

# VACUUM PUMPS AND PUMPSETS

MEMBRANE VACUUM PUMP	PAG. 7.01 ÷ 7.04
ROTARY VANE VACUUM PUMPS – GENERAL DESCRIPTION	PAG. 7.05 ÷ 7.06
VANE MINI VACUUM PUMPS	PAG. 7.07 ÷ 7.10
VACUUM PUMPS VTL 2 and 4	PAG. 7.11 ÷ 7.12
VACUUM PUMPS VTL 5 and 10	PAG. 7.13 ÷ 7.14
VACUUM PUMPS VTL 5 and 10, WITH DISPOSABLE LUBRICATION	PAG. 7.15 ÷ 7.16
VACUUM PUMPS VTL 10/F, 15/F and 20/F	PAG. 7.17 ÷ 7.18
VACUUM PUMPS VTL 10/F, 15/F and 20/F, WITH DISPOSABLE LUBRICATION	PAG. 7.19 ÷ 7.20
VACUUM PUMPS VTL 25/FG, 30/FG and 35/FG	PAG. 7.21 ÷ 7.22
VACUUM PUMPS VTL 25/FG, 30/FG and 35/FG, WITH DISPOSABLE LUBRICATION	PAG. 7.23 ÷ 7.24
VACUUM PUMPS VTL 40/G1, 50/G1 and 65/G1	PAG. 7.25 ÷ 7.26
VACUUM PUMPS VTL 75/G1, 90/G1 and 105/G1	PAG. 7.27 ÷ 7.28
VACUUM PUMPS VTL 40/G1, 50/G1 and 65/G1, WITH DISPOSABLE LUBRICATION	PAG. 7.29 ÷ 7.30
VACUUM PUMPS VTL 75/G1, 90/G1 and 105/G1, WITH DISPOSABLE LUBRICATION	PAG. 7.31 ÷ 7.32
VACUUM PUMP VTL 6 DC, WITH DC MOTOR	PAG. 7.33 ÷ 7.34
OIL-BATH VACUUM PUMPS MV 20 and MV 20A	PAG. 7.35 ÷ 7.36
OIL-BATH VACUUM PUMPS MV 40 and MV 40A	PAG. 7.37 ÷ 7.38
OIL-BATH VACUUM PUMPS MV 60 and MV 60A	PAG. 7.39 ÷ 7.40
OIL-BATH VACUUM PUMPS MV 100 and MV 100A	PAG. 7.41 ÷ 7.42
OIL-BATH VACUUM PUMPS MV 160R and MV 160RA	PAG. 7.43 ÷ 7.44
OIL-BATH VACUUM PUMPS MV 200R and MV 200RA	PAG. 7.45 ÷ 7.46
OIL-BATH VACUUM PUMPS MV 300R and MV 300RA	PAG. 7.47 ÷ 7.48
LUBRICATED VACUUM PUMP ACCESSORIES AND SPARE PARTS	PAG. 7.49 ÷ 7.51
DRY VACUUM PUMPS VTS 2 and 4	PAG. 7.52 ÷ 7.53
DRY VACUUM PUMPS VTS 6 DC, WITH DC MOTOR	PAG. 7.54 ÷ 7.55
DRY VACUUM PUMPS VTS 6 and 10	PAG. 7.56 ÷ 7.57
DRY VACUUM PUMPS VTS 10/F and 15/F	PAG. 7.58 ÷ 7.59
DRY VACUUM PUMPS VTS 20/F and 25/F	PAG. 7.60 ÷ 7.61
DRY VACUUM PUMPS VTS 10/FG, 15/FG and 20/FG	PAG. 7.62 ÷ 7.63
DRY VACUUM PUMPS VTS 25/FG, 30/FG and 35/FG	PAG. 7.64 ÷ 7.65
DRY VACUUM PUMP ACCESSORIES AND SPARE PARTS	PAG. 7.66 ÷ 7.67
MINI PUMPSETS – GENERAL DESCRIPTION	PAG. 7.68
MINI PUMPSETS DO 06 and DO 10	PAG. 7.69 ÷ 7.70
MINI PUMPSETS DO 20	PAG. 7.71
HORIZONTAL PUMPSETS – GENERAL DESCRIPTION	PAG. 7.72
HORIZONTAL PUMPSETS DO 25 and DO 50	PAG. 7.73
HORIZONTAL PUMPSETS DO 100 and DO 150	PAG. 7.74
HORIZONTAL PUMPSETS DO 300 and DO 500	PAG. 7.75
HORIZONTAL PUMPSETS DO 1000	PAG. 7.76
HORIZONTAL SAFETY PUMPSETS – GENERAL DESCRIPTION	PAG. 7.77
HORIZONTAL SAFETY PUMPSETS DSO 300 and DSO 500	PAG. 7.78
HORIZONTAL SAFETY PUMPSETS DSO 1000	PAG. 7.79
VERTICAL PUMPSETS– GENERAL DESCRIPTION	PAG. 7.80
VERTICAL PUMPSETS DV 150 and DV 300	PAG. 7.81
VERTICAL PUMPSETS DV 500 and DV 1000	PAG. 7.82
VERTICAL SAFETY PUMPSETS – GENERAL DESCRIPTION	PAG. 7.83
VERTICAL SAFETY PUMPSETS DSV 150 and DSV 300	PAG. 7.84
VERTICAL SAFETY PUMPSETS DSV 500 and DSV 1000	PAG. 7.85
VERTICAL SAFETY PUMPSETS DSV 2000	PAG. 7.86

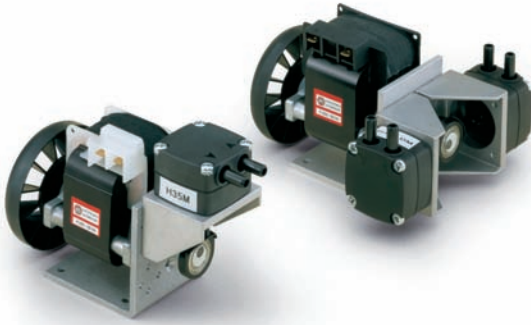
# VACUUM PUMPS AND PUMPSETS

## PUMPSET AND MINI PUMPSET COMPONENTS:

MINI PUMPSET TANKS	PAG. 7.87 ÷ 7.88
TANKS FOR HORIZONTAL PUMPSETS WITH ONE VACUUM PUMP	PAG. 7.89 ÷ 7.94
TANKS FOR HORIZONTAL PUMPSETS WITH TWO VACUUM PUMPS	PAG. 7.95 ÷ 7.97
TANKS FOR HORIZONTAL SAFETY PUMPSETS WITH TWO VACUUM PUMPS	PAG. 7.98 ÷ 7.100
TANKS FOR VERTICAL PUMPSETS WITH ONE VACUUM PUMP	PAG. 7.101 ÷ 7.103
TANKS FOR VERTICAL PUMPSETS WITH TWO VACUUM PUMPS	PAG. 7.104 ÷ 7.107
TANKS FOR VERTICAL SAFETY PUMPSETS WITH TWO VACUUM PUMPS	PAG. 7.108 ÷ 7.111
TANKS FOR VERTICAL SAFETY PUMPSETS CON TRE PUMPS PER VUOTO	PAG. 7.112 ÷ 7.114
SUPPORT FRAMES FOR TWO VACUUM PUMPS	PAG. 7.115
SUPPORT FRAMES FOR THREE VACUUM PUMPS	PAG. 7.116
VACUUM PUMP AND PUMPSET MANIFOLDS	PAG. 7.117 ÷ 7.118
MINI PUMPSET SWITCHGEAR	PAG. 7.119
SWITCHGEAR FOR PUMPSETS WITH ONE PUMP	PAG. 7.119
SWITCHGEAR FOR PUMPSETS WITH TWO PUMPS	PAG. 7.120
SWITCHGEAR FOR SAFETY PUMPSETS:	
WITH TWO PUMPS	PAG. 7.120
WITH THREE PUMPS	PAG. 7.121
WITH FOUR PUMPS	PAG. 7.121
SINGLE-PUMP SAFETY SWITCHGEAR	PAG. 7.122
VACUUM PUMP QUESTIONNAIRE	PAG. 7.123 ÷ 7.124



## 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.

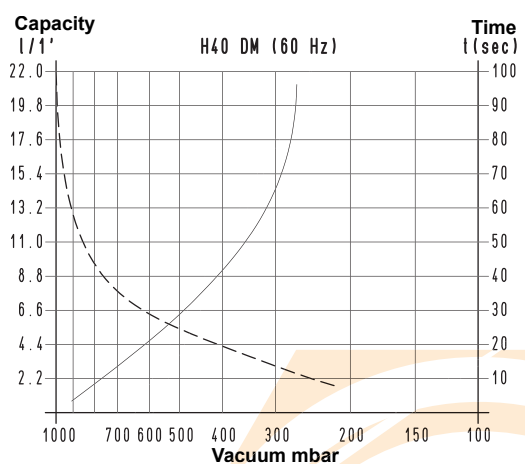
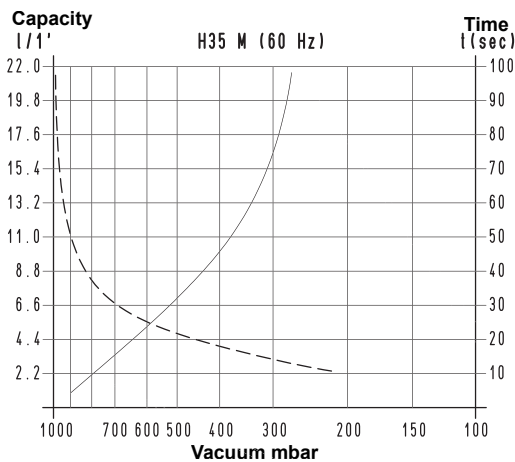
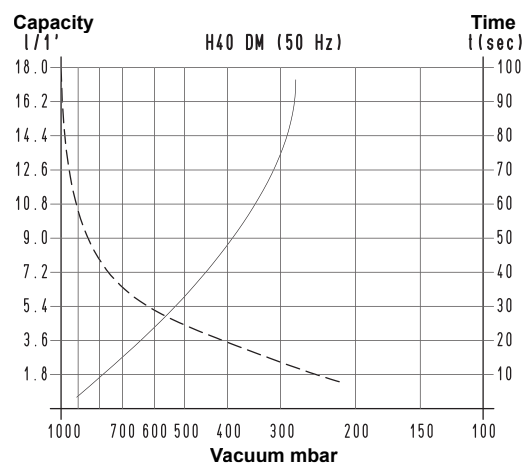
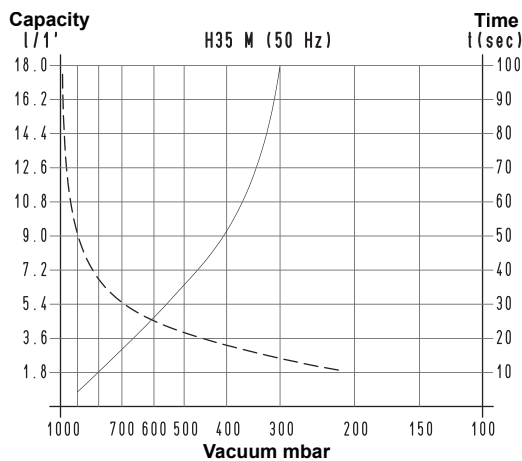
They are available in the versions with single and double head to be used in series or in parallel.

Membrane vacuum mini pumps are very silent ( $\leq 50\text{dB(A)}$ ), 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.



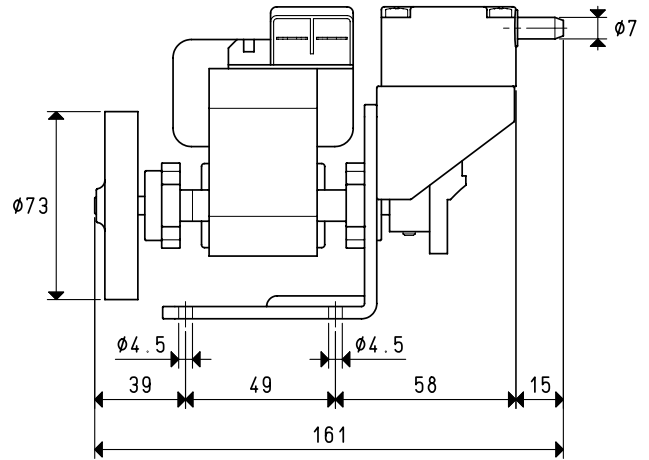
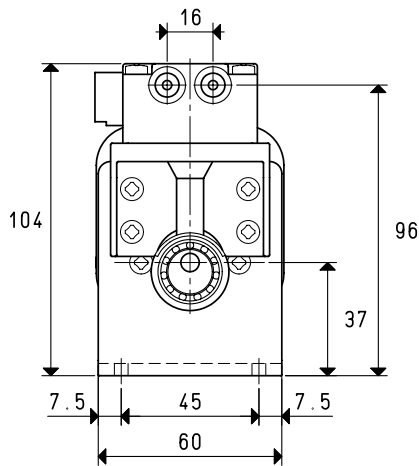
To calculate the emptying time of a volume  $V_1$ , apply the formula  $t_1 = \frac{t \times V_1}{6}$

- Curve regarding capacity (referring to a 1013 bar pressure)
- Curve regarding the emptying of a 6-litre volume

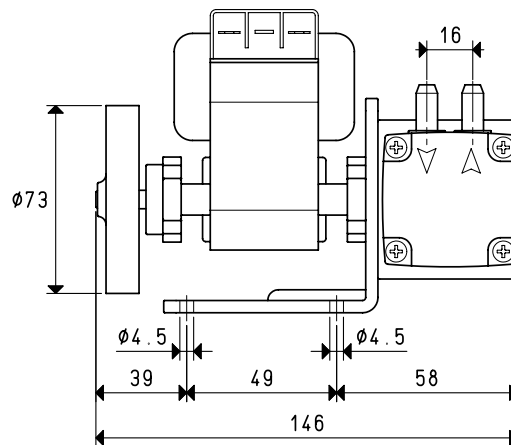
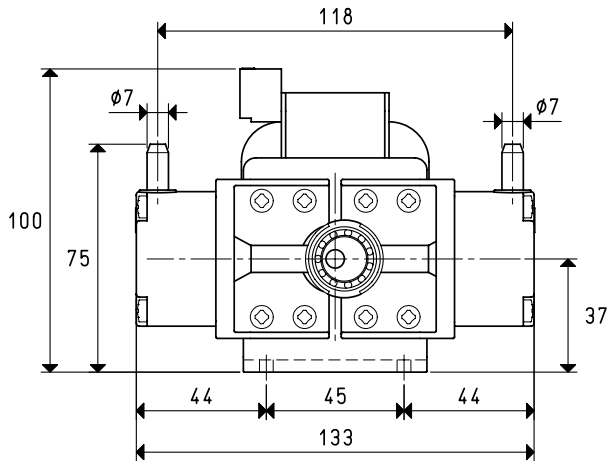
$V_1$  : Volume to be emptied  
 $t_1$  : Time to be calculated (sec)  
 $t$  : Time obtained in the table (sec)

# MEMBRANE VACUUM MINI PUMPS

## H 35 M



## H 40 DM

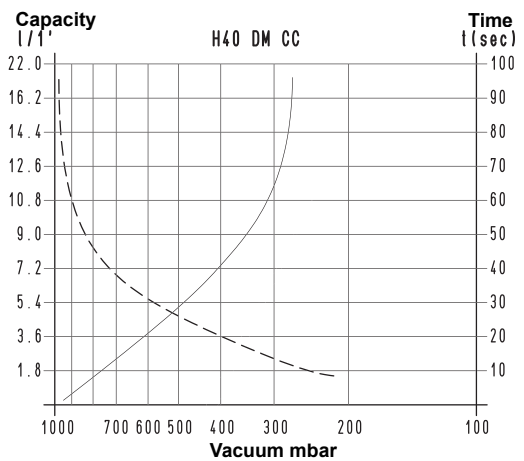
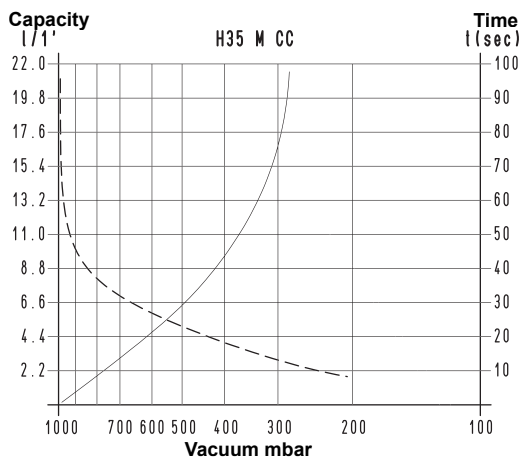
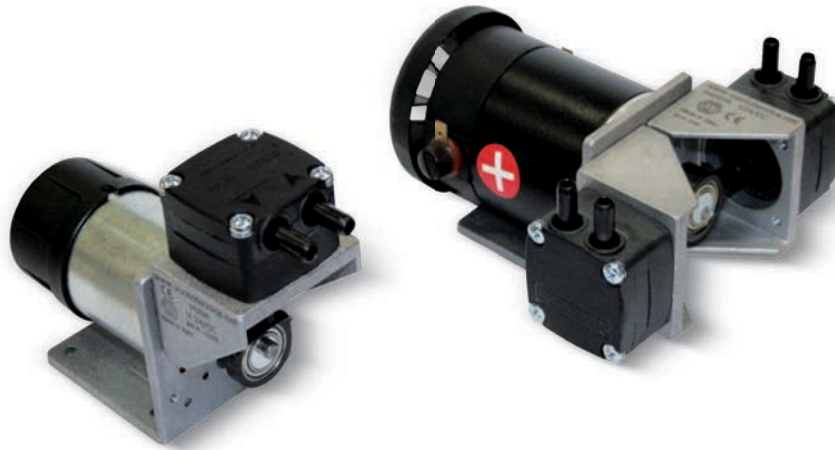


Art.	H35 M		H40 DM	
	50Hz	60Hz	50Hz	60Hz
<b>Frequency</b>	50Hz	60Hz	50Hz	60Hz
<b>Nominal capacity:</b>				
<b>Connection in series</b>	1 / 1'	17.5	18.0	21.5
<b>Connection in parallel</b>	1 / 1'	=	18.0 + 18.0	21.5 + 21.5
<b>Final pressure:</b>				
<b>Connection in series</b>	mbar abs.	200	60	
<b>Connection in parallel</b>	mbar abs.	=	160	
<b>Max. pressure</b>	bar (g)	2	2	
<b>Motor execution</b>	1~	230 ± 10%	230 ± 10%	
<b>Volt</b>				
<b>Motor power</b>	1~	15	16.5	20
<b>Watt</b>				
<b>Electric absorption</b>	A	0.60	0.80	
<b>Rotation speed</b>	rev/min <sup>-1</sup>	2800	3300	3300
<b>Noise level</b>	dB(A)	≤ 50	≤ 50	
<b>Max. weight</b>	Kg	1.3	1.6	
<b>Accessories and spare parts</b>				
<b>Membrane</b>	art.	00 H35M 15	00 H40DM 15	
<b>Lid with fittings</b>	art.	00 H35M 16	00 H40DM 20	

3D drawings available at [www.vuototecnica.net](http://www.vuototecnica.net)

## 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.



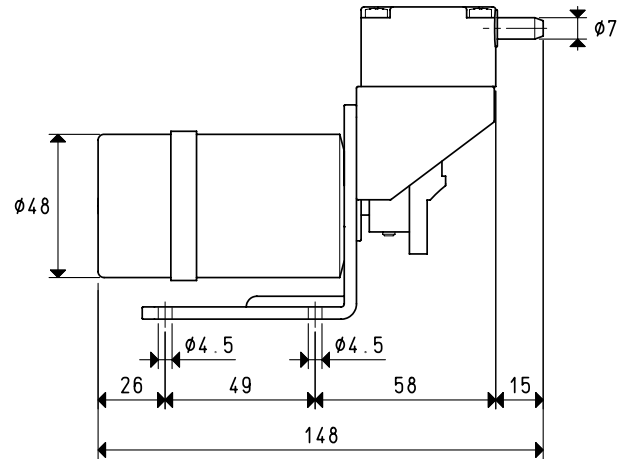
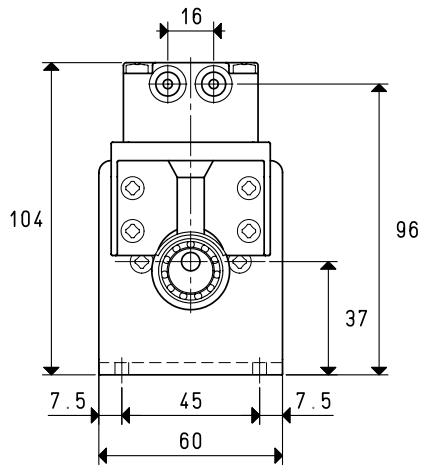
To calculate the emptying time of a volume  $V_1$ , apply the formula  $t_1 = \frac{t \times V_1}{6}$

- Curve regarding capacity (referring to a 1013 bar pressure)
- Curve regarding the emptying of a 6-litre volume

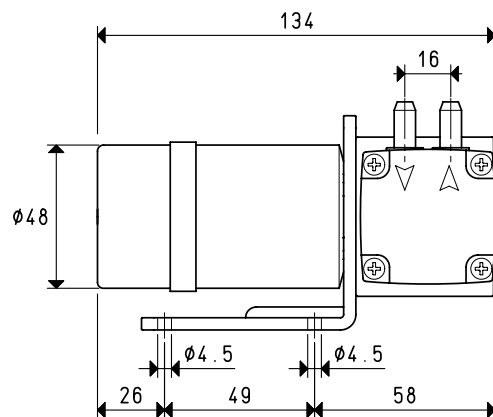
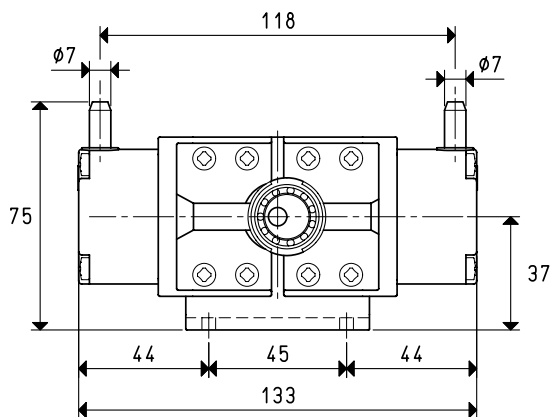
- $V_1$ : Volume to be emptied
- $t_1$ : Time to be calculated (sec)
- $t$ : Time obtained in the table (sec)

# MEMBRANE VACUUM MINI PUMPS WITH DC MOTOR

## H 35 M CC



## H 40 DM CC



Art.		H35 M CC	H40 DM CC
<b>Nominal capacity:</b>			
<b>Connection in series</b>	l / l'	21.5	20.0
<b>Connection in parallel</b>	l / l'	=	20.0 + 20.0
<b>Final pressure:</b>			
<b>Connection in series</b>	mbar abs.	200	60
<b>Connection in parallel</b>	mbar abs.	=	160
<b>Max. pressure</b>	bar (g)	2	2
<b>Motor execution</b>	Volt	24 CC	24 CC
<b>Motor power</b>	Watt	6	20
<b>Electric absorption</b>	A	0.80	1.50
<b>Rotation speed</b>	rev/min <sup>-1</sup>	3000	3000
<b>Noise level</b>	dB(A)	≤ 50	≤ 50
<b>Max. weight</b>	Kg	0.62	1.19
<b>Accessories and spare parts</b>			
<b>Membrane</b>	art.	00 H35M 15	00 H40DM 15
<b>Lid with fittings</b>	art.	00 H35M 16	00 H40DM 20

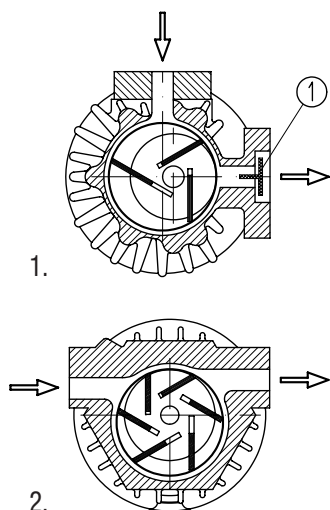
3D drawings available at [www.vuototecnica.net](http://www.vuototecnica.net)

## 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 delivery phase).

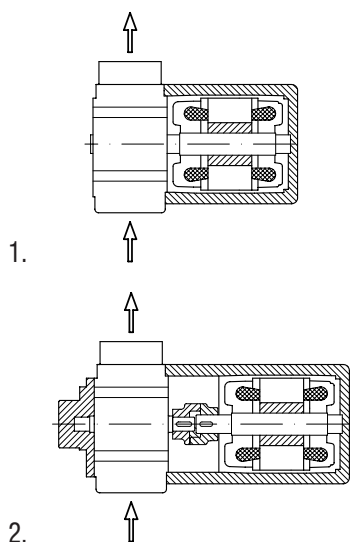
The internal design is the same for both rotating compressors and vacuum pumps.

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.



## Rotor housing

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

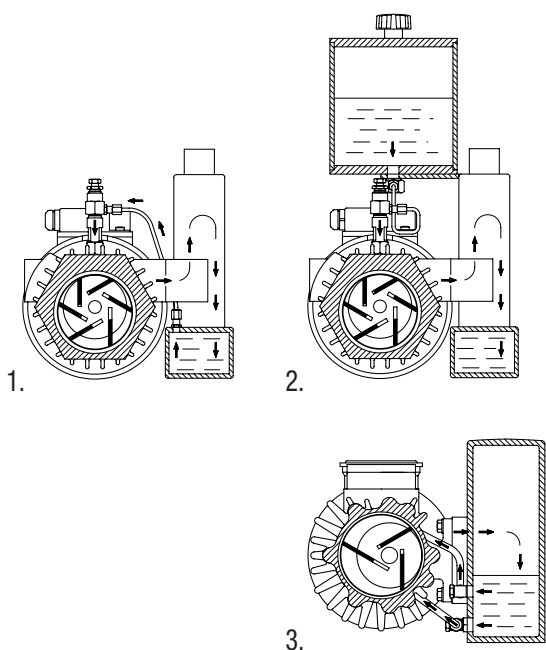
The main lubrication systems we use are by vacuum with oil recycle or disposable oil for vacuum pumps of the VTL series and oil-bath for pumps of the MV series.

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.



## ROTARY VANE VACUUM PUMPS – GENERAL DESCRIPTION

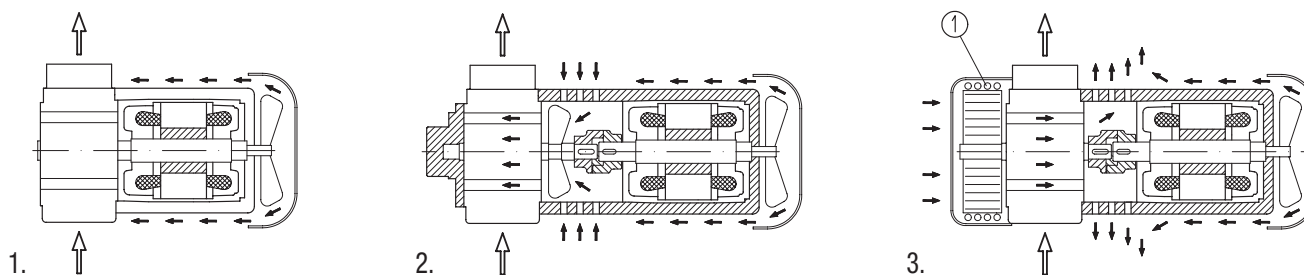
### Dry vacuum pumps

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

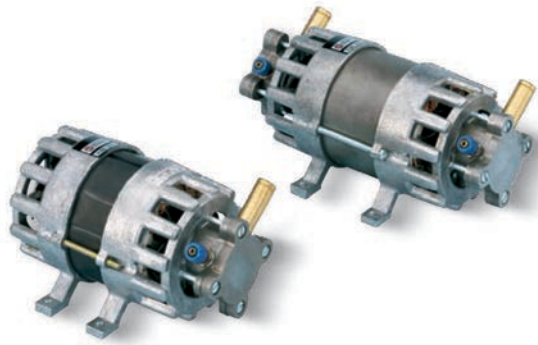
All vacuum pumps with capacity up to 20 cum/h can be supplied either with three-phase or single-phase electric motor, while those with higher capacity can only be equipped with three-phase electric motors. As a standard, all the pumps are equipped with multi-voltage electric motor, in compliance with CE standards. Upon request, they can be supplied with motors in compliance with UL-CSA and with special voltages and frequencies.

### Certifications

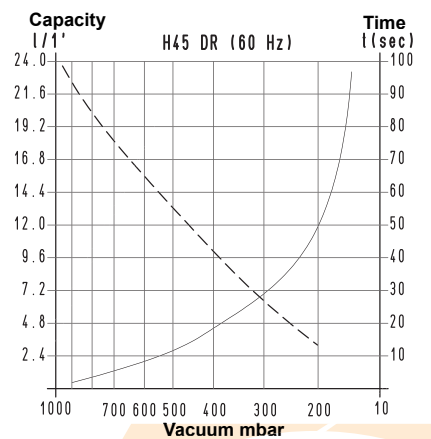
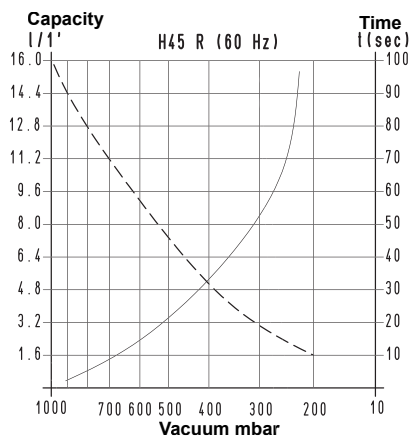
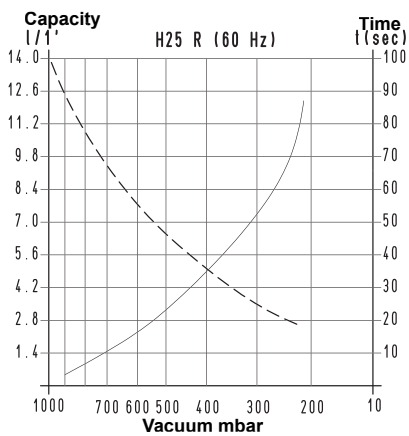
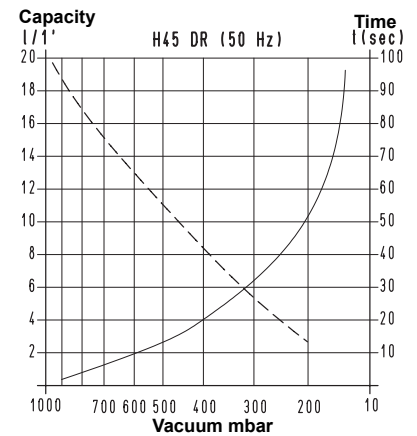
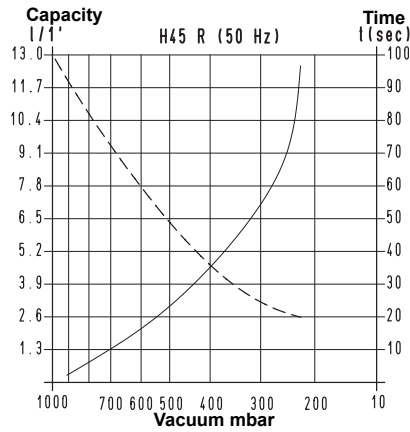
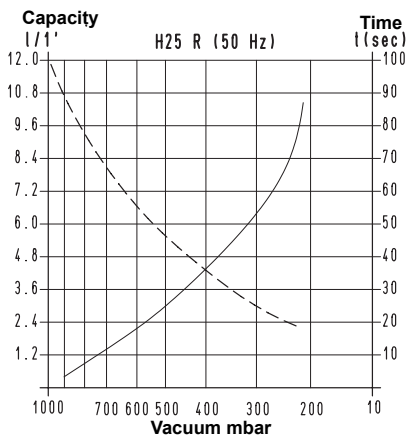
The design and manufacture of our vacuum pumps comply with European Directives on safety. In fact, every identification showing the pump technical data has the CE marking. Moreover, a Declaration of conformity with the 98/37/CE Machinery Directive and subsequent modifications is always annexed to the Use and Maintenance guide.



