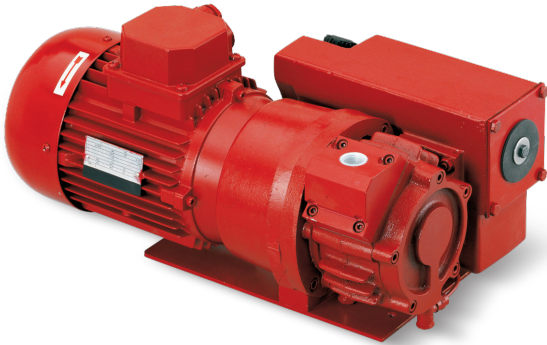


OIL-BATH VACUUM PUMPS MV 20 ÷ 300R and MV 20A ÷ 300RA

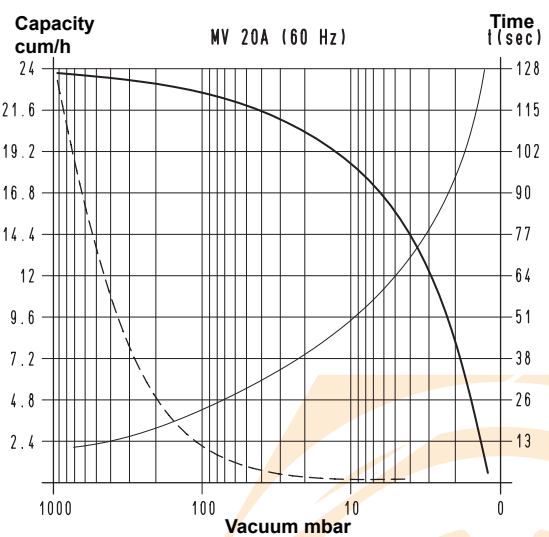
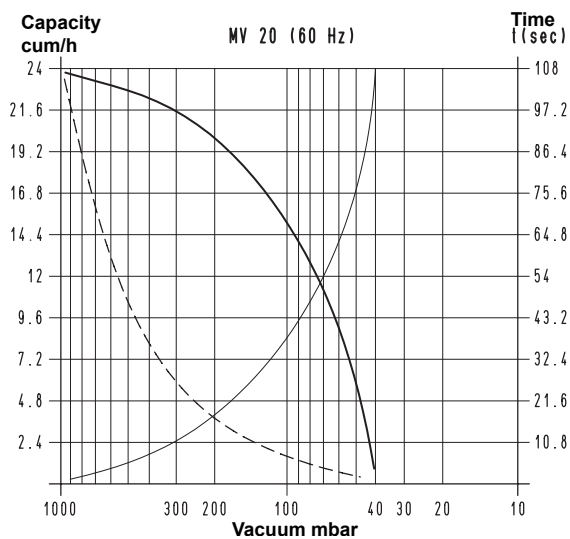
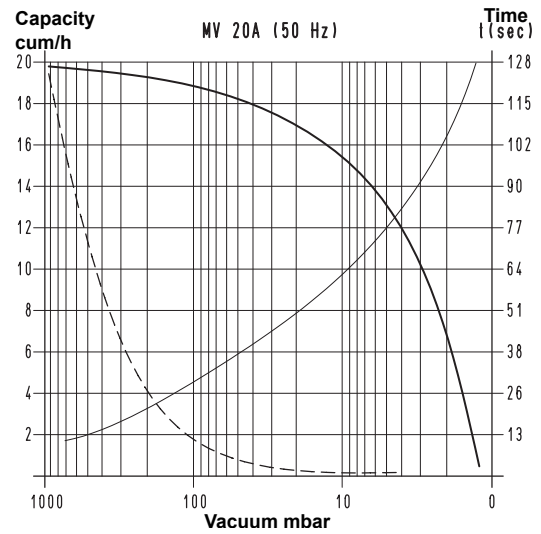
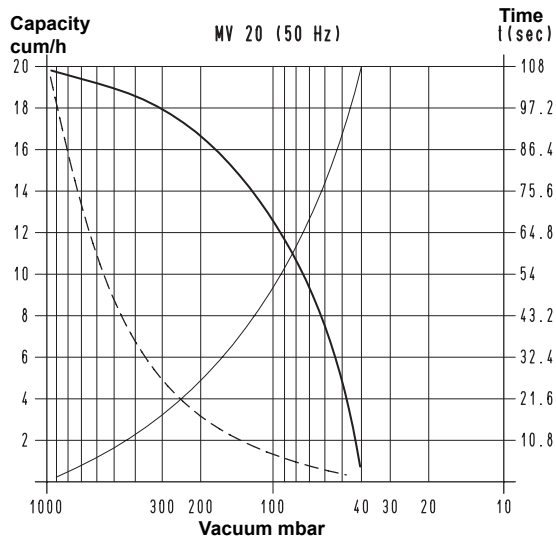


The single-stage oil-bath vane vacuum pumps of the MV series are activated by a standard electric motor coupled together via an elastic transmission joint. A centrifugal fan cantilevered-fitted onto the pump shaft guarantees the right airflow for cooling the pump unit (forced surface cooling).

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.

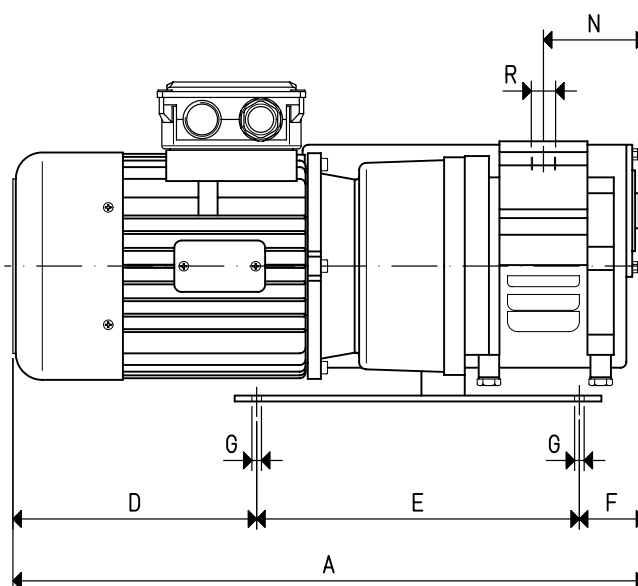
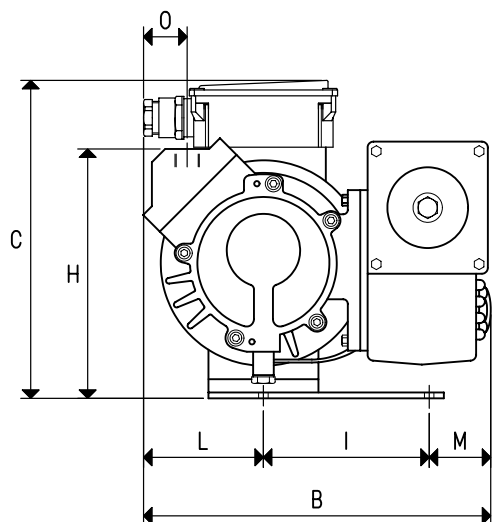


To calculate the emptying time of a volume V1, apply the formula $t1 = \frac{1 \times V1}{100}$

- 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)

OIL-BATH VACUUM PUMPS MV 20 AND MV 20A



Art.	MV 20	MV 20A
Frequency	50Hz	60Hz
Capacity m ³ /h	20.0	24.0
Final pressure mbar abs.	40	0.7
Motor execution	3~	230/400±10%
Volt	1~	230±10%
Motor power	3~	0.75
Kw	1~	0.90
Motor protection	IP	55
Rotation speed rev/min ⁻¹	2800	3350
Motor shape	B14	B14
Motor size	80	80
Noise level dB(A)	64	66
Max. weight	3~	21.5
Kg	1~	22.0
A	425	425
B	235	235
C	215	215
D	145	145
E	220	220
F	60	60
G	∅	6.5
H	170	170
I	113	113
L	82	82
M	40	40
N	60	60
O	30	30
R	∅ gas	G1/2"
Accessories and spare parts		
Oil load	I	0.70
Synthetic oil	VT OIL	ISO 68
Deoiling cartridge	art.	00 MV 20 11
3 vanes	art.	00 MV 20 10
Sealing kit	art.	00 KIT MV 20
Check valve	art.	Built-in
Suction filtre	art.	FC 20
Ballast valve	art.	VZ 01

