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MEMBRANE VACUUM MINI PUMPS

The small pumps described on 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 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 or, upon request, with threaded connections.
- A Viton membrane, fixed to a connecting rod, resistant to wear and corrosion.
- A connecting rod with incorporated long life bearing powered by an eccentric balanced system fitted on the crankshaft.
- An aluminium support, for fastening the pump.

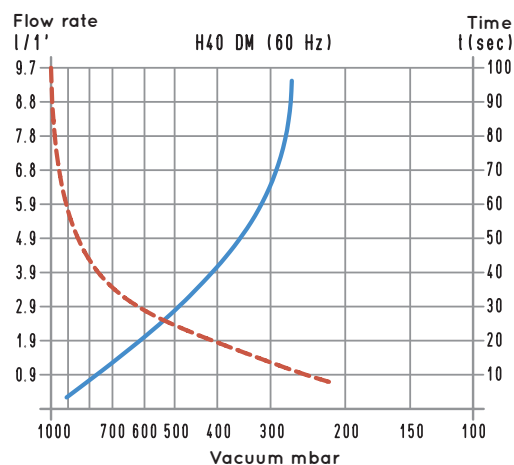
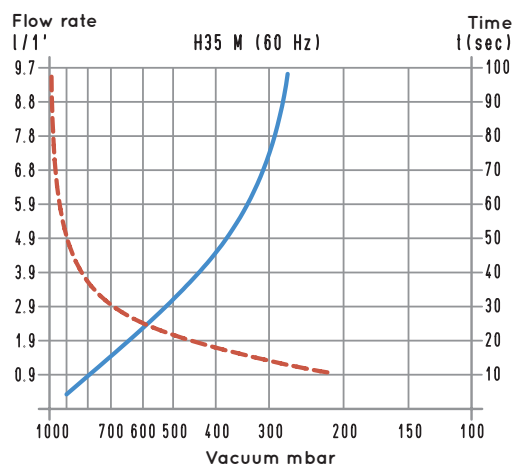
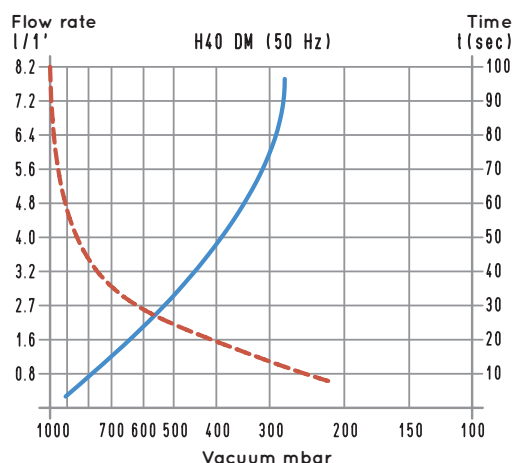
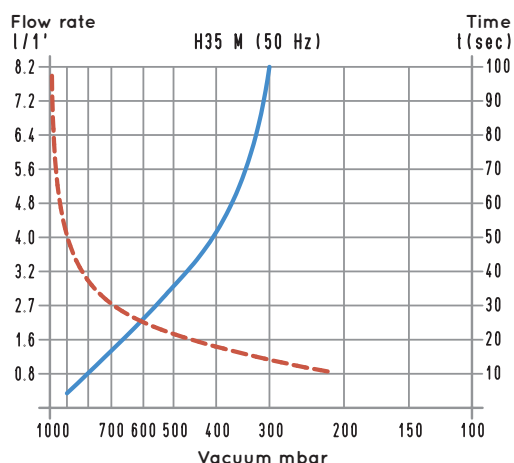
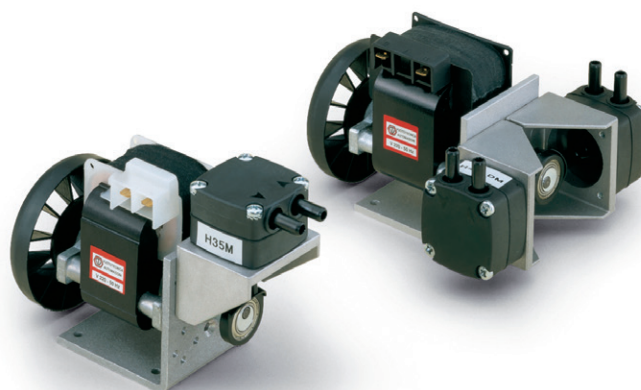
They are available in the versions with single and double head to be used in series or in parallel.

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 of V_1 , use the following formula: $t_1 = \frac{t \times V_1}{6}$

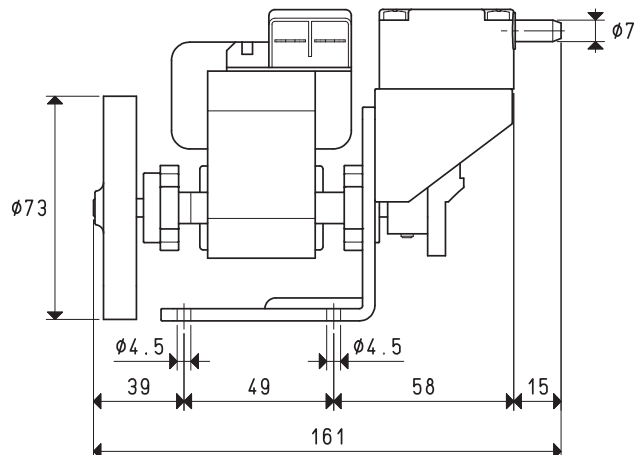
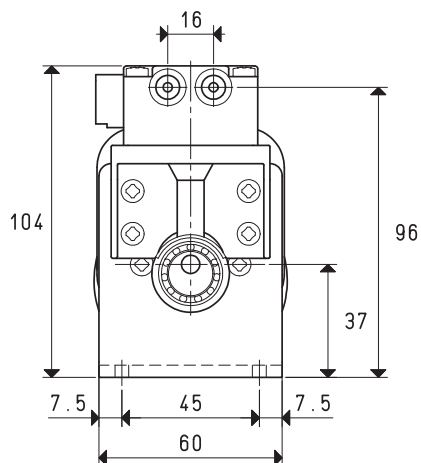
- Curve relative to the flow rate (referring to a 1013 mbar pressure)
- Curve relative to the emptying time of a 6-litre volume

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

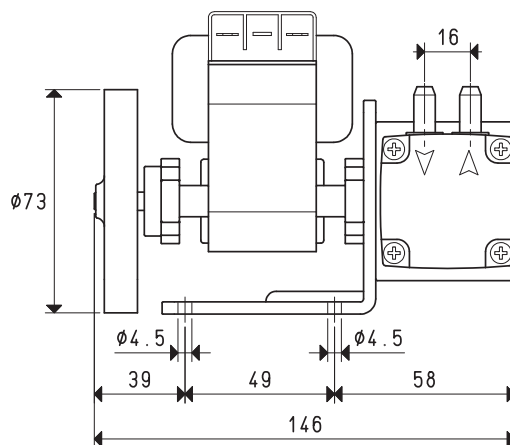
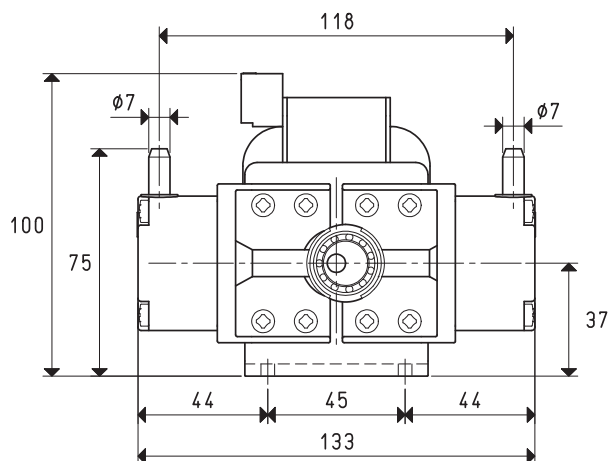


MEMBRANE VACUUM MINI PUMPS

H 35 M



H 40 DM



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Item		H35 M		H40 DM	
Frequency		50Hz	60Hz	50Hz	60Hz
Nominal flow rate:					
Connection in series	l / l'	8	9,5	8	9,5
Parallel connection	l / l'	=	=	8 + 8	9,5 + 9,5
Final pressure:					
Connection in series	mbar abs.	200		60	
Parallel connection	mbar abs.	=		200	
Maximum pressure	bar	2		2	
Motor performance 1~	volt	110/230 VAC		110/230 VAC	
Motor power 1~	watt	60	72	60	72
Rotation speed	g/min ⁻¹	2800	3300	2800	3300
Noise level	dB(A)	≤ 50		≤ 50	
Max weight	Kg	1.3		1.6	
Accessories and Parts		H35 M		H40 DM	
Membrane	item	00 H35M 15		00 H40DM 15	
Cover with fittings	item	00 H35M 16		00 H40DM 20	
Cover without fittings	item	00 H35MF 16		00 H40DMF 20	

Add the letter F to the item for a mini pump supplied with G 1/8" threaded suction and blowing connections, without hose fittings. (Example: H40 DM F).

Transformation ratio: N (newton) = Kg x 9.81 (force of gravity)

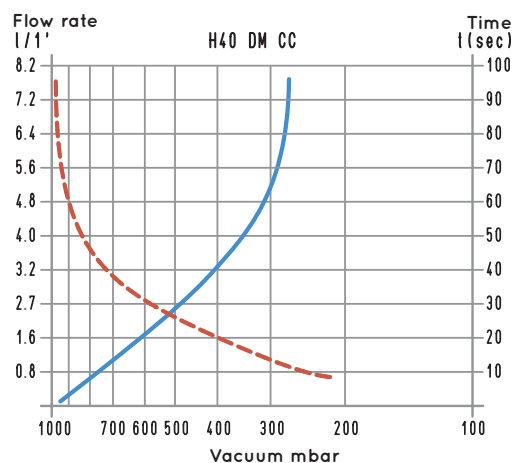
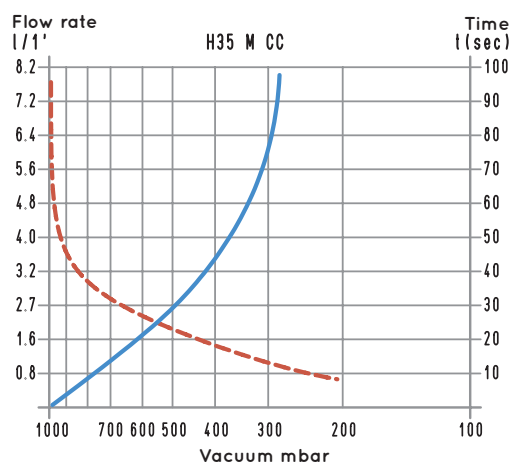
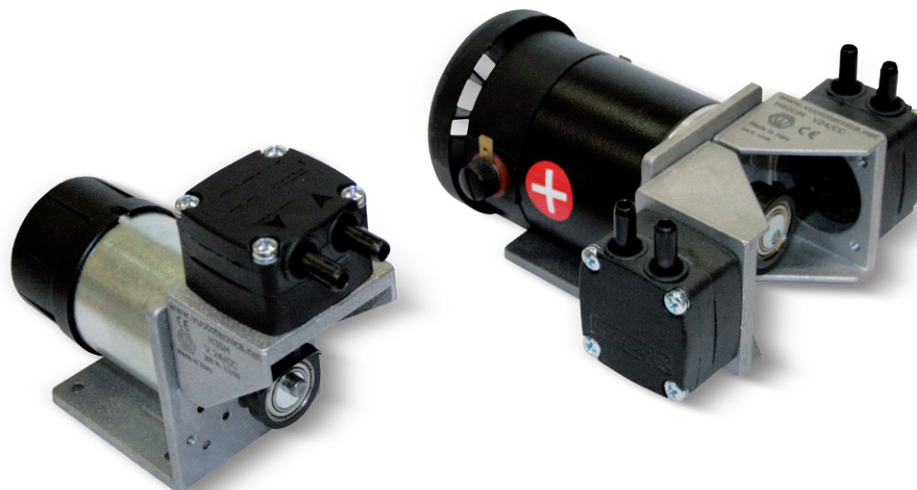
inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$

cfm= m³/h x 0.588; inch Hg= mbar x 0.0295; psi= bar x 14.6

MEMBRANE VACUUM MINI PUMPS, WITH DC MOTOR

The mini pumps on this page are the same as described above,
with a DC motor rather than an AC.

The performances are also almost the same.



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

- Curve relative to the flow rate (referring to a 1013 mbar pressure)
- Curve regarding the emptying time of a 6-litre volume

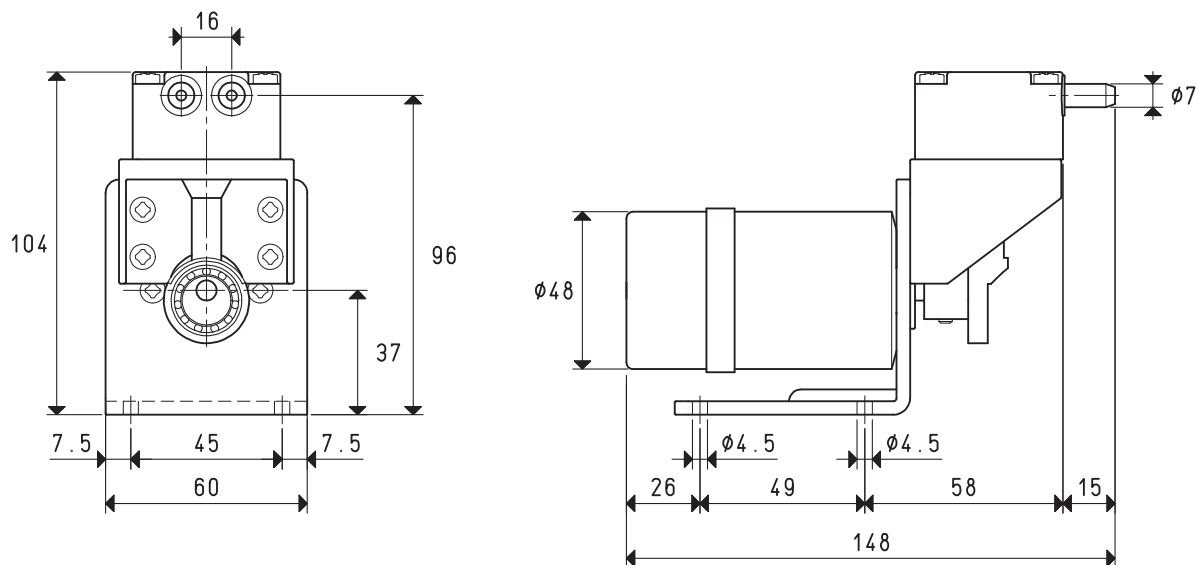
V_1 : Volume to be emptied (l)
 t_1 : time to be calculated (sec)
 t : time obtained in the table (sec)



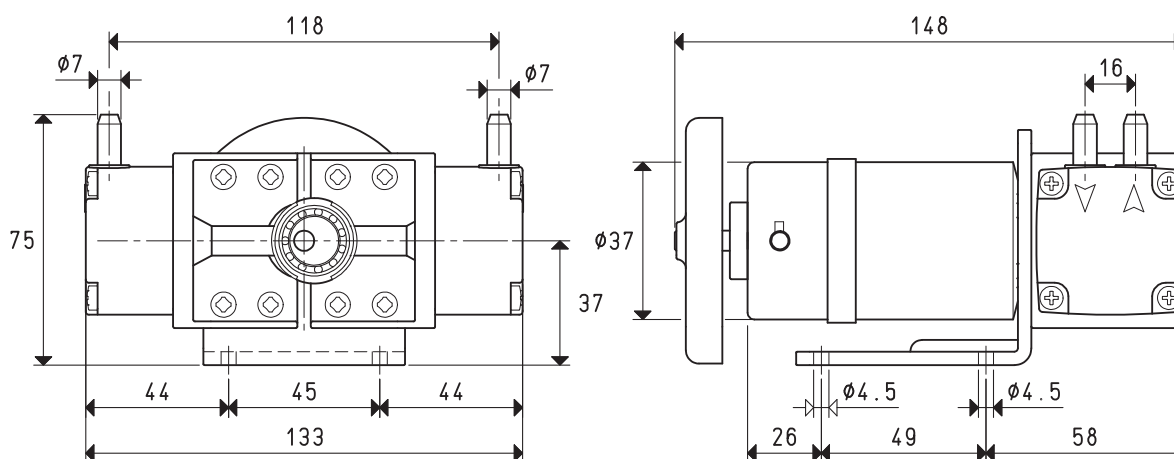
MEMBRANE VACUUM MINI PUMPS, WITH DC MOTOR

3D drawings are available on vuototecnica.net

H 35 M CC



H 40 DM CC



7

Item		H35 M CC	H40 DM CC
Nominal flow rate:			
Connection in series	l / l'	8.5	8.5
Parallel connection	l / l'	=	8.5 + 8.5
Final pressure:			
Connection in series	mbar abs.	200	60
Parallel connection	mbar abs.	=	200
Maximum pressure	bar	2	2
Motor performance	volt	12/24 VDC	12/24 VDC
Motor power	watt	12	22
Rotation speed	g/min ⁻¹	3000	3000
Noise level	dB(A)	≤ 50	≤ 50
Max weight	Kg	0.62	1.19
Accessories and Parts		H35 M CC	H40 DM CC
Membrane	item	00 H35M 15	00 H40DM 15
Cover with fittings	item	00 H35M 16	00 H40DM 20
Cover without fittings	item	00 H35MF 16	00 H40DMF 20

Note: Add the letter F to the item for a mini pump supplied with G 1/8" threaded suction and blowing connections, without hose fittings. (Example: H35 M CC F).