## 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.



To calculate the emptying time of a volume  $V_1$ , apply the formula  $t_1 = \frac{t \times V_1}{6}$

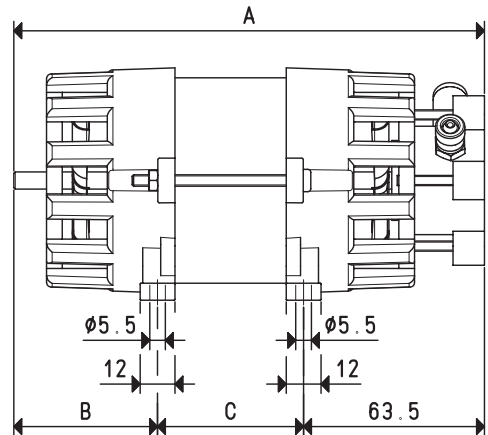
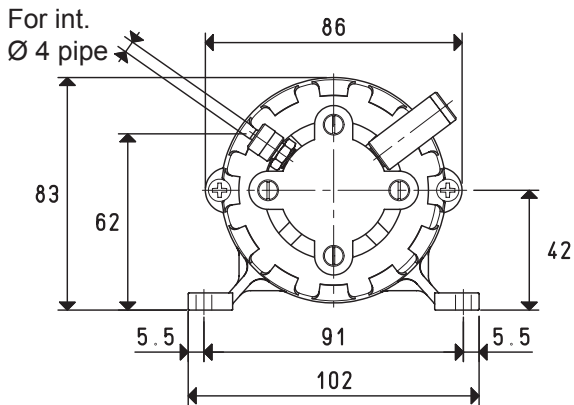
- Curve regarding capacity (referring to a 1013 bar pressure)
- Curve regarding the emptying of a 6-litre volume

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

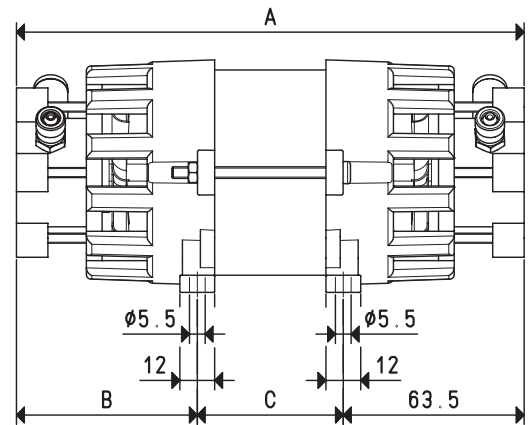
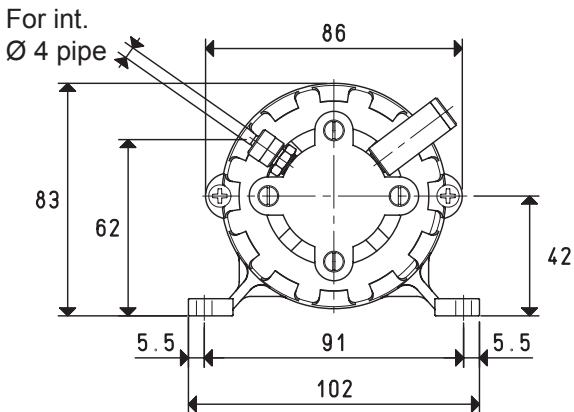
# VANE MINI VACUUM PUMPS

H 25 R

H 45 R



H 45 DR

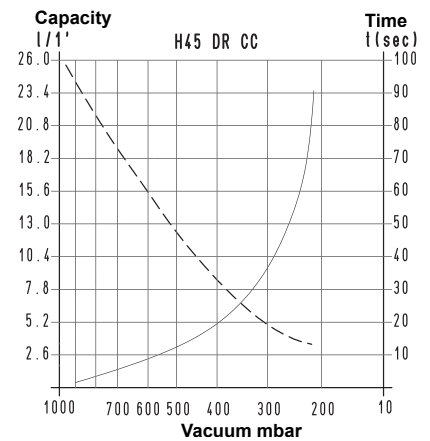
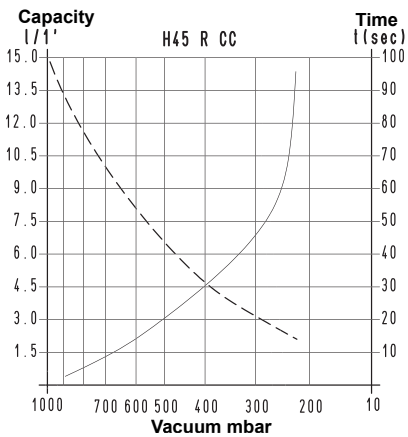
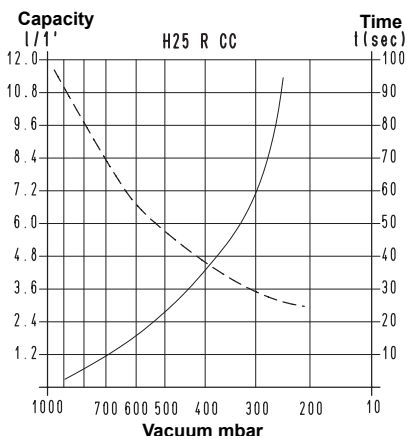
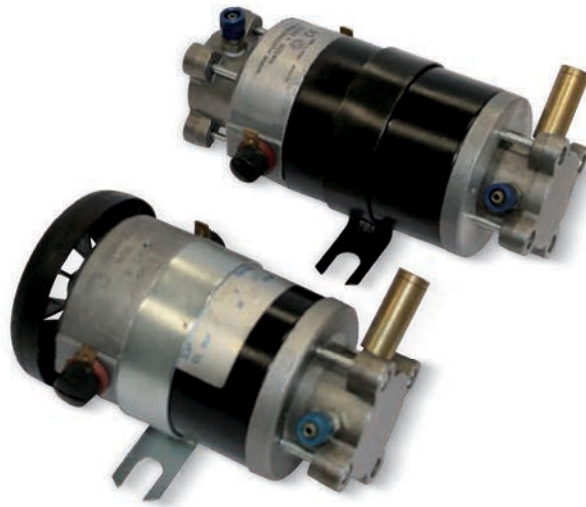


Art.	H25 R		H45 R		H45 DR	
Frequency	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz
<b>Nominal capacity:</b>						
<b>Connection in series</b>	l / l'	11.5	13.8	13.0	15.5	11.0
<b>Connection in parallel</b>	l / l'	=	=	=	=	10 + 10
<b>Final pressure:</b>						
<b>Connection in series</b>	mbar abs.	150		200		40
<b>Connection in parallel</b>	mbar abs.	=		=		150
<b>Max. pressure</b>	bar (g)	2		2		2
<b>Motor execution</b>	1~	230 ± 10%		230 ± 10%		230 ± 10%
<b>Volt</b>						
<b>Motor power</b>	1~	28	33.5	35	42	40
<b>Watt</b>						
<b>Condenser</b>	µF	2.50		3.15		3.15
<b>Electric absorption</b>	A	1.2		1.5		1.8
<b>Rotation speed</b>	rev/min <sup>-1</sup>	2800	3300	2800	3300	2800
<b>Noise level</b>	dB(A)	≤ 60		≤ 60		≤ 60
<b>Max. weight</b>	Kg	1.45		2.0		2.1
<b>A</b>		148		165		180
<b>B</b>		45.5		47.5		63.5
<b>C</b>		38		53		53
<b>Accessories and spare parts</b>						
<b>Vanes</b>	art.	n° 10 00 H25R 03		n° 10 00 H45R 02		n° 20 00 H25R 03
<b>Silencer filtre</b>	art.	FB 1		FB 1		FB 1
<b>Fittings</b>	art.	RMM5		RMM5		RMM5

3D drawings available at [www.vuototecnica.net](http://www.vuototecnica.net)

## 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.



To calculate the emptying time of a volume  $V_1$ , apply the formula  $t_1 = \frac{t \times V_1}{6}$

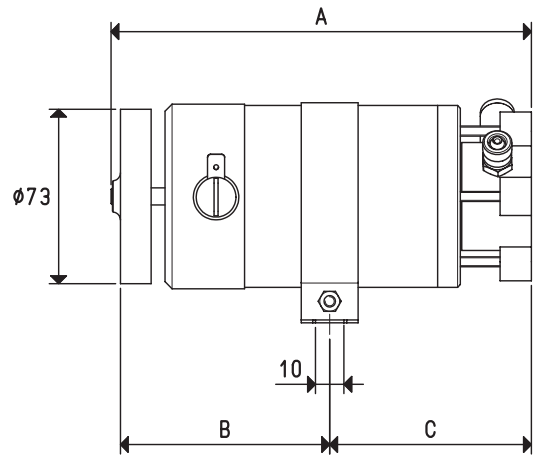
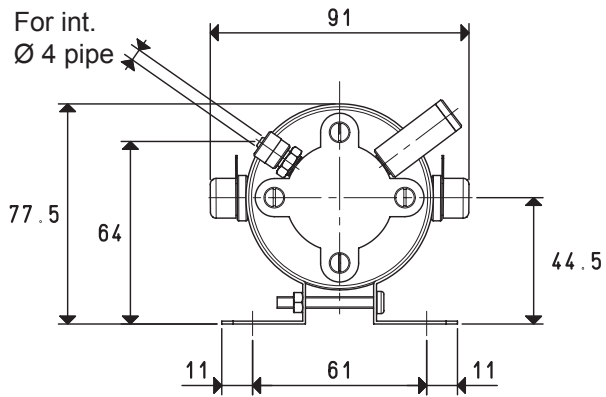
- Curve regarding capacity (referring to a 1013 bar pressure)
- Curve regarding the emptying of a 6-litre volume

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

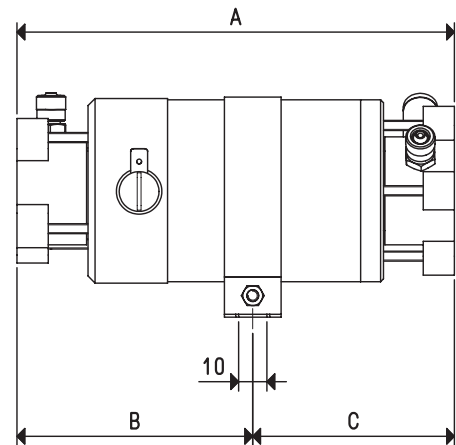
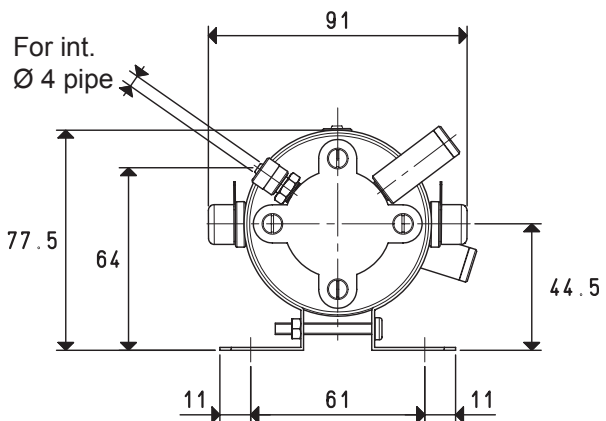
# VANE MINI VACUUM PUMPS WITH DC MOTOR

H 25 R CC

H 45 R CC



H 45 DR CC



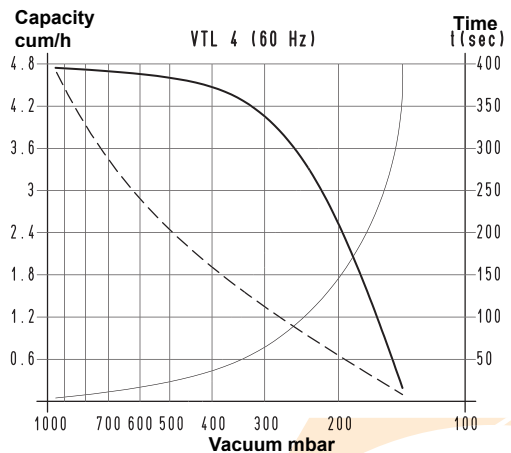
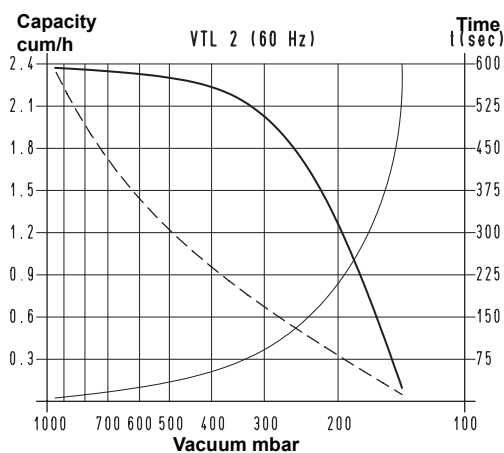
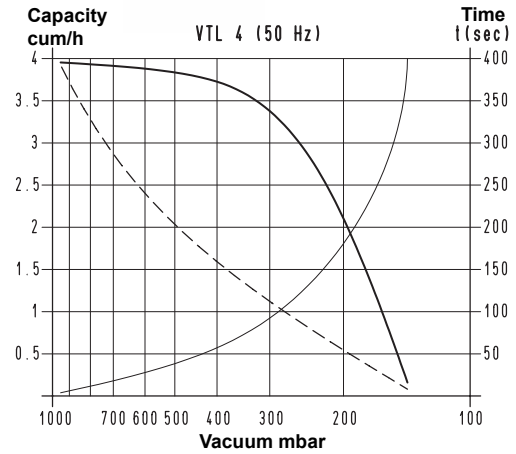
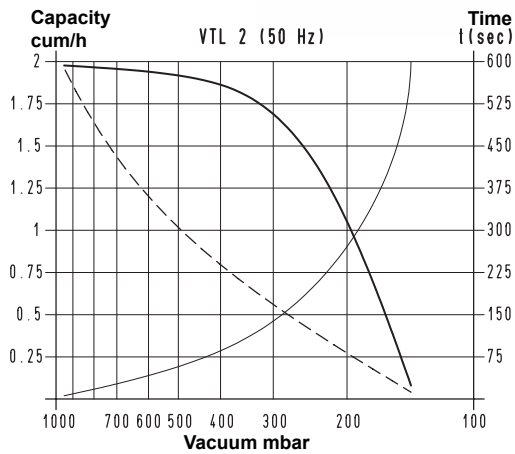
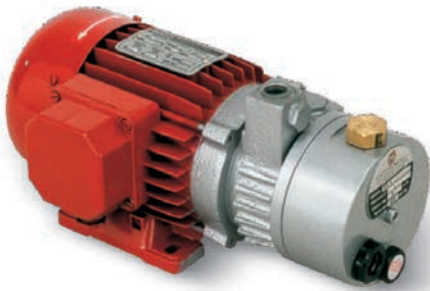
Art.		H25 R CC	H45 R CC	H45 DR CC
<b>Nominal capacity:</b>				
Connection in series	l / 1'	11.5	14.5	13.5
Connection in parallel	l / 1'	=	=	13 + 13
<b>Final pressure:</b>				
Connection in series	mbar abs.	200	200	60
Connection in parallel	mbar abs.	=	=	200
Max. pressure	bar (g)	2	2	2
Motor execution	Volt	24 CC	24 CC	24 CC
Motor power	Watt	20	24	30
Electric absorption A	1.5	1.6	1.8	
Rotation speed	rev/min <sup>-1</sup>	3000	3000	3000
Noise level	dB(A)	≤ 60	≤ 60	≤ 60
Max. weight	Kg	0.96	1.29	1.44
A		130	148	154
B		57	77	83
C		73	71	71
<b>Accessories and spare parts</b>				
Vanes	art.	n° 10 00 H25R 03	n° 10 00 H45R 02	n° 20 00 H25R 03
Silencer filtre	art.	FB 1	FB 1	FB 1
Fittings	art.	RMM5	RMM5	RMM5

3D drawings available at [www.vuototecnica.net](http://www.vuototecnica.net)

## 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 filter to prevent oil mists and to reduce noise. We strongly recommend installing a check valve and a filter on the suction inlet. Pumps VTL 2 and 4 can also be supplied with single-phase electric motor.

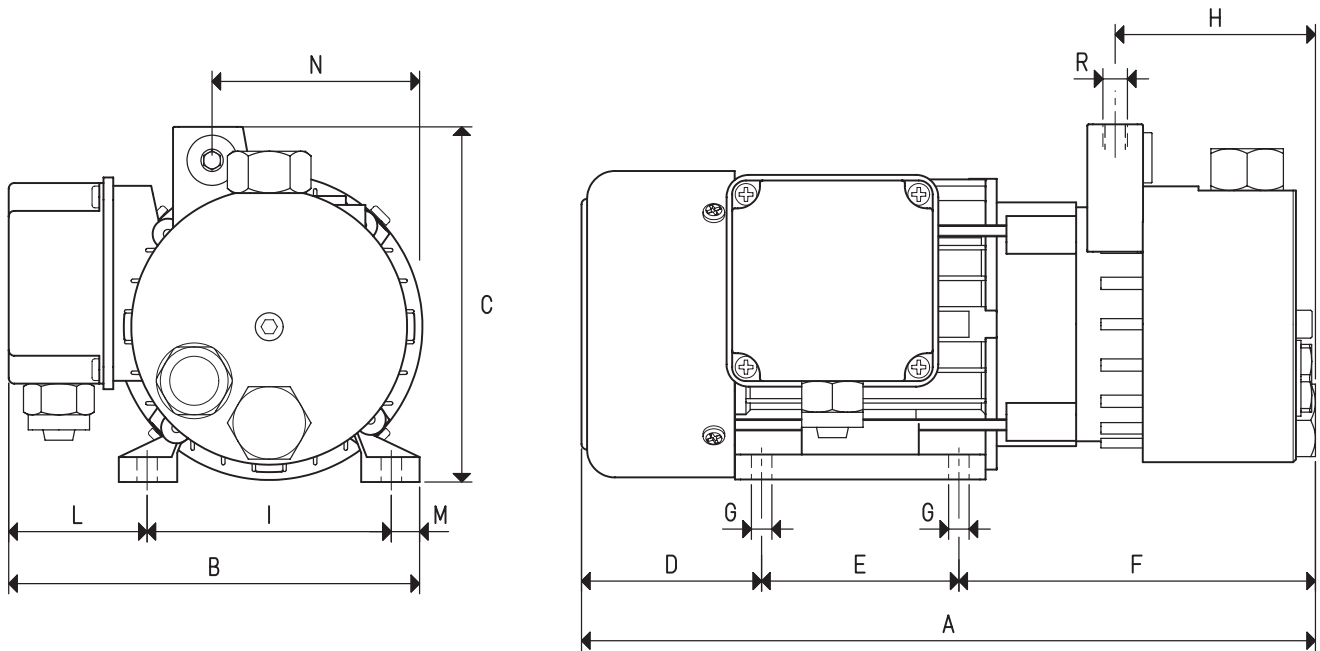


To calculate the emptying time of a volume  $V_1$ , apply the formula  $t_1 = \frac{t \times V_1}{100}$

- Curve regarding capacity (referring to the suction pressure)
- - - Curve regarding capacity (referring to a 1013 mbar 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)

# VACUUM PUMPS VTL 2 and 4



Art.	VTL 2		VTL 4	
	50Hz	60Hz	50Hz	60Hz
<b>Frequency</b>	50Hz	60Hz	50Hz	60Hz
<b>Capacity</b> m <sup>3</sup> /h	2.0	2.4	4.0	4.8
<b>Final pressure</b> mbar abs.	150		150	
<b>Motor execution</b>	230/400±10%	275/480±10%	230/400±10%	275/480±10%
<b>Volt</b>	230±10%		230±10%	
<b>Motor power</b>	0.13	0.15	0.18	0.21
<b>Kw</b>	0.13	0.15	0.15	0.18
<b>Motor protection</b>	54		54	
<b>Rotation speed</b> rev/min <sup>-1</sup>	2800	3300	2800	3300
<b>Motor shape</b>	Special		Special	
<b>Motor size</b>	56		63	
<b>Noise level</b> dB(A)	62	65	62	65
<b>Max. weight</b>	3~		7.3	
<b>Kg</b>	1~		7.5	
<b>A</b>	260		285	
<b>B</b>	145		160	
<b>C</b>	126		132	
<b>D</b>	62		66	
<b>E</b>	71		80	
<b>F</b>	127		139	
<b>G</b>	Ø		7.5	
<b>H</b>	72		80	
<b>I</b>	90		100	
<b>L</b>	43		48	
<b>M</b>	12		12	
<b>N</b>	76		86	
<b>R</b>	Ø gas G1/4"		G3/8"	
<b>Accessories and spare parts</b>				
<b>Oil load</b>	l		0.05	
<b>Synthetic oil</b>	VT OIL		ISO 32	
<b>4 vanes</b>	art.		00 VTL 02 10	
<b>Sealing kit</b>	art.		00 KIT VTL 02	
<b>Check valve</b>	art.		10 01 15	
<b>Suction filtre</b>	art.		FB 5	
			00 VTL 04 10	
			00 KIT VTL 04	
			10 02 15	
			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).

3D drawings available at [www.vuototecnica.net](http://www.vuototecnica.net)

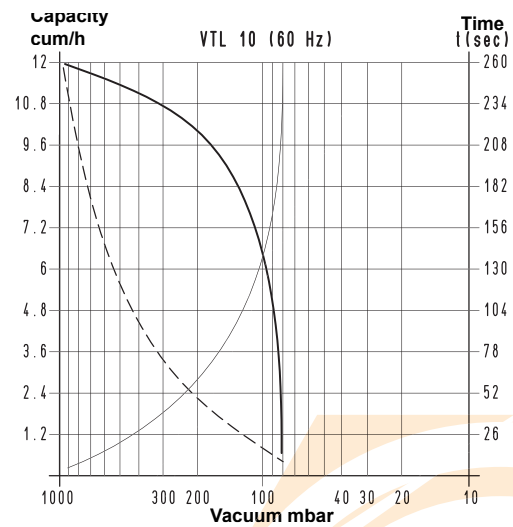
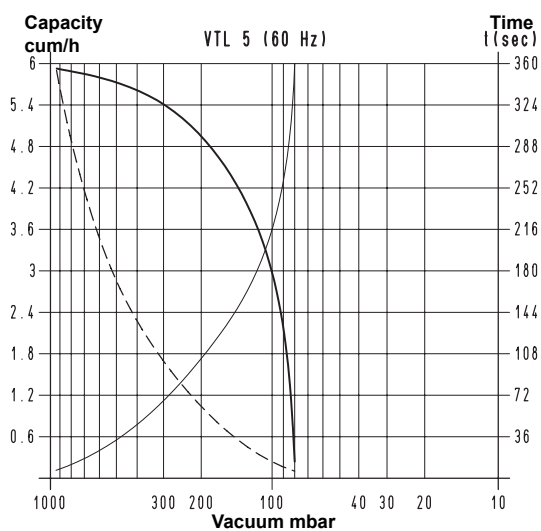
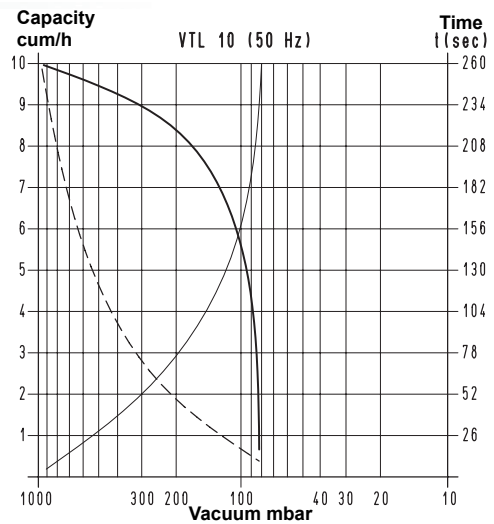
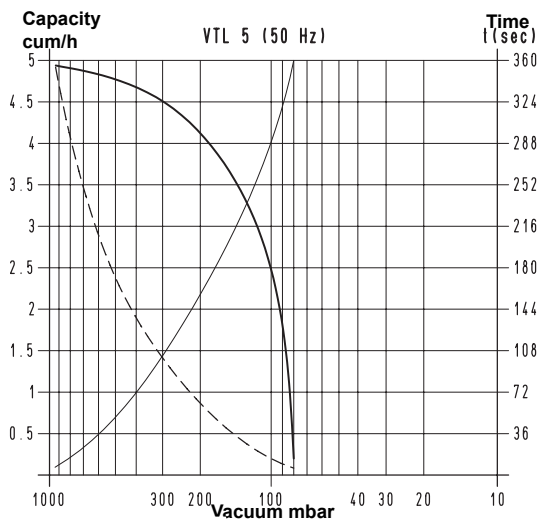
## VACUUM PUMPS VTL 5 and 10

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.

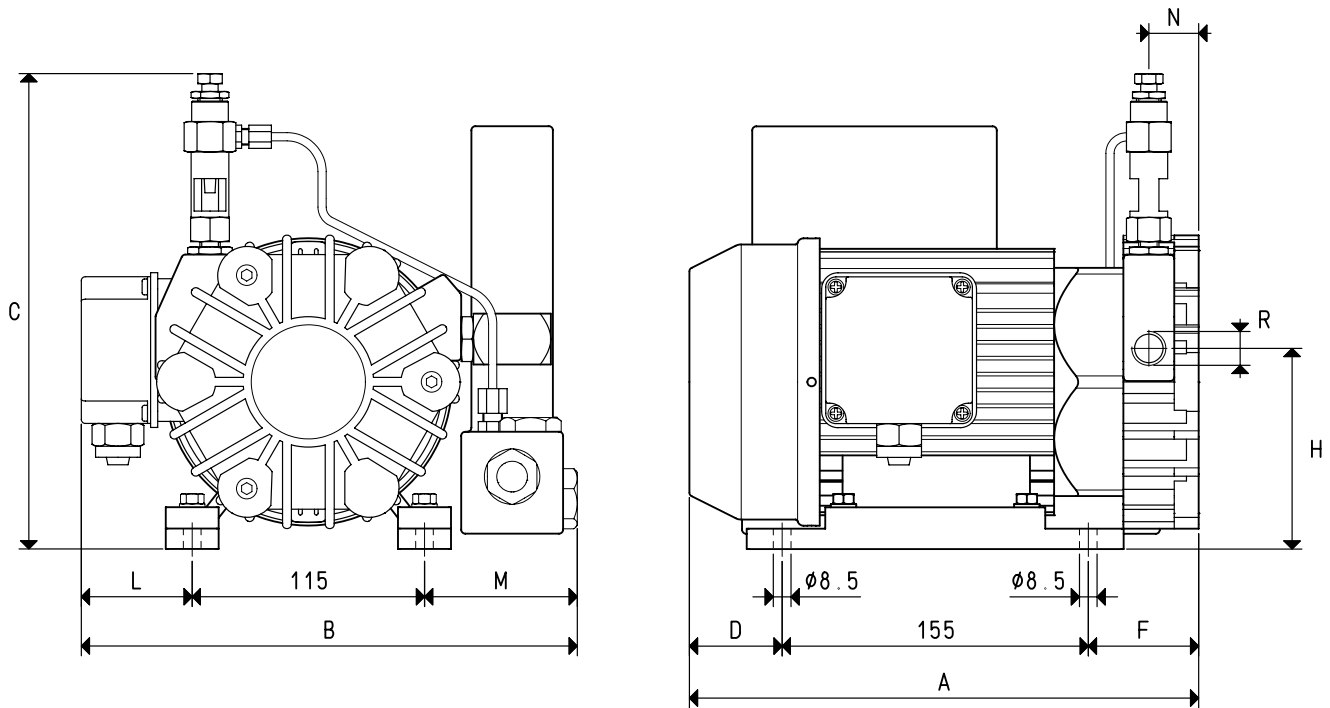


To calculate the emptying time of a volume  $V_1$ , apply the formula  $t_1 = \frac{t \times V_1}{100}$

- 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

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

# VACUUM PUMPS VTL 5 and 10



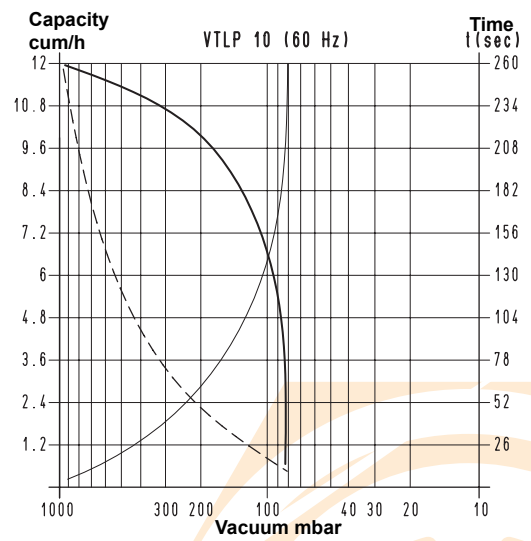
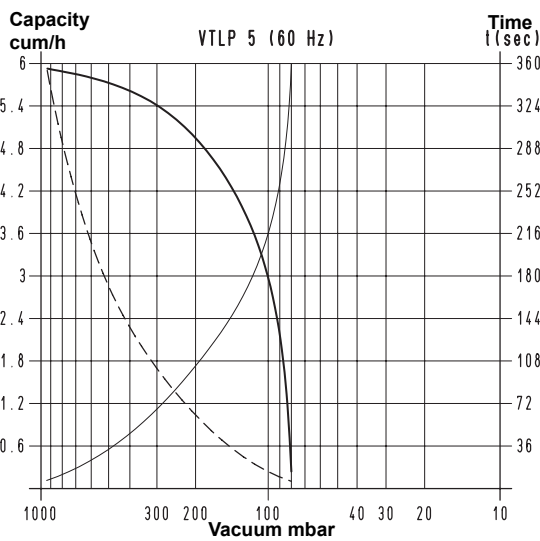
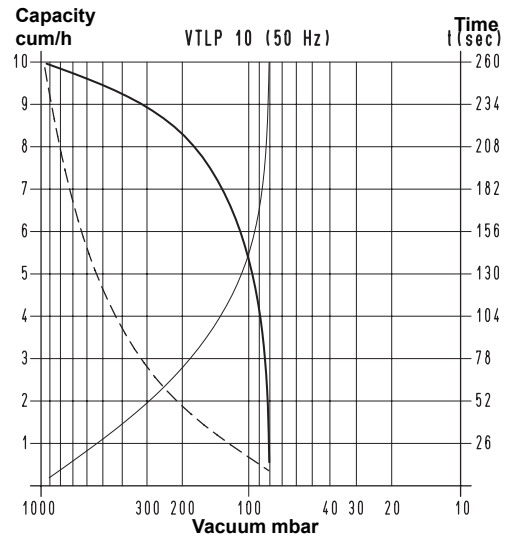
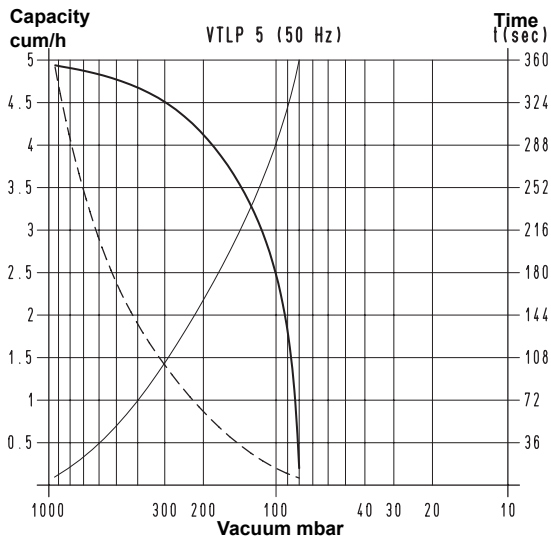
Art.	VTL 5		VTL 10	
	50Hz	60Hz	50Hz	60Hz
<b>Frequency</b>	50Hz	60Hz	50Hz	60Hz
<b>Capacity</b>	5.0	6.0	10.0	12.0
<b>Final pressure</b>	80		80	
<b>Motor execution</b>	230/400±10%	275/480±10%	230/400±10%	275/480±10%
<b>Volt</b>	230±10%		230±10%	
<b>Motor power</b>	0.25	0.30	0.35	0.40
<b>Kw</b>	0.25	0.30	0.25	0.30
<b>Motor protection</b>	IP 54		IP 54	
<b>Rotation speed</b>	1450	1740	1450	1740
<b>Motor shape</b>	Special		Special	
<b>Motor size</b>	71		71	
<b>Noise level</b>	62	64	62	64
<b>Max. weight</b>	14.5		20.5	
<b>Kg</b>	15.0		21.0	
<b>A</b>	260		310	
<b>B</b>	245		262	
<b>C</b>	245		245	
<b>D</b>	52		70	
<b>F</b>	53		85	
<b>H</b>	122		122	
<b>L</b>	45		45	
<b>M</b>	85		102	
<b>N</b>	27		52	
<b>R</b>	Ø gas G3/8"		G1/2"	
<b>Accessories and spare parts</b>				
<b>Oil load</b>	0.25		0.40	
<b>Synthetic oil</b>	VT OIL ISO 32		ISO 32	
<b>6 vanes</b>	art. 00 VTL 05 10		00 VTL 10 10	
<b>Sealing kit</b>	art. 00 KIT VTL 05		00 KIT VTL 10	
<b>Check valve</b>	art. 10 02 10		10 03 10	
<b>Suction filtre</b>	art. FB 10/FC 10		FB 20/FC 20	
<b>Adjustable drip oiler</b>	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.: VTL 5 M).