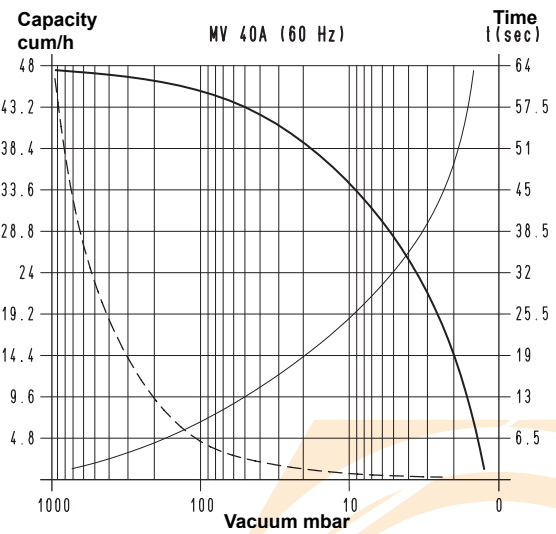
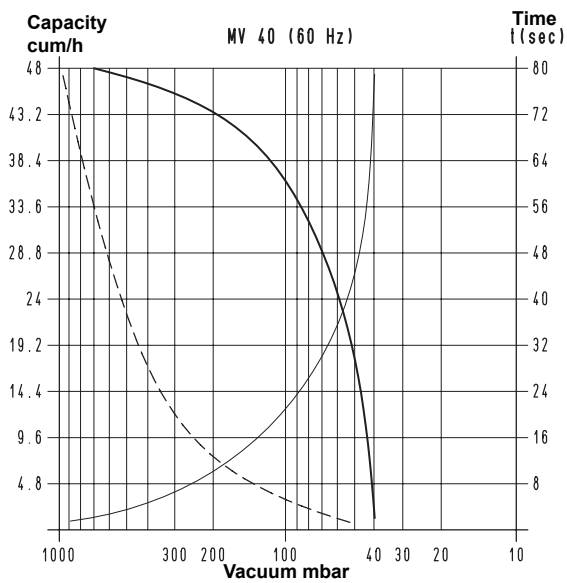
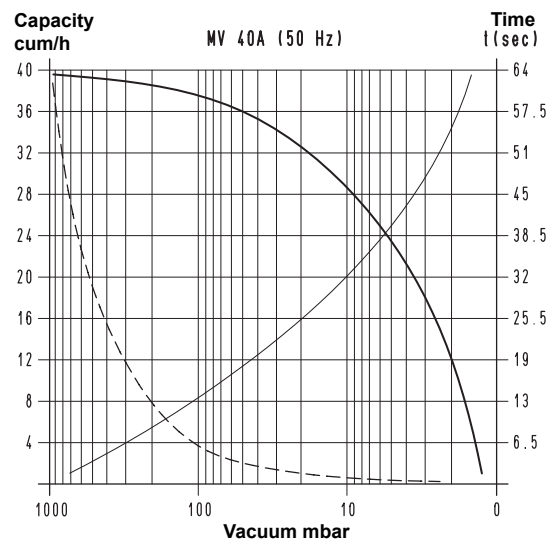
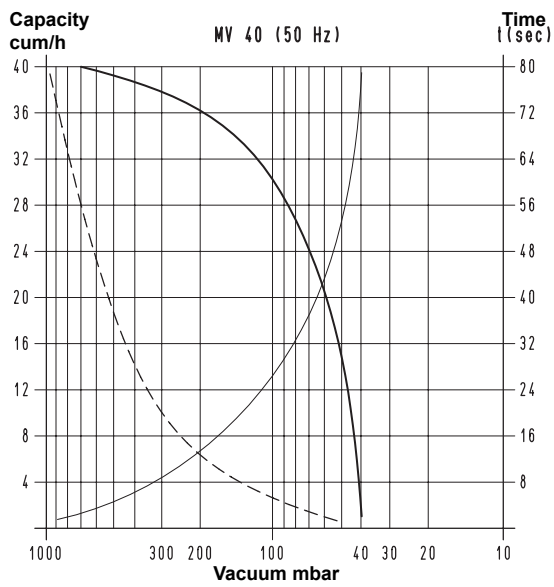
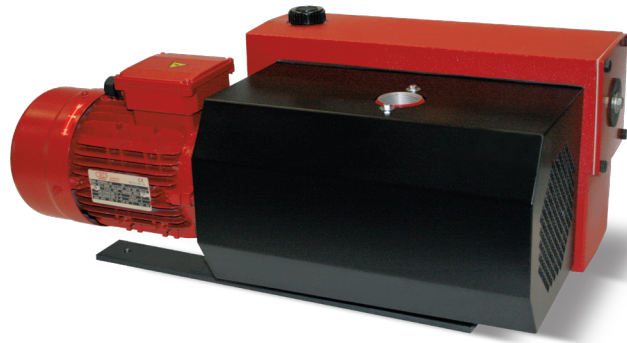
Note: The pump will be supplied with single-phase electric motor by adding the letter M to the article (E.g.: MV 20 M).

7.36

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

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



To calculate the emptying time of a volume V1, apply the formula $t_1 = \frac{1}{100} \times V_1$

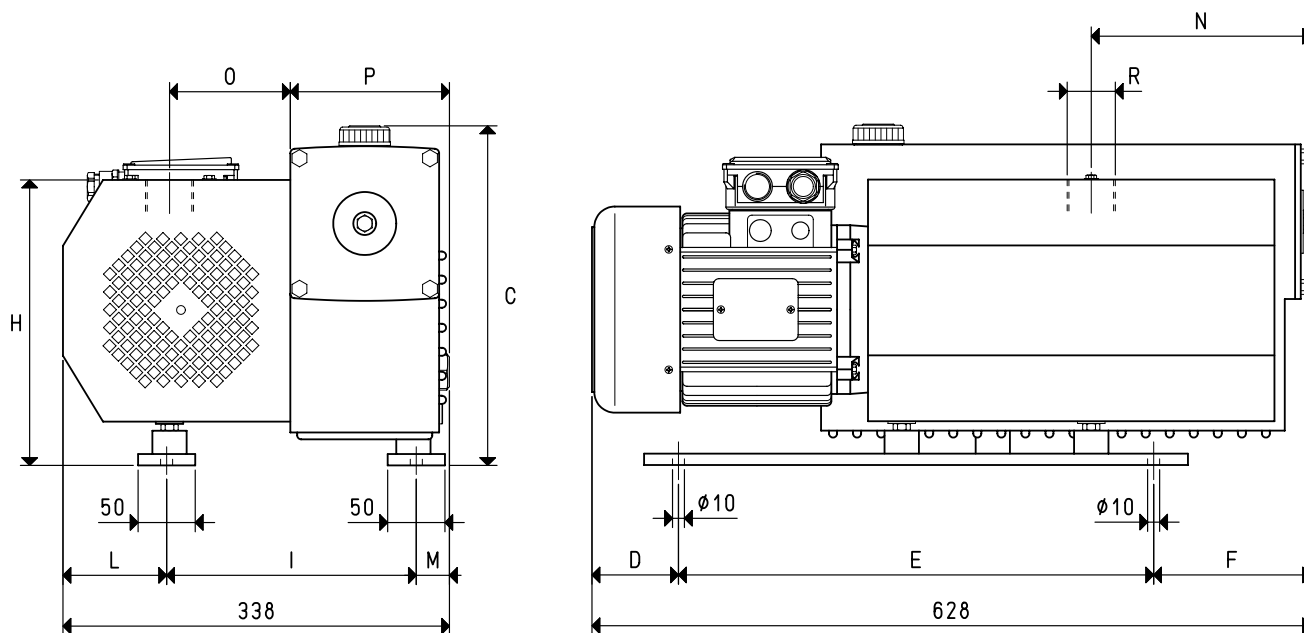
- Curve regarding capacity (referring to the suction pressure)
- - - Curve regarding capacity (referring to a 1013 bar pressure)
- Curve regarding the emptying of a 100-litre volume