Transformation ratio: N (newton) = Kg x 9.81 (force of gravity)

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

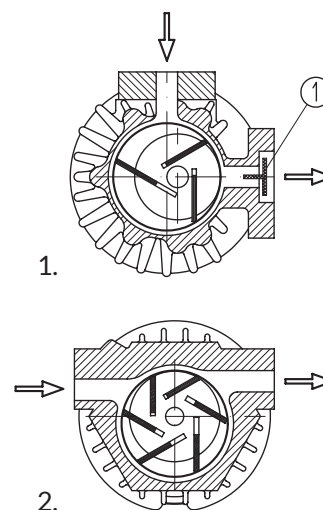
cfm= m³/h x 0.588; inch Hg= mbar x 0.0295; psi= bar x 14.6

Working 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 illustrates a system with three rotary blades and discharge valve (1); this system is mainly used in the high vacuum field.

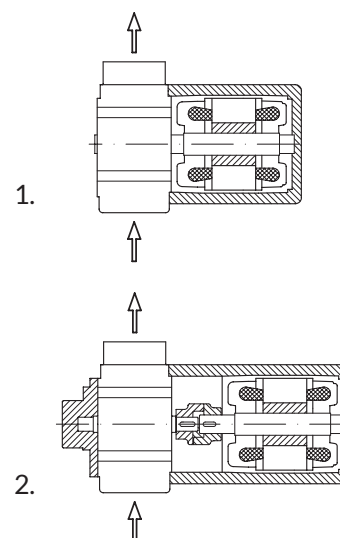
Figure 2 illustrates a system with six rotary blades and therefore with several chambers, which is mainly used in the rough vacuum field.



Rotor housing

In smaller and more compact pumps, the rotor is cantilevered on the crankshaft extension (fig.1), while in the versions with high installed power or with frequent start-ups, the rotor is supported by bearings on both sides (fig. 2).

In this case, the pump and the electric motor are two independent units and the two shafts are coupled together by an elastic transmission joint.



Lubrication system

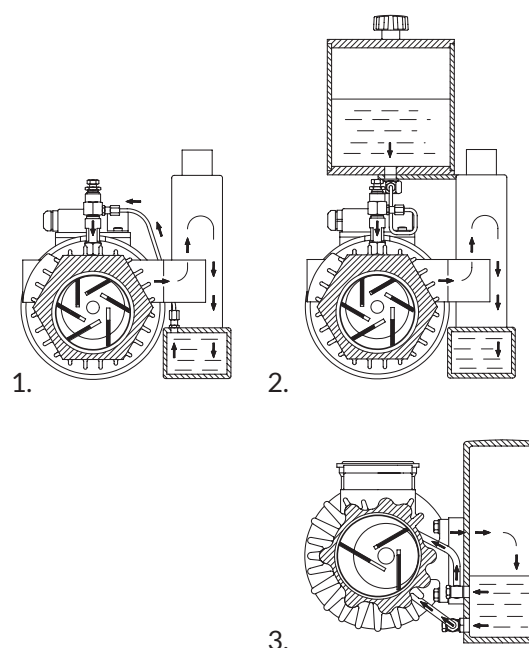
The main lubrication systems used by us are vacuum with oil recirculation or waste oil for vacuum pumps in the VTL series and an oil bath for pumps in the RVP series.

In oil recirculation lubrication (fig.1), the oil sucked into the working chamber through the adjustable oilers that dose the flow is discharged together with the air sucked into the recovery tank and, through a special filter contained in it, is separated from the air and put back into the cycle.

With disposable oil lubrication (fig.2), the lubrication oil is contained in a special transparent container, controlled by a magnetic level switch, and follows the same route previously described but is collected in the recovery tank without being put back into the cycle. This lubrication system is recommended when there are water condensates, solvent vapours or anything else that can pollute the oil in the intake air.

With oil-bath lubrication (fig.3), the oil is sucked into the working chamber directly from the recovery tank through calibrated pipes that measure the quantity and is held and separated from the air during discharge by special dehydrating microfibre cartridges, contained in the tank itself.

In this lubrication system, the quantity of oil in circulation is significantly higher than that of the two systems described above. This leads to a better seal between the stator and the rotor and lower friction between the rotating and fixed parts, with a resulting increase in the degree of vacuum, less heating and less noise.





ROTARY VANE VACUUM PUMPS - GENERAL DESCRIPTION

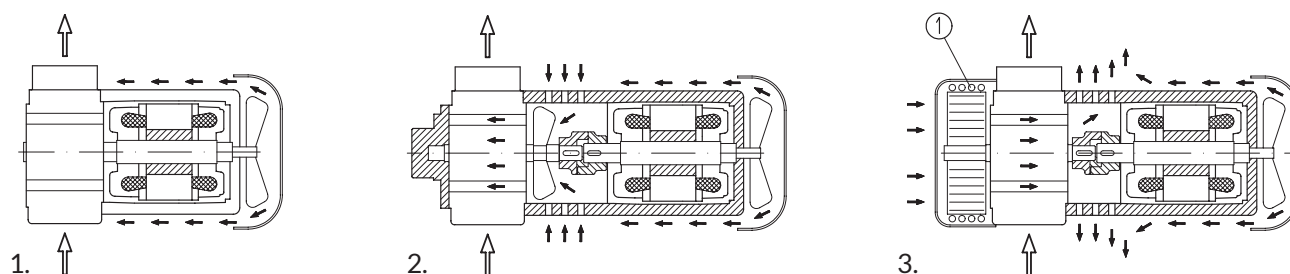
Dry vacuum pumps

The particular shape of the working chamber and the special graphite with which the blades and closing flanges are made allow these pumps to work without any need for lubrication.

Use of these pumps is not recommended when the fluid to be suctioned contains vapours or water or oil condensation.

Cooling

The pump cooling system we use is the surface air type. The heat developed by the vacuum pump is dispersed from the external, specially finned surface by the fan of the electric motor on smaller pumps and by a radial fan keyed on the pump shaft on larger pumps. Pumps with capacities from 100 m³/h upwards are also equipped with a serpentine radiator (1). In this case, the lubricating oil, passing through the radiator before entering the working chamber, is cooled by the radial fan, which sucks the cooling air through the radiator itself, allowing a further reduction of the heat developed by the pump.



Materials used

The stator and the flanges of the pumps are made of spheroidal cast iron, the transmission shaft and the rotor are made of carbon steel, while the vanes are in carbon fibre or glass for lubricated pumps and in graphite for dry pumps.

Electric motors

All vacuum pumps with flow rate up to 21 m³/h can be supplied either with three-phase or single-phase electric motors; for those with higher flow rates, only three-phase.

All the pumps are equipped as standard with multi-voltage electric motors, according to EC regulations. Upon request, they can be supplied with UL-CSA compliant motors or with special voltages and frequencies.

The pumps are driven by an electric motor, in compliance with IEC International Standard 60034 requirements for rotating machines and European Directives for Low Voltage (LV) 2006/95/EC, for Electromagnetic Compatibility (EMC) 2004/108/EC, for the limitation of use of hazardous substances RoHS 2011/65/EC and Machine Directive 2006/42/EC for CE marking.

With the exception of electric motors with power lower than 0.75 KW, the efficiency class corresponds to IE3 = Premium Efficiency, with protection degree IP 55, Tolerance of nominal Voltage $\pm 10\%$ and Class of Insulation F.

Certifications

The design and construction of our vacuum pumps comply with European safety directives. The "CE" mark is in fact reported along with the technical characteristics of the pumps on all the identification plates and the instructions for use and maintenance that accompany them are always provided with a Declaration of Compliance with Machinery Directive 2006/42/EC and subsequent changes.

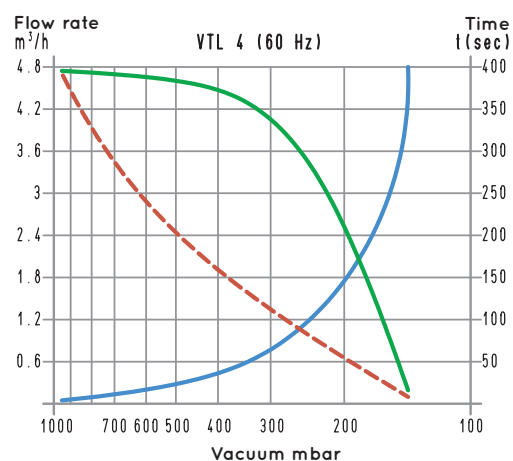
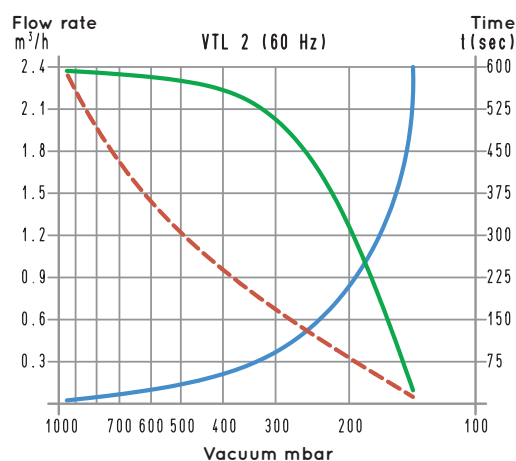
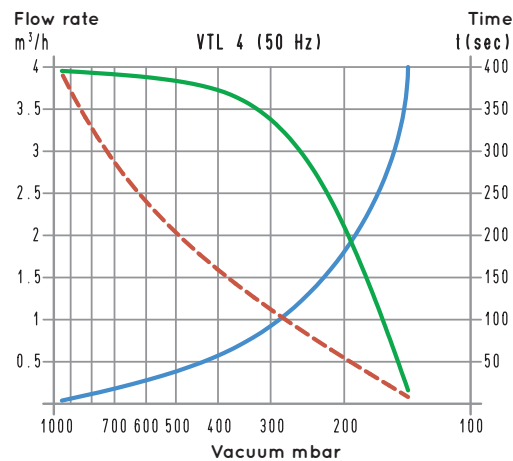
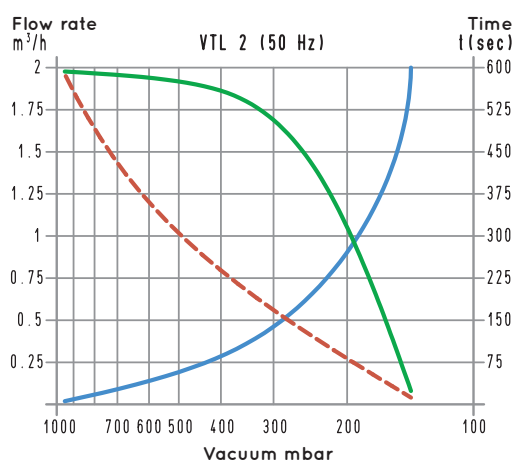
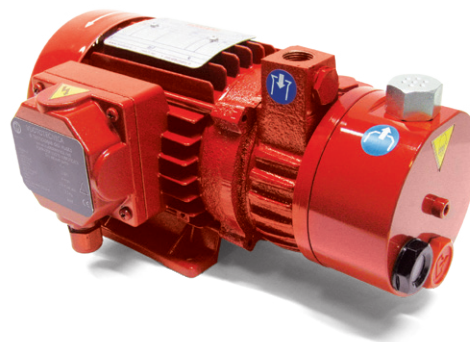
VACUUM PUMPS VTL 2 and 4

These small vacuum pumps have a suction flow rate of 2 and 4 m³/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 of V_1 , use the following formula: $t_1 = \frac{t \times V_1}{100}$

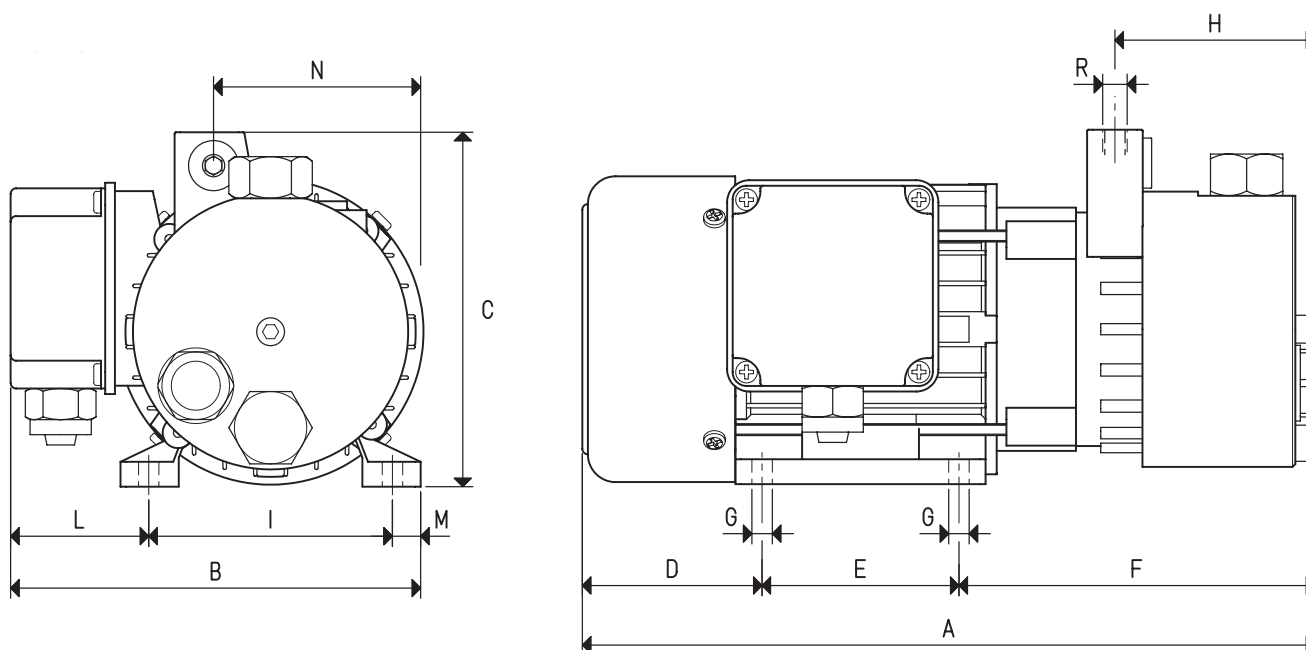
- Curve relative to the flow rate (referring to the suction pressure)
- - - Curve relative to the flow rate (referring to a 1013 mbar pressure)
- Curve regarding the emptying time of a 100-litre volume

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



VACUUM PUMPS VTL 2 and 4

3D drawings are available on vuototecnica.net



Item		VTL 2		VTL 4	
Frequency		50Hz	60Hz	50Hz	60Hz
Flow rate	m ³ /h	2.0	2.4	4.0	4.8
Final pressure	mbar abs.	150		150	
Motor performance		230/400±10%	265/460±10%	230/400±10%	265/460±10%
Volt	1~	230±10%		230±10%	
Motor power	3~	0.12	0.15	0.18	0.21
Kw	1~	0.12	0.15	0.18	0.21
Motor protection	IP	55		55	
Rotation speed	g/min ⁻¹	2700	3245	2760	3300
Motor shape		Speciale		Speciale	
Motor size		56		63	
Noise level	dB(A)	62	65	62	65
Max weight	3~	5.7		7.3	
Kg	1~	6.0		7.5	
A		260		285	
B		145		160	
C		126		132	
D		62		66	
E		71		81	
F		127		139	
G	Ø	6.5		7.5	
H		72		81	
I		90		100	
L		43		48	
M		12		12	
N		76		86	
R	Ø gas	G1/4"		G3/8"	
Accessories and Parts		VTL 2		VTL 4	
Oil charge	L	0.05		0.05	
Lubricating oil	type	ISO 32		ISO 32	
4 vanes	item	00 VTL 02 10		00 VTL 04 10	
Sealing kit	item	00 KIT VTL 02		00 KIT VTL 04	
Check valve	item	10 01 15		10 02 15	
Suction filter	item	FB 5		FB 10/FC 10	

Note: Add the letter M to the item for a pump supplied with a single-phase electric motor (Example: VTL 2 M).

