mathsf{PAG.}\ 7.71\\ \end{array}$

PAG. 7.72 PAG. 7.73 PAG. 7.74 PAG. 7.75 PAG. 7.76 PAG. 7.77 PAG. 7.78 PAG. 7.79 PAG. 7.80 PAG. 7.81

PAG. 7.82 PAG. 7.83 PAG. 7.84 PAG. 7.85 PAG. 7.86

X

MEMBRANE VACUUM PUMP
ROTARY VANE VACUUM PUMPS – GENERAL DESCRIPTION
VANE MINI VACUUM PUMPS
VACUUM PUMPS VTL 2 and 4
VACUUM PUMPS VTL 5 and 10
VACUUM PUMPS VTLP 5 and 10, WITH DISPOSABLE LUBRICATION
VACUUM PUMPS VTL 10/F, 15/F and 20/F
VACUUM PUMPS VTLP 10/F, 15/F and 20/F, WITH DISPOSABLE LUBRICATION
VACUUM PUMPS VTL 25/FG, 30/FG and 35/FG
VACUUM PUMPS VTLP 25/FG, 30/FG and 35/FG, WITH DISPOSABLE LUBRICATION
VACUUM PUMPS VTL 40/G1, 50/G1 and 65/G1
VACUUM PUMPS VTL 75/G1, 90/G1 and 105/G1
VACUUM PUMPS VTLP 40/G1, 50/G1 and 65/G1, WITH DISPOSABLE LUBRICATION
VACUUM PUMPS VTLP 75/G1, 90/G1 and 105/G1, WITH DISPOSABLE LUBRICATION
VACUUM PUMP VTL 6 DC, WITH DC MOTOR
OIL-BATH VACUUM PUMPS MV 20 and MV 20A
OIL-BATH VACUUM PUMPS MV 40 and MV 40A
OIL-BATH VACUUM PUMPS MV 60 and MV 60A
OIL-BATH VACUUM PUMPS MV 100 and MV 100A
OIL-BATH VACUUM PUMPS MV 160R and MV 160RA
OIL-BATH VACUUM PUMPS MV 200R and MV 200RA
OIL-BATH VACUUM PUMPS MV 300R and MV 300RA
LUBRICATED VACUUM PUMP ACCESSORIES AND SPARE PARTS
DRY VACUUM PUMPS VTS 2 and 4
DRY VACUUM PUMPS VTS 6 DC, WITH DC MOTOR
DRY VACUUM PUMPS VTS 6 and 10
DRY VACUUM PUMPS VTS 10/F and 15/F
DRY VACUUM PUMPS VIS 20/F and 25/F
DRY VACUUM PUMPS VIS 10/FG, 15/FG and 20/FG
DRY VACUUM PUMPS VIS 25/FG, 30/FG and 35/FG
DRY VACUUM PUMP ACCESSORIES AND SPARE PARTS
MINI PUMPSETS - GENERAL DESCRIPTION
MINI PUMPSETS DO 06 and DO TO
MINI PUMPSEIS DU ZU
HORIZONIAL PUNIPSEIS – GENERAL DESORIPTION
HUKIZUNTAL PUMPSETS DO 100 and DO 100
HORIZONTAL PUMPETS DO 200 and DO 500
HORIZONTAL PUMPSETS DO 300 ANN DO 300
HORIZONTAL SALETT FUMPSETS - GLINERAL DESCRIPTION HORIZONTAL SAFETY PLIMPSETS DSD 300 and DSD 500
HORIZONTAL SALETT FOR SETS DS0 500 and DS0 500
VERTICAL PLIMPSETS- GENERAL DESCRIPTION
VERTICAL PUMPSETS DV 150 and DV 300
VERTICAL PUMPSETS DV 500 and DV 1000
VERTICAL SAFETY PLIMPSETS - GENERAL DESCRIPTION
VERTICAL SAFETY PLIMPSETS DSV 150 and DSV 300
VERTICAL SAFETY PUMPSETS DSV 500 and DSV 1000
VERTICAL SAFETY PUMPSETS DSV 2000

PUMPSET AND MINI PUMPSET COMPONENTS:
MINI PUMPSET TANKS
TANKS FOR HORIZONTAL PUMPSETS WITH ONE VACUUM
TANKS FOR HORIZONTAL PUMPSETS WITH TWO VACUUM
TANKS FOR HORIZONTAL SAFETY PUMPSETS WITH TWO
TANKS FOR VERTICAL PUMPSETS WITH ONE VACUUM PL
TANKS FOR VERTICAL PUMPSETS WITH TWO VACUUM P
TANKS FOR VERTICAL SAFETY PUMPSETS WITH TWO VA
TANKS FOR VERTICAL SAFETY PUMPSETS CON TRE PUM
SUPPORT FRAMES FOR TWO VACUUM PUMPS
SUPPORT FRAMES FOR THREE VACUUM PUMPS
VACUUM PUMP AND PUMPSET MANIFOLDS
MINI PUMPSET SWITCHGEAR
SWITCHGEAR FOR PUMPSETS WITH ONE PUMP
SWITCHGEAR FOR PUMPSETS WITH TWO PUMPS
SWITCHGEAR FOR SAFETY PUMPSETS:
WITH TWO PUMPS
WITH THREE PUMPS
WITH FOUR PUMPS
SINGLE-PUMP SAFETY SWITCHGEAR
VACUUM PUMP QUESTIONNAIRE

m Pump JM Pumps O Vacuum Pumps Pump Pumps Acuum Pumps MPS Per Vuoto

PAG. 7.87 ÷ 7.88 PAG. 7.89 ÷ 7.94 PAG. 7.95 ÷ 7.97 PAG. 7.98 ÷ 7.100 PAG. 7.101 ÷ 7.103 PAG. 7.104 ÷ 7.107 PAG. 7.108 ÷ 7.111 PAG. 7.112 ÷ 7.114 PAG. 7.115 PAG. 7.116 PAG. 7.117 ÷ 7.118 PAG. 7.119 PAG. 7.119 PAG. 7.120 PAG. 7.120 PAG. 7.121 PAG. 7.121 PAG. 7.122 PAG. 7.123 ÷ 7.124

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at www.vuototecnica.net

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3D dra

MEMBRANE VACUUM MINI PUMPS

The mini pumps described in this page are membrane-type.

They can be used both as vacuum pumps and compressors. In the latter version they can supply compressed air 100% oil-free up to a maximum 2 bar (g) pressure. They are composed of:

- An air-cooled single-phase electric motor with protection class IP 00 (assembly execution).

- A pump body made of plastic corrosion-resistant material, complete with fittings at both suction and blowing ports.

- A Viton membrane, resistant to wear and corrosion, solidly connected to a connecting rod.

- A connecting rod with built-in "long life" bearing activated by a balanced eccentric system fitted on the motor shaft.

- An aluminium support for fixing the pump.

They are available in the versions with single and double head to be used in series or in parallel.

Membrane vacuum mini pumps are very silent (≤ 50dB(A)), they have reduced

vibrations and can be installed in any position.

Lubrication-free, they require no maintenance.

Thanks to their minimal overall dimensions and reduced weight, they are particularly

indicated for being installed on portable equipment.

They are suited for a discontinuous and non-intense use.





Curves regarding capacity (referring to a 1013 bar pressure) Curves regarding the emptying of a 6-litre volume







To calculate the emptying time of a volume V1, apply the formula $t_1 = \frac{t_X V1}{c_1}$

V1 : Volume to be emptied

t1 : Time to be calculated (sec)

t : Time obtained in the table (sec)

3D drawings available at www.vuototecnica.net







H 40 DM





Art.		H3	5 M	H40	DM
Frequency		50Hz	60Hz	50Hz	60Hz
Nominal capacity:					
Connection in series	l / 1'	17.5	21.0	18.0	21.5
Connection in parallel	1/1'	=	=	18.0 + 18.0	21.5 + 21.5
Final pressure:					
Connection in series	mbar abs.	20	00	6	0
Connection in parallel	mbar abs.	:	=	16	60
Max. pressure	bar (g)		2)
Motor execution	1~	230 ±	= 10%	230 ±	10%
Volt					
Motor power	1~	15	18	16.5	20
Watt					
Electric absorption	А	0.	60	0.3	30
Rotation speed	rev/min ⁻¹	2800	3300	2800	3300
Noise level	dB(A)	≤	50	5	50
Max. we <mark>ight</mark>	Kg	1	.3	1.	6
Accessories and spare parts					
Membrane	art.	00 H3	5M 15	00 H40	DM 15
Lid with fittings	art.	00 H3	5M 16	00 H40	DM 20

7.02

3D drawings available at www.vuototecnica.net



Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

cfm= cum/h x 0.588; inch Hg= mbar x 0.0295; psi= bar (g) x 14.6

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MEMBRANE VACUUM MINI PUMPS WITH DC MOTOR

The mini pumps described in this page are the same as the previously described ones, only with a DC motor instead of AC. The performance is practically the same.



Curves regarding capacity (referring to a 1013 bar pressure)
Curves regarding the emptying of a 6-litre volume





To calculate the emptying time of a volume V1, apply the formula $t_1 = \frac{t_X V 1}{6}$

- V1 : Volume to be emptied t1 : Time to be calculated (sec)
- t : Time obtained in the table (sec)





7.03

MEMBRANE VACUUM MINI PUMPS WITH DC MOTOR

H 35 M CC



H 40 DM CC







	Art.		H35 M CC	H40 DM CC
otecnica.net	Nominal capacity:			
	Connection in series	I / 1'	21.5	20.0
	Connection in parallel	I / 1'	=	20.0 + 20.0
	Final pressure:			
	Connection in series	mbar abs.	200	60
ilable at www.vuot	Connection in parallel	mbar abs.	=	160
	Max. pressure	bar (g)	2	2
	Motor execution	Volt	24 CC	24 CC
	Motor power	Watt	6	20
	Electric absorption	А	0.80	1.50
	Rotation speed	rev/min ⁻¹	3000	3000
wings ava	Noise level	dB(A)	≤ 50	≤ 50
	Max. we <mark>ight</mark>	Kg	0.62	1.19
	Accessories and spare parts			
dra	Membrane	art.	00 H35M 15	00 H40DM 15
3D	Lid with <mark>fittings</mark>	art.	00 H35M 16	00 H40DM 20

7.04



X

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

cfm= cum/h x 0.588; inch Hg= mbar x 0.0295; psi= bar (g) x 14.6

7
ROTARY VANE VACUUM PUMPS – GENERAL DESCRIPTION

Operation principle

The rotor rotates eccentrically inside a stator and it has grooves in which the vanes move freely and are pushed against the stator inside wall due to the centrifugal force, thus creating as many chambers as the number of vanes. During rotation, the volume of these chambers varies according to their position with respect to the eccentric axis. The chamber volume increase makes the air inside of them expand, thus creating vacuum (suction phase); the volume reduction, on the other hand, generates air compression (exhaust or delvery phase).

The internal design is the same for both rotating compressors and vacuum pumps.

We have created two different sucked air conveying principles for our pumps. Figure 1 shows a three-vane rotary system with exhaust valve (1). This system is especially used in high vacuum applications.

Figure 2 shows a six-vane (therefore with more chambers) rotary system which is mainly used for low vacuum applications.







In the smaller and more compact pumps, the rotor is cantilevered-fitted on the motor shaft end (fig.1), while in the high power versions or in those with frequent start-ups, the rotor is supported by bearings on both sides (fig. 2). In the latter case, the pump and the electric motor are two independent units and the two shafts are coupled via an elastic transmission joint.



Lubrication systems

The main lubrication systems we use are by vacuum with oil recycle or disposable oil for vacuum pumps of the VTL series and oil-bath for pumps of the MV series.

As for oil recycle lubrication (fig.1), the oil sucked in the working chamber via adjustable oilers that control the flow, is drained together with the sucked air into the recovery tank and it is separated from the air through a special filtre contained in it and put in circulation again.

As for the disposable oil lubrication (fig.2), the lubricating oil is contained in a special transparent container controlled by a magnetic level switch, and follows the same path as the one described above, only it is collected in the recovery tank without being put in circulation again. This lubrication system is recommended when the sucked air contains water condensation, solvent vapours or anything else that can effect the oil properties.

As for the oil-bath lubrication (fig.3), the oil is sucked in the chamber directly from the recovery tank via calibrated nozzles that control the quantity, and it is kept and separated from the air in the exhaust phase via special microfibre deoiling cartridges located in the tank.

With this lubrication system, the quantity of oil in circulation is much higher than the previous two systems. This results in a better sealing between stator and rotor and lower friction between the rotating parts and the fixed ones, as well as in an increase of the vacuum level, lower heating and less noise.











7.05

3D drawings available at www.vuototecnica.net

ROTARY VANE VACUUM PUMPS – GENERAL DESCRIPTION

Dry vacuum pumps

The particular conformation of the chamber and the special graphite with which the vanes and the locking flanges are made, allow these pumps to operate with no need for lubrication.

These pumps are **not recommended** when the fluid to be sucked contains vapours and water or oil condensation.

Cooling

The pump cooling system we use is by airflow on their surface. The heat developed by the pump is dispersed from the external surface which is specially finned, via the electric motor fan in the smaller pumps, and by a radial fan fitted on the pump shaft while in the larger ones. Pumps with capacities from 100 cum/h upwards, are also equipped with a serpentine radiator (1). In this case, the lubrication oil, which passes through the radiator before entering the chamber, is cooled by the radial fan that sucks the cooling air through the radiator, thus allowing a further reduction of the heat developed by the pump.





Used materials

The pump stator and flanges are made with spheroidal cast iron, the transmission shaft and the rotor are made with carbon steel, while the vanes are made with carbon or glass fibre for the lubricated pumps and with graphite for the dry ones.

Electric motors

All vacuum pumps with capacity up to 20 cum/h can be supplied either with threephase or single-phase electric motor, while those with higher capacity can only be equipped with three-phase electric motors. As a standard, all the pumps are equipped with multi-voltage electric motor, in compliance with CE standards. Upon request, they can be supplied with motors in compliance with UL-CSA and with special voltages and frequencies.

Certifications

The design and manufacture of our vacuum pumps comply with European Directives on safety. In fact, every identification showing the pump technical data has the CE marking. Moreover, a Declaration of conformity with the 98/37/CE Machinery Directive and subsequent modifications is always annexed to the Use and Maintenance guide.

7.06



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drawings

3D

VANE MINI VACUUM PUMPS



These rotating vane mini vacuum pumps, when needed, can be used even for compressing air. They are composed of a single-phase induction electric motor with condenser, a sintered metal self-lubricating stator, a white metal rotor fitted onto the motor shaft and slotted for housing the hardened steel vanes and a silencer on the exhaust. The operation principle is the same as that of the larger series of vane vacuum pumps. They are noiseless and lubrication-free and require no maintenance. Thanks to their minimal overall dimensions and their reduced weight, they are particularly suited for being installed on portable equipment. They are suitable for discontinuous, non-intense use.

Curves regarding capacity (referring to a 1013 bar pressure)
 Curves regarding the emptying of a 6-litre volume













To calculate the emptying time of a volume V1, apply the formula $t_1 = \frac{t_x V1}{6}$

V1 : Volume to be emptied t1 : Time to be calculated (sec) t : Time obtained in the table (sec) 7

7.07





H 45 DR







Art.		H2	25 R	H4	5 R	H45	DR
Frequency		50Hz	60Hz	50Hz	60Hz	50Hz	60Hz
Nominal capacity:							
Connection in series	l / 1'	11.5	13.8	13.0	15.5	11.0	13.2
Connection in parallel	l / 1'	=	=	=	=	10 + 10	12 + 12
Final pressure:							
Connection in series	mbar abs.	1	50	2	00	40	
Connection in parallel	mbar abs.	:	=		=	1	50
Max. pressure	bar (g)		2		2		2
Motor execution	1~	230 -	230 ± 10%		± 10%	230 ± 10%	
Volt							
Motor power	1~	28	33.5	35	42	40	48
Watt							
Condenser	uF	2.	.50	3.	15	3	.15
Electric absorption	А	1	.2	1.5		1.8	
Rotation speed	rev/min ⁻¹	2800	3300	2800	3300	2800	3300
Noise level	dB(A)	≤	60	≤	60	5	60
Max. weight	Kg	1.	.45	2	.0	2	2.1
Α		1.	48	1	65	1	80
В		4	5.5	47	7.5	6	3.5
C		3	38	5	3	Į	53
Accesso <mark>ries and</mark> spare parts							
Vanes	art.	n° 10 00) H25R 03	n° 10 00	H45R 02	n° 20 00) H25R 03
Silencer filtre	art.	FE	31	FE	3 1	F	31
Fittings	art.	RN	1M5	RMM5		BMM5	

3D drawings available at www.vuototecnica.net

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7.08

Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$ cfm= cum/h x

cfm= cum/h x 0.588; inch Hg= mbar x 0.0295; psi= bar (g) x 14.6

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VANE MINI VACUUM PUMPS WITH DC MOTOR

The previously described mini pumps can be supplied with a DC motor instead of an AC one. The performance is practically the same.



--- Curves regarding capacity (referring to a 1013 bar pressure) Curves regarding the emptying of a 6-litre volume







To calculate the emptying time of a volume V1, apply the formula $t_1 = \frac{t_X V1}{6}$

V1 : Volume to be emptied t1 : Time to be calculated (sec) t : Time obtained in the table (sec)

7.09

VANE MINI VACUUM PUMPS WITH DC MOTOR

H 25 R CC H 45 R CC





H 45 DR CC





Art.		H25 R CC	H45 R CC	H45 DR CC
Nominal capacity:				
Connection in series	I/ 1'	11.5	14.5	13.5
Connection in parallel	I/ 1'	=	=	13 + 13
Final pressure:				
Connection in series	mbar abs.	200	200	60
Connection in parallel	mbar abs.	=	=	200
Max. pressure	bar (g)	2	2	2
Motor execution	Volt	24 CC	24 CC	24 CC
Notor power	Watt	20	24	30
lectric absorption A	1.5	1.6	1.8	
Rotation speed	rev/min-1	3000	3000	3000
loise level	dB(A)	≤ 60	≤ 60	≤ 60
Max. weight	Kg	0.96	1.29	1.44
4		130	148	154
3		57	77	83
)		73	71	71
Accesso <mark>ries and</mark> spare parts				
lanes	art.	n° 10 00 H25R 03	n° 10 00 H45R 02	n° 20 00 H25R 03
Silencer <mark>filtre</mark>	art.	FB 1	FB 1	FB 1
Fittings	art.	RMM5	RMM5	RMM5

7.10

3D drawings available at www.vuototecnica.net

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Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

cfm= cum/h x 0.588; inch Hg= mbar x 0.0295; psi= bar (g) x 14.6

ί Π΄

VACUUM PUMPS VTL 2 and 4

These small vacuum pumps have a suction capacity of 2 and 4 cum/h They feature a wick lubrication with oil recirculation, while the rotor, which is cantilevered-fitted on the motor shaft, allows reducing the overall dimensions to the minimum.

The motor and the pump are cooled by the motor fan (surface cooling). The pumps are equipped with a small tank in line with the pump, which contains the lubrication oil as well as a separator filtre to prevent oil mists and to reduce noise. We strongly recommend installing a check valve and a filtre on the suction inlet. Pumps VTL 2 and 4 can also be supplied with single-phase electric motor.











To calculate the emptying time of a volume V1, apply the formula $t_1 = \frac{f \times V1}{100}$

Curve regarding capacity (referring to the suction pressure)
 Curve regarding capacity (referring to a 1013 bar pressure)
 Curve regarding the emptying of a 100-litre volume

- V1 : Volume to be emptied
- t1 : Time to be calculated (sec)
- t : Time obtained in the table (sec)

7.11







Art.		VTL	2	VTL	VTL 4		
Frequency		50Hz	60Hz	50Hz	60Hz		
Capacity	m³/h	2.0	2.4	4.0	4.8		
Final pressure	mbar abs.	150	1	15	0		
Motor execution	3~	230/400±10%	275/480±10%	230/400±10%	275/480±10%		
Volt	1~	230±1	0%	230±	10%		
Motor power	3~	0.13	0.15	0.18	0.21		
Kw	1~	0.13	0.15	0.15	0.18		
Motor protection	IP	54		54	1		
Rotation speed	rev/min-1	2800 3300		2800	3300		
Motor shape		Special		Spec	cial		
Motor size		56	56		}		
Noise level	dB(A)	62	65	62	65		
Max. weight	3~	5.7		7.3	3		
Kg	1~	6.0		7.	5		
Α		260)	28	5		
В		145	i	160 132			
C		126	i				
D		62		66	3		
E		71		80			
F		127		13	9		
G	Ø	6.5		7.5	ō		
Н		72		80)		
I		90		10	0		
L		43		48	}		
M		12		12	2		
N		76		86	3		
R	Ø gas	G1/4	33	G3/	8"		
Accessories and spare parts							
Oil load	I I	0.0	5	0.0	5		
Synthetic oil	VT OIL	ISO 3	2	ISO	32		
4 vanes	art.	00 VTL 0	02 10	00 VTL	04 10		
Sealing <mark>kit</mark>	art.	00 KIT V	TL 02	00 KIT \	/TL 04		
Check valve	art.	10 01	15	10 02	2 15		
Suction filtre	art	FB 5	j.	FB 10/FC 10			

Note: The pump will be supplied with single-phase electric motor by adding the letter M to the article (E.g.: VTL 2 M).

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

7.12

3D drawings available at www.vuototecnica.net



cfm= cum/h x 0.588; inch Hg= mbar x 0.0295; psi= bar (g) x 14.6

VACUUM PUMPS VTL 5 and 10

These vacuum pumps have a suction capacity of 5 and 10 cum/h.

The vacuum lubrication with oil recirculation can be adjusted via an oiler located in correspondence of the suction inlet.

The rotor is cantilevered-fitted on the motor shaft and, as a result, the overall dimensions are reduced.

The motor and the pump are cooled by the motor fan (surface cooling). An oil recovery tank is installed on the pump exhaust. This tank contains a separator filtre that prevents oil mists and reduces noise.

We strongly recommend installing a check valve and a filtre on the suction inlet. Pumps VTL 5 and 10 can also be supplied with a single-phase electric motor.











To calculate the emptying time of a volume V1, apply the formula $11 = \frac{1 \times V1}{100}$

- Curve regarding capacity (referring to the suction pressure)
 Curve regarding capacity (referring to a 1013 bar pressure)
 Curve regarding the emptying of a 100-litre volume
- 100 V1 : Volume to be emptied t1 : Time to be calculated (sec)

t : Time obtained in the table (sec)

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7.13

3D





Art.		VTL	.5	VTL	10	
Frequency		50Hz	60Hz	50Hz	60Hz	
Capacity	m³/h	5.0	6.0	10.0	12.0	
inal pressure	mbar abs.	80)	80)	
Notor execution	3~	230/400±10%	275/480±10%	230/400±10%	275/480±10%	
Volt	1~	230±	230±10%		10%	
Notor power	3~	0.25	0.30	0.35	0.40	
Kw	1~	0.25	0.30	0.25	0.30	
Notor protection	IP	54	1	54	ļ	
Rotation speed	rev/min-1	1450	1450 1740		1740	
Notor shape		Spec	Special		cial	
Motor size		7	71			
Noise level	dB(A)	62	64	62	64	
Max. weight	3~	14	5	20.5		
Kg	1~	15	.0	21.	0	
4		26	0	31	0	
B		24	245		2	
;		24	5	24	5	
)		52	2	70 85		
:		53	3			
1		12	2	12	2	
		45	5	45	5	
M		85	5	10	2	
		27	7	52	0	
	Ø gas	G3/	8"	G1/	2"	
Accessories and spare parts	Ŭ					
Dil load		0.2	25	0.4	.0	
Synthetic oil	VT OIL	ISO	32	ISO	32	
o vanes	art.	00 VTL	05 10	00 VTL	10 10	
Sealing kit	art.	00 KIT \	/TL 05	00 KIT \	/TL 10	
Check valve	art.	10 02	2 10	10 03 10		
Suction filtre	art.	FB 10/	FC 10	FB 20/FC 20		
Adjustable drip oiler	art.	00 VTI	00 11	00 VTI	00 11	

Note: The pump will be supplied with single-phase electric motor by adding the letter M to the article (E.g.: VTL 5 M).

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

7.14



3D drawings available at www.vuototecnica.net

cfm= cum/h x 0.588; inch Hg= mbar x 0.0295; psi= bar (g) x 14.6

VACUUM PUMPS VTLP 5 and 10 WITH DISPOSABLE LUBRICATION











To calculate the emptying time of a volume V1, apply the formula $11 = \frac{f \times V1}{100}$ $11 = \frac{1}{100}$ V1 : Volume to be emptied

- Curve regarding capacity (referring to the suction pressure) Curve regarding capacity (referring to a 1013 bar pressure) Curve regarding the emptying of a 100-litre volume
- t1 : Time to be calculated (sec) t : Time obtained in the table (sec)



7.15

VACUUM PUMPS VTL 5 AND 10





Art.		VTL	P 5	VTLP 10		
Frequency		50Hz	60Hz	50Hz	60Hz	
Capacity	m³/h	5.0	6.0	10.0	12.0	
inal pressure	mbar abs.	80)	80		
Notor execution	3~	230/400±10%	275/480±10%	230/400±10%	275/480±10%	
Volt	1~	230±	10%	230±	10%	
lotor power	3~	0.25	0.30	0.35	0.40	
Kw	1~	0.25	0.30	0.25	0.30	
lotor protection	IP	54	1	54		
otation speed	rev/min ⁻¹	1450	1740	1450	1740	
lotor shape		Spec	Special		ial	
lotor size		71		71		
oise level	dB(A)	62	64	62	64	
lax. weight	3~	15.	6	21.	6	
Kg	1~	16.	.1	22.	1	
		26	260		D	
		24	5	262 70 85		
		52	2			
		53	}			
l		88	5	10	2	
		27	7	52		
	Ø gas	G3/	8"	G1/	<u>2</u> "	
ccessories and spare parts						
il load		1.0	8	1.8	3	
ynthetic oil	VT OIL	ISO	32	ISO	32	
vanes	art.	00 VTL	05 10	00 VTL	10 10	
ealing kit	art.	00 KIT \	/TL 05	00 KIT \	TL 10	
heck valve	art.	10 02	2 10	10 03	10	
uction filtre	art.	FB 10/	FC 10	FB 20/	FC 20	
il level <mark>switch</mark>	art.	00 LP V	/TL 99	00 LP VTL 99		
)il filtre	art.	00 LP V	/TL 40	00 LP VTL 40		
Adiustab <mark>le drip o</mark> iler	art.	00 VTL	00 11	00 VTL	00 11	

Note: The pump will be supplied with single-phase electric motor by adding the letter M to the article (E.g.: VTLP 5 M).

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

7.16



cfm= cum/h x 0.588; inch Hg= mbar x 0.0295; psi= bar (g) x 14.6

7

3D drawings available at www.vuototecnica.net

VACUUM PUMPS VTL 10/F, 15/F and 20/F

These vacuum pumps having a suction capacity of 10, 15 and 20 cum/h. The vacuum lubrication with oil recirculation can be adjusted via an oiler located in correspondence of the suction inlet.

The rotor is cantilevered-fitted on the motor shaft and supported by independent bearings housed in the two pump flanges.

The pump is surface cooled. Heat is dispersed from the outer surface, suitably finned, by means of a radial fan placed between

motor and pump. An oil recovery tank is installed on the pump exhaust. This tank contains a separator filtre that prevents oil mists and reduces noise.

We strongly recommend installing a check valve and a filtre on the suction inlet. Also this range of pumps can be supplied with single-phase electric motors.

















To calculate the emptying time of a volume V1, apply the formula t1 = $\frac{1 \times V1}{100}$

Curve regarding capacity (referring to the suction pressure)
 Curve regarding capacity (referring to a 1013 bar pressure)
 Curve regarding the emptying of a 100-litre volume

- V1 : Volume to be emptied
- t1 : Time to be calculated (sec)
- t : Time obtained in the table (sec)

3D drawings available at www.vuototecnica.net







Art.		VTL	10/F	VTL	15/F	VTL	20/F
Frequency		50Hz	60Hz	50Hz	60Hz	50Hz	60Hz
Capacity	m³/h	10.0	12.0	15.0	18.0	20.0	24.0
Final pressure	mbar abs.	5	0	5	0	5	0
Motor execution	3~	230/400±10%	275/480±10%	230/400±10%	275/480±10%	230/400±10%	275/480±10%
Volt	1~	230±	:10%	230±10%		230±	10%
Motor power	3~	0.55	0.66	0.55	0.66	0.88	1.05
Kw	1~	0.55	0.66	0.55	0.66	0.66	0.80
Motor protection	IP	5	4	5	4	5	4
Rotation speed	rev/min ⁻¹	1450	1740	1450	1740	1450	1740
Motor shape		Spe	Special		Special		cial
Motor size		80		8	80		0
Noise level	dB(A)	62	64	63	65	64	66
Max. weight	3~	25.0		27.0		30.0	
Kg	1~	25.5		27	.5	30	.5
Α		38	385)5	42	25
В		285		28	35	28	35
C		259		25	59	25	59
D		2	5	2	5	2	5
E		34	40	340		340	
F		2	0	40		60	
Н		13	33	10	33	13	33
L		5	5	5	5	5	5
М		10	00	10	00	10	00
N		5	3	6	3	7	3
R	Ø gas	G1	/2"	G1	/2"	G1.	/2"
Accessories and spare parts							
Oil load	1	0	.4	0	.5	0.0	65
Synthetic oil	VT OIL	ISO	68	ISO	68	ISO	68
6 vanes	art.	00 VTL	10F 10	00 VTL	15F 10	00 VTL	20F 10
Sealing kit	art.	00 KIT \	/TL 10F	00 KIT V	/TL 15F	00 KIT \	/TL 20F
Check valve	art.	10 0	3 10	10 0	3 10	10 0	3 10
Suction filtre	art.	FB 20/	/FC 20	FB 20	/FC 20	FB 20/FC 20	
Adjustab <mark>le drip o</mark> iler	art.	00 VTL	. 00 11	00 VTL	. 00 11	00 VTL	00 11

Note: The pump will be supplied with single-phase electric motor by adding the letter M to the article (E.g.: VTL 10/F M).

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

7.18

3D drawings available at www.vuototecnica.net



VACUUM PUMPS VTLP 10/F, 15/F and 20/F WITH DISPOSABLE LUBRICATION

These vacuum pumps having a suction capacity of 10, 15 and 20 cum/h. The vacuum lubrication with oil recirculation can be adjusted via an oiler located in correspondence of the suction inlet.

The rotor is cantilevered-fitted on the motor shaft and supported by independent bearings housed in the two pump flanges.

The pump is surface cooled. Heat is dispersed from the outer surface, suitably finned, by means of a radial fan placed between

motor and pump. An oil recovery tank is installed on the pump exhaust. This tank contains a separator filtre that prevents oil mists and reduces noise.

A safety valve is also installed on the tank for the automatic drainage of the exhaust oil when not regularly drained.

The lubrication oil is contained in a special transparent container, fixed to the pump via its support, and controlled by a magnetic level switch.

In pumps with disposable lubrication, the oil is sucked in the pump through an adjustable drip oiler and drained together with the sucked air in the recovery tank, without being put in circulation again. These pumps are necessary when the air to be sucked contains water condensation. solvent vapours or anything else that could effect oil properties.

We strongly recommend installing a check valve and a filtre on the suction inlet. Also this range of pumps can be supplied with single-phase electric motors.









VTLP 10/F (60 Hz)

Vacuum mbar

Capacity cum/h

12

10.8

9.6

8.4

7 2

4.8

3.6

2.4

1.2

1000

6





To calculate the emptying time of a volume V1, apply the formula $11 = \frac{1 \times V1}{100}$

Curve regarding capacity (referring to the suction pressure) Curve regarding capacity (referring to a 1013 bar pressure) Curve regarding the emptying of a 100-litre volume

Time t (sec)

-260

-234

-208

182

156

-130

-104

78

-52

-26

10

- V1 : Volume to be emptied
- t1 : Time to be calculated (sec)
- t : Time obtained in the table (sec)

3D





Art.		VTL	_P 10/F	VTL	P 15/F	VTLP 20/F		
Frequency		50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	
Capacity	m³/h	10.0	12.0	15.0	18.0	20.0	24.0	
Final pressure	mbar abs.	Ę	50	Į	50		50	
Motor execution	3~	230/400±10%	275/480±10%	230/400±10%	275/480±10%	230/400±10%	275/480 ±10%	
Volt	1~	230-	230±10%		230±10%		±10%	
Motor power	3~	0.55	0.66	0.55	0.66	0.88	1.05	
Kw	1~	0.55	0.66	0.55	0.66	0.66	0.80	
Motor protection	IP	Ę	54	Į	54		54	
Rotation speed	rev/min-1	1450	1740	1450	1740	1450	1740	
Motor shape		Special		Sp	Special		Special	
Motor size		80 80		80				
Noise level	dB(A)	62	64	63	65	64	66	
Max. weight	3~	26.1		2	8.1	3	1.1	
Kg	1~	26.6		2	8.6	3	1.6	
Α		3	385		405		125	
F		2	20	40		60		
N		Ę	53	63		73		
Accessories and spare parts								
Oil load	I.	1	.8	1.8			1.8	
Synthetic oil	VT OIL	ISC) 68	ISC) 60	IS	0 68	
6 vanes	art.	00 VTL	10F 10	00 VTL	15F 10	00 VTI	_ 20F 10	
Sealing kit	art.	00 KIT	VTL 10F	00 KIT	VTL 15F	00 KIT	VTL 20F	
Check valve	art.	10 0	03 10	10 (03 10	10	03 10	
Suction filtre	art.	FB 20	/FC 20	FB 20	/FC 20	FB 20	D/FC 20	
Oil level <mark>switch</mark>	art.	00 LP	VTL 99	00 LP	00 LP VTL 99		VTL 99	
Oil filtre	art.	00 LP	VTL 40	00 LP	VTL 40	00 LP VTL 40		
Adjustab <mark>le drip o</mark> iler	art.	00 VTL	_ 00 11	00 VT	_ 00 11	00 VTL 00 11		

Note: The pump will be supplied with single-phase electric motor by adding the letter M to the article (E.g.: VTLP 10/F M).

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

7.20



cfm= cum/h x 0.588; inch Hg= mbar x 0.0295; psi= bar (g) x 14.6

7

3D drawings available at www.vuototecnica.net

VACUUM PUMPS VTL 25/FG, 30/FG and 35/FG

These vacuum pumps have a suction capacity of 10, 15 and 20 cum/h. The vacuum lubrication with oil recirculation is adjusted via two oilers located in correspondence of the support bearings. The rotor is cantilevered-fitted on the motor shaft and supported by independent bearings housed in the two pump flanges. The pump and the electric motor are, therefore, two independent units and fixed onto a special support and connected to each other via an elastic transmission joint. All this allows using standard electric motors, in the shapes and sizes indicated in the table. The pump is surface cooled. Heat is dispersed from the outer surface, suitably finned, by means of a radial fan placed between motor and pump.

An oil recovery tank is installed on the pump exhaust. This tank contains a separator filtre that prevents oil mists and reduces noise.

We strongly recommend installing a check valve and a filtre on the suction inlet. These pumps are supplied with three-phase electric motors only.







VTL 25/FG (60 Hz)

100

Vacuum mbar

Capacity

cum/h

27.5

22.5

17.5

12.5

25

20

15

10-

5

1000

7 5

2 5



100

Vacuum mbar

27

24



To calculate the emptying time of a volume V1, apply the formula $1 = \frac{1 \times V_1}{100}$ V1 : Volume to be emptied

-90

-80

-70

-60

-50

40

-30

- 2 0

10

10

Curve regarding capacity (referring to the suction pressure) Curve regarding capacity (referring to a 1013 bar pressure) Curve regarding the emptying of a 100-litre volume

Time t(sec)

-100

- 8 8

- 8 0

-72

-64

-56

- 4 8

- 4 0

- 3 2

-24

-16

- 8

10

28.8

25.2

21 6

14.4

10.8

7.2

3.6

1000

18

- t1 : Time to be calculated (sec) t : Time obtained in the table (sec)
- 3D 7.21

drawings available at www.vuototecnica.net

- 8 0

-72

-64

-56

-48

- 4 0

-32

-24

16

8

. 10



	t		VTL 25/FG		30/10	VTL 35/FG		
Frequency		50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	
Capacity	m³/h	25.0	30.0	30.0	36.0	35.0	42.0	
Final pressure	mbar abs.	Ę	50	5	0	50		
Motor execution	3~	230/400±10%	275/480±10%	230/400±10%	275/480±10%	230/400±10%	275/480 ±10%	
Volt								
Motor power	3~	0.88	1.05	1.00	1.20	1.00	1.20	
Kw								
Motor protection	IP	Ę	54	5	4	1	54	
Rotation speed	rev/min-1	1450	1740	1450	1740	1450	1740	
Motor shape		В	B14		14	E	314	
Motor size		80		80		80		
Noise level	dB(A)	64	66	65	67	65	67	
Max. weight	3~	31.0		35	i.0	3	7.0	
Kg								
Α		4	470		90	5	510	
C		2	80	280		2	80	
F			20	40		60		
H		1	33	10	33	133		
N		ī	'3	83		93		
R	Ø gas	G3	3/4"	G3	/4"	G	3/4"	
Accessories and spare parts								
Oil load		0.	65	0.	85	0	.85	
Synthetic oil	VT OIL	ISC) 68	ISO	68	ISO	0 68	
6 vanes	art.	00 VTL	25FG 10	00 VTL 3	30FG 10	00 VTL	35FG 10	
Sealing kit	art.	00 KIT \	/TL 25FG	00 KIT V	TL 30FG	00 KIT V	VTL 35FG	
Check valve	art.	10 (04 10	10 0	4 10	10	04 10	
Suction filtre	art.	FB 25	/FC 25	FB 25/	/FC 25	FB 25	5/FC 25	
Adjustable drip oiler	art.	00 VTI	_ 00 11	00 VTL	.00 11	00 VTL 00 11		

3D drawings available at www.vuototecnica.net

7.22

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

cfm= cum/h x 0.588; inch Hg= mbar x 0.0295; psi= bar (g) x 14.6

ί Π

VACUUM PUMPS VTL 25/FG, 30/FG and 35/FG WITH DISPOSABLE LUBRICATION

These vacuum pumps have a suction capacity of 25, 30 and 35 cum/h. The vacuum lubrication with oil recirculation is adjusted via two oilers located in correspondence of the support bearings.

The rotor is cantilevered-fitted on the motor shaft and supported by independent bearings housed in the two pump flanges.

The pump and the electric motor are, therefore, two independent units and fixed onto a special support and connected to each other via an elastic transmission joint.

All this allows using standard electric motors, in the shapes and sizes indicated in the table. The pump is surface cooled. Heat is dispersed from the outer surface, suitably

finned, by means of a radial fan placed between motor and pump.

An oil recovery tank is installed on the pump exhaust. This tank contains a separator filtre that prevents oil mists and reduces noise.

A safety valve is also installed on the tank for the automatic drainage of the exhaust oil when not regularly drained.

The lubrication oil is contained in a special transparent container, fixed to the pump via its support, and controlled by a magnetic level switch.

In pumps with disposable lubrication, the oil is sucked in the pump through an adjustable drip oiler and drained together with the sucked air in the recovery tank, without being put in circulation again. These pumps are necessary when the air to be sucked contains water condensation, solvent vapours or anything else that could effect oil properties.

Time (Sec)

100

. gin

80

70

-60

-50

40

-30

20

10

10

We strongly recommend installing a check valve and a filtre on the suction inlet. These pumps are supplied with three-phase electric motors only.







VTLP 30/FG (60 Hz)

100

Vacuum mbai





Capacity Time t(sec) VTLP 35/FG (60 Hz) cum/h - 8 0 42 37.8 -72 33.6 - 6 4 drawings available at www.vuototecnica.net -56 20 4 - 4 8 25.2 - 4 0 21 -32 16.8 -24 12.6 16 8.4 1 2 - 8 1000 100 Vacuum mbar 10 To calculate the emptying time of a volume V1, apply the formula $1 = \frac{1 \times V_1}{100}$ V1 : Volume to be emptied

Curve regarding capacity (referring to the suction pressure) Curve regarding capacity (referring to a 1013 bar pressure) Curve regarding the emptying of a 100-litre volume

- t1 : Time to be calculated (sec)
- t : Time obtained in the table (sec)

3D

VACUUM PUMPS VTLP 25/FG, 30/FG and 35/FG





Art.		VTL	P 25/FG	VTL	P 30/FG	V	'LP 35/FG	
Frequency		50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	
Capacity	m³/h	25.0	30.0	30.0	36.0	35.0	42.0	
Final pressure	mbar abs.		50		50		50	
Motor execution	3~	230/400±10%	275/480±10%	230/400±10%	275/480±10%	230/400±10%	275/480 ±10%	
Volt								
Motor power	3~	0.88	1.05	1.00	1.20	1.00	1.20	
Kw								
Motor protection	IP		54		54	:	54	
Rotation speed	rev/min-1	1450	1740	1450	1740	1450	1740	
Motor shape		E	314	E	314	E	814	
Motor size			80		80		80	
Noise level	dB(A)	64	66	65	67	65	67	
Max. weight	3~	3	2.0	3	6.0	3	8.0	
Kg								
Α		2	170	4	190	Ę	510	
F		20			40		60	
н		1	133	133		133		
N			73	83		93		
R	Ø gas	G	3/4"	G	G3/4"		3/4"	
Accessories and spare parts								
Oil load			1.8		1.8		1.8	
Synthetic oil	VT OIL	IS	0 68	IS	0 68	ISI	0 68	
6 vanes	art.	00 VTL	25FG 10	00 VTL	30FG 10	00 VTL	35FG 10	
Sealing kit	art.	00 KIT	VTL 25FG	00 KIT	VTL 30FG	00 KIT '	VTL 35FG	
Check valve	art.	10	04 10	10	04 10	10	04 10	
Suction filtre	art.	FB 25	5/FC 25	FB 25	5/FC 25	FB 25	5/FC 25	
Oil level switch	art.	00 LP	9 VTL 99	00 LF	9 VTL 99	00 LP	VTL 99	
Oil filtre	art.	00 LP	9 VTL 40	00 LF	9 VTL 40	00 LP VTL 40		
Adjustab <mark>le drip o</mark> iler	art.	00 VT	L 00 11	00 VT	L 00 11	00 VT	L 00 11	

3D drawings available at www.vuototecnica.net

7.24



Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$ cfm= cum/h x 0.588; inch Hg= mbar x 0.0295; psi= bar (g) x 14.6



VACUUM PUMPS VTL 40/G1 ÷ 105/G1

These vacuum pumps have a suction capacity of 40, 50, 65, 75, 90 and 105 cum/h. The vacuum lubrication with oil recirculation is adjusted via two oilers located in correspondence of the support bearings.

The rotor is fitted on the motor shaft and supported by independent bearings housed in the two pump flanges. The pump and the electric motor are, therefore, two independent units and fixed onto a special support and connected to each other via

an elastic transmission ioint. All this allows using standard electric motors, in the shapes and sizes indicated in the table

The pump is surface cooled. Heat is dispersed from the outer surface, suitably finned, by means of a radial fan placed between motor and pump.

An oil recovery tank is installed on the pump exhaust. This tank contains a separator filtre that prevents oil mists and reduces noise.

An oil recovery tank is installed on the pump exhaust. This tank contains a

separator filtre that prevents oil mists and reduces noise. A check valve and a filtre must be installed on the suction inlet.

These pumps are supplied with three-phase electric motors only.









VTI 40/G1 (60 Hz)

Vacuum mbar

Time t(sec)

-80

-72

- 6 4

-56

- 4 8

- 4 0

-32

-24

-16

- 8

Curve regarding capacity (referring to the suction pressure)

Curve regarding capacity (referring to a 1013 bar pressure) Curve regarding the emptying of a 100-litre volume

1000

10

Capacity

cum/h

43.2

38.4

33.6

28.8

19.7 14.4

9.6

4.8

1000

24





100 Vacuum mbar



To calculate the emptying time of a volume V1, apply the formula $1 = \frac{1 \times V_1}{100}$

10

- V1 : Volume to be emptied
 - t1 : Time to be calculated (sec)
 - t : Time obtained in the table (sec)

7.25

3D





Art.		VTL	40/G1	VTL S	50/G1	VTL	65/G1	
Frequency		50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	
Capacity	m³/h	40.0	48.0	50.0	60.0	65.0	78.0	
Final pressure	mbar abs.	:	50	50		50		
Motor execution	3~	230/400±10%	275/480±10%	230/400±10%	275/480±10%	230/400±10%	275/480 ±10%	
Volt								
Motor power	3~	1.10	1.35	1.50	1.80	1.50	1.80	
Kw								
Motor protection	IP		54	5	4	:	54	
Rotation speed	rev/min-1	1450	1740	1450	1740	1450	1740	
Motor shape		I	B5	B	5		B5	
Motor size		1	90	g	0		90	
Noise level	dB(A)	68	70	68	70	70	72	
Max. weight	3~	51.0		54.0		71.0		
Kg								
Α		520		50	60	5	580	
B		365		30	65	3	365	
C		3	350	350		3	350	
D			60	115		120		
F			45	30		45		
н		1	86	18	186		186	
Μ		1	25	125		125		
N			70	8	0		80	
R	Ø gas	(31"	G	1"	(31"	
Accessories and spare parts								
Oil load	I	0	.85	1.	00	1	.00	
Synthetic oil	VT OIL	ISC) 100	ISO	100	ISC	0 100	
6 vanes	art.	00 VTL	40G1 10	00 VTL :	50G1 10	00 VTL	65G1 10	
Sealing kit	art.	00 KIT (VTL 40G1	00 KIT V	TL 50G1	00 KIT \	/TL 65 G1	
Check valve	art.	10	05 10	10 0	5 10	10	05 10	
Suction filtre	art.	FB 30	D/FC 30	FB 30	/FC 30	FB 30/FC 30		
Adjustable drip oiler	art.	00 VT	L 00 11	00 VTL	. 00 11	00 VT	L 00 11	

7.26

)=(

3D drawings available at www.vuototecnica.net

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

cfm= cum/h x 0.588; inch Hg= mbar x 0.0295; psi= bar (g) x 14.6















To calculate the emptying time of a volume V1, apply the formula $1 = \frac{t \times V_1}{100}$

- Curve regarding capacity (referring to the suction pressure) Curve regarding capacity (referring to a 1013 bar pressure) Curve regarding the emptying of a 100-litre volume
- V1 : Volume to be emptied
 - t1 : Time to be calculated (sec)
 - t : Time obtained in the table (se<mark>c)</mark>

7.27

3D







Art.		VTL	75/G1	VTL 9	0/G1	VTL	105/G1
Frequency		50Hz	60Hz	50Hz	60Hz	50Hz	60Hz
Capacity	m³/h	75.0	90.0	90.0	108.0	105.0	126.0
Final pressure	mbar abs.		50	50		50	
Motor execution	3~	230/400±10%	275/480±10%	230/400±10%	275/480±10%	230/400±10%	275/480 ±10%
Volt							
Motor power	3~	2.20	2.70	3.00	3.60	3.00	3.60
Kw							
Motor protection	IP		54	5	4		54
Rotation speed	rev/min-1	1450	1740	1450	1740	1450	1740
Motor shape		I	B5	В	5		B5
Motor size		1	00	10	10	1	00
Noise level	dB(A)	70	72	71	73	72	74
Max. weight	3~	76.5		84	.0	g	7.6
Kg							
Α		640		66	60	6	690
В		385		40	0	2	100
C		4	00	400		2	145
F			62	82		112	
н		1	86	18	6	186	
М		1	45	15	i0	1	60
N			80	9	2	1	22
R	Ø gas	G1	"1/4	G1"	1/4	G1	"1/2
Accessories and spare parts							
Oil load	1		2.0	2.	6	:	2.6
Synthetic oil	VT OIL	ISC	100	ISO	100	ISC	0 100
Deoiling cartridge	art.	00 VTL	75G1 29	00 VTL 9	0G1 29	00 VTL	105G1 29
6 vanes	art.	00 VTL	75G1 10	00 VTL 9	0G1 10	00 VTL	105G1 10
Sealing kit	art.	00 KIT 1	VTL 75G1	00 KIT V	TL 90G1	00 KIT \	/TL 105G1
Check valve	art.	10	06 10	10 0	6 10	10	07 10
Suction filtre	art.	FB 40)/FC 40	FB 40/	FC 40	FB 50	D/FC 50
Adjustab <mark>le drip o</mark> iler	art.	00 VT	L 00 11	00 VTL	00 11	00 VT	L 00 11

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

7.28

3D drawings available at www.vuototecnica.net



cfm= cum/h x 0.588; inch Hg= m x 0.0295; psi= bar (g) x 14.6

VACUUM PUMPS VTLP 40/G1 ÷ 105/G1, WITH DISPOSABLE LUBRICATION

These vane vacuum pumps have a suction capacity of 40, 50, 65, 75, 90 and 105 cum/h. The vacuum lubrication with oil recirculation is adjusted via two oilers located in correspondence of the support bearings.

The rotor is fitted on the motor shaft and supported by independent bearings housed in the two pump flanges. The pump and the electric motor are, therefore, two independent units and fixed onto a special support and connected to each other via an elastic transmission ioint.

All this allows using standard electric motors, in the shapes and sizes indicated in the table

he pump is surface cooled. Heat is dispersed from the outer surface, suitably finned, by means of a radial fan placed between motor and pump.

An oil recovery tank is installed on the pump exhaust. This tank contains a separator filtre that prevents oil mists and reduces noise.

A safety valve is also installed on the tank for the automatic drainage of the exhaust oil when not regularly drained.

The lubrication oil is contained in a special transparent container, fixed to the pump via its support, and controlled by a magnetic level switch.

In pumps with disposable lubrication, the oil is sucked in the pump through an adjustable drip oiler and drained together with the sucked air in the recovery tank, without being put in circulation again. These pumps are necessary when the air to be sucked contains water

condensation, solvent vapours or anything else that could effect oil properties. A check valve and a filtre must be installed on the suction inlet.

These pumps are supplied with three-phase electric motors only.





Capacity

cum/h

36

32

28

24

20

16

12

8 4

1000

Capacity

cum/h

43.2

38.4

33 6

28.8

2

19.3

14.4

9.6

4.8

1000

VTL 40/61 (50 Hz)

Vacuum mbar

VTL 40/61 (60 Hz)

100

Vacuum mbai



Art.		VTL	P 40/G1	VTLI	P 50/G1	VTLF	P 65/G1
Frequency		50Hz	60Hz	50Hz	60Hz	50Hz	60Hz
Capacity	m³/h	40.0	48.0	50.0	60.0	65.0	78.0
Final pressure	mbar abs.		50		50	50	
Motor execution	3~	230/400±10%	275/480±10%	230/400±10%	275/480±10%	230/400±10%	275/480 ±10%
Volt							
Motor power	3~	1.10	1.35	1.50	1.80	1.50	1.80
Kw							
Motor protection	IP		54		54		54
Rotation speed	rev/min-1	1450	1740	1450	1740	1450	1740
Motor shape			B5		B5		B5
Motor size			90		90		90
Noise level	dB(A)	68	70	68	70	70	72
Max. weight	3~	52.5		Ę	55.1		2.1
Kg							
Α		520		-	560	ł	580
D			60		115		120
F			45	30		45	
Μ			125	125		125	
N			70	80		80	
R	Ø gas		G1"	G1"		G1"	
Accessories and spare parts							
Oil load	I		.80	-	.80	1	.80
Synthetic oil	VT OIL	IS	0 100	ISO	0 100	ISC	0 100
6 vanes	art.	00 VTI	. 40G1 10	00 VTL	50G1 10	00 VTL	65G1 10
Sealing kit	art.	00 KIT	VTL 40G1	00 KIT	VTL 50G1	00 KIT	VTL 65G1
Check valve	art.	10	05 10	10	05 10	10	05 10
Suction filtre	art.	FB 3	0/FC 30	FB 3	0/FC 30	FB 3	0/FC 30
Oil level switch	art.	00 LI	P VTL 99	00 LF	00 LP VTL 99		9 VTL 99
Oil filtre	art.	00 LI	P VTL 40	00 LF	PVTL 40	00 LP VTL 40	
Adjustab <mark>le drip o</mark> iler	art.	00 V	FL 00 11	00 V	TL 00 11	00 VT	L 00 11

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

3D drawings available at www.vuototecnica.net

7.30



cfm= cum/h x 0.588; inch Hg= mbar x 0.0295; psi= bar (g) x 14.6

L















To calculate the emptying time of a volume V1, apply the formula $1 = \frac{t \times \sqrt{1}}{100}$

Curve regarding capacity (referring to the suction pressure) Curve regarding capacity (referring to a 1013 bar pressure) Curve regarding the emptying of a 100-litre volume

- V1 : Volume to be emptied
- t1 : Time to be calculated (sec)
- t : Time obtained in the table (sec)

7.31





Art.		VTLF	9 75/G1	VTLP	90/G1	VTLP	105/G1
Frequency		50Hz	60Hz	50Hz	60Hz	50Hz	60Hz
Capacity	m³/h	75.0	90.0	90.0	108.0	105.0	126.0
Final pressure	mbar abs.		50	Ę	60		50
Motor execution	3~	230/400±10%	275/480±10%	230/400±10%	275/480±10%	230/400±10%	275/480 ±10%
Volt							
Motor protection	IP		54	Ę	54		54
Motor power	3~	2.20	2.70	3.00	3.60	3.00	3.60
Kw							
Rotation speed	rev/min-1	1450	1740	1450	1740	1450	1740
Motor shape			B5	E	35		B5
Motor size		100		100		100	
Noise level	dB(A)	70	72	71	73	72	74
Max. weight	3~	78.3		85.8		99.4	
Kg							
Α		640		660		690	
В		2	115	4	30	2	130
C		Į	575	5	75	6	620
F			62	8	32	1	12
М			145	1	50	1	60
N			80	ç	02	1	22
R	Ø gas	G1	1/4"	G1	1/4"	G1	1/2"
Accessories and spare parts							
Oil load	I	3.8		3.8		3.8	
Synthetic oil	VT OIL	ISO 100		ISO 100		ISO 100	
Deoiling cartridge	art.	00 VTL 75G1 29		00 VTL 90G1 29		00 VTL 105G1 29	
6 vanes	art.	00 VTL 75G1 10		00 VTL 90 G110		00 VTL 105 G110	
Sealing kit	art.	00 KIT VTL 75G1		00 KIT VTL 90G1		00 KIT VTL 105G1	
Check valve	art.	10 06 10		10 06 10		10 07 10	
Suction filtre	art.	FB 40/FC 40		FB 40/FC 40		FB 50/FC 50	
Oil level switch	art.	00 LP VTL 99		00 LP VTL 99		00 LP VTL 99	
Oil filtre	art.	00 LP VTL 40		00 LP VTL 40		00 LP VTL 40	
Adjustab <mark>le drip o</mark> iler	art.	TV 00	L 00 11	00 VTI	_ 00 11	00 VT	L 00 11

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

3D drawings available at www.vuototecnica.net

7.32



cfm= cum/h x 0.588; inch Hg= mbar x 0.0295; psi= bar (g) x 14.6

VACUUM PUMP VTL 6 DC WITH DC MOTOR

The extremely reduced size, the excellent final vacuum level that can be reached and the DC electric motor are the main features of this rotating vane vacuum pump. The internal vacuum lubrication is with oil recirculation.

Both the motor and the pump are cooled my the motor pump (surface cooling). The pump is equipped with a small tank in line with its axis, which contains the lubrication oil and a condensation separator that prevents exhaust oil mists and reduces noise. A check valve on the suction inlet is integral part of the pump. Upon request, it can be supplied with a special filtre.

The VTL 6 DC pump can only be supplied with a DC motor (service S1) conform with the EMC (89/336/CEE) Directive.