V1 : Volume to be emptied

t1 : Time to be calculated (sec)

t : Time obtained in the table (sec)

OIL-BATH VACUUM PUMPS MV 40 AND MV 40A



Art.		MV 40		MV 40A	
Frequency		50Hz	60Hz	50Hz	60Hz
Capacity	m ³ /h	40.0	48.0	40.0	48.0
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~	1.10	1.35	1.10	1.35
Kw					
Motor protection	IP	55		55	
Rotation speed	rev/min ⁻¹	1450	1740	1450	1740
Motor shape		B14		B14	
Motor size		90		90	
Noise level	dB(A)	66	68	66	68
Max. weight	3~	45.0		45.0	
Kg					
C		300		300	
D		80		80	
E		415		415	
F		133		133	
H		250		250	
I		210		210	
L		90.5		90.5	
M		37.5		37.5	
N		188		188	
O		100		100	
P		143		143	
R	∅ gas	G1"1/4		G1"1/4	
Accessories and spare parts					
Oil load	l	2.00		2.00	
Synthetic oil	VT OIL	ISO 68		ISO 68	
Deoiling cartridge	art.	00 MV 40 50		00 MV 40 50	
3 vanes	art.	00 MV 40 10		00 MV 40 10	
Sealing kit	art.	00 KIT MV 40		00 KIT MV 40	
Check valve	art.	Built-in		Built-in	
Suction filtre	art.	FC 35		FC 35	
Ballast valve	art.	VZ 02		VZ 02	

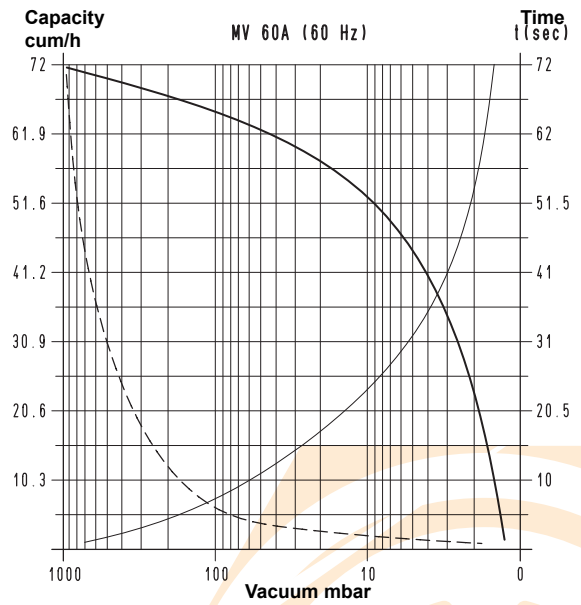
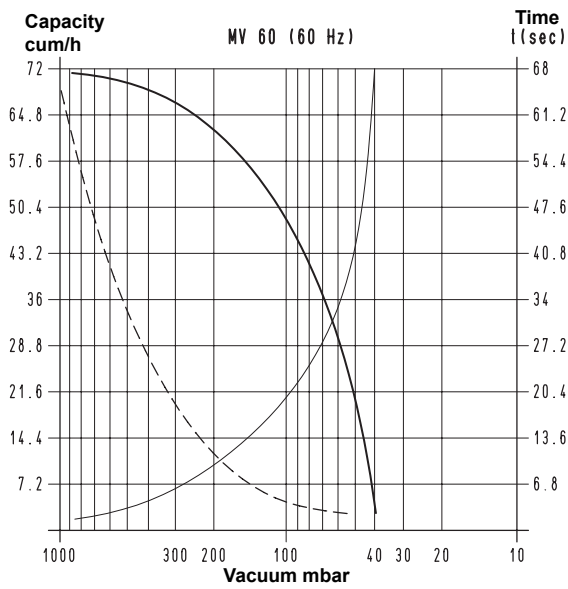
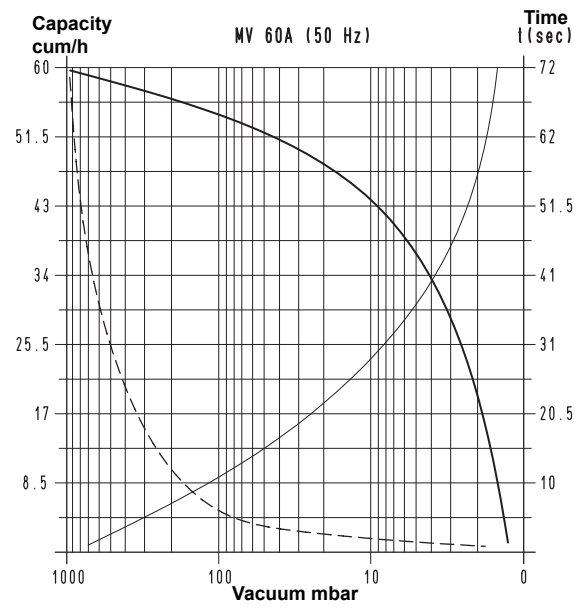
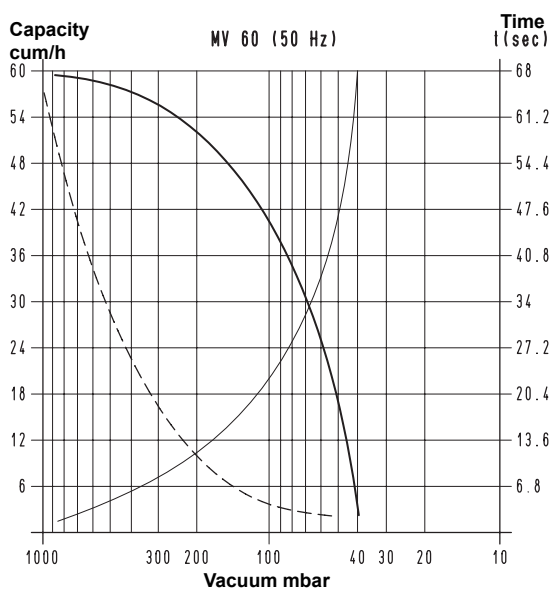
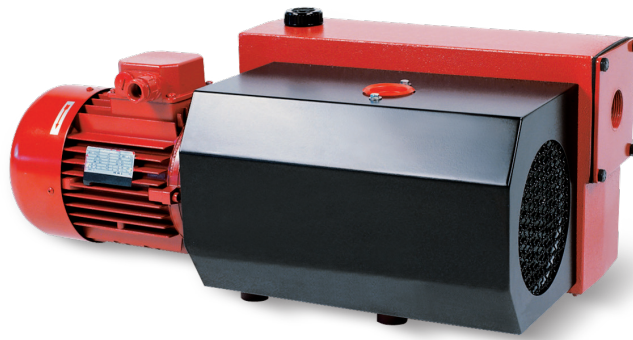
3D drawings available at www.vuototecnica.net