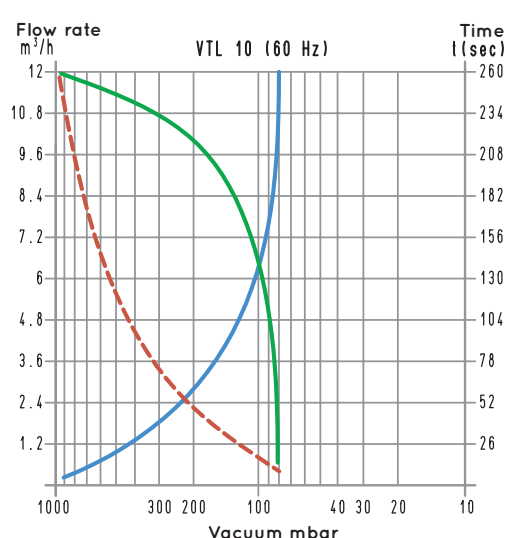
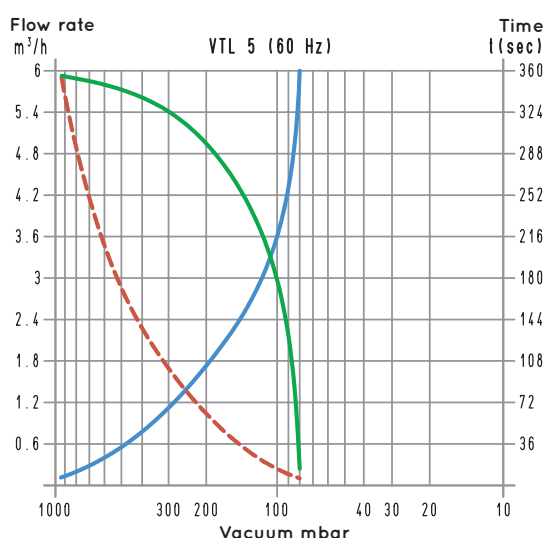
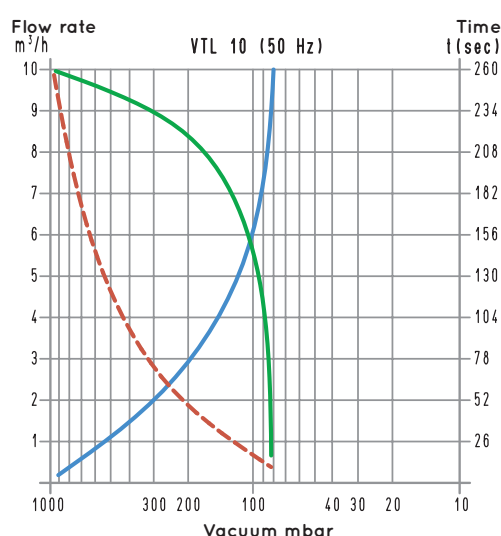
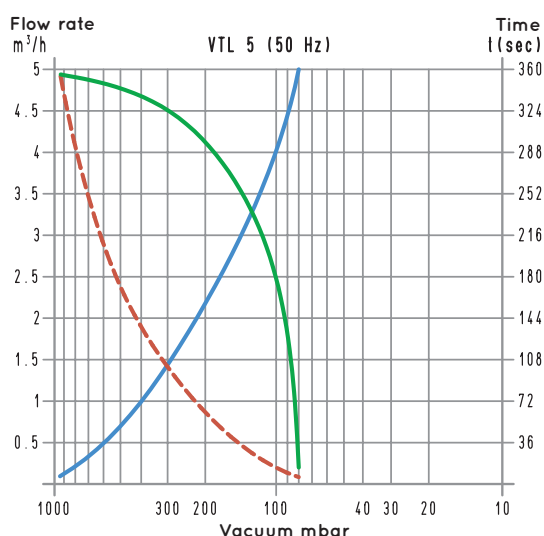
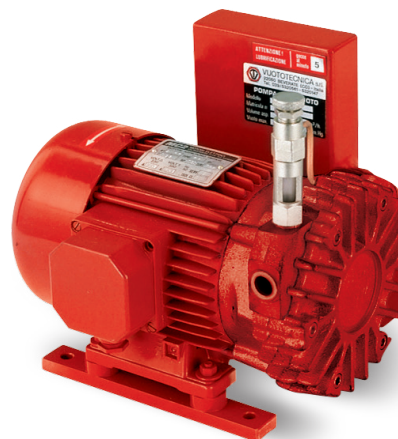
Transformation ratio: N (newton) = Kg x 9.81 (force of gravity)

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

cfm= m³/h x 0.588; inch Hg= mbar x 0.0295; psi= bar x 14.6

VACUUM PUMPS VTL 5 and 10

These vacuum pumps have a suction flow rate of 5 and 10 m³.
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 filter that prevents oil mists and reduces noise.
We strongly recommend installing a check valve and a filter 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 of V_1 , use the following formula: $t_1 = \frac{t \times V_1}{100}$

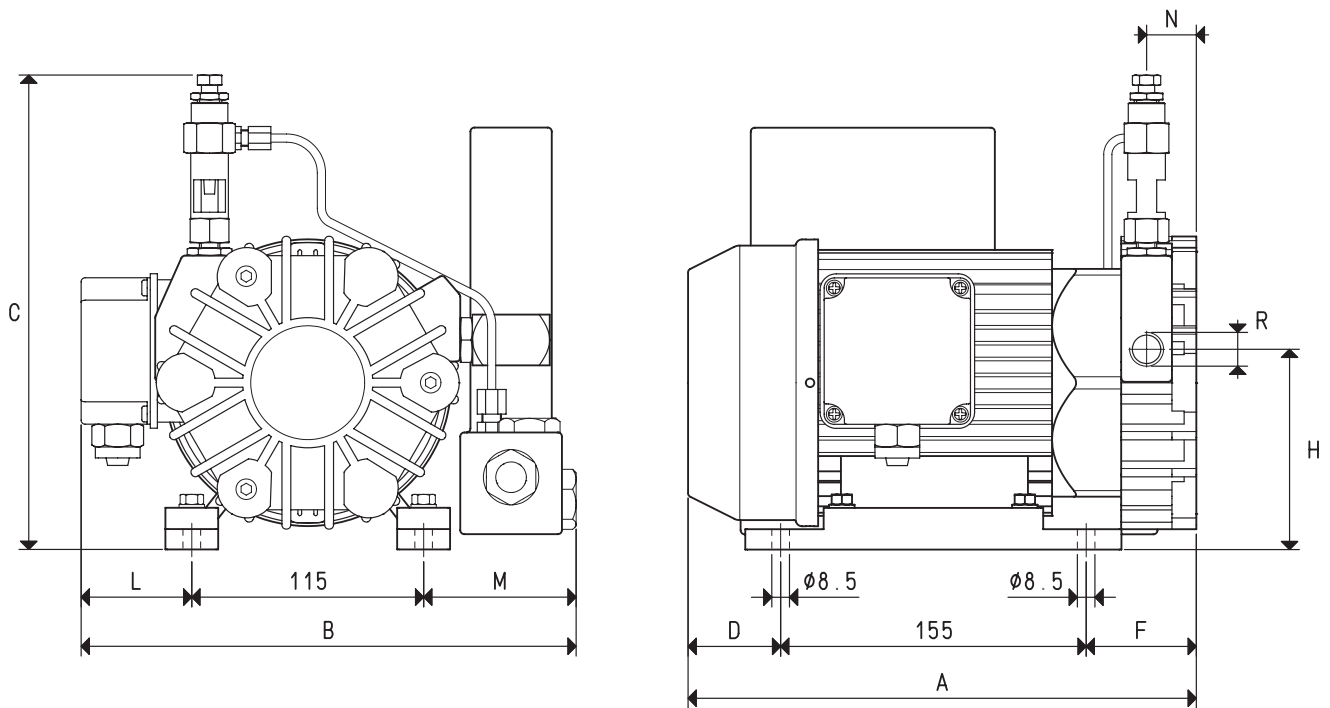
- Curve relative to the flow rate (referring to the suction pressure)
- - - Curve relative to the flow rate (referring to a 1013 mbar pressure)
- Curve regarding the emptying time of a 100-litre volume

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



VACUUM PUMPS VTL 5 and 10

3D drawings are available on vuototecnica.net



Item		VTL 5		VTL 10	
Frequency		50Hz	60Hz	50Hz	60Hz
Flow rate	m³/h	5.0	6.0	10.0	12.0
Final pressure	mbar abs.	80		80	
Motor performance	3~	230/400±10%	265/460±10%	230/400±10%	265/460±10%
Volt	1~	230±10%		230±10%	
Motor power	3~	0.25	0.30	0.37	0.40
Kw	1~	0.25	0.30	0.37	0.40
Motor protection	IP	55		55	
Rotation speed	g/min ⁻¹	1450	1680	1450	1680
Motor shape		Speciale		Speciale	
Motor size		71		71	
Noise level	dB(A)	62	64	62	64
Max weight	3~	14.5		20.5	
Kg	1~	15.0		21.0	
A		260		310	
B		245		262	
C		245		245	
D		52		70	
F		53		85	
H		122		122	
L		45		45	
M		85		102	
N		27		52	
R	Ø gas	G3/8"		G1/2"	

Accessories and Parts		VTL 5	VTL 10
Oil charge	L	0.25	0.40
Lubricating oil	type	ISO 32	ISO 100
6 vanes	item	00 VTL 05 10	00 VTL 10 10
Sealing kit	item	00 KIT VTL 05	00 KIT VTL 10
Check valve	item	10 02 10	10 03 10
Suction filter	item	FB 10/FC 10	FB 20/FC 20
Adjustable drip oiler	item	00 VTL 00 11	00 VTL 00 11

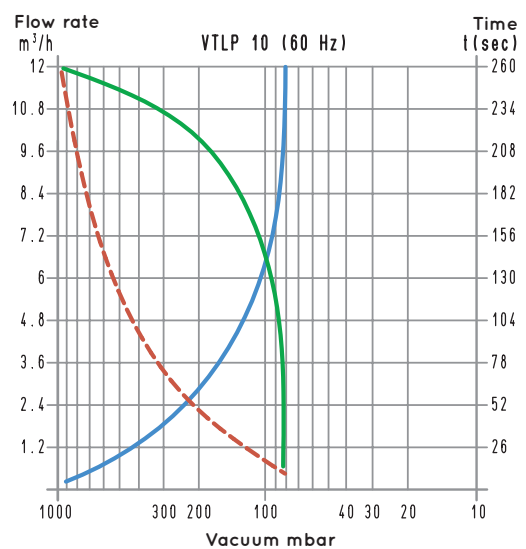
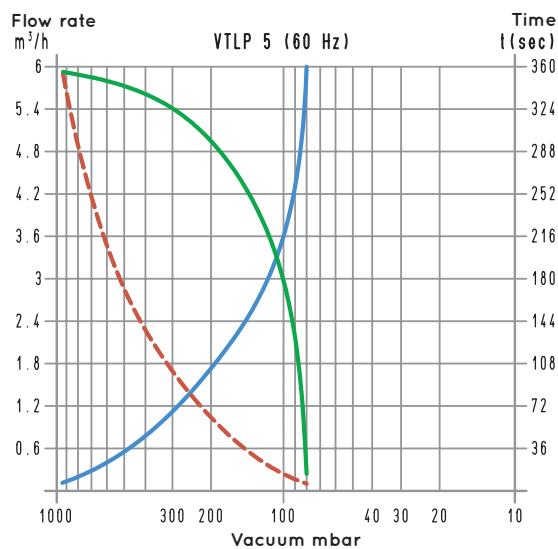
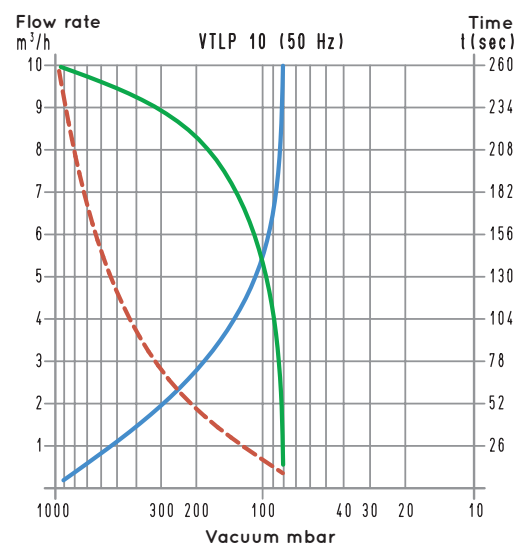
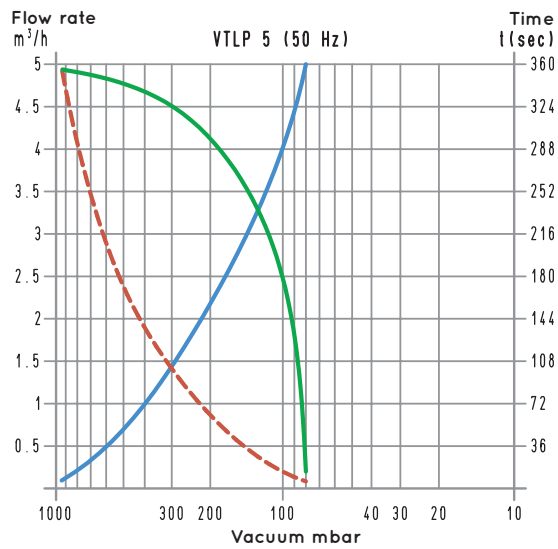
Note: Add the letter M to the item for a pump supplied with a single-phase electric motor (Example: VTL 5 M).

Transformation ratio: N (newton) = Kg x 9.81 (force of gravity)

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

cfm= m³/h x 0.588; inch Hg= mbar x 0.0295; psi= bar x 14.6

VACUUM PUMPS VTLP 5 and 10 WITH DISPOSABLE LUBRICATION



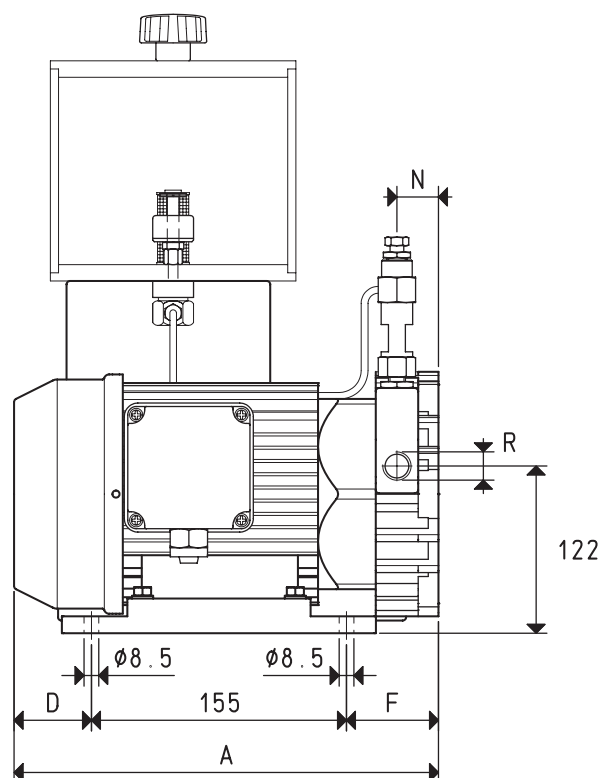
To calculate the emptying time of a volume of V_1 , use the following formula: $t_1 = \frac{t \times V_1}{100}$

- Curve relative to the flow rate (referring to the suction pressure)
- - - Curve relative to the flow rate (referring to a 1013 mbar pressure)
- Curve regarding the emptying time of a 100-litre volume