To calculate the emptying time of a volume V1, apply the formula $t1 = \frac{t \times V 1}{100}$ egarding capacity (referring to the suction pressure) V1 : Volume to be emptied

Curve regarding capacity (referring to the suction pressure) Curve regarding capacity (referring to a 1013 bar pressure) Curve regarding the emptying of a 100-litre volume

- t1 : Time to be calculated (sec)
- t: Time obtained in the table (sec)

7.33

3D drawings available at www.vuototecnica.net

VACUUM PUMP VTL 6 DC WITH DC MOTOR





Art.		VTL 6 CC
apacity	m³/h	6
inal pressure	mbar abs.	2
lotor execution	Volt	24 CC
lotor power	Kw	0.28
lax. absorption at 24 V CC	А	15
Notor protection	IP	54
otation speed	rev/min ⁻¹	3000
Notor shape		Special
lotor size		71
loise level	dB(A)	68
Aax. weight	Kg	10.5
	Ŭ	335
		168
		195
		124
		65
		146
		8
		128
		1 12
		12
		44
		32
		14.5
	Ølas	63/8"
ccessories and spare parts	e guo	40,0
il load		0.20
vnthetic oil	VT 0II	ISO 32
vanes	art	00 VTL 06 10
ealing kit	art	
heck valve	art	Built-in
NOOR TUITO	uit.	Dullt-III

3D drawings available at www.vuototecnica.net

7.34

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

cfm= cum/h x 0.588; inch Hg= mbar x 0.0295; psi= bar (g) x 14.6

7

OIL-BATH VACUUM PUMPS MV 20 ÷ 300R and MV 20A ÷ 300RA

The single-stage oil-bath vane vacuum pumps of the MV series are activated by a standard electric motor coupled together via an elastic transmission joint. A centrifugal fan cantilevered-fitted onto the pump shaft guarantees the right airflow for cooling the pump unit (forced surface cooling).

A large oil recovery tank with built-in microfibre deoiling cartridges, located on the pump exhaust, serves as a silencer and as a fume collector.

The oil contained in the system lubricates, cools and seals the rotating and the fixed parts of the pumps.

The standard check valve on the suction inlet is integral part of the pumps. Upon request, a filtre for trapping possible impurities can also be provided. Pumps included between the MV 20 and the MV 100 are set for the installation of a gas ballast valve (upon request) which allows for a high compatibility to water vapour. In the other pumps, starting from MV 160R up to MV 300R, the built-in gas ballast valve is a standard.

The features described above associated with a strong and compact construction make the pumps of the MV series suitable for continuous and intense use.









To calculate the emptying time of a volume V1, apply the formula $t_1 = \frac{1 \times V1}{100}$

Curve regarding capacity (referring to the suction pressure) Curve regarding capacity (referring to a 1013 bar pressure) Curve regarding the emptying of a 100-litre volume

V1 : Volume to be emptied t1 : Time to be calculated (sec)

t : Time obtained in the table (sec)





7

3D 7.35

drawings available at www.vuototecnica.net

OIL-BATH VACUUM PUMPS MV 20 AND MV 20A





Art.		MV 2	20	MV 20A		
Frequency		50Hz	60Hz	50Hz	60Hz	
Capacity	m³/h	20.0	24.0	20.0	24.0	
Final pressure	mbar abs.	40		0.7		
Motor execution	3~	230/400±10%	275/480±10%	230/400±10%	275/480±10%	
Volt	1~	230±1	0%	230±10%		
Motor power	3~	0.75	0.90	0.75	0.90	
Kw	1~	0.75	0.90	0.75	0.90	
Notor protection	IP	55		55		
Rotation speed	rev/min ⁻¹	2800	3350	2800	3350	
Notor shape		B14		B14		
Motor size		80		80		
Noise level	dB(A)	64	66	64	66	
Nax. weight	3~	21.5)	21.5		
Kg	1~	22.0)	22.0		
l i i i i i i i i i i i i i i i i i i i		425		425		
}		235		235		
;		215		215		
)		145		145		
		220		220		
:		60	60		60	
ì	Ø	6.5	6.5		6.5	
I		170	1	170		
		113		113 82 40 60 30		
		82				
Λ		40				
I		60				
)		30				
{	Ø gas	G1/2	39	G1/2"		
Accessories and spare parts						
Dil load		0.70)	0.70		
Synthetic oil	VT OIL	ISO 68		ISO 68		
Deoiling cartridge	art.	00 MV 20 11		00 MV 20 11		
3 vanes	art.	00 MV 20 10		00 MV 20 10		
Sealing kit	art.	00 KIT N	IV 20	00 KIT MV 20		
Check valve	art.	Built-	in	Built-in		
Suction filtre	art.	FC 2	0	FC 20		
Ballast valve	art	V7 01		VZ 01		

Note: The pump will be supplied with single-phase electric motor by adding the letter M to the article (E.g.: MV 20 M).

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

7.36



3D drawings available at www.vuototecnica.net

cfm= cum/h x 0.588; inch Hg= mbar x 0.0295; psi= bar (g) x 14.6

OIL-BATH VACUUM PUMPS MV 40 and MV 40A







38.4

28.8

19.2





To calculate the emptying time of a volume V1, apply the formula $11 = \frac{1 \times V1}{100}$

Curve regarding capacity (referring to the suction pressure) Curve regarding capacity (referring to a 1013 bar pressure) Curve regarding the emptying of a 100-litre volume

V1 : Volume to be emptied

t1 : Time to be calculated (sec)

t : Time obtained in the table (sec)

7.37





Art.		MV	40	MV 40A			
Frequency		50Hz	60Hz	50Hz	60Hz		
Capacity	m³/h	40.0	48.0	40.0	48.0		
inal pressure	mbar abs.	40	40		7		
Notor execution	3~	230/400±10%	275/480±10%	230/400±10%	275/480±10%		
Volt							
lotor power	3~	1.10	1.35	1.10	1.35		
Kw							
lotor protection	IP	55	5	55			
otation speed	rev/min ⁻¹	1450	1740	1450	1740		
lotor shape		B1	4	B14			
lotor size		90	D	90			
loise level	dB(A)	66	68	66	68		
lax. weight	3~	45	.0	45.0			
Kg							
		30	0	300			
		80	80		80		
		41	415		415		
		133		133			
		25	250		250		
		21	210 90.5		210 90.5		
		90					
l		37	.5	37.5 188			
		18	8				
		10	0	100			
		14	3	143			
	Ø gas	G1"	1/4	G1"1/4			
ccessories and spare parts							
il load	1	2.0	00	2.00			
ynthetic oil	VT OIL	ISO	ISO 68		ISO 68		
eoiling cartridge	art.	00 MV	00 MV 40 50		00 MV 40 50		
vanes	art.	00 MV	00 MV 40 10		00 MV 40 10		
ealing k <mark>it</mark>	art.	00 KIT	00 KIT MV 40		00 KIT MV 40		
check va <mark>lve</mark>	art.	Built	t-in	Built-in			
Suction filtre	art.	FC	35	FC 35			
Ballast v <mark>alve</mark>	art.	V7	VZ 02		VZ 02		

7.38

X

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

cfm= cum/h x 0.588; inch Hg= mbar x 0.0295; psi= bar (g) x 14.6











To calculate the emptying time of a volume V1, apply the formula $t_1 = \frac{t_x V I}{100}$

Curve regarding capacity (referring to the suction pressure) Curve regarding capacity (referring to a 1013 bar pressure) Curve regarding the emptying of a 100-litre volume

V1 : Volume to be emptied

t1 : Time to be calculated (sec)

t : Time obtained in the table (sec)





cfm= cum/h x 0.588; inch Hg= mbar x 0.0295; psi= bar (g) x 14.6

7

Art. Frequency		MV	60	MV 60			
		50Hz	50Hz 60Hz		60Hz		
Capacity	m³/h	60.0	72.0	60.0	72.0		
inal pressure	mbar abs.	4	0	0.	7		
Notor execution	3~	230/400±10%	275/480±10%	230/400±10%	275/480±10%		
Volt							
Notor power	3~	1.50	1.80	1.50	1.80		
Kw							
Notor protection	IP	5	5	55			
lotation speed	rev/min-1	1450	1740	1450	1740		
Notor shape		B1	4	B14			
Notor size		9	0	90			
Noise level	dB(A)	68	70	68	70		
Max. weight	3~	53	.0	53.0			
Kg							
;		30	00	300			
)		14	140		140		
		41	415		415		
:		133		133			
1		250		250			
		21	210		210		
		12	123		123		
n		9	7	97			
-		18	188		188		
)		10	00	100			
		14	13	143			
	Ø gas	G1"	1/4	G1"1/4			
ccessories and spare parts	. 940			u.			
)il load		20	00	2.(0		
withetic oil	VT OIL	ISO	ISO 68		ISO 68		
Deoiling cartridge	_art.	00 MV	00 MV 60 50		00 MV 60 50		
vanes	art.	00 MV	00 MV 60 10		00 MV 60 10		
Sealing kit	art		00 KIT MV 60		MV 60		
Check valve	art	Buil	Built-in		-in		
Suction filtre	art	FC.	35	FC 35			
Rallast valve	art	10	V7 02		V7 02		

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

7.40

3D drawings available at www.vuototecnica.net

X










To calculate the emptying time of a volume V1, apply the formula $11 = \frac{1 \times V1}{100}$

Curve regarding capacity (referring to the suction pressure)
Curve regarding capacity (referring to a 1013 bar pressure)
Curve regarding the emptying of a 100-litre volume

V1 : Volume to be emptied t1 : Time to be calculated (sec)

t : Time obtained in the table (sec)

3D drawings available at www.vuototecnica.net





cfm= cum/h x 0.588; inch Hg= mbar x 0.0295; psi= bar (g) x 14.6

7

Art.		MV 1	00	MV 100A		
Frequency		50Hz	60Hz	50Hz	60Hz	
Capacity	m³/h	100.0	120.0	100.0	120.0	
Final pressure	mbar abs.	40		0.	7	
Motor execution	3~	230/400±10%	275/480±10%	230/400±10%	275/480±10%	
Volt						
Motor power	3~	2.20	2.70	2.20	2.70	
Kw						
Motor protection	IP	55		55	5	
Rotation speed	rev/min ⁻¹	1450	1740	1450	1740	
Motor shape		B14	B14		4	
Motor size		100)	10	0	
Noise level	dB(A)	68	70	68	70	
Max. weight	3~	80.0	80.0		.0	
Kg						
C		330	330		0	
H		290	290		0	
I		275	275		5	
L		115	Ď	115		
M		40		40		
N		240)	240		
0		130)	13	0	
Р		180)	180		
R	Ø gas	G1"1	/4	G1"1/4		
Accessories and spare parts						
Oil load		3.50	D	3.50		
Synthetic oil	VT OIL	ISO 1	00	ISO ⁻	100	
2 deoiling cartridges	art.	00 MV 1	00 06	00 MV ⁻	100 06	
3 vanes	art.	00 MV 1	00 10	00 MV ⁻	100 10	
Sealing <mark>kit</mark>	art.	00 KIT M	V 100	00 KIT N	/IV 100	
Check valve	art.	Built-	in	Built	t-in	
Suction filtre	art.	FC 3	5	FC	35	
Ballast valve	art.	VZ 0	2	VZ	02	

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

7.42

X











To calculate the emptying time of a volume V1, apply the formula $t_1 = \frac{f_X V1}{100}$

Curve regarding capacity (referring to the suction pressure) Curve regarding capacity (referring to a 1013 bar pressure) Curve regarding the emptying of a 100-litre volume

X

V1 : Volume to be emptied

t1 : Time to be calculated (sec) t : Time obtained in the table (sec) 3D drawings available at www.vuototecnica.net



Art.		MV 160R		MV 160RA		
Frequency		50Hz	60Hz	50Hz	60Hz	
Capacity	m³/h	150	180	150	180	
Final pressure	mbar abs.	10	D	0	.5	
Motor execution	3~	230/400±10%	275/480±10%	230/400±10%	275/480±10%	
Volt						
Motor power	3~	3.0	4.0	3.0	4.0	
Kw						
Motor protection	IP	55	5	5	5	
Rotation speed	rev/min ⁻¹	1500	1800	1500	1800	
Motor shape		В5		B5		
Motor size		100		1(00	
Noise level	dB(A)	71	72	71	72	
Max. weight	3~	104	110	104	110	
Kg						
Α		217	226	217	226	
L		805	814	805	814	
Accessories and spare parts						
Oil load		3.	0	3.0		
Synthetic oil	VT OIL	ISO ·	100	ISO 100		
2 deoiling cartridges	art.	00 MV 1	60R 06	00 MV -	160R 06	
3 vanes	art.	00 MV 1	60R 10	00 MV -	160R 10	
Sealing kit	art.	00 KIT N	IV 160R	00 KIT N	/IV 160R	
Check valve	art.	Built	t-in	Bui	lt-in	
Oil filtre	art.	00 MV 1	60R 07	00 MV -	160R 07	
Suction filtre	art.	FC	50	FC	50	
Ballast valve	art.	Built	t-in	Built-in		

7.44

3D drawings available at www.vuototecnica.net

Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$ cfm= c

cfm= cum/h x 0.588; inch Hg= mbar x 0.0295; psi= bar (g) x 14.6







X





To calculate the emptying time of a volume V1, apply the formula $t_1 = \frac{f \times V1}{100}$

Curve regarding capacity (referring to the suction pressure) Curve regarding capacity (referring to a 1013 bar pressure) Curve regarding the emptying of a 100-litre volume

V1 : Volume to be emptied

t1 : Time to be calculated (sec)

t : Time obtained in the table (sec)





cfm= cum/h x 0.588; inch Hg= mbar x 0.0295; psi= bar (g) x 14.6

7

Art.		MV 200R		MV 200RA		
Frequency		50Hz	60Hz	50Hz	60Hz	
Capacity	m³/h	205	245	205	245	
Final pressure	mbar abs.	10)	0.5		
Motor execution	3~	230/400±10%	275/480±10%	230/400±10%	275/480±10%	
Volt						
Motor power	3~	4.0	5.5	4.0	5.5	
Kw						
Motor protection	IP	55		5	5	
Rotation speed	rev/min-1	1500	1800	1500	1800	
Motor shape		B5		B5		
Motor size		112		112		
Noise level	dB(A)	70	72	70	72	
Max. weight	3~	161	171	161	171	
Kg						
A		208	257	208	257	
		895	944	895	944	
Accessories and spare parts						
Oil load		7.	0	7.0		
Synthetic oil	VT OIL	ISO	100	ISO 100		
2 deoiling cartridges	art.	00 MV 2	00R 50	00 MV 200R 50		
3 vanes	art.	00 MV 2	00R 10	00 MV 2	200R 10	
Sealing kit	art.	00 KIT N	IV 200R	00 KIT N	/IV 200R	
Check valve	art.	Buil	t-in	Bui	t-in	
Oil filtre	art.	00 MV 2	00R 07	00 MV 2	200R 07	
Suction filtre	art.	FC	60	FC	60	
Ballast valve	art.	Buil	t-in	Built-in		

Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6}$ = $\frac{\text{Kg}}{0.4536}$

7.46

3D drawings available at www.vuototecnica.net

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OIL-BATH VACUUM PUMPS MV 300R and MV 300RA











To calculate the emptying time of a volume V1, apply the formula $t_1 = \frac{1 \times V1}{100}$

Curve regarding capacity (referring to the suction pressure) Curve regarding capacity (referring to a 1013 bar pressure) Curve regarding the emptying of a 100-litre volume

V1 : Volume to be emptied

t1 : Time to be calculated (sec)

t : Time obtained in the table (sec)

3D

drawings available at www.vuototecnica.net



MV 300R MV300RA Art. Frequency 50Hz 60Hz 50Hz 60Hz Capacity m³/h 300 350 300 350 **Final pressure** mbar abs. 10 0.5 Motor execution 3~ 400/650±10% 480/828±10% 400/650±10% 480/828±10% Volt Motor power 3~ 5.5 7.5 5.5 7.5 Kw IP Motor protection 55 55 **Rotation speed** 1500 1800 rev/min-1 1500 1800 Motor shape B5 B5 Motor size 112 112 Noise level dB(A) 71 73 71 73 Max. weight 3~ 188 192 188 192 Kg 257 297 A 979 1019 L. Accessories and spare parts **Oil load** 7.0 7.0 1 VT OIL Synthetic oil ISO 100 ISO 100 00 MV 300R 50 3 deoiling cartridges 00 MV 300R 50 art. 3 vanes 00 MV 300R 10 00 MV 300R 10 art. Sealing kit 00 KIT MV 300R 00 KIT MV 300R art. Check valve Built-in Built-in art. **Oil filtre** 00 MV 300R 07 00 MV 300R 07 art. Suction filtre FC 60 FC 60 art. Built-in Ballast v<mark>alve</mark> art. Built-in

3D drawings available

X

at www.vuototecnica.net

7.48

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

cfm= cum/h x 0.588; inch Hg= mbar x 0.0295; psi= bar (g) x 14.6

LUBRICATED VACUUM PUMP ACCESSORIES AND SPARE PARTS

	Art.	Quantity	For pump art.
Fibre vanes	00 VTL 02 10	4	VTL 2
	00 VTL 04 10	4	VTL 4
	00 VTL 05 10	6	VTL 5
	00 VTL 10 10	6	VTL 10
	00 VTL 10F 10	6	VTL 10/F
	00 VTL 15F 10	6	VTL 15/F
	00 VTL 20F 10	6	VTL 20/F
	00 VTL 25FG 10	6	VTL 25/FG
	00 VTL 30FG 10	6	VTL 30/FG
	00 VTL 35FG 10	6	VTL 35/FG
	00 VTL 40G1 10	6	VTL 40/G1
	00 VTL 50G1 10	6	VTL 50/G1
	00 VTL 65G1 10	6	VTL 65/G1
	00 VTL 75G1 10	6	VTL 75/G1
	00 VTL 90G1 10	6	VTL 90/G1
	00 VTL 105G1 10	6	VTL 105/G1
	00 VTL 06 10	3	VTL 6 CC
	00 MV 20 10	3	MV 20
	00 MV 40 10	3	MV 40
	00 MV 60 10	3	MV 60
	00 MV 100 10	3	MV 100
	00 MV 160R 10	3	MV 160R
	00 MV 200R 10	3	MV 200R
	00 MV 300R 10	3	MV 300R
Sealing kits	00 KIT VTL 02	1	VTL 2
	00 KIT VTL 04	1	VTL 4
	00 KIT VTL 05	1	VTL 5
-	00 KIT VTL 10	1	VTL 10
	00 KIT VTL 10F	1	VTL 10/F
$(()) \square$	00 KIT VTL 15F	1	VTL 15/F
	00 KIT VTL 20F	1	VTL 20/F
	00 KIT VTL 25FG	1	VTL 25/FG
	00 KIT VTL 30FG	1	VTL 30/FG
00	00 KIT VTL 35FG	1	VTL 35/FG
	00 KIT VTL 40G1	1	VTL 40/G1
	00 KIT VTL 50G1	1	VTL 50/G1
	00 KIT VTL 65G1	1	VTL 65/G1
	00 KIT VTL 75G1	1	VTL 75/G1
	00 KIT VTL 90G1	1	VTL 90/G1
	00 KIT VTL 105G1	1	VTL 105/G1
	00 KIT VTL 06	1	VTL 6 CC
	00 KIT MV 20	1	MV 20
	00 KIT MV 40	1	MV 40
	00 KIT MV 60	1	MV 60
	00 KIT MV 100	1	MV 100
	00 KIT MV 160R	1	MV 160R
	00 KIT MV 200R	1	MV 200R
	00 KIT MV 300R	1	MV 300R

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P

LUBRICATED VACUUM PUMP ACCESSORIES AND SPARE PARTS

	Aiti	Qualitity	roi puilip alt.
Check valves	10 01 15	1	VTL 2
	10 02 15	1	VTL 4
	10 02 10	1	VTL 5
-	10 03 10	1	VTL 10
			VTL 10/F
			V/TL 15/E
			VTL 20/E
1990	10.04.10		VTL 20/F
and the second s	10 04 10	1	VIL 25/FG
			VTL 30/FG
a provide the second se			VTL 35/FG
	10 05 10	1	VTL 40/G1
			VTL 50/G1
			VTL 65/G1
	10.06.10	1	VTL 75/G1
			VTL 90/G1
	10.07.10	1	VTL 105/01
	10 07 10	I	VIL 105/GI
Suction filtros	ED E	1	
Suction nitres	FB 5		VIL 2
	FB 10	1	VIL 4
			VTL 5
			VTL 6 CC
	FB 20	1	VTL 10
			VTL 10/F
C C C C			VTL 15/F
			VTL 20/F
	ER 25	1	VTL 25/EC
	FB 20	I	VTL 25/FG
			VIL 30/FG
T			VIL 35/FG
The second second	FB 30	1	VTL 40/G1
Contraction of the second			VTL 50/G1
and the			VTL 65/G1
	FB 40	1	VTL 75/G1
			VTL 90/G1
	FB 50	1	VTL 105/G1
	FC 10	1	
	10 10	I	
			VIL 5
			VIL 6 CC
	FC 20	1	VIL 10
			VTL 10/F
			VTL 15/F
			VTL 20/F
			MV 20
			MV 20A
	FC 25	1	VTL 25/FG
			VTL 30/EG
	F0 00	4	
	FU 30	I	VIL 40/G1
			VIL 50/G1
			VTL 65/G1
	FC 35	1	MV 40
			MV 40A
			MV 60
			MV 60A
			MV 100
			MV 100A
	EC 40	4	
	FU 4U	I	
			VIL 90/G1
	FC 50	1	VTL 105/G1
			MV 160R
			MV 160RA
	FC 60	1	MV 200R
			MV 200RA
			200.01
			MV 300R
			MV 300R

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7.50

X

LUBRICATED VACUUM PUMP ACCESSORIES AND SPARE PARTS

Adjustable drip oiler		o	
Adjustable drip oller		Quantity	For pump art.
	UU VIL UU II		VTLP - All
-37			
Oil level switch	00 LP VTL 99		VTLP - All
Oil filtre	00 LP VTL 40		VTLP - All
	00 MV 160R 07		MV 160R
	00 MV 200R 07		MV 200R
	00 MV 300R 07		MV 300R
Deoiling cartridge	00 VTL 75G1 29	1	VTL 75/G1
	00 VTL 90G1 29	1	VTL 90/G1
	00 VTL 105G1 29	1	VTL 105/G1
	00 MV 20 11	1	MV 20
			MV 20A
	00 MV 40 50	1	MV 40
	00 11/ 00 50		MV 40A
	00 MV 60 50	1	MV 60
	00 MU 100 00	0	MV 60A
	00 MV 100 06	2	MV 100
		0	MV 100A
		Z	MV 160PA
	00 MV 200P 50	0	
	00 1017 20011 30	2	MV 200R
	00 MV 300B 50	3	MV 300R
		0	MV 300RA
Ballast valve	VZ 01	1	MV 20
			MV 20A
-	VZ 02	1	MV40
2			MV 40A
			MV 60
			MV 60A
2000 Carlos			MV 100
			MV 100A
Mineral oil	ISO 32 - 68 - 100 - 150 - 220		Packages of I 2 - 5 - 10
	VT OIL 32 - 68 - 100		Packages of I 2 - 5 - 10
Synthetic oil			

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DRY VACUUM PUMPS VTS 2 AND 4

These small dry vacuum pumps have a suction capacity of 2 and 4 cum/h. The particular shape of the working chamber and the special graphite, with which the locking flanges and vanes are made, allow these pumps to operate with no lubrication.

The rotor is cantilevered-fitted on the motor shaft, thus reducing overall dimensions to the minimum. The motor and the pump are cooled by the motor fan (surface cooling). A filtre that functions as a silencer is installed on the suction inlet.

We strongly recommend installing a filtre on the suction inlet against possible impurities. These pumps are **not recommended** when the fluid to be sucked contains water or oil vapours or condensations.

Vacuum pumps VTS 2 and 4 can also be supplied with single-phase electric motor.











To calculate the emptying time of a volume V1, apply the formula $11 = \frac{1 \times V1}{100}$

Curve regarding capacity (referring to the suction pressure)
Curve regarding capacity (referring to a 1013 bar pressure)
Curve regarding the emptying of a 100-litre volume

- V1 : Volume to be emptied
- t1 : Time to be calculated (sec)
 - t : Time obtained in the table (sec)



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3D







Art.		VTS	52	VTS 4		
Frequency		50Hz	60Hz	50Hz	60Hz	
Capacity	m³/h	2.0	2.4	4.0	4.8	
Final pressure	mbar abs.	15	60	150)	
Motor execution	3~	230/400±10%	275/480±10%	230/400±10%	275/480±10%	
Volt	1~	230±	10%	230±1	10%	
Motor power	3~	0.13	0.15	0.15	0.18	
Kw	1~	0.13	0.15	0.15	0.18	
Motor protection	IP	5	4	54		
Rotation speed	rev/min ⁻¹	2800	3300	2800	3300	
Motor shape		Spe	cial	Spec	ial	
Motor size		5	6	63		
Noise level	dB(A)	64	66	64	66	
Max. weight	3~	5.3		6.8		
Kg	1~	5.	5	7.0)	
Α		21	7	25	1	
В		18	80	186	5	
C		12	21	13	1	
D		6	6	78		
E		7	1	81		
F		8	D	92		
н		3	5	45		
I		9	D	100)	
L		7	9	73		
М		1	1	13		
R	Ø gas	G1/	/4"	G1/4	1"	
Accessories and spare parts						
4 graphite vanes	art.	00 VTS	02 10	00 VTS	04 10	
Perforated graphite disc	art.	00 VTS	02 12	00 VTS	02 12	
Non-perforated graphite disc	art.	00 VTS	02 16	00 VTS	02 16	
Sealing kit	art.	00 KIT 1	VTS 02	00 KIT V	TS 04	
Check valve	art.	10 0	1 15	10 01	15	
Suction filtre	art.	FB	5	FB	5	

Note: The pump will be supplied with single-phase electric motor by adding the letter M to the article (E.g.: VTS 2 M).

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

X

 $cfm = cum/h \times 0.588$; inch Hg= mbar x 0.0295; psi= bar (g) x 14.6

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DRY VACUUM PUMPS VTS 6 DC WITH DC MOTOR

The extremely reduced size, the excellent final vacuum level that can be reached, the total absence of lubrication and the DC motor with which it is equipped, are the main features of this rotating vane vacuum pump.

This pump has a monobloc structure with the rotor fitted directly on the motor shaft. Both the motor and the pump are cooled by the motor fan (surface cooling).

A filtre that functions as a silencer is installed on the suction inlet.

We strongly recommend installing a filtre on the suction inlet against possible impurities. These pumps are **not recommended** when the fluid to be sucked contains water or oil vapours or condensations.

Pumps VTS 6 DC can only be supplied with DC motor (service S1) conform with the EMC (89/336/EEC) Directive.





To calculate the emptying time of a volume V1, apply the formula $1 = \frac{1 \times V1}{100}$

Curve regarding capacity (referring to the suction pressure)
Curve regarding capacity (referring to a 1013 bar pressure)
Curve regarding the emptying of a 100-litre volume

- V1 : Volume to be emptied
- t1 : Time to be calculated (sec)
- t : Time obtained in the table (sec)

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Art.		VTS 6 CC
Capacity	m³/h	6.0
Final pressure	mbar abs.	150
Motor execution	Volt	24 CC
Motor power	Kw	0.28
Max. absorption at 24V/CC	A	15
Motor protection	IP	54
Rotation speed	rev/min-1	3000
Motor shape		Special
Motor size		71
Noise level	dB(A)	72
Max. weight	Kg	9.5
Α		290
В		136
C		193
D		124
E		65
F		101
H		131
I		112
L		12
M		28
N		48
R	Ø gas	G1/4"
Accessories and spare parts		
4 vanes	art.	00 VTS 06 CC 10
Sealing kit	art.	00 KIT VTS 06 CC
Check valve	art.	10 01 15
Suction filtre	art.	FB 5

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

X

cfm= cum/h x 0.588; inch Hg= mbar x 0.0295; psi= bar (g) x 14.6

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DRY VACUUM PUMPS VTS 6 and 10

These dry vacuum pumps have a suction capacity of 6 and 10 cum/h. The particular shape of the working chamber and the special graphite, with which the locking flanges and vanes are made, allow these pumps to operate without any lubrication.

The rotor is cantilevered-fitted on the motor shaft, thus reducing overall dimensions to the minimum. The motor and the pump are cooled by the motor fan (surface cooling). A filtre that functions as a silencer is installed on the suction inlet..

We strongly recommend installing a filtre on the suction inlet against possible impurities. These pumps are not recommended when the fluid to be sucked contains water or oil vapours or condensations.

Pumps VTS 6 and 10 can also be supplied with single-phase electric motor.











To calculate the emptying time of a volume V1, apply the formula $11 = \frac{1 \times V1}{100}$

Curve regarding capacity (referring to the suction pressure) Curve regarding capacity (referring to a 1013 bar pressure) Curve regarding the emptying of a 100-litre volume

- V1 : Volume to be emptied
- t1 : Time to be calculated (sec)
 - t : Time obtained in the table (sec)

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Art.		VTS 6		VTS 10		
Frequency		50Hz	60Hz	50Hz	60Hz	
Capacity	m³/h	6.0	7.2	10.0	12.0	
Final pressure	mbar abs.	8	0	80		
Motor execution	3~	230/400±10%	275/480±10%	230/400±10%	275/480±10%	
Volt	1~	230±	:10%	230±10	%	
Motor power	3~	0.25	0.30	0.35	0.40	
Kw	1~	0.18	0.21	0.25	0.30	
Motor protection	IP	5	4	54		
Rotation speed	rev/min-1	1450	1740	1450	1740	
Motor shape		Spe	cial	Special		
Motor size		71 71				
Noise level	dB(A)	64	66	64	66	
Max. weight	3~	11.8		15.0		
Kg	1~	12	2.0	15.2		
Α		26	68	298		
В		21	10	180		
C		15	56	156		
D		5	5	55		
E		15	55	155		
F		5	8	88		
н		4	3	53		
I		11	15	115		
L		82	2.5	52.5		
M		12	2.5	12.5		
N		6	8	13		
R	Ø gas	G1.	/4"	G3/8"		
Accessories and spare parts	6					
6 graphite vanes	art.	00 VTS	06 10	00 VTS 10	10	
Front graphite disc	art.	00 VTS	06 08	00 VTS 10	12	
Rear graphite disc	art.	00 VTS	06 13	00 VTS 10	19	
Sealing kit	art.	00 KIT	VTS 06	00 KIT VTS	10	
Check valve	art.	10 0	1 15	10 02 1	0	
Suction filtre	art.	FB	5	FB 10/FC	10	

Note: The pump will be supplied with single-phase electric motor by adding the letter M to the article (E.g.: VTS 6 M).

3D drawings available at www.vuototecnica.net

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$ cfm = cu

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 $cfm = cum/h \times 0.588$; inch Hg= mbar x 0.0295; psi= bar (g) x 14.6

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DRY VACUUM PUMPS VTS 10/F, 15/F, 20/F and 25/F

These lubrication-free rotating vane vacuum pumps have a suction capacity of 10, 15, 20 and 25 cum/h. The particular shape of the working chamber and the special graphite, with which the locking flanges and vanes are made, allow these pumps to operate with no lubrication.

The pump rotor is fitted on the motor shaft and supported by independent bearings located on both the pump locking flanges. The pump is surface-cooled; the heat is dispersed from the especially finned external surface by a radial fan located between the motor and the pump.

A filtre that functions as a silencer is installed on the suction inlet.. We strongly recommend installing a filtre on the suction inlet against possible impurities. These pumps are **not recommended** when the fluid to be sucked contains water or oil vapours or condensations.



This range of pumps can be also supplied with single-phase electric motors.









To calculate the emptying time of a volume V1, apply the formula $11 = \frac{1 \times V1}{100}$

Curve regarding capacity (referring to the suction pressure)
Curve regarding capacity (referring to a 1013 bar pressure)
Curve regarding the emptying of a 100-litre volume

- V1 : Volume to be emptied
- t1 : Time to be calculated (sec)
 - t : Time obtained in the table (sec)

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Art.		VTS 10/F		VTS 15/F		
Frequency		50Hz	60Hz	50Hz	60Hz	
Capacity	m³/h	10.0	12.0	15.0	18.0	
Final pressure	mbar abs.	8	D	80		
Motor execution	3~	230/400±10%	275/480±10%	230/400±10%	275/480±10%	
Volt	1~	230±	10%	230±10)%	
Motor power	3~	0.55	0.66	0.55	0.66	
Kw	1~	0.55	0.66	0.55	0.66	
Motor protection	IP	5	4	54		
Rotation speed	rev/min ⁻¹	1450	1740	1450	1740	
Motor shape		Spe	cial	Specia	al	
Motor size		8	C	80		
Noise level	dB(A)	64	66	65	67	
Max. weight	3~	22.1		24.1		
Kg	1~	22.5		24.5		
Α		38	388			
В		26	0	260		
C		18	7	187		
D		24	4	24		
E		34	0	340		
F		24	4	44		
н		13	3	133		
I		13	0	130		
L		5	5	55		
М		7	5	75		
N		5:	3	63		
R	Ø gas	G1/	2"	G1/2	9	
Accessories and spare parts						
6 graphite vanes	art.	00 VTS	10F 10	00 VTS 15	5F 10	
Front graphite disc	art.	00 VTS	10F 21	00 VTS 10	DF 21	
Rear graphite disc	art.	00 VTS	10F 21	00 VTS 10	DF 21	
Sealing kit	art.	00 KIT V	TS 10F	00 KIT VTS	S 15F	
Check valve	art.	10 03	3 10	10 03	10	
Suction filtre	art.	FB 20/	FC 20	FB 20/FC	20	

Note: The pump will be supplied with single-phase electric motor by adding the letter M to the article (E.g.: VTS 10/F M).

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Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

X

cfm= cum/h x 0.588; inch Hg= mbar x 0.0295; psi= bar (g) x 14.6





drawings available at www.vuototecnica.net

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Art.		VTS	20/F	VTS 2	VTS 25/F		
Frequency		50Hz	60Hz	50Hz	60Hz		
Capacity	m³/h	20.0	24.0	25.0	30.0		
Final pressure	mbar abs.	8	80	80			
Motor execution	3~	230/400±10%	275/480±10%	230/400±10%	275/480±10%		
Volt	1~	230±	±10%	230±1	0%		
Motor power	3~	0.88	1.05	0.88	1.05		
Kw	1~	0.88	1.05	0.88	1.05		
Motor protection	IP	5	54	54			
Rotation speed	rev/min-1	1450	1740	1450	1740		
Motor shape		Spe	ecial	Speci	al		
Motor size		8	80	80			
Noise level	dB(A)	65	67	65	67		
Max. weight	3~	27.4		28.1			
Kg	1~	27.9		28.6			
Α		42	28	428			
В		2	60	260			
C		1	87	187			
D		2	24	24			
E		34	40	385			
F		6	64	19			
H		1:	33	133			
I		1:	30	130)		
L		5	5	55			
Μ		7	75	75			
N		7	'3	73			
R	Ø gas	G1	/2"	G3/4"			
Accessories and spare parts							
6 graphite vanes	art.	00 VTS	20F 10	00 VTS 2	5F 10		
Front graphite disc	art.	00 VTS	10F 21	00 VTS 1	0F 21		
Rear graphite disc	art.	00 VTS	10F 21	00 VTS 1	0F 21		
Sealing kit	art.	00 KIT 1	VTS 20F	00 KIT VT	S 25F		
Check valve	art.	10 0	03 10	10 04	10		
Suction filtre	art.	FB 20	/FC 20	FB 25/F	C 25		

Note: The pump will be supplied with single-phase electric motor by adding the letter M to the article (E.g.: VTS 20/F M).

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

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cfm= cum/h x 0.588; inch Hg= mbar x 0.0295; psi= bar (g) x 14.6

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DRY VACUUM PUMPS VTS 10/FG ÷ 35/FG

These lubrication-free rotating vane vacuum pumps have a suction capacity of 10, 15, 20, 25, 30 and 35 cum/h. The particular shape of the working chamber and the special graphite, with which the locking flanges and vanes are made, allow these pumps to operate with no lubrication.

The pump rotor is fitted on the motor shaft and supported by independent bearings located on both the pump locking flanges.

Therefore, the pump and the electric motor are two independent units connected to each other by an elastic transmission joint.

All this allows using standard electric motors in the shapes and sizes indicated in the table.

The pump is surface-cooled; the heat is dispersed from the especially finned external surface by a radial fan located between the motor and the pump. A filtre that functions as a silencer is installed on the suction inlet.

We strongly recommend installing a filtre on the suction inlet against possible impurities. These pumps are **not recommended** when the fluid to be sucked contains water or oil vapours or condensations.

The pumps with capacity up to 20 cum/h can also be supplied with single-phase electric motors.















To calculate the emptying time of a volume V1, apply the formula $11 = \frac{1 \times V1}{100}$

Curve regarding capacity (referring to the suction pressure)
Curve regarding capacity (referring to a 1013 bar pressure)
Curve regarding the emptying of a 100-litre volume

- V1 : Volume to be emptied
- t1 : Time to be calculated (sec)
- t : Time obtained in the table (sec)

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Art.		VTS	10/FG	VTS 1	15/FG	VTS 2	20/FG
Frequency		50Hz	60Hz	50Hz	60Hz	50Hz	60Hz
Capacity	m³/h	10.0	12.0	15.0	18.0	20.0	24.0
Final pressure	mbar abs.		80	8	0	8	80
Motor execution	3~	230/400±10%	275/480±10%	230/400±10%	275/480±10%	230/400±10%	275/480 ±10%
Volt		230	±10%	230±	:10%	230±	±10%
Notor power	3~	0.55	0.66	0.55	0.66	0.88	1.05
Kw	1~	0.55	0.66	0.55	0.66	0.88	1.05
Notor protection	IP		54	5	4	5	54
otation speed	rev/min-1	1450	1740	1450	1740	1450	1740
Notor shape		E	314	B	14	B	14
Notor size			80	8	0	8	80
loise level	dB(A)	64	66	65	67	65	67
lax. weight	3~	22.0		24.0		27.3	
Kg	1~	22.4		24.4		27.8	
l		430		450		470	
}			265	265		265	
;			170	17	70	1	70
)			65	65		65	
		3	340	340		340	
			25	45		65	
			133	133		133	
			130	130		130	
			55	55		55	
1			80	80		80	
l			73	83		9	03
ł	Ø gas	G	1/2"	G1/2"		G1/2"	
Accessories and spare parts							
graphite vanes	art.	00 VTS	10FG 10	00 VTS 15FG 10		00 VTS	20FG 10
ront graphite disc	art.	00 VTS	10FG 17	00 VTS	15FG 17	00 VTS	20FG 17
lear graphite disc	art.	00 VTS	10FG 26	00 VTS	15FG 26	00 VTS	20FG 26
ealing kit	art.	00 KIT	VTS 10FG	00 KIT V	TS 15FG	00 KIT V	TS 20FG
check valve	art.	10	03 10	10 0	3 10	10 0	3 10
Suction filtre	art.	FB 20	D/FC 20	FB 20	/FC 20	FB 20	/FC 20

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Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

cfm= cum/h x 0.588; inch Hg= mbar x 0.0295; psi= bar (g) x 14.6

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Art.		VTS 25/FG		VTS 3	0/FG	VTS 35/FG		
Frequency		50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	
Capacity	m³/h	25.0	30.0	30.0	36.0	35.0	42.0	
Final pressure	mbar abs.	8	30	80	D	8	30	
Motor execution	3~	230/400±10%	275/480±10%	230/400±10%	275/480±10%	230/400±10%	275/480 ±10%	
Volt								
Motor power	3~	0.88	1.05	1.00	1.20	1.00	1.20	
Kw								
Motor protection	IP	Į	54	54	4	Ę	54	
Rotation speed	rev/min-1	1450	1740	1450	1740	1450	1740	
Motor shape		E	314	B1	4	В	14	
Motor size		8	30	80	0	8	30	
Noise level	dB(A)	66	68	68	70	70	72	
Max. weight	3~	2	8.0	32	.0	34	4.0	
Kg								
Α		4	70	49	0	5	10	
В		2	65	26	5	265		
C		1	70	17	0	170		
D		(65	6	5	65		
E		3	85	38	5	3	85	
F			20	40	0	6	60	
H		1	33	13	33	1	33	
I		1	30	13	80	1	30	
L		;	55	55	5	Ę	55	
M		8	30	80	0	8	30	
N		-	73	83	3	ę	93	
R	Ø gas	G	3/4"	G3/	/4"	G3	3/4"	
Accessories and spare parts								
6 graphite vanes	art.	00 VTS	25FG 10	00 VTS 3	30FG 10	00 VTS	35FG 10	
Front graphite disc	art.	00 VTS	25FG 17	00 VTS 3	30FG 18	00 VTS	35FG 18	
Rear graphite disc	art.	00 VTS	25FG 26	00 VTS 3	30FG 27	00 VTS	35FG 27	
Sealing kit	art.	00 KIT \	/TS 25FG	00 KIT <mark>V</mark>	TS 30FG	00 KIT \	/TS 35FG	
Check valve	art.	10 (04 10	10 04	4 10	10 0	04 10	
Suction filtre	art.	FB 25	5/FC 25	FB 25/	FC 25	FB 25	/FC 25	

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

X

cfm= cum/h x 0.588; inch Hg= mbar x 0.0295; psi= bar (g) x 14.6

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DRY VACUUM PUMP ACCESSORIES AND SPARE PARTS

	Art.	Quantity	For pump art.
Graphite vanes	00 VTS 02 10	4	VTS 2
	00 VTS 04 10	4	VTS 4
	00 VTS 06 CC 10	4	VTS 6 CC
	00 VTS 06 10	6	VTS 6
	00 VTS 10 10	6	VTS 10
AL	00 VTS 10F 10	6	VTS 10/F
	00 VTS 15E 10	6	VTS 15/F
	00 VTS 20E 10	6	VTS 20/F
	00 VTS 25E 10	6	VTS 25/F
	00 VTS 25F 10	0	
	00 VIS 10FG 10	6	
	00 VIS 15FG 10	6	VIS I5/FG
	00 VIS 20FG 10	6	VIS 20/FG
	00 VTS 25FG 10	6	VTS 25/FG
	00 VTS 30FG 10	6	VTS 30/FG
	00 VTS 35FG 10	6	VTS 35/FG
Perforated granhi	te 00 VTS 02 12	1	VTS 2
dico		·	VTS 4
uisc			104
Non-perforated	00 \/TS 02 16	1	VITS 2
mon-periorateu	00 113 02 10	I	
graphite disc			V15 4
Front graphito	00 \/T\$ 06 08	1	VTS 6
diaa		1	VTS 0
uisc	00 VTS 10 12	1	VIS 10
	00 VIS TOF 21	I	VIS IU/F
			VIS 15/F
			VTS 20/F
			VTS 25/F
	00 VTS 10FG 17	1	VTS 10/FG
	00 VTS 15FG 17	1	VTS 15/FG
	00 VTS 20FG 17	1	VTS 20/FG
	00 VTS 25FG 17	1	VTS 25/FG
	00 VTS 30FG 18	1	VTS 30/FG
	00 VTS 35FG 18	1	VTS 35/FG
Door graphita	00 \///2 06 12	1	
near graphine	00 10 10 10	1	V15 0
aisc	00 VTS 10 19	1	VIS 10
	00 VIS TOF 21	I	VIS IO/F
			VIS 15/F
			VTS 20/F
			VTS 25/F
	00 VTS 10FG 26	1	VTS 10/FG
	00 VTS 15FG 26	1	VTS 15/FG
	00 VTS 20FG 26	1	VTS 20/FG
	00 VTS 25FG 26	1	VTS 25/FG
	00 VTS 30FG 27	1	VTS 30/FG
	00 VTS 35FG 27	1	VTS 35/FG
Sealing kits	00 KIT VTS 02	1	VTS 2
-	00 KIT VTS 04	1	VTS 4
	00 KIT VTS 06 CC	1	VTS 6 CC
- () (00 KIT VTS 06	1	VTS 6
	00 KIT VTS 10	1	VTS 10

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DRY VACUUM PUMP ACCESSORIES AND SPARE PARTS

	Art.	Quantity	For pump art.
	00 KIT VTS 10F	1	VTS 10/F
	00 KIT VIS 15F	1	VIS 15/F
	00 KIT VTS 20F	1	VTS 20/F
	00 KIT VTS 25F	1	VTS 25/F
	00 KIT VTS 10FG	1	VTS 10/FG
	00 KIT VTS 15FG	1	VTS 15/FG
	00 KIT VTS 20FG	1	VTS 20/FG
	00 KIT VTS 25FG	1	VTS 25/FG
	00 KIT VTS 30FG	1	VTS 30/FG
	00 KIT VTS 35FG	1	VTS 35/FG
Check valves	10 01 15	1	VTS 2
			VTS 4
			VTS 6 CC
			VTS 6
	10.02.10	1	VTS 10
	10.03.10	1	VTS 10/F
and the second sec	10 03 10	·	VTS 15/E
and the second s			
0			V15 20/F
			VTS 10/FG
			VTS 15 /FG
			VTS 20/FG
	10 04 10	1	VTS 25/F
			VTS 25/FG
			VTS 30/FG
			VTS 35/FG
Suction filtres	FB 5	1	VTS 2
			VTS 4
			VTS 6 CC
			VTS 6
	FB 10	1	VTS 10
	FB 20	1	VTS 10/F
	1020	·	VTS 15/F
			VTS 20/F
			VTS 20/1
			VIS 15/FG
	50.05		VIS 20/FG
	FB 25	1	VIS 25/F
			VIS 25/FG
			VTS 30/FG
			VTS 35/FG
	FC 10	1	VTS 10
	FC 20	1	VTS 10/F
TUNT			VTS 15/F
			VTS 20/F
			VTS 10/FG
A CONTRACT			VTS 15/FG
			VTS 20/FG
A CONTRACTOR	FC 25	1	VTS 25/F
and a second			VTS 25/FG
			VIS 35/FG

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MINI PUMPSETS – GENERAL DESCRIPTION

Mini pumpsets are independent vacuum-producing units with reduced size. They are composed of:

- A small welded sheet steel tank with perfect vacuum seal.
- A low-capacity dry or lubricated rotating vane vacuum pump.
- A mini vacuum switch for adjusting the maximum vacuum level.
- A vacuum gauge for reading the vacuum level.
- A switchgear enclosed in a special casing.
- A manual valve for vacuum interception.
- A cock for condensation drainage.

The vacuum level, preset via the mini vacuum switch is automatically maintained in the tank.

Mini pumpsets can also be supplied with single-phase or DC electric motors and they are suited for equipping fixed or mobile working units that require vacuum, such as:

- Trolleys with vacuum cups for fixing and transporting glass and crystals.
- Vacuum clamping systems for ski maintenance, marble processing and for polishing copper, pewter or silver objects.
- Hoists with vacuum cups for lifting television sets and household appliances for glass installation in door and window frames, for laying ceramic tiles, for feeding sheet metal into presses, etc.



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Art	Tank	Pump	Motor	Switchgear	С	D	E	F	Н	Weight	Filtre	
ALC			execution								accessories	
	Litres	Mod.	Volt	art.						Kg	art.	
D0 06 VTS 2	6	VTS 2	3 ~ 230/400-50Hz	D0 06 92	60	220	135	181	230	14.8	FB 10 / FC 10	
DO 06 VTS 2 M	6	VTS 2 M	1 ~ 230-50Hz	D0 06 90	60	220	135	181	230	15.0	FB 10 / FC 10	1
D0 06 VTS 4	6	VTS 4	3 ~ 230/400-50Hz	D0 06 92	60	253	135	191	230	16.3	FB 10 / FC 10	
D0 06 VTS 4 M	6	VTS 4 M	1 ~ 230-50Hz	D0 06 90	60	253	135	191	230	16.5	FB 10 / FC 10	-
D0 06 VTS 6	6	VTS 6	3 ~ 230/400-50Hz	D0 06 92	60	270	135	216	230	21.3	FB 10 / FC 10	-
D0 06 VTS 6 M	6	VTS 6 M	1 ~ 230-50Hz	D0 06 90	60	270	135	216	230	21.5	FB 10 / FC 10	
D0 06 VTS 6 CC	6	VTS 6 CC	= 24-CC	D0 06 93	60	290	135	253	230	18.8	FB 10 / FC 10	
DO 10 VTC 0	10		2 020/400 5011-		100	000	175	001	970	10.0	FR 10 / FC 10	-
	10	VIS Z	3 ~ 230/400-50Hz	DU 06 92	100	220	1/5	221	270	19.0	FB 10 / FC 10	
DU 10 VIS 2 M	10	V15 2 IVI	1 ~ 230-50Hz	D0 06 90	100	220	1/5	221	270	19.2	FB 107 FC 10	:
DO 10 VTS 4	10	VTS 4	3 ~ 230/400-50Hz	D0 06 92	100	253	175	231	270	20.5	FB 10 / FC 10	
DO 10 VTS 4 M	10	VTS 4 M	1 ~ 230-50Hz	D0 06 90	100	253	175	231	270	20.7	FB 10 / FC 10	
DO 10 VTS 6	10	VTS 6	3 ~ 230/400-50Hz	D0 06 92	100	270	175	256	270	25.5	FB 10 / FC 10	
DO 10 VTS 6 M	10	VTS 6 M	1 ~ 230-50Hz	D0 06 90	100	270	175	256	270	25.7	FB 10 / FC 10	
DO 10 VTS 6 CC	10	VTS 6 CC	= 24-CC	D0 06 93	100	290	175	293	270	21.2	FB 10 / <mark>FC 10</mark>	ç
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Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

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GAS-NPT thread adapters available at page 1.117

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	Art	Tank	Pump	Motor	Switchgear	С	D	E	F	Н	Weight	Filtre
	Alt			execution								accessories
		Litres	Mod.	Volt	art.						Kg	art.
net	D0 06 VTL 2	6	VTL 2	3 ~ 230/400-50Hz	D0 06 92	60	300	135	198	230	15.2	FB 10 / FC 10
ca.	D0 06 VTL 2 M	6	VTL 2 M	1 ~ 230-50Hz	D0 06 90	60	300	135	198	230	15.5	FB 10 / FC 10
cui	D0 06 VTL 4	6	VTL 4	3 ~ 230/400-50Hz	D0 06 92	60	330	135	198	230	16.8	FB 10 / FC 10
ote	D0 06 VTL 4 M	6	VTL 4 M	1 ~ 230-50Hz	D0 06 90	60	330	135	198	230	17.0	FB 10 / FC 10
lot	D0 06 VTL 5	6	VTL 5	3 ~ 230/400-50Hz	D0 06 92	60	260	135	310	230	24.0	FB 10 / FC 10
1.	D0 06 VTL 5 M	6	VTL 5 M	1 ~ 230-50Hz	D0 06 90	60	260	135	310	230	24.5	FB 10 / FC 10
M	D0 06 VTL 6 CC	6	VTL 6 CC	= 24-CC	D0 06 93	60	290	135	260	230	19.8	FB 10 / FC 10
t												
e a	D0 10 VTL 2	10	VTL 2	3 ~ 230/400-50Hz	D0 06 92	100	300	175	238	270	19.4	FB 10 / FC 10
labl	D0 10 VTL 2 M	10	VTL 2 M	1 ~ 230-50Hz	D0 06 90	100	300	175	238	270	19.7	FB 10 / FC 10
Ivai	D0 10 VTL 4	10	VTL 4	3 ~ 230/400-50Hz	D0 06 92	100	330	175	238	270	21.0	FB 10 / FC 10
JS S	D0 10 VT <mark>L 4 M</mark>	10	VTL 4 M	1~ 230-50Hz	D0 06 90	100	330	175	238	270	21.2	FB 10 / FC 10
vinç	DO 10 VT <mark>L 5</mark>	10	VTL 5	3 ~ 230/400-50Hz	D0 06 92	100	260	175	350	270	28.2	FB 10 / FC 10
Irav	D0 10 VT <mark>L 5 M</mark>	10	VTL 5 M	1 ~ 2 <mark>3</mark> 0-50Hz	D0 06 90	100	260	175	350	270	28.7	FB 10 / FC 10
C	DO 10 VT <mark>L 6 CC</mark>	10	VTL 6 CC	= 24-CC	D0 06 93	100	290	175	260	270	24.0	FB 10 / FC 10
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Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

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Art	Tank	Pump	Motor	Switchgear	D	F	Н	Weight	Filtre	
AI 6			execution						accessories	
	Litres	Mod.	Volt	art.				Kg	art.	let
DO 20 VTL 5	20	VTL 5	3 ~ 230/400-50Hz	D0 06 92	320	345	270	38.5	FB 20 / FC 20	33.1
DO 20 VTL 5 M	20	VTL 5 M	1 ~ 230/50Hz	D0 06 90	320	345	270	39.0	FB 20 / FC 20	nic
DO 20 VTL 6 CC	20	VTL 6 CC	= 24-CC	D0 06 93	400	295	270	34.3	FB 20 / FC 20	tec
DO 20 VTL 10	20	VTL 10	3 ~ 230/400-50Hz	D0 06 92	352	345	270	44.5	FB 20 / FC 20	oto
DO 20 VTL 10 M	20	VTL 10 M	1 ~ 230-50Hz	D0 06 90	352	345	270	45.0	FB 20 / FC 20	
D0 20 VTL 10/F	20	VTL 10/F	3 ~ 230/400-50Hz	D0 06 92	390	360	270	49.0	FB 20 / FC 20	MM
DO 20 VTL 10/F M	20	VTL 10/F M	1 ~ 230-50Hz	D0 06 90	390	360	270	49.5	FB 20 / FC 20	A
D0 20 VTL 15/F	20	VTL 15/F	3 ~ 230/400-50Hz	D0 06 92	410	360	270	51.0	FB 20 / FC 20	9
DO 20 VTL 15/F M	20	VTL 15/F M	3 ~ 230/400-50Hz	D0 06 90	410	360	270	51.5	FB 20 / FC 20	lde
D0 20 VTL 20/F	20	VTL 20/F	3 ~ 230/400-50Hz	D0 06 92	430	360	270	54.0	FB 20 / FC 20	vail
DO 20 VTL 20/F M	20	VTL 20/F M	1~ 230-50Hz	D0 06 90	430	360	270	54.5	FB 20 / FC 20	C C C
DO 20 MV 20	20	MV 20	3 ~ 230/400-50Hz	D0 06 92	430	315	270	45.5	FB 20 / FC 20	/ino
DO 20 MV 20 M	20	MV 20 M	1 ~ 230-50Hz	D0 06 90	430	315	270	46.0	FB 20 / FC 20	raw

Note: As a standard, MV 20 pumps are equipped with an FC 20 filtre on the suction inlet.



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HORIZONTAL PUMPSETS – GENERAL DESCRIPTION

As a standard, these pumpsets are built with various capacities and they are composed of:

- A horizontal welded sheet steel tank with perfect vacuum seal.
- A rotating vane vacuum pump to be selected according to the required suction capacity and vacuum degree.
- A vacuum switch for adjusting the vacuum level within which to operate.
- A vacuum gauge for a direct reading of the vacuum level in the tank.
- A switchgear enclosed in a special plastic casing for tanks from 25 to 50 litres and in a watertight metal casing for tanks of 100 litres upwards.
- A manual valve for vacuum interception.
- A cock for condensation drainage.

The vacuum level, preset via the mini vacuum switch is automatically maintained in the tank. The pump operation can be both continuous or automatic.

Pumpsets are normally used for handling particularly heavy or valuable loads since, in case of electricity failure, they allow the vacuum cups to maintain the grip for a certain amount of time, according to the tank capacity.

These pumpsets are recommended for multi-point applications, to centralise vacuum.

These pumpsets offer many advantages in energy consumption, since the pump operates only when required by the machine.



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HORIZONTAL PUMPSETS D0 25 ...