7.38

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

cfm= cum/h x 0.588; inch Hg= mbar x 0.0295; psi= bar (g) x 14.6

OIL-BATH VACUUM PUMPS MV 60 and MV 60A

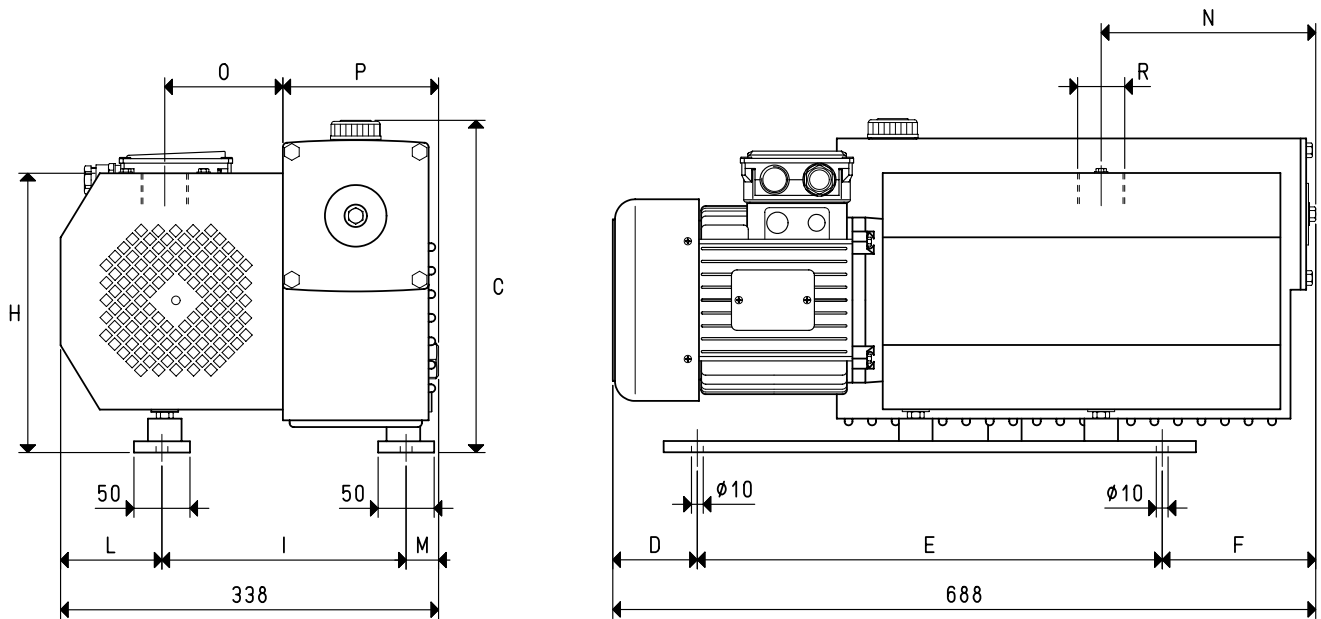


To calculate the emptying time of a volume V1, apply the formula $t_1 = \frac{t \times V_1}{100}$

- 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 (sec)

OIL-BATH VACUUM PUMPS MV 60 and MV 60A



Art.		MV 60		MV 60	
Frequency		50Hz	60Hz	50Hz	60Hz
Capacity	m ³ /h	60.0	72.0	60.0	72.0
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~	1.50	1.80	1.50	1.80
Kw					
Motor protection	IP	55		55	
Rotation speed	rev/min ⁻¹	1450	1740	1450	1740
Motor shape		B14		B14	
Motor size		90		90	
Noise level	dB(A)	68	70	68	70
Max. weight	3~	53.0		53.0	
Kg					
C		300		300	
D		140		140	
E		415		415	
F		133		133	
H		250		250	
I		210		210	
L		123		123	
M		97		97	
N		188		188	
O		100		100	
P		143		143	
R	Ø gas	G1"1/4		G1"1/4	
Accessories and spare parts					
Oil load	l	2.00		2.00	
Synthetic oil	VT OIL	ISO 68		ISO 68	
Deoiling cartridge	art.	00 MV 60 50		00 MV 60 50	
3 vanes	art.	00 MV 60 10		00 MV 60 10	
Sealing kit	art.	00 KIT MV 60		00 KIT MV 60	
Check valve	art.	Built-in		Built-in	
Suction filtre	art.	FC 35		FC 35	
Ballast valve	art.	VZ 02		VZ 02	

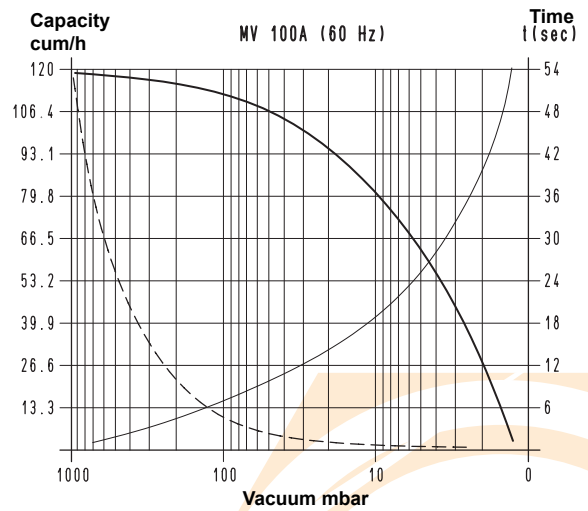
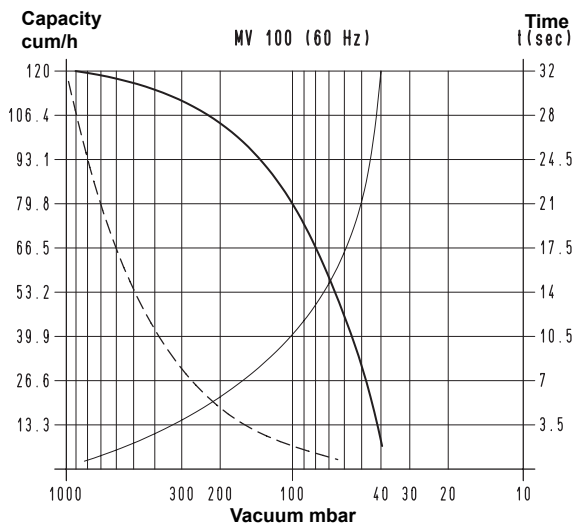
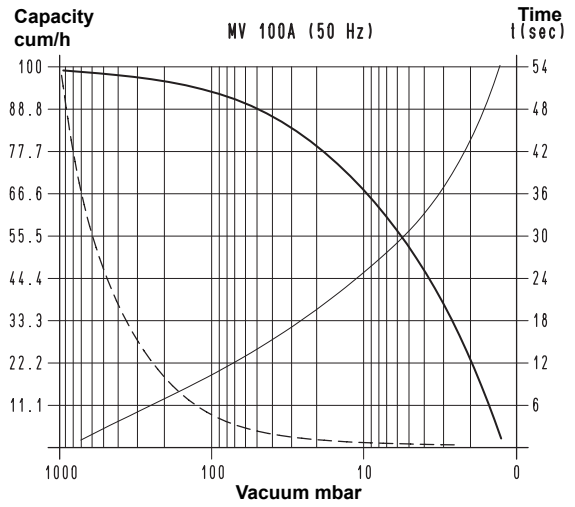
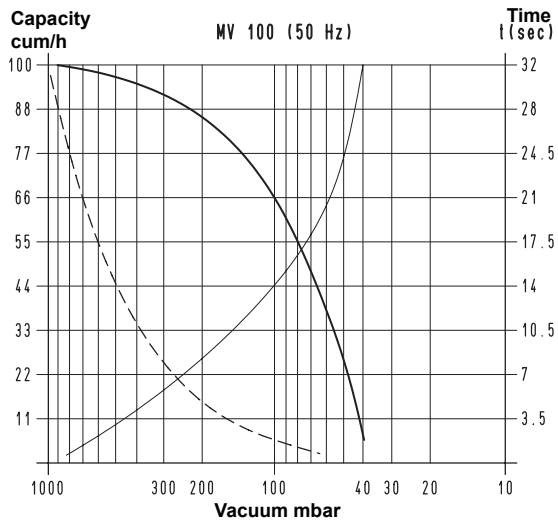
3D drawings available at www.vuototecnica.net