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



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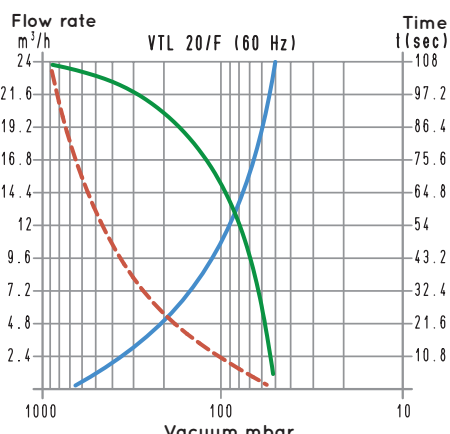
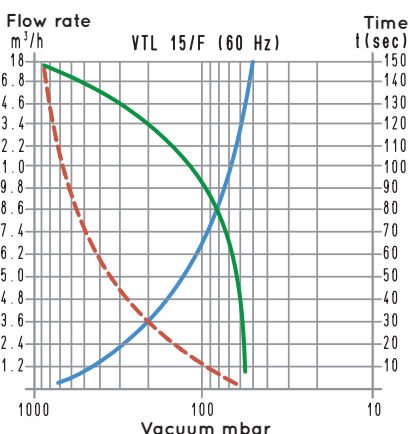
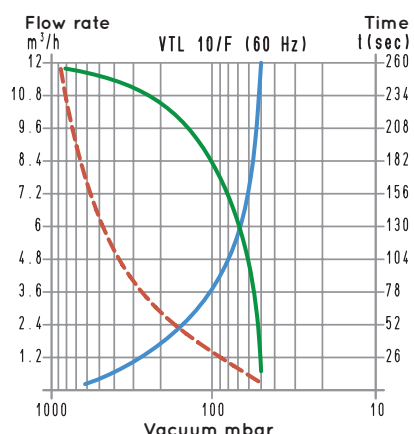
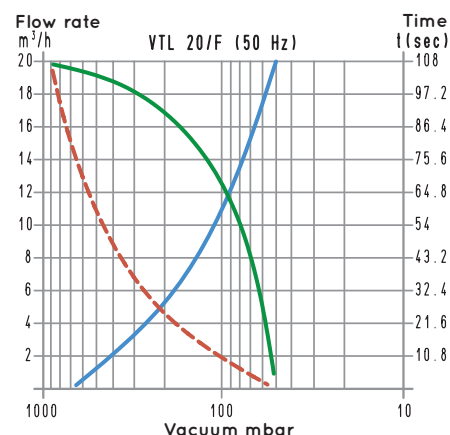
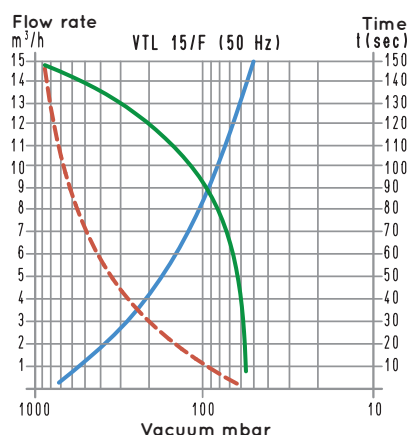
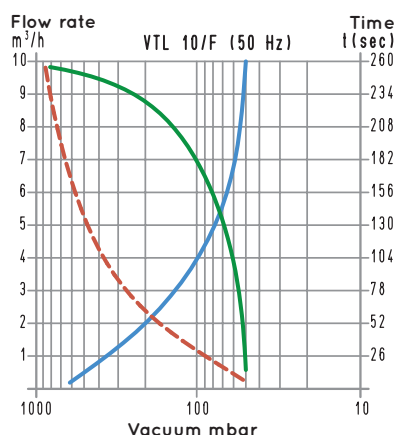
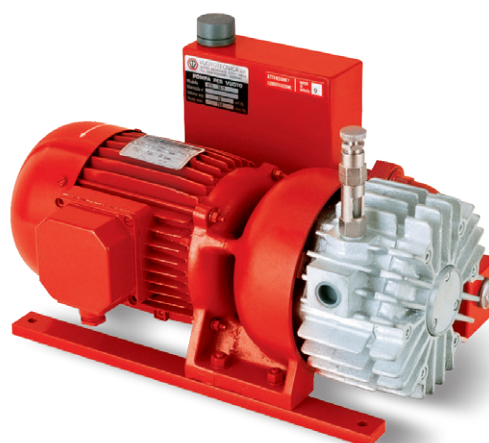


Note: Add the letter M to the item for a pump supplied with a single-phase electric motor (Example: VTLP 5 M).

$$\text{cfm} = \text{m}^3/\text{h} \times 0.588; \text{inch Hg} = \text{mbar} \times 0.0295; \text{psi} = \text{bar} \times 14.6$$

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

These vacuum pumps have a suction flow rate of 10, 15 and 20 m³/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 filter that prevents oil mists and reduces noise. We strongly recommend installing a check valve and a filter 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 of V_1 , use the following formula: $t_1 = \frac{t \times V_1}{100}$

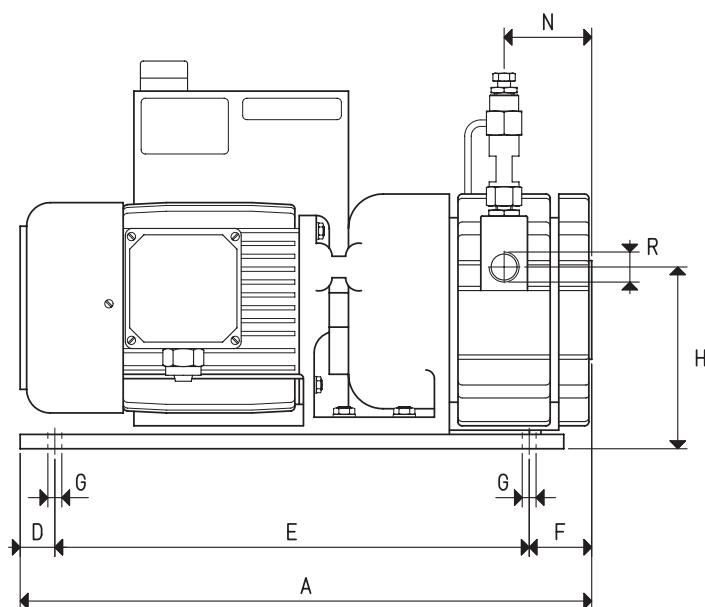
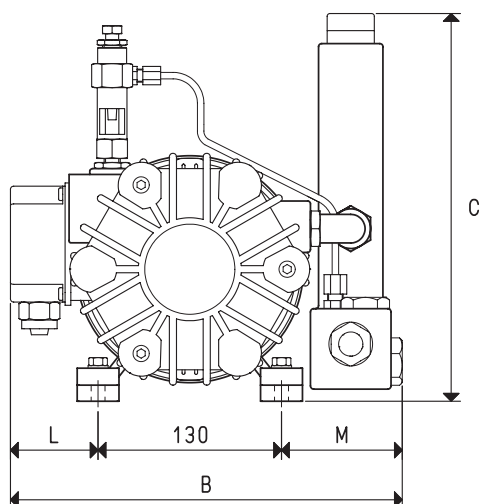
- Curve relative to the flow rate (referring to the suction pressure)
- - - Curve relative to the flow rate (referring to a 1013 mbar pressure)
- Curve regarding the emptying time of a 100-litre volume

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



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

3D drawings are available on vuototecnica.net



Item		VTL 10/F		VTL 15/F		VTL 20/F	
Frequency		50Hz	60Hz	50Hz	60Hz	50Hz	60Hz
Flow rate	m ³ /h	10.0	12.0	15.0	18.0	20.0	24.0
Final pressure	mbar abs.	50		50		50	
Motor performance	3~	230/400±10%	265/460±10%	230/400±10%	265/460±10%	230/400±10%	265/460±10%
Volt	1~	230±10%		230±10%		230±10%	
Motor power	3~	0.55	0.66	0.55	0.66	0.55	0.66
Kw	1~	0.55	0.66	0.55	0.66	0.55	0.66
Motor protection	IP	55		55		55	
Rotation speed	g/min ⁻¹	1450	1680	1450	1680	1450	1680
Motor shape		Speciale		Speciale		Speciale	
Motor size		80		80		80	
Noise level	dB(A)	62	64	63	65	64	66
Max weight	3~	25.0		27.0		30.0	
Kg	1~	25.5		27.5		30.5	
A		385		405		425	
B		285		285		285	
C		259		259		259	
D		25		25		25	
E		340		340		340	
F		20		40		60	
H		133		133		133	
L		55		55		55	
M		100		100		100	
N		53		63		73	
R	Ø gas	G1/2"		G1/2"		G1/2"	

Accessories and Parts		VTL 10/F	VTL 15/F	VTL 20/F
Oil charge	L	0.4	0.5	0.65
Lubricating oil	type	ISO 100	ISO 100	ISO 100
6 vanes	item	00 VTL 10F 10	00 VTL 15F 10	00 VTL 20F 10
Sealing kit	item	00 KIT VTL 10F	00 KIT VTL 15F	00 KIT VTL 20F
Check valve	item	10 03 10	10 03 10	10 03 10
Suction filter	item	FB 20/FC 20	FB 20/FC 20	FB 20/FC 20
Adjustable drip oiler	item	00 VTL 00 11	00 VTL 00 11	00 VTL 00 11

Note: Add the letter M to the item for a pump supplied with a single-phase electric motor (Example: VTL 10/F M).

Transformation ratio: N (newton) = Kg x 9.81 (force of gravity)

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

cfm= m³/h x 0.588; inch Hg= mbar x 0.0295; psi= bar x 14.6

VACUUM PUMPS VTLP 10/F,15/F and 20/F, WITH DISPOSABLE LUBRICATION

These vacuum pumps have a suction flow rate of 10, 15 and 20 m³/h.

The vacuum with disposable oil lubrication 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.

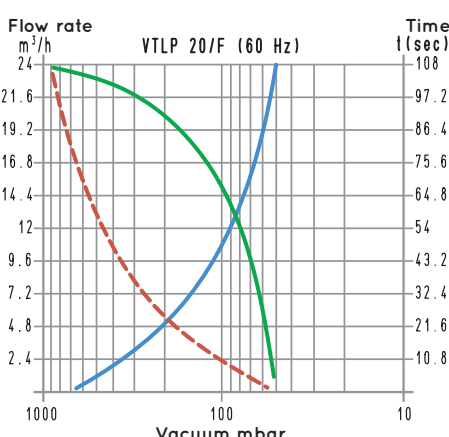
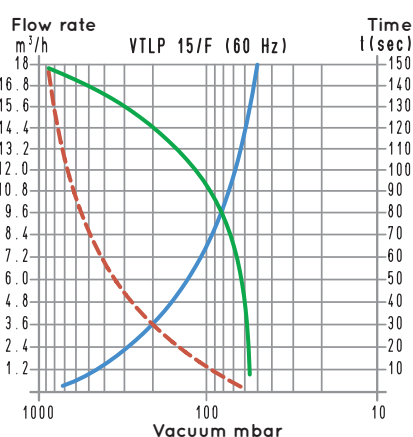
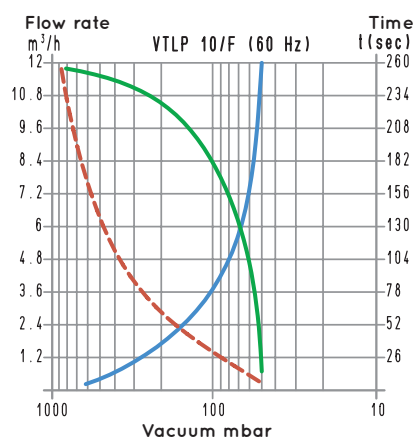
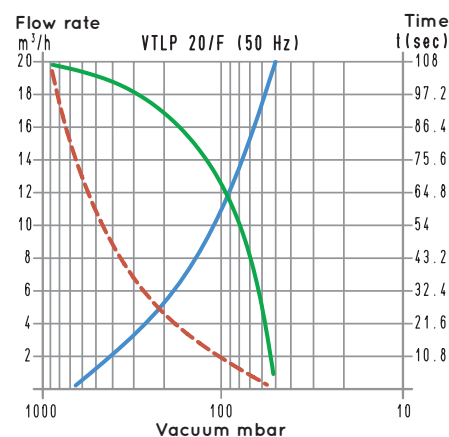
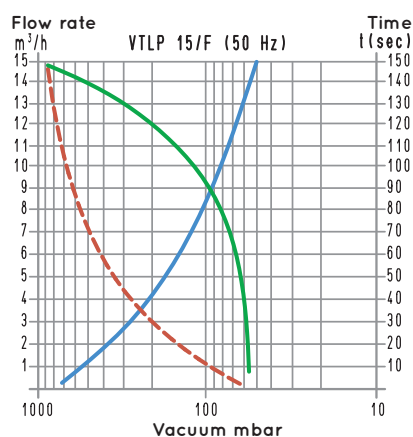
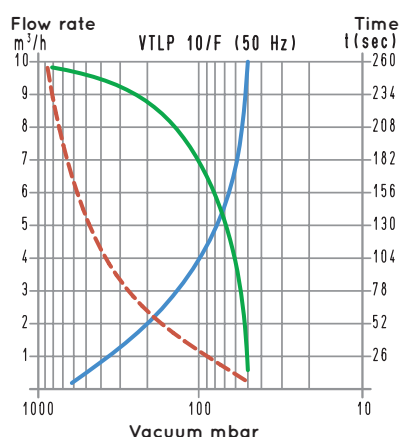
An oil recovery tank is installed on the pump exhaust. This tank contains a separator filter that prevents oil mists and reduces noise.

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 affect oil properties.

We strongly recommend installing a check valve and a filter 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 of V_1 , use the following formula: $t_1 = \frac{t \times V_1}{100}$

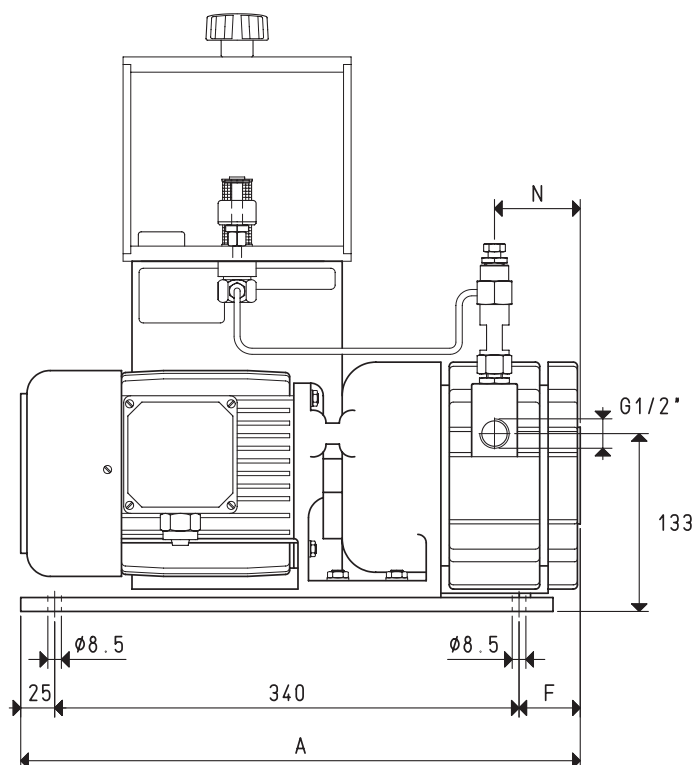
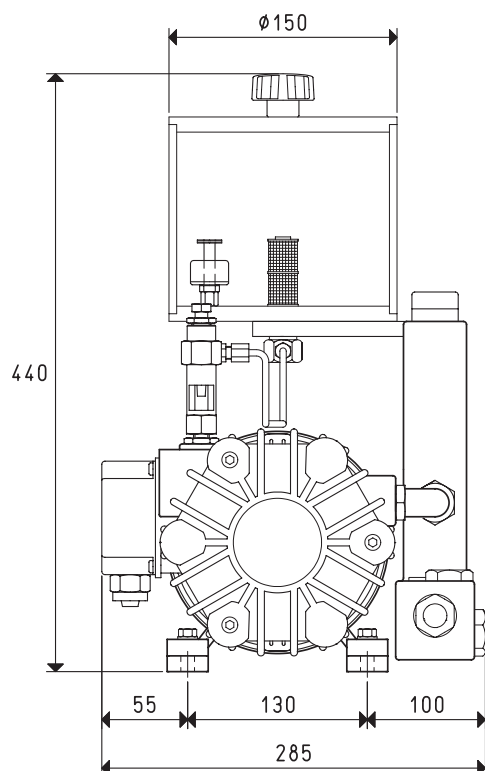
- Curve relative to the flow rate (referring to the suction pressure)
- - - Curve relative to the flow rate (referring to a 1013 mbar pressure)
- Curve regarding the emptying time of a 100-litre volume

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



VACUUM PUMPS VTLP 10/F,15/F and 20/F, WITH DISPOSABLE LUBRICATION

3D drawings are available on vuototecnica.net



Item		VTLP 10/F		VTLP 15/F		VTLP 20/F	
Frequency		50Hz	60Hz	50Hz	60Hz	50Hz	60Hz
Flow rate	m ³ /h	10.0	12.0	15.0	18.0	20.0	24.0
Final pressure	mbar abs.	50		50		50	
Motor performance	3~	230/400±10%	265/460±10%	230/400±10%	265/460±10%	230/400±10%	265/460±10%
Volt	1~	230±10%		230±10%		230±10%	
Motor power	3~	0.55	0.66	0.55	0.66	0.55	0.66
Kw	1~	0.55	0.66	0.55	0.66	0.55	0.66
Motor protection	IP	55		55		55	
Rotation speed	g/min ⁻¹	1450	1680	1450	1680	1450	1680
Motor shape		Speciale		Speciale		Speciale	
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	
Accessories and Parts		VTLP 10/F		VTLP 15/F		VTLP 20/F	
Oil charge	L	1.8		1.8		1.8	
Lubricating oil	type	ISO 100		ISO 100		ISO 100	
6 vanes	item	00 VTL 10F 10		00 VTL 15F 10		00 VTL 20F 10	
Sealing kit	item	00 KIT VTL 10F		00 KIT VTL 15F		00 KIT VTL 20F	
Check valve	item	10 03 10		10 03 10		10 03 10	
Suction filter	item	FB 20/FC 20		FB 20/FC 20		FB 20/FC 20	
Oil level switch	item	00 LP VTL 99		00 LP VTL 99		00 LP VTL 99	
Oil filter	item	00 LP VTL 40		00 LP VTL 40		00 LP VTL 40	
Adjustable drip oiler	item	00 VTL 00 11		00 VTL 00 11		00 VTL 00 11	

Note: Add the letter M to the item for a pump supplied with a single-phase electric motor (Example: VTLP 10/F M).

