

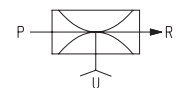
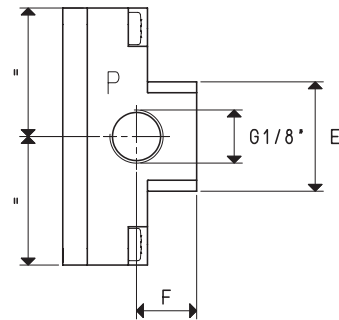
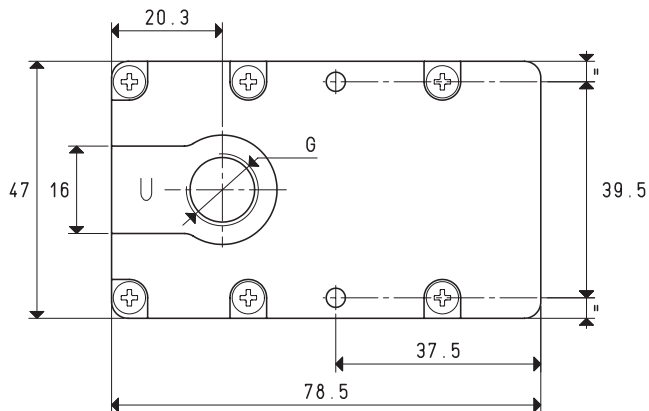
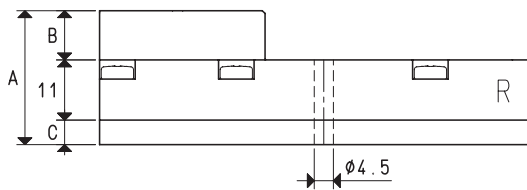
MULTI-STAGE VACUUM GENERATORS SERIES M

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.



P=COMPRESSED AIR CONNECTION R=EXHAUST U=VACUUM CONNECTION

Art.		M 3		M 7			
Quantity of sucked air	cum/h	3	3.4	3.6	5.4	5.8	6.2
Max. vacuum level	-kPa	62	82	85	62	82	85
Final pressure	mbar abs.	380	180	150	380	180	150
Supply pressure	bar (g)	3	4	5	3	4	5
Air consumption	NI/s	0.5	0.7	0.8	0.8	1.2	1.4
Working temperature	°C			-10 / +80			-10 / +80
Noise level	dB(A)			64			70
Weight	g			109			111
A				24.5			25.5
B				9			10
C				4.5			4.5
E	∅			20			24
F				11			12
G	∅			G1/4"			G3/8"
Spare parts							
Sealing 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.

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

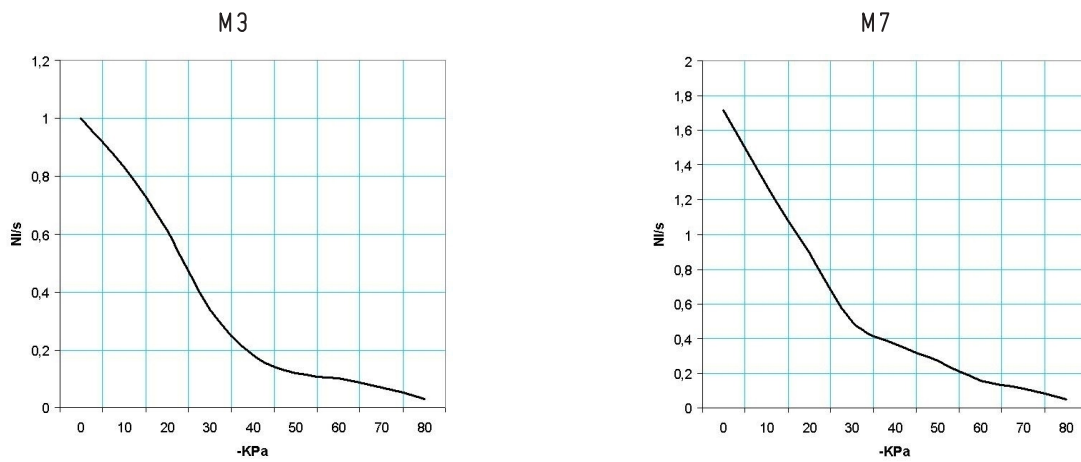
GAS-NPT thread adapters available at page 1.117