Art.	Tank	Pump	Motor	Switchgear	С	Н	R	Weight	Filtre
			execution						accessories
	Litres	Mod.	Volt	art.			Ø	Kg	art.
D0 25 VTL 5	25	VTL 5	3 ~ 230/400-50Hz	D0 06 92	540	450	G1/2"	33.5	FB 20 / FC 20
D0 25 VTL 5 M	25	VTL 5 M	1 ~ 230/50Hz	D0 06 90	540	450	G1/2"	34.0	FB 20 / FC 20
D0 25 VTL 6 CC	25	VTL 6 CC	= 24-CC	D0 06 93	480	450	G1/2"	29.3	FB 20 / FC 20
D0 25 VTL 10	25	VTL 10	3 ~ 230/400-50Hz	D0 06 92	540	450	G1/2"	39.5	FB 20 / FC 20
D0 25 VTL 10 M	25	VTL 10 M	1 ~ 230-50Hz	D0 06 90	540	450	G1/2"	40.0	FB 20 / FC 20

Note: By adding the letters SR, the pumpset will be supplied with wheels (E.g.: D0 25 VTL 10 SR).



Note: By adding the letters SR, the pumpset will be supplied with wheels (E.g.: D0 50 VTL 10 SR).

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Note: By adding the letters SR, the pumpset will be supplied with wheels (E.g.: D0 100 VTL 15/F S)

HORIZONTAL PUMPSETS DO 150 ...



Note: By adding the letters SR, the pumpset will be supplied with wheels (E.g.: D0 150 VTL 30/FG SR). As a standard, all MV... pumps are equipped with an FC... filtre adjusted to the suction connection size.

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D0 100 90

988

940

G1"1/2

186.3

FB 50 / FC 50

Note: By adding the letters SR, the pumpset will be supplied with wheels (E.g.: D0 300 MV 100 SR).

3 ~ 230/400-50Hz

MV 160R



Note: As a standard, all MV... pumps are equipped with an FC... filtre adjusted to the suction connection size.

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DO 300 MV 160R

300

GAS-NPT thread adapters available at page 1.117

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Art		Tank	Pump	Motor	Switchgear	С	Н	R	Weight	Filtre
Alt				execution						accessories
		Litres	Mod.	Volt	art.			Ø	Kg	art.
D0 100	0 <mark>mv 200</mark> r	1000	MV 200R	<mark>3</mark> ~ 230/400-50Hz	D0 100 91	1541	1250	G3"	405	FC 80
D0 100	0 <mark>MV 300</mark> R	1000	MV 300R	<mark>3</mark> ~ 400/690-50Hz	D0 100 91	1541	1250	G3"	432	FC 80

Note: As a standard, all MV... pumps are equipped with an FC... filtre adjusted to the suction connection size.

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HORIZONTAL SAFETY PUMPSETS – GENERAL DESCRIPTION

Safety pumpsets have been designed to centralise vacuum in all work environments such as hospitals, laboratories, etc. where vacuum must be guaranteed 24/7. They are composed of:

- A horizontal welded sheet steel tank with perfect vacuum seal.

- Two rotating vane vacuum pumps to be chosen according to the required suction capacity and vacuum level.

- Three vacuum swithces, of which two for adjusting the vacuum level within which each pump must operate, and one for determining the minimum safety value, under which the alarm sets off.

- A vacuum gauge for a direct reading of the vacuum level in the tank.

- Two manual valves for pump exclusion.

- A manual valve for vacuum interception.

- A cock for condensation drainage.

- A switchgear enclosed in a special watertight metal casing with switches for automatic or manual pump operation, an alarm device with sound and light signal, alarm-test buttons and hour-counter for counting the hours of actual operation of every single pump.

These pumpsets normally provide for the operation of one pump with subsequent automatic insertion of the second one for larger consumptions and when, for whatever reason, the plant vacuum level goes under the preset value.

The automatic timed inverter, located on the switchboard, accurately alternates the pump start-up, so that they are both subject to the same mechanical wear. The switchboard and remote alarm systems operate when the plant vacuum level is below the set safety value.



HORIZONTAL SAFETY PUMPSETS DSO 300 ...



Δrt	Tank	2 pumps	Motor	Switchgear	С	L	R	Weight	Recommended
Alt			execution						accessories
	Litres	Mod.	Volt	art.			Ø	Kg	art.
DSO 300 MV 40	300	MV 40	3 ~ 230/400-50Hz	DS0 300 90	940	1480	G1"1/2	196.8	FB 50 / FC 50
DSO 300 VTL 50/G1	300	VTL 50/G1	3 ~ 230/400-50Hz	DS0 300 90	990	1480	G1"1/2	214.8	FB 50 / FC 50
DSO 300 MV 60	300	MV 60	3 ~ 230/400-50Hz	DS0 300 90	940	1480	G1"1/2	212.8	FB 50 / FC 50
DSO 300 VTL 75/G1	300	VTL 75/G1	3 ~ 230/400-50Hz	DS0 300 90	1040	1480	G1"1/2	259.8	FB 50 / FC 50
DSO 300 MV 100	300	MV 100	3 ~ 230/400-50Hz	DS0 300 90	970	1480	G1"1/2	266.8	FB 50 / FC 50
DS0 300 VTL 105/G1	300	VTL 105/G1	3 ~ 230/400-50Hz	DS0 300 90	1080	1480	G1"1/2	302.0	FB 50 / FC 50

HORIZONTAL SAFETY PUMPSETS DSO 500 ...





	Art.	Tank	2 pumps	Motor	Switchgear	С	L	R	Weight	Filtre
				execution						accessories
		Litres	Mod.	Volt	art.			Ø	Kg	art.
D	SO 500 VTL 50/G1	500	VTL 50/G1	3 ~ 230/400-50Hz	DS0 300 90	1090	1510	G2"	287.8	FB 60 / FC 60
D	SO 500 MV 60	500	MV 60	3 ~ 230/400-50Hz	DS0 300 90	1030	1510	G2"	285.8	FB 60 / FC 60
D	SO 500 VTL 75/G1	500	VTL 75/G1	3 ~ 230/400-50Hz	DS0 300 90	1140	1510	G2"	332.8	FB 60 / FC 60
D	SO 500 <mark>MV 100</mark>	500	MV 100	3 ~ 230/400-50Hz	DS0 300 90	1060	1510	G2"	339.8	FB 60 / FC 60
Ď	SO 500 <mark>VTL 105</mark> /G1	500	VTL 105/G1	3~ 230/400-50Hz	DS0 300 90	1180	1510	G2"	375.0	FB 60 / FC 60
D	SO 500 <mark>MV 160</mark> R	500	MV 160R	<mark>3</mark> ~ 230/400-50Hz	DS0 300 90	1078	1510	G2"	399.0	FB 60 / FC 60

Note: As a standard, all MV... pumps are equipped with an FC... filtre adjusted to the suction connection size.

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HORIZONTAL SAFETY PUMPSETS DS0 1000 ...





126	775		-	Ħ	2	2350	H		drainage Art. 13 03 11
Art.	Tank	2 pumps	Motor	Switchgear	С	L	R	Weight	Filtre
	Litres	Mod	execution Volt	art.			Ø	Ka	accessories art.
SO 1000 MV 60	1000	MV 60	3 ~ 230/400-50Hz	DS0 300 90	1280	1730	G3"	342.8	FC 80
SO 1000 VTL 75/G1	1000	VTL 75/G1	3 ~ 230/400-50Hz	DS0 300 90	1380	1730	G3"	389.2	FC 80
SO 1000 MV 100	1000	MV 100	3 ~ 230/400-50Hz	DS0 300 90	1310	1730	G3"	396.8	FC 80
SO 1000 VTL 105/G1	1000	VTL 105/G1	3 ~ 230/400-50Hz	DS0 300 90	1430	1730	G3"	432.0	FC 80
SO 1000 MV 160R	1000	MV 160R	3 ~ 230/400-50Hz	DS0 300 90	1328	1730	G3"	452.0	FC 80
SO 1000 MV 200R	1000	MV 200R	3 ~ 230/400-50Hz	DS0 300 91	1421	1730	G3"	570.2	FC 80
SO 1000 MV 300R	1000	MV 300R	3 ~ 400/690-50Hz	DS0 300 91	1421	1730	G 3"	624.2	FC 80

Note: As a standard, all MV... pumps are equipped with an FC... filtre adjusted to the suction connection size.



GAS-NPT thread adapters available at page 1.117

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VERTICAL PUMPSETS – GENERAL DESCRIPTION

As a standard, these pumpsets are built with various capacities and they are composed of:

- A vertical welded sheet steel tank with perfect vacuum seal.
- A rotating vane vacuum pump to be selected according to the required suction capacity and vacuum degree.
- A vacuum switch for adjusting the vacuum level within which to operate.
- A vacuum gauge for a direct reading of the vacuum level in the tank.
- A switchgear enclosed in a special watertight metal casing.
- A manual valve for vacuum interception.
- A cock for condensation drainage.

The vacuum level, preset via the mini vacuum switch is automatically maintained in the tank. The pump operation can be both continuous or automatic.

These pumpsets are normally used for interconnecting several vacuum-operated machines and, for safety reasons, for vacuum handlers since, in case of electricity failure, they allow the vacuum cups to maintain the grip for an amount of time proportional to the tank capacity.

As for energy consumption, in both cases these pumpsets offer many advantages, since the pump operates only to restore vacuum in the tank within the preset values and its interventions depend exclusively on the quantity of air that is actually sucked at the service.



VERTICAL PUMPSETS DV 150 ...



Art	Tank	Pump	Motor	Switchgear	С	Н	R	Weight	Filtre
A16			execution					accessories	
	Litres	Mod.	Volt	art.			Ø	Kg	art.
DV 150 VTL 25/FG	150	VTL 25/FG	3 ~ 230/400-50Hz	D0 100 90	730	1600	G1"	103	FB 30 / FC 30
DV 150 VTL 30/FG	150	VTL 30/FG	3 ~ 230/400-50Hz	D0 100 90	730	1600	G1"	107	FB 30 / FC 30
DV 150 VTL 35/FG	150	VTL 35/FG	3 ~ 230/400-50Hz	D0 100 90	730	1600	G1"	109	FB 30 / FC 30
DV 150 MV 40	150	MV 40	3 ~ 230/400-50Hz	D0 100 90	810	1600	G1"	117	FB 30 / FC 30
DV 150 VTL 50/G1	150	VTL 50/G1	3 ~ 230/400-50Hz	D0 100 90	805	1600	G1"	126	FB 30 / FC 30
DV 150 MV 60	150	MV 60	3 ~ 230/400-50Hz	D0 100 90	810	1600	G1"	125	FB 30 / FC 30
DV 150 VTL 75/G1	150	VTL 75/G1	3 ~ 230/400-50Hz	D0 100 90	855	1600	G1"	148	FB 30 / FC 30



		€ €	1400		Cock for condens drainage	sation e Art. 13 05 10	450 650	¹⁵⁰	
Δrt	Tank	Pump	Motor	Switchgear	С	Н	R	Weight	Filtre
			execution						accessories
	Litres	Mod.	Volt	art.			Ø	Kg	art.
V 300 MV 40	300	MV 40	3 ~ 230/400-50Hz	D0 100 90	810	1890	G2"	147	FB 60 / FC 60
V 300 VTL 50/G1	300	VTL 50/G1	3 ~ 230/400-50Hz	D0 100 90	805	1890	G2"	156	FB 60 / FC 60
V 300 MV 60	300	MV 60	3 ~ 230/400-50Hz	D0 100 90	810	1890	G2"	155	FB 60 / FC 60
V 300 VTL 75/G1	300	VTL 75/G1	3 ~ 230/400-50Hz	D0 100 90	855	1890	G2"	178	FB 60 / FC 60
V 300 MV 100	300	MV 100	3 ~ 230/400-50Hz	D0 100 90	840	1890	G2"	182	FB 60 / FC 60
V 300 VTL 105/G1	300	VTL 105/G1	3 ~ 230/400-50Hz	D0 100 90	900	1890	G2"	199	FB 60 / FC 60
OV 300 MV 160R	300	MV 160R	3 ~ 230/400-50Hz	D0 100 90	858	1890	G2"	206	FB 60 / FC 60

Note: As a standard, all MV... pumps are equipped with an FC... filtre adjusted to the suction connection size.

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$ X

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Note: As a standard, all MV... pumps are equipped with an FC... filtre adjusted to the suction connection size.

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VERTICAL SAFETY PUMPSETS – GENERAL DESCRIPTION

Safety pumpsets have been designed to centralise vacuum in all work environments such as hospitals, laboratories, etc. where vacuum must be guaranteed 24/7. They are composed of:

- A vertical welded sheet steel tank with perfect vacuum seal.

- Two rotating vane vacuum pumps to be chosen according to the required suction capacity and vacuum level.

- Three vacuum swithces, of which two for adjusting the vacuum level within which each pump must operate, and one for determining the minimum safety value, under which the alarm sets off.

- A vacuum gauge for a direct reading of the vacuum level in the tank.

- Two manual valves for pump exclusion.

- A manual valve for vacuum interception.

- A cock for condensation drainage.

- A switchgear enclosed in a special watertight metal casing with switches for automatic or manual pump operation, an alarm device with sound and light signal, alarm-test buttons and hour-counter for counting the hours of actual operation of every single pump.

These pumpsets normally provide for the operation of one pump with subsequent automatic insertion of the second one for larger consumptions and when, for whatever reason, the plant vacuum level goes under the preset value.

The automatic timed inverter, located on the switchboard, accurately alternates the pump start-up, so that they are both subject to the same mechanical wear. The switchboard and remote alarm systems operate when the plant vacuum level is below the set safety value.



VERTICAL SAFETY PUMPSETS DSV 150 ...



DSV 150 VTL 15/F	150	VTL 15/F	3 ~ 230/400-50Hz	DS0 300 90	625	1600	G1"	164	FB 30 / FC 30
DSV 150 VTL 20/F	150	VTL 20/F	3 ~ 230/400-50Hz	DSO 300 90	625	1600	G1"	167	FB 30 / FC 30
DSV 150 MV 20	150	MV 20	3 ~ 230/400-50Hz	DS0 300 90	625	1600	G1"	158	FB 30 / FC 30
DSV 150 VTL 25/FG	150	VTL 25/FG	3 ~ 230/400-50Hz	DS0 300 90	630	1600	G1"	168	FB 30 / FC 30
DSV 150 VTL 30/FG	150	VTL 30/FG	3 ~ 230/400-50Hz	DS0 300 90	630	1600	G1"	172	FB 30 / FC 30
DSV 150 VTL 35/FG	150	VTL 35/FG	3 ~ 230/400-50Hz	DS0 300 90	630	1600	G1"	174	FB 30 / FC 30



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					urainage art.		В			
-	Art	Tank	2 pumps	Motor	Switchgear	B	Н	R	Weight	Filtre
	Alu			accessories						accessories
		Litres	Mod.	Volt	art.			Ø	Kg	art.
C	OSV 300 MV 40	300	MV 40	3 ~ 230/400-50Hz	DS0 300 90	725	1890	G2"	217	FB 60 / FC 60
C	OSV 300 VTL 50/G1	300	VTL 50/G1	3 ~ 230/400-50Hz	DS0 300 90	725	1890	G2"	226	FB 60 / FC 60
C	DSV 300 MV 60	300	MV 60	3 ~ 230/400-50Hz	DSO 300 90	725	1890	G2"	225	FB 60 / FC 60
0)SV 300 <mark>VTL 75/</mark> G1	300	VTL 75/G1	3 ~ 230/400-50Hz	DS0 300 90	725	1890	G2"	249	FB 60 / FC 60
C)SV 300 <mark>MV 100</mark>	300	MV 100	3~ 230/400-50Hz	DS0 300 90	725	1890	G2"	252	FB 60 / FC 60
C)SV 300 <mark>VTL 105</mark> /G1	300	VTL 105/G1	<mark>3</mark> ~ 230/400-50Hz	DS0 300 90	725	1890	G2"	270	FB 60 / FC 60

Note: As a standard, all MV... pumps are equipped with an FC... filtre adjusted to the suction connection size.

7.84



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VERTICAL SAFETY PUMPSETS DSV 500 ...

VERTICAL SAFETY PUMPSETS DSV 1000 ...



			execution						accessories
	Litres	Mod.	Volt	art.			Ø	Kg	art.
DSV 500 MV 60	500	MV 60	3 ~ 230/400-50Hz	DSO 300 90	750	2220	G2"	308	FB 60 / FC 60
DSV 500 VTL 75/G1	500	VTL 75/G1	3 ~ 230/400-50Hz	DS0 300 90	750	2220	G2"	355	FB 60 / FC 60
DSV 500 MV 100	500	MV 100	3 ~ 230/400-50Hz	DS0 300 90	750	2220	G2"	362	FB 60 / FC 60
DSV 500 VTL 105/G1	500	VTL 105/G1	3 ~ 230/400-50Hz	DS0 300 90	750	2220	G2"	396	FB 60 / FC 60
DSV 500 MV 160R	500	MV 160R	3 ~ 230/400-50Hz	DS0 300 90	750	2220	G2"	410	FB 60 / FC 60



Note: As a standard, all MV... pumps are equipped with an FC... filtre adjusted to the suction connection size.

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GAS-NPT thread adapters available at page 1.117

VERTICAL SAFETY PUMPSETS DSV 2000 ...





Art		Tank	2 pumps	Motor	Switchgear	С	Н	R	Weight	Filtre
ALC				execution						accessories
		Litres	Mod.	Volt	art.			Ø	Kg	art.
DSV 200	<mark>o mv 20</mark> 0r	2000	MV 200R	<mark>3</mark> ~ 230/400-50Hz	DS0 300 91	1751	2450	G3"	902	FC 80
DSV 200	<mark>o mv 30</mark> 0r	2000	MV 300R	<mark>3</mark> ~ 400/690-50Hz	DS0 300 91	1751	2450	G3"	926	FC 80

Note: As a standard, all MV... pumps are equipped with an FC... filtre adjusted to the suction connection size.

7.86



GAS-NPT thread adapters available at page 1.117

PUMPSET AND MINI PUMPSET COMPONENTS

Mini pumpset tanks

Mini pumpset tanks are horizontal and have a rectangular section. They are made with welded sheet steel with perfect vacuum seal and varnished with special corrosion and water condensation-resistant paint. They are set for the installation of a vacuum pump and a switchgear to be selected

from those listed in the table. They are equipped with:

- A mini vaccum switch for adjusting the maximum vacuum level.

- A vacuum gauge for a direct reading of the vacuum level in the tank.

- A check valve adjusted to the pump

- A manual valve for vacuum interception.

- A cock for condensation drainage.

- Hoses, fittings and screws for fixing the pump to the tank.

Available with a 6, 10 and 20 litre volume.



Art			For:		Recommended
Alu	Tank	Weight	Pump	Switchgear	filtre
					accessories
	Litres	Kg	Mod.	art.	art.
DO 06 01	6	7.5	VTS 2 - VTS 4 - VTS 6 - VTS 6 CC	D0 06 90	FB 10 / FC 10
			VTL 2 - VTL 4 - VTL 5 - VTL 6 CC	D0 06 92	
				D0 06 93	



		nongini	i anna	omingou		
					acces <mark>sories</mark>	
	Litres	Kg	Mod.	art.	a <mark>rt.</mark>	
DO 10 01	10	11.7	VTS 2 - VTS 4 - VTS 6 - VTS 6 CC	D <mark>0 06</mark> 90	FB 10 <mark>/ FC 10</mark>	
			VTL 2 - VTL 4 - VTL 5 - VTL 6 CC	D <mark>0 06</mark> 92		
				00.06.02		

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MINI PUMPSET TANKS





TANKS FOR HORIZONTAL PUMPSETS WITH ONE VACUUM PUMP

Horizontal pumpset tanks have a circular section.

They are made with welded sheet steel with perfect vacuum seal and are varnished with

special corrosion and water condensation-resistant paint.

They are set for the installation of a vacuum pump and a switchgear to be selected among

those in the table, and are equipped with:

- A vacuum switch for adjusting the vacuum level within which to operate.

- A vacuum gauge for a direct reading of the vacuum level in the tank.

- A check valve for the pumps that do not have them.

- A manual valve for vacuum interception.

- A cock for condensation drainage.

- Hoses, fittings and screws for fixing the pump to the tank. Available with various volumes, from 25 to 1000 litres.





				•		→
Art.				For:		Recommended
7.1.1	Tank	Weight	R	Pump	Switchgear	filtre
						accessories
	Litres	Kg	Ø	Mod.	art.	art.
DO 25 01	25	17	G3/8"	VTL 5	D0 06 90	FB 20 / FC 20
					D0 06 92	
D0 25 02	25	17	G1/2"	VTL 6 CC - VTL 10	D0 06 90	FB 20 / FC 20
					D0 06 92	
					D0 06 93	

Note: By adding the letters RS, the pumpset will be supplied with wheels (E.g.: D0 25 01 SR).



Note: By adding the letters RS, the pumpset will be supplied with wheels (E.g.: D0 50 01 SR).

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

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GAS-NPT thread adapters available at page 1.117

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TANKS FOR HORIZONTAL PUMPSETS WITH ONE PUMP



DO 100 90

Note: By adding the letters RS, the pumpset will be supplied with wheels (E.g.: D0 100 01 SR).



Note: By adding the letters RS, the pumpset will be supplied with wheels (E.g.: D0 100 02 SR).

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TANKS FOR HORIZONTAL PUMPSETS WITH ONE PUMP



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Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

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Note: By adding the letters RS, the pumpset will be supplied with wheels (E.g.: D0 300 02 SR).



Note: By adding the letters RS, the pumpset will be supplied with wheels (E.g.: DO 300 04 SR).

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GAS-NPT thread adapters available at page 1.117

TANKS FOR HORIZONTAL PUMPSETS WITH ONE PUMP



Art.				For:	Recommended	
	Tank	Weight	R	Pump	Switchgear	filtre
						accessories
	Litres	Kg	Ø	Mod.	art.	art.
DO 500 01	500	143	G1"1/4	MV 100	D0 100 90	FB 60 / FC 60
DO 500 04	500	143	G1"1/2	MV 160R	D0 100 90	FB 60 / FC 60
D0 500 03	500	143	G2"	MV 200R - MV 300R	D0 100 91	FB 60 / FC 60



GAS-NPT thread adapters available at page 1.117

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

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TANKS FOR HORIZONTAL PUMPSETS WITH ONE PUMP





TANKS FOR HORIZONTAL PUMPSETS WITH TWO PUMPS

Horizontal pumpset tanks have a circular section.

They are made with welded sheet steel with perfect vacuum seal and are varnished with

special corrosion and water condensation-resistant paint.

They are set for the installation of two vacuum pumps and a switchgear to be selected

among those in the table, and are equipped with:

- A vacuum switch for adjusting the vacuum level within which to operate.

- A vacuum gauge for a direct reading of the vacuum level in the tank.

- Two check valves for the pumps that do not have them.

- Two manual valves for pump exclusion.

- A manual valve for vacuum interception.

- A cock for condensation drainage.

- Hoses, fittings and screws for connecting and fixing the pumps to the tank.

Available with various volumes, from 300 to 1000 litres.



			N				
Art				For		Recommended	
AIG	Tank	Weight	R	2 pumps	Switchgear	filtre	
						accessories	
	Litres	Kg	Ø	Mod.	art.	art.	
D20 300 01	300	143	G1"	VTL 50/G1	D2V 150 90	FB 50 / FC 50	
D20 300 03	300	143	G1"1/4	VTL 75/G1	D2V 150 90	FB 50 / FC 50	
D20 300 04	300	143	G1"1/2	VTL 105/G1	D2V 150 90	FB 50 / FC 50	



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Δrt			FOI:			Recommended
	Tank	Weight	R	2 pumps	Switchgear	filtre
						accessories
	Litres	Kg	Ø	Mod.	art.	art.
D20 500 01	500	155	G1"	VTL 50/G1	D2V 150 90	FB 60 / FC 60
D20 500 02	500	155	G1"1/4	VTL 75/G1	D2V 150 90	FB 60 / FC 60
D20 500 04	500	155	G1"1/2	VTL 105/G1	D2V 150 90	FB 60 / FC 60



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Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

GAS-NPT thread adapters available at page 1.117

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Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

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GAS-NPT thread adapters available at page 1.117

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TANKS FOR HORIZONTAL SAFETY PUMPSETS WITH TWO PUMPS

Horizontal safety pumpset tanks have a circular section.

They are made with welded sheet steel with perfect vacuum seal and are varnished with special corrosion and water condensation-resistant paint.

They are set for the installation of two vacuum pumps and a switchgear, to be selected among those in the table, and are equipped with:

- Three vacuum switches, of which two are for adjusting the vacuum level within which each pump must operate and one is for determining the minimum safety value, under which the alarm sets off.
- A vacuum gauge for a direct reading of the vacuum level in the tank.
- Two check valves for the pumps that do not have them.
- Two manual valves for pump exclusion.
- A manual valve for vacuum interception.
- A cock for condensation drainage.
- Hoses, fittings and screws for connecting and fixing the pumps to the tank.

Available with various volumes, from 300 to 1000 litres.



Art				For	:	Recommended
AIG.	Tank	Weight	R	2 pumps	Switchgear	filtre
						accessories
	Litres	Kg	Ø	Mod.	art.	art.
DSO 300 01	300	145	G1"	VTL 50/G1	DS0 300 90	FB 50 / FC 50
DSO 300 03	300	145	G1"1/4	VTL 75/G1	DS0 300 90	FB 50 / FC 50
DSO 300 04	300	145	G1"1/2	VTL 105/G1	DS0 300 90	FB 50 / FC 50



TANKS FOR HORIZONTAL SAFETY PUMPSETS WITH TWO PUMPS



Δrt				For	:	Recommended
Alta	Tank	Weight	R	2 pumps	Switchgear	filtre
						accessories
	Litres	Kg	Ø	Mod.	art.	art.
DS0 500 01	500	157	G1"	VTL 50/G1	DS0 300 90	FB 60 / FC 60
DS0 500 02	500	157	G1"1/4	VTL 75/G1	DS0 300 90	FB 60 / FC 60
DS0 500 04	500	157	G1"1/2	VTL 105/G1	DS0 300 90	FB 60 / FC 60



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Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

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Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

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TANKS FOR VERTICAL PUMPSETS WITH ONE VACUUM PUMP

Vertical pumpset tanks have a circular section and are made with welded sheet steel with perfect vacuum seal, while the pump support frame, which is welded to the tank, is made with profiled steel.

Both the tank and the support frame are varnished with special corrosion and water condensation-resistant paint.

They are set for the installation of a vacuum pump and a switchgear to be selected among those in the table, and are equipped with:

- A vacuum switch for adjusting the vacuum level within which to operate.

- A vacuum gauge for a direct reading of the vacuum level in the tank.

- A check valve for the pumps that do not have them.

- A manual valve for vacuum interception.

- A cock for condensation drainage.

- Hoses and fittings for connecting the pump to the tank and screws for fixing it to the

support frame.

Available with various volumes, from 150 to 1000 litres.



Art.				For:	Recommended	
	Tank	Weight	R	Pump	Switchgear	filtre
						accessories
	Litres	Kg	Ø	Mod.	art.	art.
DV 150 01	150	63	G3/4"	VTL 25/FG - VTL 30/FG - VTL 35/FG	D0 100 90	FB 30 / FC 30
DV 150 02	150	63	G1"	VTL 50/G1 - VTL 75/G1	D0 100 90	FB 30 / FC 30



Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

GAS-NPT thread adapters available at page 1.117

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TANKS FOR VERTICAL PUMPSETS WITH ONE PUMP





TANKS FOR VERTICAL PUMPSETS WITH ONE PUMP



Art				For:		Recommended
AIG	Tank	Weight	R	Pump	Switchgear	filtre
						accessories
	Litres	Kg	Ø	Mod.	art.	art.
DV 500 02	500	165	G1"1/2	MV 160R	D0 100 90	FB 60 / FC 60
DV 500 03	500	165	G2"	MV 200R - MV 300R	D0 100 91	FB 60 / FC 60



Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

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TANKS FOR VERTICAL PUMPSETS WITH TWO VACUUM PUMPS

Vertical pumpset tanks have a circular section and are made with welded sheet steel with perfect vacuum seal, while the pump support frame, which is welded to the tank with volume up to 500 litres and is autonomous over that capacity, is made with profiled steel.

Both the tank and the support frame are varnished with special corrosion and water condensation-resistant paint.

They are set for the installation of two vacuum pumps and a switchgear, to be selected among those in the table, and are equipped with:

- A vacuum switch for adjusting the vacuum level within which to operate.
- A vacuum gauge for a direct reading of the vacuum level in the tank.
- Two check valves for the pumps that do not have them.
- Two manual valves for pump exclusion.
- A manual valve for vacuum interception. - A cock for condensation drainage.
- A COCK TOF CONDENSATION OF AIN AGE
- Hoses and fittings for connecting the pumps to the tank and screws for fixing them to the support frame.

Available with various volumes, from 150 to 2000 litres.





Art				For:	Recommended	
Alti	Tank	Weight	R	2 pumps	Switchgear	filtre
						accessories
	Litres	Kg	Ø	Mod.	art.	art.
D2V 150 01	150	70	G1/2"	VTL 10/F - VTL 15/F - VTL 20/F	D2V 150 90	FB 30 / FC 30
D2V 150 03	150	70	G3/4"	VTL 25/FG - VTL 30/FG - VTL 35/FG	D2V 150 90	FB 30 / FC 30



-							
Art.	Art.				For:	Recommended	
		Tank	Weight	2 pumps	Switchgear	filtre	
							accessories
ŝ			Litres	Kg	Mod.	art.	art.
í.	D2V 150	02	150	70	MV 20	D2V 150 90	FB 30 / FC 30
·							

3D drawings available at www.vuototecnica.net

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Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$

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TANKS FOR VERTICAL PUMPSETS WITH TWO PUMPS





FB 60 / FC 60

FB 60 / FC 60

D2V 150 90

D2V 150 90

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

300

300

D2V 300 03

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VTL 75/G1 - VTL 105/ G1

G1"1/4

3D drawings available at www.vuototecnica.net

TANKS FOR VERTICAL PUMPSETS WITH TWO PUMPS





Art				For:		Recommended	
ALC	Tank	Weight	R	2 pumps	Switchgear	filtre	
						accessories	
	Litres	Kg	Ø	Mod.	art.	art.	
D2V 500 01	500	173	G1"1/4	VTL 75/G1	D2V 150 90	FB 60 / FC 60	
D2V 500 03	500	173	G1"1/2	VTL 105/G1	D2V 150 90	FB 60 / FC 60	



		Litres	Kg	Ø	Mod.
D2V 500 02	2	500	173	G1"1/4	MV 60 - MV 100
D2V 500 04	1	500	173	G1"1/2	MV 160R

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Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

D2V 150 90



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FB 60 / FC 60



	Tank	worgin		z pullips	ownongoui	IIIIIG
						accessories
	Litres	Kg	Ø	Mod.	art.	art.
D2V 1000 01	1000	243	G1"1/2	MV 160R	DV 150 90	FC 80
D2V 1000 02	1000	243	G2"	MV 200R - MV 300R	DV 150 91	FC 80



Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6}$ = $\frac{\text{Kg}}{0.4536}$ GAS

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TANKS FOR VERTICAL SAFETY PUMPSETS WITH TWO VACUUM PUMPS

Vertical safety pumpset tanks have a circular section and are made with welded sheet steel with perfect vacuum seal, while the pump support frame, which is welded to the tanks with a volume up to 500 litres and is autonomous above that volume, is made with profiled steel.

Both the tank and the support frame are varnished with special corrosion and water condensation-resistant paint.

They are set for the installation of two vacuum pumps and a switchgear, to be selected among those in the table, and are equipped with:

- Three vacuum switches, of which two are for adjusting the vacuum level within which each pump must operate in order to determin the minimum safety value, under which the alarm sets off.
- A vacuum gauge for a direct reading of the vacuum level in the tank.
- Two check valves for the pumps that do not have them.
- Two manual valves for pump exclusion.
- A manual valve for vacuum interception.
- A cock for condensation drainage.

- Hoses and fittings for connecting the pumps to the tank and screws for fixing them to the support frame.

Available with various volumes, from 150 to 2000 litres.





Art				For:	Recommended	
A14	Tank	Weight	R	2 pumps	Switchgear	filtre
						accessories
	Litres	Kg	Ø	Mod.	art.	art.
DSV 150 01	150	72	G1/2"	VTL 10/F - VTL 15/F - VTL 20/F	DS0 300 90	FB 30 / FC 30
DSV 150 03	150	72	G3/4"	VTL 25/FG - VTL 30/FG - VTL 35/FG	DS0 300 90	FB 30 / FC 30



Ivai	Art.				For		Recommended
JS S	7111		Tank	Weight	2 pumps	Switchgear	filtre
ving							accessories
Irav			Litres	Kg	Mod.	art.	art.
Q	DSV 150	02	150	72	MV 20	DS0 300 90	FB 30 / FC 30
(r)							

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Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

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TANKS FOR VERTICAL SAFETY PUMPSETS WITH TWO PUMPS





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Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

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GAS-NPT thread adapters available at page 1.117

TANKS FOR VERTICAL SAFETY PUMPSETS WITH TWO PUMPS



	Litres	Kg	Ø	Mod.	art.	art.
DSV 500 01	500	175	G1"1/4	VTL 75/G1	DS0 300 90	FB 60 / FC 60
DSV 500 03	500	175	G1"1/2	VTL 105/G1	DS0 300 90	FB 60 / FC 60



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Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

GAS-NPT thread adapters available at page 1.117

TANKS FOR VERTICAL SAFETY PUMPSETS WITH TWO PUMPS



Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$ GAS-NPT

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TANKS FOR VERTICAL SAFETY PUMPSETS WITH THREE VACUUM PUMPS

Vertical safety pumpset tanks have a circular section and are made with welded sheet steel with perfect vacuum seal, while the pump support frame, which is welded to the tanks with a volume up to 500 litres and is autonomous above that volume, is made with profiled steel.

Both the tank and the support frame are varnished with special corrosion and water condensation-resistant paint.

They are set for the installation of three vacuum pumps and a switchgear to be selected among those in the table, and are equipped with:

- Four vacuum switches, of which three are for adjusting the vacuum level within which each pump must operate and one is for determining the minimum safety value, under which the alarm sets off.
- A vacuum gauge for a direct reading of the vacuum level in the tank.
- Three check valves for the pumps that do not have them
- Three manual valves for pump exclusion.
- A manual valve for vacuum interception.
- A cock for condensation drainage.
- Hoses and fittings for connecting the pumps to the tank and screws for fixing them to the support frame.
- Available with various volumes, from 300 to 2000 litres.





Art.			For:	Recommended	
	Tank	Weight	3 pumps	Switchgear	filtre
					accessories
	Litres	Kg	Mod.	art.	art.
DS3V 300 01	300	112	VTL 25/FG - VTL 30/FG - VTL 35/FG	DSO 300 95	FB 60 / FC 60





Art.				For:	For:		
	Tank	Weight	R	3 pumps	Switchgear	filtre	
						accessories	
	Litres	Kg	Ø	Mod.	art.	art.	
DS3V 50 <mark>0</mark> (500	192	G1"	VTL 50/G1	DS0 300 95	FB 60 / FC 60	
DS3V 50 <mark>0 (</mark>)2 500	192	G1"1/4	VTL 75/G1	DS0 300 95	FB 60 / FC 60	

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Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

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TANKS FOR VERTICAL SAFETY PUMPSETS WITH THREE PUMPS





Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6}$ = $\frac{\text{Kg}}{0.4536}$ GAS-NPT thread adapters available at page 1.117

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TANKS FOR VERTICAL SAFETY PUMPSETS WITH THREE PUMPS





SUPPORT FRAME AND SWITCHGEAR FOR TWO VACUUM PUMPS



Art			For:
7.1.1	Weight	2 pumps	Switchgear
	Kg	Mod.	art.
00 DSV 15	120	MV 160R	DS0 300 90 - DS0 300 91 - D2V 150 90 - D2V 150 92
00 DSV 16	120	MV 200R - MV 300R	DS0 300 90 - DS0 300 91 - D2V 150 90 - D2V 150 92

SUPPORT FRAME FOR TWO VACUUM PUMPS

This frame is made with profiled steel and varnished with special weather-resistant paints. It is suited for assembling two vacuum pumps.



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SUPPORT FRAME AND SWITCHGEAR FOR THREE VACUUM PUMPS



This frame is made with profiled steel and varnished with special weather-resistant paints. It is suited for assembling three vacuum pumps and their switchgear.

SUPPORT FRAME FOR THREE VACUUM PUMPS

This frame is made with profiled steel and varnished with special weather-resistant paints. It is suited for assembling three vacuum pumps.



VACUUM PUMP AND PUMPSET MANIFOLDS

These manifolds are made to distribute the vacuum generated by the pumps and pumpsets to several services. They are composed of a varnished steel tubular onto which the interception valves and the connections to the vacuum level reading and control devices are installed. The manifolds described in these pages are standard. Upon request, they can be supplied with different shapes and sizes.





Art.	А	В	С	G	L	М	R	Manual valve E	Manual valve F	Sleeve	Weight
				Ø			Ø	art.	art.	Ø	Kg
OLL 01 03	35	70	40	G1/2"	350	100	G1/4"	13 01 11	13 03 10	G1/4"	1.75
OLL 01 04	35	70	40	G3/4"	350	100	G3/8"	13 02 11	13 04 10	G3/8"	1. <mark>90</mark>
)LL 01 05	35	70	40	G1"	350	100	G3/8"	13 02 11	13 05 10	G3/8"	2.00
LL 01 06	40	85	60	G1"1/4	420	160	G1/2"	13 03 11	13 06 10	G1/2"	2.50
DLL 01 07	40	85	60	G1"1/2	420	160	G1/2"	13 03 11	13 07 10	G1/2"	2.60

GAS-NPT thread adapters available at page 1.117

Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6}$ = $\frac{\text{Kg}}{0.4536}$

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VACUUM PUMP AND PUMPSET MANIFOLDS







Art.	Α	В	C	F	G	Н	L	М	R	Weight
					Ø				Ø	Kg
COLL 02 03	37.5	125	40	65	G1/4"	74	450	97	G1/2"	2.5
COLL 02 05	37.5	125	40	66	G3/8"	84	450	96	G1"	2.7
COLL 02 07	37.5	125	60	94	G1/2"	108	450	127	G1" 1/2	2.9



	Art.		А	В	C	F	G	Н	I	L	М	R	Manual valve E	Weight
0							Ø					Ø	art.	Kg
	COLL 03	03	20	70	30	55	G1/2"	64	21	250	87	G1/4"	13 01 11	1.2
	COLL 03	05	20	70	40	66	G1"	84	21	250	96	G3/8"	13 02 11	1.4
	COLL 03	07	20	70	60	94	G1"1/2	108	24	250	127	G1/2"	13 03 11	1.5

3D drawings available at www.vuototecnica.net

7.118



Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

GAS-NPT thread adapters available at page 1.117

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MINI PUMPSET SWITCHGEAR

The mini pumpset switchgear is enclosed in a special plastic casing and it can manage a vacuum pump with a maximum power of 1 KW with AC and 0.5 KW with DC as well as automatically maintain the vacuum level, set with the vacuum switch, in the tank. It is equipped with a remote control switch with adjustable thermal protection, a transformer for low voltage auxiliary command power supply (with AC only), a line switch with indicator light and a deviator for the automatic or continuous pump operation.



Δrt	Number of	Motor	Pump	Weight
	pumps	execution	max- power	
	n°	Volt	Kw	Kg
D0 06 90	1	1 ~ 230-50Hz	1.0	2
D0 06 92	1	3 ~ 230/400-50Hz	1.0	2
DO 06 93	1	= 24-CC	0.5	2

SWITCHGEAR FOR PUMPSETS WITH ONE PUMP

The pumpset switchgear is enclosed in a special watertight metal casing and can manage a vacuum pump with a power up to 3 KW, or from 4 to 7.5 KW and it automatically maintains the vacuum level, set with the vacuum switch, in the tank. It is equipped with fuses, remote control switch with thermal protection, a transformer for low voltage auxiliary command power supply, a line switch with indicator light, a changeover switch for the automatic or continuous pump operation and an hour-counter for measuring the actual pump operation time.



Art.	Number of	Motor	Pump	Weight
,	pumps	execution	max. power	
	n°	Volt	Kw	Kg
DO 100 89	1	1 ~ 230-50Hz	1.0	8
DO 100 90	1	3 ~ 230/400-50Hz	3.0	8
DO 100 91	1	3 ~ 230/400-50Hz	7.5	8

7.119

X

SWITCHGEAR FOR PUMPSETS WITH TWO PUMPS

The pumpset switchgear, is enclosed in a special watertight metal casingand it manages two vacuum pumps, each with a power up to 3 KW, or from 4 to 7.5 KW and automatically maintains the vacuum level, set with the vacuum switch, in the tank.

It is equipped with fuses, two remote control switches with thermal protection, a transformer for low voltage auxiliary command power supply, a line switch with indicator light, two change-over switches for automatic or continuous pump operation and two hour-counters for measuring the actual pump operation time.



SWITCHGEAR FOR SAFETY PUMPSETS WITH TWO PUMPS

The safety pumpset switchgear is enclosed in a special watertight metal casing and it manages two vacuum pumps, each with a power up to 3 KW, or from 4 to 7.5 KW and it automatically maintains the vacuum level, set with the vacuum switches, in the tank.

It is equipped with fuses, two remote control switches with thermal protection, a transformer for low voltage auxiliary command power supply, an automatic time-set inverter, electrical connection terminal blocks and, on the panel, a main switch with door-opening unit, line indicator lights and pump service, two change-over switches for manual or automatic operation, an alarm device with sound and light signal, alarm-test buttons and two hour-counters for measuring the actual pump operation time.

These switchgears normally provide for the operation of one pump, with the subsequent automatic insertion of the second one for larger consumptions and when, for whatever reason, the plant vacuum level goes below the preset value.

An automatic time-set inverter accurately alternates the start-up of the pumps, so that they are both subject to the same mechanical wear. The switchboard and the remote alarm systems start up when the plant vacuum level goes below the set minimum safety level.

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X



Art.		Number of	Motor	Pump	Weight
74.4		pumps	execution	max. power	
		n°	Volt	Kw	Kg
DSO 300 90	0	2	3 ~ 230/400-50Hz	3.0 cad.	27
DSO 300 91	1	2	3 ~ 230/400-50Hz	7.5 cad.	27

 $\frac{\text{mm}}{25.4}$; pounds =

Conversion ratio: inch =

Kq

453.6 0.4536

7.120



SWITCHGEAR FOR SAFETY PUMPSETS WITH THREE PUMPS

The safety pumpset switchgear is enclosed in a special watertight metal casing and it manages three vacuum pumps, each with a power up to 3 KW, or from 4 to 7.5 KW and it automatically maintains the vacuum level, set with the vacuum switches, in the tank.

It is equipped with fuses, three remote control switches with thermal protection, a transformer for low voltage auxiliary command power supply, an automatic time-set inverter, electrical connection terminal blocks and, on the control panel, a main switch with door-opening unit, line indicator lights and pump service, three change-over switches for manual or automatic operation, an alarm device with sound and light signal, alarm-test buttons and three hour-counters for measuring the actual pump operation time.

These switchgears normally provide for the operation of one pump, with subsequent automatic insertion of the other two for larger consumptions and when, for whatever reason, the plant vacuum level goes below the preset value.

An automatic time-set inverter, accurately alternates the start-up of the pumps, so that they are both subject to the same mechanical wear. The switchboard and the remote alarm systems start up when the plant vacuum level goes below the set minimum safety level



SWITCHGEAR FOR SAFETY PUMPSETS WITH FOUR PUMPS

The safety pumpset switchgear is enclosed in a special watertight metal casing and it manages four vacuum pumps, each with a power up to 3 KW, or from 4 to 7.5 KW and it automatically maintains the vacuum level, set with the vacuum switches, in the tank. It is equipped with fuses, four remote control switches with thermal protection, a transformer for low voltage auxiliary command power supply, an automatic time-set inverter, electrical connection terminal blocks and, on the control panel, a main switch with door-opening unit, line indicator lights and pump service, four change-over switches for manual or automatic operation, an alarm device with sound and light signal, alarm-test buttons e four hour-counters for measuring the actual pump operation time.

These switchgears normally provide for the operation of two pumps and the subsequent automatic insertion of the other two for larger consumptions and when, for whatever reason, the plant vacuum level goes below the preset value.

An automatic time-set inverter, accurately alternates the start-up of the pumps, so that they are both subject to the same mechanical wear. The switchboard and the remote alarm systems start up when the plant vacuum level goes below the set minimum safety level.



GAS-NPT thread adapters available at page 1.117

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

SINGLE PUMP SAFETY SWITCHGEAR

The need to use the same vacuum pump in various spots in the work environment, such as, for example, a shipyard, has led us to creating this mobile switchgear that allows for polarity reversal in presence of current, as well as for time setting pump operation and the automatic start-up restoration in case of accidental black-out.

The switchgear is enclosed in a special watertight metal casing and it is composed of fuses, remote control switches with thermal protection, a transformer for low voltage auxiliary command power supply. On the casing lid, on the other hand there are installed:

- A line switch with indicator light;
- A change-over switch for pump start-up with indicator light;
- A change-over switch for polarity reversal;
- An emergency button;
- A timer for setting the duration of pump operation;
- An hour-counter for counting the actual pump operation time;
- A malfunction warning light.

This switchgear is available in two versions: the first one managing a vacuum pump with a power up to Kw and the second one a vacuum pump with a power ranging from 4 to 7.5 Kw.







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drawings available Motor Pump Weight Number of Art. execution pumps max. power n° Volt Kw Kg DO 100 93 3 ~ 230/400-50Hz 3.0 8.0 1 3 ~ 230/400-50Hz DO 100 94 7.5 30 8.0

7.122

www.vuototecnica.net

at



Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$

	o Code/ City	Country	reason, we kindly ask you to fill in this form and send it i to us via e-mail or We will suggest the best pump to solve your prob
Со	ontact person:		E-mail: tecnico@vuototecnica Fax: +39 039 5320
Te	lephone	Fax	
E-1	mail		
1)	In which industry sector	r will the pump be used?	
	 Plastic CD/DVD Elettronics Food 	 Packaging Glass/Solar Graphic arts Bottling 	 □ Wood processing □ Cosmetics □ Marble/Stone □ Automotive □ Medical/Pharmaceutical □ Ceramic/China □ Other sectors
2)	For what service will the	e vacuum pump be used?	
	 Handling by vacuum Degasification of silid plastic/rubber/resin/a Container emptying: Other uses 	pumps con or resin compounds aluminium moulding Volume/I	 Vacuum clamping Vacuum packaging Required time s Max. vacuum mbar abs
	 Inside a factory or a Outside a factory or a Height above sea lev 	mobile unit a mobile unit el of the pump place of installa	tion m
	□ Work environment ter	mperature: min °C	max °C Humidity %
4)	Work environment ter Fluid to be sucked?	mperature: min °C	max °C Humidity %
4)	 Work environment ter Fluid to be sucked? Dry air Aggressive gasses Fluid temperature °C 	mperature: min °C	max °C Humidity % Air with water Air with oil vapours Air with abrasive dust
4) 5)	 Work environment ter Fluid to be sucked? Dry air Aggressive gasses Fluid temperature °C Required capacity? 	mperature: min °C	max °C Humidity % Air with water Air with oil vapours Air with abrasive dust
4) 5)	 Work environment ter Fluid to be sucked? Dry air Aggressive gasses Fluid temperature °C Required capacity? m³/h 	mperature: min °C	max °C Humidity % Air with water Air with oil vapours Air with abrasive dust
4) 5) 6)	 Work environment ter Fluid to be sucked? Dry air Aggressive gasses Fluid temperature °C Required capacity? m³/h Required vacuum level? 	mperature: min °C	max °C Humidity %
4) 5)	 Work environment ter Fluid to be sucked? Dry air Aggressive gasses Fluid temperature °C Required capacity? m³/h Required vacuum level? mbar abs 	mperature: min °C	max °C Humidity %
4) 5) 6) 7)	 Work environment ter Fluid to be sucked? Dry air Aggressive gasses Fluid temperature °C Required capacity? m³/h Required vacuum level? mbar abs Vacuum pump use and to Daily duration: \$ 8 Nr of working cycles/hou Are there strong vacuum If so, within which values 	mperature: min °C Humid air NI/min Intrastructure:	

Company

VACUUM PUMP QUESTIONNAIRE

8) When the pump stops, must the air be prevented from returning into the plant brought to vacuum?

🗆 Yes 🗆 No

The seal is guaranteed by check valves whose use is: - Mandatory on lubricated vacuum pumps - Not mandatory on dry vacuum pumps

Note: On the oil-bath vacuum pumps of the MV series, the check valves are built-in.

9) Time for maintaining vacuum

Must	the	vacuum	ı be	maintaine	d for a certa	ain	amount	of time?	P (For	example i	t0 á	allow	the	vacuum	cups to
keep	the	grip ev	en in	absence	of electricity	()	□ Yes		No						
lf so,	for	how lor	1g? s	5	0.										