Transformation ratio: N (newton) = Kg x 9.81 (force of gravity)

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

cfm= m³/h x 0.588; inch Hg= mbar x 0.0295; psi= bar x 14.6

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

These vacuum pumps have a suction flow rate of 25, 30 and 35 m³/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.

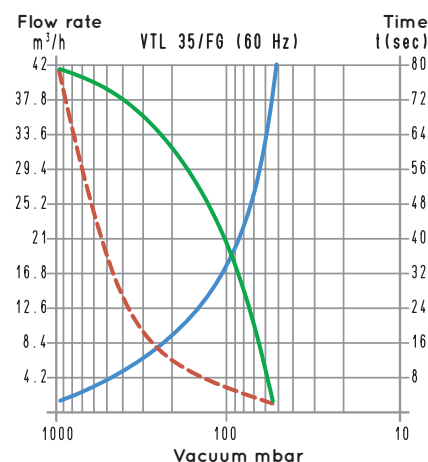
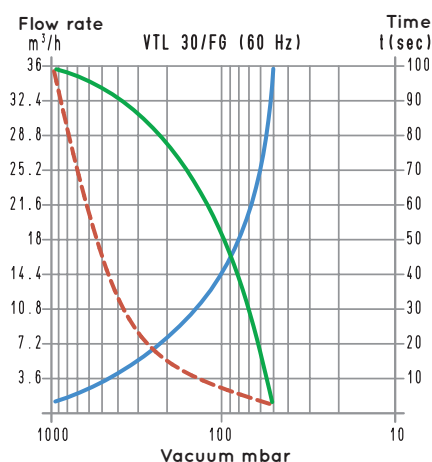
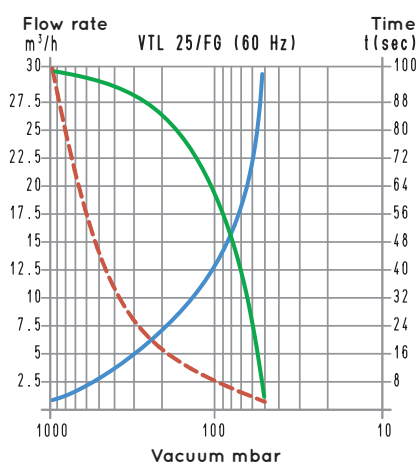
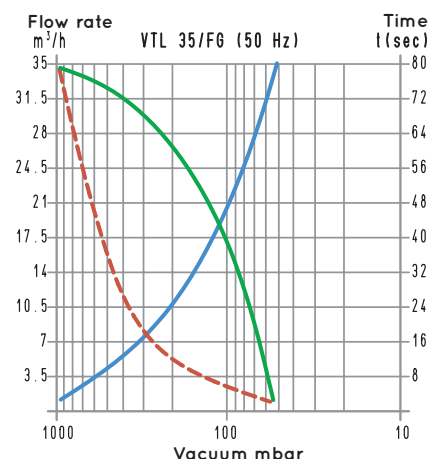
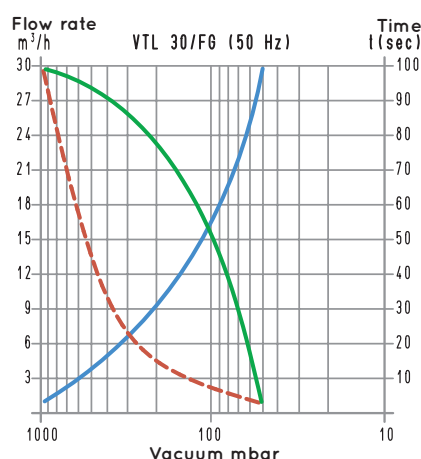
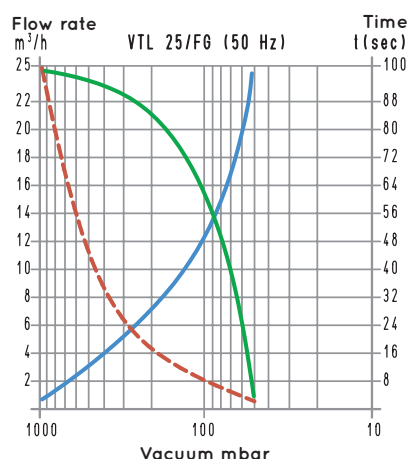
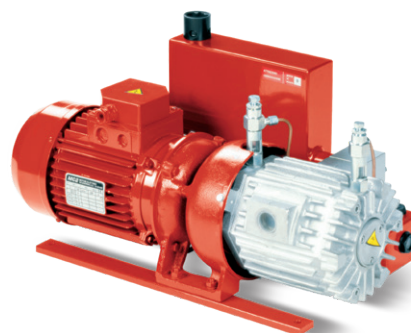
The pump and the electric motor are, therefore, two independent units and fixed onto a special support and connected to each other via an elastic transmission joint.

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 filter that prevents oil mists and reduces noise. We strongly recommend installing a check valve and a filter on the suction inlet.

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



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

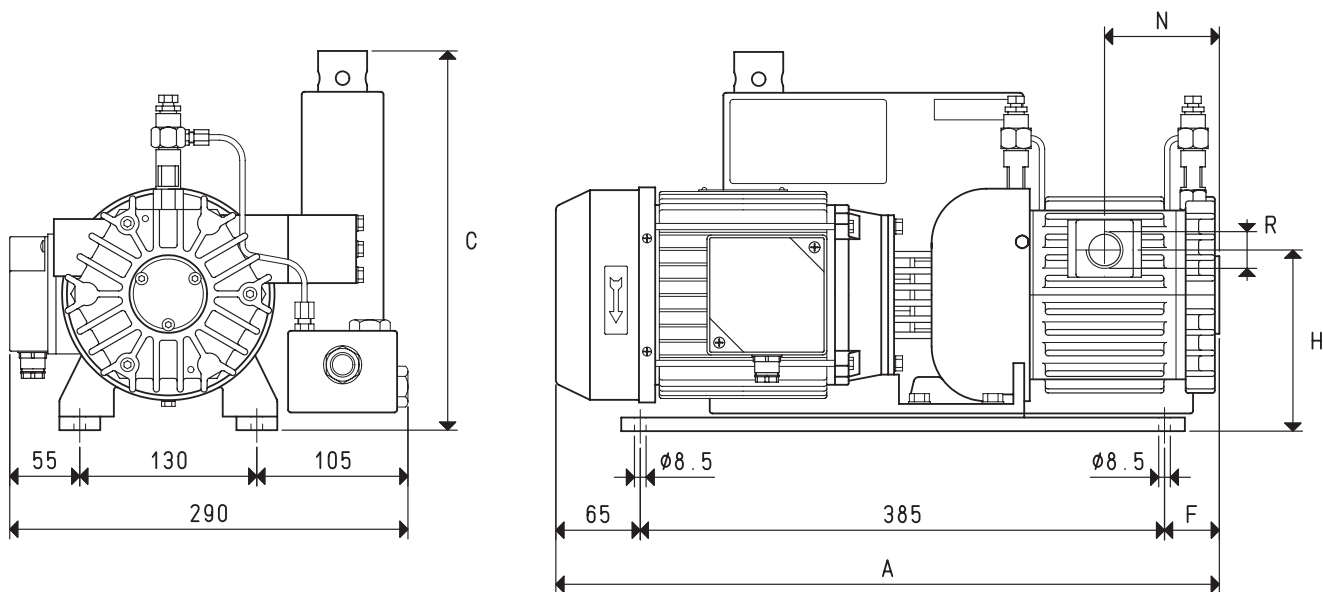
- Curve relative to the flow rate (referring to the suction pressure)
- - - Curve relative to the flow rate (referring to a 1013 mbar pressure)
- Curve regarding the emptying time of a 100-litre volume

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



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

3D drawings are available on vuototecnica.net



Item		VTL 25/FG		VTL 30/FG		VTL 35/FG	
Frequency		50Hz	60Hz	50Hz	60Hz	50Hz	60Hz
Flow rate	m ³ /h	25.0	30.0	30.0	36.0	35.0	42.0
Final pressure	mbar abs.	50		50		50	
Motor performance 3~	volt	230/400±10%	265/460±10%	230/400±10%	265/460±10%	230/400±10%	265/460±10%
Motor power 3~	Kw	0.75	0.90	0.75	0.90	1.10	1.35
Motor protection	IP	55		55		55	
Rotation speed	g/min ⁻¹	1410	1640	1410	1640	1435	1745
Motor shape		B14		B14		B14	
Motor size		80		80		80	
Noise level	dB(A)	64	66	65	67	65	67
Max weight 3~	kg	31.0		35.0		37.0	
A		470		490		510	
C		280		280		280	
F		20		40		60	
H		133		133		133	
N		73		83		93	
R	Ø gas	G3/4"		G3/4"		G3/4"	
Accessories and Parts		VTL 25/FG		VTL 30/FG		VTL 35/FG	
Oil charge	L	0.65		0.85		0.85	
Lubricating oil	type	ISO 100		ISO 100		ISO 100	
6 vanes	item	00 VTL 25FG 10		00 VTL 30FG 10		00 VTL 35FG 10	
Sealing kit	item	00 KIT VTL 25FG		00 KIT VTL 30FG		00 KIT VTL 35FG	
Check valve	item	10 04 10		10 04 10		10 04 10	
Suction filter	item	FB 28/FC 25		FB 28/FC 25		FB 28/FC 25	
Adjustable drip oiler	item	00 VTL 00 11		00 VTL 00 11		00 VTL 00 11	

Transformation ratio: N (newton) = Kg x 9.81 (force of gravity)

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

cfm= m³/h x 0.588; inch Hg= mbar x 0.0295; psi= bar x 14.6

VACUUM PUMPS VTLP 25/FG, 30/FG and 35/FG WITH DISPOSABLE LUBRICATION

These vacuum pumps have a suction flow rate of 25, 30 and 35 m³/h.

The vacuum with disposable oil lubrication 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 filter that prevents oil mists and reduces noise.

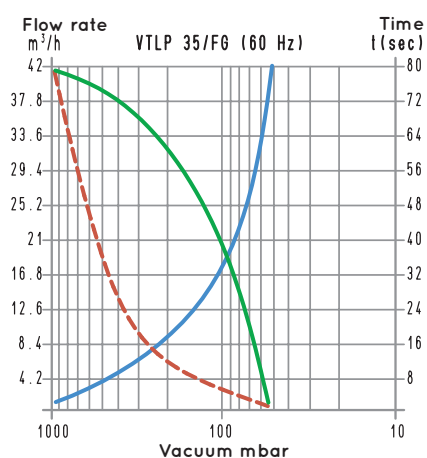
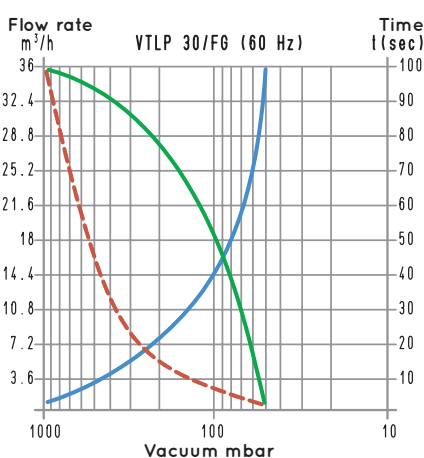
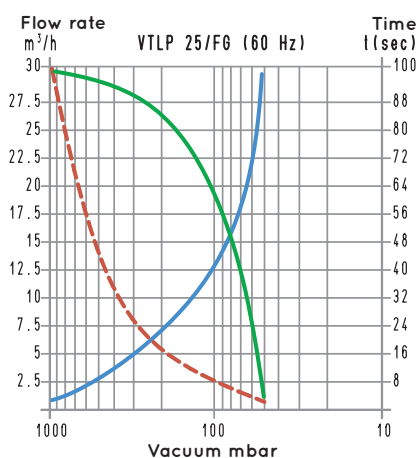
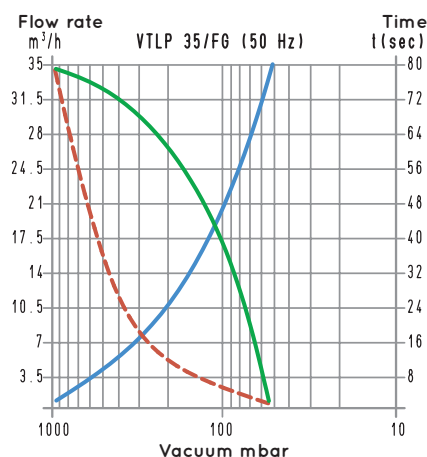
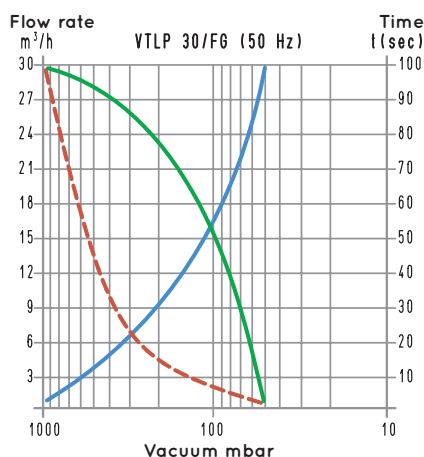
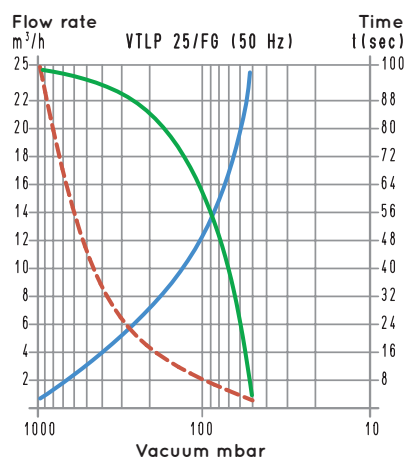
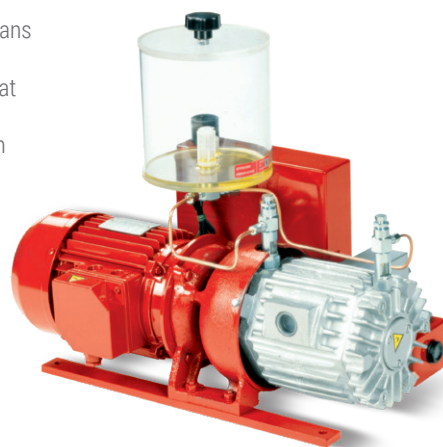
A safety valve is also installed on the tank for the automatic drainage of the exhaust oil when not regularly drained.

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 oilers 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 affect oil properties.