3D drawings available at [www.vuototecnica.net](http://www.vuototecnica.net)



# VACUUM PUMPS VTLP 5 and 10 WITH DISPOSABLE LUBRICATION

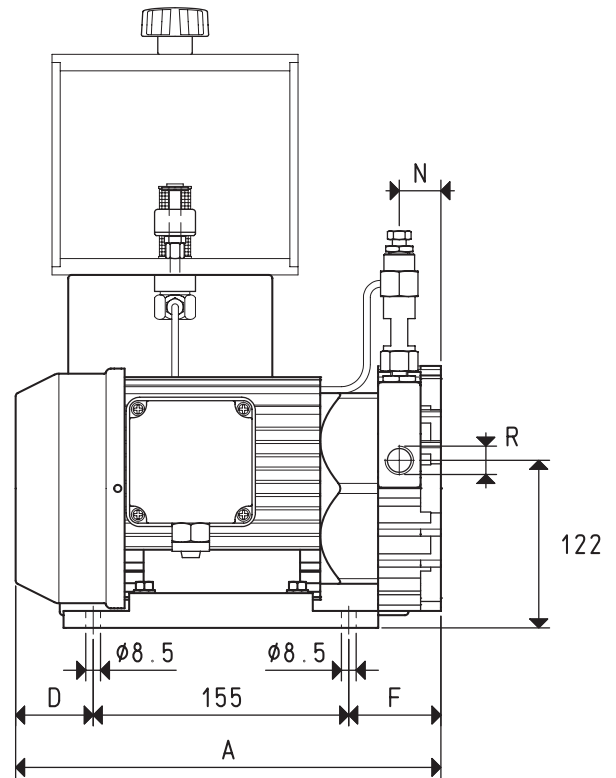
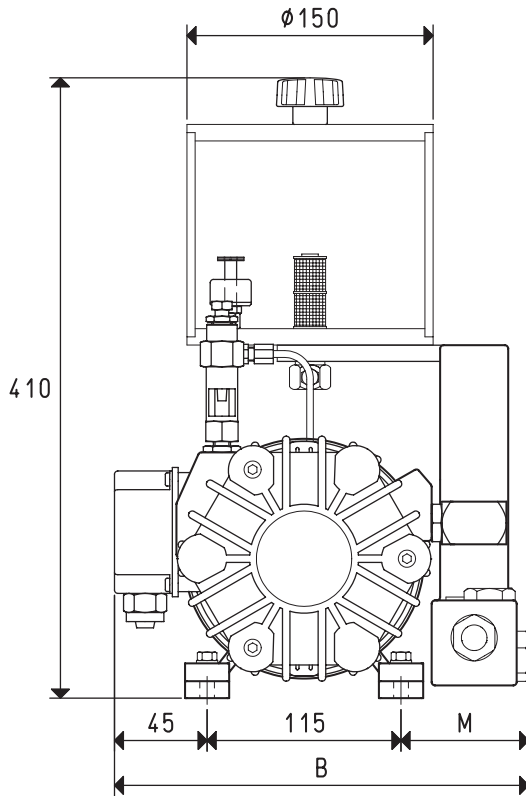


To calculate the emptying time of a volume  $V_1$ , apply the formula  $t_1 = \frac{t \times V_1}{100}$

- 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

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

# VACUUM PUMPS VTL 5 AND 10



Art.	VTLP 5		VTLP 10	
	50Hz	60Hz	50Hz	60Hz
<b>Frequency</b>	50Hz	60Hz	50Hz	60Hz
<b>Capacity</b> m <sup>3</sup> /h	5.0	6.0	10.0	12.0
<b>Final pressure</b> mbar abs.	80		80	
<b>Motor execution</b>	230/400±10%	275/480±10%	230/400±10%	275/480±10%
<b>Volt</b>	230±10%		230±10%	
<b>Motor power</b>	0.25	0.30	0.35	0.40
<b>Kw</b>	0.25	0.30	0.25	0.30
<b>Motor protection</b>	IP 54		IP 54	
<b>Rotation speed</b> rev/min <sup>-1</sup>	1450	1740	1450	1740
<b>Motor shape</b>	Special		Special	
<b>Motor size</b>	71		71	
<b>Noise level</b> dB(A)	62	64	62	64
<b>Max. weight</b>	3~		21.6	
<b>Kg</b>	1~		22.1	
<b>A</b>	260		310	
<b>B</b>	245		262	
<b>D</b>	52		70	
<b>F</b>	53		85	
<b>M</b>	85		102	
<b>N</b>	27		52	
<b>R</b>	Ø 3/8"		G1/2"	
<b>Accessories and spare parts</b>				
<b>Oil load</b>	1.8		1.8	
<b>Synthetic oil</b>	ISO 32		ISO 32	
<b>6 vanes</b>	00 VTL 05 10		00 VTL 10 10	
<b>Sealing kit</b>	00 KIT VTL 05		00 KIT VTL 10	
<b>Check valve</b>	10 02 10		10 03 10	
<b>Suction filtre</b>	FB 10/FC 10		FB 20/FC 20	
<b>Oil level switch</b>	00 LP VTL 99		00 LP VTL 99	
<b>Oil filtre</b>	00 LP VTL 40		00 LP VTL 40	
<b>Adjustable drip oiler</b>	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).

3D drawings available at [www.vuototecnica.net](http://www.vuototecnica.net)

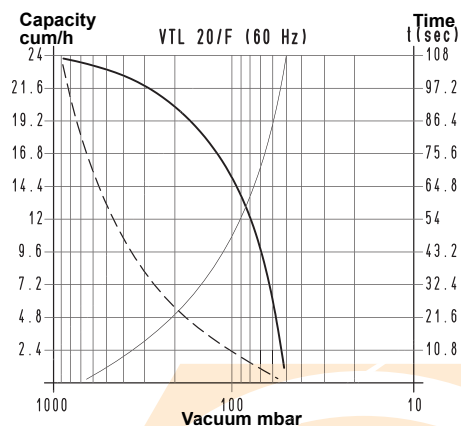
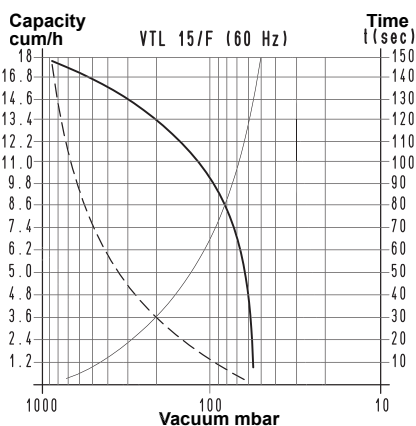
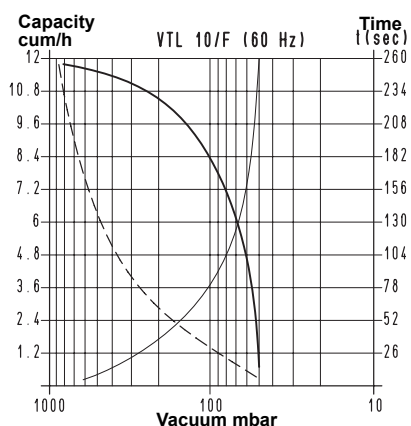
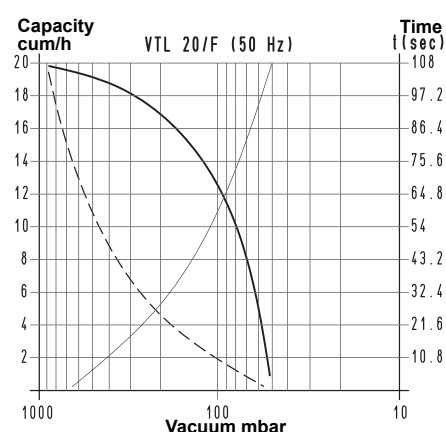
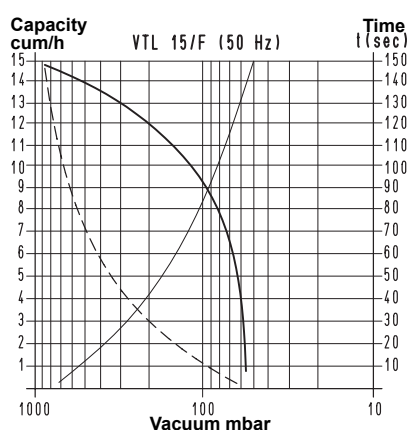
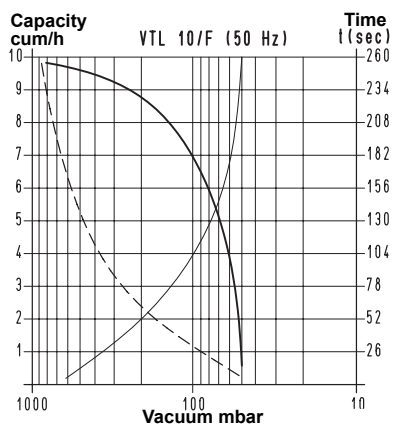
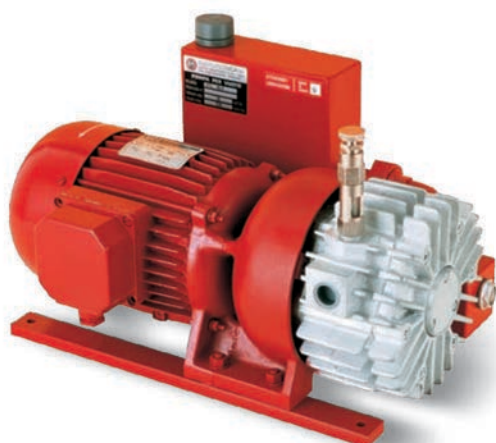
## VACUUM PUMPS VTL 10/F, 15/F and 20/F

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.

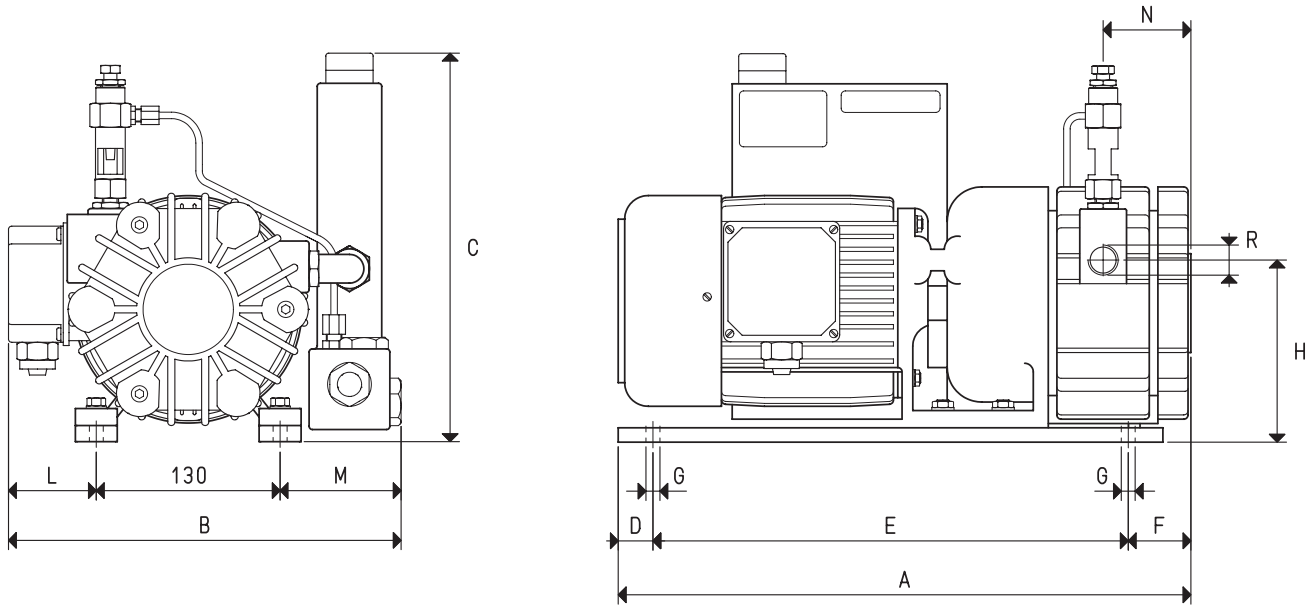


To calculate the emptying time of a volume  $V_1$ , apply the formula  $t_1 = \frac{t \times V_1}{100}$

- 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

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

# VACUUM PUMPS VTL 10/F, 15/F and 20/F



Art.	VTL 10/F		VTL 15/F		VTL 20/F	
	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz
<b>Frequency</b>	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz
<b>Capacity</b>	10.0	12.0	15.0	18.0	20.0	24.0
<b>Final pressure</b>	50		50		50	
<b>Motor execution</b>	230/400±10%	275/480±10%	230/400±10%	275/480±10%	230/400±10%	275/480±10%
<b>Volt</b>	230±10%		230±10%		230±10%	
<b>Motor power</b>	0.55	0.66	0.55	0.66	0.88	1.05
<b>Kw</b>	0.55	0.66	0.55	0.66	0.66	0.80
<b>Motor protection</b>	IP 54		IP 54		IP 54	
<b>Rotation speed</b>	1450	1740	1450	1740	1450	1740
<b>Motor shape</b>	Special		Special		Special	
<b>Motor size</b>	80		80		80	
<b>Noise level</b>	62	64	63	65	64	66
<b>Max. weight</b>	3~	25.0	27.0	30.0	30.0	30.5
<b>Kg</b>	1~	25.5	27.5	30.5	30.5	30.5
<b>A</b>	385		405		425	
<b>B</b>	285		285		285	
<b>C</b>	259		259		259	
<b>D</b>	25		25		25	
<b>E</b>	340		340		340	
<b>F</b>	20		40		60	
<b>H</b>	133		133		133	
<b>L</b>	55		55		55	
<b>M</b>	100		100		100	
<b>N</b>	53		63		73	
<b>R</b>	Ø gas G1/2"		Ø gas G1/2"		Ø gas G1/2"	
<b>Accessories and spare parts</b>						
<b>Oil load</b>	I	0.4	0.5	0.65	0.65	0.65
<b>Synthetic oil</b>	VT OIL	ISO 68	ISO 68	ISO 68	ISO 68	ISO 68
<b>6 vanes</b>	art.	00 VTL 10F 10	00 VTL 15F 10	00 VTL 20F 10	00 VTL 20F 10	00 VTL 20F 10
<b>Sealing kit</b>	art.	00 KIT VTL 10F	00 KIT VTL 15F	00 KIT VTL 20F	00 KIT VTL 20F	00 KIT VTL 20F
<b>Check valve</b>	art.	10 03 10	10 03 10	10 03 10	10 03 10	10 03 10
<b>Suction filtre</b>	art.	FB 20/FC 20	FB 20/FC 20	FB 20/FC 20	FB 20/FC 20	FB 20/FC 20
<b>Adjustable drip oiler</b>	art.	00 VTL 00 11	00 VTL 00 11	00 VTL 00 11	00 VTL 00 11	00 VTL 00 11

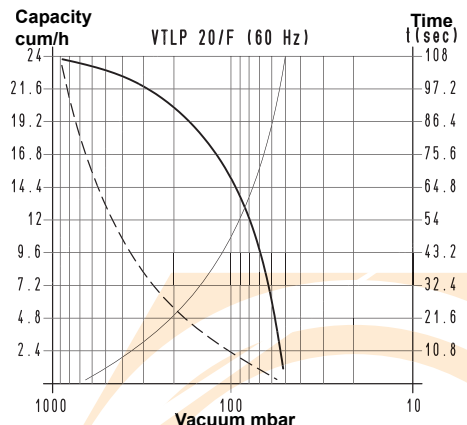
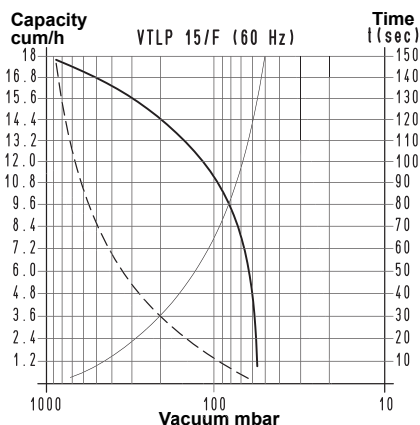
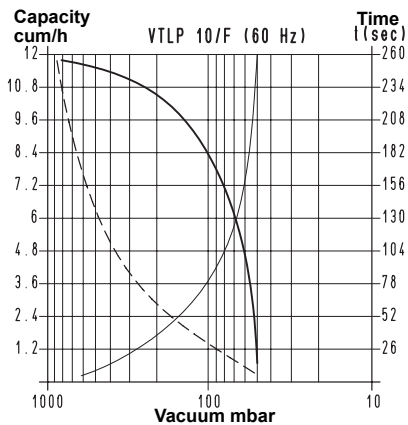
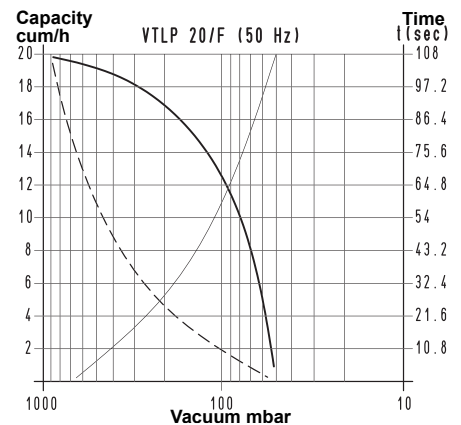
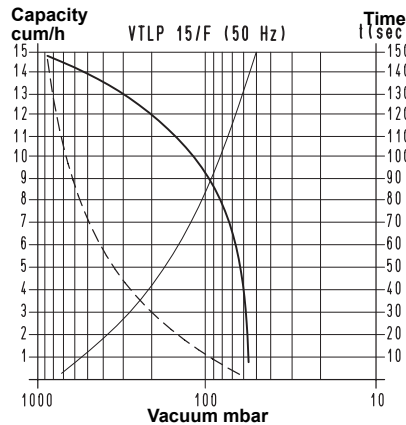
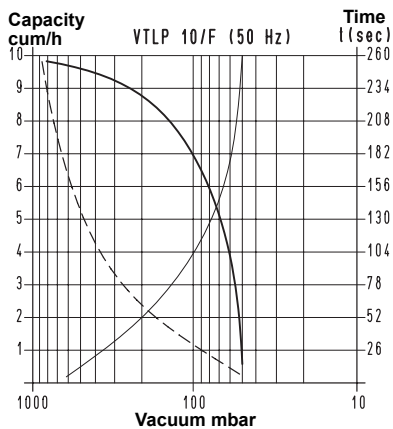
**Note:** The pump will be supplied with single-phase electric motor by adding the letter M to the article (E.g.: VTL 10/F M).

3D drawings available at [www.vuototecnica.net](http://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.

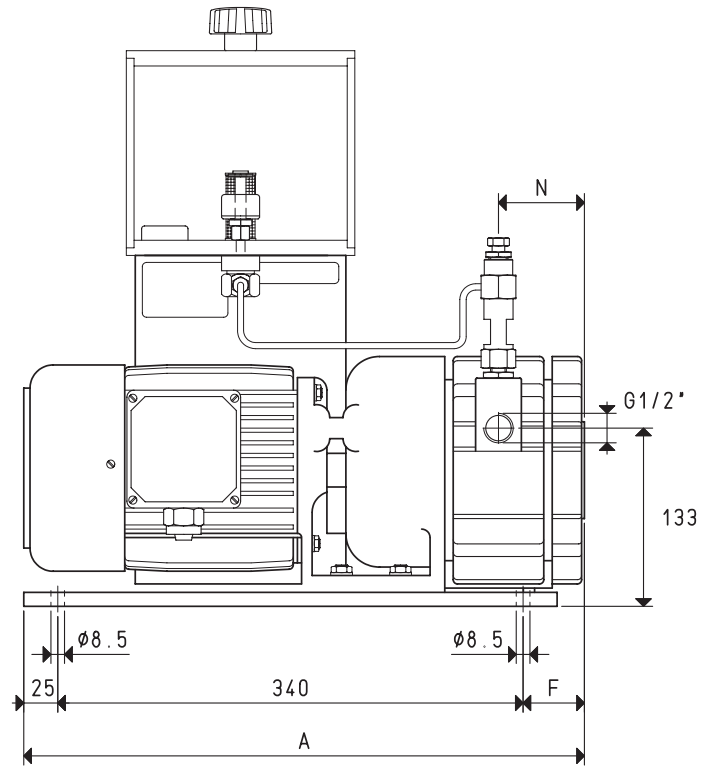
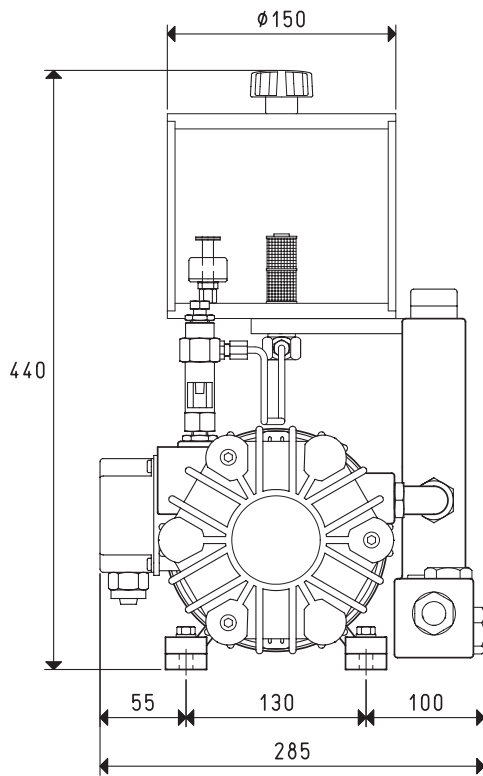


To calculate the emptying time of a volume  $V_1$ , apply the formula  $t_1 = \frac{t \times V_1}{100}$

- 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

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

# VACUUM PUMPS VTL 10/F, 15/F and 20/F

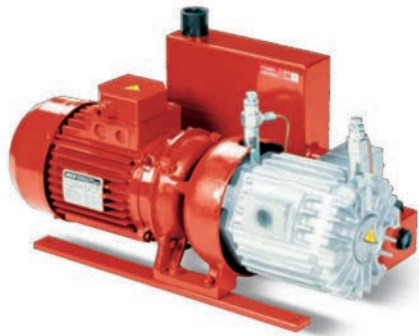


Art.	VTL 10/F		VTL 15/F		VTL 20/F			
	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz		
Frequency	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz		
Capacity	m <sup>3</sup> /h		10.0	12.0	15.0	18.0	20.0	24.0
Final pressure	mbar abs.		50		50		50	
Motor execution	3~		230/400±10%	275/480±10%	230/400±10%	275/480±10%	230/400±10%	275/480±10%
Volt	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		54		54		54	
Rotation speed	rev/min <sup>-1</sup>		1450	1740	1450	1740	1450	1740
Motor shape			Special		Special		Special	
Motor size			80		80		80	
Noise level	dB(A)		62	64	63	65	64	66
Max. weight	3~		26.1		28.1		31.1	
Kg	1~		26.6		28.6		31.6	
A			385		405		425	
F			20		40		60	
N			53		63		73	
<b>Accessories and spare parts</b>								
Oil load	l		1.8		1.8		1.8	
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 VTL 10F		00 KIT VTL 15F		00 KIT VTL 20F	
Check valve	art.		10 03 10		10 03 10		10 03 10	
Suction filtre	art.		FB 20/FC 20		FB 20/FC 20		FB 20/FC 20	
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	
Adjustable drip oiler	art.		00 VTL 00 11		00 VTL 00 11		00 VTL 00 11	

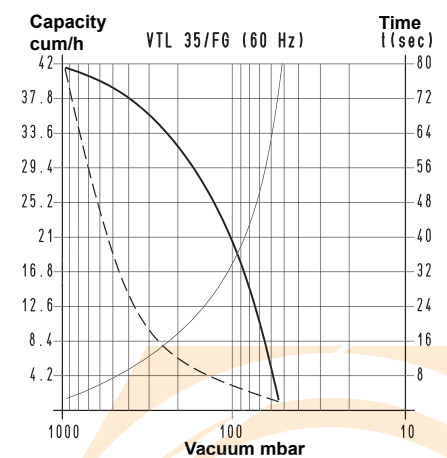
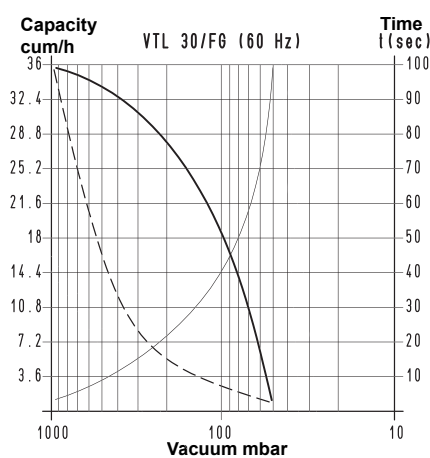
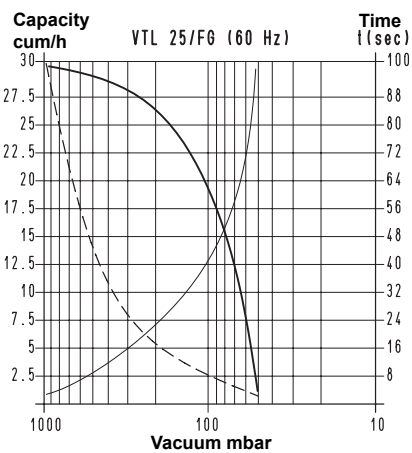
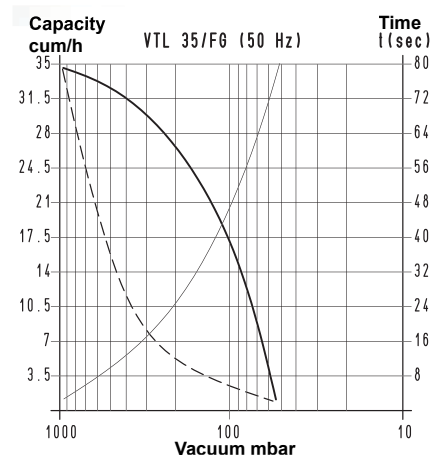
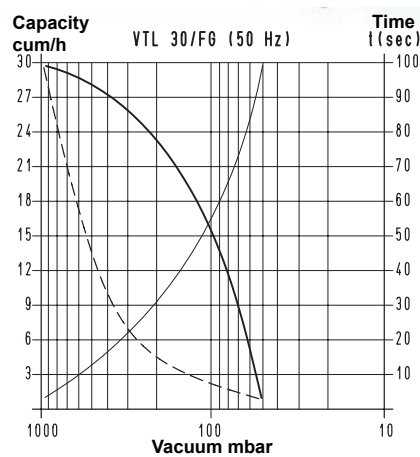
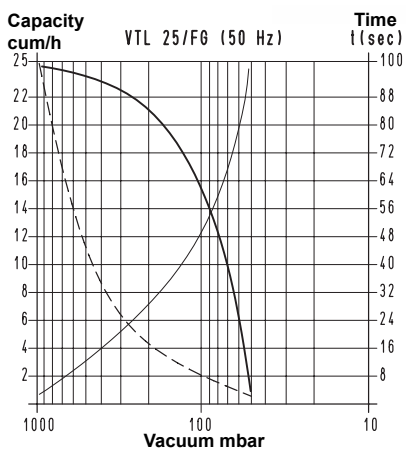
**Note:** The pump will be supplied with single-phase electric motor by adding the letter M to the article (E.g.: VTLP 10/F M).

3D drawings available at [www.vuototecnica.net](http://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.