7.40

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

cfm= cum/h x 0.588; inch Hg= mbar x 0.0295; psi= bar (g) x 14.6

OIL-BATH VACUUM PUMPS MV 100 and MV 100A

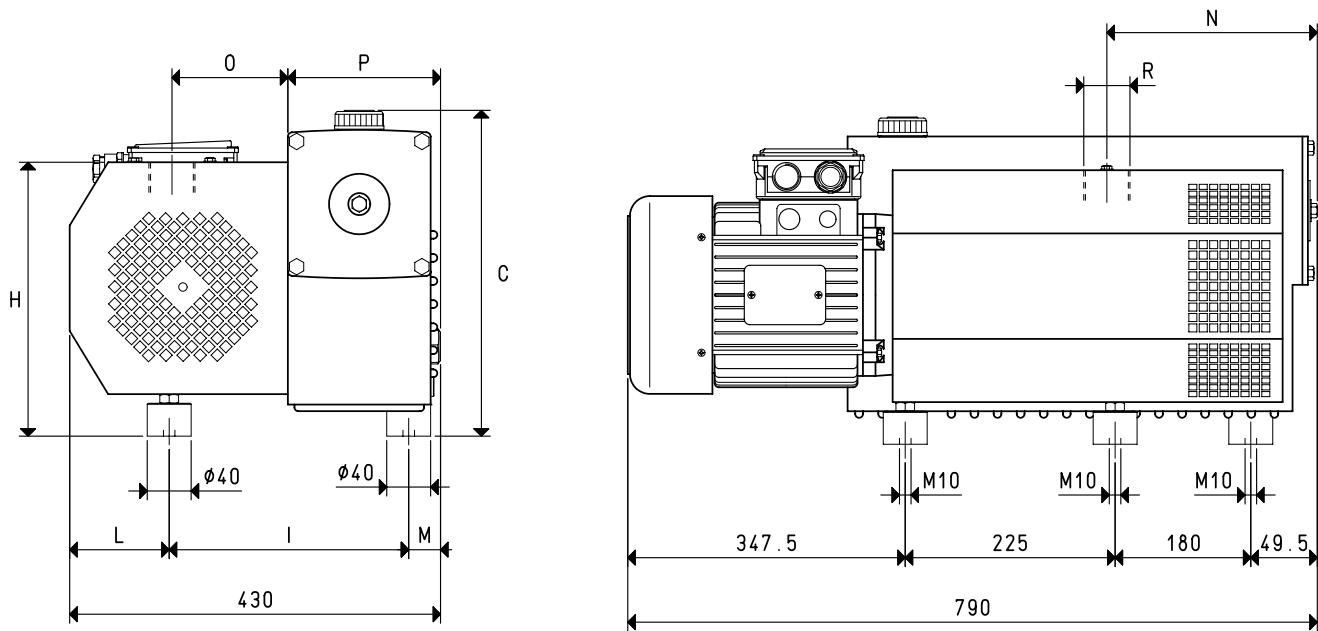


To calculate the emptying time of a volume V_1 , apply the formula $t_1 = \frac{1}{100} \times V_1$

- 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

- V_1 : Volume to be emptied
- t_1 : Time to be calculated (sec)
- t : Time obtained in the table (sec)

OIL-BATH VACUUM PUMPS MV 100 and MV 100A



Art.	MV 100		MV 100A	
	50Hz	60Hz	50Hz	60Hz
Frequency	50Hz	60Hz	50Hz	60Hz
Capacity	100.0	120.0	100.0	120.0
Final pressure	40		0.7	
Motor execution	230/400±10%	275/480±10%	230/400±10%	275/480±10%
Voit	3~		3~	
Motor power	2.20	2.70	2.20	2.70
Kw	55		55	
Motor protection	IP		IP	
Rotation speed	1450	1740	1450	1740
Motor shape	B14		B14	
Motor size	100		100	
Noise level	68	70	68	70
Max. weight	80.0		80.0	
Kg	80.0		80.0	
C	330		330	
H	290		290	
I	275		275	
L	115		115	
M	40		40	
N	240		240	
O	130		130	
P	180		180	
R	G1"1/4		G1"1/4	
Accessories and spare parts				
Oil load	3.50		3.50	
Synthetic oil	ISO 100		ISO 100	
2 deoiling cartridges	art. 00 MV 100 06		art. 00 MV 100 06	
3 vanes	art. 00 MV 100 10		art. 00 MV 100 10	
Sealing kit	art. 00 KIT MV 100		art. 00 KIT MV 100	
Check valve	art. Built-in		art. Built-in	
Suction filtre	art. FC 35		art. FC 35	
Ballast valve	art. VZ 02		art. VZ 02	

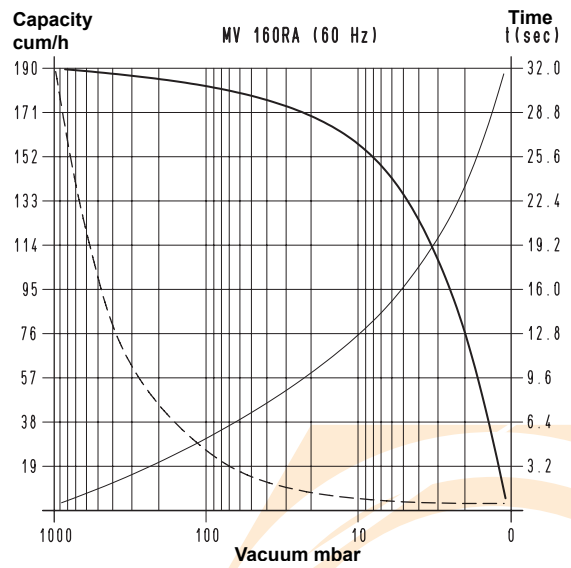
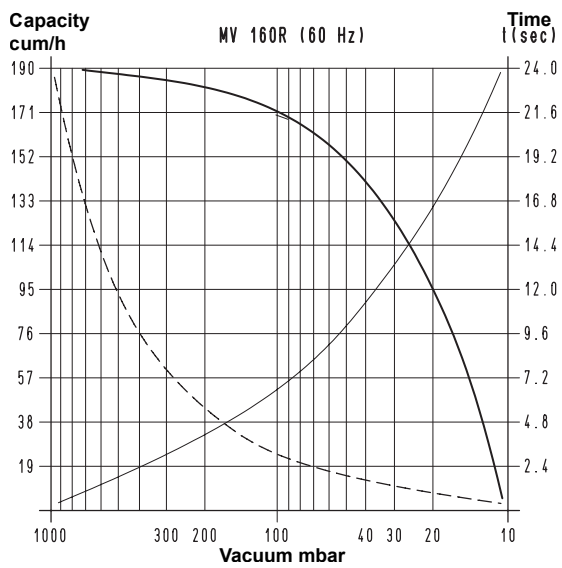
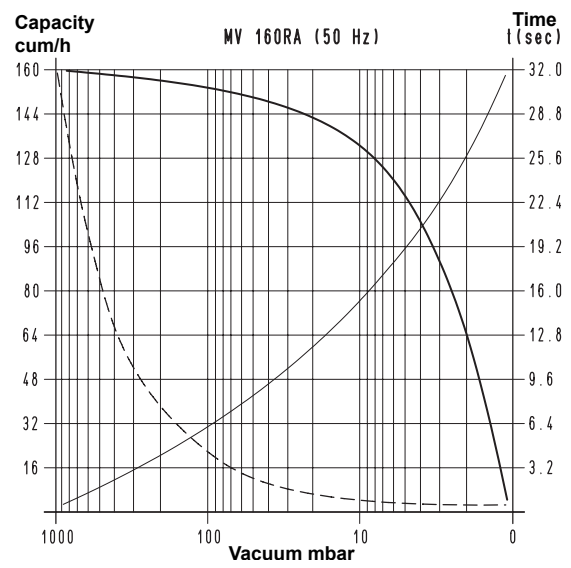
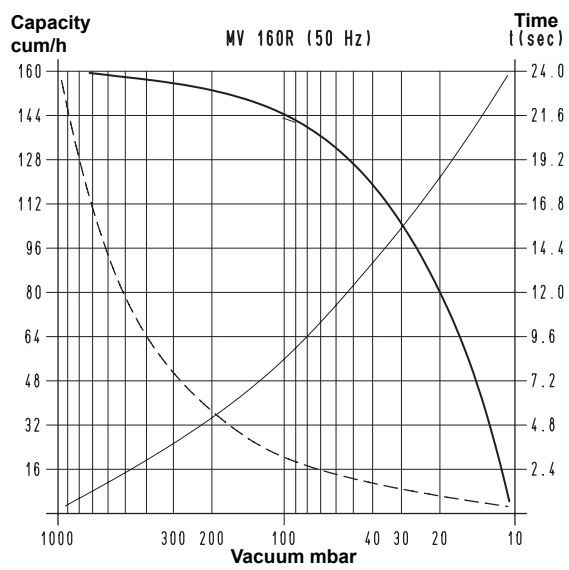
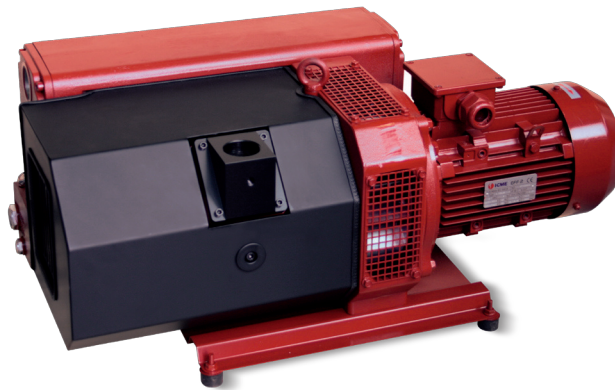
3D drawings available at www.vuototecnica.net