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

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



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

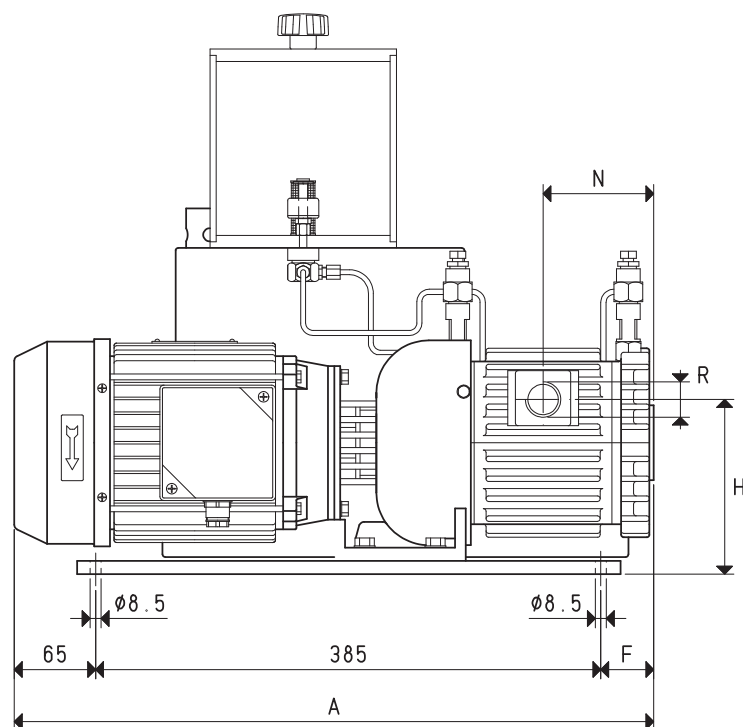
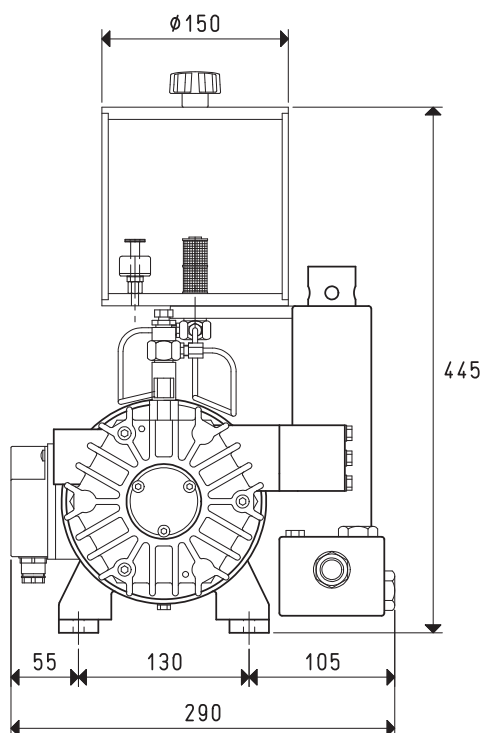
- Curve relative to the flow rate (referring to the suction pressure)
- - - Curve relative to the flow rate (referring to a 1013 mbar pressure)
- Curve regarding the emptying time of a 100-litre volume

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



VACUUM PUMPS VTLP 25/FG, 30/FG and 35/FG WITH DISPOSABLE LUBRICATION

3D drawings are available on vuototecnica.net



Item		VTLP 25/FG		VTLP 30/FG		VTLP 35/FG	
Frequency		50Hz	60Hz	50Hz	60Hz	50Hz	60Hz
Flow rate	m ³ /h	25.0	30.0	30.0	36.0	35.0	42.0
Final pressure	mbar abs.	50		50		50	
Motor performance 3~	volt	230/400±10%	265/460±10%	230/400±10%	265/460±10%	230/400±10%	265/460±10%
Motor power 3~	Kw	0.75	0.90	0.75	0.90	1.10	1.35
Motor protection	IP	55		55		55	
Rotation speed	g/min ⁻¹	1410	1640	1410	1640	1435	1745
Motor shape		B14		B14		B14	
Motor size		80		80		80	
Noise level	dB(A)	64	66	65	67	65	67
Max weight 3~	kg	32.0		36.0		38.0	
A		470		490		510	
F		20		40		60	
H		133		133		133	
N		73		83		93	
R	Ø gas	G3/4"		G3/4"		G3/4"	
Accessories and Parts		VTLP 25/FG		VTLP 30/FG		VTLP 35/FG	
Oil charge	L	1.8		1.8		1.8	
Lubricating oil	type	ISO 100		ISO 100		ISO 100	
6 vanes	item	00 VTL 25FG 10		00 VTL 30FG 10		00 VTL 35FG 10	
Sealing kit	item	00 KIT VTL 25FG		00 KIT VTL 30FG		00 KIT VTL 35FG	
Check valve	item	10 04 10		10 04 10		10 04 10	
Suction filter	item	FB 28/FC 25		FB 28/FC 25		FB 28/FC 25	
Oil level switch	item	00 LP VTL 99		00 LP VTL 99		00 LP VTL 99	
Oil filter	item	00 LP VTL 40		00 LP VTL 40		00 LP VTL 40	
Adjustable drip oiler	item	00 VTL 00 11		00 VTL 00 11		00 VTL 00 11	

Transformation ratio: N (newton) = Kg x 9.81 (force of gravity)

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

cfm= m³/h x 0.588; inch Hg= mbar x 0.0295; psi= bar x 14.6

VACUUM PUMPS VTL 40/G1 - 105/G1

These vacuum pumps have a suction flow rate of 40, 50, 65, 75, 90 and 105 m³/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.

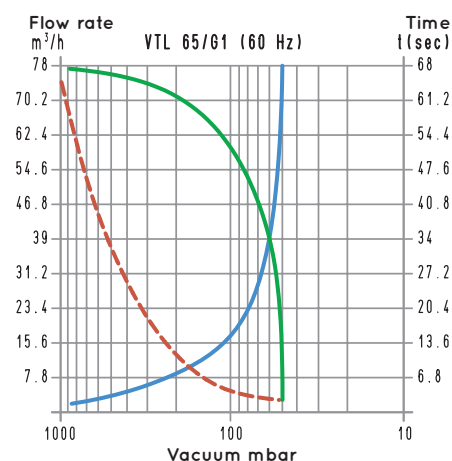
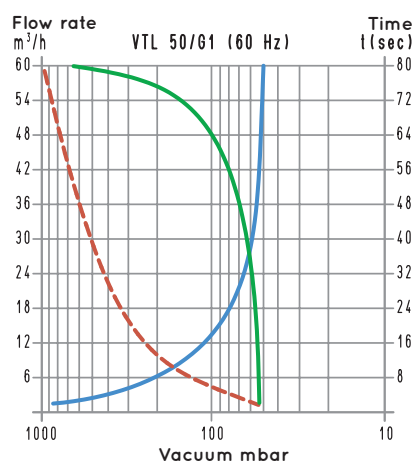
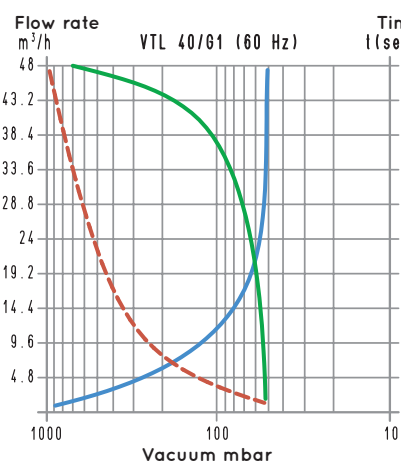
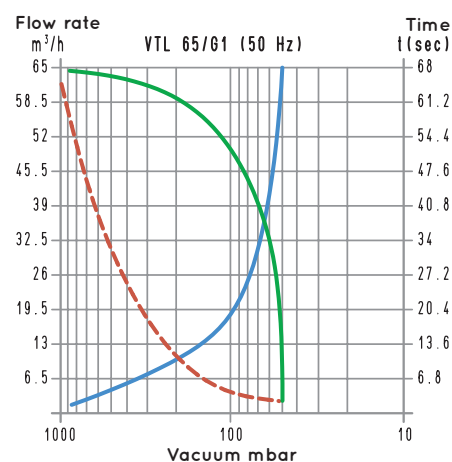
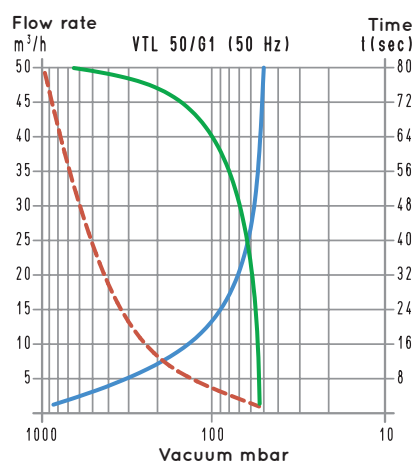
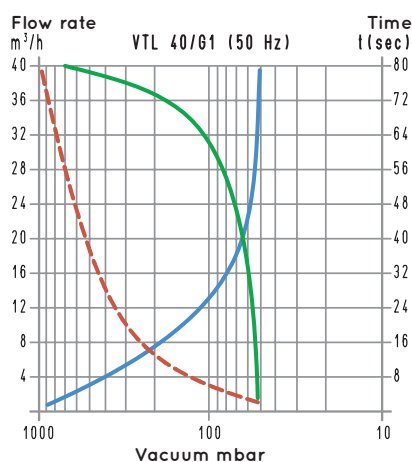
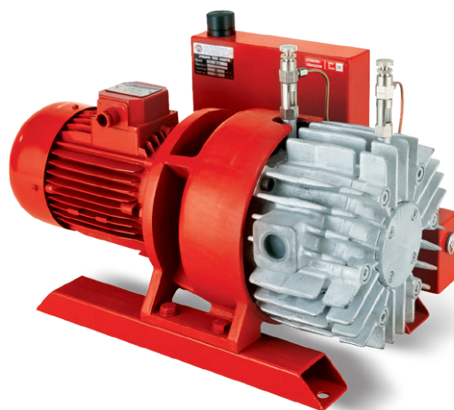
All this allows using standard electric motors, in the shapes and sizes indicated in the table.

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 filter that prevents oil mists and reduces noise.

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 of V_1 , use the following formula: $t_1 = \frac{t \times V_1}{100}$

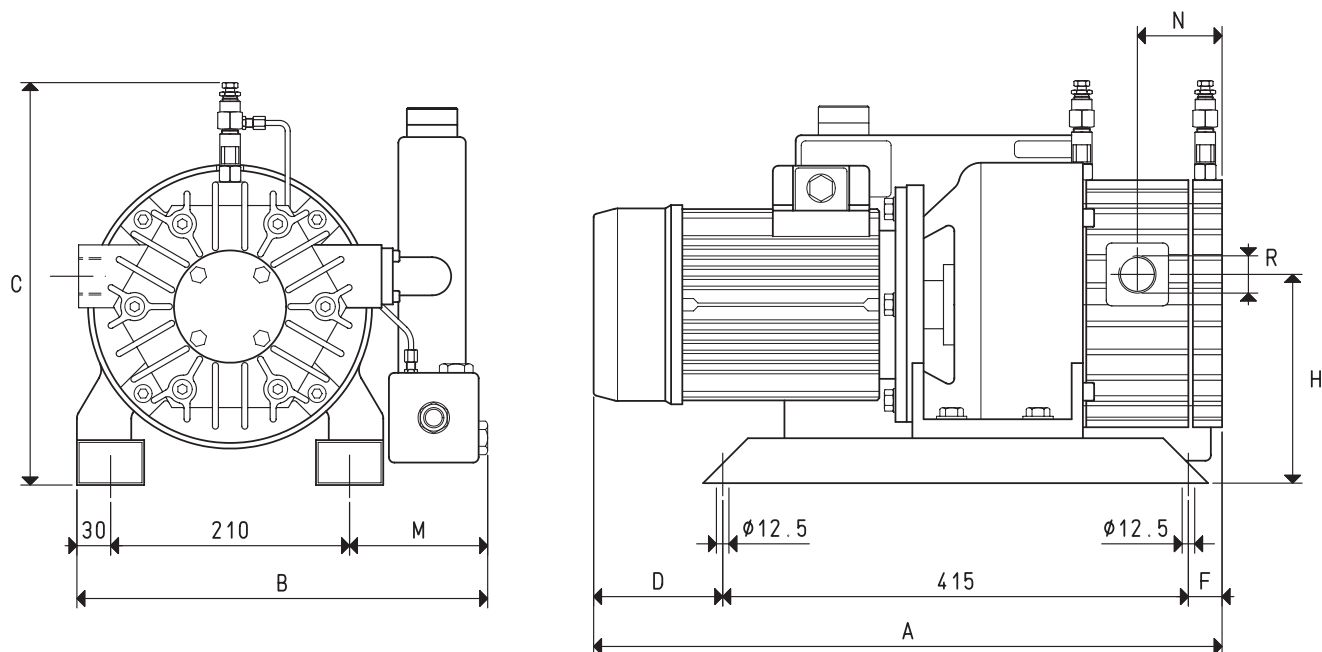
- Curve relative to the flow rate (referring to the suction pressure)
- - - Curve relative to the flow rate (referring to a 1013 mbar pressure)
- Curve regarding the emptying time of a 100-litre volume

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



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

3D drawings are available on vuototecnica.net



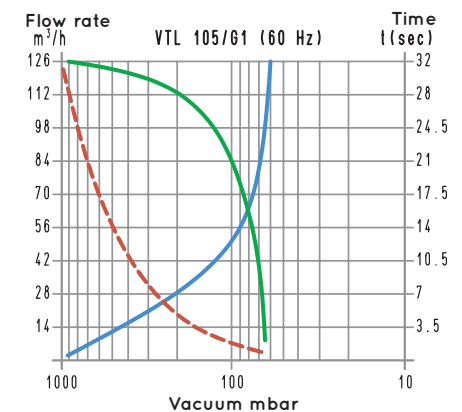
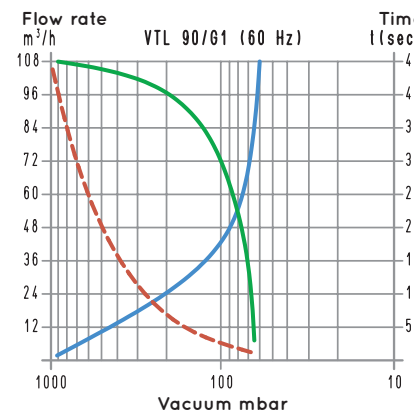
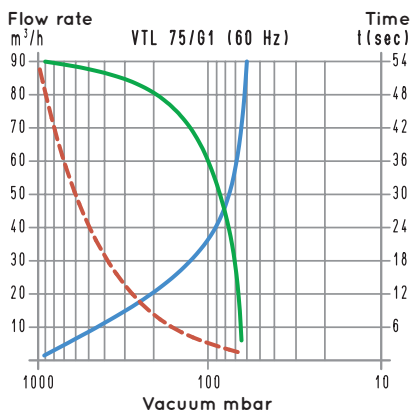
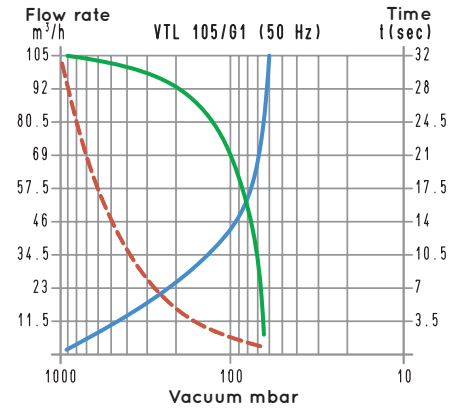
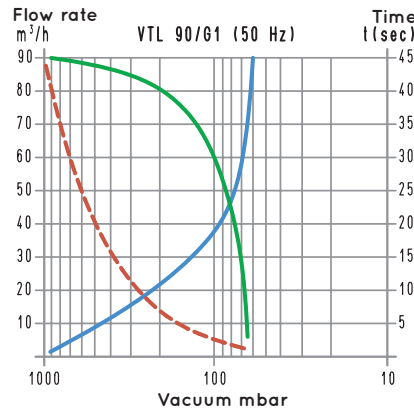
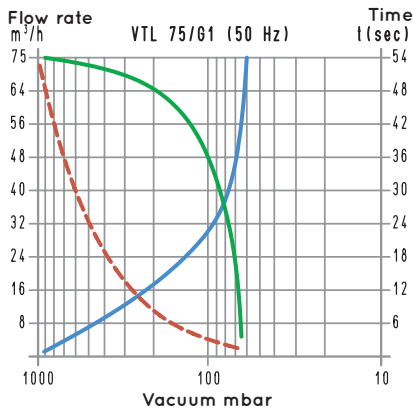
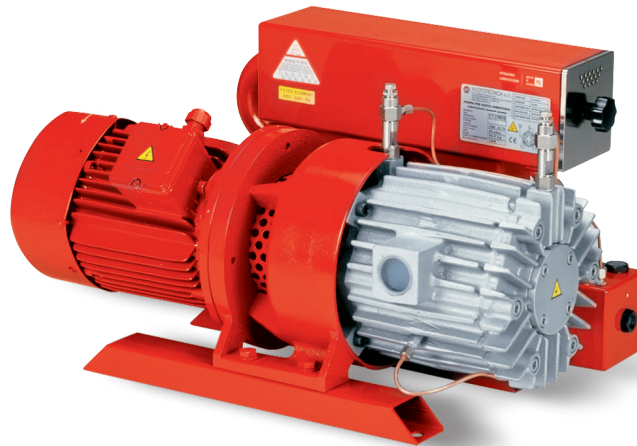
Item		VTL 40/G1		VTL 50/G1		VTL 65/G1	
Frequency		50Hz	60Hz	50Hz	60Hz	50Hz	60Hz
Flow rate	m³/h	40.0	48.0	50.0	60.0	65.0	78.0
Final pressure	mbar abs.	50		50		50	
Motor performance 3~	volt	230/400±10%	265/460±10%	230/400±10%	265/460±10%	230/400±10%	265/460±10%
Motor power 3~	Kw	1.10	1.35	1.50	1.80	1.50	1.80
Motor protection	IP	55		55		55	
Rotation speed	g/min ⁻¹	1440	1750	1440	1750	1440	1750
Motor shape		B5		B5		B5	
Motor size		90		90		90	
Noise level	dB(A)	68	70	68	70	70	72
Max weight 3~	kg	51.0		54.0		71.0	
A		520		560		580	
B		365		365		365	
C		350		350		350	
D		60		115		120	
F		45		30		45	
H		186		186		186	
M		125		125		125	
N		70		80		80	
R	Ø gas	G1"		G1"		G1"	