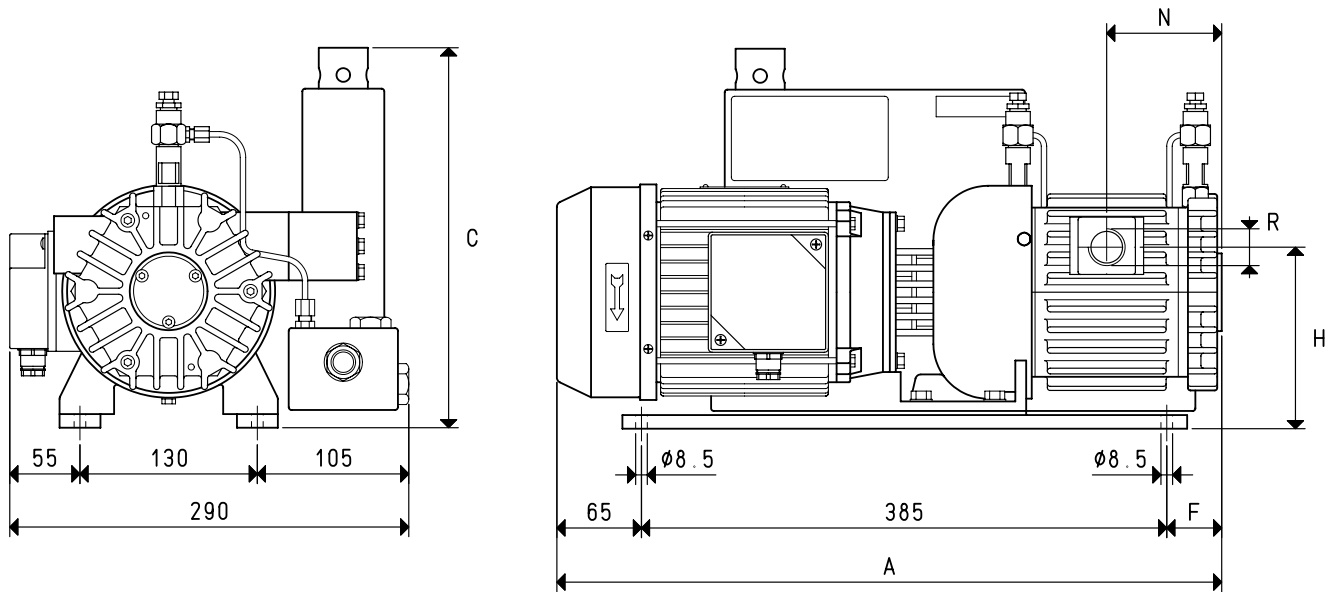


To calculate the emptying time of a volume  $V_1$ , apply the formula  $t_1 = \frac{t \times V_1}{100}$

- 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

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

# VACUUM PUMPS VTL 25/FG, 30/FG and 35/FG



Art.		VTL 25/FG		VTL 30/FG		VTL 35/FG	
<b>Frequency</b>		50Hz	60Hz	50Hz	60Hz	50Hz	60Hz
<b>Capacity</b>	m <sup>3</sup> /h	25.0	30.0	30.0	36.0	35.0	42.0
<b>Final pressure</b>	mbar abs.	50		50		50	
<b>Motor execution</b>	3~	230/400±10%	275/480±10%	230/400±10%	275/480±10%	230/400±10%	275/480±10%
<b>Voit</b>							
<b>Motor power</b>	3~	0.88	1.05	1.00	1.20	1.00	1.20
<b>Kw</b>							
<b>Motor protection</b>	IP	54		54		54	
<b>Rotation speed</b>	rev/min <sup>-1</sup>	1450	1740	1450	1740	1450	1740
<b>Motor shape</b>		B14		B14		B14	
<b>Motor size</b>		80		80		80	
<b>Noise level</b>	dB(A)	64	66	65	67	65	67
<b>Max. weight</b>	3~	31.0		35.0		37.0	
<b>Kg</b>							
<b>A</b>		470		490		510	
<b>C</b>		280		280		280	
<b>F</b>		20		40		60	
<b>H</b>		133		133		133	
<b>N</b>		73		83		93	
<b>R</b>	∅ gas	G3/4"		G3/4"		G3/4"	
<b>Accessories and spare parts</b>							
<b>Oil load</b>	l	0.65		0.85		0.85	
<b>Synthetic oil</b>	VT OIL	ISO 68		ISO 68		ISO 68	
<b>6 vanes</b>	art.	00 VTL 25FG 10		00 VTL 30FG 10		00 VTL 35FG 10	
<b>Sealing kit</b>	art.	00 KIT VTL 25FG		00 KIT VTL 30FG		00 KIT VTL 35FG	
<b>Check valve</b>	art.	10 04 10		10 04 10		10 04 10	
<b>Suction filtre</b>	art.	FB 25/FC 25		FB 25/FC 25		FB 25/FC 25	
<b>Adjustable drip oiler</b>	art.	00 VTL 00 11		00 VTL 00 11		00 VTL 00 11	

3D drawings available at [www.vuototecnica.net](http://www.vuototecnica.net)



## 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.

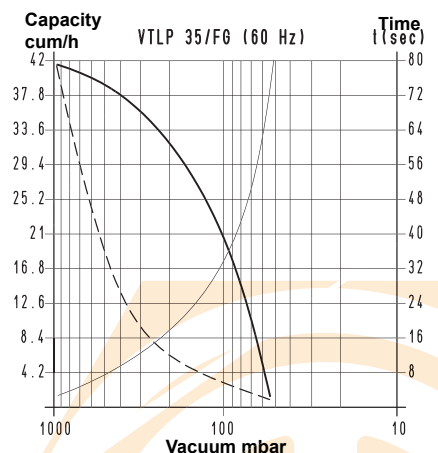
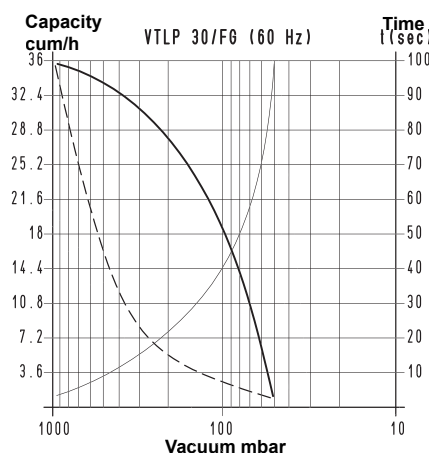
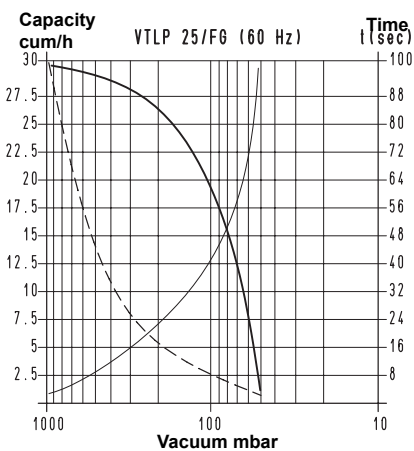
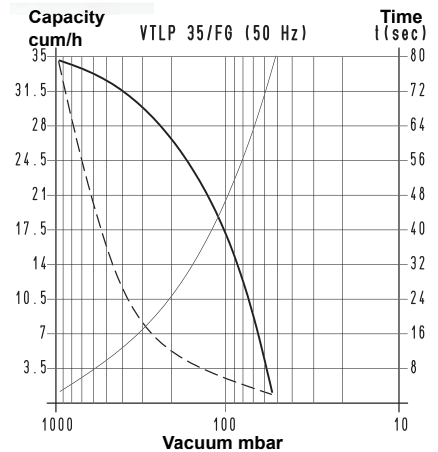
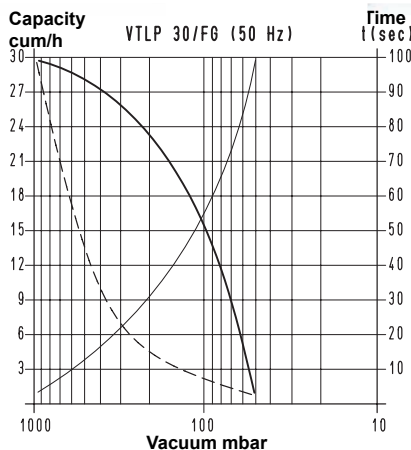
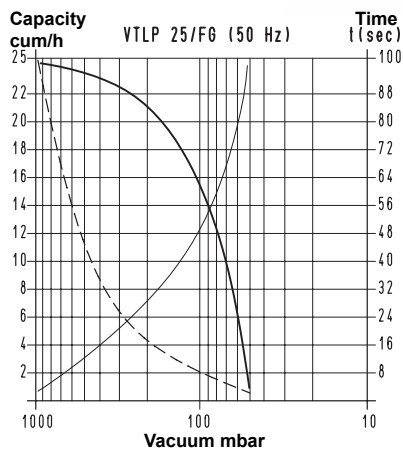
A safety valve is also installed on the tank for the automatic drainage of the exhaust oil when not regularly drained.

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.

We strongly recommend installing a check valve and a filtre on the suction inlet.

These pumps are supplied with three-phase electric motors only.

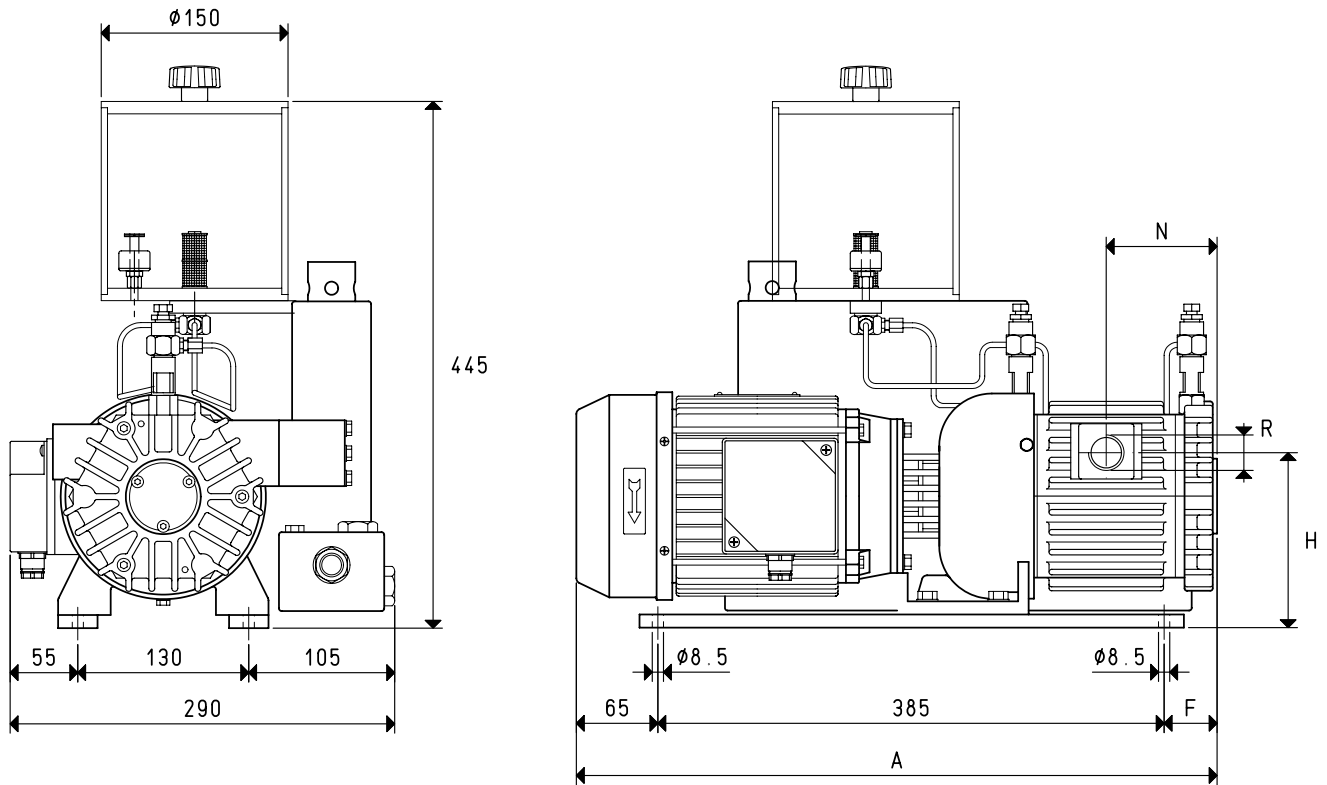


To calculate the emptying time of a volume  $V_1$ , apply the formula  $t_1 = \frac{t \times V_1}{100}$

- 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

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

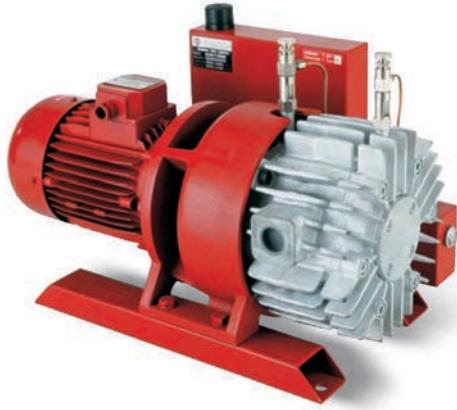
# VACUUM PUMPS VTLP 25/FG, 30/FG and 35/FG



Art.	VTLP 25/FG		VTLP 30/FG		VTLP 35/FG	
	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz
<b>Frequency</b>	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz
<b>Capacity</b>	25.0	30.0	30.0	36.0	35.0	42.0
<b>Final pressure</b>	50		50		50	
<b>Motor execution</b>	3~	275/480±10%	230/400±10%	275/480±10%	230/400±10%	275/480 ±10%
<b>Volt</b>	3~					
<b>Motor power</b>	0.88	1.05	1.00	1.20	1.00	1.20
<b>Kw</b>						
<b>Motor protection</b>	IP					
<b>Rotation speed</b>	1450	1740	1450	1740	1450	1740
<b>Motor shape</b>	B14		B14		B14	
<b>Motor size</b>	80		80		80	
<b>Noise level</b>	64	66	65	67	65	67
<b>Max. weight</b>	32.0		36.0		38.0	
<b>Kg</b>						
<b>A</b>	470		490		510	
<b>F</b>	20		40		60	
<b>H</b>	133		133		133	
<b>N</b>	73		83		93	
<b>R</b>	Ø gas		G3/4"		G3/4"	
<b>Accessories and spare parts</b>						
<b>Oil load</b>	1.8		1.8		1.8	
<b>Synthetic oil</b>	VT OIL		ISO 68		ISO 68	
<b>6 vanes</b>	art.		00 VTL 25FG 10		00 VTL 35FG 10	
<b>Sealing kit</b>	art.		00 KIT VTL 25FG		00 KIT VTL 35FG	
<b>Check valve</b>	art.		10 04 10		10 04 10	
<b>Suction filtre</b>	art.		FB 25/FC 25		FB 25/FC 25	
<b>Oil level switch</b>	art.		00 LP VTL 99		00 LP VTL 99	
<b>Oil filtre</b>	art.		00 LP VTL 40		00 LP VTL 40	
<b>Adjustable drip oiler</b>	art.		00 VTL 00 11		00 VTL 00 11	

3D drawings available at [www.vuototecnica.net](http://www.vuototecnica.net)

## 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.

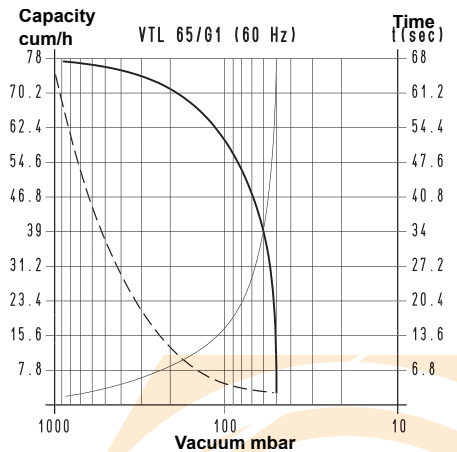
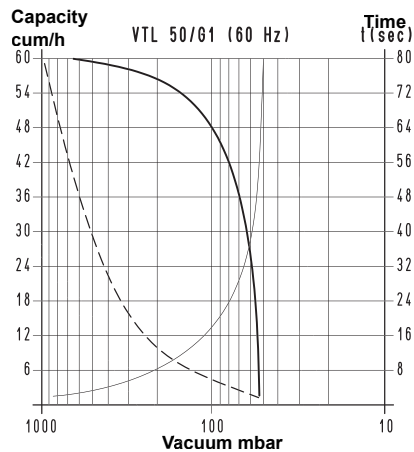
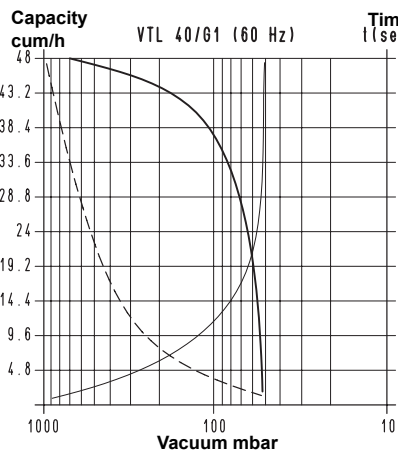
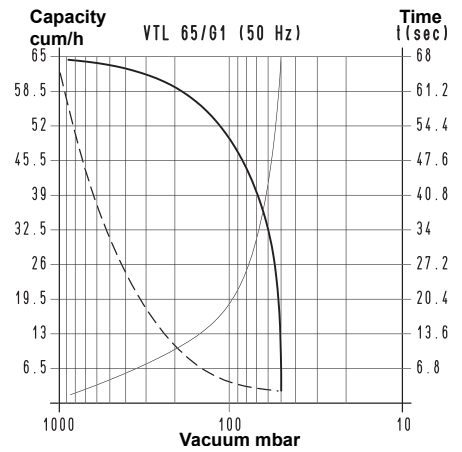
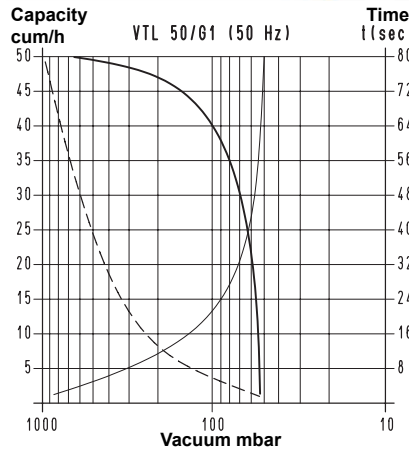
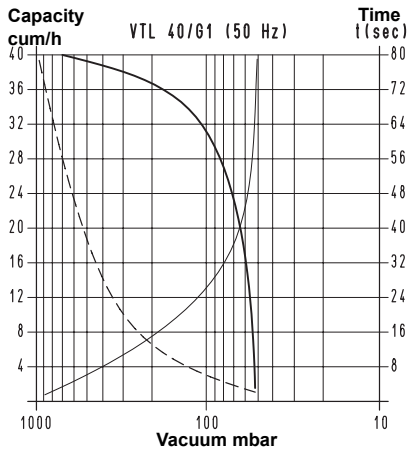
The rotor is fitted on the motor shaft and supported by independent bearings housed in the two pump flanges. The pump and the electric motor are, therefore, two independent units and fixed onto a special support and connected to each other via an elastic transmission joint.

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.

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.

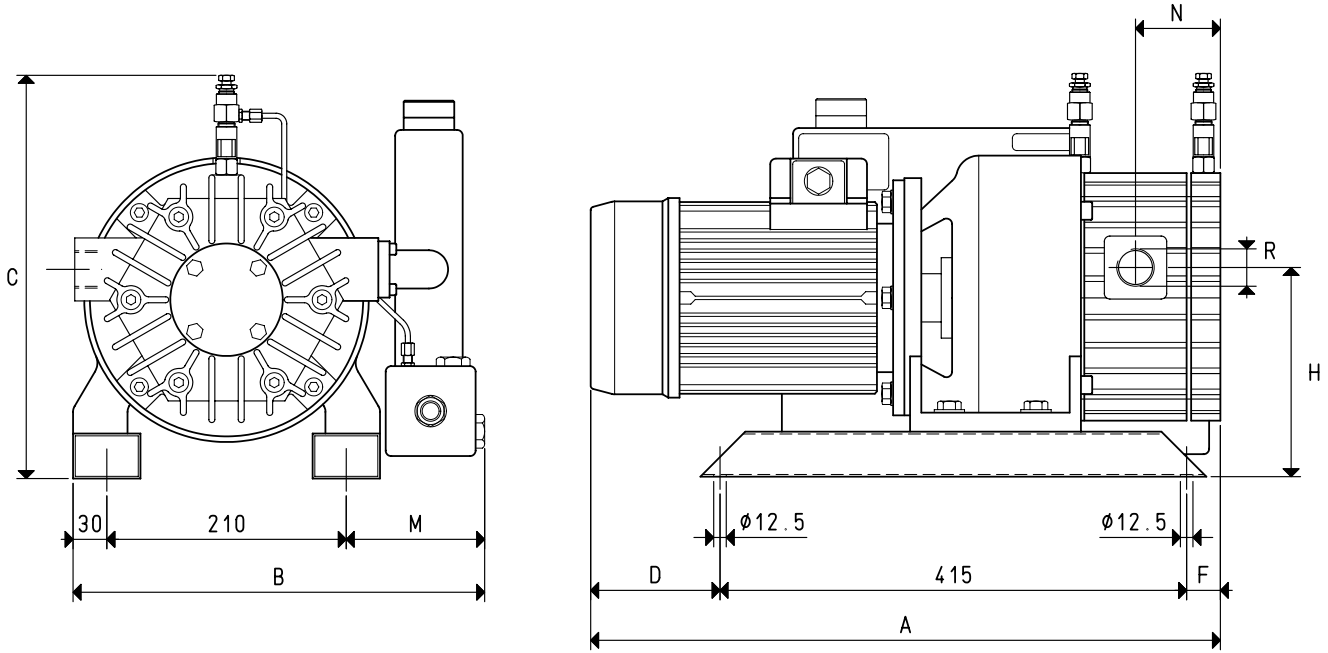


To calculate the emptying time of a volume  $V_1$ , apply the formula  $t_1 = \frac{t \times V_1}{100}$

- 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

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

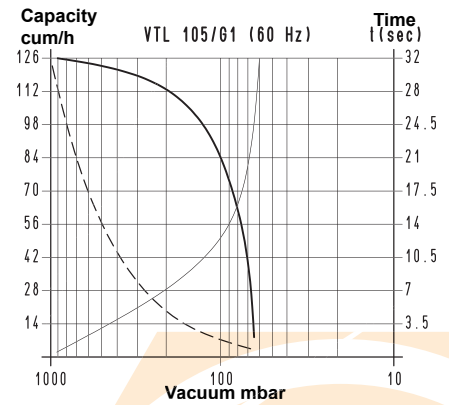
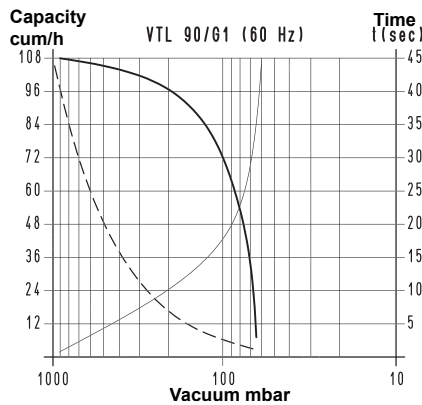
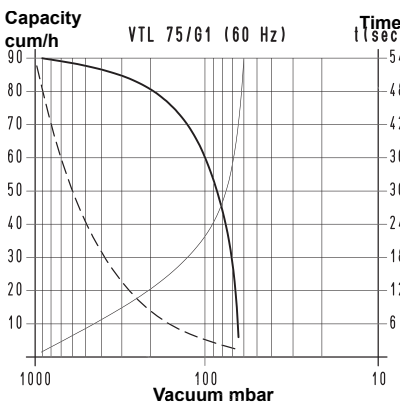
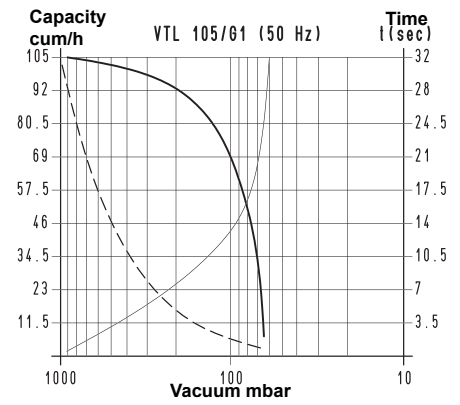
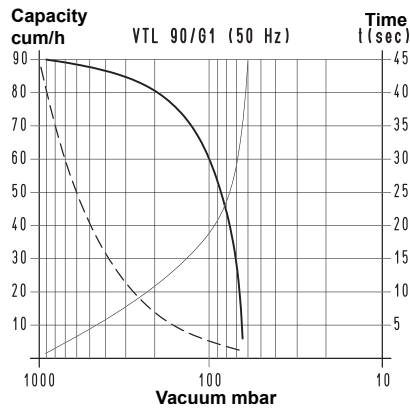
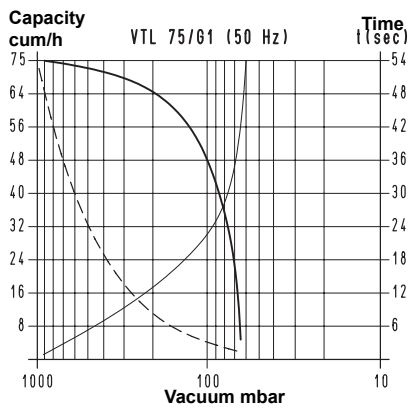
# VACUUM PUMPS VTL 40/G1, 50/G1 and 65/G1



Art.		VTL 40/G1		VTL 50/G1		VTL 65/G1	
<b>Frequency</b>		50Hz	60Hz	50Hz	60Hz	50Hz	60Hz
<b>Capacity</b>	m <sup>3</sup> /h	40.0	48.0	50.0	60.0	65.0	78.0
<b>Final pressure</b>	mbar abs.	50		50		50	
<b>Motor execution</b>	3~	230/400±10%	275/480±10%	230/400±10%	275/480±10%	230/400±10%	275/480±10%
<b>Voit</b>							
<b>Motor power</b>	3~	1.10	1.35	1.50	1.80	1.50	1.80
<b>Kw</b>							
<b>Motor protection</b>	IP	54		54		54	
<b>Rotation speed</b>	rev/min <sup>-1</sup>	1450	1740	1450	1740	1450	1740
<b>Motor shape</b>		B5		B5		B5	
<b>Motor size</b>		90		90		90	
<b>Noise level</b>	dB(A)	68	70	68	70	70	72
<b>Max. weight</b>	3~	51.0		54.0		71.0	
<b>Kg</b>							
<b>A</b>		520		560		580	
<b>B</b>		365		365		365	
<b>C</b>		350		350		350	
<b>D</b>		60		115		120	
<b>F</b>		45		30		45	
<b>H</b>		186		186		186	
<b>M</b>		125		125		125	
<b>N</b>		70		80		80	
<b>R</b>	Ø gas	G1"		G1"		G1"	
<b>Accessories and spare parts</b>							
<b>Oil load</b>	l	0.85		1.00		1.00	
<b>Synthetic oil</b>	VT OIL	ISO 100		ISO 100		ISO 100	
<b>6 vanes</b>	art.	00 VTL 40G1 10		00 VTL 50G1 10		00 VTL 65G1 10	
<b>Sealing kit</b>	art.	00 KIT VTL 40G1		00 KIT VTL 50G1		00 KIT VTL 65 G1	
<b>Check valve</b>	art.	10 05 10		10 05 10		10 05 10	
<b>Suction filtre</b>	art.	FB 30/FC 30		FB 30/FC 30		FB 30/FC 30	
<b>Adjustable drip oiler</b>	art.	00 VTL 00 11		00 VTL 00 11		00 VTL 00 11	

3D drawings available at [www.vuototecnica.net](http://www.vuototecnica.net)

# VACUUM PUMPS VTL 75/G1, 90/G1 and 105/G1

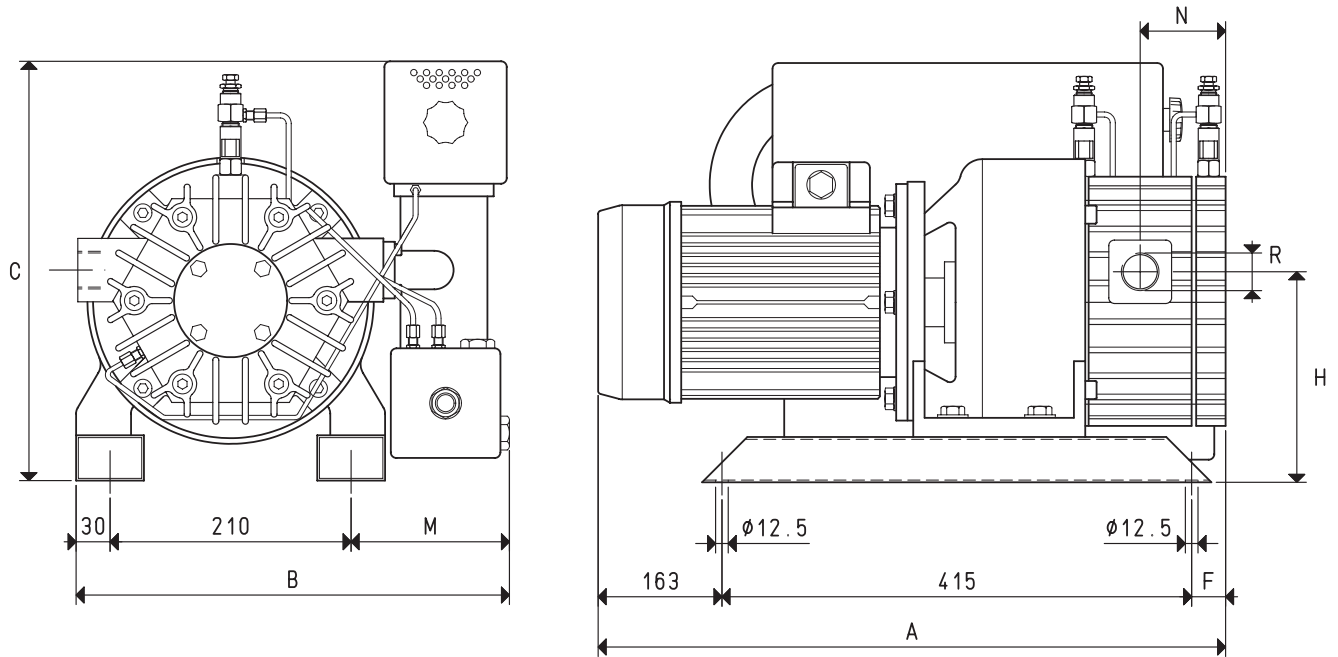


To calculate the emptying time of a volume  $V_1$ , apply the formula  $t_1 = \frac{t \times V_1}{100}$

- 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

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

# VACUUM PUMPS VTL 75/G1, 90/G1 and 105/G1



Art.		VTL 75/G1		VTL 90/G1		VTL 105/G1	
<b>Frequency</b>		50Hz	60Hz	50Hz	60Hz	50Hz	60Hz
<b>Capacity</b>	m <sup>3</sup> /h	75.0	90.0	90.0	108.0	105.0	126.0
<b>Final pressure</b>	mbar abs.	50		50		50	
<b>Motor execution</b>	3~	230/400±10%	275/480±10%	230/400±10%	275/480±10%	230/400±10%	275/480±10%
<b>Voit</b>							
<b>Motor power</b>	3~	2.20	2.70	3.00	3.60	3.00	3.60
<b>Kw</b>							
<b>Motor protection</b>	IP	54		54		54	
<b>Rotation speed</b>	rev/min <sup>-1</sup>	1450	1740	1450	1740	1450	1740
<b>Motor shape</b>		B5		B5		B5	
<b>Motor size</b>		100		100		100	
<b>Noise level</b>	dB(A)	70	72	71	73	72	74
<b>Max. weight</b>	3~	76.5		84.0		97.6	
<b>Kg</b>							
<b>A</b>		640		660		690	
<b>B</b>		385		400		400	
<b>C</b>		400		400		445	
<b>F</b>		62		82		112	
<b>H</b>		186		186		186	
<b>M</b>		145		150		160	
<b>N</b>		80		92		122	
<b>R</b>	Ø gas	G1"1/4		G1"1/4		G1"1/2	
<b>Accessories and spare parts</b>							
<b>Oil load</b>	l	2.0		2.6		2.6	
<b>Synthetic oil</b>	VT OIL	ISO 100		ISO 100		ISO 100	
<b>Deoiling cartridge</b>	art.	00 VTL 75G1 29		00 VTL 90G1 29		00 VTL 105G1 29	
<b>6 vanes</b>	art.	00 VTL 75G1 10		00 VTL 90G1 10		00 VTL 105G1 10	
<b>Sealing kit</b>	art.	00 KIT VTL 75G1		00 KIT VTL 90G1		00 KIT VTL 105G1	
<b>Check valve</b>	art.	10 06 10		10 06 10		10 07 10	
<b>Suction filtre</b>	art.	FB 40/FC 40		FB 40/FC 40		FB 50/FC 50	
<b>Adjustable drip oiler</b>	art.	00 VTL 00 11		00 VTL 00 11		00 VTL 00 11	

3D drawings available at [www.vuototecnica.net](http://www.vuototecnica.net)

# 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 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.

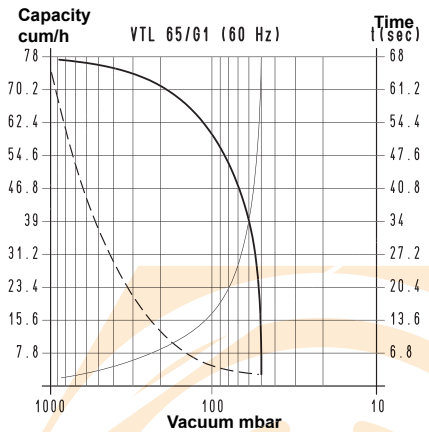
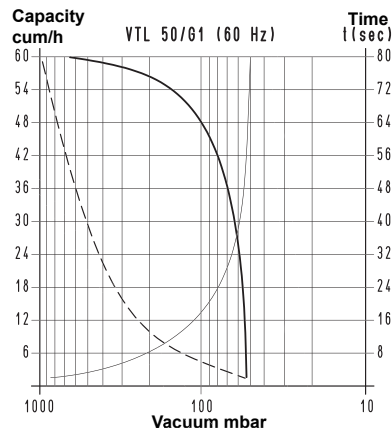
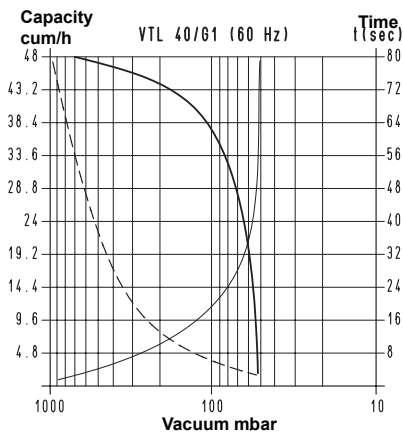
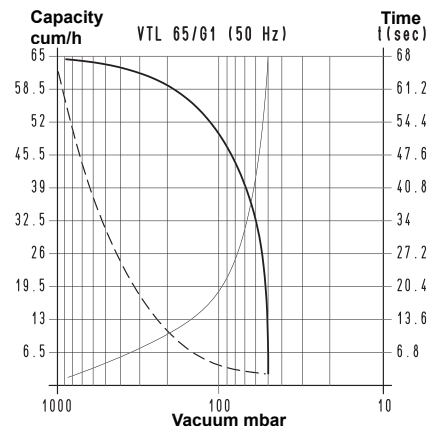
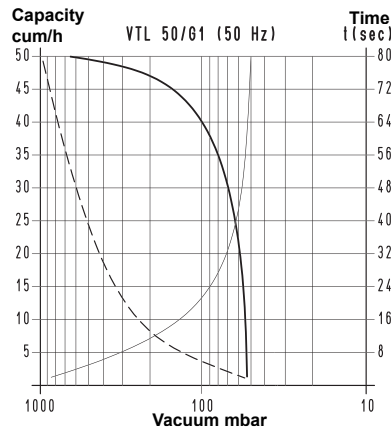
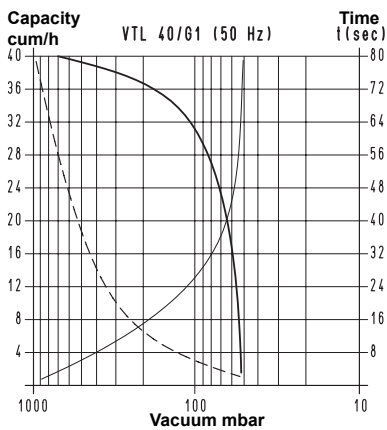
An oil recovery tank is installed on the pump exhaust. This tank contains a separator filter that prevents oil mists and reduces noise.