8.29

3D drawings available at www.vuototecnica.net

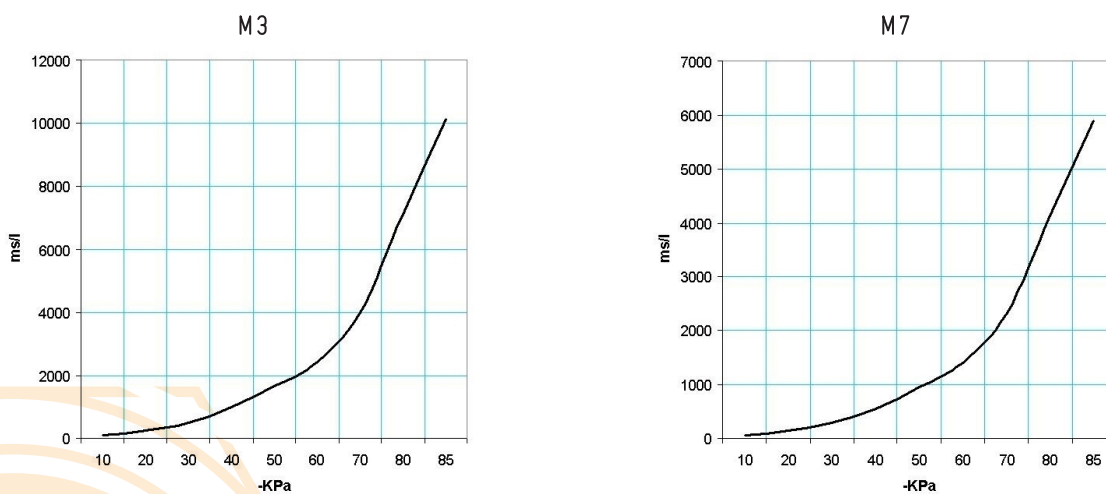
MULTI-STAGE VACUUM GENERATORS M 3 and M 7

Air capacity (NI/s) at different vacuum levels (-Kpa)



Generator art.	Supply press. bar (g)	Air consumption NI/s	Air capacity (NI/s) at different vacuum levels (-KPa)										Max. vacuum level -KPa
			0	10	20	30	40	50	60	70	80		
M 3	5.0	0.8	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	

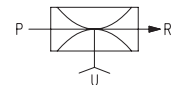
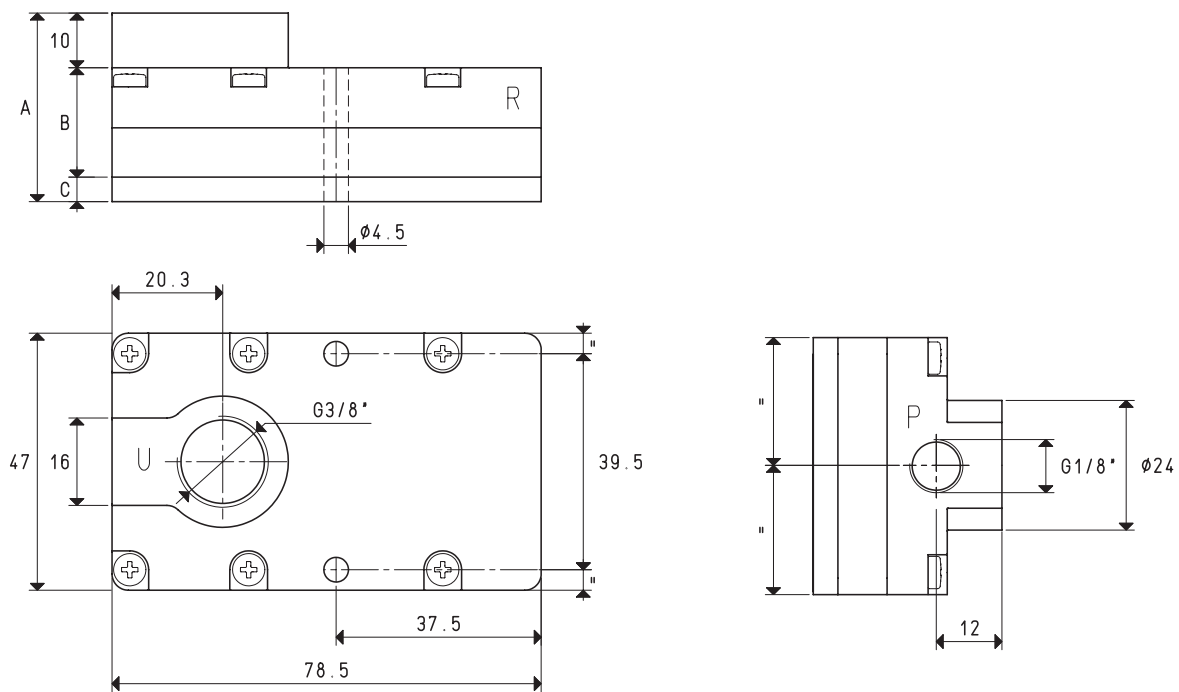
Evacuation time (ms/l=s/m³) at different vacuum levels (-Kpa)



Generator art.	Supply press. bar (g)	Air consumption NI/s	Evacuation time (ms/l = s/m³) at different vacuum levels (-KPa)										Max. vacuum level -KPa
			10	20	30	40	50	60	70	80	85		
M 3	5.0	0.8	106	244	491	969	1642	2398	4004	7128	10122	85	
M 5	5.0	1.4	61	142	285	563	954	1394	2328	4144	5885	85	