Accessories and Parts		VTL 40/G1	VTL 50/G1	VTL 65/G1
Oil charge	L	0.85	1.00	1.00
Lubricating oil	type	ISO 100	ISO 100	ISO 100
6 vanes	item	00 VTL 40G1 10	00 VTL 50G1 10	00 VTL 65G1 10
Sealing kit	item	00 KIT VTL 40G1	00 KIT VTL 50G1	00 KIT VTL 65 G1
Check valve	item	10 05 10	10 05 10	10 05 10
Suction filter	item	FB 30/FC 30	FB 30/FC 30	FB 30/FC 30
Adjustable drip oiler	item	00 VTL 00 11	00 VTL 00 11	00 VTL 00 11

Transformation ratio: N (newton) = Kg x 9.81 (force of gravity)

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

cfm= m³/h x 0.588; inch Hg= mbar x 0.0295; psi= bar x 14.6



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

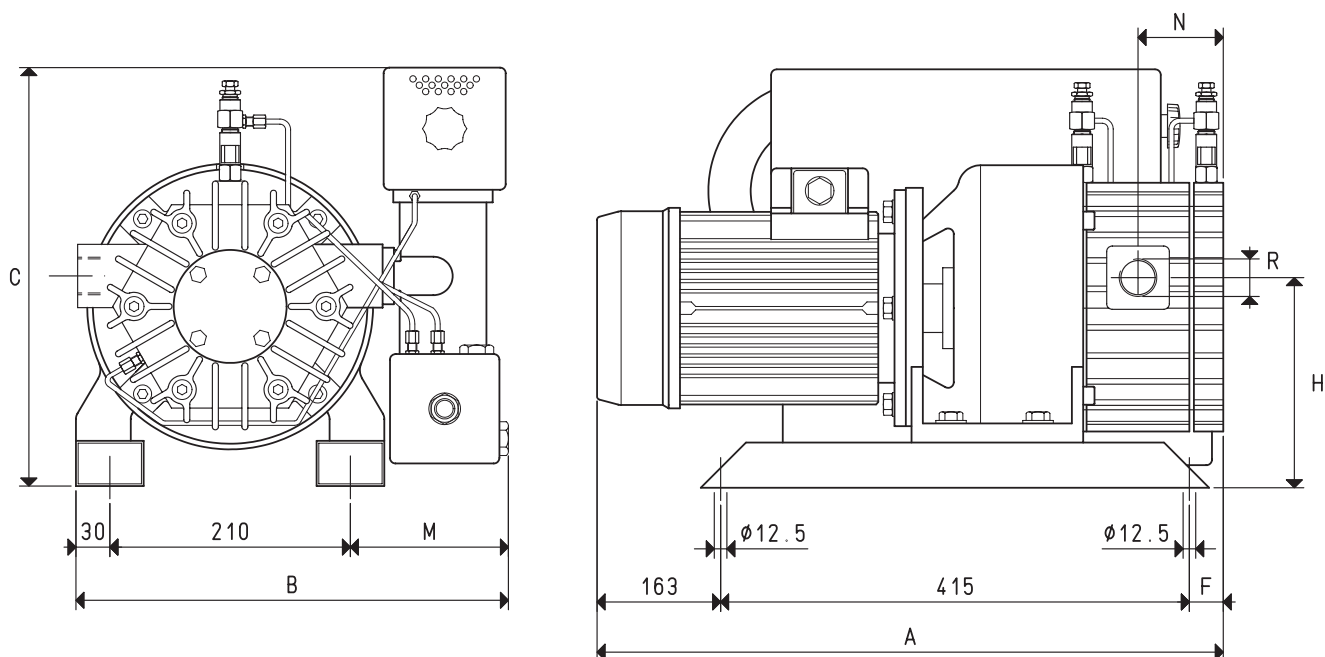
- Curve relative to the flow rate (referring to the suction pressure)
- - - Curve relative to the flow rate (referring to a 1013 mbar pressure)
- Curve regarding the emptying time of a 100-litre volume

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



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

3D drawings are available on vuototecnica.net



Item		VTL 75/G1		VTL 90/G1		VTL 105/G1	
Frequency		50Hz	60Hz	50Hz	60Hz	50Hz	60Hz
Flow rate	m ³ /h	75.0	90.0	90.0	108.0	105.0	126.0
Final pressure	mbar abs.	50		50		50	
Motor performance 3~	volt	230/400±10%	265/460±10%	230/400±10%	265/460±10%	230/400±10%	265/460±10%
Motor power 3~	Kw	2.20	2.70	3.00	3.60	3.00	3.60
Motor protection	IP	55		55		55	
Rotation speed	g/min ⁻¹	1450	1755	1440	1700	1440	1700
Motor shape		B5		B5		B5	
Motor size		100		100		100	
Noise level	dB(A)	70	72	71	73	72	74
Max weight 3~	kg	76.5		84.0		97.6	
A		640		660		690	
B		385		400		400	
C		400		400		445	
F		62		82		112	
H		186		186		186	
M		145		150		160	
N		80		92		122	
R	Ø gas	G1"1/4		G1"1/4		G1"1/2	
Accessories and Parts		VTL 75/G1		VTL 90/G1		VTL 105/G1	
Oil charge	L	2.0		2.6		2.6	
Lubricating oil	type	ISO 150		ISO 150		ISO 150	
Deoiling cartridge	item	00 VTL 75G1 29		00 VTL 90G1 29		00 VTL 105G1 29	
6 vanes	item	00 VTL 75G1 10		00 VTL 90G1 10		00 VTL 105G1 10	
Sealing kit	item	00 KIT VTL 75G1		00 KIT VTL 90G1		00 KIT VTL 105G1	
Check valve	item	10 06 10		10 06 10		10 07 10	
Exhaust filter	item	FB 40/FC 40		FB 40/FC 40		FB 50/FC 50	
Adjustable drip oiler	item	00 VTL 00 11		00 VTL 00 11		00 VTL 00 11	

Transformation ratio: N (newton) = Kg x 9.81 (force of gravity)

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

cfm= m³/h x 0.588; inch Hg= mbar x 0.0295; psi= bar x 14.6

VACUUM PUMPS VTLP 40/G1 - 105/G1 WITH DISPOSABLE LUBRICATION

These vacuum pumps have a suction flow rate of 40, 50, 65, 75, 90 and 105 m³/h.

The vacuum with disposable oil lubrication 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 filter that prevents oil mists and reduces noise.

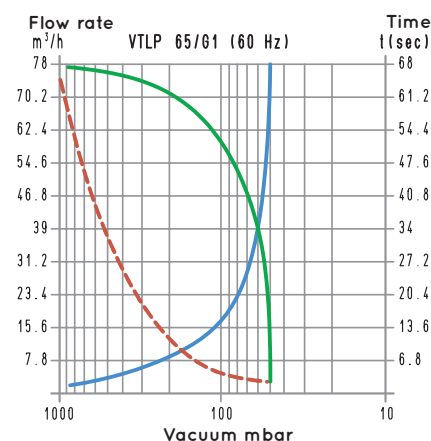
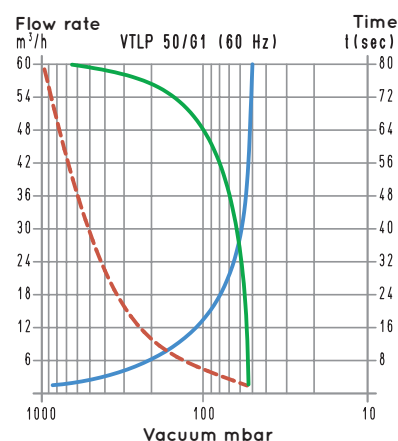
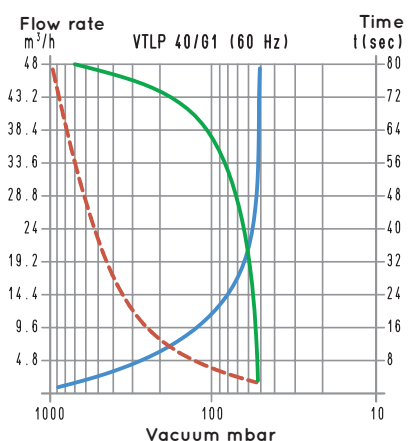
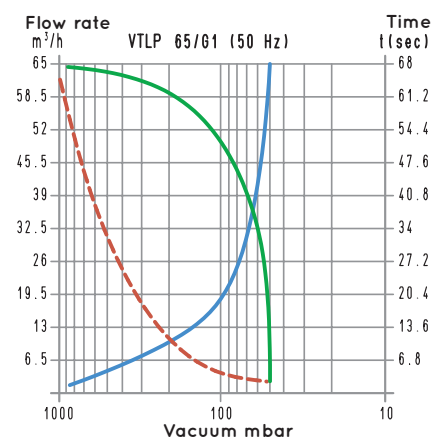
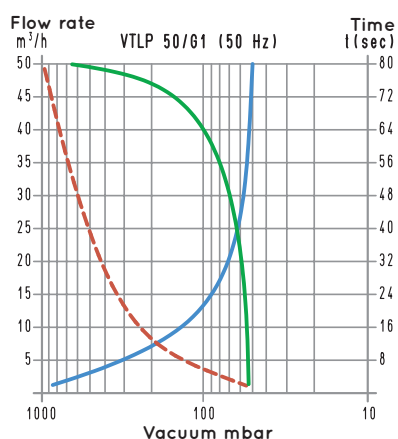
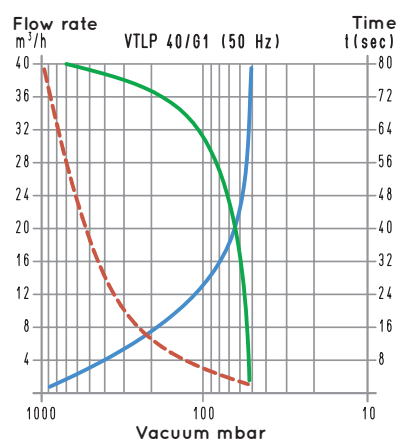
A safety valve is also installed on the tank for the automatic drainage of the exhaust oil when not regularly drained.

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 oilers 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 affect oil properties.

A check valve and a filter must be installed on the pump suction inlet.

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



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

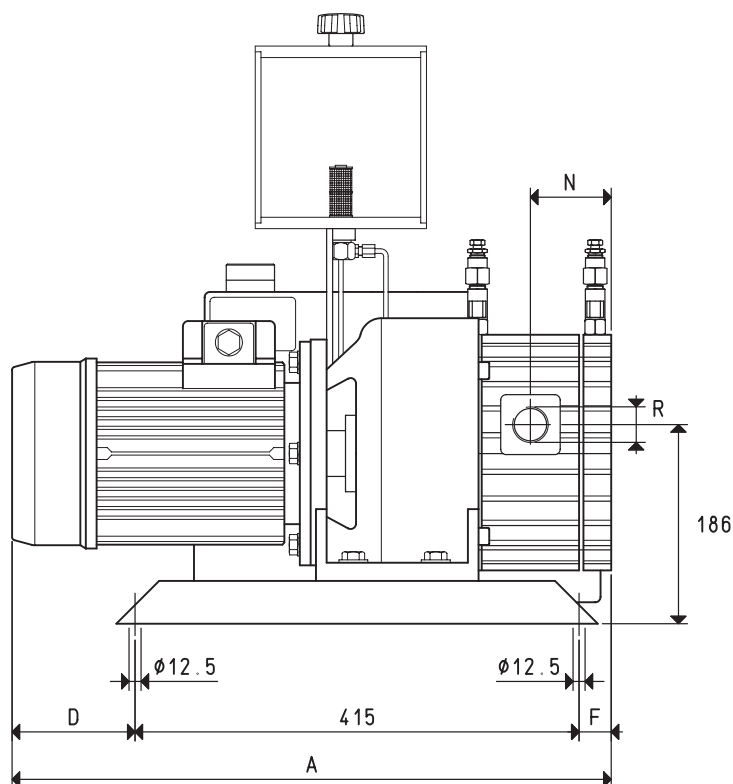
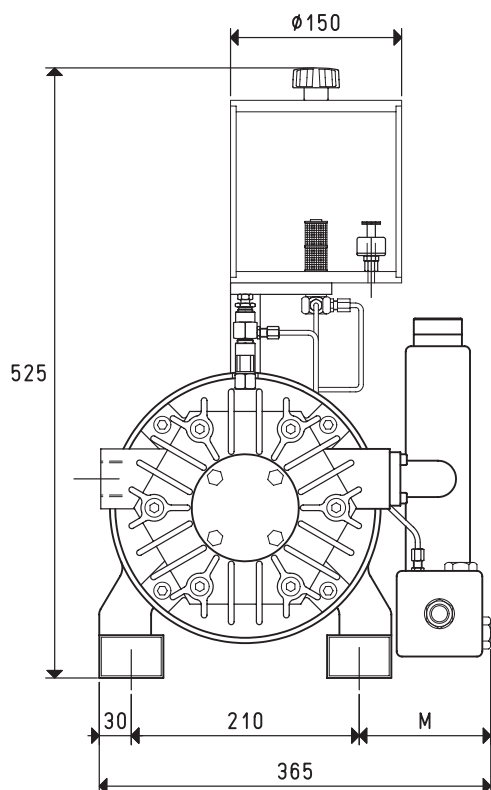
- Curve relative to the flow rate (referring to the suction pressure)
- - - Curve relative to the flow rate (referring to a 1013 mbar pressure)
- Curve regarding the emptying time of a 100-litre volume