7.42

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

$\text{cfm} = \text{cum/h} \times 0.588$; $\text{inch Hg} = \text{mbar} \times 0.0295$; $\text{psi} = \text{bar (g)} \times 14.6$

OIL-BATH VACUUM PUMPS MV 160R and MV 160RA

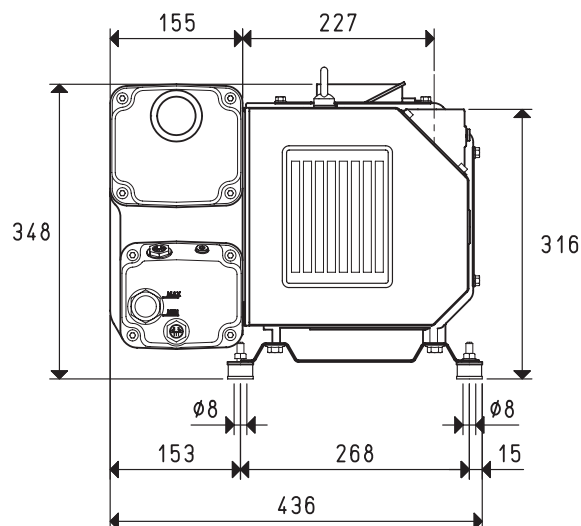
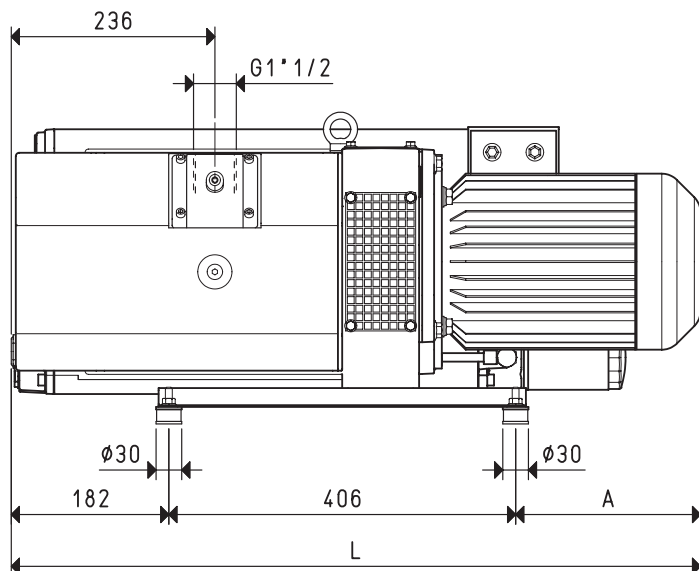


To calculate the emptying time of a volume V1, apply the formula $t_1 = \frac{t \times V_1}{100}$

- 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 (sec)

OIL-BATH VACUUM PUMPS MV 160R and MV 160RA



Art.	MV 160R		MV 160RA	
	50Hz	60Hz	50Hz	60Hz
Frequency	50Hz	60Hz	50Hz	60Hz
Capacity	150	180	150	180
Final pressure	10		0.5	
Motor execution	3~	3~	3~	3~
Volt	230/400±10%	275/480±10%	230/400±10%	275/480±10%
Motor power	3.0	4.0	3.0	4.0
Kw				
Motor protection	IP	55	55	
Rotation speed	1500	1800	1500	1800
Motor shape		B5		B5
Motor size		100		100
Noise level	71	72	71	72
Max. weight	104	110	104	110
Kg				
A	217	226	217	226
L	805	814	805	814
Accessories and spare parts				
Oil load	3.0		3.0	
Synthetic oil	ISO 100		ISO 100	
2 deoiling cartridges	art. 00 MV 160R 06		art. 00 MV 160R 06	
3 vanes	art. 00 MV 160R 10		art. 00 MV 160R 10	
Sealing kit	art. 00 KIT MV 160R		art. 00 KIT MV 160R	
Check valve	art. Built-in		art. Built-in	
Oil filtre	art. 00 MV 160R 07		art. 00 MV 160R 07	
Suction filtre	art. FC 50		art. FC 50	
Ballast valve	art. Built-in		art. Built-in	

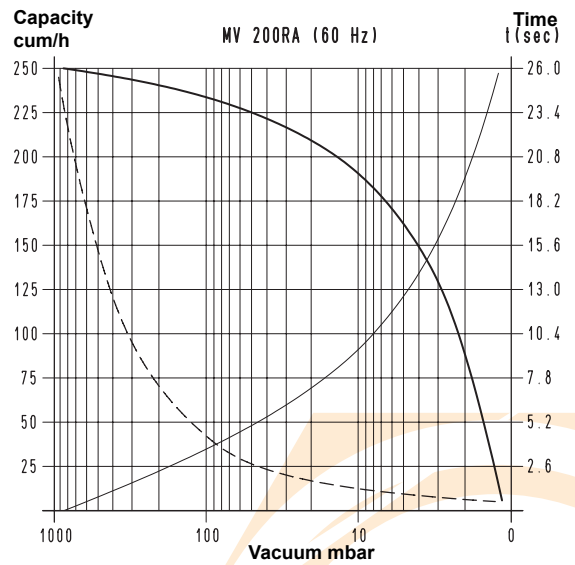
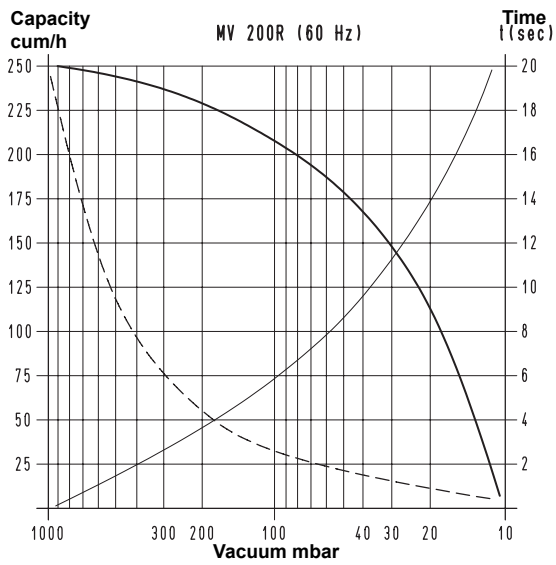
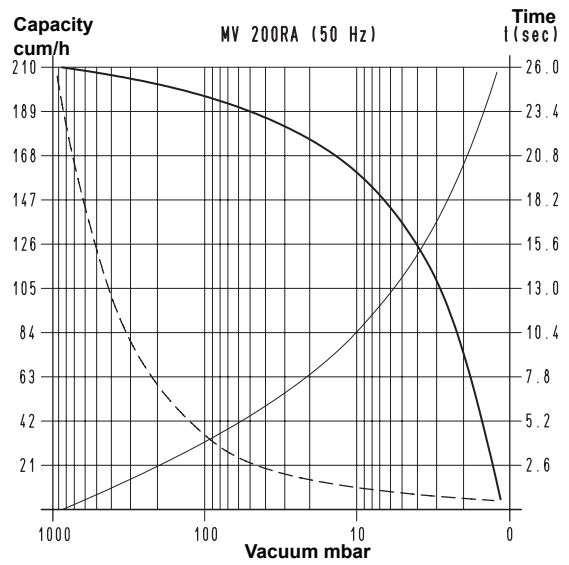
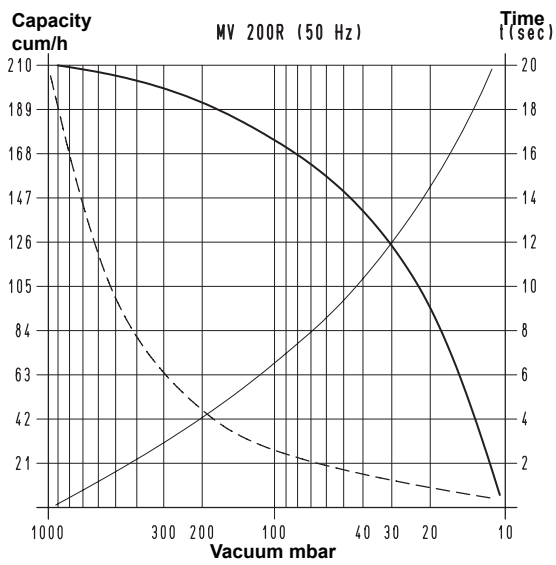
3D drawings available at www.vuototecnica.net