3D drawings available at www.vuototecnica.net

MULTI-STAGE VACUUM GENERATORS M 10, M 14 and M 18



		P=COMPRESSED AIR CONNECTION			R=EXHAUST		U=VACUUM CONNECTION			
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		145		150	
A					34.5		34.5		44.5	
B					20		20		30	
C					4.5		4.5		4.5	
Spare parts										
Sealing kit and reed valve	art.				00 KIT M 10		00 KIT M 14		00 KIT M 18	

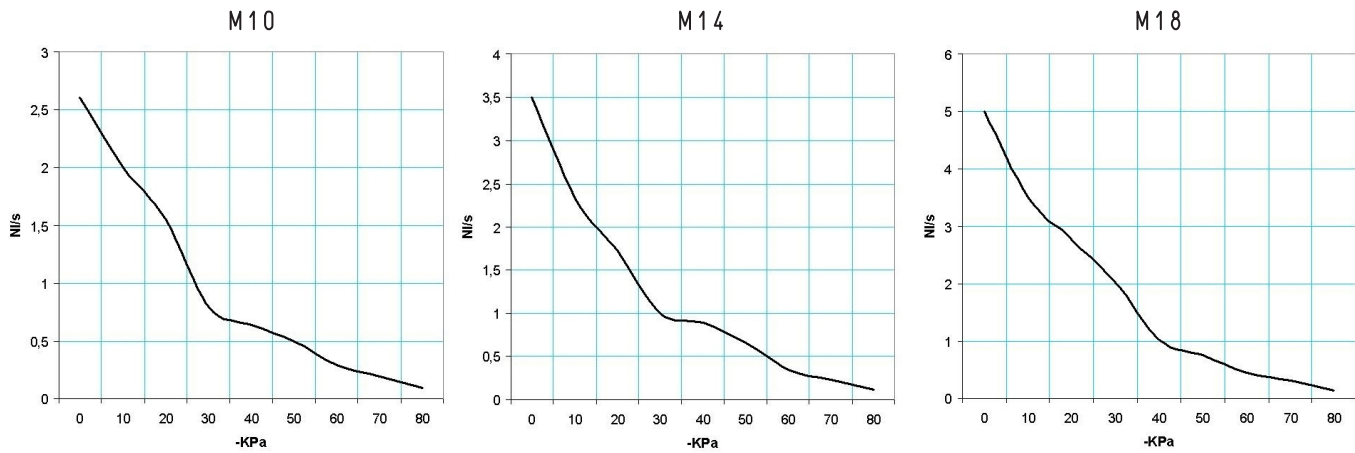
Note: All the vacuum data indicated in the table are valid at the normal atmospheric pressure of 1013 mbar and are obtained with a constant supply pressure.

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

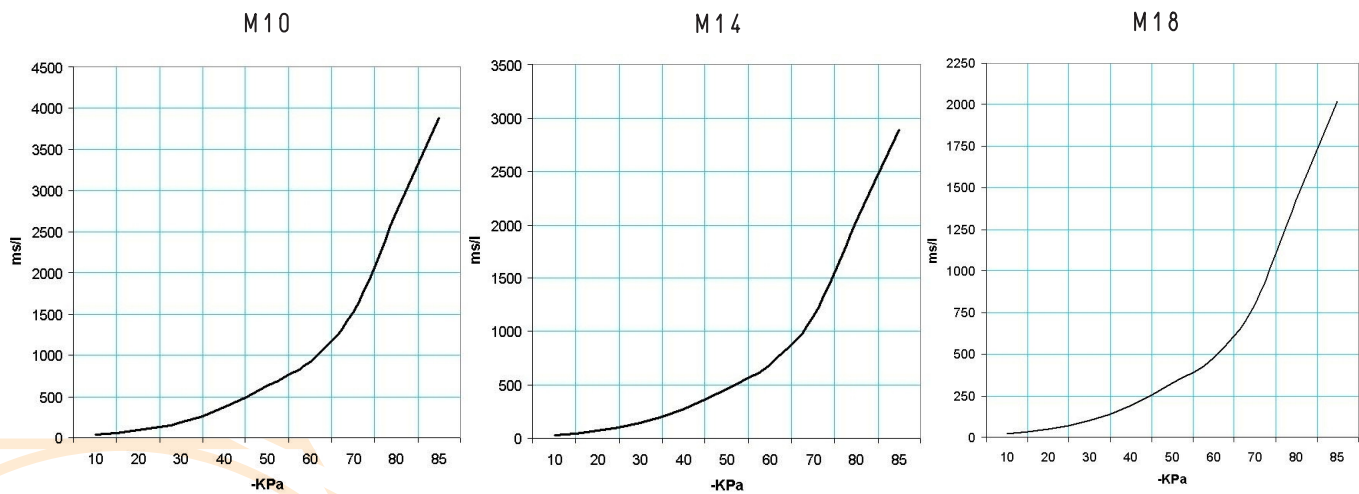
MULTI-STAGE VACUUM GENERATORS M 10, M 14 and M 18

Air capacity (NI/s) at different vacuum levels (-Kpa)