10) Vacuum tanks

	Required volume I			□ Re	commended volu	ime l		□ Available	volume I	
11) Pu	irchasing prospect									
	Single request				Nr		pumps/year	Required deli	very:	
12) In	case of the vacuum	n pun	np replacement							
	Model used until no Brand	W:		🗆	Capacity m³/h .			□ Vacuum le	evel mbar	
Pou	wer supply:		Single-phase □ Three-phase □	Volt 23 Volt 23	30-50 Hz 30/400 – 50Hz		Other Volt Other Volt		Hz Hz	
13) Co	ontact		,							
0	Would you like to be	e cor	ntacted? Yes 🗆	No						

Ο	Are you interested in a visit?	Yes 🗆	No 🗆	if so, in what date?
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PNEUMATIC VACUUM GENERATORS AND PUMPSETS

PAG. 8.01

PAG. 8.02

PAG. 8.03

PAG. 8.04

PAG. 8.05

PAG. 8.06

PAG. 8.07

PAG. 8.08

PAG 8 09

PAG. 8.10

PAG. 8.11

PAG. 8.12

PAG. 8.13

PAG. 8.14

PAG. 8.15

PAG. 8.16

PAG. 8.17

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PAG. 8.19

PAG. 8.20

PAG. 8.21

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PAG. 8.36

PAG. 8.37

PAG. 8.38

PAG. 8.39

PAG. 8.40

PAG. 8.41

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PAG. 8.46

PAG. 8.47

PAG. 8.48

PAG. 8.49

PAG. 8.50

PAG. 8.51

PAG. 8.52

PAG. 8.53

PAG. 8.54

PAG. 8.55

PAG. 8.59

PAG. 8.60

PAG. 8.61

PAG. 8.62

X

PAG. 8.56 ÷ 8.58

PAG. 8.43 ÷ 8.45

PAG. 8.26 ÷ 8.27

QUANTITY OF AIR SUCKED BY GENERATORS AT DIFFERENT VACUUM LEVELS VACUUM GENERATOR EVACUATION TIME AT DIFFERENT VACUUM LEVELS MINIMUM PIPE INTERNAL DIAMETER RECOMMENDED FOR THE GENERATORS SINGLE-STAGE VACUUM GENERATOR 15 01 10 DIAGRAMS REFERRING TO VACUUM GENERATOR 15 01 10 SINGLE-STAGE VACUUM GENERATOR 15 03 10 DIAGRAMS REFERRING TO VACUUM GENERATOR 15 03 10 SINGLE-STAGE VACUUM GENERATOR WITH EJECTOR 15 02 10 DIAGRAMS REFERRING TO VACUUM GENERATOR 15 02 10 SINGLE-STAGE VACUUM GENERATOR WITH EJECTOR 15 04 10 DIAGRAMS REFERRING TO VACUUM GENERATOR 15 04 10 IN-LINE SINGLE-STAGE VACUUM GENERATOR PVP 1 DIAGRAMS REFERRING TO VACUUM GENERATOR PVP 1 IN-LINE SINGLE-STAGE VACUUM GENERATORS GV 1, GV 2 and GV 3 DIAGRAMS REFERRING TO VACUUM GENERATORS GV 1, GV 2 and GV 3 SINGLE-STAGE VACUUM GENERATOR PVP 2 DIAGRAMS REFERRING TO VACUUM GENERATOR PVP 2 SINGLE-STAGE VACUUM GENERATOR PVP 3 DIAGRAMS REFERRING TO VACUUM GENERATOR PVP 3 SINGLE-STAGE VACUUM GENERATOR PVP 2 M DIAGRAMS REFERRING TO VACUUM GENERATOR PVP 2 M SINGLE-STAGE VACUUM GENERATOR PVP 7 X DIAGRAMS REFERRING TO VACUUM GENERATOR PVP 7 X SINGLE-STAGE VACUUM GENERATOR PVP 7 SX DIAGRAMS REFERRING TO VACUUM GENERATORS PVP 7 SX FIXING SUPPORTS FOR SINGLE-STAGE VACUUM GENERATORS MULTI-STAGE VACUUM GENERATORS - GENERAL INFORMATION MULTI-STAGE VACUUM GENERATORS SERIES M DIAGRAMS REFERRING TO VACUUM GENERATORS M 3 and M 7 MULTI-STAGE VACUUM GENERATORS M 10. M 14 and M 18 DIAGRAMS REFERRING TO VACUUM GENERATORS M 10. M 14 and M 18 MULTI-STAGE VACUUM GENERATORS M 3 SSX and M 7 SSX DIAGRAMS REFERRING TO VACUUM GENERATORS M 3 SSX and M 7 SSX MULTI-STAGE VACUUM GENERATORS M 10 SSX, M 14 SSX and M 18 SSX DIAGRAMS REFERRING TO VACUUM GENERATORS M 10 SSX, M 14 SSX and M 18 SSX FIXING SUPPORTS FOR MULTI-STAGE VACUUM GENERATORS SERIES M MULTI-STAGE AND MULTI-FUNCTION VACUUM GENERATORS SERIES MVG - GENERAL INFORMATION MULTI-STAGE AND MULTI-FUNCTION VACUUM GENERATORS MVG 3 and MVG 7 DIAGRAMS REFERRING TO VACUUM GENERATORS MVG 3 and MVG 7 MULTI-STAGE AND MULTI-FUNCTION VACUUM GENERATORS MVG 10 and MVG 14 DIAGRAMS REFERRING TO VACUUM GENERATORS MVG 10 and MVG 14 ACCESSORIES AND SPARE PARTS FOR VACUUM GENERATORS SERIES MVG MULTI-STAGE, MULTI-FUNCTION AND MODULAR VACUUM GENERATORS SERIES GVMM – GENERAL INFORMATION MULTI-STAGE, MULTI-FUNCTION AND MODULAR VACUUM GENERATORS GVMM 3 and GVMM 7 DIAGRAMS REFERRING TO VACUUM GENERATORS GVMM 3 and GVMM 7 MULTI-STAGE, MULTI-FUNCTION AND MODULAR VACUUM GENERATORS GVMM 10 and GVMM 14 DIAGRAMS REFERRING TO VACUUM GENERATORS GVMM 10 and GVMM 14 MULTI-STAGE, MULTI-FUNCTION AND MODULAR INTERMEDIATE VACUUM MODULES SERIES MI - GENERAL INFORMATION INTERMEDIATE VACUUM MODULES MI 3 and MI 7 DIAGRAMS REFERRING TO INTERMEDIATE VACUUM MODULES MI 3 and MI 7 INTERMEDIATE VACUUM MODULES MI 10 and MI 14 DIAGRAMS REFERRING TO INTERMEDIATE VACUUM MODULES MI 10 and MI 14 ACCESSORIES AND SPARE PARTS FOR VACUUM GENERATORS AND MODULES SERIES GVMM AND MI MODULAR VACUUM SYSTEMS SET-UP SINGLE-STAGE AND MULTI-FUNCTION VACUUM GENERATORS SERIES AVG - GENERAL INFORMATION SINGLE-STAGE AND MULTI-FUNCTION VACUUM GENERATORS AVG 18 and AVG 25 DIAGRAMS REFERRING TO VACUUM GENERATORS AVG 18 and AVG 25

AVG 18 P e AVG 25 P VACUUM GENERATORS ACCESSORIES AND SPARE PARTS SERIES AVG MULTI-STAGE VACUUM GENERATORS PVP 12 MX and PVP 25 MX DIAGRAMS REFERRING TO VACUUM GENERATORS PVP 12 MX and PVP 25 MX MULTI-STAGE VACUUM GENERATORS PVP 40 M. PVP 70 M and PVP 100 M DIAGRAMS REFERRING TO VACUUM GENERATORS PVP 40 M. PVP 70 M and PVP 100 M. MULTI-STAGE VACUUM GENERATORS PVP 140 M, PVP 170 M and PVP 200 M DIAGRAMS REFERRING TO VACUUM GENERATORS PVP 140 M, PVP 170 M and PVP 200 M MULTI-STAGE VACUUM GENERATORS PVP 250 M and PVP 300 M DIAGRAMS REFERRING TO VACUUM GENERATORS PVP 250 M and PVP 300 M MULTI-STAGE VACUUM GENERATORS PVP 25 MDX, PVP 35 MDX and PVP 50 MDX DIAGBAMS REFERRING TO VACUUM GENERATORS PVP 25 MDX. PVP 35 MDX and PVP 50MDX MULTI-STAGE VACUUM GENERATORS PVP 60 MDX and PVP 75 MDX DIAGRAMS REFERBING TO VACUUM GENERATORS PVP 60 MDX and PVP 75 MDX VACUUM GENERATORS ACCESSORIES PVP 25 ÷ 75 MDX SILENCERS MODULAR MULTI-STAGE VACUUM GENERATORS PVP 150 ÷ 600 MD – GENERAL INFORMATION MODULAR MULTI-STAGE VACUUM GENERATORS PVP 150 MD and PVP 300 MD DIAGRAMS REFERBING TO VACUUM GENERATORS PVP 150 MD and PVP 300 MD MODULAR MULTI-STAGE VACUUM GENERATORS PVP 450 MD and PVP 600 MD DIAGRAMS REFERBING TO VACUUM GENERATORS PVP 450 MD and PVP 600 MD ADJUSTABLE VACUUM GENERATORS CONVEYOR PVR 25 and PVR 50 DIAGRAMS REFERRING TO VACUUM GENERATORS CONVEYOR PVR 25 and PVR 50 ADJUSTABLE VACUUM GENERATORS CONVEYOR PVR 100 and PVR 200 DIAGRAMS REFERRING TO VACUUM GENERATORS CONVEYOR PVR 100 and PVR 200 ACCESSORIES FOR ADJUSTABLE VACUUM GENERATORS CONVEYOR FLOW GENERATORS VACUUM JET CX 7 and CX 10 DIAGRAMS REFERRING TO FLOW GENERATORS CX 7 and CX 10 FLOW GENERATORS VACUUM JET CX 13 and CX 19 DIAGRAMS REFERRING TO FLOW GENERATORS CX 13 and CX 19 FLOW GENERATORS VACUUM JET CX 25, CX 38 and CX 50 DIAGRAMS REFERRING TO FLOW GENERATORS CX 25, CX 38 and CX50 MINI PNEUMATIC PUMPSETS DOP 06 and DOP 10 MINI PNEUMATIC PUMPSETS DOP 20 PNEUMATIC PUMPSETS DOP 25 PNEUMATIC PUMPSETS DOP 50 PNEUMATIC PUMPSETS DOP 100 PNEUMATIC PUMPSETS DOP 150 PNEUMATIC PUMPSETS DOP 300 PNEUMATIC MINI PUMPSET AND PUMPSET COMPONENTS: MINI PNEUMATIC PUMPSET TANKS TANKS FOR PNEUMATIC PUMPSET DOP 25, 50 e 100

TANKS FOR PNFUMATIC PUMPSET DOP 150 e 300 PNEUMATIC CONTROL GEAR FOR MINI PUMPSETS AND PUMPSETS

SINGLE-STAGE AND MULTI-FUNCTION VACUUM GENERATORS WITH SHOCKPROOF PROTECTION

PAG. 8.63 PAG. 8.64 ÷ 8.65 PAG. 8.66 PAG. 8.67 PAG. 8.68 PAG. 8.69 PAG. 8.70 PAG. 8.71 PAG. 8.72 PAG. 8.73 PAG. 8.74 PAG. 8.75 PAG. 8.76 PAG. 8.77 PAG. 8.78 ÷ 8.79 PAG. 8.80 PAG. 8.81 PAG. 8.82 PAG. 8.83 PAG. 8.84 PAG. 8.85 PAG. 8.86 PAG. 8.87 PAG. 8.88 PAG. 8.89 PAG. 8.90 PAG. 8.91 PAG. 8.92 PAG. 8.93 PAG. 8.94 PAG. 8.95 PAG. 8.96 PAG. 8.97 PAG. 8.98 PAG. 8.99 PAG. 8.100 PAG. 8.101 PAG. 8.102 PAG. 8.103

PAG. 8.104 PAG. 8.105 PAG. 8,106 PAG. 8.107 ÷ 8.108

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TABLE REGARDING THE QUANTITY OF AIR SUCKED BY GENERATORS AT DIFFERENT VACUUM LEVELS

Supply press. Air Generator Supply press. Air bar (g) 15 15 01 6 15 02 10 6 15 03 10 6 15 04 10 6 PVP 1 5 9 9 PVP 2 6 9 9 PVP 3 6 9 9 FVP 7 X 6 9 9 GV 3 5 5 9 GV 3 5 5 9 M 3 - M 3 SSX 5 5 5 M 10 - M 10 SSX 5 5 5 M 13 - M 18 SSX 5 5 5 MVG 3 5 5 5 MVG 10 5 5 5 GVMM 10 5 5 5 GVMM 14 5 5 5 MI 3 5 5 6 PVP 10 6	phypress Air consumption 0 10 20 30 40 50 60 77 6 0.9 0.77 0.66 0.61 0.55 0.44 0.29 0.19 0.00 6 1.8 1.39 1.30 1.15 1.00 0.89 0.77 0.66 0.44 5 0.8 0.27 0.25 0.22 0.18 0.12 0.07 0.66 0.06 6 1.0 0.83 0.70 0.65 0.52 0.37 0.23 0.13 0.00 6 1.5 1.03 0.82 0.72 0.61 0.41 0.97 0.86 0.55 6 3.2 2.47 2.28 2.10 1.94 1.44 0.97 0.86 0.55 5 0.7 0.27 0.23 0.20 0.17 0.13 0.66 0.60 0.00 5 0.7 0.27 0.23 0.20 0.17 0.13	aj	
5 01 10 6 5 02 10 6 5 03 10 6 5 04 10 6 VP 1 5 VP 2 6 VP 3 6 VP 7 X 6 VV 7 X 6 VV 7 X 6 VV 7 X 6 VV 7 X 6 VV 7 X 6 VV 7 X 6 VV 7 X 6 VV 7 X 7 S 7 A 1 - M 10 SSX 5 A 14 - M 14 SSX 5 A 18 - M 18 SSX 5 AVG 1 5 VMM 3 5 VMM 14 5 AI 13 5 AI 14 5 VV 100 6 VP 25 MX 6 VP 40 M 6 VP 100 M 6 VP 200 M <td< th=""><th></th><th>70 80</th><th>0 Max. vacuum lev -KPa</th></td<>		70 80	0 Max. vacuum lev -KPa
5 02 10 6 5 03 10 6 5 04 10 6 /P 1 5 /P 2 6 /P 3 6 /P 7 X 7 /> 3 5 // 1 5 // 3 5 // 4 5 // 5 7 / 6 7 // 7 5 // 7 5 // 7 5 // 7 5 // 7 5 // 7 5 // 7 5 // 7 5 // 7 5 // 7 <td< td=""><td>6 0.9 0.77 0.66 0.61 0.55 0.44 0.29 0.19 0.0 6 1.8 1.39 1.30 1.15 1.00 0.89 0.77 0.69 0.44 6 1.8 1.30 1.15 1.00 0.89 0.77 0.69 0.44 6 1.0 0.83 0.70 0.65 0.52 0.37 0.23 0.13 0.00 6 1.0 0.83 0.70 0.65 0.52 0.37 0.23 0.10 0.66 0.55 6 3.2 2.47 2.28 2.10 1.94 1.44 0.97 0.86 0.55 5 0.7 0.27 0.23 0.20 0.17 0.13 0.06 0.05 0.00 5 0.7 0.27 0.23 0.20 0.17 0.13 0.06 0.05 0.00 5 0.8 1.00 0.83 0.61 0.55 0.80</td><td>0.09</td><td>- 83</td></td<>	6 0.9 0.77 0.66 0.61 0.55 0.44 0.29 0.19 0.0 6 1.8 1.39 1.30 1.15 1.00 0.89 0.77 0.69 0.44 6 1.8 1.30 1.15 1.00 0.89 0.77 0.69 0.44 6 1.0 0.83 0.70 0.65 0.52 0.37 0.23 0.13 0.00 6 1.0 0.83 0.70 0.65 0.52 0.37 0.23 0.10 0.66 0.55 6 3.2 2.47 2.28 2.10 1.94 1.44 0.97 0.86 0.55 5 0.7 0.27 0.23 0.20 0.17 0.13 0.06 0.05 0.00 5 0.7 0.27 0.23 0.20 0.17 0.13 0.06 0.05 0.00 5 0.8 1.00 0.83 0.61 0.55 0.80	0.09	- 83
6 03 10 6 9 04 10 6 IP 1 5 IP 2 6 IP 2 M 6 IP 3 6 IP 7 X 7 I 1 5 J 1 5 J 1 5 I 4 - M 14 SSX 5 VG 10 5 VG 14 5 J 3 5 VMM 7 5 VMM 10 5 J 14 5 J 5 6 IP 12 MX 6 IP 25 MX 6 IP 200 M 6 IP 250 MX 6	6 1.8 1.39 1.30 1.15 1.00 0.89 0.77 0.69 0.4 5 0.8 0.27 0.25 0.22 0.18 0.12 0.07 0.66 0.0 6 1.0 0.83 0.70 0.65 0.52 0.37 0.23 0.13 0.0 6 1.5 1.03 0.82 0.72 0.61 0.41 0.24 0.15 0.0 6 3.2 2.47 2.28 2.10 1.94 1.44 0.97 0.86 0.55 5 0.7 0.27 0.23 0.20 0.17 0.13 0.06 0.05 0.00 5 0.7 0.27 0.23 0.20 0.17 0.13 0.06 0.05 0.00 5 0.7 0.27 0.23 0.20 0.17 0.13 0.06 0.05 0.00 5 0.8 1.00 0.83 0.61 0.37 0.27	0.09	- 83
604 10 6 IP 1 5 IP 2 6 IP 2 6 IP 3 6 IP 3 6 IP 7 X 5 I 3 5 I 4 10 SSX I 4 - M 14 SSX 5 I 5 6 VG 7 5 I 4	6 1.8 1.39 1.30 1.15 1.00 0.89 0.77 0.69 0.4 5 0.8 0.27 0.25 0.22 0.18 0.12 0.07 0.06 0.00 6 1.0 0.83 0.70 0.65 0.52 0.37 0.23 0.13 0.00 6 1.5 1.03 0.82 0.72 0.61 0.41 0.24 0.15 0.00 6 3.2 2.47 2.28 2.10 1.94 1.44 0.97 0.86 0.55 5 0.7 0.27 0.23 0.20 0.17 0.13 0.06 0.05 0.00 5 0.7 0.27 0.23 0.20 0.17 0.13 0.06 0.05 0.00 5 0.7 0.27 0.23 0.20 0.17 0.13 0.06 0.05 0.0 0.05 0.0 0.05 0.0 0.05 0.0 0.05 0.0	0.44 0.	.04 85
P1 5 P2 6 P2 M 6 P3 6 P7 X 5 3 5 3 5 3 5 10 5 VG 3 5 VG 7 5 VG 3 5 VG 7	5 0.8 0.27 0.25 0.22 0.18 0.12 0.07 0.06 6 1.0 0.83 0.70 0.65 0.52 0.37 0.23 0.13 0.06 6 1.5 1.03 0.82 0.72 0.61 0.41 0.44 0.47 0.86 0.55 6 3.2 2.47 2.28 2.10 1.94 1.44 0.97 0.86 0.55 5 0.7 0.27 0.23 0.20 0.17 0.13 0.06 0.05 0.06 5 0.7 0.27 0.23 0.20 0.17 0.13 0.06 0.05 0.00 5 0.7 0.27 0.23 0.20 0.17 0.13 0.06 0.06 0.05 0.00 0.05 0.00 0.01 0.03 0.22 0.11 0.00 0.56 0.64 0.50 0.64	0.44 0.	.04 85
P 2 6 P 3 6 P 3 6 P 7 X 6 P 7 SX 5 1 5 2 5 3 5 7 - M 7 SSX 5 10 - M 10 SSX 5 14 - M 14 SSX 5 18 - M 18 SSX 5 //G 3 5 //G 7 5 //G 10 5 //G 7 5 //MM 3 5 //MM 14 5 //S 3 5 //M 14 5 //S 6 6 //P 25 MX 6 //P 25 MX 6 //P 100 M 6 //P 200 M 6 //P 25 MDX 6 //P 25 MDX 6 //P 35 MDX 6 //P 50 MD 6 //P 50 MD 6	6 1.0 0.83 0.70 0.65 0.52 0.37 0.23 0.13 0.0 6 1.5 1.03 0.82 0.72 0.61 0.41 0.24 0.15 0.0 6 3.2 2.47 2.28 2.10 1.94 1.44 0.97 0.86 0.55 6 3.2 2.47 2.28 2.10 1.94 1.44 0.97 0.86 0.55 6 3.2 2.47 2.28 2.10 1.94 1.44 0.97 0.86 0.55 6 0.7 0.27 0.23 0.20 0.17 0.13 0.06 0.05 0.00 5 0.7 0.27 0.23 0.20 0.17 0.13 0.06 0.05 0.00 5 0.8 1.00 0.83 0.61 0.34 0.18 0.12 0.10 0.00 5 1.4 1.72 1.28 0.89 0.67 0.32 0.11 0.10 0.13 0.66 0.32 0.11 0.10 0.13	0.03 0.	.004 85
P 2 M 6 P 3 6 P 7 X 6 P 7 SX 6 1 5 2 5 3 5 3 - M 3 SSX 5 7 - M 7 SSX 5 10 - M 10 SSX 5 14 - M 14 SSX 5 18 - M 18 SSX 5 //G 3 5 //G 7 5 //G 10 5 //G 14 5 //G 3 5 //MM 10 5 //MM 14 5 //G 18 6 //G 25 6 /P 10 M 6 /P 25 MX 6 /P 10 M 6 /P 20 M 6 /P 25 MX 6 /P 50 MDX 6 /P 50 MDX	61.00.830.700.650.520.370.230.130.061.51.030.820.720.610.410.240.150.063.22.472.282.101.941.440.970.860.550.70.270.230.200.170.130.060.050.050.70.270.230.200.170.130.060.050.050.70.270.230.200.170.130.060.050.050.70.270.230.200.170.130.060.050.051.41.721.280.890.500.370.270.160.151.92.612.001.550.800.640.500.290.153.65.003.502.782.021.020.750.440.350.80.890.690.410.230.180.120.100.0051.31.831.441.110.630.410.250.160.151.72.551.851.300.750.640.480.300.2250.80.830.660.380.200.160.110.090.051.31.781.300.980.650.440.290.00.151.7	0.07 0.	.007 85
P 3 6 P 7 X 6 P 7 SX 6 1 5 1 5 2 5 3 5 3 - M 3 SSX 5 7 - M 7 SSX 5 10 - M 10 SSX 5 14 - M 14 SSX 5 18 - M 18 SSX 5 //G 3 5 ////////////////////////////////////	6 1.5 1.03 0.82 0.72 0.61 0.41 0.24 0.15 0.00 6 3.2 2.47 2.28 2.10 1.94 1.44 0.97 0.86 0.55 5 0.7 0.27 0.23 0.20 0.17 0.13 0.06 0.05 0.00 5 0.7 0.27 0.23 0.20 0.17 0.13 0.06 0.05 0.00 5 0.7 0.27 0.23 0.20 0.17 0.13 0.06 0.05 0.00 5 0.7 0.27 0.23 0.20 0.17 0.13 0.06 0.05 0.00 5 0.8 1.00 0.83 0.61 0.34 0.12 0.10 0.07 5 1.9 2.61 2.00 1.55 0.80 0.64 0.50 0.27 0.16 5 0.8 0.69 0.41 0.23 0.16 0.11 0.00 0.55 5 0.8 0.69 0.41 0.23 0.16 0.1	0.07 0.	.007 85
P 7 X 6 P 7 SX 6 1 5 2 5 3 5 3 - M 3 SSX 5 7 - M 7 SSX 5 10 - M 10 SSX 5 14 - M 14 SSX 5 18 - M 18 SSX 5 //G 3 5 //G 7 5 //G 10 5 //G 7 5 //M 14 5 3 5 //G 8 6 //G 25 6 P 12 MX 6 P 25 MX 6 P 100 M 6 P 100 M 6 P 200 M 6 P 200 M 6 P 250 MDX 6 P 35 MDX 6 P 50 MDX 6 P 50 MDX 6 P 50 MDX 6 P 50 MDX 6	6 3.2 2.47 2.28 2.10 1.94 1.44 0.97 0.86 0.55 6 3.2 2.47 2.28 2.10 1.94 1.44 0.97 0.86 0.55 5 0.7 0.27 0.23 0.20 0.17 0.13 0.06 0.05 0.00 5 0.7 0.27 0.23 0.20 0.17 0.13 0.06 0.05 0.00 5 0.7 0.27 0.23 0.20 0.17 0.13 0.06 0.05 0.00 5 0.8 1.00 0.83 0.61 0.34 0.18 0.12 0.10 0.00 5 1.4 1.72 1.28 0.89 0.60 0.37 0.27 0.44 0.33 5 1.9 2.61 2.00 1.55 0.80 0.64 0.44 0.23 0.22 0.75 0.44 0.33 0.20 0.56 0.44 0.23 0.22 0.10 0.56 0.44 0.29 0.20 0.11 0.00 0.55	0.08 0.	.008 85
P 7 SX 6 1 5 2 5 3 5 3 - M 3 SSX 5 7 - M 7 SSX 5 10 - M 10 SSX 5 14 - M 14 SSX 5 18 - M 18 SSX 5 //G 3 5 //G 7 5 //M 10 5 //M 10 5 //M 14 5 ////S 5 //////S 6 /////////S 6 ///////S 6 //////S 6 ////////S 6 //////////S 6 ////////////S 6 ////////////////////////////////////	6 3.2 2.47 2.28 2.10 1.94 1.44 0.97 0.86 0.55 5 0.7 0.27 0.23 0.20 0.17 0.13 0.06 0.05 0.06 5 0.7 0.27 0.23 0.20 0.17 0.13 0.06 0.05 0.06 5 0.8 1.00 0.83 0.61 0.34 0.18 0.12 0.10 0.06 5 1.4 1.72 1.28 0.89 0.50 0.37 0.27 0.16 0.16 5 1.9 2.61 2.00 1.55 0.80 0.64 0.50 0.29 0.11 5 2.5 3.50 2.33 1.72 1.00 0.89 0.67 0.35 0.22 5 3.6 5.00 3.50 2.78 2.02 1.02 0.75 0.44 0.30 0.22 5 3.6 5.00 3.50 2.78 2.02 1.02 0.75 0.44 0.30 0.22 5 1.3 1.38 1.44 1.11 0.63 0.44 0.29 0.20 0.11 5 1.7 2.55 1.85 1.30 0.75 0.64 0.48 0.30 0.22 5 0.8 0.83 0.66 0.38 0.20 0.16 0.11 0.09 5 1.7 2.52 2.00 1.66 0.97 0.56 0.40 0.22 0.1	0.54 0.	.05 85
1 5 2 5 3 5 3 5 3 5 3 5 3 5 3 5 3 5 3 5 3 5 10 M 10 SSX 18 5 //G 3 5 //G 3 5 //G 7 5 //G 10 5 //G 14 5 3 5 //G 7 5 //G 10 5 //G 14 5 3 5	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	0.54 0.	.05 85
2 5 3 5 3 5 3 5 3 5 3 5 3 5 3 5 3 5 5 5 10 M 10 SSX 5 5 16 7 7 5 16 7 7 5 10 5 MM 3 5 MM 10 5 3 5 7 5 10 5 14 5 3 5 7 5 10 5 14 5 6 6 P 12 MX 6 P 25 MX 6 P 100 M 6 P 100 M 6 P 200 M 6 P 200 M 6 P 25 MDX 6 P 35 MDX 6 P 35 MDX 6	5 0.7 0.27 0.23 0.20 0.17 0.13 0.06 0.05 0.05 5 0.7 0.27 0.23 0.20 0.17 0.13 0.06 0.05 0.00 5 0.8 1.00 0.83 0.61 0.34 0.18 0.12 0.10 0.00 5 1.4 1.72 1.28 0.89 0.50 0.37 0.27 0.16 0.11 5 1.9 2.61 2.00 1.55 0.80 0.64 0.50 0.29 0.11 5 2.6 3.50 2.33 1.72 1.00 0.89 0.67 0.35 0.22 5 0.8 0.89 0.69 0.41 0.23 0.18 0.12 0.10 0.00 5 1.3 1.33 1.44 1.11 0.63 0.41 0.25 0.16 0.11 5 0.8 0.83 0.66 0.38 0.20 0.16 0.11 0.09 0.00 5 1.3 1.78 1.30 0.9	0.03 0.	.004 85
3 5 3 - M 3 SSX 5 3 - M 13 SSX 5 10 - M 10 SSX 5 14 - M 14 SSX 5 18 - M 18 SSX 5 //G 3 5 //G 7 5 //G 8 6 //G 7 5 //M 3 5 //M 7 5 //M 10 5 //G 8 6 //G 25 6 //P 12 MX 6 //P 25 MX 6 //P 140 M 6 //P 200 M 6 //P 200 M 6 //P 250 MZ 6 //P 35 MDX 6 //P 50 MDX 6 //P 50 MDX 6 //P 50 MD 6	5 0.7 0.27 0.23 0.20 0.17 0.13 0.06 0.05 0.05 5 0.8 1.00 0.83 0.61 0.34 0.18 0.12 0.10 0.00 5 1.4 1.72 1.28 0.89 0.50 0.37 0.27 0.16 0.11 5 1.9 2.61 2.00 1.55 0.80 0.64 0.50 0.29 0.11 5 1.9 2.61 2.00 1.55 0.80 0.64 0.50 0.29 0.11 5 2.5 3.50 2.33 1.72 1.00 0.89 0.67 0.35 0.22 5 0.8 0.89 0.69 0.41 0.25 0.16 0.11 0.00 5 1.3 1.83 1.44 1.11 0.63 0.41 0.25 0.16 0.11 5 1.7 2.55 1.85 1.30 0.75 0.64 0.48 0.30 0.22 0.11 5 1.7 2.52 2.00 1.6	0.03 0	004 85
3 - M 3 SSX 5 7 - M 7 SSX 5 10 - M 10 SSX 5 14 - M 14 SSX 5 18 - M 18 SSX 5 //G 3 5 //G 7 5 //G 8 5 //G 7 5 //G 10 5 //M 3 5 //M 10 5 //M 14 5 3 5 //I 4 5 //G 18 6 //G 25 6 P 12 MX 6 P 25 MX 6 P 100 M 6 P 200 M 6 P 200 M 6 P 200 M 6 P 25 MDX 6 P 35 MDX 6 P 35 MDX <t< td=""><td>5 0.8 0.10 0.83 0.61 0.34 0.61 0.03 0.61 0.03 5 1.4 1.72 1.28 0.89 0.50 0.37 0.27 0.16 0.11 5 1.9 2.61 2.00 1.55 0.80 0.64 0.50 0.29 0.11 5 2.5 3.50 2.33 1.72 1.00 0.89 0.67 0.35 0.22 5 3.6 5.00 3.50 2.78 2.02 1.02 0.75 0.44 0.33 5 0.8 0.89 0.64 0.23 0.18 0.12 0.10 0.00 5 1.3 1.83 1.44 1.11 0.63 0.44 0.25 0.16 0.11 5 1.7 2.55 1.85 1.30 0.75 0.64 0.48 0.30 0.22 5 0.8 0.83 0.66 0.38 0.20 0.16 0.11 0.09 0.00 5 1.3 1.78 1.30 0.98 0.5</td><td>0.00 0.</td><td>004 85</td></t<>	5 0.8 0.10 0.83 0.61 0.34 0.61 0.03 0.61 0.03 5 1.4 1.72 1.28 0.89 0.50 0.37 0.27 0.16 0.11 5 1.9 2.61 2.00 1.55 0.80 0.64 0.50 0.29 0.11 5 2.5 3.50 2.33 1.72 1.00 0.89 0.67 0.35 0.22 5 3.6 5.00 3.50 2.78 2.02 1.02 0.75 0.44 0.33 5 0.8 0.89 0.64 0.23 0.18 0.12 0.10 0.00 5 1.3 1.83 1.44 1.11 0.63 0.44 0.25 0.16 0.11 5 1.7 2.55 1.85 1.30 0.75 0.64 0.48 0.30 0.22 5 0.8 0.83 0.66 0.38 0.20 0.16 0.11 0.09 0.00 5 1.3 1.78 1.30 0.98 0.5	0.00 0.	004 85
7 - M 7 SSX 5 10 - M 10 SSX 5 14 - M 14 SSX 5 18 - M 18 SSX 5 /G 3 5 //G 7 5 //M 3 5 MM 3 5 MM 10 5 //G 7 5 10 5 14 5 3 5 7 5 10 5 14 5 G 18 6 P 25 MX 6 P 40 M 6 P 100 M 6 P 200 M 6 P 200 M 6 P 200 M 6 P 35 MDX 6 P 50 MDX 6 P 50 MDX 6	5 1.4 1.72 1.28 0.89 0.53 0.73 0.27 0.16 0.17 5 1.9 2.61 2.00 1.55 0.80 0.64 0.50 0.29 0.1 5 2.5 3.50 2.33 1.72 1.00 0.89 0.67 0.35 0.22 5 3.6 5.00 3.50 2.78 2.02 1.02 0.75 0.44 0.33 5 0.8 0.89 0.69 0.41 0.23 0.18 0.12 0.10 0.0 5 1.3 1.83 1.44 1.11 0.63 0.41 0.25 0.16 0.11 0.10 5 1.3 1.40 2.45 1.84 1.05 0.88 0.61 0.36 0.20 0.16 5 0.8 0.83 0.66 0.38 0.20 0.16 0.11 0.09 0.00 5 1.3 1.78 1.30 0.98 0.56 0.44 0.29 0.20 0.11 5 1.1 3.52<	0.00 0.	03 85
10 - M 10 SSX 5 14 - M 14 SSX 5 18 - M 18 SSX 5 /G 3 5 //G 7 5 //G 14 5 ////G 14 5 ////////////////////////////////////	5 1.9 2.61 2.00 1.55 0.80 0.64 0.50 0.29 0.11 5 2.5 3.50 2.33 1.72 1.00 0.89 0.67 0.35 0.22 5 3.6 5.00 3.50 2.78 2.02 1.02 0.75 0.44 0.33 5 0.8 0.89 0.69 0.41 0.23 0.18 0.12 0.10 0.00 5 1.3 1.83 1.44 1.11 0.63 0.41 0.25 0.16 0.11 5 1.7 2.55 1.85 1.30 0.75 0.64 0.48 0.30 0.22 5 0.8 0.83 0.66 0.38 0.20 0.16 0.11 0.09 0.00 5 1.3 1.78 1.30 0.98 0.56 0.44 0.29 0.20 0.11 5 1.7 2.52 2.00 1.66 0.97 0.56 0.40 0.22 0.11 5 1.3 1.78 1.30 0.9	0.11 0.	05 85
14 - M 14 SSX 5 18 - M 18 SSX 5 76 3 5 76 7 5 76 7 5 76 7 5 76 7 5 76 7 5 76 7 5 77 5 7 5 10 5 14 5 5 6 18 6 6 25 6 P 12 MX 6 P 25 MX 6 P 40 M 6 P 70 M 6 P 100 M 6 P 170 M 6 P 200 M 6 P 300 M 6 P 35 MDX 6 P 35 MDX 6 P 50 MDX 6 P 75 MDX 6 P 35 MDX 6 P 35 MDX 6 P 35 MDX 6 P 35 MDX 6 P 35 MDX 6 P 35 MDX 6 P 35 MDX 6 P 36 MD 6	5 1.3 2.00 1.3.3 0.00 0.04 0.05 0.03 0.13 5 2.5 3.50 2.33 1.72 1.00 0.89 0.67 0.35 0.23 5 3.6 5.00 3.50 2.78 2.02 1.02 0.75 0.44 0.33 5 0.8 0.89 0.69 0.41 0.23 0.18 0.12 0.10 0.00 5 1.3 1.83 1.44 1.11 0.63 0.41 0.25 0.16 0.11 5 1.7 2.55 1.85 1.30 0.75 0.64 0.48 0.30 0.22 5 0.8 0.83 0.66 0.38 0.20 0.16 0.11 0.09 0.00 5 1.3 1.78 1.30 0.98 0.56 0.44 0.29 0.20 0.11 5 0.8 0.83 0.66 0.38 0.20 0.56 0.40 0.22 0.11 5 1.3 1.78 1.30 0.98 0.	0.10 0.	.00 00 00 85
14 - Mile SSX 5 18 - Mile SSX 5 16 - Mile SSX 5 16 - Mile SSX 5 16 - Mile SSX 5 16 - Mile SSX 5 16 - Mile SSX 5 16 - Mile SSX 5 16 - Mile SSX 5 17 - 5 5 16 - Mile SSX 5 MM 3 5 MM 3 5 MM 10 5 5 5 MM 14 5 3 5 7 5 10 5 14 5 6 6 P 12 MX 6 P 25 MX 6 P 40 M 6 P 100 M 6 P 100 M 6 P 200 M 6 P 200 M 6 P 35 MDX 6	5 2.5 3.60 2.53 1.72 1.00 0.69 0.67 0.23 0.22 5 3.6 5.00 3.50 2.78 2.02 1.02 0.75 0.44 0.33 5 0.8 0.89 0.69 0.41 0.23 0.18 0.12 0.10 0.0 5 1.3 1.83 1.44 1.11 0.63 0.41 0.25 0.16 0.11 0.09 0.07 5 2.1 3.40 2.45 1.84 1.05 0.88 0.61 0.36 0.22 0.16 5 0.8 0.83 0.66 0.38 0.20 0.16 0.11 0.09 0.00 5 1.3 1.78 1.30 0.98 0.56 0.44 0.29 0.20 0.11 0.99 0.50 0.40 0.22 0.11 5 0.17 2.52 2.00 1.66 0.97 0.56 0.40 0.22 0.11 5	0.13 0.	0U
13 - M 18 SSA 5 /G 3 5 /G 7 5 /G 10 5 /G 14 5 /G 3 5 //G 14 5 //G 3 5 //G 14 5 //G 14 5 MM 3 5 MM 7 5 MM 10 5 3 5 7 5 10 5 14 5 G 18 6 G 25 6 P 12 MX 6 P 25 MX 6 P 40 M 6 P 100 M 6 P 100 M 6 P 200 M 6 P 200 M 6 P 300 M 6 P 35 MDX 6 P 35 MDX 6 P 35 MDX 6 P 50 MDX 6 P 50 MDX 6 P 50 MDX 6 P 150 MD 6	5 3.6 5.00 3.30 2.78 2.02 1.02 0.73 0.144 0.33 5 0.8 0.89 0.69 0.41 0.23 0.18 0.12 0.10 0.0 5 1.3 1.83 1.44 1.11 0.63 0.41 0.25 0.16 0.11 5 1.7 2.55 1.85 1.30 0.75 0.64 0.48 0.30 0.22 5 0.8 0.83 0.66 0.38 0.20 0.16 0.11 0.09 0.00 5 1.3 1.78 1.30 0.98 0.56 0.44 0.29 0.20 0.11 5 1.7 2.52 2.00 1.66 0.97 0.56 0.40 0.22 0.11 5 1.3 1.78 1.30 0.98 0.56 0.44 0.29 0.20 0.16 5 1.7 2.52 2.00 1.66 0.97 0.56 0	0.24 0.	.11 00
7G 3 5 7G 7 5 7G 10 5 7G 14 5 MM 3 5 MM 7 5 MM 10 5 3 5 7 5 10 5 14 5 G 18 6 G 25 6 P 12 MX 6 P 25 MX 6 P 40 M 6 P 100 M 6 P 100 M 6 P 200 M 6 P 200 M 6 P 300 M 6 P 35 MDX 6 P 50 MDX 6 P 50 MDX 6 P 75 MDX 6 P 75 MDX 6 P 300 MD 6 P 35 MDX 6	5 0.8 0.89 0.69 0.41 0.23 0.18 0.12 0.10 0.0 5 1.3 1.83 1.44 1.11 0.63 0.41 0.25 0.16 0.11 5 1.7 2.55 1.85 1.30 0.75 0.64 0.64 0.36 0.22 5 2.1 3.40 2.45 1.84 1.05 0.88 0.61 0.36 0.22 5 1.3 1.78 1.30 0.98 0.56 0.44 0.29 0.20 0.11 5 1.7 2.52 2.00 1.66 0.97 0.56 0.40 0.22 0.11 5 0.8 0.83 0.66 0.38 0.20 0.11 0.09 0.00 5 1.3 1.78 1.30 0.98 0.56 0.44 0.29 0.20 0.11 0.09 0.00 0.55 0.44 0.22 0.11 0.99 0.80 0.58	0.30 0.	.14 85
/G 10 5 //G 10 5 //G 14 5 //G 14 5 MM 3 5 MM 7 5 MM 10 5 MM 10 5 MM 14 5 3 5 7 5 10 5 14 5 G 18 6 G 25 6 P 12 MX 6 P 25 MX 6 P 40 M 6 P 100 M 6 P 100 M 6 P 100 M 6 P 200 M 6 P 200 M 6 P 300 M 6 P 35 MDX 6 P 35 MDX 6 P 35 MDX 6 P 75 MDX 6 P 35 MDX 6 P 35 MDX 6 P 35 MDX 6 P 35 MDX 6 P 35 MDX 6 P 35 MDX 6 P 35 MDX 6	5 1.3 1.83 1.44 1.11 0.63 0.41 0.25 0.16 0.11 5 1.7 2.55 1.85 1.30 0.75 0.64 0.48 0.30 0.22 5 2.1 3.40 2.45 1.84 1.05 0.88 0.61 0.36 0.2 5 0.8 0.83 0.66 0.38 0.20 0.16 0.11 0.09 0.0 5 1.7 2.52 2.00 1.66 0.97 0.56 0.44 0.29 0.20 0.11 5 1.7 2.52 2.00 1.66 0.97 0.56 0.44 0.29 0.20 0.11 5 1.3 1.78 1.30 0.98 0.56 0.44 0.29 0.20 0.11 5 1.3 1.78 1.30 0.98 0.56 0.44 0.29 0.20 0.11 5 1.7 2.52 2.00 1.66 0.97 0.56 0.40 0.22 0.11 5 1.7 2.52<	0.07 0.	.03 85
/G10 5 /G14 5 MM 3 5 MM 7 5 MM 10 5 MM 10 5 MM 14 5 3 5 7 5 10 5 14 5 G 18 6 G 25 6 P 12 MX 6 P 25 MX 6 P 40 M 6 P 70 M 6 P 100 M 6 P 200 M 6 P 200 M 6 P 300 M 6 P 35 MDX 6 P 50 MDX 6 P 75 MDX 6 P 75 MDX 6 P 300 MD 6 P 35 MDX 6	5 1.7 2.55 1.85 1.30 0.75 0.64 0.48 0.30 0.2 5 2.1 3.40 2.45 1.84 1.05 0.88 0.61 0.36 0.2 5 0.8 0.83 0.66 0.38 0.20 0.16 0.11 0.09 0.00 5 1.3 1.78 1.30 0.98 0.56 0.44 0.29 0.20 0.11 5 1.7 2.52 2.00 1.66 0.97 0.56 0.40 0.22 0.1 5 2.1 3.35 2.42 1.84 0.99 0.80 0.58 0.34 0.2 5 0.8 0.83 0.66 0.38 0.20 0.16 0.111 0.09 0.00 5 1.3 1.78 1.30 0.98 0.56 0.44 0.29 0.20 0.11 5 1.7 2.52 2.00 1.66 0.97 0.56 0.40 0.22 0.1 5 1.7 2.52 2.00 1.66 0.97 0.56 0.40 0.22 0.1 5 2.1 3.35 2.42 1.84 0.99 0.80 0.58 0.34 0.22 6 6.4 4.83 4.58 4.04 3.58 2.72 1.90 1.68 1.00 6 3.2 8.61 6.15 4.10 2.05 1.46 1.17 0.88 0.66 6 3.2 11.66 8.32	0.11 0.	.05 85
/G14 5 MM 3 5 MM 7 5 MM 10 5 MM 10 5 MM 14 5 3 5 7 5 10 5 14 5 G 18 6 G 25 6 P 12 MX 6 P 25 MX 6 P 100 M 6 P 100 M 6 P 100 M 6 P 200 M 6 P 200 M 6 P 300 M 6 P 300 M 6 P 35 MDX 6 P 50 MDX 6 P 75 MDX 6 P 150 MD 6 P 3200 MD 6	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	0.20 0.	.09 85
MM 3 5 MM 7 5 MM 10 5 MM 14 5 3 5 7 5 10 5 14 5 G 18 6 G 25 6 P 12 MX 6 P 25 MX 6 P 100 M 6 P 100 M 6 P 100 M 6 P 200 M 6 P 200 M 6 P 300 M 6 P 35 MDX 6 P 50 MDX 6 P 75 MDX 6 P 75 MDX 6 P 300 MD 6 P 35 MDX 6 P 300 MD 6	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	0.24 0.	.11 85
MM 7 5 MM 10 5 MM 14 5 3 5 7 5 10 5 14 5 G 18 6 G 25 6 P 12 MX 6 P 25 MX 6 P 100 M 6 P 100 M 6 P 100 M 6 P 200 M 6 P 200 M 6 P 300 M 6 P 35 MDX 6 P 50 MDX 6 P 75 MDX 6 P 75 MDX 6 P 300 MD 6 P 35 MDX 6 </td <td>$\begin{array}{cccccccccccccccccccccccccccccccccccc$</td> <td>0.06 0.</td> <td>.02 85</td>	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	0.06 0.	.02 85
MM 10 5 MM 14 5 3 5 7 5 10 5 14 5 G 18 6 G 25 6 P 12 MX 6 P 25 MX 6 P 40 M 6 P 100 M 6 P 100 M 6 P 170 M 6 P 200 M 6 P 300 M 6 P 35 MDX 6 P 50 MDX 6 P 75 MDX 6 P 150 MD 6	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	0.14 0.	.06 85
MM 14 5 3 5 7 5 10 5 14 5 G 18 6 G 25 6 P 12 MX 6 P 25 MX 6 P 40 M 6 P 100 M 6 P 140 M 6 P 170 M 6 P 200 M 6 P 300 M 6 P 300 M 6 P 35 MDX 6 P 50 MDX 6 P 75 MDX 6 P 75 MDX 6 P 300 MD 6	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	0.16 0.	.07 85
3 5 7 5 10 5 14 5 G 18 6 G 25 6 P 12 MX 6 P 25 MX 6 P 40 M 6 P 70 M 6 P 100 M 6 P 140 M 6 P 170 M 6 P 200 M 6 P 300 M 6 P 35 MDX 6 P 50 MDX 6 P 75 MDX 6 P 150 MD 6	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	0.22 0.	.10 85
7 5 10 5 14 5 G 18 6 G 25 6 P 12 MX 6 P 25 MX 6 P 40 M 6 P 70 M 6 P 100 M 6 P 140 M 6 P 170 M 6 P 200 M 6 P 300 M 6 P 35 MDX 6 P 50 MDX 6 P 75 MDX 6 P 150 MD 6	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	0.06 0.	.02 85
10 5 14 5 G 18 6 G 25 6 P 12 MX 6 P 25 MX 6 P 40 M 6 P 70 M 6 P 100 M 6 P 140 M 6 P 170 M 6 P 200 M 6 P 300 M 6 P 35 MDX 6 P 50 MDX 6 P 50 MDX 6 P 75 MDX 6 P 150 MD 6	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	0.14 0.	.06 85
14 5 G 18 6 G 25 6 P 12 MX 6 P 25 MX 6 P 25 MX 6 P 40 M 6 P 70 M 6 P 100 M 6 P 100 M 6 P 100 M 6 P 200 M 6 P 300 M 6 P 35 MDX 6 P 50 MDX 6 P 75 MDX 6 P 150 MD 6 P 300 M 6	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	0.16 0.	.07 85
G 18 6 G 25 6 P 12 MX 6 P 25 MX 6 P 40 M 6 P 70 M 6 P 70 M 6 P 100 M 6 P 100 M 6 P 170 M 6 P 200 M 6 P 300 M 6 P 35 MDX 6 P 50 MDX 6 P 50 MDX 6 P 75 MDX 6 P 150 MD 6	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	0.22 0.	.10 85
G 25 6 P 12 MX 6 P 25 MX 6 P 40 M 6 P 70 M 6 P 100 M 6 P 100 M 6 P 100 M 6 P 100 M 6 P 100 M 6 P 200 M 6 P 250 M 6 P 300 M 6 P 35 MDX 6 P 50 MDX 6 P 75 MDX 6 P 150 MD 6	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	1.07 0.	.10 85
P 12 MX 6 P 25 MX 6 P 40 M 6 P 70 M 6 P 100 M 6 P 140 M 6 P 140 M 6 P 170 M 6 P 200 M 6 P 250 M 6 P 300 M 6 P 35 MDX 6 P 50 MDX 6 P 75 MDX 6 P 150 MD 6 P 150 MD 6	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	1.54 0.	.15 85
P 25 MX 6 P 40 M 6 P 70 M 6 P 100 M 6 P 140 M 6 P 170 M 6 P 200 M 6 P 250 M 6 P 300 M 6 P 35 MDX 6 P 50 MDX 6 P 60 MDX 6 P 150 MD 6	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	0.41 0.	.23 90
P 40 M 6 P 70 M 6 P 100 M 6 P 140 M 6 P 170 M 6 P 200 M 6 P 250 M 6 P 300 M 6 P 35 MDX 6 P 50 MDX 6 P 60 MDX 6 P 150 MD 6 P 300 MD 6	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	0.61 0.	.35 90
P 70 M 6 P 100 M 6 P 140 M 6 P 170 M 6 P 200 M 6 P 250 M 6 P 300 M 6 P 35 MDX 6 P 50 MDX 6 P 60 MDX 6 P 75 MDX 6 P 150 MD 6	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	0.83 0.	.47 90
P 100 M 6 P 140 M 6 P 170 M 6 P 200 M 6 P 250 M 6 P 300 M 6 P 35 MDX 6 P 50 MDX 6 P 50 MDX 6 P 75 MDX 6 P 75 MDX 6 P 75 MDX 6 P 300 MD 6	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	1.58 0.	.90 90
P 140 M 6 P 170 M 6 P 200 M 6 P 250 M 6 P 300 M 6 P 25 MDX 6 P 35 MDX 6 P 50 MDX 6 P 60 MDX 6 P 75 MDX 6 P 150 MD 6	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	2.14 1.	.22 90
P 170 M 6 P 200 M 6 P 250 M 6 P 300 M 6 P 25 MDX 6 P 35 MDX 6 P 50 MDX 6 P 60 MDX 6 P 75 MDX 6 P 150 MD 6	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	3.02 1.	.72 90
P 200 M 6 P 250 M 6 P 300 M 6 P 25 MDX 6 P 35 MDX 6 P 50 MDX 6 P 75 MDX 6 P 75 MDX 6 P 75 MDX 6 P 150 MD 6	6 19.4 55.55 39.67 26.45 13.22 9.44 7.55 5.68 3.9 6 24.0 77.77 55.55 37.03 18.51 13.22 10.58 7.95 5.55 6 29.0 88.88 63.48 42.32 21.16 15.11 12.09 9.09 6.3 6 3.2 11.94 8.53 5.68 2.84 2.03 1.62 1.22 0.8 6 4.8 15.83 11.30 7.53 3.76 2.69 2.15 1.61 1.1 6 6.5 18.88 13.48 8.99 4.49 3.21 2.56 1.93 1.3 6 8.2 25.55 18.25 12.16 6.08 4.34 3.47 2.61 1.8 6 9.8 28.61 20.43 13.62 6.81 4.86 3.89 2.92 2.0	3.61 2.	.06 90
P 250 M 6 P 300 M 6 P 25 MDX 6 P 35 MDX 6 P 50 MDX 6 P 60 MDX 6 P 75 MDX 6 P 150 MD 6	624.077.7755.5537.0318.5113.2210.587.955.5629.088.8863.4842.3221.1615.1112.099.096.363.211.948.535.682.842.031.621.220.864.815.8311.307.533.762.692.151.611.166.518.8813.488.994.493.212.561.931.368.225.5518.2512.166.084.343.472.611.869.828.6120.4313.626.814.863.892.922.0	3.97 2.	.27 90
P 300 M 6 P 25 MDX 6 P 35 MDX 6 P 50 MDX 6 P 60 MDX 6 P 75 MDX 6 P 150 MD 6	629.088.8863.4842.3221.1615.1112.099.096.363.211.948.535.682.842.031.621.220.864.815.8311.307.533.762.692.151.611.166.518.8813.488.994.493.212.561.931.368.225.5518.2512.166.084.343.472.611.869.828.6120.4313.626.814.863.892.922.0	5.56 3.	.17 90
P 25 MDX 6 P 35 MDX 6 P 50 MDX 6 P 60 MDX 6 P 75 MDX 6 P 150 MD 6 P 150 MD 6	6 3.2 11.94 8.53 5.68 2.84 2.03 1.62 1.22 0.8 6 4.8 15.83 11.30 7.53 3.76 2.69 2.15 1.61 1.1 6 6.5 18.88 13.48 8.99 4.49 3.21 2.56 1.93 1.3 6 8.2 25.55 18.25 12.16 6.08 4.34 3.47 2.61 1.8 6 9.8 28.61 20.43 13.62 6.81 4.86 3.89 2.92 2.0	6.35 3.	.63 90
P 35 MDX 6 P 50 MDX 6 P 60 MDX 6 P 75 MDX 6 P 150 MD 6 P 150 MD 6	6 4.8 15.83 11.30 7.53 3.76 2.69 2.15 1.61 1.1 6 6.5 18.88 13.48 8.99 4.49 3.21 2.56 1.93 1.3 6 8.2 25.55 18.25 12.16 6.08 4.34 3.47 2.61 1.8 6 9.8 28.61 20.43 13.62 6.81 4.86 3.89 2.92 2.0	0.85 0.	.48 90
P 50 MDX 6 P 60 MDX 6 P 75 MDX 6 P 150 MD 6 P 200 MD 6	6 6.5 18.88 13.48 8.99 4.49 3.21 2.56 1.93 1.3 6 8.2 25.55 18.25 12.16 6.08 4.34 3.47 2.61 1.8 6 9.8 28.61 20.43 13.62 6.81 4.86 3.89 2.92 2.0	1.13 0.	.64 90
P 60 MDX 6 P 75 MDX 6 P 150 MD 6 P 200 MD 6	6 8.2 25.55 18.25 12.16 6.08 4.34 3.47 2.61 1.8 6 9.8 28.61 20.43 13.62 6.81 4.86 3.89 2.92 2.0	1.35 0	77 90
P 75 MDX 6 P 150 MD 6	6 9.8 28.61 20.43 13.62 6.81 4.86 3.89 2.92 2.0	1.82 1	04 90
P 150 MD 6		2 04 1	16 90
	6 16.0 55.55 39.68 26.45 13.22 Q.44 7.55 5.69 -20	3 97 2	27 00
		7.01	54 00
	0 32.0 111.11 73.30 32.31 20.43 10.09 13.11 11.30 7.9	11.59 4.	.J4 9U
	U 47.0 IDI.II IID.U7 /0.71 38.30 27.39 21.91 10.48 11.5	11.52 6.	.00 90
P 600 MD 6	<u> </u>	14.90 8.	.51 90

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TABLE REGARDING VACUUM GENERATOR EVACUATION TIME, AT DIFFERENT VACUUM LEVELS

	Evacuation time (ms/l= s/m³) at different vacuum levels (-KPa)											
Art. Generator	Supply press. N bar (g)	lax. vacuum level -KPa	10	20	30	40	50	60	70	80	85	90
15 01 10	6	82	139	278	472	727	1171	1628	2720	4928		
15 02 10	6	82	139	278	472	727	1171	1628	2720	4928		
15 03 10	6	85	77	154	261	403	649	902	1506	2730	3876	
15 04 10	6	85	77	154	261	403	649	902	1506	2730	3876	
PVP 1	5	85	393	786	1336	2057	3312	4605	7690	13935	19787	
PVP 2	6	85	128	257	438	675	1087	1511	2523	4572	6492	
PVP 2 M	6	85	128	257	438	675	1087	1511	2523	4572	6492	
PVP 3	6	85	104	207	353	544	875	1217	2033	3684	5232	
PVP 7 X	6	85	43	86	147	226	365	507	847	1536	2181	
PVP 7 SX	6	85	43	86	147	226	365	507	847	1536	2181	
GV 1	5	85	394	788	1339	2063	3322	4617	7711	13973	19841	
GV 2	5	85	394	788	1339	2063	3322	4617	7711	13973	19841	
GV 3	5	85	394	788	1339	2063	3322	4617	7711	13973	19841	
M 3 - M 3 SSX	5	85	106	244	491	969	1642	2398	4004	7128	10122	
M 7 - M 7 SSX	5	85	61	142	285	563	954	1394	2328	4144	5885	
M 10 - M 10 SSX	5	85	40	93	188	371	629	918	1534	2731	3878	
M 14 - M 14 SSX	5	85	30	69	140	276	469	685	1144	2036	2892	
M 18 - M 18 SSX	5	85	21	48	. 10	193	327	478	799	1423	2020	
MVG 3	5	85	119	274	552	1088	1845	2694	4499	8009	11373	
MVG 7	5	85	58	133	268	520	807	1310	2188	3895	5531	
MVG 10	5	85	л1	95	102	370	642	038	1567	2790	3062	
MVG 14	5	85	31	71	1//	28/	/82	704	1175	2002	2071	
	5	85	100	204	502	1167	1079	2880	1924	2032	12105	
GVMM 7	5	85	50	127	075	5/2	021	1244	4024	2007	5676	
	5	05	10	07	105	201	921	051	1500	2991	J070 4016	
	5	60	42	97	140	304	100	901	1100	2020	4010	
UVIVIIVI 14 ML 2	5	60 95	31 100	12	140 500	200	409	714	1193	2124	10105	
VII 3	5	60	120	294	075	1107	1970	2009	4024	0000	12190	
VII 7	5	65	59	137	2/5	043	921	1344	2245	3997	0100	
MI 10	5	85	42	97	195	384	100	951	1589	2828	4016	
MI 14	5	85	31	72	146	288	489	/14	1193	2124	3016	
AVG 18	6	85	22	44	/5	115	185	258	430	798	1107	
AVG 25	6	85	15	30	52	80	128	1/8	297	538	764	50.10
PVP 12 MX	6	90	15.4	38.7	85.1	204.4	365.9	559.8	929.4	1607.8		5916
PVP 25 MX	6	90	10.4	26.0	57.3	137.7	246.5	377.1	626.0	1083.1		3986
PVP 40 M	6	90	7.7	19.2	42.3	101.6	182.0	278.4	462.3	799.8		2943
PVP 70 M	6	90	4.0	10.1	22.2	53.3	95.5	146.1	242.6	419.7		1544
PVP 100 M	6	90	3.0	7.4	16.4	39.5	70.7	108.2	179.6	310.8		1144
PVP 140 M	6	90	2.1	5.3	11.7	28.0	50.2	76.9	127.6	220.8		812
PVP 170 M	6	90	1.7	4.4	9.7	23.4	42.0	64.2	106.6	184.5		678
PVP 200 M	6	90	1.6	4.0	8.9	21.3	38.2	58.4	97.0	167.8		618
PVP 250 M	6	90	1.1	2.9	6.4	15.2	27.3	41.8	69.3	119.9		442
PVP 300 M	6	90	1.0	2.5	5.5	13.3	23.8	36.5	60.6	104.9		386
PVP 25 MDX	6	90	7.5	18.8	41.3	99.3	177.7	271.9	451.4	781.0		2874
PVP 35 MDX	6	90	5.6	14.1	31.2	74.9	134.0	205.1	340.5	589.1		2168
PVP 50 MDX	6	90	4.7	11.9	26.2	62.8	112.4	172.0	285.5	494.0		1818
PVP 60 MDX	6	90	3.5	8.8	19.3	46.4	83.0	127.0	211.0	365.0		1343
PVP 75 MDX	6	90	3.1	7.8	17.2	41.4	74.2	113.5	188.4	326.0		1200
PVP 150 MD	6	90	1.6	4.0	8.9	21.3	38.2	58.4	97.0	167.8		618
PVP 300 MD	6	90	0.8	2.0	4.4	10.6	19.1	29.2	48.5	83.9		306
PVP 450 MD	6	90	0.5	1.4	3.0	7.4	13.2	20.1	33.5	57.9		213
		00	0.4	1.0	0.4	5.7	10.0	15.6	05.0	110		16

8.02

MINIMUM PIPE INTERNAL DIAMETER RECOMMENDED FOR THE GENERATORS

Choosing the right fittings and pipe sections is essential for the correct operation of the vacuum plant. To obtain the highest performance by the vacuum generators, please see the temperature below and keep to the data shown in it.

		Compressed air	Vacuum	Exhaust
acuum generat	or	Pipe internal Ø	Pipe internal Ø	Pipe internal Ø
п.		mm	mm	mm
5 01 10		2	6	8
i 02 10		2	6	8
03 10		2	8	10
04 10		2	8	10
P 1		2	4	=
P 2		2	6	8
P 2 M		2	6	8
P 3		2	6	8
P 7 X		4	10	=
D 7 CY		т Л	10	_
1			10	_
1 0		2	4	0
2		2	4	b
3		2	4	6
3 - M 3 SSX		2	6	=
7 - M 7 SSX		2	8	=
10 - M 10 SSX	(4	10	=
14 - M 14 SSX	(4	12	=
18 - M 18 SSX	(4	15	=
/G 3		2	6	=
/G 7		2	8	=
/G 10		4	10	=
G 14		4	12	=
MM 3		2	6	=
MM 7		2	8	_
MM 10		4	10	_
		4	10	=
0		4	12	=
ა _		2	0	=
7		2	8	=
10		4	10	=
14		4	12	=
G 18		8	15	=
G 25		9	15	=
P 12 MX		4	12	14
P 25 MX		4	15	6 x 4 pipes
P 40 M P	A 40 - PS 40	6	27	=
P 70 M P	A 70 - PS 70	8	27	=
P 100 M P	A 100 - PS 100	9	27	=
P 140 M P	A 140 - PS 140	9	35	=
P 170 M P	A 170 - PS 170	12	35	_
D 200 M D	A 170 - 13 170	12	40	—
F 200 IVI F	A 200 - F3 200	12	40	=
	A 200 - F3 200	12	40	=
P 300 M P	A 300 - PS 300	12	50	=
P 25 MDX		6	27	=
9 35 MDX		6	27	=
P 50 MDX		6	27	=
P 60 MDX		8	27	=
P 75 MDX		8	27	=
P 150 MD		12	35	
P 300 MD		12	40	=
P 450 MD		16	50	=
D 600 MD		18	60	

Note: Data valid for pipes max. 2 m long.

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Single-stage vacuum generator operation is based on the Venturi principle.

Supplying the generator with compressed air in P, vacuum will be generated at connection U, while both the supply and the sucked air will be released through R.

By interrupting the air supply in P, the vacuum effect in U will also stop.

Vacuum generators 15 01 10 and 15 03 10 are generally used for controlling vacuum cups, for gripping and handling non-porous objects and equipment with low capacity requirements.

They are fully made with anodised aluminium.







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Note: All the vacuum data indicated in the table are valid at the normal atmospheric pressure of 1013 mbar and are obtained with a constant supply pressure.