7.44

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

cfm= cum/h x 0.588; inch Hg= mbar x 0.0295; psi= bar (g) x 14.6

OIL-BATH VACUUM PUMPS MV 200R and MV 200RA

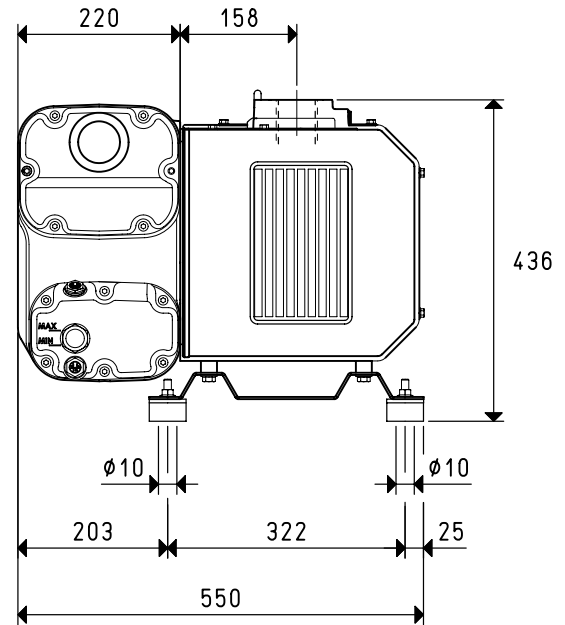
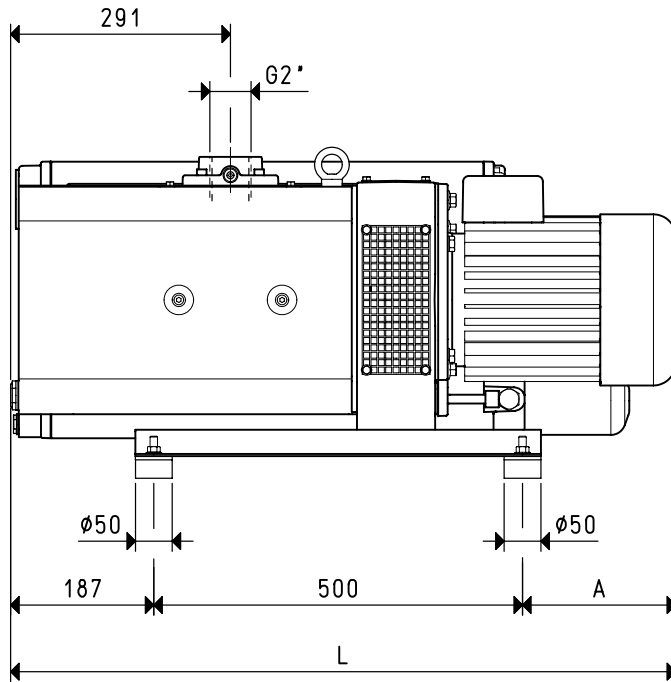


To calculate the emptying time of a volume V1, apply the formula $t_1 = \frac{t \times V_1}{100}$

- 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 (sec)

OIL-BATH VACUUM PUMPS MV 200R and MV 200RA



Art.	MV 200R		MV 200RA	
	50Hz	60Hz	50Hz	60Hz
Frequency	50Hz	60Hz	50Hz	60Hz
Capacity	205	245	205	245
Final pressure	10		0.5	
Motor execution	230/400±10%		230/400±10%	
Volt	3~		3~	
Motor power	4.0	5.5	4.0	5.5
Kw				
Motor protection	IP 55		IP 55	
Rotation speed	1500	1800	1500	1800
Motor shape	B5		B5	
Motor size	112		112	
Noise level	70	72	70	72
Max. weight	161	171	161	171
Kg				
A	208	257	208	257
L	895	944	895	944
Accessories and spare parts				
Oil load	7.0		7.0	
Synthetic oil	ISO 100		ISO 100	
2 deoiling cartridges	art. 00 MV 200R 50		art. 00 MV 200R 50	
3 vanes	art. 00 MV 200R 10		art. 00 MV 200R 10	
Sealing kit	art. 00 KIT MV 200R		art. 00 KIT MV 200R	
Check valve	art. Built-in		art. Built-in	
Oil filtre	art. 00 MV 200R 07		art. 00 MV 200R 07	
Suction filtre	art. FC 60		art. FC 60	
Ballast valve	art. Built-in		art. Built-in	