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 filter must be installed on the suction inlet.  
These pumps are supplied with three-phase electric motors only.

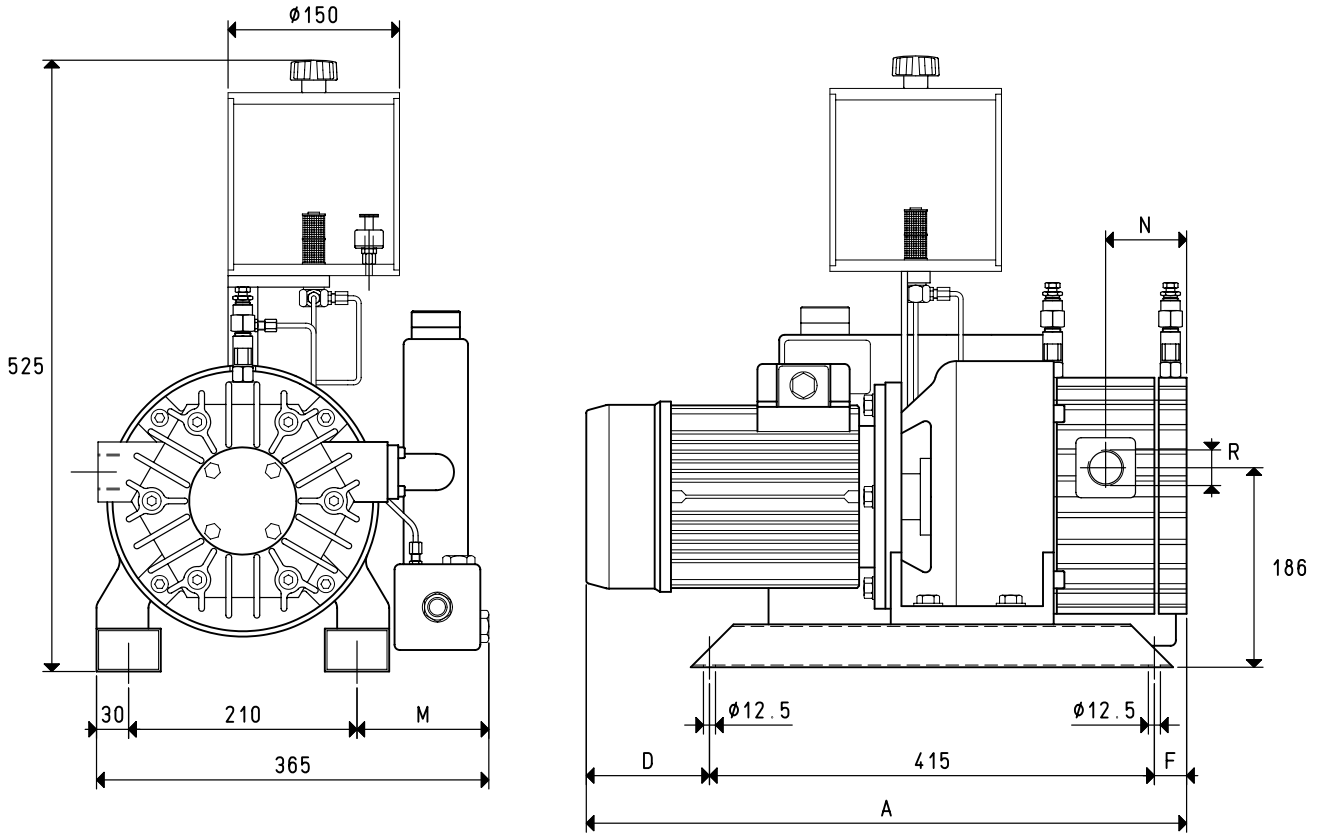


To calculate the emptying time of a volume  $V_1$ , apply the formula  $t_1 = \frac{t \times V_1}{100}$

- 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

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

# VACUUM PUMPS VTLP 40/G1, 50/G1 and 65/G1

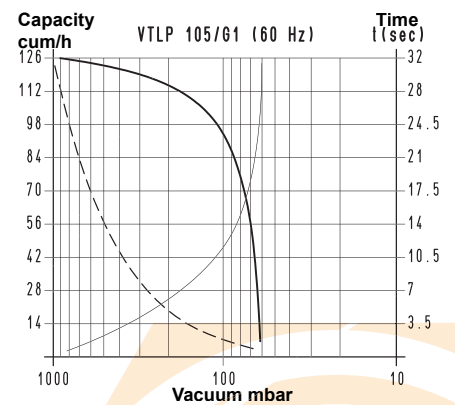
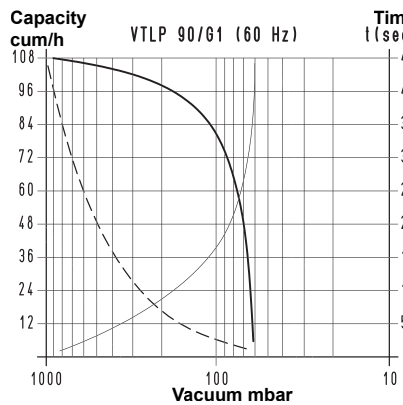
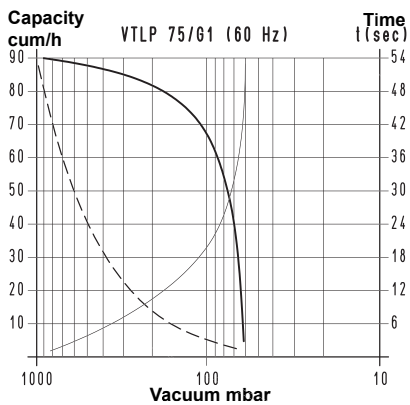
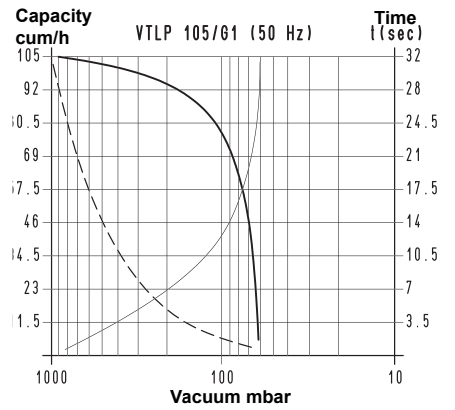
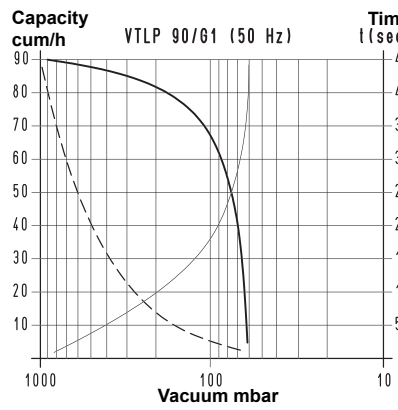
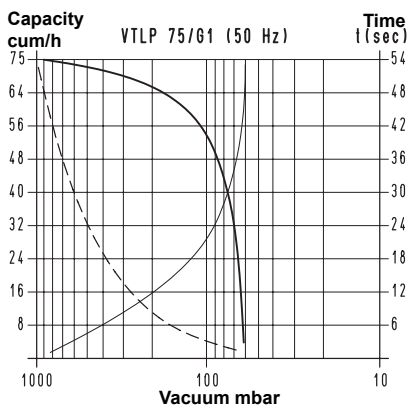


Art.	VTLP 40/G1		VTLP 50/G1		VTLP 65/G1		
	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	
<b>Frequency</b>							
<b>Capacity</b>	m <sup>3</sup> /h	40.0	48.0	50.0	60.0	65.0	78.0
<b>Final pressure</b>	mbar abs.		50		50		50
<b>Motor execution</b>	3~	230/400±10%	275/480±10%	230/400±10%	275/480±10%	230/400±10%	275/480 ±10%
<b>Volt</b>							
<b>Motor power</b>	3~	1.10	1.35	1.50	1.80	1.50	1.80
<b>Kw</b>							
<b>Motor protection</b>	IP		54		54		54
<b>Rotation speed</b>	rev/min <sup>-1</sup>	1450	1740	1450	1740	1450	1740
<b>Motor shape</b>			B5		B5		B5
<b>Motor size</b>			90		90		90
<b>Noise level</b>	dB(A)	68	70	68	70	70	72
<b>Max. weight</b>	3~		52.5		55.1		72.1
<b>Kg</b>							
<b>A</b>			520		560		580
<b>D</b>			60		115		120
<b>F</b>			45		30		45
<b>M</b>			125		125		125
<b>N</b>			70		80		80
<b>R</b>	Ø gas		G1"		G1"		G1"
<b>Accessories and spare parts</b>							
<b>Oil load</b>	l		1.80		1.80		1.80
<b>Synthetic oil</b>	VT OIL		ISO 100		ISO 100		ISO 100
<b>6 vanes</b>	art.		00 VTL 40G1 10		00 VTL 50G1 10		00 VTL 65G1 10
<b>Sealing kit</b>	art.		00 KIT VTL 40G1		00 KIT VTL 50G1		00 KIT VTL 65G1
<b>Check valve</b>	art.		10 05 10		10 05 10		10 05 10
<b>Suction filtre</b>	art.		FB 30/FC 30		FB 30/FC 30		FB 30/FC 30
<b>Oil level switch</b>	art.		00 LP VTL 99		00 LP VTL 99		00 LP VTL 99
<b>Oil filtre</b>	art.		00 LP VTL 40		00 LP VTL 40		00 LP VTL 40
<b>Adjustable drip oiler</b>	art.		00 VTL 00 11		00 VTL 00 11		00 VTL 00 11

3D drawings available at [www.vuototecnica.net](http://www.vuototecnica.net)



# VACUUM PUMPS VTLP 75/G1, 90/G1 and 105/G1

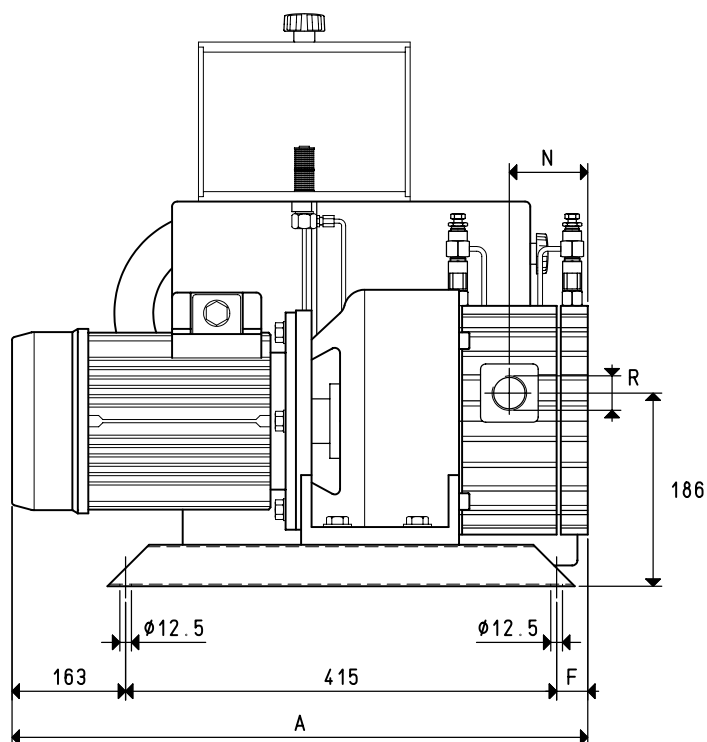
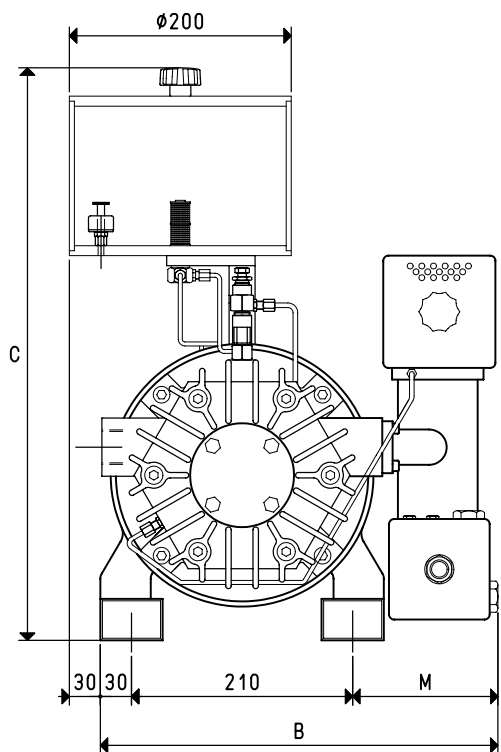


To calculate the emptying time of a volume  $V_1$ , apply the formula  $t_1 = \frac{t \times V_1}{100}$

- Curve regarding capacity (referring to the suction pressure)
- - - Curve regarding capacity (referring to a 1013 mbar 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)

# VACUUM PUMPS VTLP 75/G1, 90/G1 e 105/G1



Art.	VTLP 75/G1		VTLP 90/G1		VTLP 105/G1	
<b>Frequency</b>	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz
<b>Capacity</b> m <sup>3</sup> /h	75.0	90.0	90.0	108.0	105.0	126.0
<b>Final pressure</b> mbar abs.	50		50		50	
<b>Motor execution</b> 3~	230/400±10%	275/480±10%	230/400±10%	275/480±10%	230/400±10%	275/480±10%
<b>Voit</b>						
<b>Motor protection</b> IP	54		54		54	
<b>Motor power</b> 3~	2.20	2.70	3.00	3.60	3.00	3.60
<b>Kw</b>						
<b>Rotation speed</b> rev/min <sup>-1</sup>	1450	1740	1450	1740	1450	1740
<b>Motor shape</b>	B5		B5		B5	
<b>Motor size</b>	100		100		100	
<b>Noise level</b> dB(A)	70	72	71	73	72	74
<b>Max. weight</b> 3~	78.3		85.8		99.4	
<b>Kg</b>						
<b>A</b>	640		660		690	
<b>B</b>	415		430		430	
<b>C</b>	575		575		620	
<b>F</b>	62		82		112	
<b>M</b>	145		150		160	
<b>N</b>	80		92		122	
<b>R</b> Ø gas	G1 1/4"		G1 1/4"		G1 1/2"	
<b>Accessories and spare parts</b>						
<b>Oil load</b> l	3.8		3.8		3.8	
<b>Synthetic oil</b> VT OIL	ISO 100		ISO 100		ISO 100	
<b>Deoiling cartridge</b> art.	00 VTL 75G1 29		00 VTL 90G1 29		00 VTL 105G1 29	
<b>6 vanes</b> art.	00 VTL 75G1 10		00 VTL 90 G110		00 VTL 105 G110	
<b>Sealing kit</b> art.	00 KIT VTL 75G1		00 KIT VTL 90G1		00 KIT VTL 105G1	
<b>Check valve</b> art.	10 06 10		10 06 10		10 07 10	
<b>Suction filtre</b> art.	FB 40/FC 40		FB 40/FC 40		FB 50/FC 50	
<b>Oil level switch</b> art.	00 LP VTL 99		00 LP VTL 99		00 LP VTL 99	
<b>Oil filtre</b> art.	00 LP VTL 40		00 LP VTL 40		00 LP VTL 40	
<b>Adjustable drip oiler</b> art.	00 VTL 00 11		00 VTL 00 11		00 VTL 00 11	

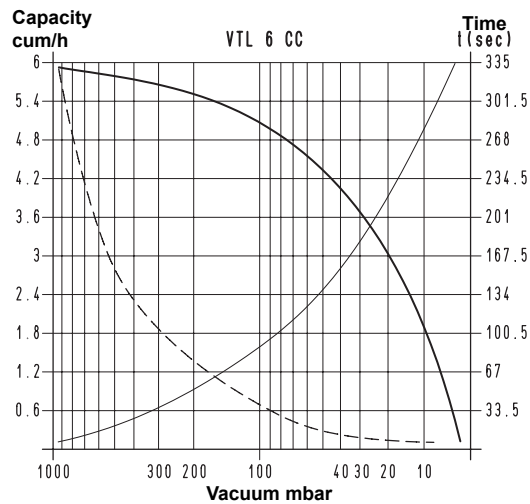
3D drawings available at [www.vuototecnica.net](http://www.vuototecnica.net)

## 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 by 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 filter.

The VTL 6 DC pump can only be supplied with a DC motor (service S1) conform with the EMC (89/336/CEE) Directive.

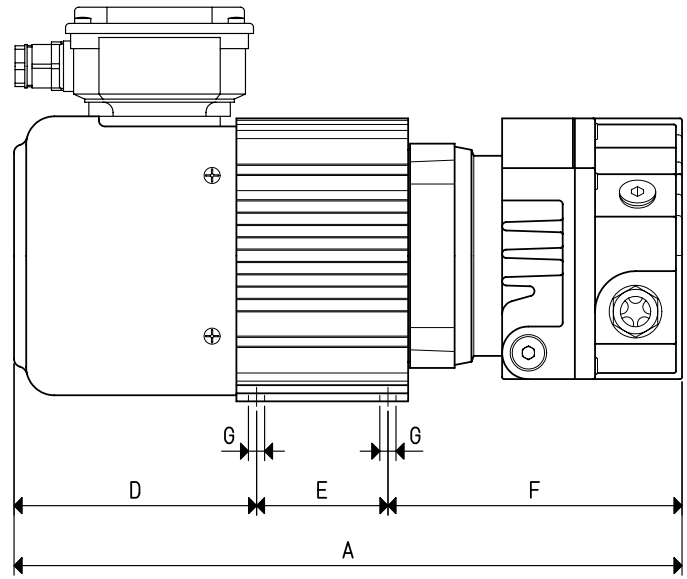
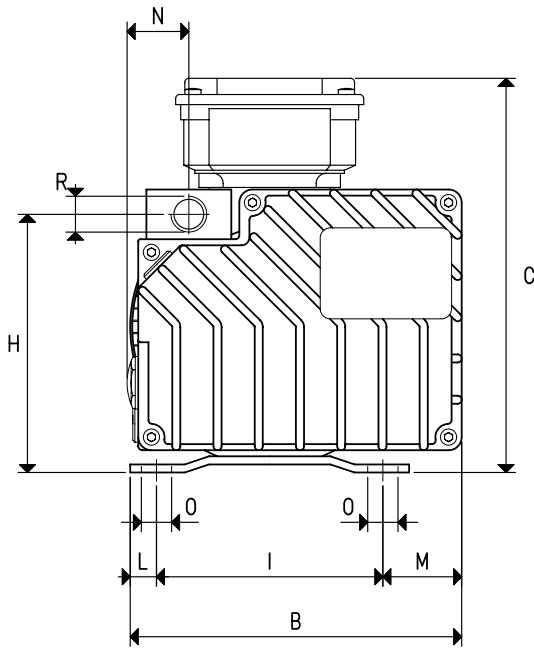


To calculate the emptying time of a volume  $V_1$ , apply the formula  $t_1 = \frac{t \times V_1}{100}$

- 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

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

# VACUUM PUMP VTL 6 DC WITH DC MOTOR

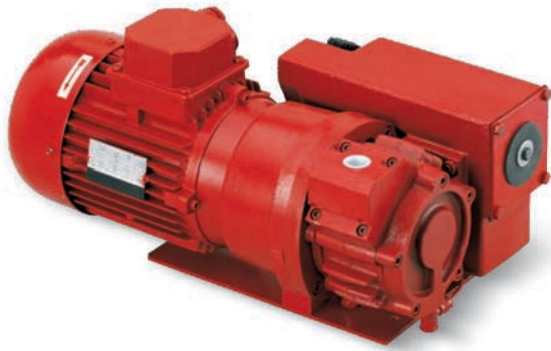


Art.	VTL 6 CC	
Capacity	m <sup>3</sup> /h	6
Final pressure	mbar abs.	2
Motor execution	Volt	24 CC
Motor power	Kw	0.28
Max. absorption at 24 V CC	A	15
Motor protection	IP	54
Rotation speed	rev/min <sup>-1</sup>	3000
Motor shape		Special
Motor size		71
Noise level	dB(A)	68
Max. weight	Kg	10.5
A		335
B		168
C		195
D		124
E		65
F		146
G		8
H		128
I		112
L		12
M		44
N		32
O		14.5
R	Ø gas	G3/8"
Accessories and spare parts		
Oil load	l	0.20
Synthetic oil	VT OIL	ISO 32
3 vanes	art.	00 VTL 06 10
Sealing kit	art.	00 KIT VTL 06
Check valve	art.	Built-in
Suction filtre	art.	FB 10/FC 10

3D drawings available at [www.vuototecnica.net](http://www.vuototecnica.net)

# OIL-BATH VACUUM PUMPS

## MV 20 ÷ 300R and MV 20A ÷ 300RA

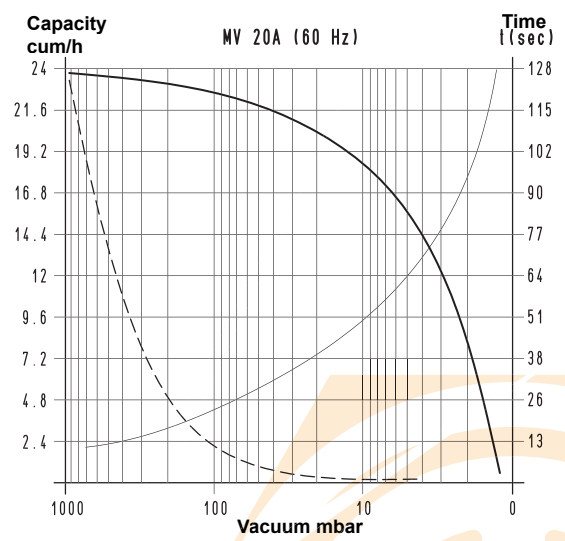
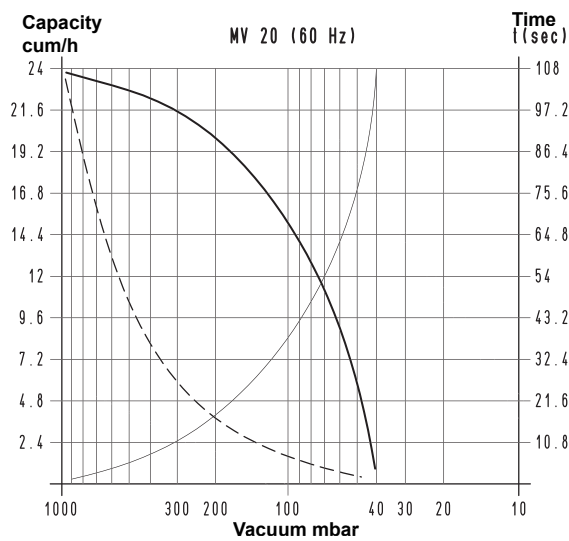
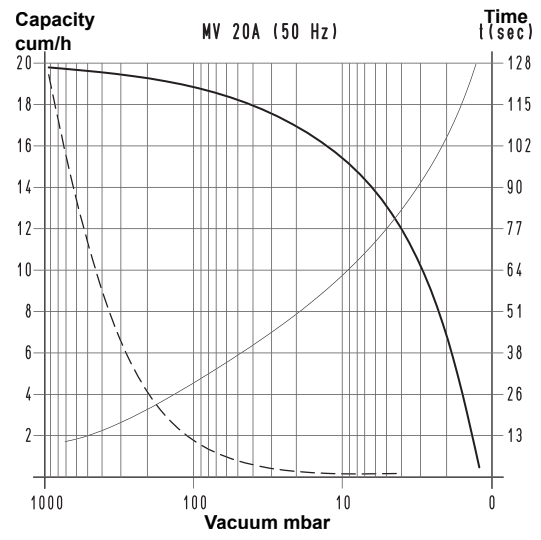
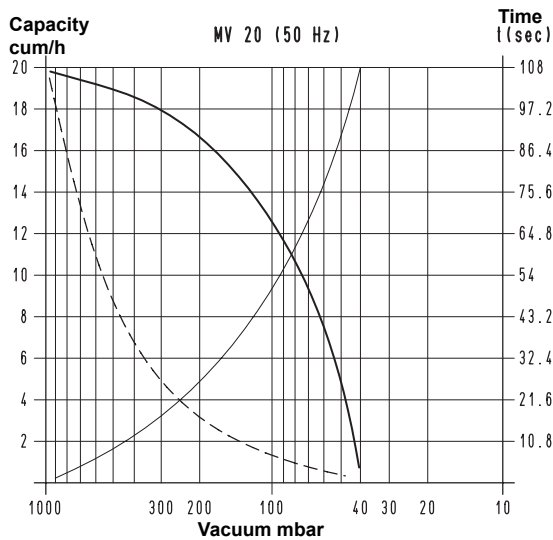


The single-stage oil-bath vane vacuum pumps of the MV series are activated by a standard electric motor coupled together via an elastic transmission joint. A centrifugal fan cantilevered-fitted onto the pump shaft guarantees the right airflow for cooling the pump unit (forced surface cooling).

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.