R=EXHAUST

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drawings available at www.vuototecnica.net

3D

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

U=VACUUM CONNECTION

cum/h

-KPa

mbar abs

bar (g)

NI/s

°C

g

dB(A)

GAS-NPT thread adapters available at page 1.117

2.8

83

170

6

0.9

-20 / +80

63

140

8

15 01 10

2.8

70

300

5

0.8

2.7

55

450

4

0.7



Generator	Supply press.	Air consumption		Air capacity (NI/s) at different vacuum levels (-KPa) M									
art.	bar (g)	NI/s	0	10	20	30	40	50	60	70	80	-KPa	
15 01 10	6.0	0.9	0.77	0.66	0.61	0.55	0.44	0.29	0.19	0.09		83	

Evacuation time (ms/l=s/m³) at different vacuum levels (-Kpa)



Generator	Supply press.	Air consumption		Evacuation time $(ms/I = s/m^3)$ at different vacuum levels (-KPa)								
art.	bar (g)	NI/s	10	20	30	40	50	60	70	80	-KPa	
15 01 10	6.0	0.9	139	278	472	727	1171	1628	2720	4928	83	

Accessories upon reques

Silencer art. SSX 1/4"





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GAS-NPT thread adapters available at page 1.117

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3D drawings available at www.vuototecnica.net



Р —

GAS-NPT thread adapters available at page 1.117

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					$\overline{\mathbf{b}}$	
P=COMPRESSED AIR CONNECTION	R=EXHAUST	U=VACUUM CONNECTION				
Art.				15 03 10		
Quantity of sucked air		cum/h	4.8	5	6	
Max. vacuum level		-KPa	62	78	85	
Final pressure		mbar abs.	380	220	150	
Supply pressure		bar (g)	4	5	6	
Air consumption		NI/s	1.3	1.6	1.8	
Working <mark>temper</mark> ature		°C			-20 / +80	
Noise le <mark>vel</mark>		dB(A)			79	
Weight		g			179	

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

Note: All the vacuum data indicated in the table are valid at the normal atmospheric pressure of 1013 mbar and are obtained with a constant supply pressure.

8.06





Generator	Supply press.	Air consumption		Air capacity (NI/s) at different vacuum levels (-KPa)								
art.	bar (g)	NI/s	0	10	20	30	40	50	60	70	80	-KPa
15 03 10	6.0	1.8	1.39	1.30	1.15	1.00	0.89	0.77	0.69	0.44	0.04	85

Evacuation time (ms/l=s/m³) at different vacuum levels (-Kpa)



Generator	Supply press.	Air consumption		Evacuation time (ms/l = s/m³) at different vacuum levels (-KPa)									
art.	bar (g)	NI/s	10	20	30	40	50	60	70	80	85	-KPa	
15 03 10	6.0	1.8	77	154	261	403	649	902	1506	2730	3876	85	



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SINGLE-STAGE VACUUM GENERATORS WITH EJECTOR 15 02 10 and 15 04 10

The operation of these single-stage vacuum generators is based on the Venturi principle. Supplying the generator with compressed air in P, vacuum will be generated at connection U, while both the supply and the sucked air will be released through R. At the same time, the chamber contained in the generator is also supplied and, as soon as the supply in P is interrupted, it discharges the compressed air that had been collected in it through connection U, thus rapidly restoring the atmospheric pressure at the service.

If, for example, a vacuum cup is connected to the service U, thanks to this system it will disconnect much rapidly than with the vacuum generators described previously. They are fully made with anodised aluminium.







GAS-NPT thread adapters available at page 1.117

8

P=COMPRESSED AIR CONNECTION R=EXHAUS	T U=VACUUM CONNECTIO	N		
Art.			15 02 10	
Quantity of sucked air	cum/h	2.7	2.8	2.8
Max. vacuum level	-KPa	55	70	83
Final pressure	mbar abs.	450	300	170
Supply pressure	bar (g)	4	5	6
Air consumption	NI/s	0.7	0.8	0.9
Working temperature	°C			-20 / +80
Noise level	dB(A)			63
Weight	g			319
Spare parts				
Sealing kit	art.			00 15 500

Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$

Note: All the vacuum data indicated in the table are valid at the normal atmospheric pressure of 1013 mbar and are obtained with a constant supply pressure.

8.08

drawings available at www.vuototecnica.net

3D





Generator	Supply press.	Air consumption	Air capacity (NI/s) at different vacuum levels (-KPa) Max. va									
art.	bar (g)	NI/s	0	10	20	30	40	50	60	70	80	-KPa
15 02 10	6.0	0.9	0.77	0.66	0.61	0.55	0.44	0.29	0.19	0.09		83

Evacuation time (ms/l=s/m³) at different vacuum levels (-Kpa)



Generator	Supply press.	Air consumption	I	Max. vacuum level							
art.	bar (g)	NI/s	10	20	30	40	50	60	70	80	-KPa
15 02 10	6.0	0.9	139	278	472	727	1171	1628	2720	4928	83

Accessories upon req

Silencer art. SSX 1/4"





Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

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GAS-NPT thread adapters available at page 1.117

3D drawings available at www.vuototecnica.net

8.09







P=COMPRESSED AIR CONNECTION U=VACUUM CONNECTION R=EXHAUST

Art.			15 04 10	
Quantity of sucked air	cum/h	4.8	5	5
Max. vacuum level	-KPa	62	78	85
Final pressure	mbar abs.	380	220	150
Supply pressure	bar (g)	4	5	6
Air consumption	NI/s	1.3	1.6	1.8
Working temperature	°C			-20 / +80
Noise level	dB(A)			79
Weight	g			501
Spare parts				
Sealing kit	art.			00 15 501

Note: All the vacuum data indicated in the table are valid at the normal atmospheric pressure of 1013 mbar and are obtained with a constant supply pressure.

8.10

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3D





GAS-NPT thread adapters available at page 1.117



Generator	Supply press.	Air consumption			Air capacit	ty (NI/s) at	different	vacuum le	/els (-KPa)			Max. vacuum level
art.	bar (g)	NI/s	0	10	20	30	40	50	60	70	80	-KPa
15 04 10	6.0	1.8	1.39	1.30	1.15	1.00	0.89	0.77	0.69	0.44	0.04	85

Evacuation time (ms/l=s/m³) at different vacuum levels (-Kpa)



Generator	Supply press.	Air consumption		Evacu	ation time	(ms/l = s)	/m³) at diff	ferent vacı	um levels	(-KPa)		Max. vacuum level
art.	bar (g)	NI/s	10	20	30	40	50	60	70	80	85	-KPa
15 04 10	6.0	1.8	77	154	261	403	649	902	1506	2730	3876	85



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IN-LINE SINGLE-STAGE VACUUM GENERATORS PVP 1

This new range of vacuum generators also exploits the Venturi principle. Their distinctive feature compared with traditional vacuum generators are the two air and vacuum supply connections located in-line, while the exhaust connection of the sucked and exhaust air is orthogonal to them and it is located on the on the generator circumference. These vacuum generators are easy to disassemble, thus allowing visibility and access to all the components. The advantages of these generators include reduced overall dimensions, easy maintenance and easy assembly to the vacuum cup supports or to the vacuum cup holders. As a standard, they are equipped with pressed stainless steel suction filtre and a special microfibre silencer, which is wrapped around the exhaust connection, making them particularly silent.

They are fully made with anodised aluminium.





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3D

P=COMPRESSED AIR CONNECTION R=EXH	AUST U=VACUUM CONNECT	ION		0
Art.			PVP 1	
Quantity of sucked air	cum/h	0.9	1.0	1.0
Max. vacuum level	-KPa	60	80	85
Final pressure	mbar abs.	400	200	150
Supply pressure	bar (g)	3	4	5
Air consumption	NI/s	0.5	0.6	0.8
Working temperature	°C			-20 / +80
Noise level	dB(A)			62
Weight	g			44
Spare parts				
Silencer	art.			00 15 114
Suction filtre	art.			SP 1/4 I

Note: All the vacuum data indicated in the table are valid at the normal atmospheric pressure of 1013 mbar and are obtained with a constant supply pressure.

8.12





GAS-NPT thread adapters available at page 1.117



Generator	Supply press.	Air consumption			Air capaci	ty (NI/s) at	different	vacuum le	vels (-KPa)			Max. vacuum level
art.	bar (g)	NI/s	0	10	20	30	40	50	60	70	80	-KPa
PVP 1	5.0	0.8	0.27	0.25	0.22	0.18	0.12	0.07	0.06	0.03	0.004	85

Evacuation time (ms/l=s/m³) at different vacuum levels (-Kpa)



		10000 5000 0	10 20	30 40	50 60 -KPa	70 90	05					us available at www.vuototecnica.net
Generator Supply	press. Air consumption		Evad	cuation time	e (ms/l = s	/m³) at diff	ere <mark>nt v</mark> acı	um levels	(-KPa)	M	ax. vacuu <mark>m leve</mark>	Nin I
art. bar	(g) NI/s	10	20	30	40	50	60	70	80	85	-KPa	drav
PVP 1 5.0	0.8	393	786	1336	2057	3312 🦯	4605	7690	13935	19787	85	30

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8.13

The operation of these vacuum generators is also based on the Venturi principle.

Their distinctive feature compared with traditional vacuum generators are the two air and vacuum supply connections located in-line, while the exhaust connection of the sucked and exhaust air is orthogonal to them.

The advantages of these generators include reduced overall dimensions, easy maintenance and easy assembly. These vacuum generators can be assembled directly onto the vacuum cup supports or vacuum cup holders. They are fully made with anodised aluminium, except for the exhaust nozzle which is made with brass.







drawings available at www.vuototecnica.net

3D

P=COMPRESSED AII	R CONNECTION	R=EXH	AUST	U=VACUUM C	ONNECTION				-	
Art.				GV1			GV2			GV3
Quantity of sucked air	cum/h	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Max. vacuum level	-KPa	60	75	85	60	75	85	60	75	85
Final pressure	mbar abs.	400	250	150	400	250	150	400	250	150
Supply pressure	bar (g)	3	4	5	3	4	5	3	4	5
Air consumption	NI/s	0.5	0.6	0.7	0.5	0.6	0.7	0.5	0.6	0.7
Working temperature	0°C			-20 / +80			-20 / +80			-20 / +80
Noise level	dB(A)			70			70			70
Weight	g			19			20			21
A				30			35			38
C	Ø			M5			G1/8"			G1/4"

Note: All the vacuum data indicated in the table are valid at the normal atmospheric pressure of 1013 mbar and are obtained with a constant supply pressure.

8.14





GAS-NPT thread adapters available at page 1.117

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Generator	Supply press.	Air consumption	Air capacity (NI/s) at different vacuum levels (-KPa) Max. vacuum									Max. vacuum level
art.	bar (g)	NI/s	0	10	20	30	40	50	60	70	80	-KPa
GV1 - GV2 - GV3	5.0	0.7	0.27	0.23	0.20	0.17	0.13	0.06	0.05	0.03	0.004	85

Evacuation time (ms/l=s/m³) at different vacuum levels (-Kpa)



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SINGLE-STAGE VACUUM GENERATORS PVP 2 and PVP 3

With their extremely reduced size and high performance, these single-stage vacuum generators operate exploiting the Venturi principle.

Supplying the generator with compressed air in P, vacuum will be generated at connection U, while both the supply and the sucked air will be released through R. By interrupting the air supply in P, the vacuum effect in U will also stop.

The vacuum generators described in this page are generally used for interconnecting vacuum cups, for gripping and handling non-porous objects and equipment with low capacity requirements.

They are made with anodised aluminium with brass ejectors.







R=EXHAUST **U=VACUUM CONNECTION** P=COMPRESSED AIR CONNECTION Art. PVP 2 Quantity of sucked air cum/h 2.8 2.9 3.0 Max. vacuum level -KPa 60 70 85 **Final pressure** mbar abs 400 300 150 **Supply pressure** bar (g) 4 5 6 Air consumption NI/s 0.7 0.9 1.0 Working temperature °C -20 / +80 Noise level dB(A) 78 Weight 70 g

Note: All the vacuum data indicated in the table are valid at the normal atmospheric pressure of 1013 mbar and are obtained with a constant supply pressure.

8.16

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drawings available

3D



Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

GAS-NPT thread adapters available at page 1.117





Generator	Supply press.	Air consumption			Air capacit	ty (NI/s) at	different	vacuum le	vels (-KPa)			Max. vacuum level
art.	bar (g)	NI/s	0	10	20	30	40	50	60	70	80	-KPa
PVP 2	6.0	1.0	0.83	0.70	0.65	0.52	0.37	0.23	0.13	0.07	0.007	85

Evacuation time (ms/l=s/m³) at different vacuum levels (-Kpa)



Generator	Supply press.	Air consumption		Evacu	ation time	(ms/l = s)	/m³) at diff	ierent vacu	ium levels	(-KPa)		Max. vacuum level
art.	bar (g)	NI/s	10	20	30	40	50	60	70	80	85	-KPa
PVP 2	6.0	1.0	128	257	438	675	1087	1511	2523	4572	6492	85

Accessories upon request

Silencer art. 00 15 74



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8.17

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Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

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GAS-NPT thread adapters available at page 1.117







P=COMPRESSED AIR CONNECTION R=EXHAUST	U=VACUUM CONNECTION			P R
Art.			PVP 3	
Quantity of sucked air	cum/h	3.4	3.5	3.7
Max. vacuum level	-KPa	60	70	85
Final pressure	mbar abs.	400	300	150
Supply pressure	bar (g)	4	5	6
Air consumption	NI/s	1.1	1.3	1.5
Working temperature	°C			-20 / +80
Noise level	dB(A)			80
Weight	g			100

Note: All the vacuum data indicated in the table are valid at the normal atmospheric pressure of 1013 mbar and are obtained with a constant supply pressure.

8.18

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Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

GAS-NPT thread adapters available at page 1.117





Generator	Supply press.	Air consumption	Air capacity (NI/s) at different vacuum levels (-KPa) Max. vacuum level											
art.	bar (g)	NI/s	0	10	20	30	40	50	60	70	80	-KPa		
PVP 3	6.0	1.5	1.03	0.82	0.72	0.61	0.41	0.24	0.15	0.08	0.008	85		

Evacuation time (ms/l=s/m³) at different vacuum levels (-Kpa)



Generator	Supply press.	Air consumption	Evacuation time (ms/l = s/m ³) at different vacuum levels (-KPa) Max. vacuum level											
art.	bar (g)	NI/s	10	20	30	40	50	60	70	80	85	-KPa		
PVP 3	6.0	1.5	104	207	353	544	857	1217	2033	3684	5232	85		

Accessories upon request

Silencer art. 00 15 74





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Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

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GAS-NPT thread adapters available at page 1.117

8.19

SINGLE-STAGE VACUUM GENERATORS PVP 2 M

The vacuum generators described in this page are also based on the Venturi principle and share the same technical features as the previous ones. Their distinctive feature is their shape.

The vacuum connection U, in fact, is threaded to allow the assembly of a vacuum cup with a male 3/8" threaded gas support, while in-line, but on the opposite side an M 10 threaded hole allows installing the generator directly onto the machine or on the cup holders with springing device. They are fully made with anodised aluminium, with brass ejectors.

Equipped with a vacuum cup, they are true independent gripping units. These vacuum generators are suited for vacuum cup operated loaders or handlers, for gripping sheet steel, glass slabs, plastic panels and other similar products.







				P R
				$\frac{1}{v}$
P=COMPRESSED AIR CONNECTION R=EXHAUST	U=VACUUM CONNECTION			
Art.			PVP 2 M	
Quantity of sucked air	cum/h	2.8	2.9	3.0
Max. vacuum level	-KPa	60	70	85
Final pressure	mbar abs.	400	300	150
Supply pressure	bar (g)	4	5	6
Air consumption	NI/s	0.7	0.9	1.0
Working temperature	°C			-20 / +80
Noise level	dB(A)			78
Weight	g			162

Note: All the vacuum data indicated in the table are valid at the normal atmospheric pressure of 1013 mbar and are obtained with a constant supply pressure.

8.20

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3D





GAS-NPT thread adapters available at page 1.117

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SINGLE-STAGE VACUUM GENERATORS PVP 2 M





Generator	Supply press.	Air consumption	Air capacity (NI/s) at different vacuum levels (-KPa) Max. vacuum level											
art.	bar (g)	NI/s	0	10	20	30	40	50	60	70	80	-KPa		
PVP 2 M	6.0	1.0	0.83	1.70	0.65	0.52	0.37	0.23	0.13	0.07	0.007	85		

Evacuation time (ms/l=s/m³) at different vacuum levels (-Kpa)



Generator	Supply press.	Air consumption	1	Evacuation time (ms/I = s/m ³) at different vacuum levels (-KPa) N											
art.	bar (g)	NI/s	10	20	30	40	50	60	70	80	85	-KPa			
PVP 2 M	6.0	1.0	128	257	438	675	1087	1511	2523	4572	6492	85			

Accessories upon request

Silencer art. 00 15 74





8

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

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GAS-NPT thread adapters available at page 1.117

SINGLE-STAGE VACUUM GENERATORS PVP 7 X

Vacuum generators PVP 7 X also exploit the Venturi principle. Their distinctive feature compared to PVP 2 and PVP 3 is their greater suction capacity, thanks to the association of two ejectors in parallel.

A special silencer made with sintered ceramic is installed on their exhaust, making them particularly silent.

As a standard, they are equipped with a vacuum gauge for a direct reading of the vacuum level.

An additional connection on the body of the generator allows the installation of a mini vacuum switch for signalling the vacuum level, or of a pneumatic solenoid valve for a quick restoration of the atmospheric pressure at the service.

They are fully made with anodised aluminium, with stainless steel ejectors. These vacuum generators can be used for connecting one or more vacuum cups or equipment with capacity requirements within the shown values.









P=COMPRESSED AIR CONNECTION R=EXHAUST U=VACUUM CONNECTION

Art.			PVP 7 X	
Quantity of sucked air	cum/h	8.5	8.8	8.9
Max. vacuum level	-KPa	60	73	85
Final pressure	mbar abs.	400	270	150
Supply pressure	bar (g)	4	5	6
Air consumption	NI/s	2.3	2.8	3.2
Working temperature	°C			-20 / +80
Noise level	dB(A)			63
Weight	g			470
Spare parts	,			
Sealing kit	art.			00 15 276
Vacuum gauge	art.			09 03 15
Silencer	art.			00 15 55

Note: All the vacuum data indicated in the table are valid at the normal atmospheric pressure of 1013 mbar and are obtained with a constant supply pressure.

8.22

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Generator	Supply press.	Air consumption	Air capacity (NI/s) at different vacuum levels (-KPa) Max. vacuum leve											
art.	bar (g)	NI/s	0	10	20	30	40	50	60	70	80	-KPa		
PVP 7 X	6.0	3.2	2.47	2.28	2.10	1.94	1.44	0.97	0.86	0.54	0.05	85		

Evacuation time (ms/l=s/m³) at different vacuum levels (-Kpa)



		SE .	1000						/						ototacnica nat
			0	0 20	30	40	50 80 (Pa) 70	80	85					available at www.
Generator	Supply press.	Air consumption			Evac	uation ti	me (ms	/I = s/n	n³) at di	fferent	vacuum lev	els (-KPa)	N	/lax. vacuu <mark>m lev</mark>	vel :
art.	bar (g)	NI/s	10)	20	30		40	50	60) 70	80	85	-KPa	Lo Lo
PVP 7 X	6.0	3.2	43	}	86	147	7	226	365	50	7 847	1536	2181	85	

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8.23
SINGLE-STAGE VACUUM GENERATORS PVP 7 SX

Vacuum generators PVP 7X share the same mechanical and technical features as the previously described ones. Their distinctive feature is a state of the are silencer installed on them and made with natural fibre sound absorbing material contained in a special cylindrical anodised aluminium enclosure open on the exhaust.

This prevents the silencer from being clogged and allows the vacuum generator to suck oil or water condensation saturated fluids mixed with fine and impalpable dust.

They can be used as PVP 7X and, in addition, they can also operate in humid or dusty environments.









P R

P=COMPRESSED AIR CONNECTION R=EXHAUST U=VACUUM CONNECTION Art. PVP 7 SX Quantity of sucked air 8.5 8.8 8.9 cum/h Max. vacuum level -KPa 60 73 85 **Final pressure** mbar abs 400 270 150 Supply pressure bar (g) 4 5 6 Air consumption NI/s 2.3 2.8 3.2 Working temperature °C -20 / +80 **Noise level** dB(A) 63 Weight g 470 Spare parts Sealing kit art. 00 15 276 Vacuum gauge art. 09 03 15 Silencer SSX 3/4 R art.

Note: All the vacuum data indicated in the table are valid at the normal atmospheric pressure of 1013 mbar and are obtained with a constant supply pressure.

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Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$

GAS-NPT thread adapters available at page 1.117





Generator	Supply press.	Air consumption			Air capacit	ty (NI/s) at	different	vacuum le	vels (-KPa)			Max. vacuum level
art.	bar (g)	NI/s	0	10	20	30	40	50	60	70	80	-KPa
PVP 7 SX	6.0	3.2	2.47	2.28	2.10	1.94	1.44	0.97	0.86	0.54	0.05	85

Evacuation time (ms/l=s/m³) at different vacuum levels (-Kpa)



		SE .	1000 500						/	/								iototecnica.net
			0	10	20 :	30	40 50	9 60 *a	70	80	85							s available at www.vu
Generator	Supply press.	Air consumption				Evacu	ation ti	me (ms	s/l = s/	m³) at c	differe	e <mark>nt v</mark> acuu	m levels	s (-KPa)		Max. vacuum	level	wing
art.	bar (g)	NI/s		10	:	20	30		40	50		60	70	80	85	-KPa		drav
PVP 7 SX	6.0	3.2		43	1	86	147		226	365		507	847	1536	2181	85		U C C

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8.25

FIXING SUPPORTS FOR SINGLE-STAGE VACUUM GENERATORS

The supports described in this page are made with anodised aluminium as a standard, but, upon request, they can be supplied in the stainless steel version. These supports are for fixing the single-stage vacuum generators to the machine via a cylindrical slotted pin or a ball pin housed in the machine itself. They are suited for robotic gripping systems and they allow for an easy installation of the vacuum generators on the profiles used in the automotive sector.







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Δrt	For	Material	Weight
	generators		g
FCH 01	PVP 2	aluminium	60
	PVP 3		
FCH 01 INOX	PVP 2	stainless steel	180
	PVP 3		



otecnica.net	,53,16.5, 23. ▶	<u>4</u> <u>5</u> 96	36) 6 9 5 ↓	8
www.vuot	Art.	For generators	Material	Weight g
available at w	FCH 02	15 01 10 15 02 10 15 03 10 15 04 10	aluminium	72
3D drawings	FCH 02 INOX	15 01 10 15 02 10 15 03 10 15 04 10	stainless steel	220

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Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$









Art.	For	Material	Weight
,	generators		g
FCH 03	PVP 2	aluminium	39
	PVP 3		
FCH 03 INOX	PVP 2	stainless steel	117
	PVP 3		









53 26.5		36 6 9 5	
Art.	For	Material	Weight
FCH 04	15 01 10	aluminium	52
	15 02 10		alda
	15 03 10		
FCH 04 INOX	15 01 10	stainless steel	156
	15 02 10		
	15 03 10		
	15 04 10		

X

8.27

MULTI-STAGE VACUUM GENERATORS - GENERAL INFORMATION

Our multi-stage vacuum generators produce a maximum vacuum of 90%, equal to a final vacuum level of 100 mbar abs., with different suction capacities. They operate by use of compressed air from 1 to 6 bar (g).

Working principle

Each ejector is based on the Venturi principle: the supply fluid (compressed air) is led high speed by a convergent pipe into the fluid to be extracted (volume of the air to be sucked). This mixture is then led into two or three divergent pipes, where its kinetic energy is transformed into pressure energy for it to enter in the environment at a higher pressure (atmospheric pressure at the exhaust).

Technical features

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The main asset of multi-stage vacuum generators is its ability to exploit the kinetic energy of the supply compressed air via several specially dimensioned in-line ejectors, before releasing it in the atmosphere. This system allows, given the same capacity, a reduced compressed air consumption compared to the single-stage vacuum generators. The suction capacity is indirectly proportional to the differential between the pressure of

the fluid to be sucked and the external (atmospheric) pressure.

The reduced size and weight make multi-stage vacuum generators compact in relation to their great suction capacity.

The absence of moving parts make them particularly silent and allow them to be used continuously, without developing heat.

Being supplied exclusively by compressed air, these vacuum generators are explosionproof and can be used in work environments with temperatures ranging from -20 to +80 °C.

They are fully made with stainless materials.

Thanks to all these features, a good filtration of the supply and sucked compressed air is sufficient to make these generators are fully maintenance-free.



MULTI-STAGE VACUUM GENERATORS SERIES M

These vacuum generators feature multiple state of the art ejectors assembled onto small modules. One of their distinctive features is their great suction capacity compared to their reduced size.

With a compressed air supply of $4 \div 5$ bar (g), they can produce a maximum vacuum equal to 85% and a suction capacity of $3.6 \div 18$ cum/h, according to the number of modules. The silencer is built-in.

They are fully made with slightly anodised alloys and can be installed in any position. The multi-stage vacuum generators in this range are suited for interconnecting vacuum cup gripping systems and, in particular, in the industrial robotics sector, which requires equipment with excellent working performance, but with weight and size reduced to the minimum.













cum/h

-KPa

bar (g)

NI/s

°C

g

Ø

Ø

art.

dB(A)

mbar abs.



10

4.5

24

12

G3/8"

00 KIT M 7

drawings available at www.vuototecnica.net

Note: All the vacuum data indicated in the table are valid at the normal atmospheric pressure of 1013 mbar and are obtained with a constant supply pressure.

3

62

380

3

0.5

9

4.5

20

11

G1/4"

00 KIT M 3



8.29

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Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6}$ = $\frac{\text{Kg}}{0.4536}$

Art.

Quantity of sucked air

Max. vacuum level

Final pressure

Supply pressure

Air consumption

Noise level

Weight

A

В

C

Ε

F

G

Х

Spare parts

Sealing kit and reed valve

Working temperature

GAS-NPT thread adapters available at page 1.117



Air capacity (NI/s) at different vacuum levels (-Kpa)



				AIF capaci	ty (NI/S) a	t different	vacuum le	vels (-KPa)			Max. vacuum level
art. b	ar (g) NI/s	s 0	10	20	30	40	50	60	70	80	-KPa
M 3	5.0 0.8	3 1.00	0.83	0.61	0.34	0.18	0.12	0.10	0.07	0.03	85
M 7	5.0 1.4	1.72	1.28	0.89	0.50	0.37	0.27	0.16	0.11	0.05	85

Evacuation time (ms/l=s/m³) at different vacuum levels (-Kpa)





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Gen <mark>erator</mark>	Supply press.	Air consumption		Evacu	ation time	(ms/l = s/s)	/m³) at diff	erent vacu	um levels	(-KPa)		Max. vacuum level
a <mark>rt.</mark>	bar (g)	NI/s	10	20	30	40	50	60	70	80	85	-KPa
M 3	5.0	0.8	106	244	491	969	1642	2398	4004	7128	10122	85
M 7	5.0	1.4	61	142	285	563	954	1394	2328	4144	5885	85

3D drawings available at www.vuototecnica.net

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D_COMPRESSED AID CONNECTION	D_EVUALIST	LI_VACUUM CONNECTION
FEGUIVIERESSED AIR CONNECTION	DECVUADA	

X

Art.				M 10			M 14			M 18
Quantity of sucked air	cum/h	7.7	8.5	9.4	10.2	11.6	12.6	14.8	16.5	18.0
Max. vacuum level	-KPa	62	82	85	62	82	85	62	82	85
Final pressure	mbar abs.	380	180	150	380	180	150	380	180	150
Supply pressure	bar (g)	3	4	5	3	4	5	3	4	5
Air consumption	NI/s	1.2	1.6	1.9	1.7	2.1	2.5	2.3	2.9	3.6
Working temperature	°C			-10 / +80			-10 / +80			-10 / +80
Noise level	dB(A)			72			72			76
Weight	g			144			14 <mark>5</mark>			150
Α				34.5			34.5			44.5
В				20			20			30
C				4.5			4.5			4.5
Spare parts										
Sealing kit and reed valve	art.			00 KIT M 10			00 KI <mark>T M 1</mark> 4			00 <mark>KIT M 18</mark>

8.31

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Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$ GAS-NPT thread adapters available at page 1.117

(L)



Generator	Supply press.	Air consumption			Air capaci	ty (NI/s) at	different	vacuum le	vels (-KPa))		Max. vacuum level
art.	bar (g)	NI/s	0	10	20	30	40	50	60	70	80	-KPa
M 10	5.0	1.9	2.61	2.00	1.55	0.80	0.64	0.50	0.29	0.19	0.09	85
M 14	5.0	2.5	3.50	2.33	1.72	1.00	0.89	0.67	0.35	0.24	0.11	85
M 18	5.0	3.6	5.00	3.50	2.78	2.02	1.02	0.75	0.44	0.30	0.14	85



Evacuation time (ms/l=s/m³) at different vacuum levels (-Kpa)

8.32

M 18

5.0

3.6



3D

MULTI-STAGE VACUUM GENERATORS SERIES M.. SSX

These vacuum generators share the same technical features as the others of the M series described above. Their distinctive feature is their silent operation.

In fact, along with thye built-in silencer, they also have an external SSX silencer for a further noise reduction.

These generators are particularly recommended in work environments where the noise level must be kept within very low values.









Art.				M 3 SSX			M 7 SSX
Quantity of sucked air	cum/h	3.0	3.4	3.6	5.4	5.8	6.2
Max. vacuum level	-KPa	62	82	85	62	82	85
inal pressure	mbar abs.	380	180	150	380	180	150
upply pressure	bar (g)	3	4	5	3	4	5
ir consumption	NI/s	0.5	0.7	0.8	0.8	1.2	1.4
orking temperature	°C			-10 / +80			-10 / +80
dise level	dB(A)			52			58
eight	g			109			111
				24.5			25.5
				9			10
				4.5			4.5
	Ø			20			29
				11			12
	Ø			G1/4"			G3/8"
				74.5			97.5
pare parts							
lencer	art.			SSX 1/4"			S <mark>SX 3/8"</mark>
ealing kit and reed valve	art.			00 KIT M 3			00 KIT M 7

Note: All the vacuum data indicated in the table are valid at the normal atmospheric pressure of 1013 mbar and are obtained with a constant supply pressure.

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GAS-NPT thread adapters available at page 1.117

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

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Evacuation time (ms/l=s/m³) at different vacuum levels (-Kpa)



3D drawings available at www.vuototecnica.net



Silencer art. SSX 3/8" on M7



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Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

GAS-NPT thread adapters available at page 1.117







Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

X





P=COMPRESSED AIR CO	RESSED AIR CONNECTION R=EXHAUST U=VACUUM CONNECTION									
Art.				M 10 SSX			M 14 SSX			M 18 SSX
Juantity of sucked air	cum/h	7.7	8.5	9.4	10.2	11.5	12.6	14.8	16.5	18.0
lax. vacuum level	-KPa	62	82	85	62	82	85	62	82	85
inal pressure	mbar abs.	380	180	150	380	180	150	380	180	150
upply pressure	bar (g)	3	4	5	3	4	5	3	4	5
ir consumption	NI/s	1.2	1.6	1.9	1.7	2.1	2.5	2.3	2.9	3.6
/orking temperature	°C		-10 / +80				-10 / +80			-10 / +80
oise level	dB(A)		60				62			66
/eight	g	144					145			150
			34.5				34.5			44.5
				20			20			30
				4.5			4.5			4.5
	Ø			29		29				35
	Ø			G3/8"		G3/8"				G1/2"
				106.5			106.5			136.5
pare parts										
ilencer	art.			SSX 3/8"			SSX 3/8"			SSX 1/2"
ealing kit and reed valve	art.			00 KIT M 10			00 KI <mark>T M 1</mark> 4			00 <mark>KIT M 18</mark>

Note: All the vacuum data indicated in the table are valid at the normal atmospheric pressure of 1013 mbar and are obtained with a constant supply pressure.

GAS-NPT thread adapters available at page 1.117

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Evacuation time (ms/l=s/m³) at different vacuum levels (-Kpa) M10 SSX M14 SSX M18 SSX lister in the Sec -KPa -KPa -KPa Generator Supply press. Air consumption Evacuation time (ms/l = s/m³) at different vacuum levels (-KPa) Max. vacuum level art. -KPa bar (g) NI/s M 10 SSX 5.0 1.9

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M 14 SSX

M 18 SSX

Accessories included

5.0

5.0

2.5

3.6



3D drawings available at www.vuototecnica.net

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FIXING SUPPORTS FOR MULTI-STAGE VACUUM GENERATORS

The supports described in this page are made with anodised aluminium as a standard, but, upon request, they can be supplied in the stainless steel version. These supports are for fixing the multi-stage vacuum generators to the machine via a cylindrical slotted pin or a ball pin housed in the machine itself. They are suited for robotic gripping systems and they allow for an easy installation of the vacuum generators on the profiles used in the automotive sector.



Art	For	Material	Weight
generators			g
00 FCH 23	M 3 - M 7 - M 10 - M 14 - M 18	aluminium	63
00 FCH 22	M 3 - M 7 - M 10 - M 14 - M 18	stainless steel	191



1 8



Δrt	For	Material	Weight
7.1.1	generators		g -
00 FCH 13	M 3 - M 7 - M 10 - M 14 - M 18	aluminium	85
00 FCH 12	M 3 - M 7 - M 10 - M 14 - M 18	stainless steel	256

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8.37

MULTI-STAGE AND MULTI-FUNCTION VACUUM GENERATORS SERIES MVG

These generators are true independent vacuum units that can control an entire vacuum gripping system. Their distinctive features are their compact size and great suction capacity.

They are composed of a monobloc anodised aluminium structure onto which are assembled:

- A modular and silenced multi-stage vacuum generator.
- A micro solenoid valve for supplying compressed air to the generator.
- A micro solenoid valve for blowing the exhaust compressed air.
- An adjustable flow regulator for dosing the exhaust air.
- A unidirectional check valve, located on the suction inlet, for maintaining the vacuum in case of electricity failure.
- A digital vacuum switch provided with display and commutation LEDs, for managing the compressed air supply and for signalling the safety cycle start-up.
- An anodised aluminium manifold provided with vacuum connections and a built-in filtre easy to inspect.

By activating the compressed air solenoid valve, the generator creates vacuum at the service. Once the preset maximum value is reached, the vacuum switch acts on the solenoid valve electric coil and interrupts the air supply, restoring it when the vacuum value returns below the minimum value.

Along with maintaining the vacuum level within preset safety values (hysteresis), this modulation allows saving a considerable amount of compressed air.

A second vacuum switch signal, also adjustable and independent from the first, can be used to start up the cycle when the vacuum level is suitable for the application. Once the working cycle is completed, the compressed air supply is deactivated and, at the same time, the ejection micro solenoid valve is activated for a quick restoration of the atmospheric pressure at the application.

MVG multi-function vacuum generators can be installed in any position and are suited for interconnecting vacuum gripping systems for handling sheet steel, glass, marble, ceramic, plastic, cardboard, wood, etc., and, in particular, for the industrial robotics sector which requires equipment with excellent performance and with size and weight reduced to the minimum.

3D drawings available at www.vuototecnica.net

8.38

MULTI-STAGE AND MULTI-FUNCTION VACUUM GENERATORS MVG 3 and MVG 7







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PECOMPRESSED AIR CONNECTION REEXHAUST DEVACUUM CONNECTION	P=COMPRESSED AIR CONNECTION	R=EXHAUST	U=VACUUM CONNECTION
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Art.				MVG 3			MVG 7
Quantity of sucked air	cum/h	2.8	3.0	3.2	5.6	6.0	6.6
Max. vacuum level	-KPa	50	70	85	50	70	85
Final pressure	mbar abs.	500	300	150	500	300	150
Supply pressure	bar (g)	3	4	5	3	4	5
Air consumption	NI/s	0.5	0.6	0.8	0.8	1.0	1.3
Max. quantity of blown air at 5 bar	I/min			205			205
Supply solenoid valve position	NO/NC			NO			NO
Ejection solenoid valve position	NC			NC			NC .
Supply voltage	V			24 DC			24 DC
Electric absorption	W			2 x 2			2 x 2
Vacuum switch output				PNP			PNP
Class of protection	IP			65			65
Working temperature	°C			-10 / +60			-10 / +60
Noise level	dB(A)			66			70
Weight	Kg			0.666			0.670
G	Ø			G1/4"			G3/8"
Note: To order the generator: with supply so without the digital vacuum switch, plowithout the ejection solenoid valve, p	plenoid valve NC, please ease indicate the code l lease indicate the code	e indicate the code MVG MVG SV; MVG SC.	3 NC;				
Note: All the vacuum data indicated in the t	able are valid at the no	rmal atmospheric press	sure of 1013 mbar a	nd are obtained with	a constant supply	pressure.	

Note: All the vacuum data indicated in the table are valid at the normal atmospheric pressure of 1013 mbar and are obtained with a constant supply pressure.

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GAS-NPT thread adapters available at page 1.117

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

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Air capacity (NI/s) at different vacuum levels (-Kpa)

Evacuation time (ms/l=s/m³) at different vacuum levels (-Kpa)



Generator	Supply press.	Air consumption		Evacu	ation time	(ms/l = s/s)	′m³) at diff	erent vacu	um levels	(-KPa)		Max. vacuum level
art.	bar (g)	NI/s	10	20	30	40	50	60	70	80	85	-KPa
MVG 3	5.0	0.8	119	274	552	1088	1845	2694	4499	8009	11373	85
MVG 7	5.0	1.3	58	133	268	529	897	1310	2188	3895	5531	85

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ACCESSORIES AND SPARE PARTS UPON REQUEST

Art.		MVG 3	MVG 7
Sealing kit and reed valve	art.	00 KIT MVG 3	00 KIT MVG 7
Electric connection cable with axial connector for vacuum switch	art.	00 12 2	0
Electric connection cable with radial connector for vacuum switch	art.	00 12 2	:1
Electric connection cable set with built-in energy			
Saving device NO and connectors	art.	00 15 2	02
Electric connection cable set with built-in energy			
Saving device NC and connectors	art.	00 15 2	03
Digital vacuum switch	art.	12 10 1	0
Supply s <mark>olenoid</mark> valve NO	art.	00 15 1	55
Supply solenoid valve NC	art.	00 15 1	56
Supply solenoid valve NC	art.	00 15 1	00

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MULTI-STAGE AND MULTI-FUNCTION VACUUM GENERATORS MVG 10 and MVG 14



sum/h KPa mbar abs. oar (g) IV/s IV/NC IV/NC IVC IV VV	7.7 50 500 3 0.9	8.4 70 300 4 1.3	MVG 10 9.2 85 150 5 1.7 205 NO NC 24 DC	10.2 50 500 3 1.3	11.2 70 300 4 1.7	MVG 14 12.2 85 150 5 2.1 205 N0 NC
sum/h KPa mbar abs. bar (g) IV/s /min IV/NC IV VC V V	7.7 50 500 3 0.9	8.4 70 300 4 1.3	9.2 85 150 5 1.7 205 NO NC 24 DC	10.2 50 500 3 1.3	11.2 70 300 4 1.7	12.2 85 150 5 2.1 205 N0 NC
KPa nbar abs. var (g) IV/s /min IO/NC IV V V	50 500 3 0.9	70 300 4 1.3	85 150 5 1.7 205 NO NC 24 DC	50 500 3 1.3	70 300 4 1.7	85 150 5 2.1 205 N0 NC
nbar abs. par (g) /min NO/NC NC VC	500 3 0.9	300 4 1.3	150 5 1.7 205 NO NC 24 DC	500 3 1.3	300 4 1.7	150 5 2.1 205 NO NC
oar (g) 41/s 40/NC 40/NC 40 V	3 0.9	4 1.3	5 1.7 205 NO NC 24 DC	3 1.3	4 1.7	5 2.1 205 NO NC
II/s /min IO/NC IC / V	0.9	1.3	1.7 205 NO NC 24 DC	1.3	1.7	2.1 205 NO NC
/min NO/NC NC V			205 NO NC 24 DC			205 NO NC
NO/NC NC / N			NO NC 24 DC			NO NC
NC / N			NC 24 DC			NC
I N			24 DC			
N						24 DC
			1.4 x 2			1.4 x 2
			PNP			PNP
Р			65			65
°C			-10 / +60			-10 / +60
iB(A)			62			70
(g			0.716			0.720
ð			G3/8"			G3/8"
valve NC, please in dicate the code MV	ndicate the code MVG	NC;	0.716 G3/8"			G3/8
P v v v v v v v v v v v v v	C 3(A) alve NC, please ir cate the code MV licate the code M	alve NC, please indicate the code MVG cate the code MVG SV;	alve NC, please indicate the code MVG NC; cate the code MVG SV; licate the code MVG SC.	65	65 C 3(A) g 0.716 G3/8" alve NC, please indicate the code MVG NC; cate the code MVG SV; licate the code MVG SC.	65 -10 / +60 3(A) 62 0.716 G3/8" alve NC, please indicate the code MVG NC; cate the code MVG SV; licate the code MVG SC.

Note: All the vacuum data indicated in the table are valid at the normal atmospheric pressure of 1013 mbar and are obtained with a constant supply pressure.

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GAS-NPT thread adapters available at page 1.117

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

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Air capacity (NI/s) at different vacuum levels (-Kpa)





Generator	Supply press.	Air consumption		Evacu	ation time	(ms/l = s/l)	m³) at diff	erent vacı	um levels	(-KPa)		Max. vacuum level
art.	bar (g)	NI/s	10	20	30	40	50	60	70	80	85	-KPa
MVG 10	5.0	1.7	41	95	192	379	642	938	1567	2790	3962	85
MVG 14	5.0	2.1	31	71	144	284	482	704	1175	2092	2971	85

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ACCESSORIES AND SPARE PARTS UPON REQUEST

Art.		MVG 10	MVG 14
Sealing kit and reed valve	art.	00 KIT MVG 10	00 KIT MVG 14
Electric connection cable with axial connector for vacuum switch	art.	00 12 20	
Electric connection cable with radial connector for vacuum switch	art.	00 12 21	
Electric connection cable set with built-in energy			
Saving device NO and connectors	art.	00 15 202	
Electric connection cable set with built-in energy			
Saving device NC and connectors	art.	00 15 203	
Digital v <mark>acuum s</mark> witch	art.	12 10 10	
Supply s <mark>olenoid</mark> valve NO	art.	00 15 155	
Supply s <mark>olenoid</mark> valve NC	art.	00 15 156	

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ACCESSORIES AND SPARE PARTS FOR MULTI-STAGE AND MULTI-FUNCTION VACUUM GENERATORS SERIES MVG



Cable length = 5 mt.

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3D

drawings available at www.vuototecnica.net

ACCESSORIES AND SPARE PARTS FOR MULTI-STAGE AND MULTI-FUNCTION VACUUM GENERATORS SERIES MVG

Cable set with built-in energy saving device



	1		
DIGITAL OUTPUT (+24) -	WHITE		DIGITAL VACUUM SWITCH PNP
POSITIVE POLE +24	BROWN		ART 121010
NEGATIVE POLE -0 V	GREY		SUPPLY SOLENOID
SUCTION ON	BLACK	MANIFOLD	VALVE NG
BLOWING ON	BLUE	_	BLOWING SOLENOID VALVE NC

Art.	Description
00 15 203	Cable set with built-in energy saving device for connection to:
	- Digital vacuum switch
	- Supply solenoid valve NC
	- Ejection solenoid valve NC
	Cable length= 5 mt.

Connector



Art.	Description
00 15 157	Connector with LED for micro solenoid valve

Cable with axial connector



ACCESSORIES AND SPARE PARTS FOR MULTI-STAGE AND MULTI-FUNCTION VACUUM GENERATORS SERIES MVG

Supply solenoid valve NO



Ejection solenoid valve spare plate



MODULAR MULTI-STAGE AND MULTI-FUNCTION VACUUM GENERATORS SERIES GVMM

Modular multi-function vacuum generators are true independent vaccum units that offer an entire vacuum control system.

They feature a reduced thickness and weight compared to their suction capacity and they have been designed to be assembled with screws to one or more intermediate modules *MI*. The original internal connection system for the compressed air supply allows communication with no need for external manifolds.

This modular system allows increasing the number of independent vacuum units according to the requirements. In fact, you can order a multi-function vacuum generator and the intermediate modules with the desired capacities, already assembled, or you can assemble one or more intermediate modules to the GVMM generator that has already been installed on the machine, without having to make particular modifications. GVMM vacuum generators are composed of an anodised aluminium monobloc with lid, inside of which the silenced multiple ejectors are installed and the vacuum chamber and the compressed air supply connection are contained.

The following items are assembled externally:

- A micro solenoid valve for supplying compressed air to the generator.
- A micro solenoid valve for blowing the exhaust compressed air.
- An adjustable flow regulator for dosing the exhaust air.
- A digital vacuum switch with display and commutation LEDs for managing the compressed air supply and for signalling the safety cycle start-up.
- An anodised aluminium or transparent plexiglas manifold provided with vacuum connections with built-in suction filtre, easy to inspect, and a check valve for maintaining the vacuum in case of electricity or compressed air failure.

By activating the compressed air solenoid valve, the generator creates vacuum at the service. Once the preset maximum value is reached, the vacuum switch acts on the solenoid valve electric coil and interrupts the air supply, restoring it when the vacuum value returns below the minimum value.

Along with maintaining the vacuum level within preset safety values (hysteresis), this modulation allows saving a considerable amount of compressed air.

A second vacuum switch signal, also adjustable and independent from the first, can be used to start up the cycle when the vacuum level is suitable for the application. Once the working cycle is completed, the compressed air supply is deactivated and, at the same time, the ejection micro solenoid valve is activated for a quick restoration of the atmospheric pressure at the application.

GVMM multi-function vacuum generators can be installed in any position and are suited for interconnecting vacuum gripping systems for handling sheet steel, glass, marble, ceramic, plastic, cardboard, wood, etc., and, in particular, for the industrial robotics sector which requires eqipment with excellent performance and several independent vacuum units for controlling several applications but with reduced size and weight.

3D drawings available at

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www.vuototecnica.net

MODULAR MULTI-STAGE AND MULTI-FUNCTION VACUUM GENERATORS GVMM 3 and GVMM 7

		WWW.VUOTOT					
127 55.5 39.5 4 22 6) M R	
P=COMPRESSED AIR CONNECTION	ON R=EXHA	UST U=VAC	UUM CONNECTION		U V		— U
Art.				GVMM 3			GVMM 7
Quantity of sucked air	cum/h	2.6	2.8	3.0	5.5	6.0	6.4
Max. vacuum level	-KPa	64	85	85	60	80	85
Final pressure	mbar abs.	360	150	150	400	200	150
Supply pressure	bar (g)	3	4	5	3	4	5
Air consumption	NI/s	0.6	0.7	0.8	0.9	1.1	1.3
Max. quantity of blown air at 5 bar (a)	I/min			128			128
Supply solenoid valve position	NO/NC			NO			NO
Flectric absorption	W			2			2
Fiection solenoid valve position	NC			NC.			NC
Electric abcorntion	W			Λ			1
	vv			4			4
Suppry voltage	V			Z4DU			Z4DU
	10			PNP			PNP
Class of protection	IF.			65			65
Working temperature	°C			-10 / +60			-10 / +60
Noise level	dB(A)			66			70
Weight	g			420			420
G	Ø			G1/4"			G1/4"

Note: To order the generator: with supply solenoid valve NC, please indicate the code GVMM .. NC; without the digital vacuum switch, please indicate the code GVMM .. SV.

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

Note: All the vacuum data indicated in the table are valid at the normal atmospheric pressure of 1013 mbar and are obtained with a constant supply pressure.

GAS-NPT thread adapters available at page 1.117

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3D drawings available at www.vuototecnica.net

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MODULAR MULTI-STAGE AND MULTI-FUNCTION VACUUM GENERATORS GVMM 3 and GVMM 7



Air capacity (NI/s) at different vacuum levels (-Kpa)

Evacuation time (ms/l=s/m³) at different vacuum levels (-Kpa)





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Generator	Supply press.	Air consumption	Evacuation time (ms/l = s/m ³) at different vacuum levels (-KPa) Max. vacuum level									
art.	bar (g)	NI/s	10	20	30	40	50	60	70	80	85	-KPa
GVMM 3	5.0	0.8	128	294	592	1167	1978	2889	4824	8588	12195	85
GVMM 7	5.0	1.3	59	137	275	543	921	1344	2245	3997	5676	85

ACCESSORIES AND SPARE PARTS UPON REQUEST

Art.		GVMM 3	GVMM 7						
Sealing kit and reed valve	art.	00 KIT GVMM 3	00 KIT GVMM 7						
Electric connection cable with axial connector for vacuum switch	art.	00 12 20							
Electric connection cable with radial connector for vacuum switch art. 00 12 21									
Electric connection cable set with built-in energy									
Saving device NO and connectors	art.	00 15 202							
Electric connection cable set with built-in energy									
Saving device NC and connectors	art.	00 15 203							
Digital vacuum switch	art.	12 10 10							
Supply s <mark>olenoid</mark> valve NO	art.	00 15 176							
Supply s <mark>olenoid</mark> valve NC	art.	00 15 175							

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MODULAR MULTI-STAGE AND MULTI-FUNCTION VACUUM GENERATORS GVMM 10 and GVMM 14



Note: To order the generator: with supply solenoid valve NC, please indicate the code GVMM .. NC;

without the digital vacuum switch, please indicate the code $\ensuremath{\mathsf{GVMM}}$.. SV.

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

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Note: All the vacuum data indicated in the table are valid at the normal atmospheric pressure of 1013 mbar and are obtained with a constant supply pressure.

GAS-NPT thread adapters available at page 1.117

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drawings available at www.vuototecnica.net

3D

MODULAR MULTI-STAGE AND MULTI-FUNCTION VACUUM GENERATORS GVMM 10 and GVMM 14



Evacuation time (ms/l=s/m³) at different vacuum levels (-Kpa)



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Generator	Supply pless.	All consumption	Evacuation time ($115/1 = 5/11^{-}$) at unrefer vacuum revers (-K-a)								
art.	bar (g)	NI/s	10	20	30	40	50	60	70	80	85
GVMM 10	5.0	1.7	42	97	195	384	651	951	1589	2828	4016
GVMM 14	5.0	2.1	31	72	146	288	489	714	1193	2124	3016

3D drawings available at www.vuototecnica.net

ACCESSORIES AND SPARE PARTS UPON REQUEST

Art.		GVMM 10	GVMM 14
Sealing kit and reed valve	art.	00 KIT GVMM 10	00 KIT GVMM 14
Electric connection cable with axial connector for vacuum switch	art.	00 12 20	
Electric connection cable with radial connector for vacuum switch	art.	00 12 21	
Electric connection cable set with built-in energy			
Saving device NO and connectors	art.	00 15 202	
Electric connection cable set with built-in energy			
Saving device NC and connectors	art.	00 15 203	
Digital vacuum switch	art.	12 10 10	
Supply s <mark>olenoid v</mark> alve NO	art.	00 15 176	
Supply solenoid valve NC	art.	00 15 175	

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MULTI-STAGE, MULTI-FUNCTION AND MODULAR INTERMEDIATE VACUUM MODULES SERIES MI

Intermediate modules are non-independent multi-stage and multi-function vacuum generators to be assembled to the generators of the GVMM range. Their thickness and weight are reduced to the maximum compared to their suction capacity and they have been designed to be enclosed between the lid and the base of the GVMM vacuum generator and fixed with screws. The internal connections for the compressed air supply allow communication between them and the basic generator, with no need for external manifolds.

This way, each module becomes an independent vacuum unit that can control an entire vacuum system.

They can be ordered in the desired amount and capacity, either already assembled onto the GVMM multi-function vacuum generator, or separately, to be assembled to the GVMM generator previously installed onto the machine. In this case, we suggest ordering a screw kit suitable for the number of modules to be assembled.

MI intermediate vacuum modules are made up of the same elements that compose GVMM generators, except for the lid. They operate and they are used as the GVMM multi-function vacuum generator onto which they are assembled.



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			66) C			R	P C J
P=COMPRESSED AIR CONNECT Art.	ION R=EXH	AUST U=VACL	JUM CONNECTI	ON MI 3	U		MI 7
Quantity of sucked air	cum/h	2.6	2.8	3.0	5.5	6.0	6.4
Max. vacuum level	-KPa	64	85	85	60	80	85
Final pressure	mbar abs.	360	150	150	400	200	150
Supply pressure	bar (g)	3	4	5	3	4	5
Air consumption	NI/s	0.6	0.7	0.8	0.9	1.1	1.3
Max. quantity of blown air at 5 bar (g)	l/min			128			128
${\bf \Xi}$ Supply solenoid valve position	NO/NC			NO			NO
Electric absorption	W			2			2
Ejection solenoid valve position	NC			NC			NC
Electric absorption	W			4			4
Supply voltage	V			24DC			24DC
	ח			PNP			PNP or
S LIASS OF PROTECTION	IL IL			10/00			05
Working temperature				-107+60			-10/+60 70
The second secon	uD(A)			00			01 000
	g			30U C1/A"			00U €1///"
Note: To order the generator: with supply sole without the digital vacuum switch, plea Note: All the vacuum data indicated in the tat	enoid valve NC, please se indicate the code M ple are valid at the norr	indicate the code MI I SV. nal atmospheric pressi	NC; ure of 1013 mbar an	nd are obtained with a c	onstant supply pres	sure.	UII T

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Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6}$ = $\frac{\text{Kg}}{0.4536}$

GAS-NPT thread adapters available at page 1.117



Air capacity (NI/s) at different vacuum levels (-Kpa)



Supply press. Max. vacuum level art. bar (g) NI/s -KPa MI 3 5.0 0.8 5.0 MI 7 1.3

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ACCESSORIES AND SPARE PARTS UPON REQUEST				ote
Art.		MI 3		
Sealing kit and reed valve	art.	00 KIT MI 3	00	KIT MI 7
Electric connection cable with axial connector for vacuum switch	art.		00 12 20	
Electric connection cable with radial connector for vacuum switch	art.		00 12 21	t w
Electric connection cable set with built-in energy				e
Saving device NO and connectors	art.		00 15 202	llab
Electric connection cable set with built-in energy				ava
Saving device NC and connectors	art.		00 15 203	SD
Digital vacuum switch	art.		12 10 10	vi
Supply solenoid valve NO	art.		00 15 176	drav
Supply solenoid valve NC	art.		00 15 175	3D .

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INTERMEDIATE VACUUM MODULES MI 10 and MI 14





P=COMPRESSED AIR CONNECTION R=EXHAUST U=VACUUM CONNECTION

Art.				MI 10			MI 14
Quantity of sucked air	cum/h	7.5	8.3	9.1	10.1	11.1	12.1
Max. vacuum level	-KPa	60	80	85	60	80	85
Final pressure	mbar abs.	400	200	150	400	200	150
Supply pressure	bar (g)	3	4	5	3	4	5
Air consumption	NI/s	1.1	1.4	1.7	1.4	1.7	2.1
Max. quantity of blown air at 5 bar (g)	l/min			128			128
Supply solenoid valve position	NO/NC			NO			NO
Electric absorption	W			2			2
Ejection solenoid valve position	NC			NC			NC
Electric absorption	W			4			4
Supply voltage	V			24DC			24DC
Vacuum switch output				PNP			PNP
Class of protection	IP			65			65
Working temperature	°C			-10 / +60			-10/+60
Noise level	dB(A)			70			72
Weight	g			410			410
G	Ø			G1/4"			G1/4"

Note: To order the generator: with supply solenoid valve NC, please indicate the code MI .. NC; without the digital vacuum switch, please indicate the code MI .. SV.

Note: All the vacuum data indicated in the table are valid at the normal atmospheric pressure of 1013 mbar and are obtained with a constant supply pressure.