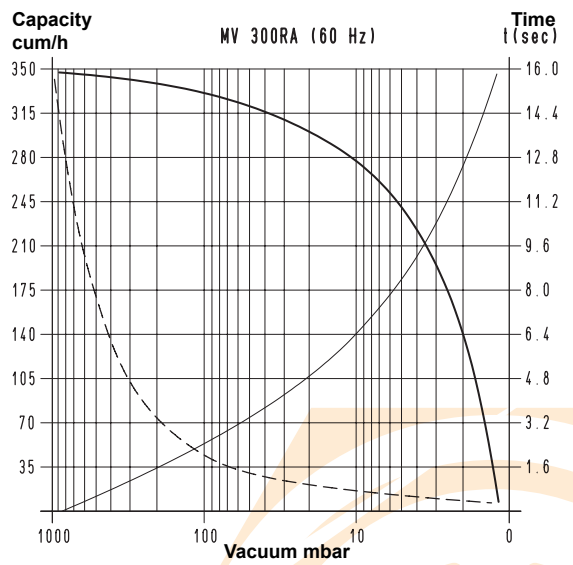
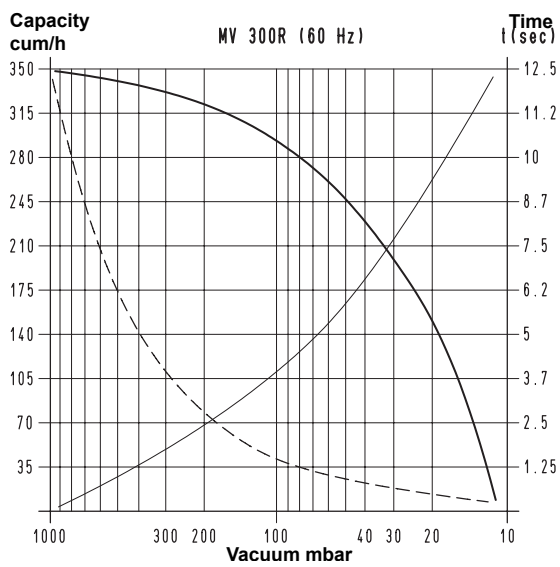
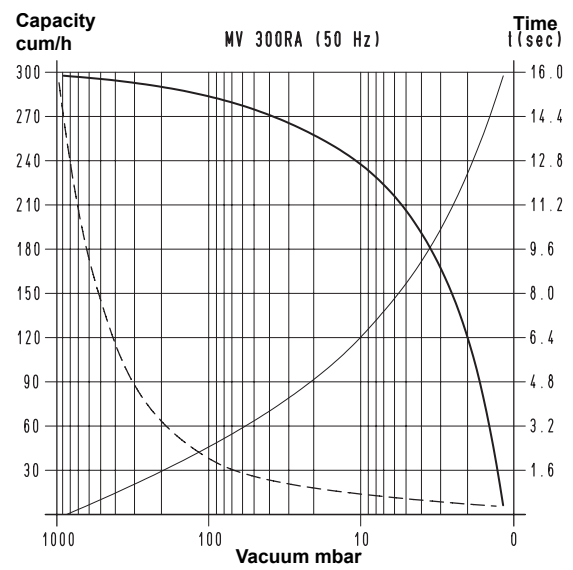
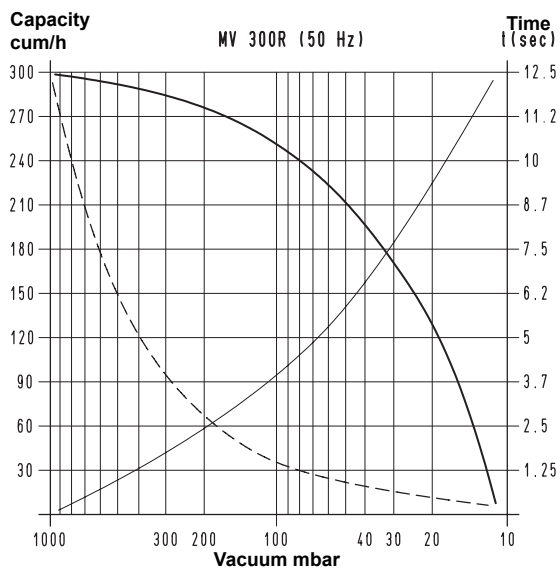
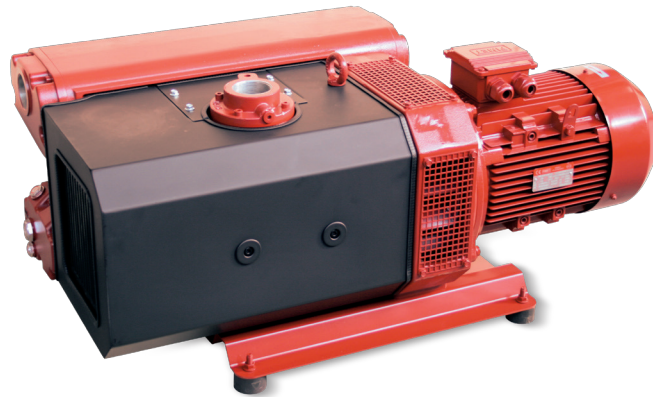
3D drawings available at www.vuototecnica.net

7.46

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

cfm= cum/h x 0.588; inch Hg= mbar x 0.0295; psi= bar (g) x 14.6

OIL-BATH VACUUM PUMPS MV 300R and MV 300RA



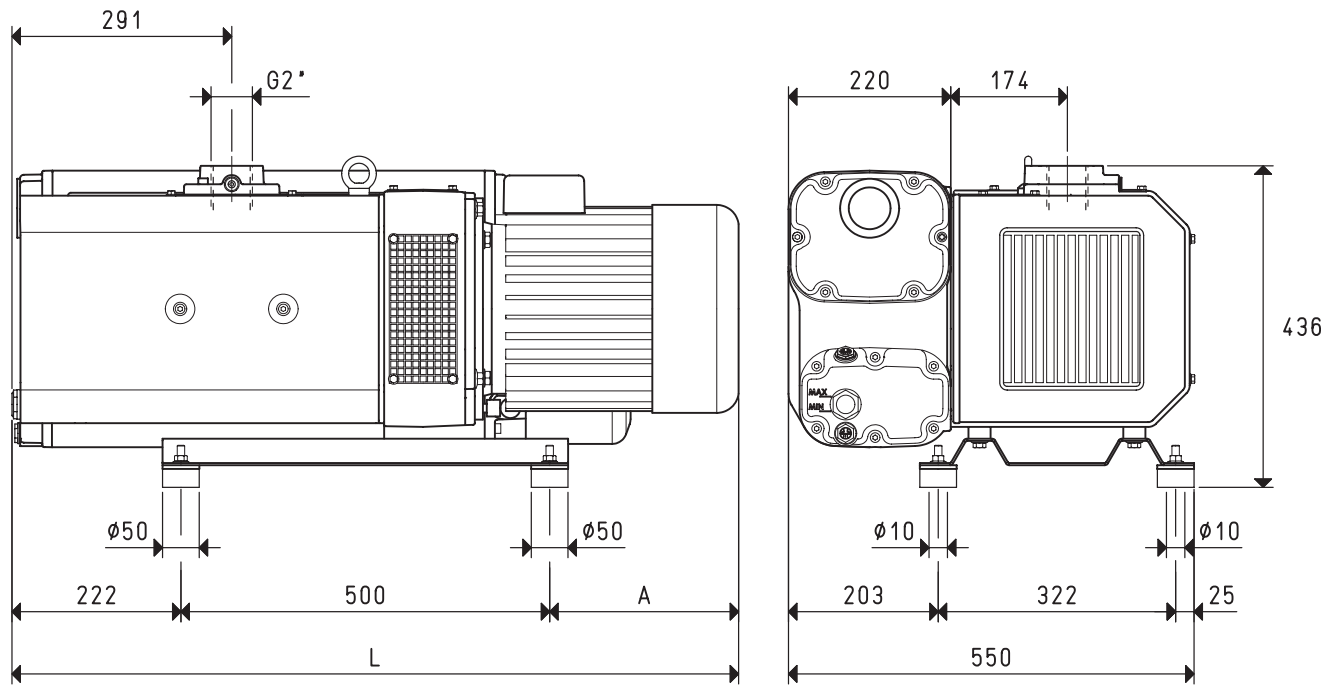
To calculate the emptying time of a volume V1, apply the formula $t_1 = \frac{1}{100} \times V_1$

- 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

OIL-BATH VACUUM PUMPS MV 300R and MV 300RA



Art.	MV 300R		MV300RA	
	50Hz	60Hz	50Hz	60Hz
Frequency	50Hz	60Hz	50Hz	60Hz
Capacity	300	350	300	350
Final pressure	10		0.5	
Motor execution	3~	400/650±10%	3~	480/828±10%
Volt				
Motor power	3~	5.5	3~	7.5
Kw				
Motor protection	IP	55	IP	55
Rotation speed	rev/min ⁻¹	1500	rev/min ⁻¹	1800
Motor shape		B5		B5
Motor size		112		112
Noise level	dB(A)	71	dB(A)	73
Max. weight	3~	188	3~	192
Kg				
A		257		297
L		979		1019
Accessories and spare parts				
Oil load	l	7.0	l	7.0
Synthetic oil	VT OIL	ISO 100	VT OIL	ISO 100
3 deoiling cartridges	art.	00 MV 300R 50	art.	00 MV 300R 50
3 vanes	art.	00 MV 300R 10	art.	00 MV 300R 10
Sealing kit	art.	00 KIT MV 300R	art.	00 KIT MV 300R
Check valve	art.	Built-in	art.	Built-in
Oil filtre	art.	00 MV 300R 07	art.	00 MV 300R 07
Suction filtre	art.	FC 60	art.	FC 60
Ballast valve	art.	Built-in	art.	Built-in

3D drawings available at www.vuototecnica.net

7.48

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

cfm= cum/h x 0.588; inch Hg= mbar x 0.0295; psi= bar (g) x 14.6