Generator art.	Supply press. bar (g)	Air consumption NI/s	Air capacity (NI/s) at different vacuum levels (-KPa)										Max. vacuum level -KPa
			0	10	20	30	40	50	60	70	80		
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	

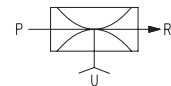
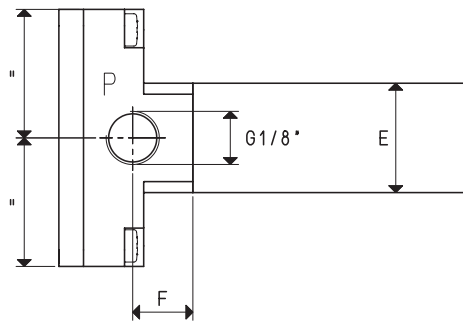
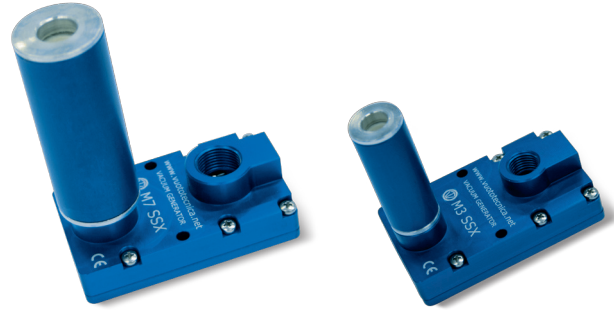
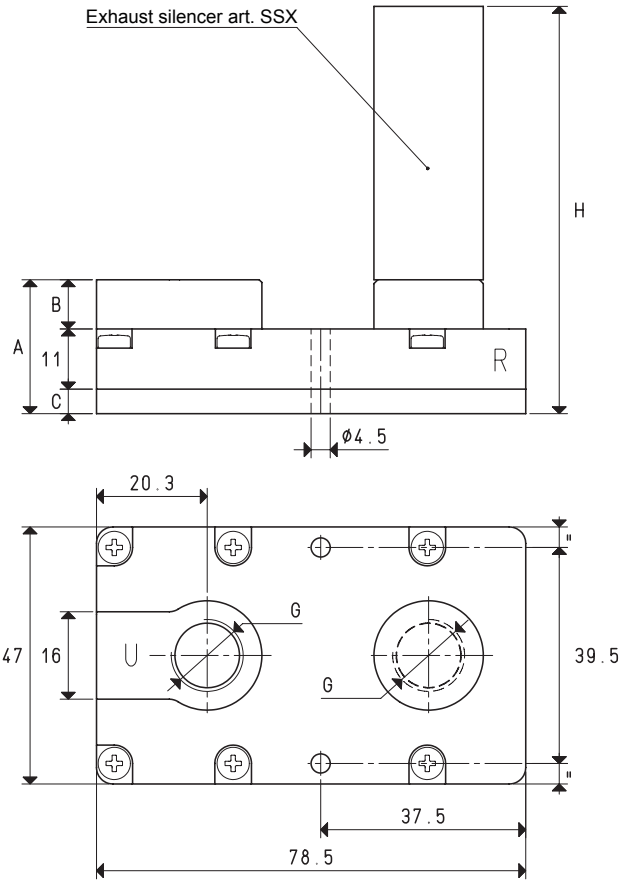
Evacuation time (ms/l=s/m³) at different vacuum levels (-Kpa)



Generator art.	Supply press. bar (g)	Air consumption NI/s	Evacuation time (ms/l = s/m ³) at different vacuum levels (-KPa)										Max. vacuum level -KPa
			10	20	30	40	50	60	70	80	85		
M 10	5.0	1.9	40	93	188	371	629	918	1534	2731	3878	85	
M 14	5.0	2.5	30	69	140	276	469	685	1144	2036	2892	85	
M 18	5.0	3.6	21	48	98	193	327	478	799	1423	2020	85	

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 the 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.	P=COMPRESSED AIR CONNECTION		R=EXHAUST		U=VACUUM CONNECTION		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		
Final pressure	mbar abs.		380	180	150	380	180	150		
Supply pressure	bar (g)		3	4	5	3	4	5		
Air consumption	NI/s		0.5	0.7	0.8	0.8	1.2	1.4		
Working temperature	°C				-10 / +80			-10 / +80		
Noise level	dB(A)				52			58		
Weight	g				109			111		
A					24.5			25.5		
B					9			10		
C					4.5			4.5		
E	Ø				20			29		
F					11			12		
G	Ø				G1/4"			G3/8"		
H					74.5			97.5		
Spare parts										
Silencer	art.				SSX 1/4"			SSX 3/8"		
Sealing 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.