3D drawings available at www.vuototecnica.net



Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

GAS-NPT thread adapters available at page 1.117



Air capacity (NI/s) at different vacuum levels (-Kpa)



Generator	Supply press.	Air consumption	Evacuation time (ms/I = s/m ³) at different vacuum levels (-KPa) Max. vacuum level							/lax. vacuum level		
art.	bar (g)	NI/s	10	20	30	40	50	60	70	80	85	-KPa
MI 10	5.0	1.7	42	97	195	384	651	951	1589	2828	4016	85
MI 14	5.0	2.1	31	72	146	288	489	714	1193	2124	3016	85

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ACCESSORIES AND SPARE PARTS UPON REQUEST				totecni
Art.		MI 10		MI 14
Sealing kit and reed valve	art.	00 KIT MI 10	00) KIT MI 14
Electric connection cable with axial connector for vacuum switch	art.		00 12 20	
Electric connection cable with radial connector for vacuum switch	art.		00 12 21	atv
Electric connection cable set with built-in energy				le
Saving device NO and connectors	art.		00 15 202	ilab
Electric connection cable set with built-in energy				ava
Saving device NC and connectors	art.		00 15 203	ds
Digital vacuum switch	art.		12 10 10	Win Via
Supply solenoid valve NO	art.		00 15 176	dra
Supply solenoid valve NC	art.		00 15 175	30

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ACCESSORIES AND SPARE PARTS FOR VACUUM GENERATORS AND MODULES SERIES GVMM and MI



Cable set with built-in energy saving device



ACCESSORIES AND SPARE PARTS FOR VACUUM GENERATORS AND MODULES SERIE GVMM e MI

Cable set with built-in energy saving device



Art.	Description
00 15 203	Cable set with built-in energy saving device for connection to :
	- Digital vacuum switch
	- Supply solenoid valve NC
	- Ejection solenoid valve NC
	Cable length= 5 mt.

Connector



Art.	Description	
00 15 157	Connector with LED for micro solenoid valve	

Cable with axial connector



Art.	Description
00 12 20	Electric connection cable with axial connector,
	for digital vacuum switch

Cable with radial connector



Art.	Description	
00 12 21	Electric connection cable with radial connector,	
	for digital vacuum switch	

Digital vacuum switch



Art.	Description
00 12 21	Electric connection cable with radial connector,
	for digital vacuum switch
Art.	Description
12 10 10	Digital vacuum switch

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ACCESSORIES AND SPARE PARTS FOR VACUUM GENERATORS AND MODULES **SERIES GVMM e MI** Micro solenoid valve NO



Art.	Description	
00 15 176	Supply solenoid valve NO	

Micro solenoid valve NC



Art.	Description	
00 15 175	Supply solenoid valve NC	

Plexiglass manifolds



Art.	Description
00 15 171	Plexiglass manifold for GVMM - MI 3/7
00 15 188	Plexiglass manifold for GVMM - MI 10/14

Aluminium manifolds



Art.	Description
00 15 174	Aluminium manifold for GVMM - MI 3/7
00 15 187	Aluminium manifold for GVMM - MI 10/14





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Art.	Description
00 15 306	Galvanised sheet metal L-type fixing support

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Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

MODULAR VACUUM SYSTEMS SET-UP

GVMM multi-function vacuum generators can be assembled with one or more intermediate modules, thus forming a modular vacuum system, featuring a compact shape and reduced size and weight.

As a standard, up to 6 vacuum units can be assembled, but using threaded bars instead allows assembling even more.



SET-UP EXAMPLE 1				
N°	Art.	В		
1	GVMM 3 - 7	20		
2	MI 10 - 14	25		
3	MI 3 - 7	20		

Total length L= 65

Recommended screw kit: Art. 00 KIT GVMM 02

Order example:

n°1 Generator GVMM 3

n°1 Intermediate module MI 10

n°1 Intermediate module MI 3

n°1 stainless steel screw kit 00 KIT GVMM 02



SET-UP EXAMPLE 2

N°	Art.	В
1	GVMM 10 - 14	25
2	MI 3 - 7	20
3	MI 10 - 14	25

Total length L= 70

Recommended screw kit: Art. 00 KIT GVMM 03

Order example:

n°1 Generator GVMM 10

n°1 Intermediate module MI 3

n°1 Intermediate module MI 10

n°1 stainless steel screw kit 00 KIT GVMM 03





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STAINLESS STEEL M5 SCREW KIT	
Art.	L
00 KIT GVMM 01	45 - 50
00 KIT GVMM 02	60 - 65
00 KIT GVMM 03	70 - 75
00 KIT GVMM 04	80 - 85
00 KIT GVMM 05	90 - 95
00 KIT GVMM 06	100 - 105
00 KIT GVMM 07	110 - 115
00 KIT GVMM 08	120 - 125
00 KIT GVMM 09	130 - 135

140 - 145

150 - 155

00 KIT GVMM 10

00 KIT GVMM 11



3D drawings available at www.vuototecnica.net

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

8.59
SINGLE-STAGE AND MULTI-FUNCTION VACUUM GENERATORS SERIES AVG

These generators are independent vacuum units that can control an entire vacuum gripping system. They have been specially designed for the AUTOMOTIVE sector and they are equipped with single ejectors that, given the same capacity as the multi-ejector generators, allow a quicker grip and, as a result, a greater compressed air consumption. As a standard, they are provided with a built-in pneumatic energy-saving device. They are composed of an anodised aluminium monobloc structure, inside of which are installed the ejectors, the servo-controlled slide valve for the compressed air supply and are contained the vacuum chambers as well as the various connections. On the outside, on the other hand, are installed:

- A bistable impulse solenoid valve for controlling the slide valve.
- A micro solenoid valve for blowing the exhaust compressed air.
- A flow regulator for dosing the exhaust compressed air.
- Two silencers for removing noise from the ejected air.
- An aluminium manifold provided with vacuum connections with built-in:
- A pneumatic vacuum switch for managing the compressed air supply according to the set vacuum level (energy saving).
- ^o A check valve for maintaining the vacuum in case of electricity or compressed air failure.
- ° A suction filtre, easy to inspect through the transparent polycarbonate lid.

By providing an electric impulse to the two-position micro solenoid valve, the compressed air supply slide valve will be activated and vacuum will be created at the application. Once the preset maximum value has been reached, the pneumatic vacuum switch, acts on the slide valve and interrupts the compressed air supply, restoring it when the value returns below the minimum value.

Along with maintaining the vacuum level within the preset safety values, this modulation allows saving a considerable amount of compressed air, even in case of electricity failure. Once the work cycle is completed, an electric impulse deactivates the supply micro solenoid valve and, at the same time, the ejection micro solenoid valve for a quick restoration of the atmospheric pressure at the application.

AVG vacuum generators are set for the installation of a micro digital vacuum switch art. 12 05 11 at the application and, upon request, they can be supplied protection devices against shocks and accidental falls.

Also these vacuum generators can be installed in any position.

AVG vacuum generators are suited for controlling vacuum cup gripping systems, for handling sheet metal, glass, marble, ceramic, plastic, cardboard, wood, etc., and, in particular for the AUTOMOTIVE sector, which requires equipment with excellent performance and reduced overall dimensions and weight.









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P=COMPRESSED AIR CONNECT	ON R=EXHA	AUST	U=VACUUM CON	NECTION	(J	
Art.				AVG 18			AVG 25
Max. quantity of sucked air	cum/h	16.5	17.0	17.4	24.5	25.0	25.2
Max. vacuum level	-KPa	60	70	85	60	70	85
Final pressure	mbar abs.	400	300	150	400	300	150
Supply pressure	bar (g)	4	5	6	4	5	6
Air consumption	NI/s	4.3	5.3	6.4	6.5	8.0	9.6
Max. quantity of air blown at 6 bar (g)	l/min			140			140
Bistable supply solenoid valve	NO/NC			NO/NC			NO/NC
Electric absorption	W			1			1
Ejection solenoid valve position	NC			NC			NC
Electric absorption	W			4			4
Supply voltage	V			24 DC			24 DC
Class of protection	IP			65			65
Working temperature	°C			-10 / +60			-1 <mark>0 / +60</mark>
Noise level	dB(A)			63			65
Weight	Kg			1.67			1.67

Note: To order the generator provided with digital vacuum switch, add the letter V to the code (e.g.: AVG 25 V).

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

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Note: All the vacuum data indicated in the table are valid at the normal atmospheric pressure of 1013 mbar and are obtained with a constant supply pressure.

GAS-NPT thread adapters available at page 1.117

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Evacuation time (ms/l=s/m³) at different vacuum levels (-Kpa)



ACCESSORIES AND SPARE PARTS UPON REQUEST

Art.		AVG 18	AVG 25
Sealing kit	art.	00 KIT AVG 18	00 KIT AVG 25
Cables with solenoid valve connectors provided with			
built-in electronic device in the male M2 connector	art.	00 15	309
Exhaust silencer	art.	SSX 3	/4 R
Rear aluminium shockproof protection plate	art.	00 15	271
Front aluminium shockproof protection plate	art.	00 15	272
Digital micro vacuum switch	art.	12 05	11
Bistable supply solenoid valve	art.	00 15	297
Blowing solenoid valve NC	art.	00 15	175

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Protection devices



Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

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ACCESSORIES AND SPARE PARTS FOR SINGLE-STAGE AND MULTI-FUNCTION VACUUM GENERATORS SERIES AVG



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3D drawing available at www.vuototecnica.net

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ACCESSORIES AND SPARE PARTS FOR SINGLE-STAGE AND MULTI-FUNCTION VACUUM GENERATORS SERIES AVG

Digital micro vacuum switch



Connector



Art.	Description	
00 15 157	Connector with solenoid valve LED	

Bistable micro solenoid valve



Art.	Description
00 15 297	Bistable supply solenoid valve

Micro solenoid valve NC



MULTI-STAGE VACUUM GENERATORS PVP 12 MX and 25 MX

This new range of multiple ejector vacuum generators represents the natural evolution of the PVP 12M and 25M generators. In fact, given the same air consumption and final vacuum level, the maximum suction capacity is increased from 15 to 21 cum/h and from 25 to 31 cum/h respectively.

The body and the lid are made with anodised aluminium, all the ejectors are made with stainless steel, as well as the fixing screws.

The state of the art seal in EPDM and is never in contact with the sucked fluid. The reed valves, on the other hand, are made with silicon as a standard, and viton, upon request. The devices are also equipped with two new vacuum connections, apart from the existing one, and one for the possible connection to control or measuring devices.

As a standard, the devices are equipped with a vacuum gauge, a quick coupler for compressed air supply and metal locking caps for the unused connections. The exhaust air connections are threaded in order to allow the installation of the new

SSX silencers, for a further noise reduction.

They are perfectly interchangeable with the previous generators.





P=COMPRESSED AIR CONNEC	TION R=EXHAUST	U=		↓ U					
Art.				PVP 12 MX	2 12 MX				
Max. quantity of sucked air	cum/h	16.0	18.0	21.0	25.0	28.0	31.0		
Max. vacuum level	-KPa	65	85	90	65	85	90		
Final pressure	mbar abs.	350	150	100	350	150	100		
Supply pressure	bar (g)	4	5	6	4	5	6		
Air consumption	NI/s	1.3	1.5	1.8	2.3	2.7	3.2		
Working temperature	°C			-20 / +80			-20 / +80		
Noise level	dB(A)			65			70		
Weight	g			660			960		
Α				29.5			45.5		
В				63.5			79.5		
C				15.5			20.7		
D				57.0			60.5		
E				35.0			37.0		
F				95.0			89.5		
G				14.0			20.7		
L							20.75		
M							14.5		
N							G1/8"		
Exhaust connection	Ø			G3/8"			N° 4 x G1/4"		
R Vacuum connection	Ø			G3/8"			G3/8"		
R 1 Auxiliary vacuum connection	Ø			G1/8"			G1/8"		
R 2 Additional vacuum connection	Ø			G1/4"			G1/2"		
Spare parts									
Sealing kit and reed valve	art.			00 KIT PVP 12 MX			00 KIT PVP 25 MX		
Vacuum gauge	art.			09 03 15			09 03 15		

Note: All the vacuum data indicated in the table are valid at the normal atmospheric pressure of 1013 mbar and are obtained with a constant supply pressure.

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drawing available at www.vuototecnica.net

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GAS-NPT thread adapters available at page 1.117



Evacuation time (ms/l=s/m³) at different vacuum levels (-Kpa)



Generator	Supply press.	Air consumption		Evacuation time (ms/I = s/m ³) at different vacuum levels (-KPa)								Max. vacuum level
art.	bar (g)	NI/s	10	20	30	40	50	60	70	80	85	-KPa
PVP 12 MX	6.0	1.8	15.4	38.7	85.1	204.4	365.9	559.8	929.4	1607.8	5916	90
PVP 25 MX	6.0	3.2	10.4	26.0	57.3	137.7	246.5	377.1	626.0	1083.1	3986	90

Accessories upon request

Silencer art. SSX 3/8" for PVP 12MX







Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

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GAS-NPT thread adapters available at page 1.117

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3D drawing available at www.vuototecnica.net

MULTI-STAGE VACUUM GENERATORS PVP 40 ÷ 300 M

This new range of multi-stage vacuum generators have been designed to be assembled onto OCTOPUS vacuum systems and represents a true evolution of traditional vane vacuum pumps. They feature state of the art ejectors and boast an excellent ratio between the consumed and the sucked air to the benefit of operative consumption. They also allow adjusting the vacuum level and capacity according to the air supply pressure.

When designing these vacuum generators, our focus was on noise; In fact, they are free of moving parts subject to vibrations and wear and they are perfectly soundproofed, therefore, their operation is particularly silent.

Moreover, their operation being based on Venturi's principle, they do not develop heat. The light alloys used to make them have allowed a considerable reduction of their weight. A good filtration of the compressed air supply and of the sucked one allows discharging air free from oil vapours, water condensation and impurities and reducing maintenance to a simple regular filtre cleaning.







P R

P=COMPRESSED AIR CC	NNECTION	R=EXHA	AUST	U=VACUL	JM CONNEC					
Art.				PVP 40 M			PVP 70 M			PVP 100 M
Max. quantity of sucked air	cum/h	36	39	42	65	73	80	88	98	108
Max. vacuum level	-KPa	65	82	90	65	82	90	65	82	90
Final pressure	mbar abs.	350	180	100	350	180	100	350	180	100
Supply pressure	bar (g)	4	5	6	4	5	6	4	5	6
Air consumption	NI/s	2.3	2.7	3.2	4.9	5.7	6.6	7.2	8.5	9.8
Working temperature	٥°			-20 / +80			-20 / +80			-20 / +80
Noise level	dB(A)			67			68			70
Weight	Kg			4.2			4.2			4.2
Spare parts										
Sealing kit e disc valves	art.			00 KIT PVP 40 N	Λ	0	0 KIT PVP 70 M	N	0	0 KIT PVP 100 M
Vacuum <mark>gauge</mark>	art.			09 03 15			09 03 15			09 03 15
Pressure gauge	art.			09 03 25	09 03 25			09 03 25		

Note: All the vacuum data indicated in the table are valid at the normal atmospheric pressure of 1013 mbar and are obtained with a constant supply pressure. By adding the letter R to the article, the generator will be supplied with a built-in check valve (E.g.: PVP 40 MR).

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drawing available at www.vuototecnica.net

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GAS-NPT thread adapters available at page 1.117



Generator	Supply press.	Air consumption		Air capacity (NI/s) at different vacuum levels (-KPa) Max. vacuum le								Max. vacuum level
art.	bar (g)	NI/s	0	10	20	30	40	50	60	70	80	-KPa
PVP 40 M	6.0	3.2	11.66	8.32	5.55	2.77	1.98	1.58	1.19	0.83	0.47	90
PVP 70 M	6.0	6.6	22.22	15.87	10.58	5.29	3.77	3.02	2.27	1.58	0.90	90
PVP 100 M	6.0	9.8	30.00	21.42	14.28	7.14	5.10	4.08	3.06	2.14	1.22	90



Evacuation time (ms/l=s/m³) at different vacuum levels (-Kpa)

Generator Supply press. Air consumption Evacuation time (ms/I = s/m³) at different vacuum levels (-KPa) Max. vacuum level art. bar (g) NI/s 10 20 30 40 50 60 70 80 90 -KPa PVP 40 M 6.0 3.2 7.7 19.2 42.3 101.6 182.0 278.4 462.3 799.8 2943 90 **PVP 70 M** 6.0 6.6 4.0 10.1 22.2 53.3 95.5 146.1 242.6 419.7 1544 90 **PVP 100 M** 6.0 9.8 3.0 7.4 16.4 39.5 70.7 108.2 179.6 310.8 1144 90

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P=COMPRESSED AIR CONNECTION		R=EXHAUST U=VA			JM CONNEC	CTION				-
Art.				PVP 140 M			PVP 170 M			PVP 200 M
Max. quantity of sucked air	cum/h	125	140	152	150	168	182	170	188	200
Max. vacuum level	-KPa	65	82	90	65	82	90	65	82	90
Final pressure	mbar abs.	350	180	100	350	180	100	350	180	100
Supply pressure	bar (g)	4	5	6	4	5	6	4	5	6
Air consumption	NI/s	9.6	11.4	13.0	12.1	14.2	16.3	14.2	16.9	19.4
Working temperature	0°			-20 / +80			-20 / +80			-20 / +80
Noise level	dB(A)			70		71				72
Weight	Kg			5.1			5.1			5.1
Spare parts										
Sealing <mark>kit e dis</mark> c valves	art.			00 KIT PVP 140 M	N	00	KIT PVP 170	M	00) KIT PVP 200 M
Vacuum <mark>gauge</mark>	art.			09 03 15			09 03 15			09 03 15
Pressure <mark> gauge</mark>	art.			09 03 25			09 03 25			09 03 25

Note: All the vacuum data indicated in the table are valid at the normal atmospheric pressure of 1013 mbar and are obtained with a constant supply pressure. By adding the letter R to the article, the generator will be supplied with a built-in check valve (E.g.: PVP 140 MR).

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3D drawing available at www.vuototecnica.net



GAS-NPT thread adapters available at page 1.117

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Generator	Supply press.	Air consumption		Air capacity (NI/s) at different vacuum levels (-KPa) Max. vacuum level								
art.	bar (g)	NI/s	0	10	20	30	40	50	60	70	80	-KPa
PVP 140 M	6.0	13.0	42.22	30.15	20.10	10.05	7.18	5.74	4.31	3.02	1.72	90
PVP 170 M	6.0	16.3	50.55	36.10	24.07	12.03	8.59	6.87	5.17	3.61	2.06	90
PVP 200 M	6.0	19.4	55.55	39.67	26.45	13.22	9.44	7.55	5.68	3.97	2.27	90



Evacuation time (ms/l=s/m³) at different vacuum levels (-Kpa)

Generator	Supply press.	Air consumption		Evacuation time (ms/I = s/m ³) at different vacuum levels (-KPa)							Ma	x. vacuu <mark>m level</mark>
art.	bar (g)	NI/s	10	20	30	40	50	60	70	80	90	-KPa
PVP 140 M	6.0	13.0	2.1	5.3	11.7	28.0	50.2	76.9	127.6	220.8	812	90
PVP 170 M	6.0	16.3	1.7	4.4	9.7	23.4	42.0	<u>64.</u> 2	106.6	184. <mark>5</mark>	678	90
PVP 200 M	6.0	19.4	1.6	4.0	8.9	21.3	38.2	58.4	97.0	167.8	618	90

X

8



P=COMPRESSED AIR CONI	NECTION R=EXH	AUST	U=VACUUM CON	INECTION			U
Art.				PVP 250 M			PVP 300 M
Max. quantity of sucked air	cum/h	224	252	280	240	290	320
Max. vacuum level	-KPa	65	82	90	65	82	90
Final pressure	mbar abs.	350	180	100	350	180	100
Supply pressure	bar (g)	4	5	6	4	5	6
Air consumption	NI/s	17.3	20.7	24.0	20.4	24.8	29.0
Working temperature	°C			-20 / +80			-20 / +80
Noise level	dB(A)			72			74
Weight	Kg			6.0			6.0
Spare parts							
Sealing kit e disc valves	art.			00 KIT PVP 250 M	1		00 KIT PVP 300 M
Vacuum <mark>gauge</mark>	art.			09 03 15			09 03 15
Pressure gauge	art.			09 03 25			09 03 25

Note: All the vacuum data indicated in the table are valid at the normal atmospheric pressure of 1013 mbar and are obtained with a constant supply pressure.

By adding the letter R to the article, the generator will be supplied with a built-in check valve (E.g.: PVP 250 MR).

8.72



GAS-NPT thread adapters available at page 1.117





Generator	Supply press.	Air consumption		Air capacity (NI/s) at different vacuum levels (-KPa)							Max. vacuum level	
art.	bar (g)	NI/s	0	10	20	30	40	50	60	70	80	-KPa
PVP 250 M	6.0	24.0	77.77	55.55	37.03	18.51	13.22	10.58	7.95	5.56	3.17	90
PVP 300 M	6.0	29.0	88.88	63.48	42.32	21.16	15.11	12.09	9.09	6.35	3.63	90

Evacuation time (ms/l=s/m³) at different vacuum levels (-Kpa)



X



Generator Supply press. Air consumption Evacuation time (ms/I = s/m³) at different vacuum levels (-KPa) Max. vacuum level art. bar (g) NI/s 10 20 30 40 50 60 70 80 90 -KPa PVP 250 M 6.0 24.0 1.1 2.9 6.4 15.2 27.3 41.8 69.3 119.9 442 90 **PVP 300 M** 6.0 29.0 1.0 2.5 5.5 13.3 23.8 36.5 60.6 104.9 386 90

8

3D

MULTI-STAGE VACUUM GENERATORS PVP 25 ÷ 75 MDX

This new range of generators represent the natural evolution of the PVP $25 \div 75$ MD multiple ejector vacuum generators and they boast an excellent performance. In fact, given the same air consumption values and the same final vacuum level, the maximum suction capacity is increased by $10 \div 12\%$ compared to the previous range. the body and lid are made with anodised aluminium, all the ejectors are made with stainless steel, as well as the fixing screws.

The state of the art seal is in EPDM and is never in contact with the sucked fluid; le reed valves, on the other hand, are made with silicon as a standard and in viton, upon request.

These new devices contain a housing for the installation, upon request, of a pneumatic vacuum switch, that, associated with a pneumatic slide valve and a special check valve, allows making an energy saving device. As a standard, these devices are equipped with a vacuum gauge a pressure gauge, a silencer on the exhaust and a quick coupler for the compressed air supply.

This new range of vacuum generators is perfectly interchangeable with the previous one.









P=COMPRESSED AIR C	ONNECTION	R=EXHA	UST	U=VACUL	JM CONNEC	TION				
Art.				PVP 25 MDX			PVP 35 MDX		I	PVP 50 MDX
Max. quantity of sucked air	cum/h	35	39	43	47	52	57	57	62	68
Max. vacuum level	-KPa	65	82	90	65	82	90	65	82	90
Final pressure	mbar abs.	350	180	100	350	180	100	350	180	100
Supply pressure	bar (g)	4	5	6	4	5	6	4	5	6
Air consumption	NI/s	2.3	2.8	3.2	3.4	4.1	4.8	4.7	5.6	6.5
Working temperature	С°С			-20 / +80			-20 / +80			-20 / +80
Noise level	dB(A)			58			58			60
Weight	Kg			1.71			1.73			1.75
Spare parts										
Sealing kit and reed valve	art.		(00 KIT PVP 25 ME	XC	00	KIT PVP 35 M	DX	00 I	KIT PVP 50 MDX
Vacuum gauge	art.			09 03 15			09 03 15			09 03 15
Pressure gauge	art.			09 03 25			09 03 25			09 03 25
Silencer	art.			SSX 3/4"			SSX 3/4"			SSX 3/4"

Note: All the vacuum data indicated in the table are valid at the normal atmospheric pressure of 1013 mbar and are obtained with a constant supply pressure.

8.74

drawing available at www.vuototecnica.net

3D



GAS-NPT thread adapters available at page 1.117

MULTI-STAGE VACUUM GENERATORS PVP 25 MDX, 35 MDX and 50 MDX



Air capacity (NI/s) at different vacuum levels (-Kpa)

Generator	Supply press.	Air consumption		Air capacity (NI/s) at different vacuum levels (-KPa) Max.								Max. vacuum level
art.	bar (g)	NI/s	0	10	20	30	40	50	60	70	80	-KPa
PVP 25 MDX	6.0	3.2	11.94	8.53	5.68	2.84	2.03	1.62	1.22	0.85	0.48	90
PVP 35 MDX	6.0	4.8	15.83	11.30	7.53	3.76	2.69	2.15	1.61	1.13	0.64	90
PVP 50 MDX	6.0	6.5	18.88	13.48	8.99	4.49	3.21	2.56	1.93	1.35	0.77	90



Evacuation time (ms/l=s/m³) at different vacuum levels (-Kpa)

Generator	Supply press.	Air consumption		Evacuation time (ms/I = s/m ³) at different vacuum levels (-KPa)							Ma	Max. vacuu <mark>m level</mark>		
art.	bar (g)	NI/s	10	20	30	40	50	60	70	80	90	-KPa		
PVP 25 MDX	6.0	3.2	7.5	18.8	41.3	99.3	177.7	<mark>271.</mark> 9	451.4	781.0	2874	90		
PVP 35 MDX	6.0	4.8	5.6	14.1	31.2	74.9	134.0	<mark>205</mark> .1	340.5	589.1	2618	90		
PVP 50 MDX	6.0	6.5	4.7	11.9	26.2	62.8	112.4	172.0	285.5	494.0	1818	90		

X











GAS-NPT thread adapters available at page 1.117

8

P=COMPRESSED AIR CONI	NECTION R=EXH	AUST	U=VACUUM CONI	NECTION			0
Art.				PVP 60 MDX			PVP 75 MDX
Max. quantity of sucked air	cum/h	75	85	92	85	94	103
Max. vacuum level	-KPa	65	82	90	65	82	90
Final pressure	mbar abs.	350	180	100	350	180	100
Supply pressure	bar (g)	4	5	6	4	5	6
Air consumption	NI/s	5.9	7.0	8.2	7.0	8.4	9.8
Working temperature	°C			-20 / +80			-20 / 80
Noise level	dB(A)			62			64
Weight	Kg			1.90			1.92
Spare parts							
Sealing kit and reed valve	art.			00 KIT PVP 60 MD	X		00 KIT PVP 75 MDX
Vacuum gauge	art.			09 03 15			09 03 15
Pressure gauge	art.			09 03 25			09 03 25
Silencer	art.			SSX 1"			SSX 1"

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

Note: All the vacuum data indicated in the table are valid at the normal atmospheric pressure of 1013 mbar and are obtained with a constant supply pressure.

8.76

3D drawing available at www.vuototecnica.net





Generator	Supply press.	Air consumption		Air capacity (NI/s) at different vacuum levels (-KPa)							Max. vacuum level	
art.	bar (g)	NI/s	0	10	20	30	40	50	60	70	80	-KPa
PVP 60 MDX	6.0	8.2	25.55	18.25	12.16	6.08	4.34	3.47	2.61	1.82	1.04	90
PVP 75 MDX	6.0	9.8	28.61	20.43	13.62	6.81	4.86	3.89	2.92	2.04	1.16	90





X



70 80

60

Generator	Supply press.	Air consumption	Evacuation time (ms/I = s/m³) at different vacuum levels (-KPa)							Max. vacuum level		
art.	bar (g)	NI/s	10	20	30	40	50	60	70	80	90	-KPa
PVP 60 MDX	6.0	8.2	3.5	8.8	19.3	46.4	83.0	127.0	211.0	365.0	1343	90
PVP 75 MDX	6.0	9.8	3.1	7.8	17.2	41.4	74.2	113.5	188.4	326.0	1200	90



① - MINI PNEUMATIC VACUUM SWITCH

The vacuum switch removes a pneumatic signal as soon as a determined adjustable vacuum level is reached. The pressure differential between the set maximum value and the value of reset of the rest signal cannot be adjusted and it is equal to approximately 100 mbar.

The pneumatic vacuum switch installed on PVP 25 ÷ 75 MDX vacuum generators intervene on the supply slide valve and automatically maintain the maximum and minimum vacuum level within the differential level.





Art.	For generator	Weight
	art.	g
12 02 30 X	PVP 25 ÷ 50 MDX	104
	PVP 60 ÷ 75 MDX	

② - SERVO-CONTROLLED SUPPLY SLIDE VALVE

This valve is provided with slide shutter that, once pneumatically activated by the vacuum switch or by alternative sources intercepts the generator compressed air supply, with pressure ranging from 1.5 and 7 bar (g). The value is according to the generator supply connection.



3D

X

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

GAS-NPT thread adapters available at page 1.117

VACUUM GENERATORS ACCESSORIES PVP 25 ÷ 75 MDX

③ - MEMBRANE CHECK VALVE

This check valve has been specially designed for PVP 25 ÷ 75 MDX vacuum generators. Its distinctive feature, along with its shape, is its membrane check valve that

guarantees minimal load loss, quick intervention and perfect sealing.



④ - HOSE KIT WITH FITTINGS

This hose kit is for connecting the vacuum switch to the supply slide valve and to the membrane check valve. On the hose ends are installed the special quick couplers to screw onto the valve and vacuum switch connections.



Art.	For generator	Weight
	art.	g
00 15 308	PVP 25 ÷ 50 MDX	16
	PVP 60 ÷ 75 MDX	



COMPLETE	ES	ENERGY	SAVING
		DE/	/ICE KIT

COM	DETE ES ENERO	EVICE KIT	otecnica.net
Art.	For gen <mark>erator</mark>	Weight	uot
	art.	g	N.V
ES 01	PVP 25 ÷ 50 MDX	475	ž
ES 02	PVP 60 ÷ 75 MDX	998	it w
			drawing available a
gy-saving devic	e, add the letters ES to the the code	(E.g.: PVP 25 MDX ES).	3D



Note: To order multi-stage vacuum generators with energy-saving device, add the letters ES to the the code (E.g.: PVP 25 MDX ES).

GAS-NPT thread adapters available at page 1.117

Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$



SILENCERS

The use of natural fibre sound absorbing material enclosed in special anodised aluminium casings has allowed creating this new range of silencers that considerably reduce noise made by air at the vacuum generator exhaust.

There are two versions with different lengths: the longer the length and the more will the noise be reduced. Noise reduction: from -13 to -20 dB (A);

Working temperature: from -20 to +100 °C.







et	Art	Α	В	C	C1	D	Weight
a.n	ALC.	Ø				Ø	g
nic	SSX 1/4"	G1/4"	10	60		20	20
tec	SSX 3/8"	G3/8"	12	84		29	52
0 to	SSX 1/2"	G1/2"	14	106		35	96
VUC	SSX 3/4" R	G3/4"	14	106		35	100
N.	SSX 3/4"	G3/4"	14	126		50	174
M	SSX 1"	G1"	14	146		60	240
at	SSX 1" 1/2	G1" 1/2	30	210		80	302
able	SSX 2"	G2"	30	230		90	372
/aila	2SSX 1/4"	G1/4"	10		108	20	40
g al	2SSX 3/ <mark>8"</mark>	G3/8"	12		154	29	104
vin	2SSX 1/2"	G1/2"	14		196	35	192
drav	2SSX 3/ <mark>4"</mark>	G3/4"	14		236	50	348
3D (2SSX 1"	G1"	14		276	55	480

8.80



Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

GAS-NPT thread adapters available at page 1.117



8

C

MODULAR MULTI-STAGE VACUUM GENERATORS PVP 150 ÷ 600 MD

The special shape of these vacuum generators has allowed obtaining great suction capacities in very limited overall dimensions. The ejectors share the same features as the previous ones, but instead of being fixed directly onto the generator body, they are assembled onto modular frames. The superimposition of one or more frames determines the generator capacity. They are supplied by filtered compressed air with an optimal pressure of 6 bar (g), and they can create a maximum vacuum of 90%, with a suction capacity ranging from 200 to 750 cum/h, measured at the normal atmospheric pressure of 1013 mbar. They are fully made with anodised aluminium with disc valves and special compound seals.

They are perfectly soundproofed which results in an extremely silent operation.



8

3D drawing available at www.vuototecnica.net

8.81







A

37

P R

P=COMPRESSED AIR CONNECTION R=EXHAUST U=VACUUM CONNECTION

Art.				PVP 150 MD			PVP 300 MD
Max. quantity of sucked air	cum/h	160	180	200	320	360	400
Max. vacuum level	-KPa	65	82	90	65	82	90
Final pressure	mbar abs.	350	180	100	350	180	100
Supply pressure	bar (g)	4	5	6	4	5	6
Air consumption	NI/s	12.1	14.2	16.0	23.2	27.8	32.0
Working temperature	°C			-20 / +80			-20 / +80
Noise level	dB(A)			72			74
Weight	Kg			7.8			8.8
Α				80			100
G	Ø			G1" 1/2			G2"
L				125			145
Spare parts							
Sealing kit e disc valves	art.			00 KIT PVP 150 ME)		00 KIT PVP 300 MD
Vacuum <mark>gauge</mark>	art.			09 03 15			09 03 15
Pressure <mark> gauge</mark>	art.			09 03 25			09 03 25

Note: All the vacuum data indicated in the table are valid at the normal atmospheric pressure of 1013 mbar and are obtained with a constant supply pressure.

By adding the letter R to the article, the generator will be supplied with a built-in check valve (E.g.: PVP 300 MDR).

8.82

drawing available at www.vuototecnica.net

3D



Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

GAS-NPT thread adapters available at page 1.117



Generator	Supply press.	Air consumption			Air capaci	ty (NI/s) at	different	vacuum le	evels (-KPa)			Max. vacuum level
art.	bar (g)	NI/s	0	10	20	30	40	50	60	70	80	-KPa
PVP 150 MD	6.0	16	55.55	39.68	26.45	13.22	9.44	7.55	5.68	3.97	2.27	90
PVP 300 MD	6.0	32	111.11	79.36	52.91	26.45	19.89	15.11	11.36	7.94	4.54	90

Evacuation time (ms/l=s/m³) at different vacuum levels (-Kpa)



X

PVP 300 MD **Treat** 80 90

Generator Supply press. Air consumption Evacuation time (ms/l = s/m³) at different vacuum levels (-KPa) Max. vacuu	m level
art. bar (g) NI/s 10 20 30 40 50 6<mark>0</mark> 70 80 90 -KPa	1
PVP 150 MD 6.0 16 1.6 4.0 8.9 21.3 38.2 58.4 97.0 167.8 618 90	
PVP 300 MD 6.0 32 0.8 2.0 4.4 10.6 19.1 29.2 48.5 83.9 386 90	

8.83







P=COMPRESSED AIR CONNECTION R=



Art.				PVP 450 MD			PVP 600 MD
Max. quantity of sucked air	cum/h	490	530	580	640	700	750
Max. vacuum level	-KPa	65	82	90	65	82	90
Final pressure	mbar abs.	350	180	100	350	180	100
Supply pressure	bar (g)	4	5	6	4	5	6
Air consumption	NI/s	34.4	39.4	47.8	43.2	53.5	63.2
Working temperature	°C			-20 / +80			-20 / +80
Noise level	dB(A)			74			78
Weight	Kg			9.9			11.1
Α				122			142
G	Ø			G2" 1/2			G3"
L				167			187
Spare parts							
Sealing kit e disc valves	art.			00 KIT PVP 450 ME)		00 KIT PVP 600 MD
Vacuum <mark>gauge</mark>	art.			09 03 15			09 03 15
Pressure gauge	art.			09 03 25			09 03 25

Note: All the vacuum data indicated in the table are valid at the normal atmospheric pressure of 1013 mbar and are obtained with a constant supply pressure.

By adding the letter R to the article, the generator will be supplied with a built-in check valve (E.g.: PVP 450 MDR).

8.84

drawing available at www.vuototecnica.net

3D



GAS-NPT thread adapters available at page 1.117



Generator	Supply press.	Air consumption			Air capaci	ty (NI/s) at	t different	vacuum le	evels (-KPa)		Max. vacuum level
art.	bar (g)	NI/s	0	10	20	30	40	50	60	70	80	-KPa
PVP 450 MD	6.0	47.8	161.11	115.07	76.71	38.35	27.39	21.91	16.48	11.52	6.58	90
PVP 600 MD	6.0	63.2	208.33	148.80	99.20	49.60	35.43	28.34	21.31	14.90	8.51	90

Evacuation time (ms/l=s/m³) at different vacuum levels (-Kpa)



X

)



ž	50						/]				75 60 25							/				vuototecnica.net
	0 10	20	30	40	50 -KPa	60	70	80	90			0	10	20	30	40	50 -KPa	60	70	80	90		vailable at www.v
Generator	Suppl	y pres	S.	Air co	nsum	ption				Evacu	ation time	e (ms/l = s/	m³) at	differ	ent va	cuum	levels	(-KPa)			Max	. vacuu <mark>m level</mark>	
art.	bar	(g)			NI/s			1	0	20	30	40	50		60		70	80)	90		-KPa	wir
PVP 450 MD	6.	0			47.8			0	.5	1.4	3.0	7.4	13.2	2	20.1	3	33.5	57	9	213		90	dra
PVP 600 MD	6.	0			63.2			0	.4	1.0	2.4	5.7	10.2	2	15.6	2	25.9	44	.8	165		90	3D

ADJUSTABLE VACUUM GENERATORS CONEYOR

Working principle

The operation of these vacuum generators is based on the Venturi principle.

Unlike the previous ones, the ejector, apart from having a much larger flow diameter, is also adjustable.

This feature allows modifying the capacity and the vacuum level of the device, without intervening on the air supply pressure level.

Also the compressed air consumption is related to the actual performance of the vacuum generator. *Features*

The special shape of these adjustable vacuum generators, as well as their straight-flow working principle allow sucking and transferring products of various nature with no interference, just like flow generators, only, unlike these, they allow overcoming much higher level differences.

They are suited for transferring powders, granulated products, sawdust, metal chips, dry or liquid food products, etc. They are also recommended for controlling vacuum cups in presence of large amounts of dust or liquids, as well as for sucking fumes, cooling mists, water and oil condensation, etc. The absence of moving parts allows for a continuous use without developing heat.

The noise level, which is quite high for this kind of equipment, can be considerably reduced with a silencer screwed on the exhaust connection.

They do not require electricity, therefore, they can even be used in work environments with hazardous environments where an ignition source would be dangerous.

Available in anodised aluminium and stainless steel.

Thanks to all these features, a good filtration of the compressed air supply will be sufficient to make these devices fully maintenance-free.



P=COMPRESSED AIR CONNECTION	R=EXHAUST	U=VACUUM CONNECTION	U
Art.		PVR 25	PVR 50
Max quantità di aria aspirata a 5 bar (g)	cum/h	13.0	36.0
Max. quantity of blown air at 6 bar (g)	cum/h	33.5	88.0
Max. vacuum level	-KPa	80	75
Final pressure	mbar abs.	200	250
Max pressione di alimentazione	bar (g)	6	6
Air consumption at 6 bar (g)	NI/s	6.1	15.5
Norking temperature	°C	-20 / +80	-20 / +80
Noise level	dB(A)	92	98
Neight	g	150	280
4	Ø	19	26
3	Ø	32	38
)	Ø	6	8
		19	35
		47	54
	Ø	G1/4"	G3/8"
G1	Ø	G1/4"	G1/2"
1		34	61
		100	150
И		22	25
u la la la la la la la la la la la la la	Ø	6	10

Note: All the vacuum data indicated in the table are valid at the normal atmospheric pressure of 1013 mbar and are obtained with a constant supply pressure.

By adding the letter I to the article, the generator will be supplied in the stainless steel version (E.g.: PVR 50 I).

8.86

drawing available at www.vuototecnica.net

3D



GAS-NPT thread adapters available at page 1.117



8

3D drawing available at www.vuototecnica.net

8.87

ADJUSTABLE VACUUM GENERATORS CONEYOR PVR 100 and PVR 200



3D

A

В

D

Ε

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G

G1

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L

Μ

Ν

Note: All the vacuum data indicated in the table are valid at the normal atmospheric pressure of 1013 mbar and are obtained with a constant supply pressure.

By adding the letter I to the article, the generator will be supplied in the stainless steel version (E.g.: PVR 100 I).

Ø

8.88



28

12.5

GAS-NPT thread adapters available at page 1.117

28

16.0



ACCESSORIES FOR ADJUSTABLE VACUUM GENERATORS CONVEYOR

The noise level of adjustable vacuum generators Conveyor is always quite high, but it can be considerably reduced with a silencer screwed on the exhaust connection. Upon request, silencers of the SSX range, which are suitable for any kind of Conveyor vacuum generator, can be supplied.

The table below shows the codes of the silencers associated with the various vacuum generators.

PVR 25 with exhaust silencer SSX 1/4" and vacuum cup 08 53 35 S



PVR 50 with exhaust silencer 2SSX 1/2"



PVR 100 with exhaust silencer SSX 3/4"



Art.	Silencer	Noise	Silencer	Noise
		reduction		reduction
	art.	dB(A)	art.	dB(A)
PVR 25	SSX 1/4"	-13	2SSX 1/4"	-20
PVR 50	SSX 1/2"	-13	2SSX 1/2"	-20
PVR 100	SSX 3/4"	-13	2SSX 3/4"	-20
PVR 200	SSX 1"	-13	2SSX 1"	-20

8.90

FLOW GENERATOR VACUUM JET

Working principle

The compressed air supply blown into a ring chamber concentric to the device, flows at a very high speed towards the centre of the main pipe, thus forming a cyclonic effect. The latter creates a vacuum inside the device and leads a great volume of air towards its outlet. Therefore, a variation of the air supply pressure will modify the vacuum level and the amount of sucked air.

Features

The special shape of these adjustable vacuum generators, as well as their straightflow working principle allow sucking and transferring products of various nature with no interference. In fact, Vacuum Jet flow generators are suited for transferring powders, granulated products, sawdust, metal chips, dry or liquid food products, etc. They are also recommended for controlling vacuum cups in presence of large amounts of dust or liquids, as well as for sucking fumes, cooling mists, water and oil condensation, etc. The absence of moving parts allows for a continuous use without developing heat. Available in anodised aluminium and stainless steel.

Thanks to all these features, a good filtration of the compressed air supply will be sufficient to make these devices fully maintenance-free.





P=COMPRESSED AIR CONNECTION	R=EXHAUST	U=VACUUM CONNECTION	U
Art.		CX 7	CX 10
lax. quantity of sucked air at 6 bar (g)	cum/h	12.0	28.0
ax. quantity of blown air at 6 bar (g)	cum/h	17.6	51.4
ax. vacuum level	-KPa	15	22
nal pressure	mbar abs.	850	780
ax pressione di alimentazione	bar (g)	6	6
ir consumption at 6 bar (g)	NI/s	1.5	6.5
orking temperature	°C	-20 / +80	-20 / +80
bise level	dB(A)	75	84
eight	g	110	104
	Ø	19	19
	Ø	32	32
	Ø	7	10
	Ø	6	6
		15	15
		42	42
		33	33
		90	90
1		13	13

By adding the letter I to the article, the generator will be supplied in the stainless steel version (E.g.: CX 10 I).

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

GAS-NPT thread adapters available at page 1.117

3D drawing available at www.vuototecnica.net

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Quantity of sucked air (cum/h) at different supply pressures (bar)





P=COMPRESSED AIR CONNECTION	R=EXHAUST	U=VACUUM CONNECTION	U
Art.		CX 13	CX 19
lax. quantity of sucked air at 6 bar (g)	cum/h	50.0	92.0
lax. quantity of blown air at 6 bar (g)	cum/h	73.7	134.0
lax. vacuum level	-KPa	18	16
inal pressure	mbar abs.	820	840
ax pressione di alimentazione	bar (g)	6	6
ir consumption at 6 bar (g)	NI/s	6.6	11.6
orking temperature	°C	-20 / +80	-20 / +80
bise level	dB(A)	88	92
eight	g	280	500
	Ø	25	32
	Ø	45	54
	Ø	13	19
	Ø	8	10
		30	43
		55	65
		55	82
		140	190
I		18	22

By adding the letter I to the article, the generator will be supplied in the stainless steel version (E.g.: CX 13 I).

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

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Quantity of sucked air (cum/h) at different supply pressures (bar)





P=COMPRESSED AIR CONNECTION	R=EXHAUST	U=VACUUM CONNECTION		
Art.		CX 25	CX 38	CX 50
Max. quantity of sucked air at 6 bar (g)	cum/h	150	310	405
Max. quantity of blown air at 6 bar (g)	cum/h	210	400	525
Max. vacuum level	-KPa	13	10	8
Final pressure	mbar abs.	870	900	920
Nax. supply pressure	bar (g)	6.0	6.0	6.0
Air consumption at 6 bar (g)	NI/s	16.6	25.0	33.3
Vorking temperature	°C	-20 / +80	-20 / +80	-20 / +80
loise level	dB(A)	100	103	103
Veight	g	560	800	1090
l l l l l l l l l l l l l l l l l l l	Ø	38	51	54
3	Ø	60	75	90
;	Ø	25	38	50
)	Ø	10	12	16
		42	42	42
:		66	66	66
1		82	82	82
		190	190	190
M		22	22	22

By adding the letter I to the article, the generator will be supplied in the stainless steel version (E.g.: CX 38 I).

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

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GAS-NPT thread adapters available at page 1.117

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MINI PNEUMATIC PUMPSETS DOP 06 and DOP 10

Mini pneumatic pumpsets are independent vacuum units, fed exclusively by compressed air and featuring very small sizes. They are composed of: - A small welded sheet steel tank.

- A compressed air-operated vacuum generator.

- A pneumatic vacuum switch for adjusting the vacuum level.

- A vacuum gauge for a direct reading of the vacuum level.

- A manual valve for vacuum interception.

- A suction filtre with an FC paper cartridge.

- A pressure adjuster equipped with filtre. - A pneumatic activation valve for the vacuum generator supply.

- A sleeve valve for compressed air interception.

- for compressed air interception for draining condensation from the tank. the vacuum level in the tank, previously set with the vacuum switch, is automatically maintained.

Mini pneumatic pumpsets are suited for equipping small fixed and mobile working units that require vacuum, such as:

- Trolleys with vacuum cups for fixing and transporting glass and crystals.

- Vacuum clamping systems for ski maintenance, to drill or pantograph marble, to polish pewter, copper or silver objects. etc.

- Tackles with cups for lifting television sets and other household aplliances, for the insertion of glass in the window fittings, for feeding sheet metal to presses, etc.

Mini pneumatic pumpsets require no electricity, only compressed air at a $4 \div 6$ bar (g) pressure. For this feature they are recommended in hazardous environments where an ignition source would be dangerous.



•	200	>	•				L					cnica.net
	Tank	Generator	Pneumatic	C	D	E	F	G	Н	L	Weight	www.vuotote
Art.	Litres	art.	device art.				Ø				Kg	able at
DOP 06 PVP 12 MX	6	PVP 12 MX	DOP 06 90	60	G3/8"	150	95	180	260	620	12.7	vail
DOP 06 PVP 25 MX	6	PVP 25 MX	DOP 06 90	60	G3/8"	150	95	180	260	620	13.0	ving av
DOP 10 PVP 12 MX	10	PVP 12 MX	DOP 06 90	100	G3/8"	210	95	240	300	620	12.9	drav
DOP 10 PVP 25 MX	10	PVP 25 MX	DOP 06 90	100	G3/8"	210	95	240	300	620	13.2	3D (

GAS-NPT thread adapters available at page 1.117

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MINI PNEUMATIC PUMPSETS DOP 20

The distinctive feature of this mini pumpset, apart from the tank volume, is the installed vacuum generator.

The vacuum generator of the PVP... MDX ES range, in fact, is equipped with an energy saving device which allows automatically maintaining the preset vacuum level inside the tank. The other accessories, except for the vacuum switch and the pneumatic activation valve for the vacuum generator supply, are the same as those installed on DOP 06 and DOP 10. They are used as the previously described mini pneumatic pumpsets.







Art.		Tank	Generator	Pneumatic device	D	E	F	G	H	L	Weight
		Litres	art.	art.	Ø						Kg
DOP 20	<mark>PVP 25 M</mark> DX	20	PVP 25 MDX ES	DOP 20 90	G1/2"	225	135	270	340	1110	20.6
DOP 20	<mark>PVP 35 M</mark> DX	20	PVP 35 MDX ES	DOP 20 90	G1/2"	225	135	270	340	1110	20.7

drawing available at www.vuototecnica.net

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Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$

GAS-NPT thread adapters available at page 1.117

PNEUMATIC PUMPSETS DOP 25, DOP 50 and DOP 100

Pneumatic pumpsets are independent vacuum units fed exclusively by compressed air. They are composed of:

- A welded sheet steel tank.

- A compressed air-operated vacuum generator PVP ... MDX ES, equipped with an energy saving device.

- A vacuum gauge for a direct reading of the vacuum level.

- A manual valve for vacuum interception.

- A suction filtre with an FC paper cartridge.

- A pressure adjuster equipped with filtre.

- A sleeve valve for compressed air interception.

- A cock for draining condensation from the tank.

the vacuum level in the tank, previously set with the vacuum switch, is automatically maintained. Pneumatic pumpsets are normally used for handling particularly heavy or valuable loads, since even in case of a sudden power supply failure, they allow the vacuum cups to maintain the grip for a certain amount of time (which varies according to the tank capacity). They are recommended for connecting several applications to centralise the vacuum. In any case, the use of the pumpset offers a great advantage under an energysaving point of view, since the generator operates only when vacuum is required by the

application.

Pneumatic pumpsets require no electricity, only compressed air at a $4 \div 6$ bar (g) pressure. For this feature, they are recommended in hazardous environments where an ignition source would be dangerous.



Art.	Tank	Generator	Pneumatic device	Н	L	М	N	R	Weight	availab
	Litres	art.	art.			Ø		Ø	Kg	ving
DOP 25 PVP 25 MDX	25	PVP 25 MDX ES	DOP 20 90	225	185	240	51	G1/2"	15.9	rav
DOP 25 PVP 35 MDX	25	PVP 35 MDX ES	DOP 20 90	225	185	2 <mark>40</mark>	51	G1/2"	16.0	3D C

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Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

GAS-NPT thread adapters available at page 1.117





Tank Generator Pneumatic G Η М Ν L Art. device Litres Litres Ø art. art. DOP 50 <mark>PVP 50 M</mark>DX 50 PVP 50 MDX ES DOP 20 90 27.5 245 205 280 51 DOP 50 <mark>PVP 60 M</mark>DX 50 PVP 60 MDX ES DOP 50 90 27.5 245 205 280 51

- 8.100

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drawing available at www.vuototecnica.net



Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

GAS-NPT thread adapters available at page 1.117

R

Ø

G1/2"

G1/2"

Hose

ext. ø

Ø

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12

Weight

Kg

18.9

19.7







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Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$ GA

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GAS-NPT thread adapters available at page 1.117

PNEUMATIC PUMPSETS DOP 150 and DOP 300

Pneumatic pumpsets are independent vacuum units fed exclusively by compressed air.

They are composed of:

- A welded sheet steel tank.
- A compressed air-operated vacuum generator.
- A pneumatic vacuum switch for adjusting the vacuum level.
- Un vacuum gauge for a direct reading of the vacuum level.
- A manual valve for vacuum interception.
- A suction filtre with an FC paper cartridge.
- A pressure adjuster equipped with filtre.
- A pneumatic activation valve for the vacuum generator supply.
- A sleeve valve for compressed air interception.
- A cock for draining condensation from the tank.

the vacuum level in the tank, previously set with the vacuum switch, is automatically maintained. Pneumatic pumpsets are normally used for handling particularly heavy or valuable loads, since even in case of a sudden power supply failure, allow the vacuum cups to maintain the grip for a certain amount of time (which varies according to the tank capacity). They are recommended for connecting several applications to centralise the vacuum. In any case, the use of the pumpset offers a great advantage under an energy-saving point of view, since the generator operates only when vacuum is required by the application.

Pneumatic pumpsets require no electricity, only compressed air at a $4 \div 6$ bar (g) pressure. For this feature, they are recommended in hazardous environments where an ignition source would be dangerous.





Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

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GAS-NPT thread adapters available at page 1.117

Art.	Tank	Generator	Pneumatic device	Н	L	М	N R	Weight
	Litres	art.	art.			Ø	Ø	Kg
DOP 300 PVP 300 MD	300	PVP 300 MDR	DOP 150 90	440	340	500	45 G1"1/2	41.2





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PNEUMATIC MINI PUMPSET AND PUMPSET COMPONENTS

Mini pneumatic pumpset tanks DOP 06 and 10

Mini pneumatic pumpset tanks are horizontal with a rectangular section. They are made with welded sheet steel, a perfect vacuum seal, and varnished with special paints resistant to water condensation corrosion.

They are set for the installation of a vacuum generator to be chosen in the table and a pneumatic device.

They are equipped with:

- A pneumatic vacuum switch for adjusting the maximum vacuum level.
- Un vacuum gauge for a direct reading of the vacuum level in the tank.
- A check valve suitable for the generator connection.
- A manual valve for vacuum interception.
- A suction filtre with an FC paper cartridge.
- A cock for condensation drainage.
- Hoses, fittings and screws for connecting and fixing the generator to the tank.
- Available with volumes of 6 and 10 litres.



Art						Set for	
ALC.	Tank	Weight	С	Е	Н	Generator	Pneumatic device
	Litres	Kg				art.	art.
DOP 06 01	6	11.4	60	150	250	PVP 12 MX	DOP 06 90
						PVP 25 MX	
DOP 10 01	10	11.6	100	210	290	PVP 12 MX	DOP 06 90
						PVP 25 MX	

Mini pneumatic pumpset tanks DOP 20

Mini pneumatic pumpset tanks are horizontal with a rectangular section.

They are made with welded sheet steel, a perfect vacuum seal, and varnished with special paints resistant to water condensation corrosion.

They are set for the installation of a pneumatic device and a PVP .. MDX ES generator to be chosen in the table which are provided with built-in servo-controlled supply slide valve, check

valve and pneumatic vacuum switch.

- They are equipped with:
- Un vacuum gauge for a direct reading of the vacuum level in the tank.
- A manual valve for vacuum interception.
- A suction filtre with an FC paper cartridge.

Available with a volume of 20 litres.





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PNEUMATIC PUMPSET TANKS DOP 25, 50 and 100





Art.	Teach	W - : - I- I			0		-	0					Set	for:	
	Litres	Ka	А	В	U	Ø	E	Ø	н	L	IVI	к Ø	art.	art.	
)P 25 01	25	13.5	200	250x210	330	240	225	G3/4"	485	780x270	51	G1/2"	PVP 25 MDX ES PVP 35 MDX ES	DOP 20 90	
OP 50 01	50	16.4	220	460x245	400	280	245	G3/4"	492	1080x300	51	G1/2"	PVP 50 MDX ES	DOP 20 90	
)P 50 02	50	16.4	220	460x245	400	280	245	G1"	492	1080x300	51	G1/2"	PVP 60 MDX ES	DOP 50 90	
OP 100 01	100	27.6	290	570x295	480	350	300	G1"	585	1340x355	41	G1"	PVP 75 MDX ES	DOP 50 90	

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TANKS FOR PNEUMATIC PUMPSETS DOP 150 e 300

Pneumatic pumpset tanks are horizontal with a circular section.

Made with welded sheet steel a perfect vacuum seal, they are varnished with special paints resistant to water condensation corrosion.

They are set for the installation of a pneumatic device and a PVP .. MDX ES generator to be chosen in the table which are provided with built-in servo-controlled supply slide valve, check valve and pneumatic vacuum switch.

They are equipped with:

- A pneumatic vacuum switch for adjusting the maximum vacuum level.
- Un vacuum gauge for a direct reading of the vacuum level in the tank.
- A manual valve for vacuum interception.
- A suction filtre with an FC paper cartridge.
- A cock for condensation drainage.
- Hoses, fittings and screws for connecting and fixing the generator to the tank.

Available with volumes of 150 and 300 litres.





drawing available at www.vuototecnica.net

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Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$

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PNEUMATIC CONTROL GEAR FOR MINI PUMPSETS DOP 06 and DOP 10

The mini pumpset pneumatic control gear manages a vacuum generator and automatically maintains the vacuum level, set with the pneumatic vacuum switch, in the tank.

It is composed of:

- A pressure filtre-adjuster provided with pressure gauge, for adjusting the compressed air supply. - A slide valve for compressed air interception.