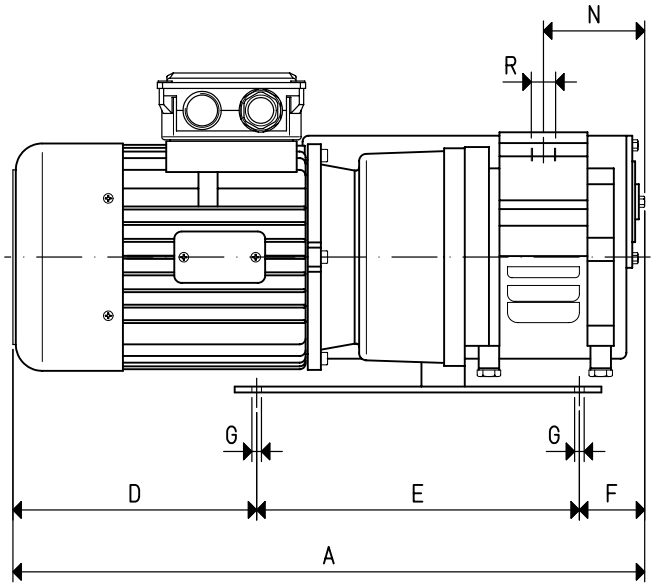
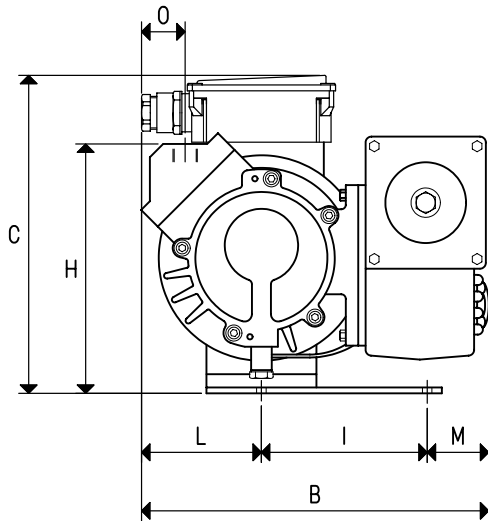


To calculate the emptying time of a volume  $V_1$ , apply the formula  $t_1 = \frac{t \times V_1}{100}$

- 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

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

# OIL-BATH VACUUM PUMPS MV 20 AND MV 20A

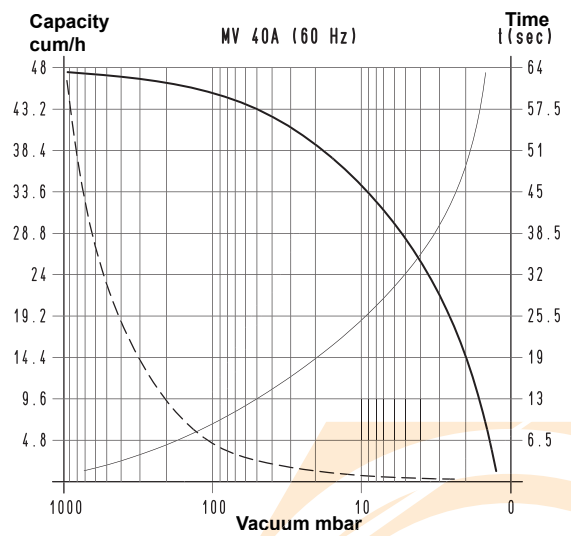
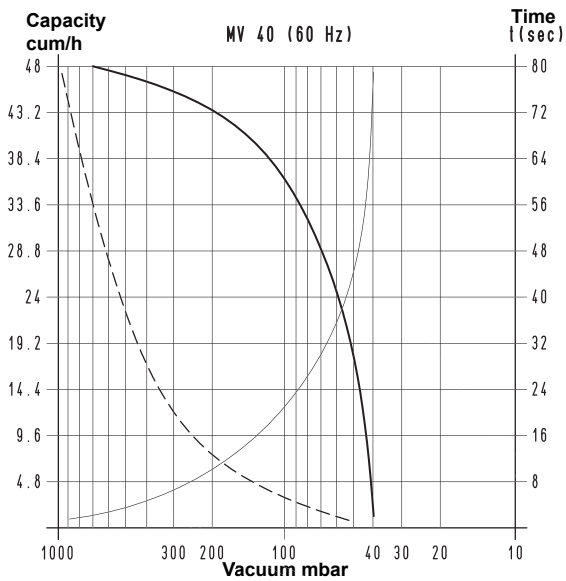
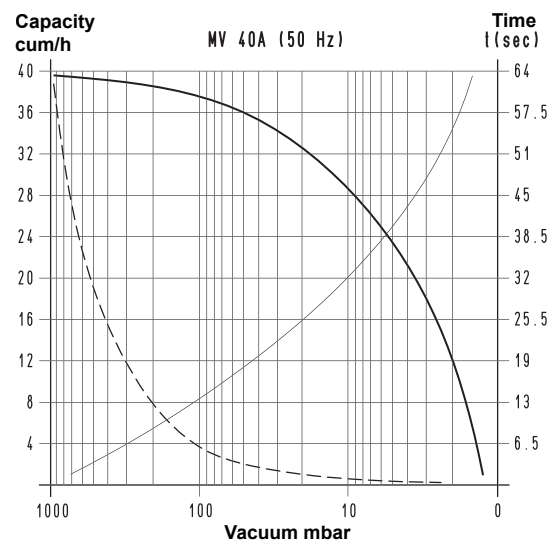
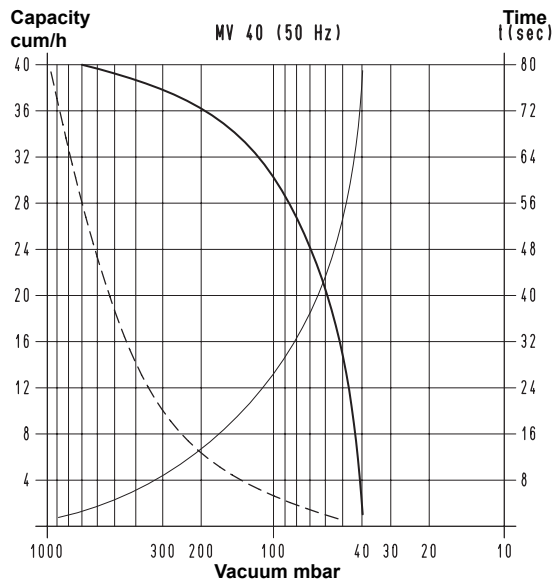
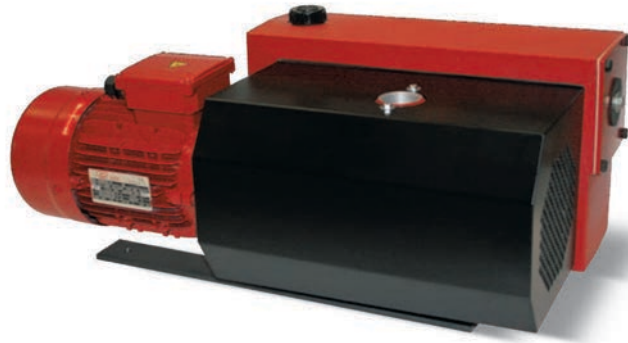


Art.		MV 20		MV 20A	
<b>Frequency</b>		50Hz	60Hz	50Hz	60Hz
<b>Capacity</b>	m <sup>3</sup> /h	20.0	24.0	20.0	24.0
<b>Final pressure</b>	mbar abs.	40		0.7	
<b>Motor execution</b>	3~	230/400±10%	275/480±10%	230/400±10%	275/480±10%
<b>Volt</b>	1~	230±10%		230±10%	
<b>Motor power</b>	3~	0.75	0.90	0.75	0.90
<b>Kw</b>	1~	0.75	0.90	0.75	0.90
<b>Motor protection</b>	IP	55		55	
<b>Rotation speed</b>	rev/min <sup>-1</sup>	2800	3350	2800	3350
<b>Motor shape</b>		B14		B14	
<b>Motor size</b>		80		80	
<b>Noise level</b>	dB(A)	64	66	64	66
<b>Max. weight</b>	3~	21.5		21.5	
<b>Kg</b>	1~	22.0		22.0	
<b>A</b>		425		425	
<b>B</b>		235		235	
<b>C</b>		215		215	
<b>D</b>		145		145	
<b>E</b>		220		220	
<b>F</b>		60		60	
<b>G</b>	∅	6.5		6.5	
<b>H</b>		170		170	
<b>I</b>		113		113	
<b>L</b>		82		82	
<b>M</b>		40		40	
<b>N</b>		60		60	
<b>O</b>		30		30	
<b>R</b>	∅ gas	G1/2"		G1/2"	
<b>Accessories and spare parts</b>					
<b>Oil load</b>	l	0.70		0.70	
<b>Synthetic oil</b>	VT OIL	ISO 68		ISO 68	
<b>Deoiling cartridge</b>	art.	00 MV 20 11		00 MV 20 11	
<b>3 vanes</b>	art.	00 MV 20 10		00 MV 20 10	
<b>Sealing kit</b>	art.	00 KIT MV 20		00 KIT MV 20	
<b>Check valve</b>	art.	Built-in		Built-in	
<b>Suction filtre</b>	art.	FC 20		FC 20	
<b>Ballast valve</b>	art.	VZ 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).

3D drawings available at [www.vuototecnica.net](http://www.vuototecnica.net)

# OIL-BATH VACUUM PUMPS MV 40 and MV 40A

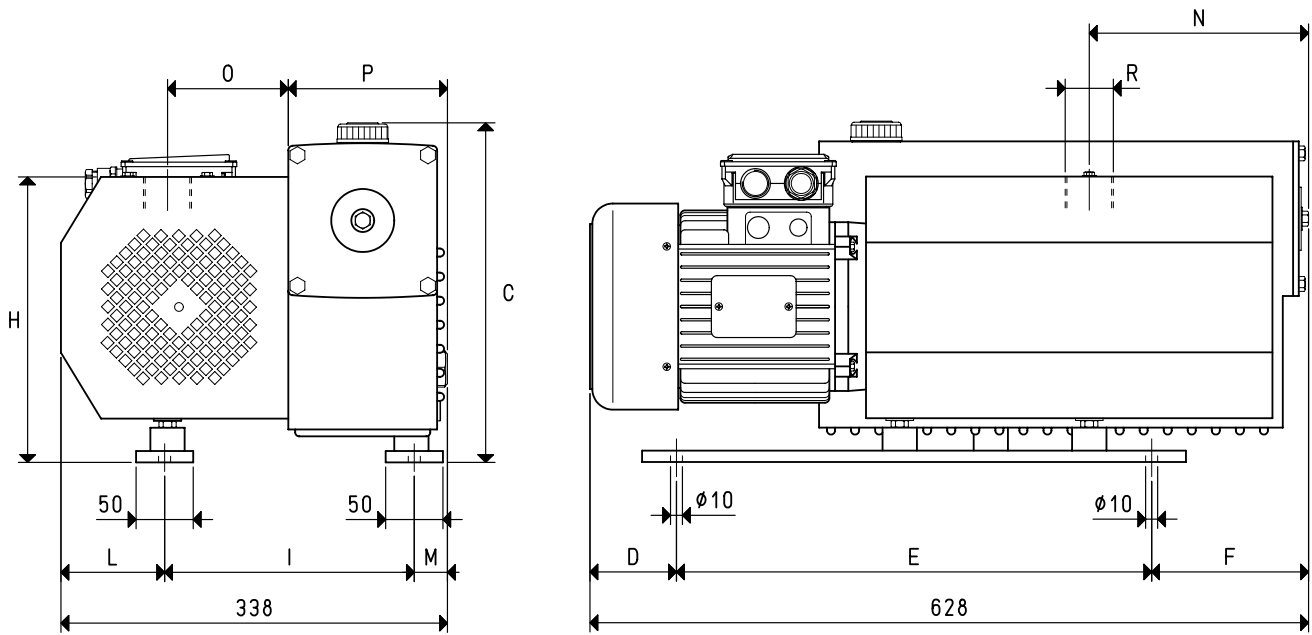


To calculate the emptying time of a volume  $V_1$ , apply the formula  $t_1 = \frac{t \times V_1}{100}$

- Curve regarding capacity (referring to the suction pressure)
- - - Curve regarding capacity (referring to a 1013 mbar 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 40 AND MV 40A

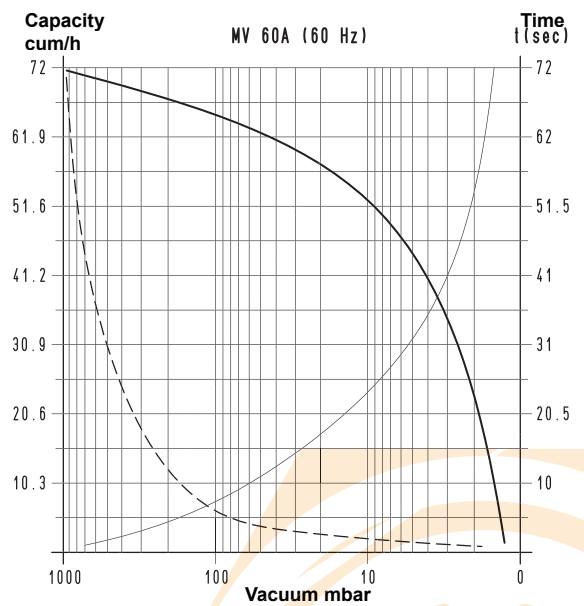
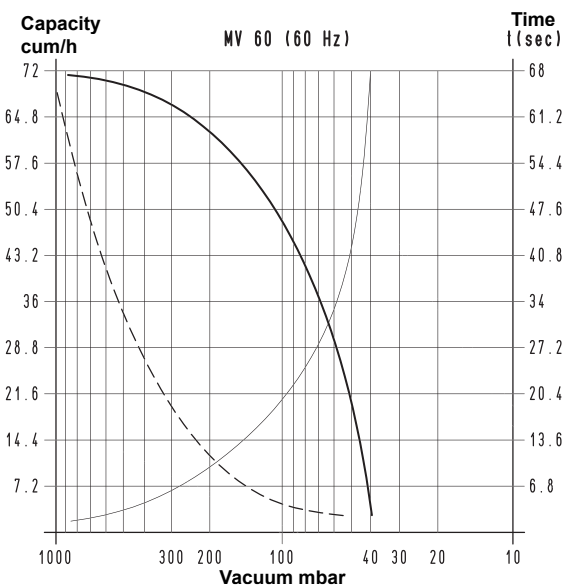
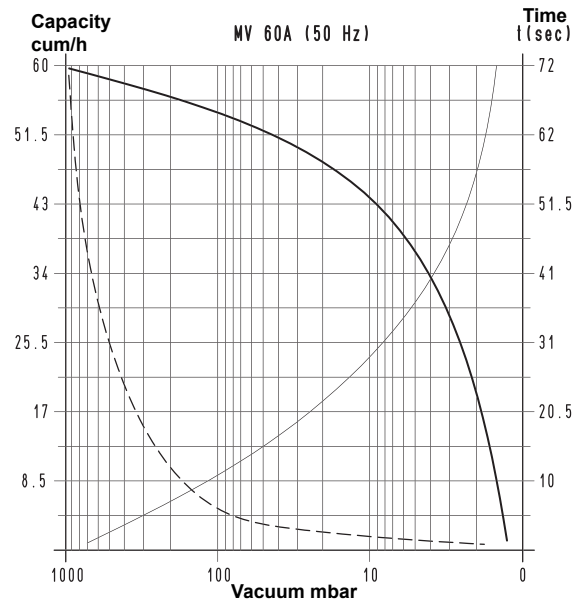
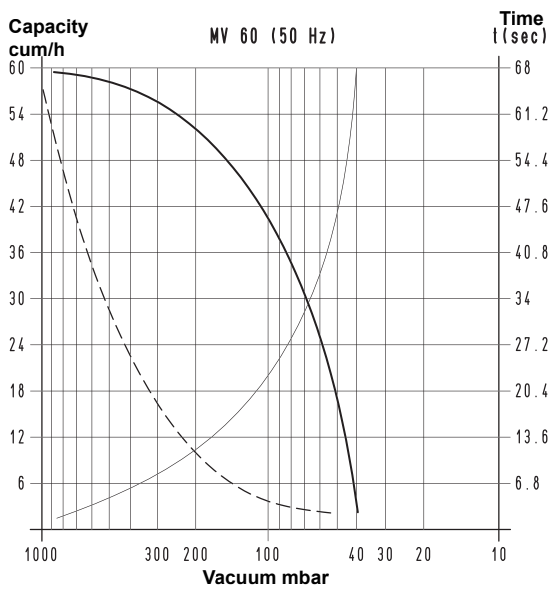


Art.		MV 40		MV 40A	
Frequency		50Hz	60Hz	50Hz	60Hz
Capacity	m <sup>3</sup> /h	40.0	48.0	40.0	48.0
Final pressure	mbar abs.	40		0.7	
Motor execution	3~	230/400±10%	275/480±10%	230/400±10%	275/480±10%
Voit					
Motor power	3~	1.10	1.35	1.10	1.35
Kw					
Motor protection	IP	55		55	
Rotation speed	rev/min <sup>-1</sup>	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	
<b>Accessories and spare parts</b>					
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](http://www.vuototecnica.net)



# OIL-BATH VACUUM PUMPS MV 60 and MV 60A

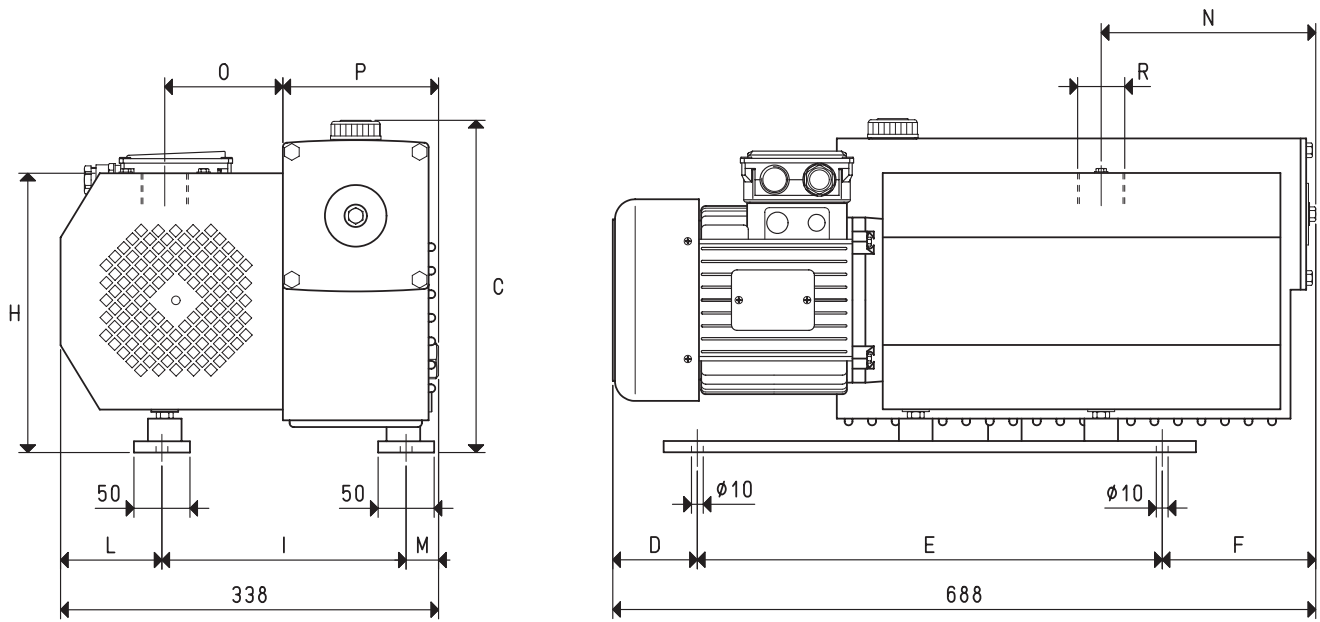


To calculate the emptying time of a volume  $V_1$ , apply the formula  $t_1 = \frac{t \times V_1}{100}$

- Curve regarding capacity (referring to the suction pressure)
- - - Curve regarding capacity (referring to a 1013 mbar 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)

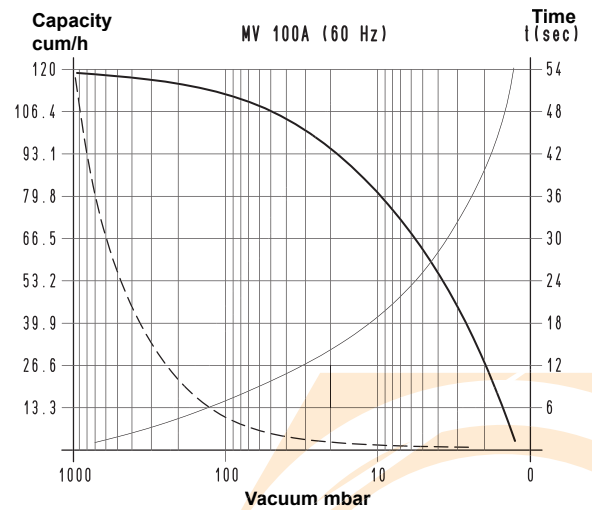
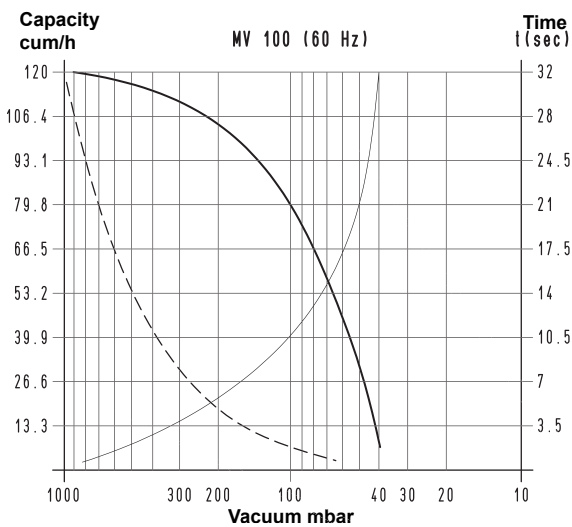
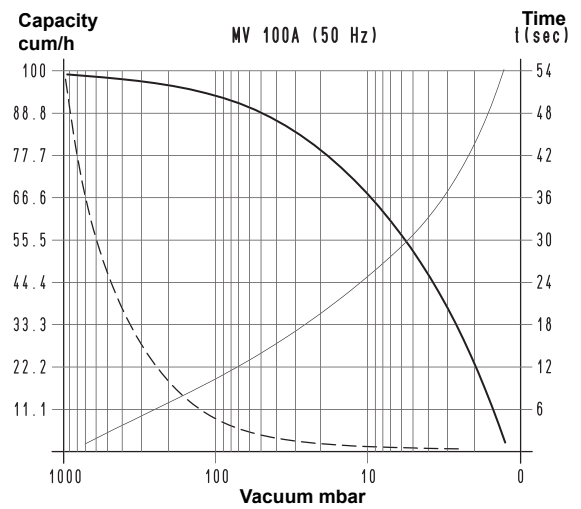
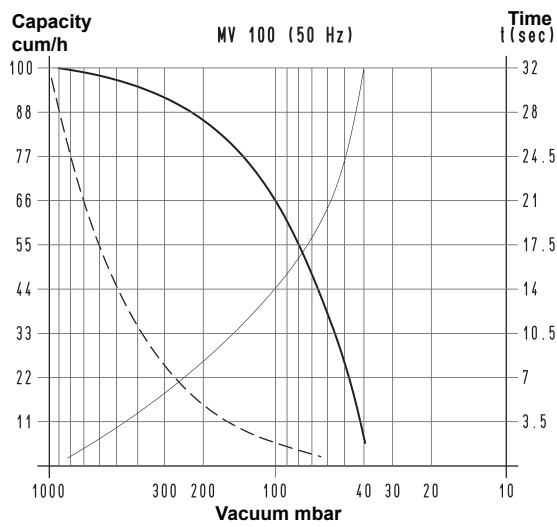
# OIL-BATH VACUUM PUMPS MV 60 and MV 60A



Art.		MV 60		MV 60A	
Frequency		50Hz	60Hz	50Hz	60Hz
Capacity	m <sup>3</sup> /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 <sup>-1</sup>	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	∅ 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](http://www.vuototecnica.net)

# OIL-BATH VACUUM PUMPS MV 100 and MV 100A

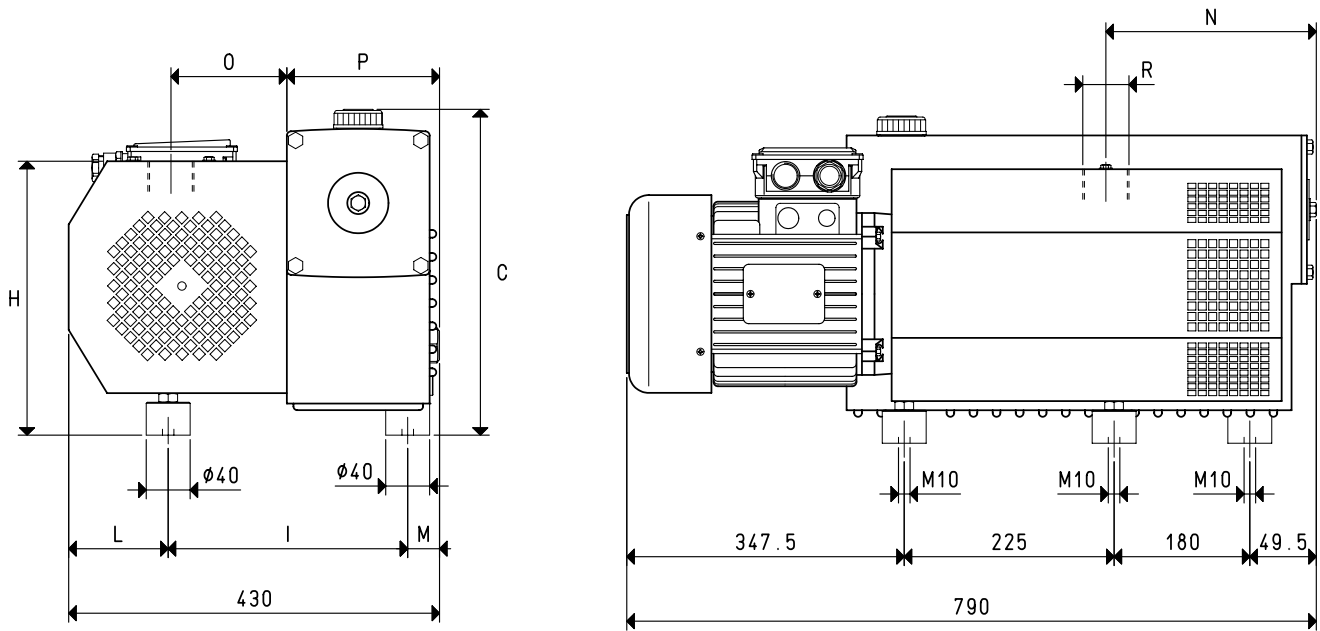


To calculate the emptying time of a volume  $V_1$ , apply the formula  $t_1 = \frac{t \times V_1}{100}$

- 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

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

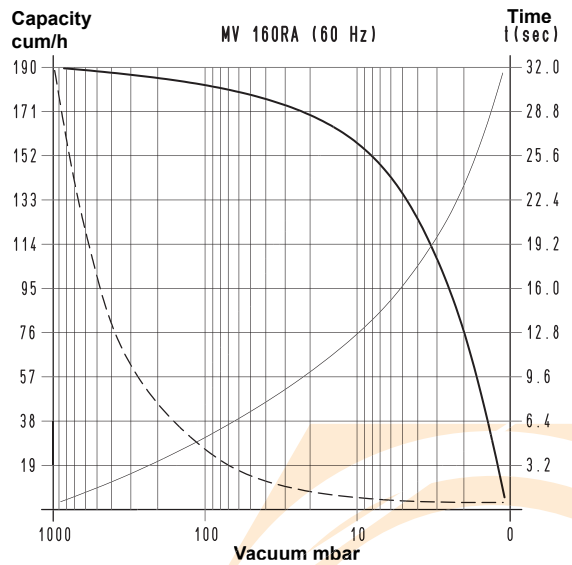
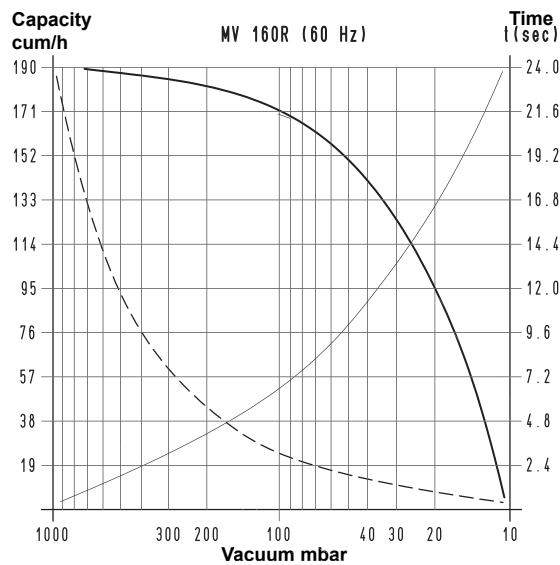
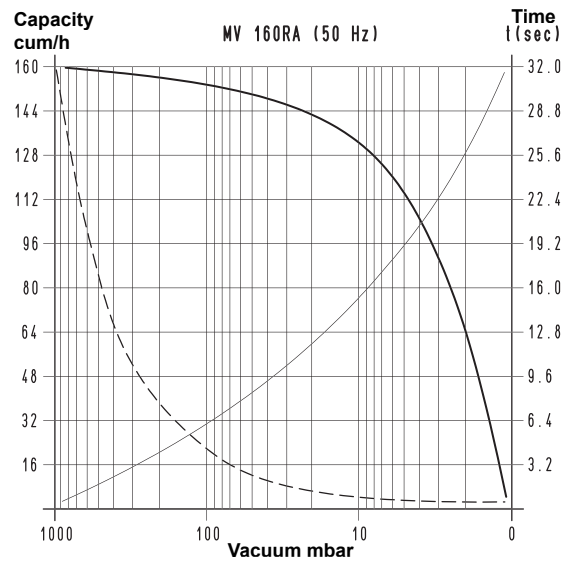
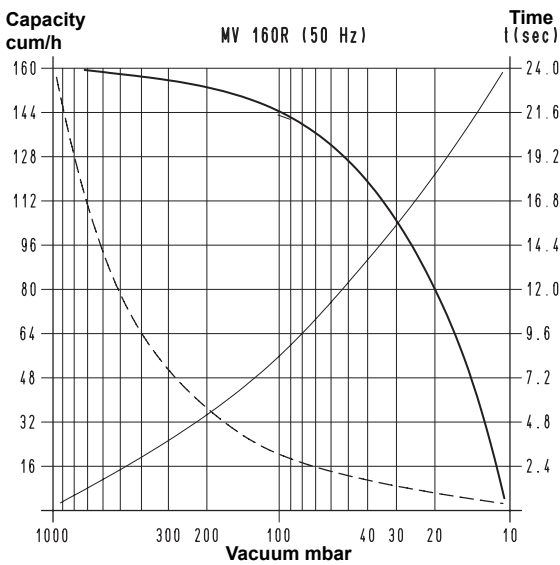
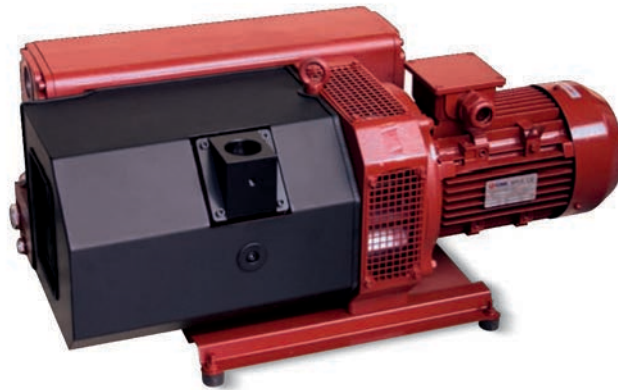
# OIL-BATH VACUUM PUMPS MV 100 and MV 100A



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

3D drawings available at [www.vuototecnica.net](http://www.vuototecnica.net)

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



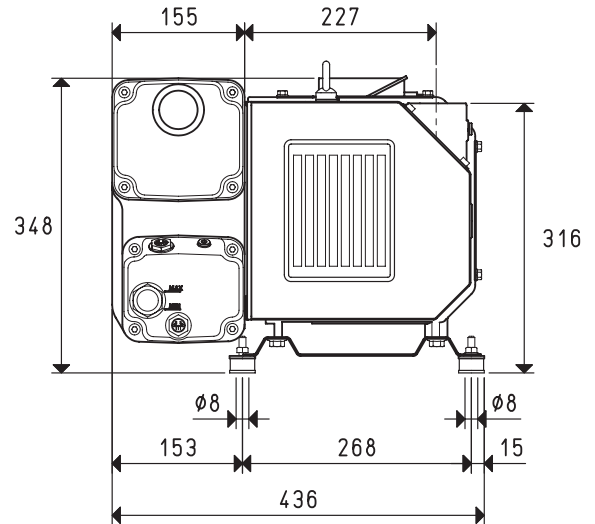
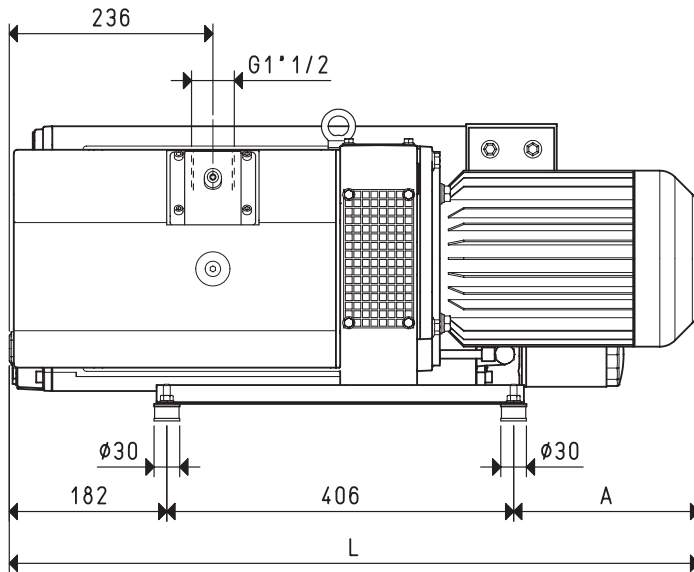
To calculate the emptying time of a volume  $V_1$ , apply the formula  $t_1 = \frac{t \times V_1}{100}$