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

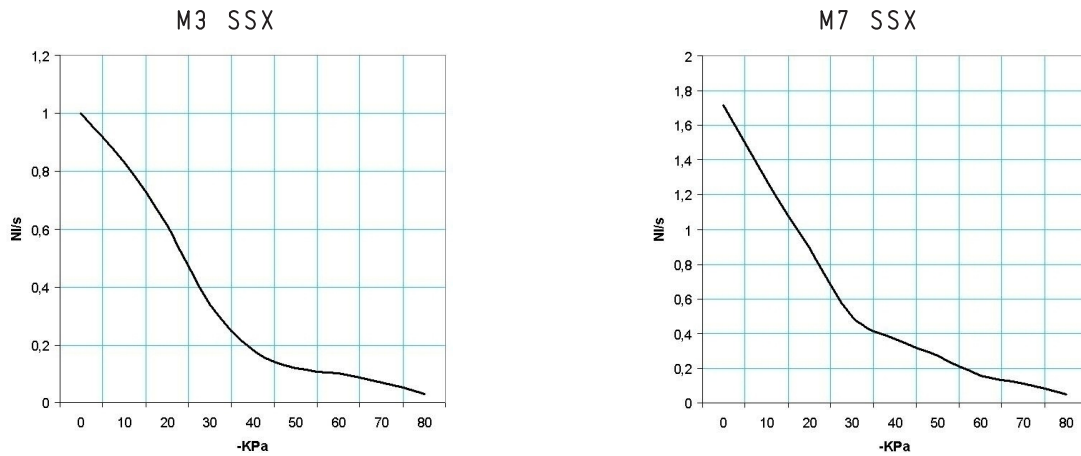
GAS-NPT thread adapters available at page 1.117

8.33

3D drawings available at www.vuototecnica.net

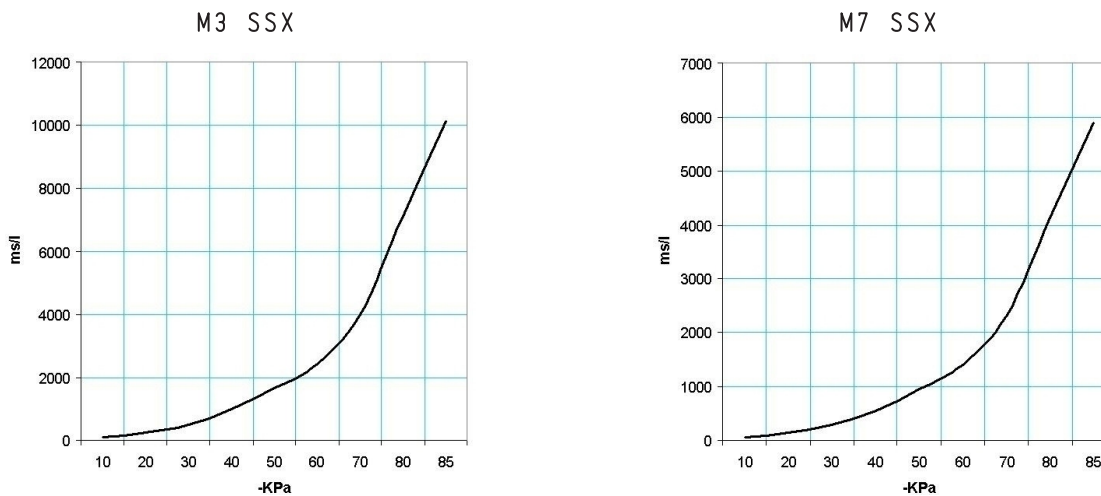
MULTI-STAGE VACUUM GENERATORS M 3 SSX and M 7 SSX

Air capacity (NI/s) at different vacuum levels (-Kpa)



Generator art.	Supply press. bar (g)	Air consumption NI/s	Air capacity (NI/s) at different vacuum levels (-KPa)										Max. vacuum level -KPa
			0	10	20	30	40	50	60	70	80	85	
M 3 SSX	5.0	0.8	1.00	0.83	0.61	0.34	0.18	0.12	0.10	0.07	0.03	0.03	85
M 7 SSX	5.0	1.4	1.72	1.28	0.89	0.50	0.37	0.27	0.16	0.11	0.05	0.05	85

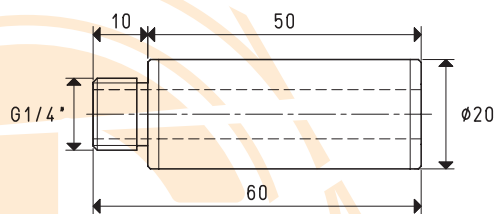
Evacuation time (ms/l=s/m³) at different vacuum levels (-Kpa)



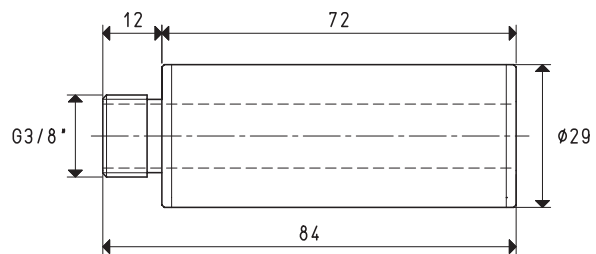
Generator art.	Supply press. bar (g)	Air consumption NI/s	Evacuation time (ms/l = s/m³) at different vacuum levels (-KPa)										Max. vacuum level -KPa
			10	20	30	40	50	60	70	80	85		
M 3 SSX	5.0	0.8	106	244	491	969	1642	2398	4004	7128	10122	10122	85
M 7 SSX	5.0	1.4	61	142	285	563	954	1394	2328	4144	5885	5885	85