- A 3-way servo-controlled valve for the vacuum generator supply

- Fittings and hoses for connecting the various component and screws for fixing them to the support



Δrt			For
Alt	Weight	R	Generator
	Kg	Ø	art.
DOP 06 90	0.6	G1/4"	PVP 12 MX
			PVP 25 MX
			PVP 25 MDX
			PVP 35 MDX
			PVP 50 MDX



PNEUMATIC CONTROL GEAR FOR MINI PUMPSETS DOP 20 AND PUMPSETS DOP 25, 50 and 100

The pneumatic control gear for these pumpsets manages a vacuum generator and automatically maintains the vacuum level, set with the built-in pneumatic vacuum switch, in the tank.

It is composed of:

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- A pressure filtre-adjuster provided with pressure gauge, for adjusting the compressed air supply.

- A slide valve for compressed air interception.

- Fittings and hoses for connecting the various component and screws for fixing them to the support. Available in two sizes according to the supply connection.





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PNEUMATIC CONTROL GEAR FOR PUMPSETS DOP 50 and 100





Art.		For
	Weight	Generator
	Kg	art.
DOP 50 90	0.4	PVP 60 MDX ES
		PVP 75 MDX ES

PNEUMATIC CONTROL GEAR FOR PUMPSETS DOP 150 and 300

The pneumatic control gear for these pumpsets manages a vacuum generator and automatically maintains the vacuum level, set with the pneumatic vacuum switch, in the tank.

It is composed of:

- A pressure filtre-adjuster provided with pressure gauge, for adjusting the compressed air supply.
- A slide valve for compressed air interception.
- A 3-way servo-controlled valve for the vacuum generator supply
- Fittings and hoses for connecting the various component and screws for fixing them to the support.



OCTOPUS VACUUM GRIPPING SYSTEM

OCTOPUS GRIPPING SYSTEM COMPOSITION	PAG. 9.01 ÷ 9.02
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OCTOPUS GRIPPING SYSTEMS ART. SO 20 30X, SO 20 40X and SO 20 60X	PAG. 9.04
OCTOPUS GRIPPING SYSTEMS ART. SO 30 30X, SO 30 40X, SO 30 50X, SO 40 40X and SO 40 60X	PAG. 9.05
OCTOPUS GRIPPING SYSTEMS ART. SO DO 35X and SO DO 50X	PAG. 9.06
OCTOPUS GRIPPING SYSTEMS ART. SO 40 100X, SO 60 80X, SO 60 120X and SO 80 100X	PAG. 9.07
STANDARD SUCTION PLATES PX and P2X FOR OCTOPUS SYSTEMS	PAG. 9.08
STANDARD SUCTION PLATES WITH SHUT-OFF VALVES PXE and P2XE FOR	
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SPECIAL SUCTION PLATES PY and P2Y FOR OCTOPUS SYSTEMS	PAG. 9.10
SPECIAL SUCTION PLATES WITH SHUT-OFF VALVES PY2E and P2Y2E FOR	
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SPECIAL SUCTION PLATES PZ and P2Z FOR OCTOPUS SYSTEMS	PAG. 9.12
VACUUM CUP SUCTION PLATES PV FOR OCTOPUS SYSTEMS	PAG. 9.13
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VACUUM CUP SUCTION PLATES WITH SHUT-OFF VALVES PVE	
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FLANGE FIXING SUPPORT FOR OCTOPUS SYSTEMS WITHOUT	
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OCTOPUS GRIPPING BARS ART. BO 08 60X and BO 08 80X	PAG. 9.19
OCTOPUS GRIPPING BARS ART. BO 12 60X and BO 12 80X	PAG. 9.20
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STANDARD SUCTION PLATES PX E P2X FOR OCTOPUS GRIPPING BARS	PAG. 9.22
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SUCTION PLATES WITH SHUT-OFF VALVES PXE and P2XE	
FOR OCTOPUS GRIPPING BARS	PAG. 9.24
LOCKING PLATES FOR OCTOPUS GRIPPING BARS	PAG. 9.25
ACCESSORIES AND SPARE PARTS FOR OCTOPUS GRIPPING SYSTEMS AND BARS	PAG. 9.26 ÷ 9.28
OCTOPUS GRIPPING SYSTEM SPECIAL EXECUTION	PAG. 9.29 ÷ 9.31

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OCTOPUS GRIPPING SYSTEM COMPOSITION AND RELATIVE IDENTIFICATION CODES

The OCTOPUS systems described in the following pages are equipped, as a standard, with suction plates PX. Should you want to replace these plates with others with different features you will have to modify the identification codes as described below.

Example regarding a composition of a standard OCTOPUS system with a 300x400 mm gripping surface:



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9.01

OCTOPUS GRIPPING SYSTEM COMPOSITION AND RELATIVE IDENTIFICATION CODES

Example regarding a composition of an OCTOPUS system with a suction plate P2Y equipped with vacuum generator: n° 1 PVP 150 MD n° 1 SO 30 40 2Y

Example regarding a composition of an OCTOPUS system with suction plate P2V equipped with silicon vacuum cups and a vacuum: generator:

n° 1 PVP 150 MD n° 1 SO 30 40 2V n° 36 01 40 42 S

Example regarding a composition of an OCTOPUS system with suction plate PX and shut-off valves equipped with vacuum generator: n° 1 PVP 150 MD

n° 1 SO 30 40 XE

VACUUM GENERATORS USED ON OCTOPUS SYSTEMS

The standard OCTOPUS gripping system generators indicated in the tables, despite not being built-in the system, have been carefully selected following the assessment the best ratio between performance and compressed air consumption; To replace them with others with different features, please contact our technical department.

FIXING AND CONNECTION ALTERNATIVES

The OCTOPUS system can be connected to a remotely installed vacuum generator or to an alternative vacuum source by fixing one of the special flanged support described in the following pages instead of the generator.



OCTOPUS GRIPPING SYSTEM

The OCTOPUS system is our answer to the ever increasing requirements of operational flexibility for palletising robots and vacuum gripping systems in general. This system, in fact, it allows gripping objects of any shape and feature, provided that they do not have an excessive transpiration, without having to change or place vacuum cups, and even when their surface occupies only 5% of the whole suction plate. The maximum weight of the load to be lifted will obviously be proportional to the gripping system.

The standard OCTOPUS systems described in these pages are composed of: - A compressed air-fed vacuum generator as shown in the picture and in the drawing, that has to be ordered separately, since it is not included in the code. - An anodised aluminium box, open on one side, with a built-in micro-fine stainless steel mesh filtre on the suction inlet to protect the vacuum generator, very easy to inspect. On the outside of the box there are one or more connections for the possible installation of control devices or solenoid valves

for a prompt restoration of the atmospheric pressure on its inside. - A suction plate sealing the box also made with anodised aluminium and coated with a special perforated foam rubber.

This suction plate perfectly adapts itself to any surface, either smooth, rough or uneven.

With the same system, for instance, it is possible to grip and handle cardboard boxes and the wooden pallet that supports it.

These OCTOPUS systems can be supplied, upon request, with other dimensions, suction plates and vacuum generators than those indicated in the tables.





A	rt.		S0 15 20 MX	*
Suct	ion plate	art.	PX 15 20	u.
Grip	ping force	Kg	21.2	ica
Vacı	ium generator	art.	PVP 25 MX	GCU
Мах	. supply pressure	bar (g)	6	tot
Мах	. vacuum level	-KPa	90	on
Air o	consumption at 6 bar (g)	NI/s	3.2	W.V
Quai	ntity of sucked air	cum/h	31.0	2
Worl	king temperature	C°	-20 / +80	atv
Weig	pht	Kg	2.1	ole
P	Compressed air pipe connection	ext. Ø	8	ailat
R	Exhaust connection	Ø	N° 4 x G1/4"	ava
Not	e: The code S0 15 20 X exclusively identifies the OCTOPL The vacuum generator indicated in the table is not inte	IS system base box with the associated suction plate PX. gral part of the OCTOPUS system and therefore, must be o	rdered separately with its proper code.	rawings
All t	he values shown in the table are valid at a normal atmos	oheric pressure of 1013 mbar and obtained with a constant	t supply pressure.	3D d

All the values shown in the table are valid at a normal atmospheric pressure of 1013 mbar and obtained with a constant supply pressure

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

9.03





Art.		SO 20 30 X	SO 20 40 X	SO 20 60 X
Suction plate	art.	PX 20 30	PX 20 40	PX 20 60
Gripping force	Kg	42.4	56.6	84.8
Vacuum generator	art.	PVP 100 M	PVP 140 M	PVP 200 M
Max. supply pressure	bar (g)	6	6	6
Max. vacuum level	-KPa	90	90	90
Air consumption at 6 bar (g)	NI/s	9.8	13.0	19.4
Quantity of sucked air	cum/h	108.0	152.0	200.0
Working temperature	°C	-20 / +80	-20 / +80	-20 / +80
Weight	Kg	7.0	8.6	10.7
Α		300	400	600
E		74	96	96
F		20	70	170
G		16	66	166
Н		124	146	146
P Compressed air pipe connection	ext. Ø	15	15	15

Note: The code SO.... X exclusively identifies the OCTOPUS system base box with the associated suction plate PX. The vacuum generator indicated in the table is not integral part of the OCTOPUS system and therefore, must be ordered separately with its proper code.

All the values shown in the table are valid at a normal atmospheric pressure of 1013 mbar and obtained with a constant supply pressure.

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Art.		SO 30 30 X	SO 30 40 X	SO 30 50 X	SO 40 40 X	SO 40 60 X
Suction plate	art.	PX 30 30	PX 30 40	PX 30 50	PX 40 40	PX 40 60
Gripping force	Kg	63.6	84.8	106.0	113.1	169.6
Vacuum generator	art.	PVP 150 MD	PVP 150 MD	PVP 300 MD	PVP 300 MD	PVP 300 MD
Max. supply pressure	bar (g)	6	6	6	6	6
Max. vacuum level	-KPa	90	90	90	90	90
Air consumption at 6 bar (g)	NI/s	16.0	16.0	32.0	32.0	32.0
Quantity of sucked air	cum/h	200.0	200.0	400.0	400.0	400.0
Vorking temperature	°C	-20 / +80	-20 / +80	-20 / +80	-20 / +80	-20 / +80
Veight	Kg	11.5	12.5	15.0	17.0	19.0
l i i i i i i i i i i i i i i i i i i i		300	400	500	400	600
1		300	300	300	400	400
;		138	138	158	158	158
		88	88	108	108	108
:		50	100	150	100	200
ì		15	15	15	65	65
Comprossed air pipe connection	ext. Ø	15	15	15	15	15

All the values shown in the table are valid at a normal atmospheric pressure of 1013 mbar and obtained with a constant supply pressure.

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

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9.05



Art.		SO DO 35 X	S0 D0 50 X
Suction plate	art.	PX DO 35	PX D0 50
Gripping force	Kg	65.4	139.6
Vacuum generator	art.	PVP 170 M	PVP 300 MD
Max. supply pressure	bar (g)	6	6
Max. vacuum level	-KPa	90	90
Air consumption at 6 bar (g)	NI/s	16.3	32.0
Quantity of sucked air	cum/h	182.0	400.0
Working temperature	°C	-20 / +80	-20 / +80
Weight	Kg	9.5	17.0
Α		120	270
В		264	200
C		43	150
D	Ø	350	500
E		96	108
Н		146	158
	Ø	8.5	10.5
P Compressed air pipe connection	ext. Ø	15	15

Note: The code SO DO .. X exclusively identifies the OCTOPUS system base box with the associated suction plate PX. The vacuum generator indicated in the table is not integral part of the OCTOPUS system and therefore, must be ordered separately with its proper code.

All the values shown in the table are valid at a normal atmospheric pressure of 1013 mbar and obtained with a constant supply pressure.

9.06

drawings available at www.vuototecnica.net

3D



GAS-NPT thread adapters available at page 1.117

OCTOPUS VACUUM GRIPPING SYSTEM

The OCTOPUS system is our answer to the ever increasing requirements of operational flexibility for palletising robots and vacuum gripping systems in general. This system, in fact, it allows gripping objects of any shape and feature, provided that they do not have an excessive transpiration, without having to change or place vacuum cups, and even when their surface occupies only 5% of the whole suction plate. The maximum weight of the load to be lifted will obviously be proportional to the gripping system. The standard OCTOPUS systems described in this page are composed of: - Two compressed air-fed vacuum generators, as shown in the picture and in the drawing, that has to be ordered separately, since they are not included in the code.

- An anodised aluminium box, open on one side, with two built-in microfine stainless steel mesh filtres on the suction inlet to protect the vacuum generator, very easy to inspect. On the outside of the box there are one or more connections for the possible installation of control devices o solenoid valves for a prompt restoration of the atmospheric pressure on its inside.

- Un suction plate sealing the box, also made with anodised aluminium and coated with a special perforated foam rubber.

The suction plate perfectly adapts itself to any surface, either smooth, rough or uneven.

With the same system, for instance, it is possible to grip and handle cardboard boxes and the wooden pallet that supports it.

These OCTOPUS systems can be supplied, upon request, with other dimensions, suction plates and vacuum generators than those indicated in the tables.





Art.		SO 40 100 X	SO 60 80 X	SO 60 120 X	SO 80 100 X
Suction plate	art.	PX 40 100	PX 60 80	PX 60 120	PX 80 100
Gripping force	Kg	282.6	339.2	508.7	597.4
N° 2 vacuum generators	art.	PVP 300 MD	PVP 300 MD	PVP 450 MD	PVP 450 MD
Max. supply pressure	bar (g)	6	6	6	6
Max. vacuum level	-KPa	90	90	90	90
Air consumption at 6 bar (g)	NI/s	64.0	64.0	95.6	95.6
Quantity of sucked air	cum/h	800.0	800.0	1160	1160
Working temperature	°C	-20 / +80	-20 / +80	-20 / +80	-20 / +80
Weight	Kg	34.0	37.5	50.0	53.5
Α		400	600	600	800
В		1000	800	1200	1000
C		120	70	170	120
F		100	200	200	300
G		108	108	130	130
н		158	158	180	180
L		220	120	320	220
P Compressed air pipe connection	ext. Ø	15	15	22	22

Note: The code SO.... X exclusively identifies the OCTOPUS system base box with the associated suction plate PX. The vacuum generator indicated in the table is not integral part of the OCTOPUS system and therefore, must be ordered separately with its proper code.

All the values shown in the table are valid at a normal atmospheric pressure of 1013 mbar and obtained with a constant supply pressure.



3D drawings available at www.vuototecnica.net

9.07

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STANDARD SUCTION PLATES PX AND P2X FOR OCTOPUS SYSTEMS

The suction plates PX described in this page are installed, as a standard, on all OCTOPUS systems and, therefore, can be supplied as a spare part. They are made with anodised aluminium and coated with special perforated foam rubber with two types of thickness: 15 mm, for suction plates of the PX range; 30 mm, for special suction plates of the P2X range. Their lifting force has been calculated considering a minimum vacuum level of -75 Kpa, the overall perforated surface on the foam rubber and a safety factor 3.







drawings available at www.vuototecnica.net

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Δrt	Force	А	В	С	D	E	F	Н	Weight
	Kg			Ø	Ø				Kg
PX 15 20	21.2	150	200	15		5	15	20	0.40
PX 20 30	42.4	200	300	15		5	15	20	0.80
PX 20 40	56.6	200	400	15		5	15	20	1.10
PX 20 60	84.8	200	600	15		5	15	20	1.70
PX 30 30	63.6	300	300	15		5	15	20	1.30
PX 30 40	84.8	300	400	15		5	15	20	1.70
PX 30 50	106.0	300	500	15		5	15	20	2.10
PX 40 40	113.1	400	400	15		5	15	20	2.20
PX 40 60	169.6	400	600	15		5	15	20	3.40
PX 40 100	282.6	400	1000	15		5	15	20	5.60
PX 60 80	339.2	600	800	15		5	15	20	6.70
PX 60 120	508.7	600	1200	15		5	15	20	10.10
PX 80 100	597.4	800	1000	15		5	15	20	11.30
PX DO 35	65.4			15	350	5	15	20	1.30
PX DO 50	139.6			15	500	5	15	20	2.30
P2X 15 20	21.2	150	200	15		5	30	35	0.44
P2X 20 30	42.4	200	300	15		5	30	35	0.89
P2X 20 40	56.6	200	400	15		5	30	35	1.21
P2X 20 60	84.8	200	600	15		5	30	35	1.77
P2X 30 30	63.6	300	300	15		5	30	35	1.36
P2X 30 40	84.8	300	400	15		5	30	35	1.78
P2X 30 50	106.0	300	500	15		5	30	35	2.22
P2X 40 40	113.1	400	400	15		5	30	35	2.41
P2X 40 60	169.6	400	600	15		5	30	35	3.55
P2X 40 100	282.6	400	1000	15		5	30	35	5.96
P2X 60 80	339.2	600	800	15		5	30	35	7.18
P2X 60 120	508.7	600	1200	15		5	30	35	10.73
P2X 80 100	597.4	800	1000	15		5	30	35	11.93
P2X D0 35	65.4			15	350	5	30	35	1.49
P2X D0 50	139.6			15	500	5	30	35	2.48

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Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6}$ = $\frac{\text{Kg}}{0.4536}$

STANDARD SUCTION PLATES WITH SHUT-OFF VALVES PXE AND P2XE, FOR OCTOPUS SYSTEMS

The suction plates described in this page are the same as the previously described ones. Their distinctive features are the shut-off valves inserted in each hole. In absence of an object to grip or in case of a defective grip of the foam rubber, the shut-off valves automatically close the suction inlet, thus preventing the vacuum level from decreasing on the other gripping holes. This feature allows reducing the vacuum generator capacity compared to the standard OCTOPUS systems, all to the benefit of energy saving.



٨	Force	Α	В	С	D	Е	F	G	Н	Nr. of	Weight
AI L	Kg			Ø	Ø					Valves	Kg
PXE 20 30	42.4	200	300	15		10	15	18	25	96	1.76
PXE 20 40	56.6	200	400	15		10	15	18	25	128	2.38
PXE 20 60	84.8	200	600	15		10	15	18	25	192	3.62
PXE 30 30	63.6	300	300	15		10	15	18	25	144	2.74
PXE 30 40	84.8	300	400	15		10	15	18	25	192	3.62
PXE 30 50	106.0	300	500	15		10	15	18	25	240	4.50
PXE 40 40	113.1	400	400	15		10	15	18	25	256	4.76
PXE 40 60	169.6	400	600	15		10	15	18	25	384	7.24
PXE 40 100	282.6	400	1000	15		10	15	18	25	656	12.16
PXE 60 80	339.2	600	800	15		10	15	18	25	768	14.38
PXE 60 120	508.7	600	1200	15		10	15	18	25	1176	21.86
PXE 80 100	597.4	800	1000	15		10	15	18	25	1353	24.83
PXE DO 35	65.4			15	350	10	15	18	25	148	2.78
PXE DO 50	139.6			15	500	10	15	18	25	308	5.38
P2XE 20 30	42.4	200	300	15		10	30	18	40	96	1.85
P2XE 20 40	56.6	200	400	15		10	30	18	40	128	2.49
P2XE 20 60	84.8	200	600	15		10	30	18	40	192	3.69
P2XE 30 30	63.6	300	300	15		10	30	18	40	144	2.80
P2XE 30 40	84.8	300	400	15		10	30	18	40	192	3.70
P2XE 30 50	106.0	300	500	15		10	30	18	40	240	4.62
P2XE 40 40	113.1	400	400	15		10	30	18	40	256	4.97
P2XE 40 60	169.6	400	600	15		10	30	18	40	384	7.24
P2XE 40 100	282.6	400	1000	15		10	30	18	40	656	12.52
P2XE 60 80	339.2	600	800	15		10	30	18	40	768	14.86
P2XE 60 120	508.7	600	1200	15		10	30	18	40	1176	22.49
P2XE 80 100	597.4	800	1000	15		10	30	18	40	1353	25.46
P2XE D0 35	65.4			15	350	10	30	18	40	148	2.97
P2XE D0 50	139.6			15	500	10	30	18	40	308	5.56





SPECIAL SUCTION PLATES PY AND P2Y FOR OCTOPUS SYSTEMS

Compared to the standard ones, these suction plates, given the same gripping surface, develop a greater force (art. PY) and can grip even very rough and uneven surfaces (art. P2Y).

They are made with anodised aluminium and coated with special perforated foam rubber, with two types of thickness, upon request. They are perfectly interchangeable with the standard suction plates. Their lifting force has been calculated considering a minimum vacuum level of -75 Kpa, the overall perforated surface on the foam rubber and a safety factor 3.





Art	Force	Α	В	C	D	E	F	Н	Weight
A10	Kg			Ø	Ø				Kg
PY 15 20	37.7	150	200	40		5	15	20	0.39
PY 20 30	75.4	200	300	40		5	15	20	0.78
PY 20 40	100.5	200	400	40		5	15	20	1.07
PY 20 60	150.8	200	600	40		5	15	20	1.66
PY 30 30	113.0	300	300	40		5	15	20	1.27
PY 30 40	150.8	300	400	40		5	15	20	1.65
PY 30 50	188.4	300	500	40		5	15	20	2.04
PY 40 40	201.0	400	400	40		5	15	20	2.14
PY 40 60	301.5	400	600	40		5	15	20	3.35
PY 40 100	502.4	400	1000	40		5	15	20	5.50
PY 60 80	602.9	600	800	40		5	15	20	6.61
PY 60 120	904.4	600	1200	40		5	15	20	10.01
PY 80 100	1037.3	800	1000	40		5	15	20	11.24
PY DO 35	100.5			40	350	5	15	20	1.25
PY DO 50	213.5			40	500	5	15	20	2.24
P2V 15 20	37.7	200	200	40		5	30	25	0.42
P2V 20 30	75.4	200	300	40		5	30	35	0.42
P2V 20 40	100.5	200	400	40		5	30	35	1 15
P2V 20 60	150.8	200	600	40		5	30	35	1.10
P2V 30 30	113.0	300	300	40		5	30	35	1.00
P2Y 30 40	150.8	300	400	40		5	30	35	1.68
P2Y 30 50	188.4	300	500	40		5	30	35	2 10
P2Y 40 40	201.0	400	400	40		5	30	35	2.29
P2Y 40 60	301.5	400	600	40		5	30	35	3.45
P2Y 40 100	502.4	400	1000	40		5	30	35	5.80
P2Y 60 80	602.9	600	800	40		5	30	35	7.01
P2Y 60 120	904.4	600	1200	40		5	30	35	10.60
P2Y 80 100	1037.3	800	1000	40		5	30	35	11.81
P2Y D0 35	100.5			40	350	5	30	35	1.39
P2Y D0 50	213.5			40	500	5	30	35	2.36

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Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

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3D drawings available at www.vuototecnica.net

SPECIAL SUCTION PLATES WITH SHUT-OFF VALVES PY2E AND P2Y2E, FOR OCTOPUS SYSTEMS

The suction plates described in this page are the same as the previously described ones. Their distinctive features are the shut-off valves inserted in each hole. In absence of an object to grip or in case of a defective grip of the foam rubber, the shut-off valves automatically close the suction inlet, thus preventing the vacuum level from decreasing on the other gripping holes. This feature allows reducing the vacuum generator capacity compared to the standard OCTOPUS systems, all to the benefit of energy saving.

٨٢٠	Force	Α	В	С	D	E	F	G	Н	Nr. of	Weight
AIL.	Kg			Ø	Ø					Valves	Kg
PY2E 20 30	75.4	200	300	40		17	15	18	32	24	1.26
PY2E 20 40	100.5	200	400	40		17	15	18	32	32	1.71
PY2E 20 60	150.8	200	600	40		17	15	18	32	48	2.62
PY2E 30 30	113.0	300	300	40		17	15	18	32	36	1.99
PY2E 30 40	150.8	300	400	40		17	15	18	32	48	2.61
PY2E 30 50	188.4	300	500	40		17	15	18	32	60	3.24
PY2E 40 40	201.0	400	400	40		17	15	18	32	64	3.42
PY2E 40 60	301.5	400	600	40		17	15	18	32	96	5.27
PY2E 40 100	502.4	400	1000	40		17	15	18	32	160	8.70
PY2E 60 80	602.9	600	800	40		17	15	18	32	192	10.45
PY2E 60 120	904.4	600	1200	40		17	15	18	32	288	15.77
PY2E 80 100	1037.3	800	1000	40		17	15	18	32	320	17.64
PY2E DO 35	100.5			40	350	17	15	18	32	32	1.89
PY2E DO 50	213.5			40	500	17	15	18	32	76	3.76
P2Y2E 20 30	75.4	200	300	40		17	30	18	47	24	1.33
P2Y2E 20 40	100.5	200	400	40		17	30	18	47	32	1.79
P2Y2E 20 60	150.8	200	600	40		17	30	18	47	48	2.65
P2Y2E 30 30	113.0	300	300	40		17	30	18	47	36	2.02
P2Y2E 30 40	150.8	300	400	40		17	30	18	47	48	2.64
P2Y2E 30 50	188.4	300	500	40		17	30	18	47	60	3.30
P2Y2E 40 40	201.0	400	400	40		17	30	18	47	64	3.57
P2Y2E 40 60	301.5	400	600	40		17	30	18	47	96	5.37
P2Y2E 40 100	502.4	400	1000	40		17	30	18	47	160	9.00
P2Y2E 60 80	602.9	600	800	40		17	30	18	47	192	10.85
P2Y2E 60 120	904.4	600	1200	40		17	30	18	47	288	16.36
P2Y2E 80 100	1037.3	800	1000	40		17	30	18	47	320	18.21
P2Y2E D0 35	100.5			40	350	17	30	18	47	32	2.03
P2Y2E D0 50	213.5			40	500	17	30	18	47	76	3.88





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Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

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SPECIAL SUCTION PLATES PZ AND P2Z, FOR OCTOPUS SYSTEMS

Among all the suction plates described up to now, these are the ones which develop the greatest lifting force given the same gripping surface and vacuum level. Moreover, the P2Z version is also able to grip very rough and uneven surfaces.

They are made with light alloys and coated with special foam rubber with slot holes, with two types of thickness. They are perfectly interchangeable with the standard suction plates.

Their lifting force has been calculated considering a minimum vacuum level of -75 Kpa, The overall surface of the slot holes on the foam rubber and a safety factor 3.





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Art.	Force	Α	В	С	D	E	F	G	Н	Weight
<i>,</i>	Kg			Ø	Ø					Kg
PZ 15 20	41.0	150	200	42		5	15	18	20	0.40
PZ 20 30	82.4	200	300	42		5	15	18	20	0.80
PZ 20 40	109.8	200	400	42		5	15	18	20	1.09
PZ 20 60	164.7	200	600	42		5	15	18	20	1.68
PZ 30 30	123.5	300	300	42		5	15	18	20	1.28
PZ 30 40	164.7	300	400	42		5	15	18	20	1.67
PZ 30 50	206.0	300	500	42		5	15	18	20	2.06
PZ 40 40	219.6	400	400	42		5	15	18	20	2.17
PZ 40 60	329.4	400	600	42		5	15	18	20	3.38
PZ 40 100	549.0	400	1000	42		5	15	18	20	5.54
PZ 60 80	658.8	600	800	42		5	15	18	20	6.64
PZ 60 120	988.3	600	1200	42		5	15	18	20	10.05
PZ 80 100	1143.1	800	1000	42		5	15	18	20	11.30
PZ DO 35	126.9			42	350	5	15	18	20	1.26
PZ DO 50	271.1			42	500	5	15	18	20	2.26
P2Z 15 20	41.0	200	200	42		5	30	18	35	0.44
P2Z 20 30	82.4	200	300	42		5	30	18	35	0.88
P2Z 20 40	109.8	200	400	42		5	30	18	35	1.18
P2Z 20 60	164.7	200	600	42		5	30	18	35	1.72
P2Z 30 30	123.5	300	300	42		5	30	18	35	1.33
P2Z 30 40	164.7	300	400	42		5	30	18	35	1.71
P2Z 30 50	206.0	300	500	42		5	30	18	35	2.14
P2Z 40 40	219.6	400	400	42		5	30	18	35	2.32
P2Z 40 60	329.4	400	600	42		5	30	18	35	3.48
P2Z 40 100	549.0	400	1000	42		5	30	18	35	5.84
P2Z 60 80	658.8	600	800	42		5	30	18	35	7.05
P2Z 60 120	988.3	600	1200	42		5	30	18	35	10.64
P2Z 80 100	1143.1	800	1000	42		5	30	18	35	11.85
P2Z D0 35	126.9			42	350	5	30	18	35	1.42
P2Z D0 50	271.1			42	500	5	30	18	35	2.39

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3D drawings available at www.vuototecnica.net

VACUUM CUP SUCTION PLATES PV and P2V. FOR OCTOPUS SYSTEMS

These suction plates provided with vacuum cups have been designed to ensure a better grip on uneven and very flexible surfaces (pasta or candy bags, blister or skin-film packs, thin cardboard boxes, etc.), which are difficult to arip with suction plates coated with foam rubber. We recommend using bellow cups. Thanks to their great flexibility, they adapt themselves to any gripping surface, following its profiles and movements during the lifting phase, guaranteeing a firm and safe grip. They are made with anodised aluminium, as are the vacuum cup supports screwed onto them, which are 1/8" gas supports for the PV version and 1/4" gas for the P2V version.

The cups are cold assembled onto the supports with no adhesives and can be provided in other compounds. Also these suction plates are perfectly interchangeable with the standard ones.

Their lifting force has been calculated considering a minimum vacuum level of -75 Kpa, the overall vacuum cup surface and a safety factor 3. Upon request, they can be provided with different cups, as long as the diameter does not exceed 22 mm for the PV suction plates and 45 mm for the P2V ones.







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Art.	Force	Α	В	C	D	E	F	Н	Example	Nr. of	Weight
Alu	Kg			Ø	Ø				Vacuum cup art.	cups	Kg
PV 15 20	30.2	150	200	18		5	36	41	01 18 29	48	0.54
PV 20 30	60.5	200	300	18		5	36	41	01 18 29	96	1.13
PV 20 40	80.6	200	400	18		5	36	41	01 18 29	128	1.54
PV 20 60	121.0	200	600	18		5	36	41	01 18 29	192	2.37
PV 30 30	90.7	300	300	18		5	36	41	01 18 29	144	1.80
PV 30 40	121.0	300	400	18		5	36	41	01 18 29	192	2.37
PV 30 50	151.2	300	500	18		5	36	41	01 18 29	240	2.94
PV 40 40	167.0	400	400	18		5	36	41	01 18 29	256	3.09
PV 40 60	242.0	400	600	18		5	36	41	01 18 29	384	4.74
PV 40 100	413.3	400	1000	18		5	36	41	01 18 29	656	7.89
PV 60 80	483.9	600	800	18		5	36	41	01 18 29	768	9.38
PV 60 120	740.8	600	1200	18		5	36	41	01 18 29	1176	14.21
PV 80 100	852.4	800	1000	18		5	36	41	01 18 29	1353	16.03
PV DO 35	93.2			18	350	5	36	41	01 18 29	148	1.81

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01 18 29

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Note: The code PV. .. exclusively indicates the suction plate with the vacuum cup supports screwed on it.

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The vacuum cups indicated in the table or freely chosen are not integral part of the suction plate and therefore, must be or dered separately.

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194.0

PV DO 50

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drawings available at www.vuototecnica.net

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Art	Force	Α	В	С	D	E	F	Н	Example	Nr. of	Weight
Alt	Kg			Ø	Ø				Vacuum cup art.	cups	Kg
P2V 15 20	37.7	150	200	40		5	51.5	56.5	01 40 42	12	0.56
P2V 20 30	75.4	200	300	40		5	51.5	56.5	01 40 42	24	1.12
P2V 20 40	100.5	200	400	40		5	51.5	56.5	01 40 42	32	1.67
P2V 20 60	150.8	200	600	40		5	51.5	56.5	01 40 42	48	2.24
P2V 30 30	113.0	300	300	40		5	51.5	56.5	01 40 42	36	1.68
P2V 30 40	150.8	300	400	40		5	51.5	56.5	01 40 42	48	2.24
P2V 30 50	188.4	300	500	40		5	51.5	56.5	01 40 42	60	2.80
P2V 40 40	201.0	400	400	40		5	51.5	56.5	01 40 42	64	3.34
P2V 40 60	301.5	400	600	40		5	51.5	56.5	01 40 42	96	4.48
P2V 40 100	502.4	400	1000	40		5	51.5	56.5	01 40 42	160	8.35
P2V 60 80	602.9	600	800	40		5	51.5	56.5	01 40 42	192	8.96
P2V 60 120	904.3	600	1200	40		5	51.5	56.5	01 40 42	288	13.44
P2V 80 100	1004.8	800	1000	40		5	51.5	56.5	01 40 42	320	16.70
P2V D0 35	100.5			40	350	5	51.5	56.5	01 40 42	32	1.67
P2V D0 50	213.5			40	500	5	51.5	56.5	01 40 42	76	3.17

Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$

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Note: The code P2V... exclusively indicates the suction plate with the vacuum cup supports screwed on it.

The vacuum cups indicated in the table or freely chosen are not integral part of the suction plate and therefore, must be ordered separately.

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3D drawings available at www.vuototecnica.net

VACUUM CUP SUCTION PLATES WITH SHUT-OFF VALVES PVE and P2V2E, FOR OCTOPUS SYSTEMS

The suction plates described in this page are the same as the previous ones. Their distinctive features are the shut-off valves inserted in each cup support connection. In absence of an object to grip or in case of a defective grip of the foam rubber, the shut-off valves automatically close the suction inlet, thus preventing the vacuum level from decreasing on the other gripping holes. This feature allows reducing the vacuum generator capacity compared to the OCTOPUS systems without valves, all to the benefit of energy saving.



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Art.	Force	Α	В	С	D	E	F	G	H	Example	Nr. of	Weight
											Valves and	
	Kg			Ø	Ø					Vacuum cup art.	cups	Kg
PVE 20 30	60.5	200	300	18		10	36	18	46	01 18 29	96	2.09
PVE 20 40	80.6	200	400	18		10	36	18	46	01 18 29	128	2.82
PVE 20 60	121.0	200	600	18		10	36	18	46	01 18 29	192	4.18
PVE 30 30	90.7	300	300	18		10	36	18	46	01 18 29	144	3.24
PVE 30 40	121.0	300	400	18		10	36	18	46	01 18 29	192	4.18
PVE 30 50	151.2	300	500	18		10	36	18	46	01 18 29	240	6.27
PVE 40 40	167.0	400	400	18		10	36	18	46	01 18 29	256	5.64
PVE 40 60	242.0	400	600	18		10	36	18	46	01 18 29	384	8.36
PVE 40 100	413.3	400	1000	18		10	36	18	46	01 18 29	656	14.45
PVE 60 80	483.9	600	800	18		10	36	18	46	01 18 29	768	17.06
PVE 60 120	740.8	600	1200	18		10	36	18	46	01 18 29	1176	25.97
PVE 80 100	852.4	800	1000	18		10	36	18	46	01 18 29	1353	29.56
PVE DO 35	93.2			18	350	10	36	18	46	01 18 29	148	3.29
PVE DO 50	194.0			18	500	10	36	18	46	01 18 29	308	6.45

Н

Note: The code PVE... exclusively indicates the suction plate with the vacuum cup supports screwed on it and the built-in shut-off valves. The vacuum cups indicated in the table or freely chosen are not integral part of the suction plate and therefore, must be ordered separately. drawings available at www.vuototecnica.net

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VACUUM CUP SUCTION PLATES WITH SHUT-OFF VALVES P2V2E, FOR OCTOPUS SYSTEMS







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Δrt	Force	А	В	С	D	E	F	G	Н	Example	Nr. of	Weight
A10											Valves and	
	Kg			Ø	Ø					Vacuum cup art.	cups	Kg
P2V2E 20 30	75.4	200	300	40		17	51.5	18	68.5	01 40 42	24	1.60
P2V2E 20 40	100.5	200	400	40		17	51.5	18	68.5	01 40 42	32	2.31
P2V2E 20 60	150.8	200	600	40		17	51.5	18	68.5	01 40 42	48	3.20
P2V2E 30 30	113.0	300	300	40		17	51.5	18	68.5	01 40 42	36	2.40
P2V2E 30 40	150.8	300	400	40		17	51.5	18	68.5	01 40 42	48	3.20
P2V2E 30 50	188.4	300	500	40		17	51.5	18	68.5	01 40 42	60	4.00
P2V2E 40 40	201.0	400	400	40		17	51.5	18	68.5	01 40 42	64	4.62
P2V2E 40 60	301.5	400	600	40		17	51.5	18	68.5	01 40 42	96	6.40
P2V2E 40 100	502.4	400	1000	40		17	51.5	18	68.5	01 40 42	160	11.55
P2V2E 60 80	602.9	600	800	40		17	51.5	18	68.5	01 40 42	192	12.80
P2V2E 60 120	904.3	600	1200	40		17	51.5	18	68.5	01 40 42	288	19.20
P2V2E 80 100	1004.8	800	1000	40		17	51.5	18	68.5	01 40 42	320	23.10
P2V2E D0 35	100.5			40	350	17	51.5	18	68.5	01 40 42	32	2.31
P2V2E D0 50	213.5			40	500	17	51.5	18	68.5	01 40 42	76	4.53

Note: The code P2V2E.... exclusively indicates the suction plate with the vacuum cup supports screwed on it and the built-in shut-off valves. The vacuum cups indicated in the table or freely chosen are not integral part of the suction plate and therefore, must be ordered separately.



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BAG GRIPPING SUCTION PLATES PJ, FOR OCTOPUS SYSTEMS

These suction plates have been designed to allow gripping paper or plastic bags containing powders, granulated products, bulk products or liquids. These suction plates are associated with OCTOPUS systems that fully exploit their performance.

They are made with anodised aluminium and are provided with a special foam rubber seal. They are perfectly interchangeable with the OCTOPUS system standard suction plates.

The shapes of the seal and the face allow reducing bag deformation in the gripping phase, reducing vacuum loss to the minimum and guaranteeing the largest gripping surface possible.

Their lifting force has been calculated considering a minimum vacuum level of -75 Kpa, the overall gripping surface enclosed in the seal and a safety factor 3.

E





0115.00	Kg								
115.20									Kg
J 10 ZU	24.6	150	200	160	10	15	110	40	0.46
PJ 20 30	73.4	200	300	230	10	30	130	40	0.92
PJ 20 40	106.0	200	400	330	10	30	130	40	1.25
J 20 60	171.0	200	600	530	10	30	130	40	1.84
J 30 40	188.4	300	400	330	10	30	230	40	1.84
J 30 50	246.0	300	500	430	10	30	230	40	2.30
J 40 60	436.0	400	600	530	10	30	330	40	3.68

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

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9.17

FLANGED FIXING SUPPORT, FOR OCTOPUS SYSTEMS WITHOUT VACUUM GENERATOR

The fixing supports described in this page have been designed to connect an OCTOPUS system to a remotely installed vacuum generator or to an alternative vacuum source.

The anodised aluminium supports are provided with two flanges: one to fix the OCTOPUS system instead of the vacuum generator and the other to connect it to the machine.

They are also equipped with connectors for direct connection to the OCTOPUS system, to the generator or to the alternative vacuum source, as well as to the vacuum level reading and control devices. The unused connections may be closed with special metal caps which they are equipped with.

The flanged fixing supports are currently available in the versions described in this page and are suited for OCTOPUS systems that use the vacuum generators indicates next to the article:

u	10	vau	Jui		<i>yununan</i>	multan	55 m	JΛL	10	unc	4
-	Ar	t. S	50	00	02	PVP	100	÷	20	ОМ	
-	Ar	t. S	50	00	05	PVP	150	÷	30	OMD)
_	Ar	t. S	50	00	06	PVP	450	÷	60	OMD)



Note: The vacuum gauges and switches in the picture are not integral part of the supports.









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'n															
2	Art		А	В	C	D	E	F	G	Н	I	L	М	Ν	Weight
2	Arta												Ø	Ø	Kg
2	SO 00 02	2	100	100	210	80	10	194	8	76	12	50	G1" 1/2	8.5	2.8
20	SO 00 0	5	150	120	150	130	10	134	8	96	12	75	G2"	8.5	4.2
	SO 00 0	6	150	14 <mark>5</mark>	150	130	10	134	8	121	12	75	G2" 1/2	8.5	4.3
·															

drawings available at www.vuototecnica.net

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Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$

OCTOPUS VACUUM GRIPPING BARS

OCTOPUS vacuum gripping bars are our answer to the ever increasing requirements of palletisation robots operational flexibility.

They are composed of:

- A slotted fixing plate, to allow a quick installation onto the machine and an easy placement with respect to the load to be lifted;

- Two or three compressed air-fed vacuum generators, according to their size; - A box made with light alloy, sealed by a suction plate coated with special perforated foam rubber.

The suction plate perfectly adapts itself to any surface, either smooth, rough or uneven.

These bars allow gripping objects of any shape and feature, provided that they do not have an excessive transpiration, without having to change or place vacuum cups and even when their surface does not occupy the entire suction plate. The maximum weight of the load to be lifted will obviously be proportional with the gripping surface. The connections provided for are four: one provided with quick coupler, for supplying compressed air to the vacuum generator; one for the possible installation of a vacuum switch, and two, closed by a threaded cap, for the air inlet inside the OCTOPUS bar in the discharge phase, for a prompt restoration of the atmospheric pressure.



Art.		B0 08 60 X	B0 08 80 X
Suction plate	art.	PX 08 60	PX 08 80
Gripping force	Kg	31.7	42.2
N° 2 vacuum generators	art.	PVP 25 MX	PVP 25 MX
Max. supply pressure	bar (g)	6	6
Max. vacuum level	-KPa	90	90
Air consumption at 6 bar (g)	NI/s	6.4	6.4
Quantity of sucked air	cum/h	62	62
Working temperature	°C	-20 / +80	-20 / +80
Weight	Kg	6	8
Α		600	800
В		80	80
C		21	21
D		50	50
E		5.2	5.2
F		4.8	4.8
G		10	10
н		112	112
P Compressed air pipe connection	ext. Ø	8	8

Note: The code B0 08 .. X, identifies the OCTOPUS bar (g) base box with the associated suction plate PX, the slotted support plate and the vacuum generators indicated in the table. All the values shown in the table are valid at a normal atmospheric pressure of 1013 mbar and obtained with a constant supply pressure.



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3D drawings available at www.vuototecnica.net

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Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$





Art.		B0 12 60 X	B0 12 80 X
Suction plate	art.	PX 12 60	PX 12 80
Gripping force	Kg	42.2	56.3
N° 2 vacuum generators	art.	PVP 25 MX	PVP 25 MX
Max. supply pressure	bar (g)	6	6
Max. vacuum level	-KPa	90	90
Air consumption at 6 bar (g)	NI/s	6.4	6.4
Quantity of sucked air	cum/h	62	62
Norking temperature	°C	-20 / +80	-20 / +80
Veight	Kg	8.1	10.8
4		600	800
3		120	120
		21	21
		90	90
		5.2	5.2
		4.8	4.8
		10	10
H		112	112
P Compressed air pipe connection	ext. Ø	8	8

Note: The code B0 12 .. X, identifies the OCTOPUS bar (g) base box with the associated suction plate PX, the slotted support plate and the vacuum generators indicated in the table. All the values shown in the table are valid at a normal atmospheric pressure of 1013 mbar and obtained with a constant supply pressure.

9.20









Art.		B0 12 100 X	B0 12 120 X
Suction plate	art.	PX 12 100	PX 12 120
Gripping force	Kg	70.4	86.2
N° 3 vacuum generators	art.	PVP 25 MX	PVP 25 MX
Max. supply pressure	bar (g)	6	6
Max. vacuum level	-KPa	90	90
Air consumption at 6 bar (g)	NI/s	9.6	9.6
Quantity of sucked air	cum/h	93	93
Working temperature	°C	-20 / +80	-20 / +80
Weight	Kg	14.5	17.4
Α		1000	1200
В		120	120
C		21	21
D		90	90
E		5.2	5.2
F		4.8	4.8
G		10	10
н		112	112
P Compressed air pipe connection	ext. Ø	8	8

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STANDARD SUCTION PLATES PX E P2X, FOR OCTOPUS GRIPPING BARS

The suction plates PX described in this page are installed, as a standard, on all OCTOPUS gripping bars and, therefore, they can be supplied as a spare part.

They are made with anodised aluminium and coated with special perforated foam rubber, with two types of thickness: 20 mm with suction plates of the PX range, 30 mm for special suction plates of the P2X range. Their lifting force has been calculated considering a minimum vacuum level of -75 Kpa, the overall perforated surface on the foam rubber and a safety factor 3.





net	Art	Force	Α	В	С	E	F	Н	Weight
ca.I	Alta	Kg			Ø				Kg
cni	PX 08 60	31.7	80	600	15	5	20	25	0.70
ote	PX 08 80	42.2	80	800	15	5	20	25	0.94
lot	PX 12 60	42.2	120	600	15	5	20	25	1.06
I.VI	PX 12 80	56.3	120	800	15	5	20	25	1.41
M	PX 12 100	70.4	120	1000	15	5	20	25	1.76
at w	PX 12 120	86.2	120	1200	15	5	20	25	2.11
lable	P2X 08 60	31.7	80	600	15	5	30	35	0.72
ivai	P2X 08 80	42.2	80	800	15	5	30	35	0.96
JS a	P2X 12 6 <mark>0</mark>	42.2	120	600	15	5	30	35	1.08
vinç	P2X 12 8 <mark>0</mark>	56.3	120	800	15	5	30	35	1.44
Irav	P2X 12 1 <mark>00</mark>	70.4	120	1000	15	5	30	35	1.80
	P2X 12 120	86.2	120	1200	15	5	30	35	2.17

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Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

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VACUUM CUP SUCTION PLATES PV FOR OCTOPUS GRIPPING BARS

These suction plates provided with vacuum cups have been designed to ensure a better grip on uneven and very flexible surfaces (pasta or candy bags, blister or skin-film packs, thin cardboard boxes, etc.), which are difficult to grip with suction plates coated with foam rubber. We recommend using bellow cups. Thanks to their great flexibility, they adapt themselves to any gripping surface, following its profiles and movements during the lifting phase, guaranteeing a firm and safe grip. They are made with anodised aluminium, as are the 1/8" vacuum cup supports screwed onto them.

The cups are cold assembled onto the supports with no adhesives and can be provided in other compounds. Also these suction plates are perfectly interchangeable with the standard ones.

Their lifting force has been calculated considering a minimum vacuum level of -75 Kpa, the overall vacuum cup surface and a safety factor 3. Upon request, they can be provided with different cups, as long as the diameter does not exceed 22 mm.





Aut	Force	A	В	С	E	F	Н	Example	Nr. of	Weight
Art.	Kg			Ø				Vacuum cup art.	cups	Kg
/ 08 60	45.4	80	600	18	5	36	41	01 18 29	72	0.83
V 08 80 V	60.5	80	800	18	5	36	41	01 18 29	96	1.26
/ 12 60	60.5	120	600	18	5	36	41	01 18 29	96	1.42
/ 12 80	80.6	120	800	18	5	36	41	01 18 29	128	1.90
/ 12 100	100.8	120	1000	18	5	36	41	01 18 29	160	2.37
	121.0	120	1200	18	5	36	41	01 18 29	192	2.84

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

The vacuum cups indicated in the table or freely chosen are not integral part of the suction plate and therefore, must be ordered separately.

9.23

SUCTION PLATES WITH SHUT-OFF VALVES PXE and P2XE, FOR OCTOPUS GRIPPING BARS

The suction plates described in this page are the same as the previously described ones. Their distinctive features are the shut-off valves inserted in each cup support connection. In absence of an object to grip or in case of a defective grip of the foam rubber, the shut-off valves automatically close the suction inlet, thus preventing the vacuum level from decreasing on the other gripping holes. This feature allows reducing the vacuum generator capacity compared to the OCTOPUS systems without valves, all to the benefit of energy saving.



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let	Art	Force	А	В	C	E	F	G	Н	Nr. of	Weight
Ca.I	AIL.	Kg			Ø					Valves	Kg
	PXE 08 60	43.7	80	600	20	10	20	18	25	56	1.69
JIE	PXE 08 80	60.0	80	800	20	10	20	18	25	77	2.25
	PXE 12 60	42.1	120	600	20	10	20	18	25	54	2.53
2	PXE 12 80	57.7	120	800	20	10	20	18	25	74	3.38
	PXE 12 100	73.3	120	1000	20	10	20	18	25	94	4.22
alw	PXE 12 120	88.9	120	1200	20	10	20	18	25	114	5.07
lable	P2XE 08 60	43.7	80	600	20	10	30	18	40	56	1.72
IVal	P2XE 08 80	60.0	80	800	20	10	30	18	40	77	2.29
S. S.	P2XE 12 <mark>60</mark>	42.1	120	600	20	10	30	18	40	54	2.58
Ĵ	P2XE 12 <mark>80</mark>	57.7	120	800	20	10	30	18	40	74	3.44
Irav	P2XE 12 100	73.3	120	1000	20	10	30	18	40	94	4.30
Ģ	P2XE 12 120	88.9	120	1200	20	10	30	18	40	114	5.16

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LOCKING PLATES. FOR OCTOPUS GRIPPING BARS WITHOUT VACUUM GENERATOR

The locking plate with manifold described in this page has been designed to connect an OCTOPUS gripping bar to a remotely installed vacuum generator or to an alternative vacuum source.

This anodised aluminium plate is fixed with screws to the body of the OCTOPUS bar, instead of the generator. The manifold is equipped with connectors for a direct connection to the OCTOPUS bar, to the generator or to the alternative vacuum source, as well as to vacuum level reading and control devices. The unused connections can be closed with special metal caps which they are equipped with.

The locking plate with manifold is suited for any kind of OCTOPUS gripping bar that uses PVP 12 MX and PVP 25 MX vacuum generators.



LOCKING PLATES FOR, **OCTOPUS GRIPPING BARS WITHOUT VACUUM GENERATOR**

The locking plate described in this page has been created to close the suction holes on the OCTOPUS bar body and left free by the removal of the vacuum generator.

This anodised aluminium plate is fixed with screws to the OCTOPUS bar instead of the generator. The gasket provides perfect seal.

The locking plate with manifold is suited for any kind of OCTOPUS gripping bar that uses PVP 12 MX and PVP 25 MX vacuum generators.



Digital vacuum switch with 1/8" axial gas coupler



Electric cable with axial connector



Art.	Description
00 12 20	Digital vacuum switch electric connection cable with axial connector

Electric cable with radial connector



Art.	Description
00 12 21	Digital vacuum switch electric connection cable with radial connector

Vacuum gauge Ø 40 mm with 1/8" axial gas coupler



Art.	Description	
09 03 15	Vacuum gauge	
-		

Pressure gauge Ø 40 mm with 1/8" axial gas coupler



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SPARE PARTS FOR OCTOPUS GRIPPING SYSTEMS AND BARS

Silencer Art. For generator art. SSX 1/4" PVP 25 MX

Sealing kit and reed valves



Sealing kit and disc valves





Stainless steel disc filtre



Cup supports



Art	D	Weight	Support	For cup
	Ø	g	material	art.
00 08 157	1.5	4	aluminium	01 18 29
00 08 178	2.5	4	aluminium	01 18 29



Art.	Weight	Support	For cup
	g	material	art.
00 08 158	8	aluminium	01 40 42



Art.	Weight	Support	For cup
	g	material	art.
00 08 170	4	aluminium	01 20 23

Shut-off valves

3D drawings available at www.vuototecnica.net

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Art		A	В	d	D	E	Н	Ch	Weight	Support
ALC		Ø	Ø	Ø	Ø				g	material
14 01 06	G	/4"	G1/8"	3.25	15	18	28	12	10	aluminium
14 01 07	G3	3/8"	G1/4"	4.50	20	25	35	17	24	aluminium

GAS-NPT thread adapters available at page 1.117



mm 330x550 - SO 33 55 2V

mm 270x420 - SO 27 42 2V



mm 70x200 - SO 07 20 X

mm Ø 100 - SO DO 10 X







mm 70x140 with digital vacuum switch - SO 07 14 V

mm 300x360 with fixing support - SO 30 36 X $\,$



mm Ø400 with fixing support and vacuum interception solenoid valve - SO DO 40 V



mm 210x360 SO 21 36 V with 3 independent chambers





mm 620x1240 with 12 independent chambers - SO 62 127 2V



GRAPHIC DIVISION

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DISC CUPS	PAG. 10.24

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3D drawings available at www.vuototecnica.net

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GRAPHIC DIVISION

The experience and production capacity of Vuototecnica has originated a division specially dedicated to the graphics and printing sector. A reference entity, ranging from engineering to services, that offers innovative and advantageous technical solutions under every point of view: performance, reliability, duration and operational economy. A significant demonstration of the Graphic Division specialisation is represented by the new range of products among which:

PNEUMATIC SUCTION AND BLOWING PUMPS

These state of the art multi-ejector (multi-stage) pumps are very versatile and can either suck or blow, according to the requirements, thus representing a true evolution compared to the traditional rotating vane pumps.

These pumps feature state of the art ejectors and boast an exceptional ratio between the amount of consumed air and sucked (or generated) air, all to the benefit of operational consumption. Moreover, they adjust the vacuum (or pressure) level and capacity according to the air supply pressure. The state of the art hi-tech materials have considerably reduced the weight allowing them to be installed directly on the machine. The Vuototecnica research centre has focused its attention on noise reduction, with solutions that provide for full soundproofing and no moving parts, thus prolonging duration and eliminating any vibration. Furthermore, these pumps are based on the Venturi principle which exploits the compressed air kinetic energy via in-line ejectors and, therefore, do not develop heat. The excellent compressed air and sucked filtration allows blowing air free from oil vapours, water condensation and impurities, between the sheets of paper to be separated and in the work environment, causing no pollution. Other assets of this safe and competitive technology include a minimal maintenance, limited to a regular filtre cleaning operation, and a reliability with no comparison. The pneumatic suction and blowing pumps are described in the following pages.

VACUUM CYLINDERS

By assembling a vacuum cup onto their perforated stem and creating a vacuum, the cup will quickly come into contact with the sheet or the object to be handled and it will automatically lift it, holding it until the vacuum is excluded. For all these features, this range of cylinders combined with cups are particularly recommended for separating sheets of paper or plastic. The advantages include: high speed operation. automatic compensation of the height of the objects to be lifted, non-rotating stems and extremely easy fixing. These vacuum cylinders are described in the following pages.

CUPS

They come in a large variety of shapes and sizes, to guarantee a quick and safe grip and they can be provided in anti-abrasion natural para rubber, nitrile or oil-resistant rubber, silicon, Viton, polyurethane and other compounds, according to the requirements. Vacuum cups are described in detail in Chapter 1; this chapter, however, will focus on the disc cups only.



Low air consumption and limited weight. Surprisingly silent operation and total absence of heat. Great respect for the work environment and minimal maintenance.

10.01

Max. suction			Max. vacı	um generated by a	corresponding electr	ic pump		
capacity generated by a corresponding	-0.1 bar (g)	-0.2 bar (g)	-0.3 bar (g)	-0.4 bar (g)	-0.5 bar (g)	-0.6 bar (g)	-0.7 bar (g)	-0.8 bar (g)
electric pump	-10 KPa	-20 KPa	-30 KPa	-40 KPa	-50 KPa	-60 KPa	-70 KPa	-80 KPa
10 cum/h	PA 40	PA 40	PA 40	PA 40	PA 40	PA 40	PA 40	PA 40
15 cum/h	PA 40	PA 40	PA 40	PA 40	PA 40	PA 40	PA 40	PA 70
20 cum/h	PA 40	PA 40	PA 40	PA 40	PA 40	PA 40	PA 70	PA 70
25 cum/h	PA 40	PA 40	PA 40	PA 40	PA 40	PA 70	PA 70	PA 70
30 cum/h	PA 40	PA 40	PA 40	PA 40	PA 70	PA 70	PA 70	PA 100
40 cum/h	PA 40	PA 70	PA 70	PA 70	PA 70	PA 100	PA 100	PA 140
60 cum/h	PA 70	PA 70	PA 70	PA 70	PA 100	PA 140	PA 140	PA 170
80 cum/h	PA 100	PA 100	PA 100	PA 100	PA 140	PA 140	PA 170	PA 200
100 cum/h	PA 100	PA 100	PA 100	PA 100	PA 140	PA 170	PA 200	PA 250
120 cum/h	PA 140	PA 140	PA 140	PA 140	PA 170	PA 200	PA 250	PA 300
140 cum/h	PA 140	PA 140	PA 140	PA 140	PA 200	PA 250	PA 300	
160 cum/h	PA 170	PA 170	PA 170	PA 200	PA 250	PA 300		
180 cum/h	PA 170	PA 170	PA 200	PA 250	PA 300			
200 cum/h	PA 200	PA 200	PA 200	PA 250	PA 300			
250 cum/h	PA 250	PA 300	PA 300	PA 300				
300 cum/h	PA 300	PA 300	PA 300					

E.g.: To replace an electric pump with a capacity of 80 cum/h and a residual vacuum of 0.6 bar (g).