- 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

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

# OIL-BATH VACUUM PUMPS

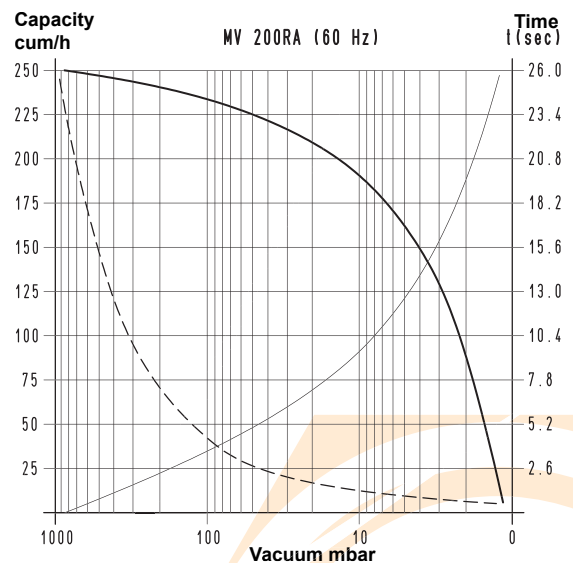
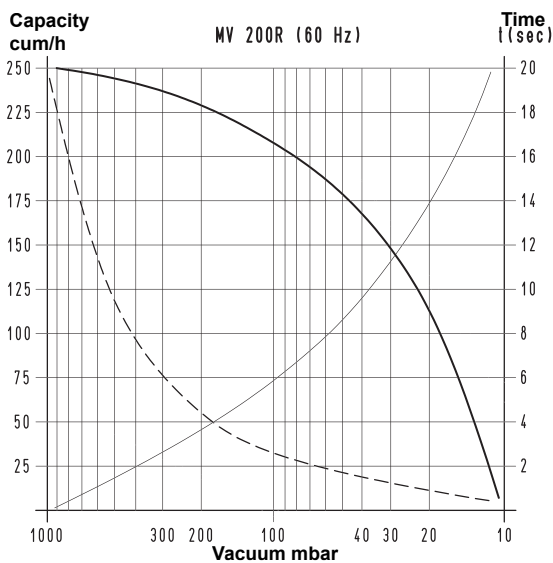
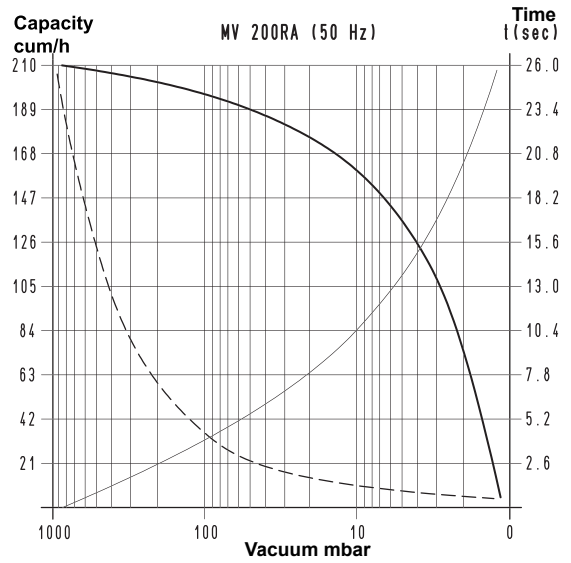
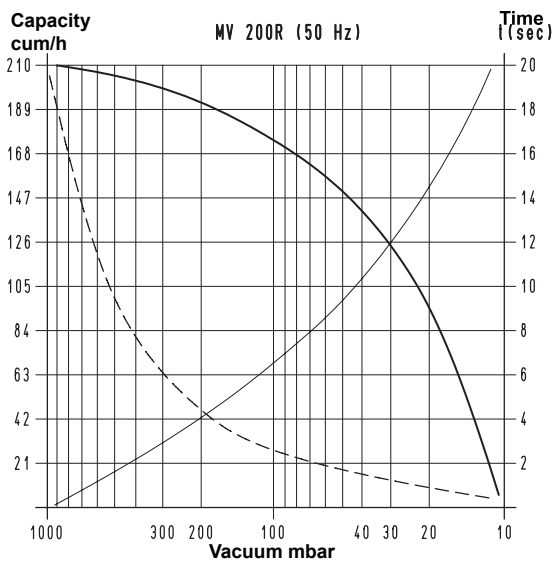
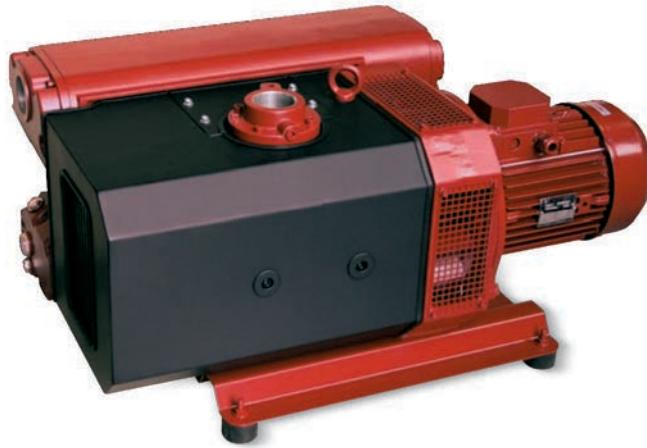
## MV 160R and MV 160RA



Art.	MV 160R		MV 160RA	
	50Hz	60Hz	50Hz	60Hz
Frequency	50Hz	60Hz	50Hz	60Hz
Capacity	m <sup>3</sup> /h 150	180	150	180
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~ 3.0	4.0	3.0	4.0
Kw				
Motor protection	IP 55		55	
Rotation speed	rev/min <sup>-1</sup> 1500	1800	1500	1800
Motor shape		B5	B5	
Motor size		100	100	
Noise level	dB(A) 71	72	71	72
Max. weight	3~ 104	110	104	110
Kg				
A	217	226	217	226
L	805	814	805	814
<b>Accessories and spare parts</b>				
Oil load	l 3.0		3.0	
Synthetic oil	VT OIL ISO 100		ISO 100	
2 deoiling cartridges	art. 00 MV 160R 06		00 MV 160R 06	
3 vanes	art. 00 MV 160R 10		00 MV 160R 10	
Sealing kit	art. 00 KIT MV 160R		00 KIT MV 160R	
Check valve	art. Built-in		Built-in	
Oil filtre	art. 00 MV 160R 07		00 MV 160R 07	
Suction filtre	art. FC 50		FC 50	
Ballast valve	art. Built-in		Built-in	

3D drawings available at [www.vuototecnica.net](http://www.vuototecnica.net)

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

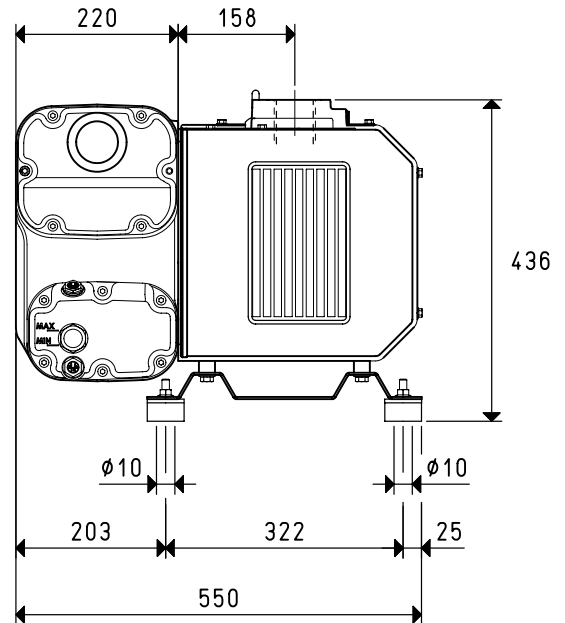
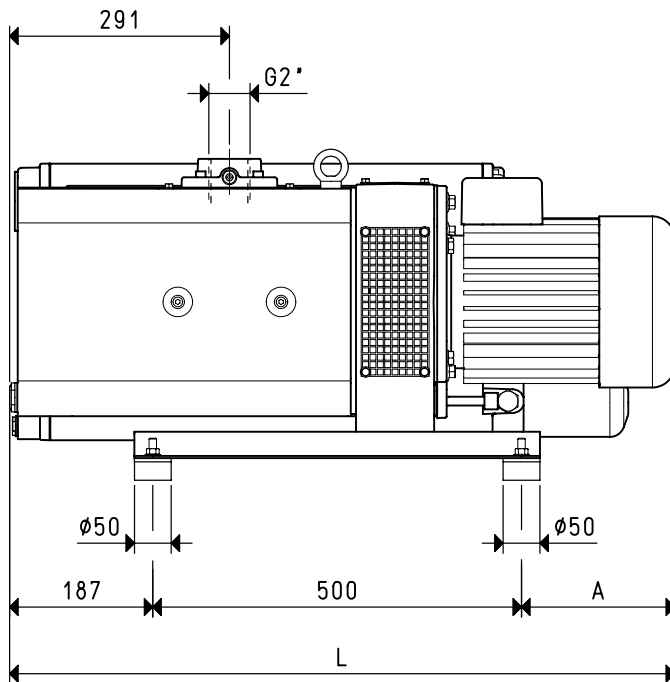


To calculate the emptying time of a volume  $V_1$ , apply the formula  $t_1 = \frac{t \times V_1}{100}$

- 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

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

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

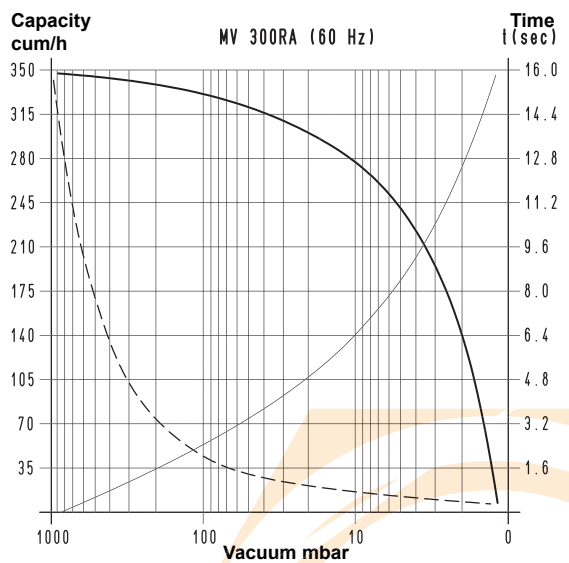
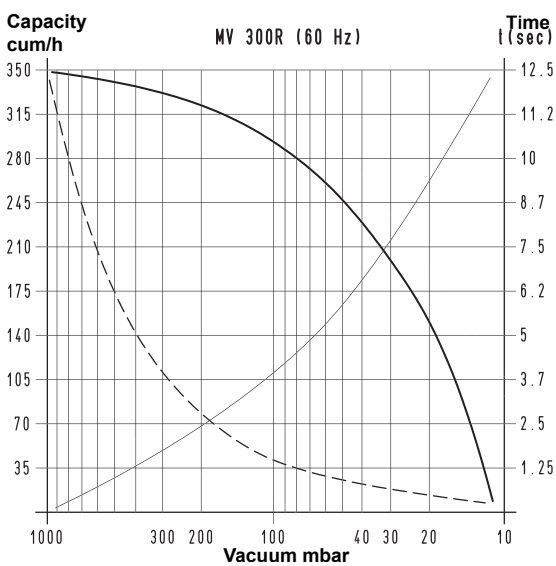
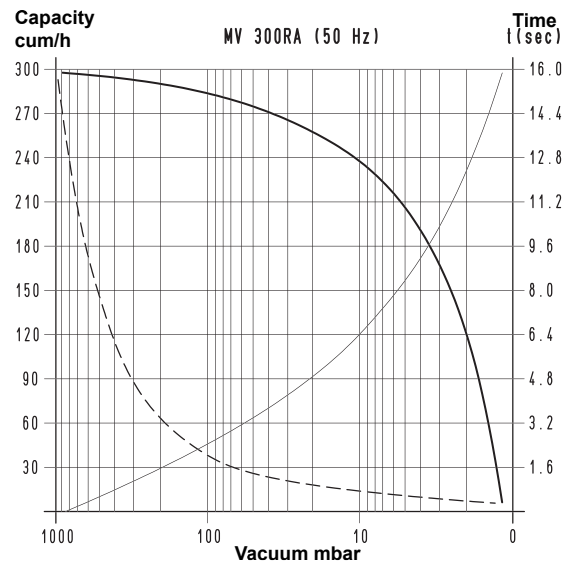
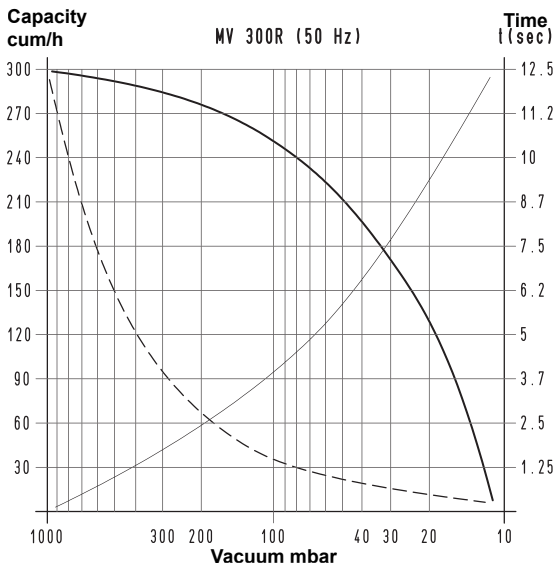
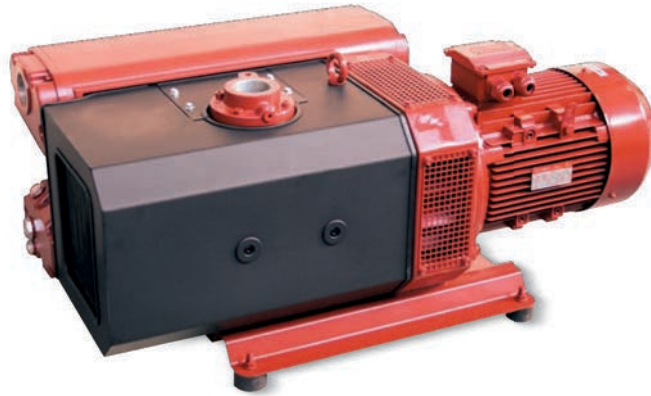


Art.	MV 200R		MV 200RA	
	50Hz	60Hz	50Hz	60Hz
Frequency	50Hz	60Hz	50Hz	60Hz
Capacity	205	245	205	245
Final pressure	10		0.5	
Motor execution	230/400±10%	275/480±10%	230/400±10%	275/480±10%
Motor power	4.0	5.5	4.0	5.5
Motor protection	IP 55		IP 55	
Rotation speed	1500	1800	1500	1800
Motor shape	B5		B5	
Motor size	112		112	
Noise level	70	72	70	72
Max. weight	161	171	161	171
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	00 MV 200R 50		00 MV 200R 50	
3 vanes	00 MV 200R 10		00 MV 200R 10	
Sealing kit	00 KIT MV 200R		00 KIT MV 200R	
Check valve	Built-in		Built-in	
Oil filtre	00 MV 200R 07		00 MV 200R 07	
Suction filtre	FC 60		FC 60	
Ballast valve	Built-in		Built-in	

3D drawings available at [www.vuototecnica.net](http://www.vuototecnica.net)



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



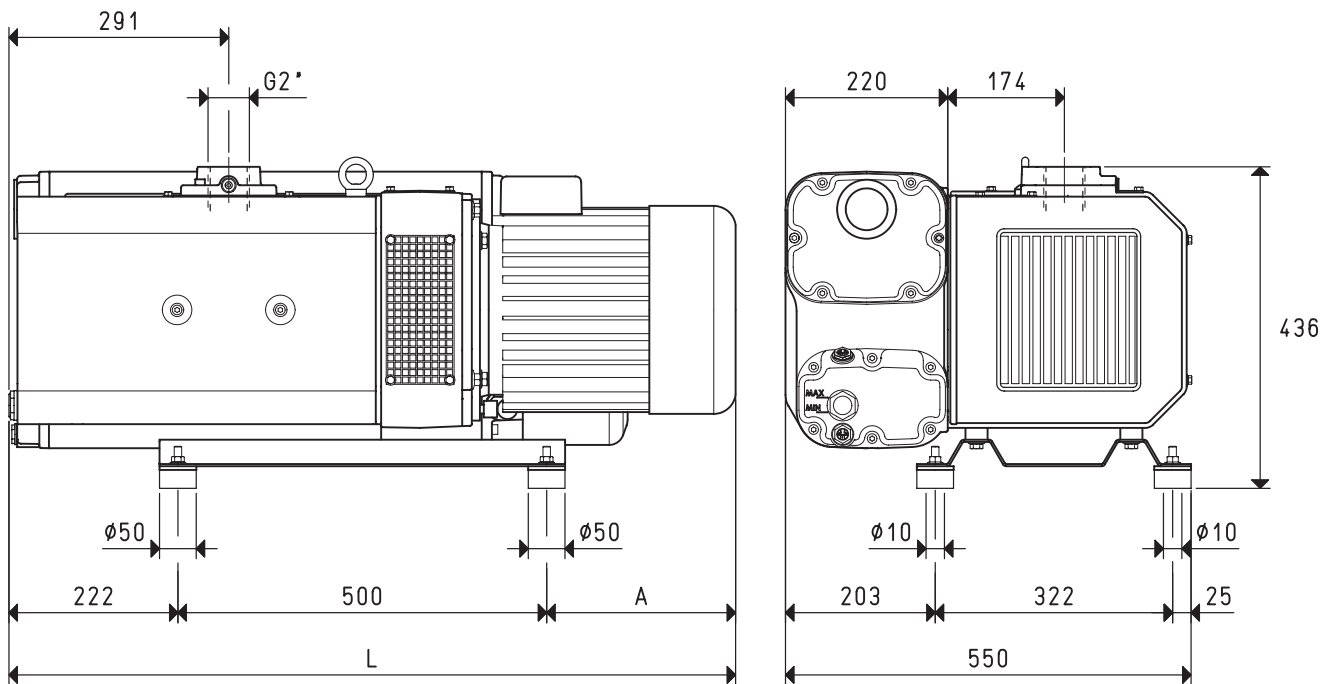
To calculate the emptying time of a volume  $V_1$ , apply the formula  $t_1 = \frac{t \times V_1}{100}$

- 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

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

# OIL-BATH VACUUM PUMPS


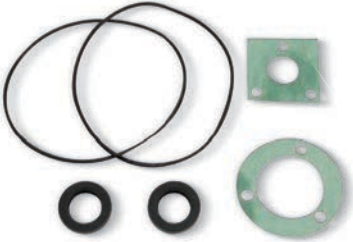
## MV 300R and MV 300RA



Art.	MV 300R		MV300RA	
	50Hz	60Hz	50Hz	60Hz
Frequency	50Hz	60Hz	50Hz	60Hz
Capacity	m <sup>3</sup> /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%
Motor power	3~ 5.5	7.5	5.5	7.5
Motor protection	IP 55		55	
Rotation speed	rev/min <sup>-1</sup> 1500	1800	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				
A	257		297	
L	979		1019	
Accessories and spare parts				
Oil load	l 7.0		7.0	
Synthetic oil	VT OIL ISO 100		ISO 100	
3 deoiling cartridges	art. 00 MV 300R 50		00 MV 300R 50	
3 vanes	art. 00 MV 300R 10		00 MV 300R 10	
Sealing kit	art. 00 KIT MV 300R		00 KIT MV 300R	
Check valve	art. Built-in		Built-in	
Oil filtre	art. 00 MV 300R 07		00 MV 300R 07	
Suction filtre	art. FC 60		FC 60	
Ballast valve	art. Built-in		Built-in	

3D drawings available at [www.vuototecnica.net](http://www.vuototecnica.net)

## LUBRICATED VACUUM PUMP ACCESSORIES AND SPARE PARTS

	Art.	Quantity	For pump art.
<b>Fibre vanes</b>  	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
	<b>Sealing kits</b>  	00 KIT VTL 02	1
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
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 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

# LUBRICATED VACUUM PUMP ACCESSORIES AND SPARE PARTS

	Art.	Quantity	For pump art.	
	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
				VTL 15/F
				VTL 20/F
	10 04 10	1	VTL 25/FG	
			VTL 30/FG	
			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/G1	
	FB 5	1	VTL 2	
	FB 10	1	VTL 4	
				VTL 5
				VTL 6 CC
	FB 20	1	VTL 10	
				VTL 10/F
				VTL 15/F
				VTL 20/F
	FB 25	1	VTL 25/FG	
				VTL 30/FG
				VTL 35/FG
	FB 30	1	VTL 40/G1	
				VTL 50/G1
				VTL 65/G1
	FB 40	1	VTL 75/G1	
				VTL 90/G1
	FB 50	1	VTL 105/G1	
FC 10	1	VTL 4		
			VTL 5	
			VTL 6 CC	
FC 20	1	VTL 10		
			VTL 10/F	
			VTL 15/F	
			VTL 20/F	
			MV 20	
			MV 20A	
FC 25	1	VTL 25/FG		
			VTL 30/FG	
			VTL 35/FG	
FC 30	1	VTL 40/G1		
			VTL 50/G1	
			VTL 65/G1	
FC 35	1	MV 40		
			MV 40A	
			MV 60	
			MV 60A	
			MV 100	
			MV 100A	
FC 40	1	VTL 75/G1		
			VTL 90/G1	
FC 50	1	VTL 105/G1		
			MV 160R	
			MV 160RA	
FC 60	1	MV 200R		
			MV 200RA	
			MV 300R	
			MV 300RA	

## LUBRICATED VACUUM PUMP ACCESSORIES AND SPARE PARTS

	Art.	Quantity	For pump art.	
<b>Adjustable drip oiler</b> 	00 VTL 00 11		VTL - All VTLP - All	
<b>Oil level switch</b>	00 LP VTL 99		VTLP - All	
<b>Oil filtre</b>	00 LP VTL 40		VTLP - All	
	00 MV 160R 07		MV 160R	
	00 MV 200R 07		MV 200R	
	00 MV 300R 07		MV 300R	
<b>Deoiling cartridge</b> 	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 MV 40A	
	00 MV 60 50	1	MV 60 MV 60A	
	00 MV 100 06	2	MV 100 MV 100A	
	00 MV 160R 06	2	MV 160R MV 160RA	
	00 MV 200R 50	2	MV 200R MV 200RA	
	00 MV 300R 50	3	MV 300R MV 300RA	
	<b>Ballast valve</b> 	VZ 01	1	MV 20 MV 20A
		VZ 02	1	MV40 MV 40A MV 60 MV 60A MV 100 MV 100A
<b>Mineral oil</b>	ISO 32 - 68 - 100 - 150 - 220		Packages of 1 2 - 5 - 10	
<b>Synthetic oil</b>	VT OIL 32 - 68 - 100		Packages of 1 2 - 5 - 10	
<b>Non-toxic synthetic oil for food industry</b>	VT OIL FI 68 - 100		Packages of 1 2 - 5 - 10	



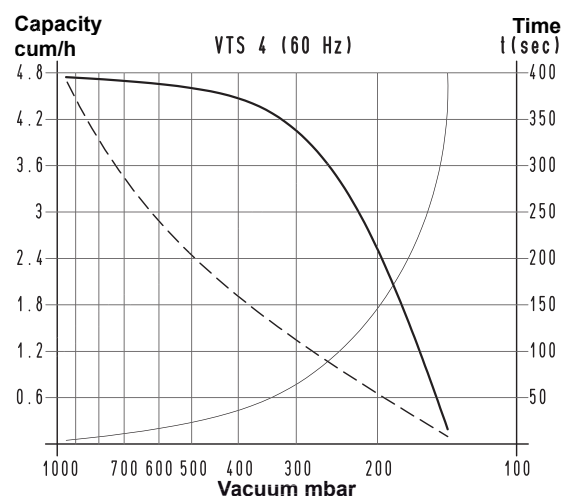
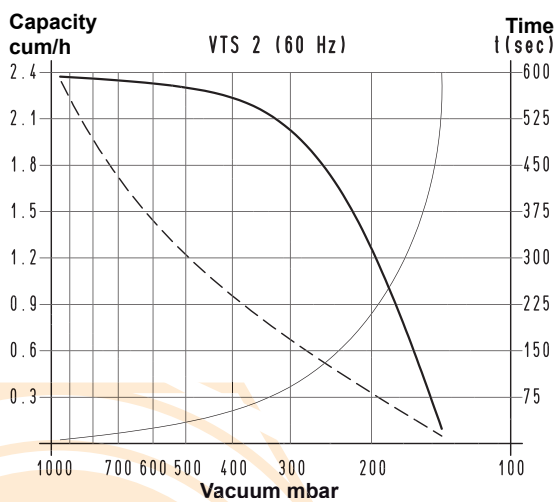
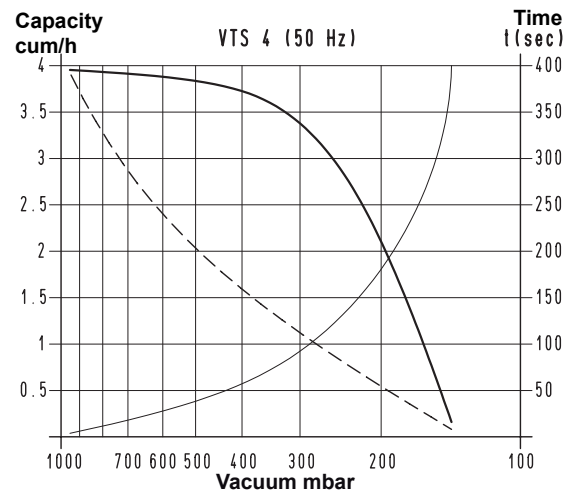
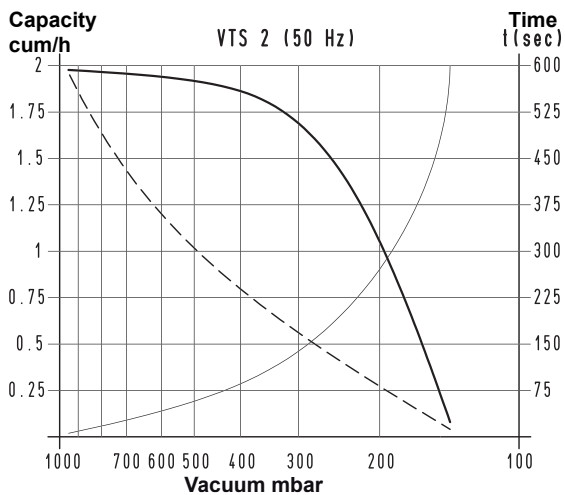
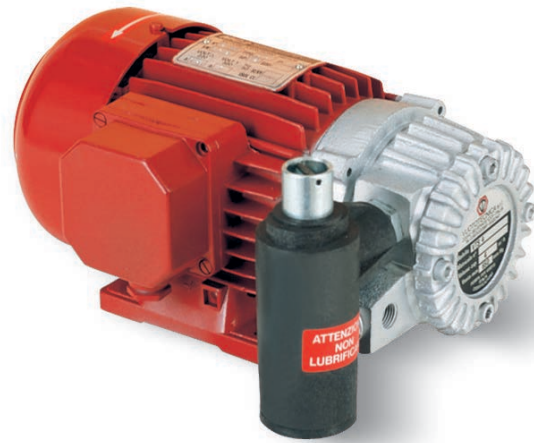
## DRY VACUUM PUMPS VTS 2 AND 4

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.

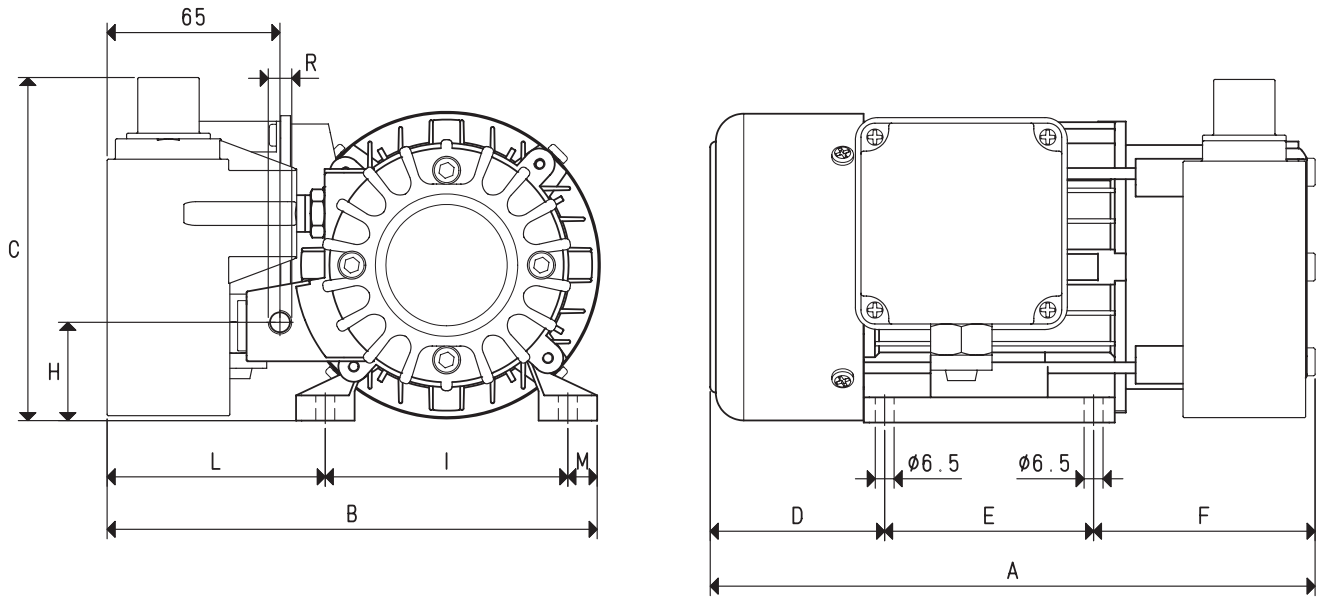
Vacuum pumps VTS 2 and 4 can also be supplied with single-phase electric motor.



To calculate the emptying time of a volume  $V_1$ , 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

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



Art.	VTS 2		VTS 4	
	50Hz	60Hz	50Hz	60Hz
<b>Frequency</b>	50Hz	60Hz	50Hz	60Hz
<b>Capacity</b>	2.0	2.4	4.0	4.8
<b>Final pressure</b>	150		150	
<b>Motor execution</b>	230/400±10%	275/480±10%	230/400±10%	275/480±10%
<b>Volt</b>	230±10%		230±10%	
<b>Motor power</b>	0.13	0.15	0.15	0.18
<b>Kw</b>	0.13	0.15	0.15	0.18
<b>Motor protection</b>	IP 54		IP 54	
<b>Rotation speed</b>	2800	3300	2800	3300
<b>Motor shape</b>	Special		Special	
<b>Motor size</b>	56		63	
<b>Noise level</b>	64	66	64	66
<b>Max. weight</b>	5.3		6.8	
<b>Kg</b>	5.5		7.0	
<b>A</b>	217		251	
<b>B</b>	180		186	
<b>C</b>	121		131	
<b>D</b>	66		78	
<b>E</b>	71		81	
<b>F</b>	80		92	
<b>H</b>	35		45	
<b>I</b>	90		100	
<b>L</b>	79		73	
<b>M</b>	11		13	
<b>R</b>	Ø gas G1/4"		Ø gas G1/4"	
<b>Accessories and spare parts</b>				
<b>4 graphite vanes</b>	art. 00 VTS 02 10		art. 00 VTS 04 10	
<b>Perforated graphite disc</b>	art. 00 VTS 02 12		art. 00 VTS 02 12	
<b>Non-perforated graphite disc</b>	art. 00 VTS 02 16		art. 00 VTS 02 16	
<b>Sealing kit</b>	art. 00 KIT VTS 02		art. 00 KIT VTS 04	
<b>Check valve</b>	art. 10 01 15		art. 10 01 15	
<b>Suction filtre</b>	art. FB 5		art. 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 =  $\frac{\text{mm}}{25.4}$ ; 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

## DRY VACUUM PUMPS VTS 6 DC WITH DC MOTOR

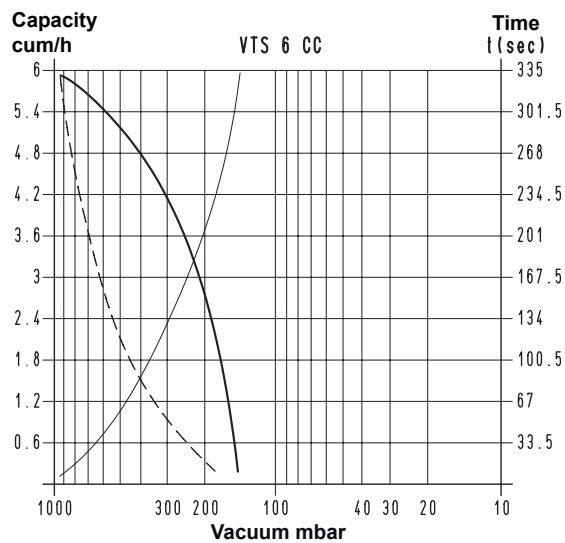
The extremely reduced size, the excellent final vacuum level that can be reached, the total absence of lubrication and the DC motor with which it is equipped, are the main features of this rotating vane vacuum pump.