Accessories included

Silencer art. SSX 1/4" on M3



Silencer art. SSX 3/8" on M7



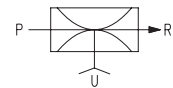
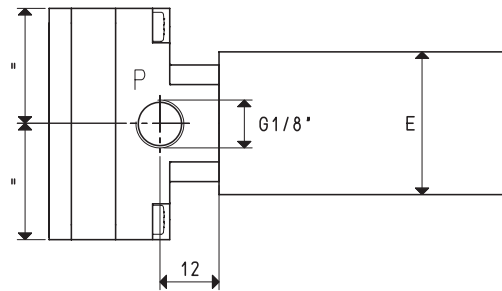
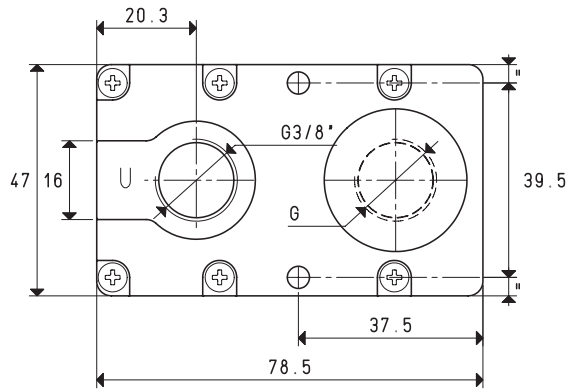
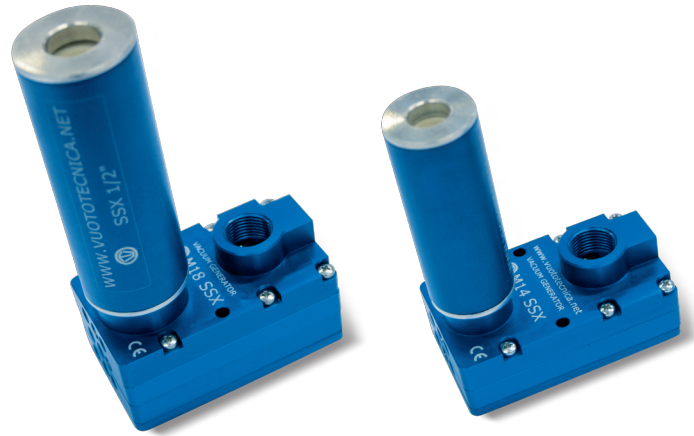
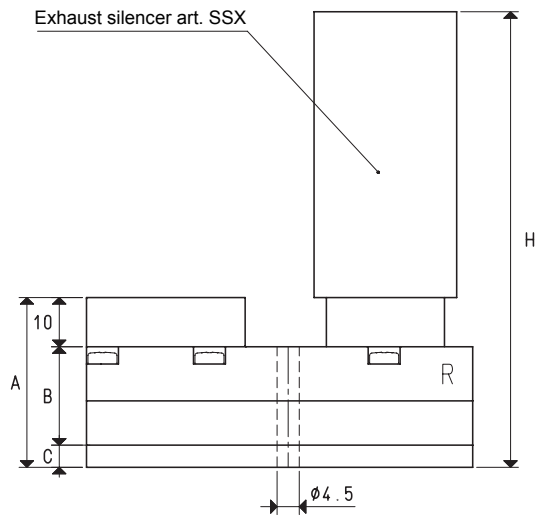
3D drawings available at www.vuototecnica.net

8.34

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

MULTI-STAGE VACUUM GENERATORS M 10 SSX, M 14 SSX and M 18 SSX



Art.	P=COMPRESSED AIR CONNECTION	R=EXHAUST	U=VACUUM CONNECTION	M 10 SSX			M 14 SSX			M 18 SSX							
				Quantity of sucked air	Max. vacuum level	Final pressure	Supply pressure	Air consumption	Working temperature	Noise level	Weight	A	B	C	E	G	H
Quantity of sucked air	cum/h	7.7	8.5	9.4	10.2	11.5	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)			60			62			66							
Weight	g			144			145			150							
A				34.5			34.5			44.5							
B				20			20			30							
C				4.5			4.5			4.5							
E	\emptyset			29			29			35							
G	\emptyset			G3/8"			G3/8"			G1/2"							
H				106.5			106.5			136.5							
Spare parts																	
Silencer	art.			SSX 3/8"			SSX 3/8"			SSX 1/2"							
Sealing kit and reed valve	art.			00 KIT M 10			00 KIT M 14			00 KIT M 18							

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.