Cross the line "80 cum/h" with the column "0.6 bar (g)" column in the table. At the intersection point, you will find that PA 140 is the ideal pump for the replacement.

TABLES FOR BLOWING PUMPS SELECTION

Max. blowing			Max. overpre	essure generated by	a corresponding ele	ctric pump		
capacity generated by a corresponding	+0.1 bar (g)	+0.2 bar (g)	+0.3 bar (g)	+0.4 bar (g)	+0.5 bar (g)	+0.6 bar (g)	+0.7 bar (g)	+0.8 bar (g)
electric pump	+10 KPa	+20 KPa	+30 KPa	+40 KPa	+50 KPa	+60 KPa	+70 KPa	+80 KPa
25 cum/h	PS 40	PS 40	PS 40	PS 40	PS 40	PS 40	PS 40	PS 40
30 cum/h	PS 40	PS 40	PS 40	PS 40	PS 40	PS 40	PS 40	PS 40
40 cum/h	PS 40	PS 40	PS 40	PS 40	PS 40	PS 40	PS 40	PS 40
60 cum/h	PS 70	PS 70	PS 70	PS 70	PS 70	PS 70	PS 70	PS 70
80 cum/h	PS 70	PS 70	PS 70	PS 70	PS 70	PS 70	PS 70	PS 70
100 cum/h	PS 70	PS 70	PS 70	PS 70	PS 70	PS 70	PS 100	PS 100
120 cum/h	PS 100	PS 100	PS 100	PS 100	PS 100	PS 100	PS 100	PS 100
140 cum/h	PS 100	PS 100	PS 100	PS 100	PS 100	PS 100	PS 100	PS 140
160 cum/h	PS 140	PS 140	PS 140	PS 140	PS 140	PS 140	PS 140	PS 140
180 cum/h	PS 140	PS 140	PS 140	PS 140	PS 140	PS 140	PS 140	PS 140
200 cum/h	PS 140	PS 140	PS 140	PS 140	PS 140	PS 140	PS 170	PS 170
250 cum/h	PS 200	PS 200	PS 200	PS 200	PS 200	PS 250	PS 250	PS 250
300 cum/h	PS 250	PS 250	PS 250	PS 250	PS 250	PS 300	PS 300	PS 300
350 cum/h	PS 300	PS 300	PS 300	PS 300	PS 300	PS 300	PS 300	PS 300
400 cum <mark>/h</mark>	PS 300	PS 300	PS 300	PS 300	PS 300	PS 300		

E.g.: To replace an electric pump with a capacity of 80 cum/h and an overpressure of 0.6 bar (g).

Cross the line "80 cum/h" with the column "0.6 bar (g)" column in the table. At the intersection point, you will find that PS 70 is the ideal pump for the replacement.

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SMALL PNEUMATIC SUCTION PUMPS PA

The assembly of a pressure adjuster equipped with pressure gauge and of an FCL filtre on the suction inlet connection of a vacuum generator of the M .. SSX range has allowed creating these small pneumatic suction pumps. Their main features include reduced overall dimensions compared to their technical performance.

The vacuum level and capacity can be adjusted according to the supply air pressure. These pumps are supplied by compressed air with a pressure ranging from 1 to 5 bar (g) and they can produce a maximum vacuum of 85% and a suction capacity between 2 and 18 cum/h, measured at a normal atmospheric pressure of 1013 mbar. Being based on the Venturi principle, these pumps do not develop heat.

An SSX silencer screwed onto the pump exhaust ensures a silent operation. The filtre equipped with a microporous cartridge is located on the suction inlet connection and can keep the finest dust and impurities.

Thanks to their static operating principle, maintenance is reduced to a simple regular cleaning of the filtre.



Compressed air connection





Art.				PA 3		
Supply pressure	bar (g)	1	2	3	4	5
Max. vacuum level	-KPa	20	42	62	80	85
Air consumption	NI/s	0.2	0.4	0.5	0.7	0.8
Quantity of sucked air	cum/h	2.0	2.5	3.0	3.4	3.6
Α				88		
В				110.5		
R	Ø			G1/4"		
Weight	Kg			0.45		
Art.				PA 7		
Supply pressure	bar (g)	1	2	3	4	5
Max. vacuum level	-KPa	20	42	62	80	85
Air consumption	NI/s	0.4	0.6	0.8	1.2	1.4
Quantity of sucked air	cum/h	3.0	4.0	5.4	5.8	6.2
4				89		
3				111.5		
R				G3/8"		
Weight	Kg			0.46		
Working temperature	°C I			-20 / +80		

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GAS-NPT thread adapters available at page 1.117

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10.03

SMALL PNEUMATIC SUCTION PUMPS PA 10, PA 14 and PA 18



Art.				PA 10		
Supply pressure	bar (g)	1	2	3	4	5
Max. vacuum level	-KPa	20	42	62	80	85
Air consumption	NI/s	0.5	0.9	1.2	1.6	1.9
Quantity of sucked air	cum/h	4.0	6.0	7.7	8.5	9.4
Α				94		
В				118.5		
C				24.5		
Weight	Kg			0.59		
Art.	- -			PA 14		
Supply pressure	bar (g)	1	2	3	4	5
Max. vacuum level	-KPa	20	42	62	80	85
Air consumption	NI/s	0.9	1.3	1.7	2.1	2.5
Quantity of sucked air	cum/h	6.0	8.0	10.2	11.5	12.6
Α				94		
В				118.5		
C				24.5		
Weight	Kg			0.60		
Working temperature				PA 18		
Supply pressure	bar (g)	1	2	3	4	5
Max. vacuum level	-KPa	20	42	62	80	85
Air consumption	NI/s	1.2	1.7	2.3	2.9	3.6
Quantity of sucked air	cum/h	8.0	11.5	14.8	16.5	18.0
A				102		
В				136.5		
С				34.5		
Weight	Kg			0.62		
Working temperature	°C			-20 / +80		

Note: All the values in the table are valid at a normal atmospheric pressure of 1013 mbar and obtained with a constant supply pressure.

10.04

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GAS-NPT thread adapters available at page 1.117

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SMALL PNEUMATIC SUCTION PUMPS PA

A state of the art range of ejectors has allowed creating this range of pneumatic suction pumps featuring an excellent ratio between the amount of consumed air and sucked air, as well as the ability to adjust the vacuum level and capacity according to the supply air pressure.

These pumps are supplied by compressed air with a pressure ranging from 1 to 6 bar (g), and they can produce a maximum vacuum of 90% and a suction capacity between 15 and 320 cum/h, measured at a normal atmospheric pressure of 1013 mbar. When designing these pumps our attention was focused on noise. In fact, they are perfectly soundproofed and there are no moving parts subject to wear and vibrations. All this results in an extremely silent operation.

Moreover, being based on the Venturi principle, they do not develop heat.

As a standard, they are equipped with a filtre/pressure reducer unit for the supply air and a filtre with microporous cartridge located on the suction inlet connection which can keep the finest dust and impurities.

The excellent compressed air and sucked filtration allows blowing air free from oil vapours, water condensation and impurities in the work environment, causing no pollution.

The use of light alloys for making these pumps has allowed a considerable reduction of their weight thus allowing them to be directly installed onto the machine. Thanks to their static operating principle, maintenance is reduced to a simple regular cleaning of the filtres.





Art.				PA	40		
Supply pressure	bar (g)	1	2	3	4	5	6
Max. vacuum level	-KPa	14	30	46	65	82	90
Air consumption	NI/s	1.0	1.5	2.0	2.3	2.7	3.2
Quantity of sucked air	cum/h	15	23	30	36	39	42
Weight	Kg			6.	.2		
Art.				PA	70		
Supply pressure	bar (g)	1	2	3	4	5	6
Max. vacuum level	-KPa	14	30	46	65	82	90
Air consumption	NI/s	2.0	3.0	4.1	4.9	5.7	6.6
Quantity of sucked air	cum/h	29	47	58	65	73	80
Weight	Kg			6.	.2		
Art.				PA	100		
Supply pressure	bar (g)	1	2	3	4	5	6
Max. vacuum level	-KPa	11	28	45	65	82	90
Air consumption	NI/s	3.0	4.6	6.2	7.2	8.5	9.8
Quantity of sucked air	cum/h	28	57	75	88	98	108
Weight	Kg			6.	.2		
Working temperature	°C			-20 /	+80		

Note: All the values in the table are valid at a normal atmospheric pressure of 1013 mbar and obtained with a constant supply pressure.



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10.05

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Kg GAS-NPT thread adapters available at page 1,117

Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6}$ = $\frac{\text{Kg}}{0.4536}$







Art.				PA	140		
Supply pressure	bar (g)	1	2	3	4	5	6
Max. vacuum level	-KPa	15	35	55	70	85	90
Air consumption	NI/s	4.1	6.2	8.3	9.6	11.4	13.0
Quantity of sucked air	cum/h	45	80	106	125	140	152
Weight	Kg			7.	2		
Art.				PA	170		
Supply pressure	bar (g)	1	2	3	4	5	6
Max. vacuum level	-KPa	15	35	55	70	85	90
Air consumption	NI/s	5.1	7.7	10.3	12.1	14.2	16.3
Quantity of sucked air	cum/h	53	98	128	150	168	182
Weight	Kg			7.	2		
Art.				PA	200		
Supply pressure	bar (g)	1	2	3	4	5	6
Max. vacuum level	-KPa	15	35	55	70	85	90
Air consumption	NI/s	6.0	9.1	12.2	14.2	16.9	19.4
Quantity <mark>of suck</mark> ed air	cum/h	60	110	142	170	188	200
Weight	Kg			7.	2		
Working temperature	°C			-20 /	+80		

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

Note: All the values in the table are valid at a normal atmospheric pressure of 1013 mbar (g) and obtained with a constant supply pressure.

10.06

3D drawings available at www.vuototecnica.net







PNEUMATIC SUCTION PUMPS PA 250 and PA 300







Art.				PA	250		
Supply pressure	bar (g)	1	2	3	4	5	6
Max. vacuum level	-KPa	15	35	55	70	85	90
Air consumption	NI/s	7.5	11.2	15.0	17.3	20.7	24.0
Quantity of sucked air	cum/h	100	145	190	224	252	280
Weight	Kg			8.	1		
Art.		•		PA	300		
Supply pressure	bar (g)	1	2	3	4	5	6
Max. vacuum level	-KPa	15	35	55	70	85	90
Air consumption	NI/s	9.0	13.5	18.1	20.4	24.8	29.0
Quantity of sucked air	cum/h	106	160	213	240	290	320
Weight	Kg			8.	1		
Working temperature	°C			-20 /	+80		

Note: All the values in the table are valid at a normal atmospheric pressure of 1013 mbar (g) and obtained with a constant supply pressure.

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Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

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GAS-NPT thread adapters available at page 1.117

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SMALL PNEUMATIC BLOWING PUMPS PS

The assembly of a pressure adjuster equipped with pressure gauge and of an FCL filtre on the suction inlet connection of a vacuum generator of the M .. SSX range has allowed creating these small pneumatic suction pumps. Their main features include reduced overall dimensions compared to their technical performance.

The vacuum level and capacity can be adjusted according to the supply air pressure. These pumps are supplied by compressed air with a pressure ranging from 1 to 5 bar (g) and they can produce a maximum pressure of 0.7 bar (g) and a blowing capacity between 2.7 and 31 cum/h, measured at a normal atmospheric pressure of 1013 mbar. Being based on the Venturi principle, they do not develop heat.

The filtre equipped with microporous cartridge located on the air inlet connection can keep the finest dust and impurities.

Thanks to their static operating principle, maintenance is reduced to a simple regular cleaning of the filtre.







Art.				PS 3		
Supply pressure	bar (g)	1	2	3	4	5
Max. blowing pressure	bar (g)	0.1	0.2	0.3	0.5	0.7
Air consumption	NI/s	0.2	0.4	0.5	0.7	0.8
Quantity of blown air	cum/h	2.7	3.9	4.8	5.9	6.5
Α				88		
В				110.5		
R	Ø			G1/4"		
Weight	Kg			0.44		
Art.				PS 7		
Supply pressure	bar (g)	1	2	3	4	5
Max. blowing pressure	bar (g)	0.1	0.2	0.3	0.5	0.7
Air consumption	NI/s	0.4	0.6	0.8	1.2	1.4
Quantity of blown air	cum/h	4.4	6.1	8.2	10.1	11.2
A				89		
В				111.5		
R				G3/8"		
Weight	Kg			0.45		
Working <mark>temper</mark> ature	0°			-20 / +80		

Note: All the values in the table are valid at a normal atmospheric pressure of 1013 mbar and obtained with a constant supply pressure.

10.08

drawings available at www.vuototecnica.net

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GAS-NPT thread adapters available at page 1.117







Art.				PS 10		
Supply pressure	bar (g)	1	2	3	4	5
Max. blowing pressure	-KPa	0.1	0.2	0.3	0.5	0.7
Air consumption	NI/s	0.5	0.9	1.2	1.6	1.9
Quantity of blown air	cum/h	5.8	9.2	12.0	14.2	16.2
l III				94		
ł				118.5		
;				24.5		
ł				G3/8"		
/eight	Kg			0.49		
Art.				PS 14		
upply pressure	bar (g)	1	2	3	4	5
lax. blowing pressure	-KPa	0.1	0.2	0.3	0.5	0.7
ir consumption	NI/s	0.9	1.3	1.7	2.1	2.5
uantity of blown air	cum/h	9.2	12.6	16.3	19.0	21.6
				94		
				118.5		
				24.5		
				G3/8"		
/eight	Kg			0.50		
orking temperature				PS 18		
upply pressure	bar (g)	1	2	3	4	5
lax. blowing pressure	-KPa	0.1	0.2	0.3	0.5	0.7
ir consumption	NI/s	1.2	1.7	2.3	2.9	3.6
uantity of blown air	cum/h	12.3	17.6	23.0	26.9	31.0
l				94		
				128.5		
;				34.5		
ł				G1/2"		
Veight	Kg			0.52		
Vorking temperature	°C			-20 / +80		



Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6}$ = $\frac{\text{Kg}}{0.4536}$ GAS-NPT thread adapters available at page 1.117

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PNEUMATIC BLOWING PUMPS PS

A state of the art range of ejectors has allowed creating this range of pneumatic blowing pumps featuring an excellent ratio between the amount of consumed air and sucked air, as well as the ability to adjust the vacuum level and capacity according to the supply air pressure.

These pumps are supplied by compressed air with a pressure ranging from 1 to 6 bar (g) and can produce a maximum pressure of 0.8 bar (g) and a blowing capacity between 18 and 425 cum/h, measured at a normal atmospheric pressure of 1013 mbar.

When designing these pumps our attention was focused on noise. In fact, they are perfectly soundproofed and there are no moving parts subject to wear and vibrations. All this results in an extremely silent operation.

Moreover, being based on the Venturi principle, they do not develop heat.

As a standard, they are equipped with a filtre-pressure reducer unit for the supply air and a filtre with microporous cartridge located on the air inlet connection, which can keep the finest dust and impurities.

The excellent compressed air and sucked filtration allows blowing air free from oil vapours, water condensation and impurities in the work environment, causing no pollution.

The use of light alloys for making these pumps has allowed a considerable reduction of their weight thus allowing them to be directly installed onto the machine.

Thanks to their static operating principle, maintenance is reduced to a simple regular cleaning of the filtres.





Art.				PS	40		
Supply pressure	bar (g)	1	2	3	4	5	6
Max. blowing pressure	bar (g)	0.1	0.2	0.3	0.5	0.7	0.8
Air consumption	NI/s	1.0	1.5	2.0	2.3	2.7	3.2
Quantity of blown air	cum/h	18	28	37	44	48	53
Weight	Kg			6.	3		
Art.				PS	70		
Supply pressure	bar (g)	1	2	3	4	5	6
Max. blowing pressure	bar (g)	0.1	0.2	0.3	0.5	0.7	0.8
Air consumption	NI/s	2.0	3.0	4.1	4.9	5.7	6.6
Quantity of blown air	cum/h	36	57	72	83	93	104
Weight	Kg			6.	3		
Art.				PS	100		
Supply pressure	bar (g)	1	2	3	4	5	6
Max. blowing pressure	bar (g)	0.1	0.2	0.3	0.5	0.7	0.8
Air consumption	NI/s	3.0	4.6	6.2	7.2	8.5	9.8
Quantity <mark>of blow</mark> n air	cum/h	38	73	97	114	129	144
Weight	Kg			6.	3		
Working temperature	0°			-20 /	+80		

Note: All the values in the table are valid at a normal atmospheric pressure of 1013 mbar and obtained with a constant supply pressure.

10.10



3D drawings available at www.vuototecnica.net





GAS-NPT thread adapters available at page 1.117







Art.	PS 140										
Supply pressure	bar (g)	1	2	3	4	5	6				
Max. blowing pressure	bar (g)	0.1	0.2	0.3	0.5	0.7	0.8				
Air consumption	NI/s	4.1	6.2	8.3	9.6	11.4	13.0				
Quantity of blown air	cum/h	59	102	135	160	181	199				
Weight	Kg			7.	.3						
Art.				PS	170						
Supply pressure	bar (g)	1	2	3	4	5	6				
Max. blowing pressure	bar (g)	0.1	0.2	0.3	0.5	0.7	0.8				
Air consumption	NI/s	5.1	7.7	10.3	12.1	14.2	16.3				
Quantity of blown air	cum/h	71	125	165	194	219	240				
Weight	Kg			7	.3						
Art.				PS	200						
Supply pressure	bar (g)	1	2	3	4	5	6				
Max. blowing pressure	bar (g)	0.1	0.2	0.3	0.5	0.7	0.8				
Air consumption	NI/s	6.0	9.1	12.2	14.2	16.9	19. <mark>4</mark>				
Quantity of blown air	cum/h	81	142	185	221	249	270				
Weight	Kg			7	.3						
Working temperature	О°			-20 /	+80						

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PNEUMATIC BLOWING PUMPS PS 250 and PS 300







Art.				PS	250		
Supply pressure	bar (g)	1	2	3	4	5	6
Max. blowing pressure	bar (g)	0.1	0.2	0.3	0.5	0.7	0.8
Air consumption	NI/s	7.5	11.2	15.0	17.3	20.7	24.0
Quantity of blown air	cum/h	127	185	244	286	327	366
Weight	Kg			8	.2		
Art.				PS	300		
Supply pressure	bar (g)	1	2	3	4	5	6
Max. blowing pressure	bar (g)	0.1	0.2	0.3	0.5	0.7	0.8
Air consumption	NI/s	9.0	13.5	18.1	20.4	24.8	29.0
Quantity <mark>of blow</mark> n air	cum/h	138	208	278	313	379	424
Weight	Kg			8	.2		
Working temperature	°C			-20 /	+80		

Note: All the values in the table are valid at a normal atmospheric pressure of 1013 mbar and obtained with a constant supply pressure.

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SMALL PNEUMATIC COMBINED SUCTION AND BLOWING PUMPS PS



All the small pneumatic suction and blowing pumps previously described can be combined regardless of their suction or blowing capacity. Given the enormous number of possible combinations, for space reasons, this catalogue only describes combinations of pumps with the same size.





Art.				PA 3			Art.				PS 3		
Supply pressure	bar (g)	1	2	3	4	5	Supply pressure	bar (g)	1	2	3	4	5
Max. vacuum level	-KPa	20	42	62	80	85	Max. blowing pressure	bar (g)	0.1	0.2	0.3	0.5	0.7
Air consumption	NI/s	0.2	0.4	0.5	0.7	0.8	Air consumption	NI/s	0.2	0.4	0.5	0.7	0.8
Quantity of sucked air	cum/h	2.0	2.5	3.0	3.4	3.6	Quantity of blown air	cum/h	2.7	3.9	4.8	5.9	6.5
Α				88			Α				88		
В				110.5			В				110.5		
R	Ø			G1/4"			R	Ø			G1/4"		
Weight	Kg			0.45			Weight	Kg			0.44		
Art.				PA 7			Art.				PS 7		
Supply pressure	bar (g)	1	2	3	4	5	Supply pressure	bar (g)	1	2	3	4	5
Max. vacuum level	-KPa	20	42	62	80	85	Max. blowing pressure	bar (g)	0.1	0.2	0.3	0.5	0.7
Air consumption	NI/s	0.4	0.6	0.8	1.2	1.4	Air consumption	NI/s	0.4	0.6	0.8	1.2	1.4
Quantity of sucked air	cum/h	3.0	4.0	5.4	5.8	6.2	Quantity of blown air	cum/h	4.4	6.1	8.2	10.1	11.2
Α				88			Α				88		
B				110.5			В				110.5		
R	Ø			G3/8"			R	Ø			G3/8"		
Weight	Kg			0.46			Weight	Kg			0.45		
Working temperature	°C			-20 / +8	0		Working temperature	°C			-20 / +80		

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GAS-NPT thread adapters available at page 1.117

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SMALL PNEUMATIC COMBINED SUCTION PUMPS PA and BLOWING PUMPS PS



Art.				PA 10			Art.				PS 10		
Supply pressure	bar (g)	1	2	3	4	5	Supply pressure	bar (g)	1	2	3	4	5
Max. vacuum level	-KPa	20	42	62	80	85	Max, blowing pressure	bar (g)	0.1	0.2	0.3	0.5	0.7
Air consumption	NI/s	0.5	0.9	1.2	1.6	1.9	Air consumption	NI/s	0.5	0.9	1.2	1.6	1.9
Quantity of sucked air	cum/h	4.0	6.0	7.7	8.5	9.4	Quantity of blown air	cum/h	5.8	9.2	12.0	14.2	16.2
A				94			A				94		
В				118.5			В				118.5		
C				24.5			C				24.5		
-							R	Ø			G3/8"		
Weight	Κα			0.59			Weight	Ka			0.49		
Art.				PA 14			Art.				PS 14		
Supply pressure	bar (g)	1	2	3	4	5	Supply pressure	bar (g)	1	2	3	4	5
Max. vacuum level	-KPa	20	42	62	80	85	Max. blowing pressure	bar (q)	0.1	0.2	0.3	0.5	0.7
Air consumption	NI/s	0.9	1.3	1.7	2.1	2.5	Air consumption	NI/s	0.9	1.3	1.7	2.1	2.5
Quantity of sucked air	cum/h	6.0	8.0	10.2	11.5	12.6	Quantity of blown air	cum/h	9.2	12.6	16.3	19.0	21.6
A				94			A				94		
В				118.5			В				118.5		
C				24.5			C				24.5		
							R	Ø			G3/8"		
Weight	Kg			0.60			Weight	Kg			0.50		
Art.				PA 18			Art.				PS 18		
Supply pressure	bar (g)	1	2	3	4	5	Supply pressure	bar (g)	1	2	3	4	5
Max. vacuum level	-KPa	20	42	62	80	85	Max. blowing pressure	bar (g)	0.1	0.2	0.3	0.5	0.7
Air consumption	NI/s	1.2	1.7	2.3	2.9	3.6	Air consumption	NI/s	1.2	1.7	2.3	2.9	3.6
Quantity of sucked air	cum/h	8.0	11.5	14.8	16.5	18.0	Quantity of blown air	cum/h	12.3	17.6	23.0	26.9	31.0
A				94			Α				94		
В				128.5			В				128.5		
C				34.5			C				34.5		
							R	Ø			G1/2"		
Weight	Kg			0.62			Weight	Kg			0.52		
Working <mark>temper</mark> ature	°C			-20 / +8	0		Working temperature	°C			-20 / +80		

Note: All the values in the table are valid at a normal atmospheric pressure of 1013 mbar and obtained with a constant supply pressure.

10.14

3D drawings available at www.vuototecnica.net



Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

GAS-NPT thread adapters available at page 1.117

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PNEUMATIC COMBINED SUCTION PUMP PA and BLOWING PUMP PS



All the small pneumatic suction and blowing pumps previously described can be combined regardless of their suction or blowing capacity. Given the enormous number of possible combinations, for space reasons, this catalogue only describes combinations of pumps with the same size.





Art.				PA 4	0			Art.				PS 4	0		
Supply pressure	bar (g)	1	2	3	4	5	6	Supply pressure	bar (g)	1	2	3	4	5	6
Max. vacuum level	-KPa	14	30	46	65	82	90	Max. blowing pressure	bar (g)	0.1	0.2	0.3	0.5	0.7	0.8
Air consumption	NI/s	1.0	1.5	2.0	2.3	2.7	3.2	Air consumption	NI/s	1.0	1.5	2.0	2.3	2.7	3.2
Quantity of sucked air	cum/h	15	23	30	36	39	42	Quantity of blown air	cum/h	18	28	37	44	48	53
Neight	Kg			6	.2			Weight	Kg			6	3		
Art.				PA	70			Art.				PS	70		
Supply pressure	bar (g)	1	2	3	4	5	6	Supply pressure	bar (g)	1	2	3	4	5	6
Max. vacuum level	-KPa	14	30	46	65	82	90	Max. blowing pressure	bar (g)	0.1	0.2	0.3	0.5	0.7	0.8
Air consumption	NI/s	2.0	3.0	4.1	4.9	5.7	6.6	Air consumption	NI/s	2.0	3.0	4.1	4.9	5.7	6.6
Quantity of sucked air	cum/h	29	47	58	65	73	80	Quantity of blown air	cum/h	36	57	72	83	93	104
Weight	Kg			6	.2			Weight	Kg			6	3		
Art.				PA	100			Art.				PS	100		
Supply pressure	bar (g)	1	2	3	4	5	6	Supply pressure	bar (g)	1	2	3	4	5	6
Max. vacuum level	-KPa	11	28	45	65	82	90	Max. blowing pressure	bar (g)	0.1	0.2	0.3	0.5	0.7	0.8
Air consumption	NI/s	3.0	4.6	6.2	7.2	8.5	9.8	Air consumption	NI/s	3.0	4.6	6.2	7.2	8.5	9.8
Quantity of sucked air	cum/h	28	57	75	88	98	108	Quantity of blown air	cum/h	38	73	97	114	129	144
Weight	Kg			6.2				Weight	Kg			6	3		
Working temperature	°C			-20 /	/ +80			Working temperature	°C			-20	/ +80		

GAS-NPT thread adapters available at page 1.117

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

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Art.				PA 14	40			Art.				PS 14	40		
Supply pressure	bar (g)	1	2	3	4	5	6	Supply pressure	bar (g)	1	2	3	4	5	6
Max. vacuum level	-KPa	15	35	55	70	85	90	Max. blowing pressure	bar (g)	0.1	0.2	0.3	0.5	0.7	0.8
Air consumption	NI/s	4.1	6.2	8.3	9.6	11.4	13.0	Air consumption	NI/s	4.1	6.2	8.3	9.6	11.4	13.0
Quantity of sucked air	cum/h	45	80	106	125	140	152	Quantity of blown air	cum/h	59	102	135	160	181	199
Weight	Kg			7	.2			Weight	Kg			7.	.3		
Art.				PA	170			Art.				PS	170		
Supply pressure	bar (g)	1	2	3	4	5	6	Supply pressure	bar (g)	1	2	3	4	5	6
Max. vacuum level	-KPa	15	35	55	70	85	90	Max. blowing pressure	bar (g)	0.1	0.2	0.3	0.5	0.7	0.8
Air consumption	NI/s	5.1	7.7	10.3	12.1	14.2	16.3	Air consumption	NI/s	5.1	7.7	10.3	12.1	14.2	16.3
Quantity of sucked air	cum/h	53	98	128	150	168	182	Quantity of blown air	cum/h	71	125	165	194	219	240
Weight	Kg			7	.2			Weight	Kg			7.	.3		
Art.				PA	200			Art.				PS	200		
Supply pressure	bar (g)	1	2	3	4	5	6	Supply pressure	bar (g)	1	2	3	4	5	6
Max. vacuum level	-KPa	15	35	55	70	85	90	Max. blowing pressure	bar (g)	0.1	0.2	0.3	0.5	0.7	0.8
Air consumption	NI/s	6.0	9.1	12.2	14.2	16.9	19.4	Air consumption	NI/s	6.0	9.1	12.2	14.2	16.9	19.4
Quantity <mark>of suck</mark> ed air	cum/h	60	110	142	170	188	200	Quantity of blown air	cum/h	81	142	185	221	249	270
Weight	Kg			7	.2			Weight	Kg			7.	.3		
Working <mark>temper</mark> ature	°C			-20 /	/ +80			Working temperature	°C			-20	/ +80		

Note: All the values in the table are valid at a normal atmospheric pressure of 1013 mbar and obtained with a constant supply pressure.

10.16



3D drawings available at www.vuototecnica.net



GAS-NPT thread adapters available at page 1.117

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Art.				PA 2	50			Art.				PS 25	50		
Supply pressure	bar (g)	1	2	3	4	5	6	Supply pressure	bar (g)	1	2	3	4	5	6
Max. vacuum level	-KPa	15	35	55	70	85	90	Max. blowing pressure	bar (g)	0.1	0.2	0.3	0.5	0.7	0.8
Air consumption	NI/s	7.5	11.2	15.0	17.3	20.7	24.0	Air consumption	NI/s	7.5	11.2	15.0	17.3	20.7	24.0
Quantity of sucked air	cum/h	100	145	190	224	252	280	Quantity of blown air	cum/h	127	185	244	286	327	366
Weight	Kg			8	.1			Weight	Kg			8.	2		
Art.			PA 300 Art. PS 300												
Supply pressure	bar (g)	1	2	3	4	5	6	Supply pressure	bar (g)	1	2	3	4	5	6
Max. vacuum level	-KPa	15	35	55	70	85	90	Max. blowing pressure	bar (g)	0.1	0.2	0.3	0.5	0.7	0.8
Air consumption	NI/s	9.0	13.5	18.1	20.4	24.8	29.0	Air consumption	NI/s	9.0	13.5	18.1	20.4	24.8	29.0
Quantity of sucked air	cum/h	106	160	213	240	290	320	Quantity of blown air	cum/h	138	208	278	313	379	424
Weight	Kg			8	.1			Weight	Kg			8.	2		
Working temperature	°C			-20 /	/ +80			Working temperature	°C			-20	/ +80		

GAS-NPT thread adapters available at page 1.117

Note: All the values in the table are valid at a normal atmospheric pressure of 1013 mbar and obtained with a constant supply pressure.

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

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10.17

SUCTION AND BLOWING SYSTEM AS

With the suction and blowing system AS we have tried to provide the printing industry with an answer to most of their requirements regarding the management of paper during the printing process, i.e.:

- The concentration of all the necessary pumps and commands on one single piece.
- An ever increasing printing quality thanks to individually controlled pumps.
- An increase of productivity resulting from the configuration and use of individual pumps.
- Reduced machine idle state due to the pneumatic pumps based on the Venturi principle.
- An improvement of the work environment thanks to the noise reduction, absence of heat and the emission of air free of oil vapours,
- water condensation and impurities between the sheets of paper to be separated and in the work environment.
- Energy saving due to a low compressed air consumption compared to the amount of sucked (or generated) air.
- Maintenance reduced to a regular cleaning of the filtres.

The suction and blowing system AS is composed of a metal, easy-to-place cabinet, inside of which the combined pneumatic pumps PA and PS are located with the supply compressed air interception and adjustment valves.

The suction and blowing capacities of the pumps are determined according to the client's requirements or to technical specifications of the machine manufacturer.

At the sides of the cabinet are located the blowing and suction connectors for the connection to the application, as well as the filtres equipped with microporous cartridge against fine dust ..

On the control panel are installed:

- The pneumatic main switch for supply compressed air interception with a pressure gauge for a direct reading of the line pressure.
- The pneumatic switches for supply compressed air interception of every single pump.
- The pressure reducers with relative pressure gauges for adjusting the compressed air of every single pump. The vacuum (or pressure) level as well as the pump capacity can be adjusted according to the supply air pressure.
- Vacuum gauges and pressure gauges for a direct reading of the vacuum and pressure at the application.
- Vacuum gauges for controlling the clogging level of the PS pump filtres.
- All our pneumatic suction and blowing pumps can be combined regardless of their suction
- and blowing capacity and can be installed inside the system cabinet.

Given the enormous number of possible combinations, this catalogue only describes combinations of pumps with the same size.





Note: The filtres are not integral part of the system, but they are the same filtres installed on PA/PS pumps on the outside of the cabinet.

To order the complete system, all you have to do is ad the art. of the chosen PA and PS pumps to the art. AS 4.

- E.g.: n°1 AS 4
 - n°1 PA 100 n°1 PS 140 n°1 PS 200 n°1 PA 170

You can install up to 4 pumps on the AS 4 system, regardless of their size and suction or blowing function.

10.18

3D



Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$

PNEUMATIC SUCTION AND BLOWING PUMP SUPPORTS

The supports described in this page have been designed to allow a quick assembly of the pneumatic suction and blowing pumps and their easy placement on the machine.

They are made with a sturdy satinated stainless sheet steel and are equipped with anti-slip and anti-vibration rubber feet. These supports are currently available for single pneumatic pumps and for the combined ones.





											N		1			
Δrt	Α	В	С	D	E	F	G	Н	I	L	М	Ν	0	Р	Q	Weight
Altu						Ø								Ø		Kg
GR DIV 03	100	39.5	3.75	64	12	11.5	74.5	13.5	41	43	84	47.5	79	4.5	45°	0.1

Rubber feet

F

F

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Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$

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Art.

GR DIV 01

GR DIV 02

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GAS-NPT thread adapters available at page 1.117

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PNEUMATIC AND BLOWING PUMPS SUCTION FILTRES

To allow the pneumatic suction and blowing pumps to work even in very dusty environments it is necessary to use these filtres that, installed on the suction inlet connection, can keep the finest dust and impurities and affecting the capacity in a nealiaible manner.

The filtering cartridges, in fact, are made with a special treated paper with a porosity level of $5 \div 7$ micron, and pleated to increase the filtering surface.

FCL filtres are composed of a transparent plexiglas cylindrical body inside of which is located the filtering cartridge locked by two anodised aluminium flanges that are kept in place by seeger rings, inside of which the threaded connectors and the seals are housed.

The filtres can be inspected by simply removing one of the two flanges. The container of the filtering element FP is made with plastic and it is screwed onto the blue plastic lid; a gasket located between the two elements ensures a perfect seal. The container of the filtering element FC, as well as its lid, are made with sheet steel and varnished with a special oxidation-resistant treatment. A gasket between the lid and the container ensures a perfect vacuum seal, while the release clamps on the container allow a quick opening of the lid to check or replace the filtering cartridge.





Art.	d	А	В	С	D	E	F	Max. capacity	For pumps	Weight	Spare cartridge
74.4	Ø		Ø					cum/h	art.	Kg	art.
FCL 1 MF	G1/4"	91.2	20	17	19.1	12	7.1	5	PA - PS 3	0.12	00 FCL 03
FCL 2 MF	G3/8"	93.4	24	20	19.1	12	9.3	20	PA - PS 7 - 10 -14 - 18	0.14	00 FCL 03



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С d D

Art. FC 38 Art. FC 55



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avai	Art		d	А	В	C	D	Max. capacity	For pumps	Weight	Spare cartridge
gs g	Alta		Ø				Ø	cum/h	art.	Kg	art.
vin	FP 30/4/	/SP	G1"	145	169	24	130	100	PA - PS 40 ÷ 100	1.00	SP/4
drav	FC 38		G1" 1/2	143	101	45	120	200	PA - PS 140 ÷ 200	0.95	00 FC 15
3D C	FC 55		G2"	143	170	79	120	300	PA - PS 250 ÷ 300	1.29	00 FC 33

В

10.20



Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6}$ = $\frac{\text{Kg}}{0.4536}$

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Vacuum gauge Ø 40 mm with 1/8" coaxial gas coupler



Art.	For pneumatic pumps	
09 03 15	PA - PS 40 ÷ 300	

Pressure gauge Ø 40 mm with 1/8" coaxial gas coupler



Art.	bar	For pneumatic pumps
09 03 20	1 ÷ 10	All
09 03 25	1 ÷ 1.6	PS 40 ÷ 300

1/8" gas pressure reducer



Art.	For pneumatic pumps
MREG 1-08	PA 3 - 7 - 10 - 14 - 18
	PS 3 - 7 - 10 - 14 - 18

1/2" gas filtre/pressure reducer



PNEUMATIC PUMP SPARE PARTS

Sealing kit and reed valves



Art. For pneumatic pumps art. 00 KIT M 3 PA 3 - PS 3 00 KIT M 7 PA 7 - PS 7 00 KIT M 10 PA 10 - PS 10 00 KIT M 14 PA 14 - PS 14 00 KIT M 18 PA 18 - PS 18

Sealing kit and disc valves



Art.	For pneumatic pumps art.
00 KIT PVP 40 M	PA 40 - PS 40
00 KIT PVP 70 M	PA 70 - PS 70
00 KIT PVP 100 M	PA 100 - PS 100
00 KIT PVP 140 M	PA 140 - PS 140
00 KIT PVP 170 M	PA 170 - PS 170
00 KIT PVP 200 M	PA 200 - PS 200
00 KIT PVP 250 M	PA 250 - PS 250
00 KIT PVP 300 M	PA 300 - PS 300

Exhaust silencers SSX



Art.	For pneumatic pumps
SSX 1/4"	PA 3
SSX 3/8"	PA 7 - 10 - 14
SSX 1/2"	PA 18

Sound absorbing material on the exhaust



Art.	For pneumatic pumps art.	Quantity
00 15 110	PA 40 - PS 40	N°1 piece
	PA 70 - PS 70	N°1 piece
	PA 100 - PS 100	N°1 piece
	PA 140 - PS 140	N°1 piece
	PA 170 - PS 170	N°1 piece
	PA 200 - PS 200	N°1 piece
	PA 250 - PS 250	N°1 piece
	PA 300 - PS 300	N°1 piece

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Sound absorbing material on ejectors

3				
M		Art.	For pneumatic pumps art.	Quantity
at v		00 15 111	PA 40 - PS 40	N°1 piece
ole			PA 70 - PS 70	N°1 piece
ilab			PA 100 - PS 100	N°1 piece
ava			PA 140 - PS 140	N°2 pieces
gs			PA 170 - PS 170	N°2 pieces
win			PA 200 - PS 200	N°2 pieces
dra			PA 250 - PS 250	N°3 pieces
30			PA 300 - PS 300	N°3 pieces
	10.22			
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VACUUM CYLINDERS

The cylinders described in this page are vacuum operated. By creating vacuum in the cylinder front chamber, the stem, which is solidly connected to the piston, comes out overcoming the opposing spring force.

The piston is pushed by the air at atmospheric pressure that gets into the cylinder's rear chamber through the hollow stem.

The greater the pressure differential between the front chamber under vacuum and the rear chamber at atmospheric pressure, and the larger the piston thrust force will be.

The stem returns into position in two ways:

 By preventing the atmospheric air from entering through the stem hole and with the vacuum inserted, the pressure differential inside the cylinder is removed. Under this condition, the thrust spring and the atmospheric pressure forces prevail on the stem which is thus pushed into its initial position.

2) By excluding the vacuum, the atmospheric pressure is restored in both the cylinder chambers. Also in this case, being the pressure differential removed, the stem returns to its initial position pushed by the thrust spring.

The first of these two methods is the true operating principle for which this cylinder has been designed. In fact, by assembling a vacuum cup on the cylinder hollow stem and creating a vacuum, the cup will rapidly come into contact with the object to be handled and it will automatically lift it keeping the grip until the vacuum is excluded.

For this feature, vacuum cylinders associated with vacuum cups are recommended for gripping and handling machined, moulded or thermoformed objects, as well as for separating sheets of paper or plastic, sheet steel, etc. and lifting printed circuits or thin plastic panels. The advantages offered by these vacuum cylinders include: brief and quick cycles controlled by only one valve for vacuum interception; automatic compensation of the height of the objects to be gripped with no compression on them; non-rotating piston and an extremely easy fixing. They are fully made with anodised aluminium and are equipped with a special self-lubricating technopolymer bush which guarantees long duration.



Art.		25 05 10	25 10 10	25 15 10	
Stroke	mm	17	25	30	
Thrusting force at -KPa 80	Kg	2.0	4.3	12.0	
Lifting force at -KPa 80	Kg	0.45	1.0	2.5	
Minimum cycle time	Sec	0.3	0.4	0.6	
Min. vacuum level -KPa		60	60	60	
Min. capacity necessary NI/1'		15	30	90	
Working temperature °C		5 ÷ 80	5 ÷ 80	5 ÷ 80	
Weight	g	55	145	515	
A	Ø	24	35	59	
В	Ø	M 6	G1/8"	M 10	
C	Ø	M 5	G1/8"	G1/4"	
D	Ø	M 16 x 1.5	M 22 x 1.5	M 40 x 1.5	
E Pipe vacuum connection	Ø int.	4	4	4	
F		39.5	56	66	
G		12	16	17	
н		4	6	9	
I		55.5	78	92	
Ch. 1		19	27	50	
Ch. 2		24	32	55	
Ch 3		8	12	17	

Note: By adding the letters PZ to the code, the cylinder will be supplied with technopolymer piston (E.g.: 25 05 10 PZ).

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$ GAS-NPT thread

GAS-NPT thread adapters available at page 1.117

3D drawings available at www.vuototecnica.net

10.23

DISC CUPS

Apart from some standard rubber discs, these articles are generally produced upon specific request by the client and for a minimum amount to be specified in the offer phase.

They can be die-cut from sheets or moulded in nitrile rubber, in natural para rubber, silicon or special compounds. They can also be made with reinforced rubber or polyurethane.

The discs described above are used in the printing industry, as an alternative to vacuum cups, for gripping and handling sheets of paper, cardboard or plastic.







SPECIAL PRODUCTS

DEGASSIFIERS	PAG. 11.01
MOBILE DEGASSIFIERS WITH WHEELS AND HANDLE	PAG. 11.02
ELECTRIC EQUIPMENT FOR VACUUM TEST	PAG. 11.03
PNEUMATIC EQUIPMENT FOR VACUUM TEST	PAG. 11.04
SUCTION UNITS WITH SYPHON FILTRE GA FS 5 and GA FS 10	PAG. 11.05
Suction units with syphon filtre ga FS 20 ES \div ga FS 30 ES	PAG. 11.06
SAFETY SUCTION UNITS WITH SYPHON FILTRE	PAG. 11.07
LIQUID-SUCKING PUMPSETS	PAG. 11.08

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DEGASSIFIERS

The function of degassifiers is to suck the air bubbles that remain in the synthetic resin or composite material mixes and in silicon or similar compounds during their preparation. The presence of bubbles, in fact causes a drastic reduction of their technical features and negatively affects their appearance. Degassifiers are composed of:

- One or two welded sheet steel autoclaves, featuring a perfect vacuum seal, equipped with transparent methacrylate lids that can be manually removed. - An oil-bath rotating vane pump for high vacuum.

- One or two vacuum switches for a direct reading of the vacuum level in the autoclave.

- One or two three-way manual valves for vacuum interception. - A switchgear enclosed in a special protective casing.

- A profiled steel frame for assembling all the components.

Inside the autoclave, the degassifiers can reach a final vacuum level equal to

99.5 %. With small modifications and with the aid of insulating or waterproofing resins these degassifiers can be used for vacuum-impregnating windings for

electric motors, transformers, electric coils, etc.

Upon request they can also be supplied in different versions.





715	550		150 Autoclave 1 100	A	Autoclave I 100	300	at www.vindotecnica.net
Art	Autoclaves	Pump	Motor execution	Motor power	Switchgear	A	Weight
ALC.	Litres	mod.	Volt	Kw	art.		Kg
DR 100 01	100	MV 20A	3 ~ 230/400-50Hz	0.75	DR 100 90	1250	62.0 22
DR 100 02	100	MV 40A	3 ~ 230/400-50Hz	1.10	DR 100 90	1250	85.5
D2R 150 01	100+50	MV 20A	3 ~ 230/400-50Hz	0.75	DR 100 90	1800	82.0
D2R 150 02	100+50	MV 40A	3 ~ 230/400-50Hz	1.10	DR 100 90	1800	105.5

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11.01
MOBILE SYSTEM FOR RESIN VACUUM INFUSION

This system has been designed for allowing resin vacuum infusion moulding and composite fibre vacuum forming.

The system is composed of:

- A welded sheet steel autoclave featuring a perfect vacuum seal, equipped with a a transparent methacrylate lid that can be manually removed.
- An oil-bath rotating vane pump, for high vacuum.
- A reducer for adjusting the required vacuum level.
- A vacuum gauge, for a direct reading of the vacuum level in the autoclave.
- A three-way manual valve for pump vacuum interception and for restoring the atmospheric pressure inside the autoclave.
- A two-way valve for vacuum interception at the application.
- A switchgear, enclosed in a special protective casing.
- A profiled steel frame for assembling all the components mounted on wheels. - A handle to move and place it.

Resin vacuum infusion moulding is carried out connecting the connector controlled by the two-way manual valve to the mould.

The resin inside its container is sucked via the vacuum iside the mould, until it's totally full. The resin in excess is collectes in the autoclave.

The same connector can be connected to the vacuum press bag for forming composite fibres.

The installed vacuum pumps allow reaching a maximum vacuum level of 99.5% inside the autoclave. Therefore, this device can also be used as a degassifier. The vacuum reducer allows adjusting the vacuum level within a minimum value of 20% a maximum value of 99.5%.

Upon request, they can be supplied in different versions.





drawings available at www.vuototecnica.net

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Art.		Autoclave Pump Motor		tor execution	Motor power	Switchgear	A	Weight	
		Litres	mod.		Volt	Kw	art.		Kg
DR 100 I	VI 01	100	MV 20A	3 ~	230/400-50Hz	0.75	DR 100 90	1100	64.0
DR 100 I	VI 02	100	MV 40A	3 ~	230/400-50Hz	1.10	DR 100 90	1200	87.5

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

11.02



SWITCHGEARS FOR VACUUM TESTS

These devices have been created for testing the weldings and, therefore, the sealing of cellophane or PVC wrappings for food products.

In fact, the wrapping placed inside a bell jar tends to inflate because of the pressure differential created between the air at atmospheric pressure contained inside and the vacuum created inside the bell jar. The higher the vacuum level reached in the bell jar and the greater the thrust that the air contained in the wrapping will exert on the walls and, therefore, on the weldings.

The devices for vacuum tests are composed of:

- A mobile transparent plexiglas bell jar.

- A support surface with seal.

- A dry rotating vane vacuum pump.

- Two 2-way manual valves for vacuum interception. - A vacuum gauge for a direct reading of the vacuum level.

- A mini vacuum switch for vacuum level adjustment.

- A switchgear enclosed in a special protective casing.

 A bent sheet steel frame with anti-vibration feet for assembling all the components. The vacuum level that can be reached inside the bell jar depends on the pump installed.

> The test values are adjustable and can be automatically repeated. They can be supplied in different versions upon request.



Art.	Bell jar	Pump	Motor execution	Motor power	Switchgear	A	D	Weight	C S D
	Litres	mod.	Volt	Kw	art.		Ø	Kg	win
ATS 05	5.5	VTS 4M	1~ 230-50Hz	0.18	D0 06 95	300	200	21.5	dra
ATS 20	21.5	VTS 10M	1~ 230-50Hz	0.30	D0 06 95	500	400	29.5	3D

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

11.03

11

PNEUMATIC DEVICES FOR VACUUM TESTS

The function of these devices is to test the welding sealing in flow-pack, cellophane or food product wrappings.

They are composed of:

- A transparent plexiglass cylindrical container into which the water is poured and the vacuum is created.
- A mobile transparent plexiglas lid with, on its lower part, a perforated disc fixed via a pin which is for keeping the flow-pack wrapping submerged in the water, in the container and on its upper part, the instruments for managing and controlling the vacuum.
- A multiple ejector multi-stage vacuum generator.
- A check valve located on the generator suction inlet to prevent the air from returning into the
- container when the generator is not in operation.
- A sleeve valve for compressed air interception.
- A supply compressed air reducer equipped with pressure gauge.
- A 2-way manual valve for restoring the atmospheric pressure inside the container.

The wrapping submerged in the water in the container tends to inflate because of the pressure differential produced between the air at atmospheric pressure on its inside and the vacuum created in the container. The higher the vacuum level reached in the bell jar and the greater the thrust that the air contained in the wrapping will exert on the walls and, therefore, on the weldings.

Any air leak from the wrapping due to a defecting welding is proved by bubbles that indicate the exact point of the welding that's leaking.

The vacuum level that can be reached inside the bell jar depends on the pump installed.

The test values are adjustable and can be automatically repeated.

They can be supplied in different versions upon request.







Art	Container	A	В	D	Generator	Vacuum gauge	Weight
Art.	Litres			Ø	art.	art.	Kg
ATP 02	6.0	100	220	220	M10	09 03 15	5.0

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$



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30



11.04

SUCTION UNITS WITH SYPHON FILTRE GA FS 5 AND GA FS 10

These suction units with syphone filtre allow sucking fluids saturated with condensation or mixed with water and liquids.

They share all the best technical features of syphon filtres and vacuum generators. In fact, they keep liquids and solid impurities, while the vacuum generator can suck fluids saturated with vapours or liquid condensation without compromising its performance.

These devices are composed of:

- A standard syphon filtre described in Chapter 5.

- A compressed air-fed multi-stage vacuum generator.

- A pneumatic vacuum switch for vacuum level adjustment.

A vacuum gauge for a direct reading of the vacuum level in the container.
A pneumatic valve managed by the vacuum switch for supplying the vacuum generator.

- A sleeve valve for compressed air interception.

The vacuum level, preset with the vacuum switch, is automatically maintained in the plexiglas container. These suction units with syphone filtre are suited for vacuum cup clamping systems for gripping glass, marble, granite, light alloys and in all those cases with a considerable presence of refrigerating liquids.

They are also recommended for sucking They are also recommended for sucking creamy or muddy substances, hard to handle with traditional pumps.

These suction assemblies are fed by compressed air at a pressure of 4÷6 bar (g) only.

Upon request they can also be supplied in different versions.





drawings available at www.vuototecnica.net

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3D

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

X

GAS-NPT thread adapters available at page 1.117

f

SUCTION UNITS WITH SYPHON FILTRE GA FS 20 ES ÷ GA FS 30 ES

These suction units with syphon filtres share the same features and functions as the previous ones; their distinctive features are their size and the type of generator installed.

These devices are composed of:

- A standard syphon filtre already described in Chapter 5.
- A compressed air-operated multi-stage vacuum generator with a built-in energysaving system ES.
- A vacuum gauge for a direct reading of the vacuum level in the container.
- A sleeve valve for compressed air interception.

The vacuum level, preset with the vacuum switch, is automatically maintained in the plexiglas container. These suction units with syphone filtre are suited for vacuum cup clamping systems for gripping glass, marble, granite, light alloys and in all those cases with a considerable presence of refrigerating liquids.

They are also recommended for sucking They are also recommended for sucking creamy or muddy substances, hard to handle with traditional pumps.

These suction assemblies are fed by compressed air at a pressure of $4 \div 6$ bar (g) only. Upon request they can also be supplied in different versions.





drawings available Weight R Capacity D F Μ Ν 0 Ρ Vacuum R C d G Н Т Λ Art. generator Ø Ø Ø Ø Kg art. GA FS 20 ES 795 130 175 200 25 100 410 290 150 25 240 10 145 G1/2" PVP 25MDX ES 10.5 9.5 8 GA FS 25 ES 745 150 195 8 240 25 100 510 290 170 30 270 180 G3/4" PVP 50MDX ES 19.5 12.0 11 GA FS 30 ES 885 190 225 12 <mark>30</mark>0 30 120 610 330 200 40 G1" PVP 75MDX ES 38.0 22.0 310 11 220 30

11.06

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at

20

М



Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6}$ = 0.4536



SAFETY SUCTION UNITS WITH SYPHON FILTRE

These units have the same functions as the previous ones, but they differ for their automation and composition. In fact, these devices are composed of:

- A standard syphon filtre already described in Chapter 5.

- Two compressed air-operated multistage vacuum generators with built-in energy-saving system ES.

- A vacuum gauge for a direct reading of the vacuum level in the container. - Two sleeve valves for compressed air interception.

These safety suction units normally provide for the operation of one vacuum generator with subsequent automatic insertion of the other one for higher consumptions and when, for whatever reason, the plant vacuum level goes below the preset minimum value. All this also guarantees continuous operation even in presence of a vacuum generator breakdown. The vacuum level, preset with the vacuum switch, is automatically maintained in the plexiglas container. These suction units with syphone filtre are suited for vacuum cup clamping systems for gripping glass, marble, granite, light alloys and in all those cases with a considerable presence of refrigerating liquids.

They are also recommended for sucking They are also recommended for sucking creamy or muddy substances, hard to handle with traditional pumps.

These suction assemblies are fed by compressed air at a pressure of $4\div 6$ bar (g) only. Upon request they can also be supplied in different versions.





3D drawings available at www.vuototecnica.net

11

X

GAS-NPT thread adapters available at page 1.117

Kg

LIQUID-SUCKING PUMPSETS

These pumpsets are for sucking liquids and collect them inside their tanks. The maximum level difference that can be exceeded is approximately 9 metres. They are composed of:

- A welded sheet steel large-capacity tank.
- A compressed-air operated multi-stage vacuum generator.
- A vacuum switch for adjusting the vacuum level within which to operate.
- A vacuum gauge for a direct reading of the vacuum level in the tank.
- A liquid level visual indicator light.
- Two magnetic switches for minimum and maximum liquid level.

- A three-way solenoid valve line for restoring the atmospheric pressure in the tank, with consequent automatic drainage of the accumulated liquid.

- Two vacuum reducers for vacuum level adjustment at the application.
- Three manual valves for vacuum interception.

- A switchgear enclosed in a special protective casing for manual or automatic operation selection. Liquid-sucking pumpsets are normally used for extracting the water contained in washing machine and dishwasher filtres that cannot be automatically drained after their commissioning.

They are also recommended for transferring dense liquids and creamy or muddy substances. Upon request, they can be supplied in other versions.





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X

11.08



Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$

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The following terms are intended as accepted by the purchaser in the ordering phase.

- 1. **ORDERS:** With the transmission of the order the purchaser approves all the sale terms in force. The article codes must be specified in the order.
- 2. **PRICES:** prices are intended for goods delivered ex our warehouse (VAT, packaging and transportation excluded) and the prices in force when ordering will be considered as valid.
- 3. **PACKAGING:** free of charge for accessories, at cost for pumps and pumpsets.
- 4. SHIPMENT: shipment will be carried out via postal package or the customer's courier of confidence; carriage will be paid to our factory in Beverate and the goods travel at the full risk of the customer. Therefore, in case of delay, losses, faults, thefts, etc., claims must be addressed to the Courier who is the only responsible.
- 5. DELIVERY: if indicated, the date of delivery is purely indicative and, therefore, releases our company from any claim.
- 6. CLAIMS: must be sent in written form within 8 days from receipt of the goods. Claims arriving after this deadline will not be accepted. Whatever their nature, claims do not suspend the obligation to carry out payments with the methods agreed upon. Should the purchaser consider the goods not suitable, he/she has the right to have them replaced or to the recrediting of the sum. No other type of compensation is considered valid. For any objection or controversy, the place of jurisdiction will be Lecco.
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