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.

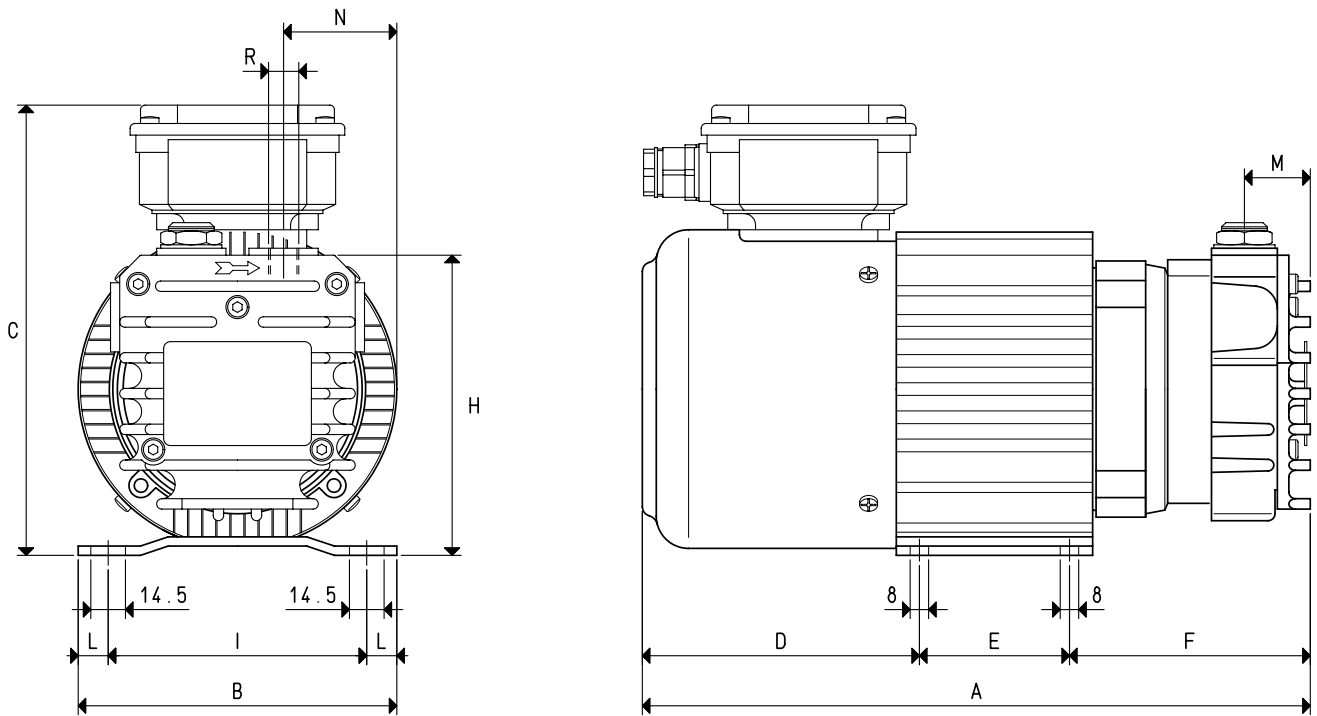


To calculate the emptying time of a volume  $V_1$ , apply the formula  $t_1 = \frac{t \times V_1}{100}$

- 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

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





Art.	VTS 6 CC	
Capacity	m <sup>3</sup> /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 <sup>-1</sup>	3000
Motor shape		Special
Motor size		71
Noise level	dB(A)	72
Max. weight	Kg	9.5
A		290
B		136
C		193
D		124
E		65
F		101
H		131
I		112
L		12
M		28
N		48
R	Ø gas	G1/4"
<b>Accessories and spare parts</b>		
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

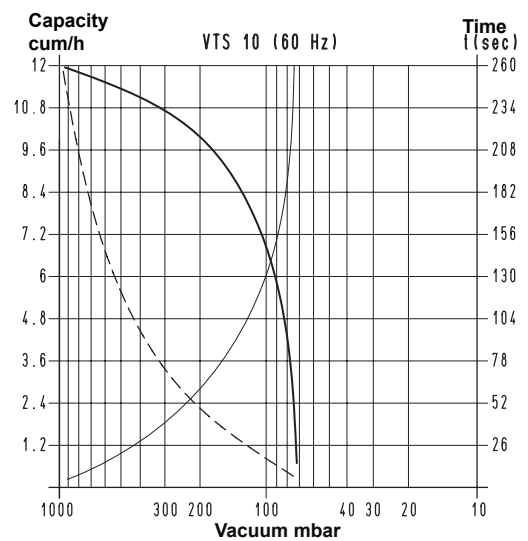
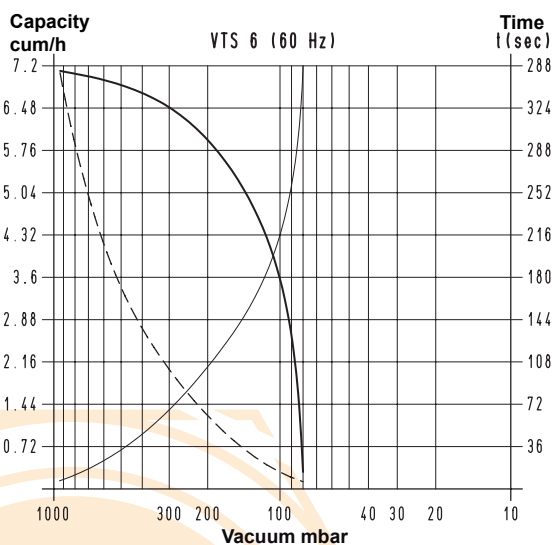
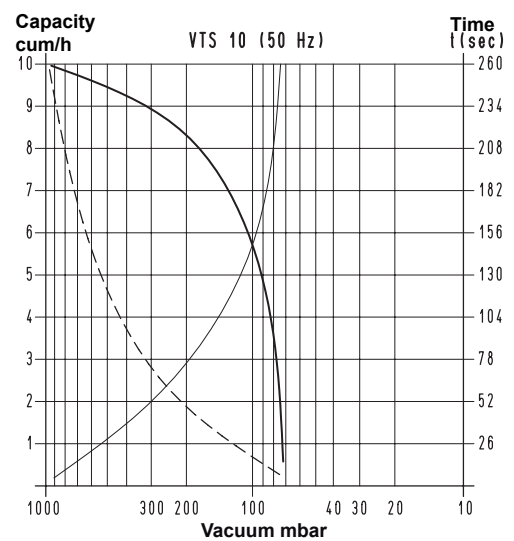
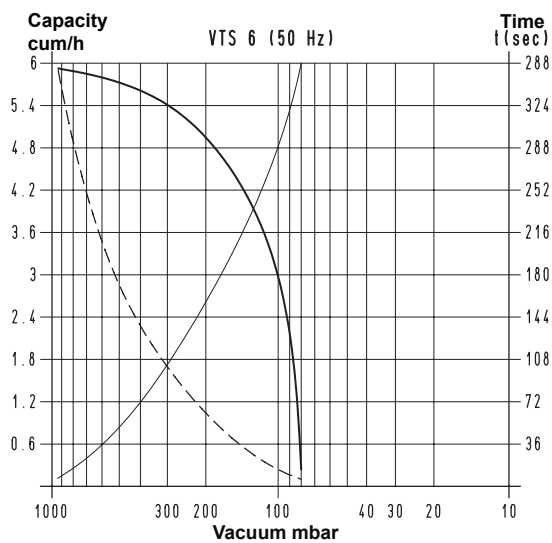
## DRY VACUUM PUMPS VTS 6 and 10

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.

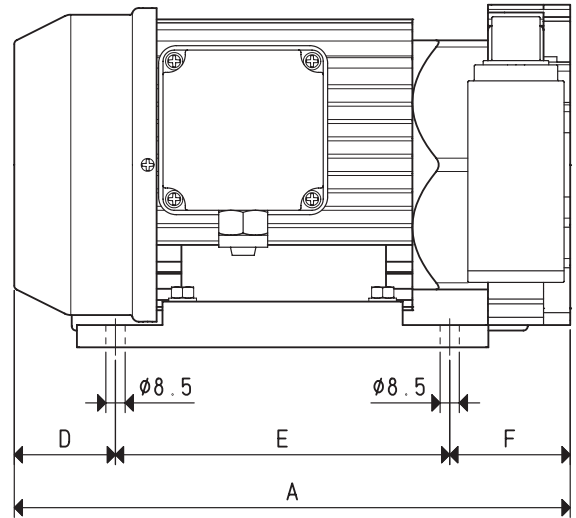
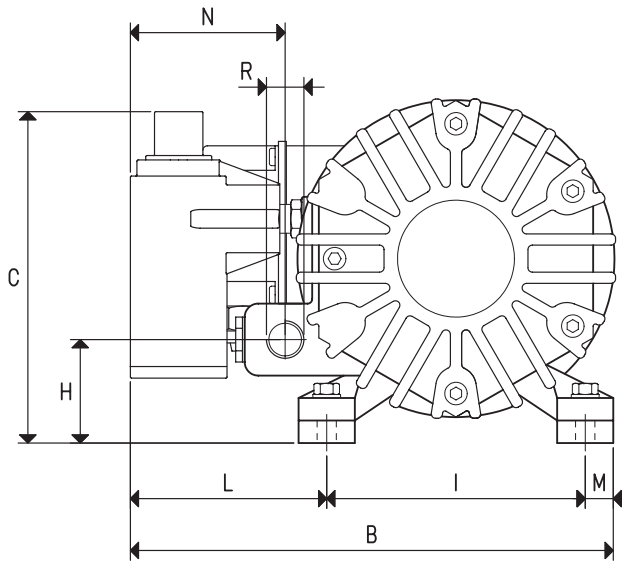
Pumps VTS 6 and 10 can also be supplied with single-phase electric motor.



To calculate the emptying time of a volume  $V_1$ , 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

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



Art.	VTS 6		VTS 10	
	50Hz	60Hz	50Hz	60Hz
<b>Frequency</b>	50Hz	60Hz	50Hz	60Hz
<b>Capacity</b> m <sup>3</sup> /h	6.0	7.2	10.0	12.0
<b>Final pressure</b> mbar abs.	80		80	
<b>Motor execution</b>	230/400±10%	275/480±10%	230/400±10%	275/480±10%
<b>Volt</b>	230±10%		230±10%	
<b>Motor power</b>	0.25	0.30	0.35	0.40
<b>Kw</b>	0.18	0.21	0.25	0.30
<b>Motor protection</b> IP	54		54	
<b>Rotation speed</b> rev/min <sup>-1</sup>	1450	1740	1450	1740
<b>Motor shape</b>	Special		Special	
<b>Motor size</b>	71		71	
<b>Noise level</b> dB(A)	64	66	64	66
<b>Max. weight</b>	11.8		15.0	
<b>Kg</b>	12.0		15.2	
<b>A</b>	268		298	
<b>B</b>	210		180	
<b>C</b>	156		156	
<b>D</b>	55		55	
<b>E</b>	155		155	
<b>F</b>	58		88	
<b>H</b>	43		53	
<b>I</b>	115		115	
<b>L</b>	82.5		52.5	
<b>M</b>	12.5		12.5	
<b>N</b>	68		13	
<b>R</b> Ø gas	G1/4"		G3/8"	
<b>Accessories and spare parts</b>				
<b>6 graphite vanes</b>	art.	00 VTS 06 10	00 VTS 10 10	
<b>Front graphite disc</b>	art.	00 VTS 06 08	00 VTS 10 12	
<b>Rear graphite disc</b>	art.	00 VTS 06 13	00 VTS 10 19	
<b>Sealing kit</b>	art.	00 KIT VTS 06	00 KIT VTS 10	
<b>Check valve</b>	art.	10 01 15	10 02 10	
<b>Suction filtre</b>	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).

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

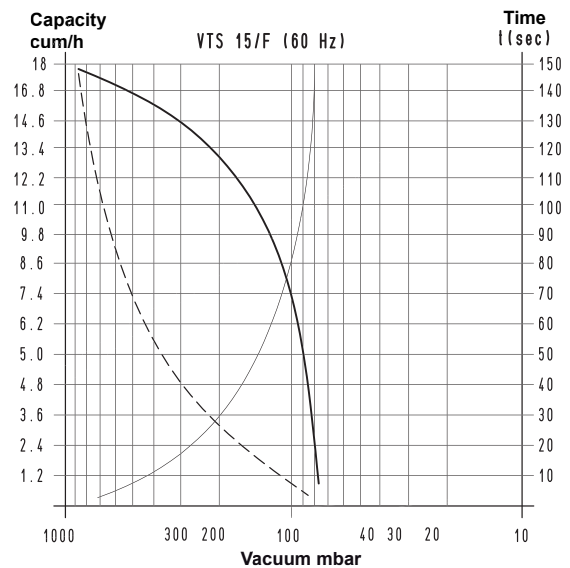
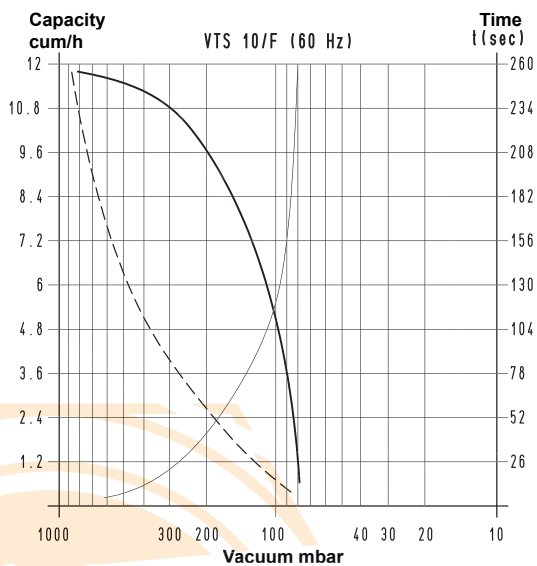
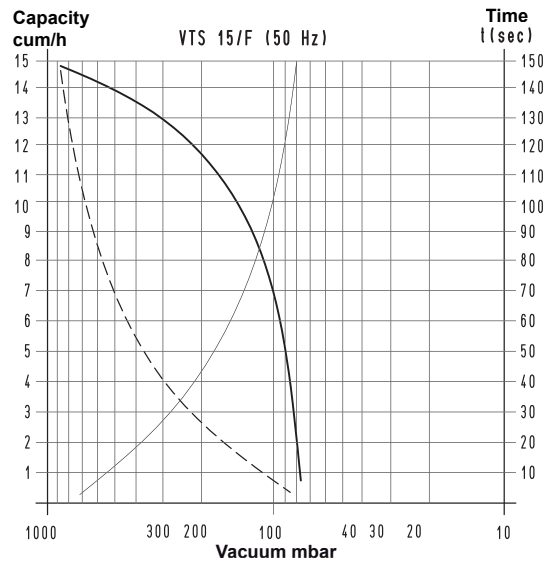
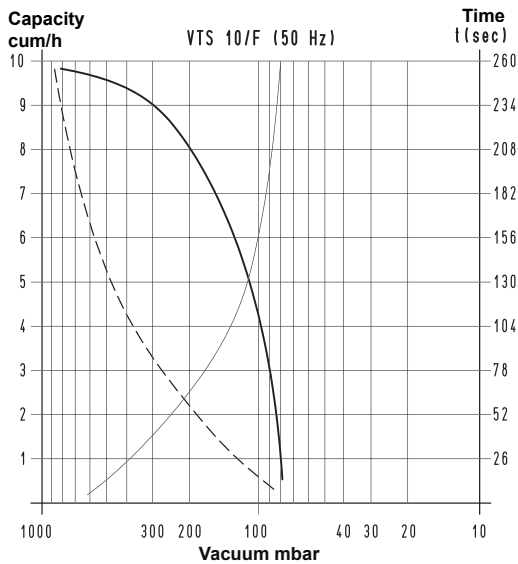
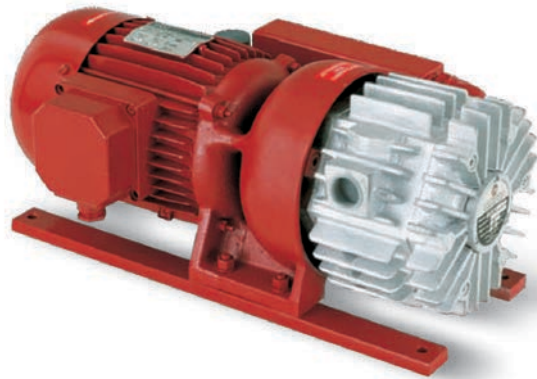
## DRY VACUUM PUMPS VTS 10/F, 15/F, 20/F and 25/F

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.

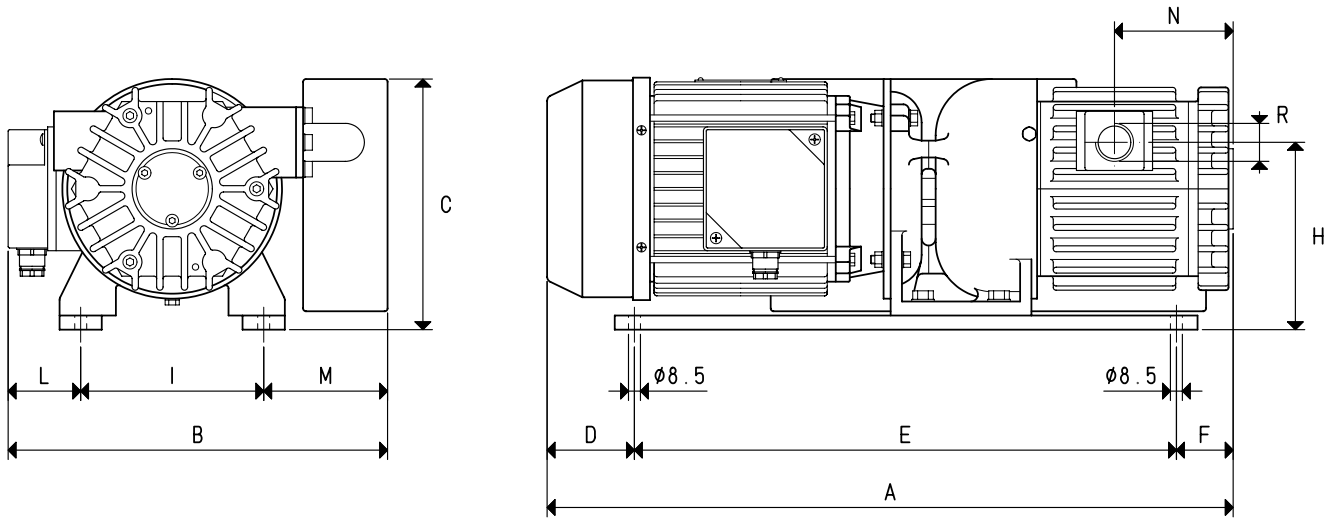


To calculate the emptying time of a volume  $V_1$ , apply the formula  $t_1 = \frac{t \times V_1}{100}$

- 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

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

# DRY VACUUM PUMPS VTS 10/F and 15/F

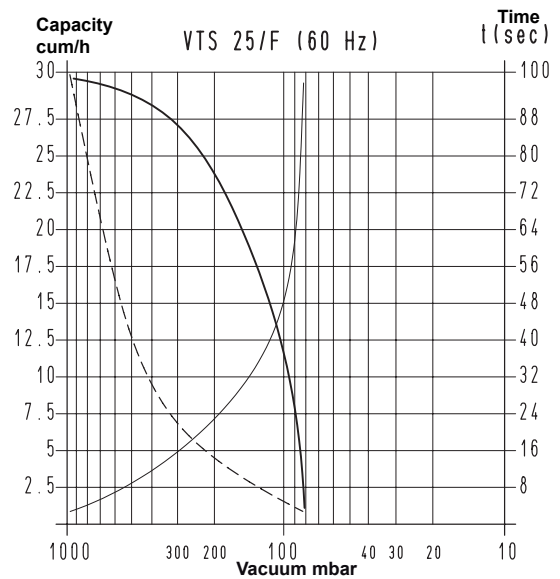
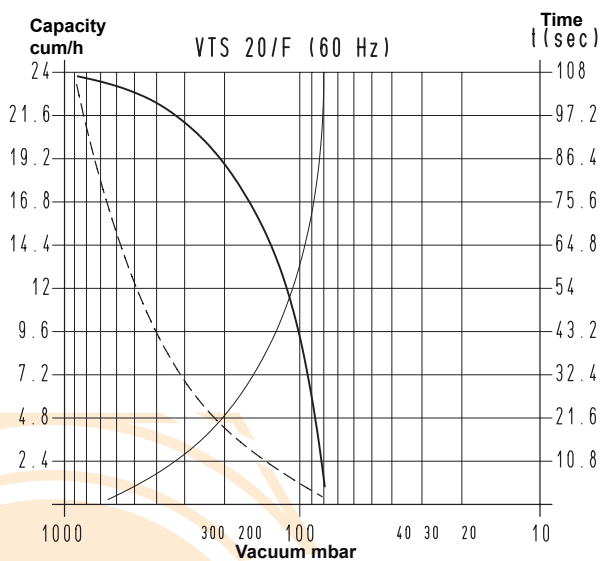
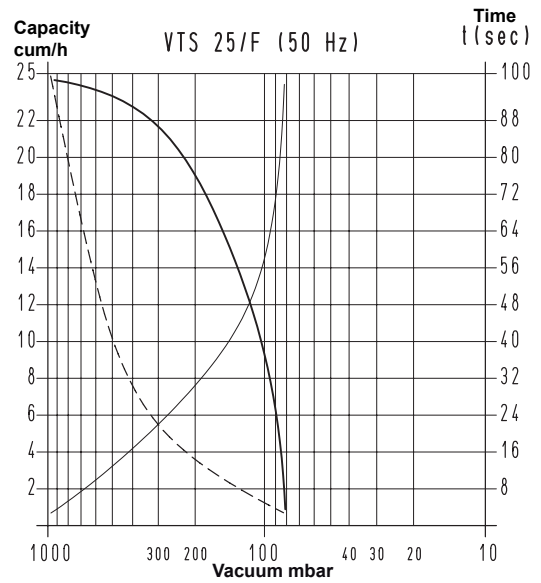
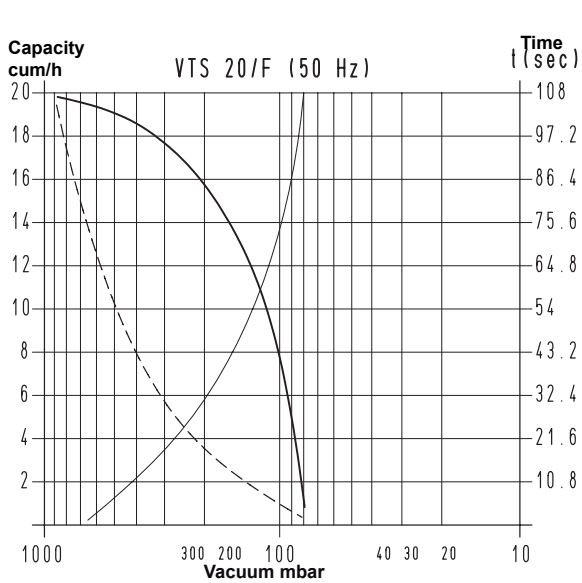
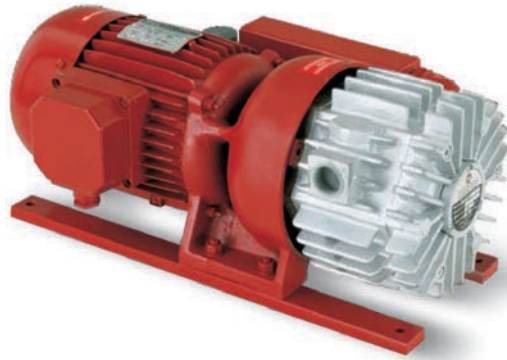


Art.	VTS 10/F			VTS 15/F	
	50Hz	60Hz		50Hz	60Hz
<b>Frequency</b>	50Hz	60Hz		50Hz	60Hz
<b>Capacity</b>	10.0	12.0		15.0	18.0
<b>Final pressure</b>	80			80	
<b>Motor execution</b>	3~	275/480±10%		230/400±10%	275/480±10%
<b>Volt</b>	1~	230±10%		230±10%	
<b>Motor power</b>	3~	0.55	0.66	0.55	0.66
<b>Kw</b>	1~	0.55	0.66	0.55	0.66
<b>Motor protection</b>	IP	54			54
<b>Rotation speed</b>	rev/min <sup>-1</sup>	1450	1740	1450	1740
<b>Motor shape</b>		Special			Special
<b>Motor size</b>		80			80
<b>Noise level</b>	dB(A)	64	66	65	67
<b>Max. weight</b>	3~	22.1			24.1
<b>Kg</b>	1~	22.5			24.5
<b>A</b>		388			408
<b>B</b>		260			260
<b>C</b>		187			187
<b>D</b>		24			24
<b>E</b>		340			340
<b>F</b>		24			44
<b>H</b>		133			133
<b>I</b>		130			130
<b>L</b>		55			55
<b>M</b>		75			75
<b>N</b>		53			63
<b>R</b>	Ø gas	G1/2"			G1/2"
<b>Accessories and spare parts</b>					
<b>6 graphite vanes</b>	art.	00 VTS 10F 10		00 VTS 15F 10	
<b>Front graphite disc</b>	art.	00 VTS 10F 21		00 VTS 10F 21	
<b>Rear graphite disc</b>	art.	00 VTS 10F 21		00 VTS 10F 21	
<b>Sealing kit</b>	art.	00 KIT VTS 10F		00 KIT VTS 15F	
<b>Check valve</b>	art.	10 03 10		10 03 10	
<b>Suction filtre</b>	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).

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

# DRY VACUUM PUMPS VTS 20/F and 25/F

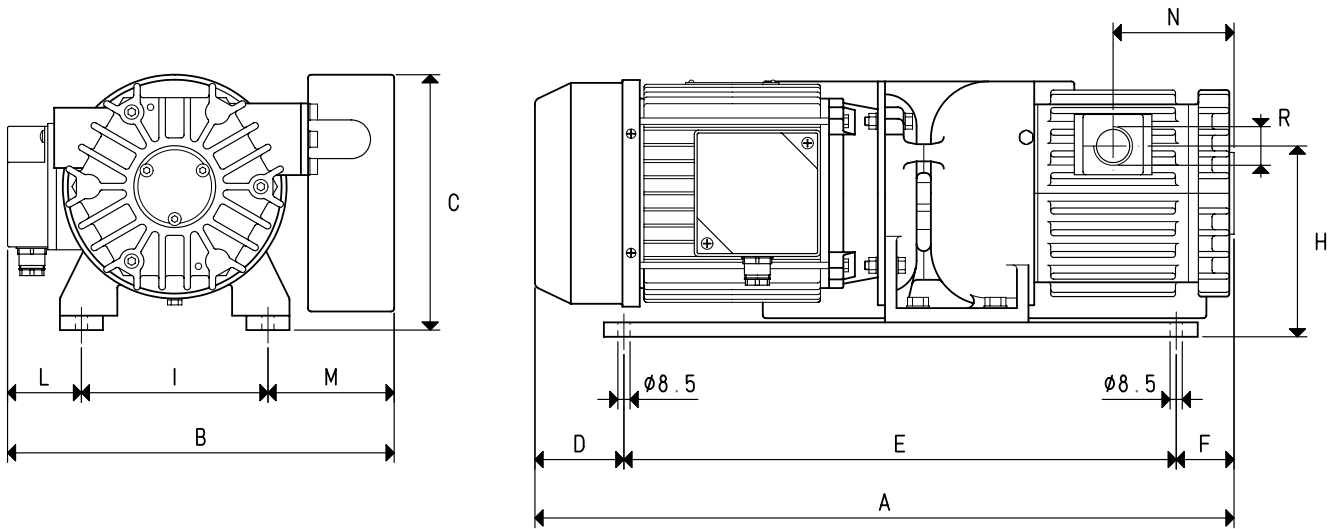


To calculate the emptying time of a volume  $V_1$ , apply the formula  $t_1 = \frac{t \times V_1}{100}$

- 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

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

# DRY VACUUM PUMPS VTS 20/F and 25/F



Art.	VTS 20/F			VTS 25/F	
	50Hz	60Hz		50Hz	60Hz
<b>Frequency</b>	50Hz	60Hz		50Hz	60Hz
<b>Capacity</b>	20.0	24.0		25.0	30.0
<b>Final pressure</b>	80			80	
<b>Motor execution</b>	3~	275/480±10%		230/400±10%	275/480±10%
<b>Volt</b>	1~	230±10%		230±10%	
<b>Motor power</b>	3~	0.88	1.05	0.88	1.05
<b>Kw</b>	1~	0.88	1.05	0.88	1.05
<b>Motor protection</b>	IP	54		54	
<b>Rotation speed</b>	rev/min <sup>-1</sup>	1450	1740	1450	1740
<b>Motor shape</b>		Special		Special	
<b>Motor size</b>		80		80	
<b>Noise level</b>	dB(A)	65	67	65	67
<b>Max. weight</b>	3~	27.4		28.1	
<b>Kg</b>	1~	27.9		28.6	
<b>A</b>		428		428	
<b>B</b>		260		260	
<b>C</b>		187		187	
<b>D</b>		24		24	
<b>E</b>		340		385	
<b>F</b>		64		19	
<b>H</b>		133		133	
<b>I</b>		130		130	
<b>L</b>		55		55	
<b>M</b>		75		75	
<b>N</b>		73		73	
<b>R</b>	Ø gas	G1/2"		G3/4"	
<b>Accessories and spare parts</b>					
<b>6 graphite vanes</b>	art.	00 VTS 20F 10		00 VTS 25F 10	
<b>Front graphite disc</b>	art.	00 VTS 10F 21		00 VTS 10F 21	
<b>Rear graphite disc</b>	art.	00 VTS 10F 21		00 VTS 10F 21	
<b>Sealing kit</b>	art.	00 KIT VTS 20F		00 KIT VTS 25F	
<b>Check valve</b>	art.	10 03 10		10 04 10	
<b>Suction filtre</b>	art.	FB 20/FC 20		FB 25/FC 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 =  $\frac{\text{mm}}{25.4}$ ; 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