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

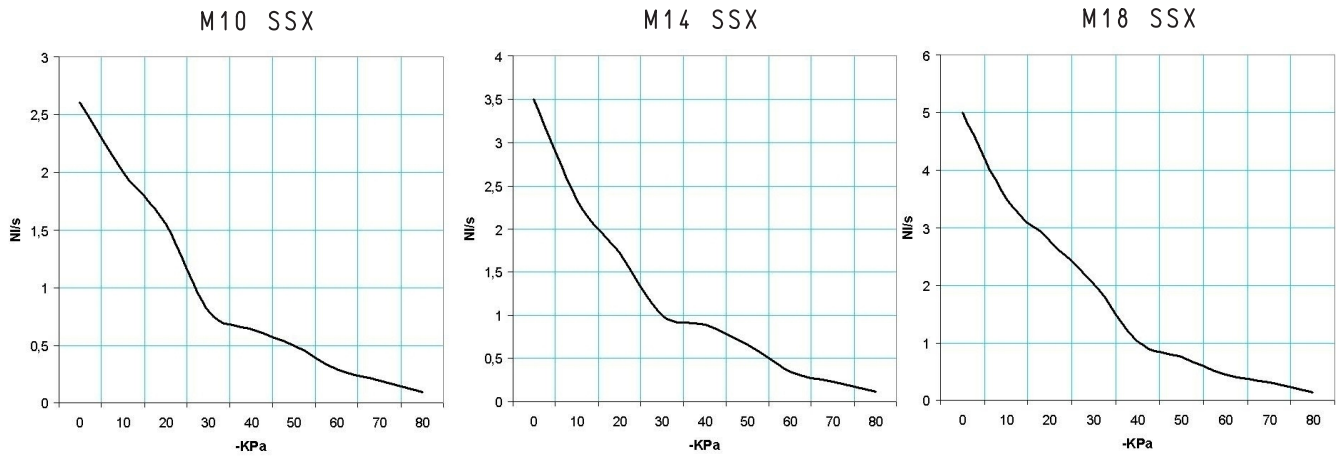
GAS-NPT thread adapters available at page 1.117

8.35

3D drawings available at www.vuototecnica.net

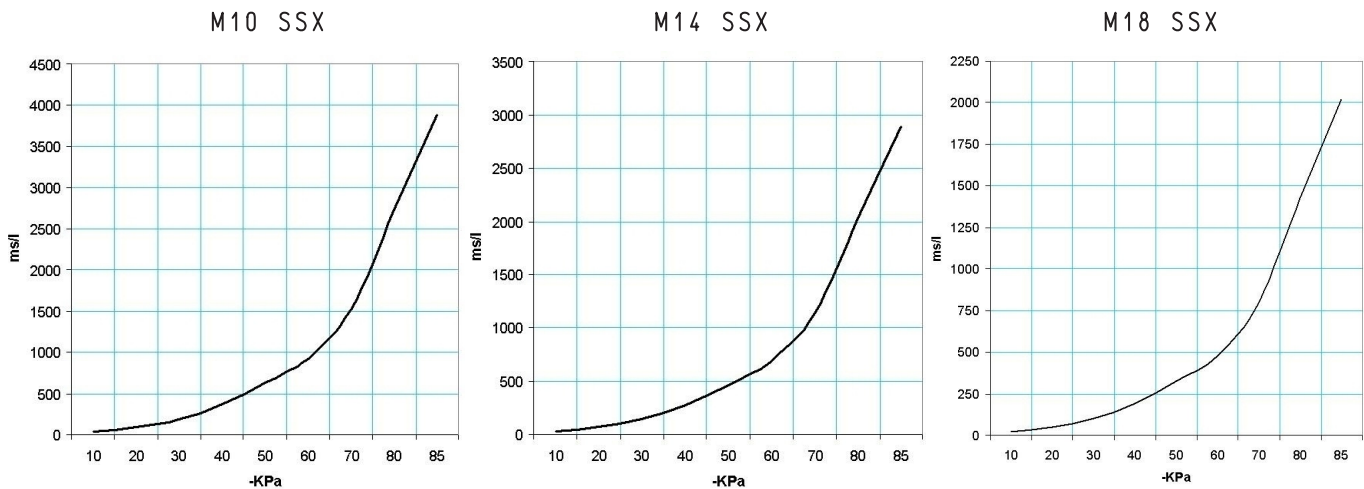
MULTI-STAGE VACUUM GENERATORS M 10 SSX, M 14 SSX and M 18 SSX

Air capacity (NI/s) at different vacuum levels (-Kpa)



Generator art.	Supply press. bar (g)	Air consumption NI/s	Air capacity (NI/s) at different vacuum levels (-KPa)										Max. vacuum level -KPa
			0	10	20	30	40	50	60	70	80		
M 10 SSX	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 SSX	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 SSX	5.0	3.6	5.00	3.50	2.78	2.02	1.02	0.75	0.44	0.30	0.14	85	

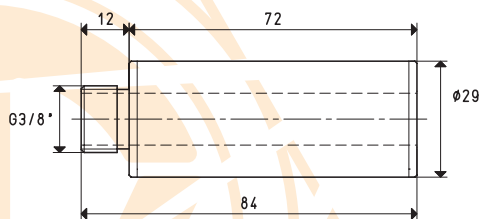
Evacuation time (ms/l = s/m³) at different vacuum levels (-Kpa)



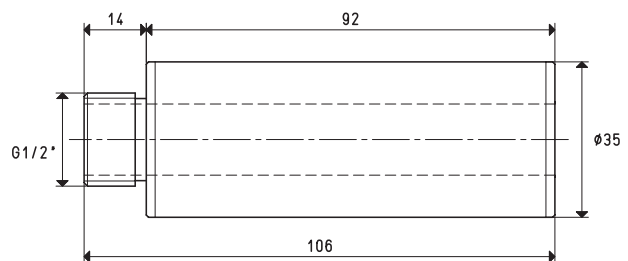
Generator art.	Supply press. bar (g)	Air consumption NI/s	Evacuation time (ms/l = s/m³) at different vacuum levels (-KPa)										Max. vacuum level -KPa
			10	20	30	40	50	60	70	80	85		
M 10 SSX	5.0	1.9	40	93	188	371	629	918	1534	2731	3878	85	
M 14 SSX	5.0	2.5	30	69	140	276	469	685	1144	2036	2892	85	
M 18 SSX	5.0	3.6	21	48	98	193	327	478	799	1423	2020	85	

Accessories included

Silencer art. SSX 1/2" on M10 and M14



Silencer art. SSX 1/2" on M18



3D drawings available at www.vuototecnica.net

8.36

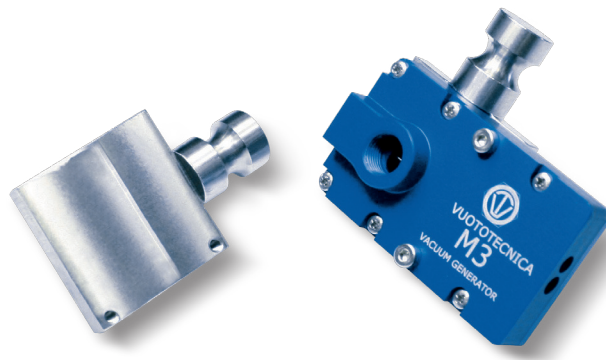
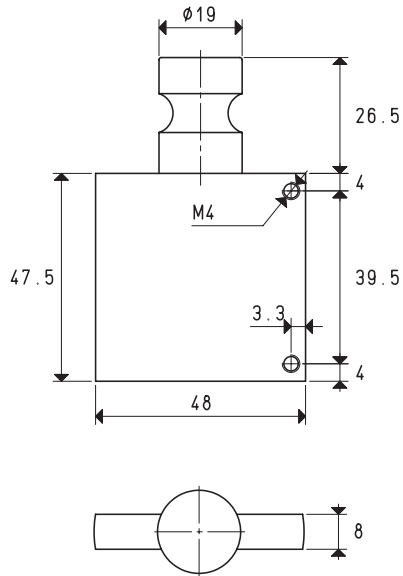
Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$

GAS-NPT thread adapters available at page 1.117

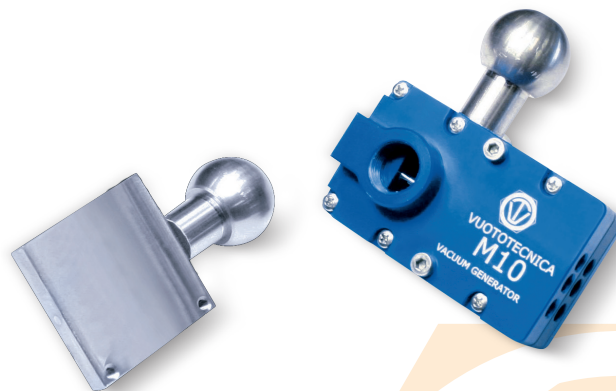
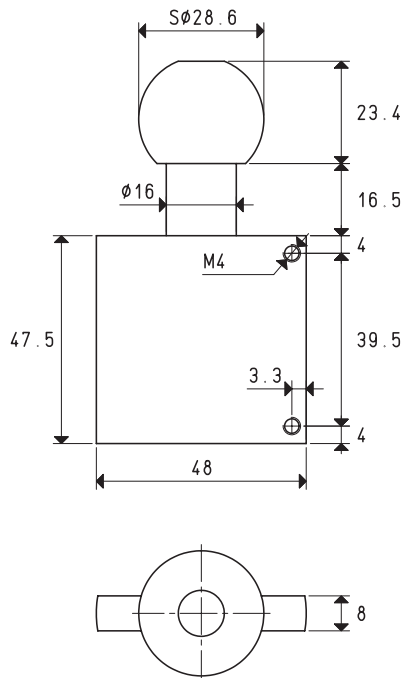
FIXING SUPPORTS FOR MULTI-STAGE VACUUM GENERATORS

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 generators	Material	Weight
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



Art.	For generators	Material	Weight
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

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