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



VACUUM PUMPS VTLP 40/G1, 50/G1 and 65/G1 WITH DISPOSABLE LUBRICATION

3D drawings are available on vuototecnica.net



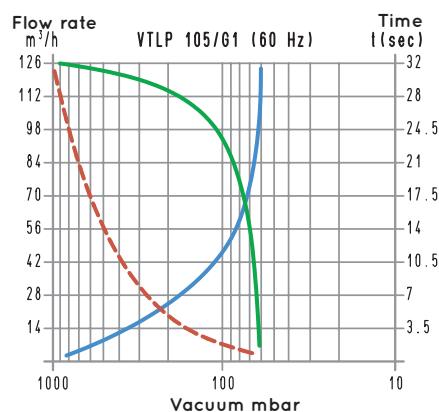
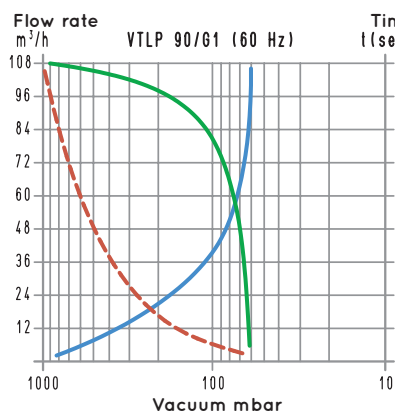
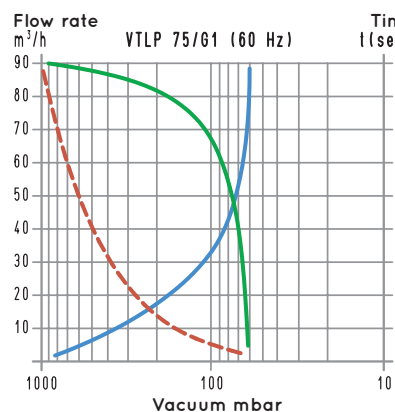
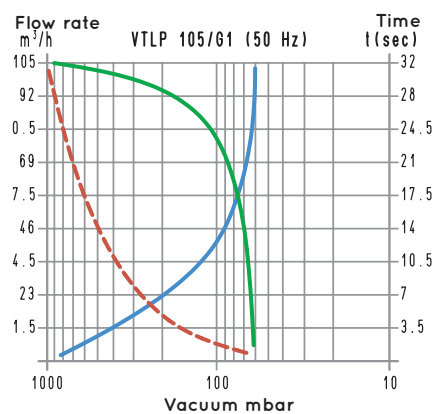
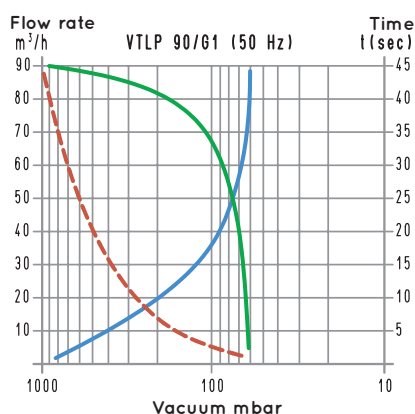
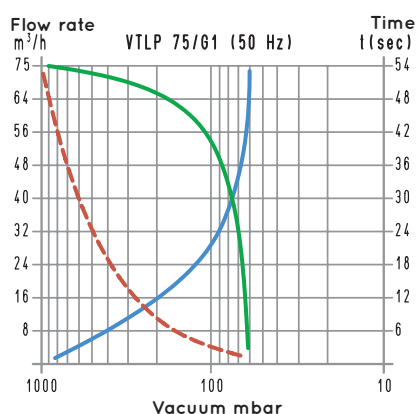
Item		VTLP 40/G1		VTLP 50/G1		VTLP 65/G1	
Frequency		50Hz	60Hz	50Hz	60Hz	50Hz	60Hz
Flow rate	m ³ /h	40.0	48.0	50.0	60.0	65.0	78.0
Final pressure	mbar abs.	50		50		50	
Motor performance 3~	volt	230/400±10%	265/460±10%	230/400±10%	265/460±10%	230/400±10%	265/460±10%
Motor power 3~	Kw	1.10	1.35	1.50	1.80	1.50	1.80
Motor protection	IP	55		55		55	
Rotation speed	g/min ⁻¹	1440	1750	1440	1750	1440	1750
Motor shape		B5		B5		B5	
Motor size		90		90		90	
Noise level	dB(A)	68	70	68	70	70	72
Max weight 3~	kg	52.5		55.1		72.1	
A		520		560		580	
D		60		115		120	
F		45		30		45	
M		125		125		125	
N		70		80		80	
R	Ø gas	G1"		G1"		G1"	
Accessories and Parts		VTLP 40/G1		VTLP 50/G1		VTLP 65/G1	
Oil charge	L	1.8		1.8		1.8	
Lubricating oil	type	ISO 100		ISO 100		ISO 100	
6 vanes	item	00 VTL 40G1 10		00 VTL 50G1 10		00 VTL 65G1 10	
Sealing kit	item	00 KIT VTL 40G1		00 KIT VTL 50G1		00 KIT VTL 65G1	
Check valve	item	10 05 10		10 05 10		10 05 10	
Suction filter	item	FB 30/FC 30		FB 30/FC 30		FB 30/FC 30	
Oil level switch	item	00 LP VTL 99		00 LP VTL 99		00 LP VTL 99	
Oil filter	item	00 LP VTL 40		00 LP VTL 40		00 LP VTL 40	
Adjustable drip oiler	item	00 VTL 00 11		00 VTL 00 11		00 VTL 00 11	

Transformation ratio: N (newton) = Kg x 9.81 (force of gravity)

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

cfm= m³/h x 0.588; inch Hg= mbar x 0.0295; psi= bar x 14.6

VACUUM PUMPS VTLP 75/G1, 90/G1 and 105/G1 WITH DISPOSABLE LUBRICATION



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

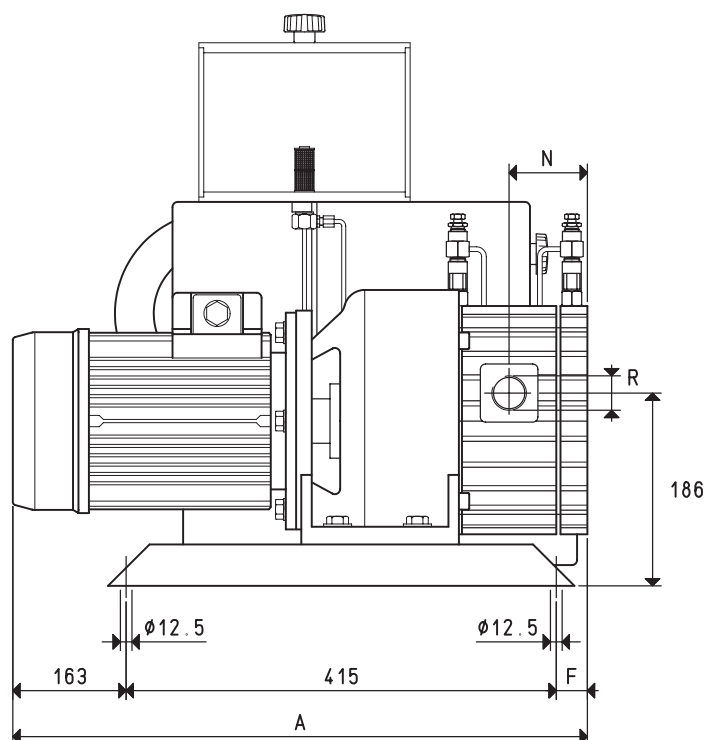
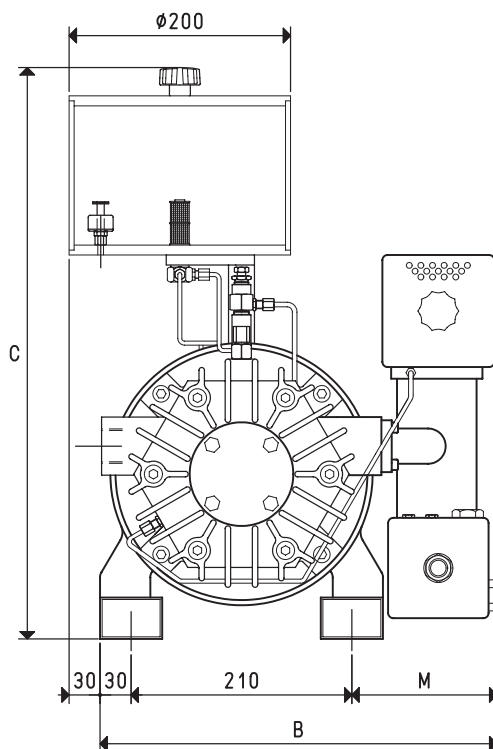
- Curve relative to the flow rate (referring to the suction pressure)
- - - Curve relative to the flow rate (referring to a 1013 mbar pressure)
- Curve regarding the emptying time of a 100-litre volume

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



VACUUM PUMPS VTLP 75/G1, 90/G1 and 105/G1 WITH DISPOSABLE LUBRICATION

3D drawings are available on vuototecnica.net



Item		VTLP 75/G1		VTLP 90/G1		VTLP 105/G1	
Frequency		50Hz	60Hz	50Hz	60Hz	50Hz	60Hz
Flow rate	m ³ /h	75.0	90.0	90.0	108.0	105.0	126.0
Final pressure	mbar abs.	50		50		50	
Motor performance 3~	volt	230/400±10%	265/460±10%	230/400±10%	265/460±10%	230/400±10%	265/460±10%
Motor power 3~	Kw	2.20	2.70	3.00	3.60	3.00	3.60
Motor protection	IP	55		55		55	
Rotation speed	g/min ⁻¹	1450	1735	1440	1700	1440	1700
Motor shape		B5		B5		B5	
Motor size		100		100		100	
Noise level	dB(A)	70	72	71	73	72	74
Max weight 3~	kg	78.3		85.8		99.4	
A		640		660		690	
B		415		430		430	
C		575		575		620	
F		62		82		112	
M		145		150		160	
N		80		92		122	
R	Ø gas	G1"1/4		G1"1/4		G1"1/2	

Accessories and Parts		VTLP 75/G1	VTLP 90/G1	VTLP 105/G1
Oil charge	L	3.8	3.8	3.8
Lubricating oil	type	ISO 150	ISO 150	ISO 150
Deoiling cartridge	item	00 VTL 75G1 29	00 VTL 90G1 29	00 VTL 105G1 29
6 vanes	item	00 VTL 75G1 10	00 VTL 90 G110	00 VTL 105 G110
Sealing kit	item	00 KIT VTL 75G1	00 KIT VTL 90G1	00 KIT VTL 105G1
Check valve	item	10 06 10	10 06 10	10 07 10
Suction filter	item	FB 40/FC 40	FB 40/FC 40	FB 50/FC 50
Oil level switch	item	00 LP VTL 99	00 LP VTL 99	00 LP VTL 99
Oil filter	item	00 LP VTL 40	00 LP VTL 40	00 LP VTL 40
Adjustable drip oiler	item	00 VTL 00 11	00 VTL 00 11	00 VTL 00 11

Transformation ratio: N (newton) = Kg x 9.81 (force of gravity)

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

cfm= m³/h x 0.588; inch Hg= mbar x 0.0295; psi= bar x 14.6

The pumps in this new series are single-stage, rotary vane and with oil-bath lubrication with recycling. The implementation of cutting edge construction techniques and the use of hi-tech, latest generation materials has allowed for the achievement of high standards of quality, performance, duration and low cost of use. The resulting technical features include:

- High pumping speed in the field of absolute pressure between 850 and 0.5 mbar
- Extremely low noise output
- Low operating temperatures
- No pollution
- Low maintenance

The pumps are driven by an electric motor, coupled by means of an elastic transmission joint (not including RVP 15), in compliance with IEC International Standard 60034 requirements for rotating machines and European Directives for Low Voltage (LV) 2006/95/EC, for Electromagnetic Compatibility (EMC) 2004/108/EC, for the limitation of use of hazardous substances RoHS 2011/65/CE and Machine Directive 2006/42/EC for CE marking.

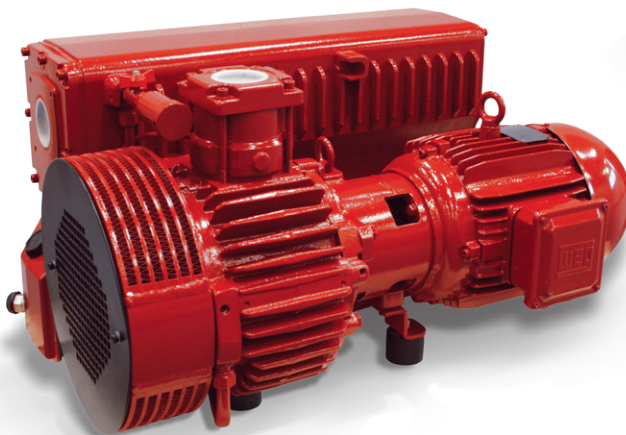
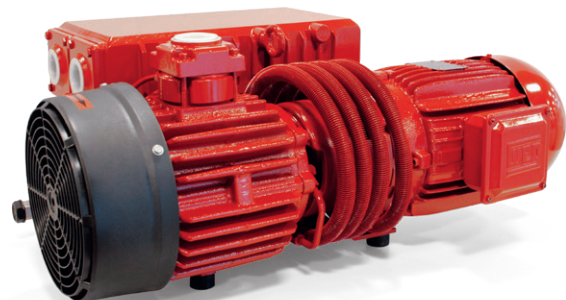
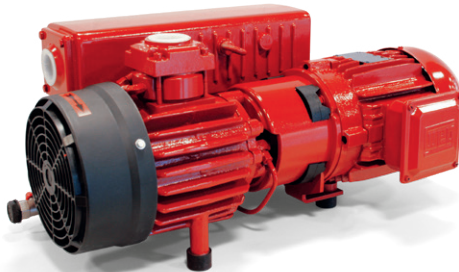
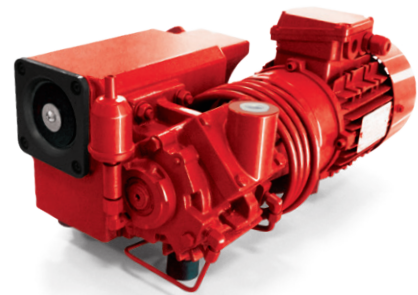
With the exception of electric motors with power lower than 0.75 KW, the efficiency class corresponds to IE3 = Premium Efficiency, with protection degree IP 55, Tolerance of nominal Voltage $\pm 10\%$ and Class of Insulation F.

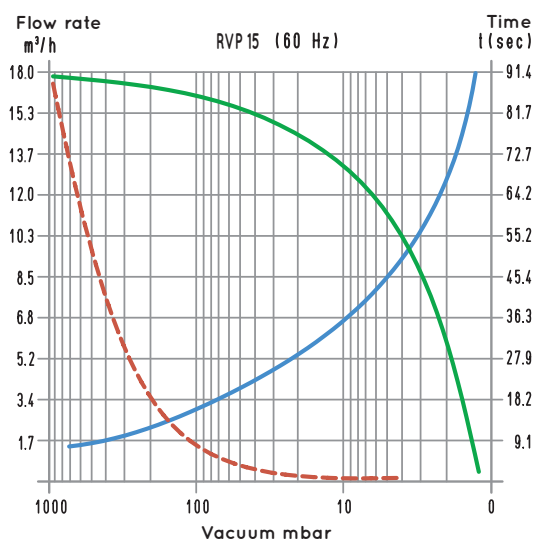
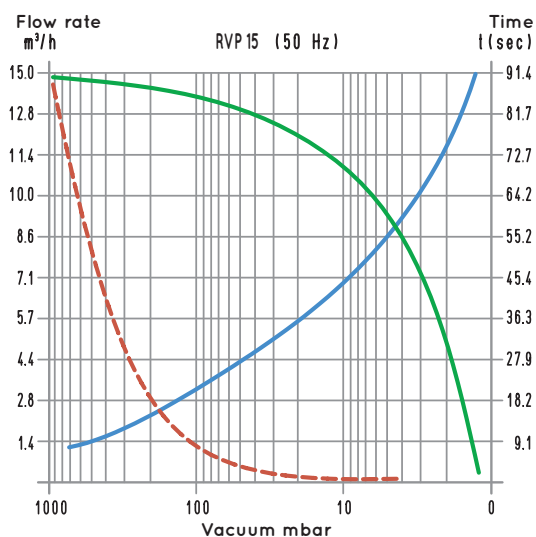
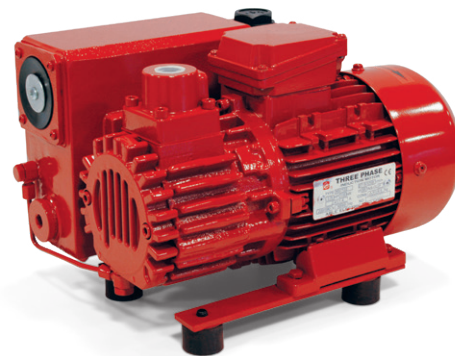
A centrifuge fan fitted on the pump shaft ensures a suitable air flow for optimal pump body and radiator cooling (forced surface cooling).

A capacious oil recovery tank located on the pump outlet and equipped with microfibre deoiling cartridges has the function of smoke filtering system and silencer. A special built-in ball cock valve allows for the recovery of oil retained by cartridges. The oil filter, except mod. RVP 15 and 21 pumps, are installed as standard on all.

The oil contained in the system lubricates, cools and seals rotating and fixed pump parts. The check valve on the suction line is an integral part of the pump and is standard while a filter suitable for trapping any suctioned impurities can be supplied upon request. All pumps except mod. RVP 15 and RVP 21, are supplied standard with a gas ballast valve, which permits high water vapour compatibility. Instead, for mod. RVP 21, the ballast valve can only be installed upon request.

The above described product devices combined with strong, compact construction make RVP series vacuum pumps especially suitable for continuous and heavy-duty use.

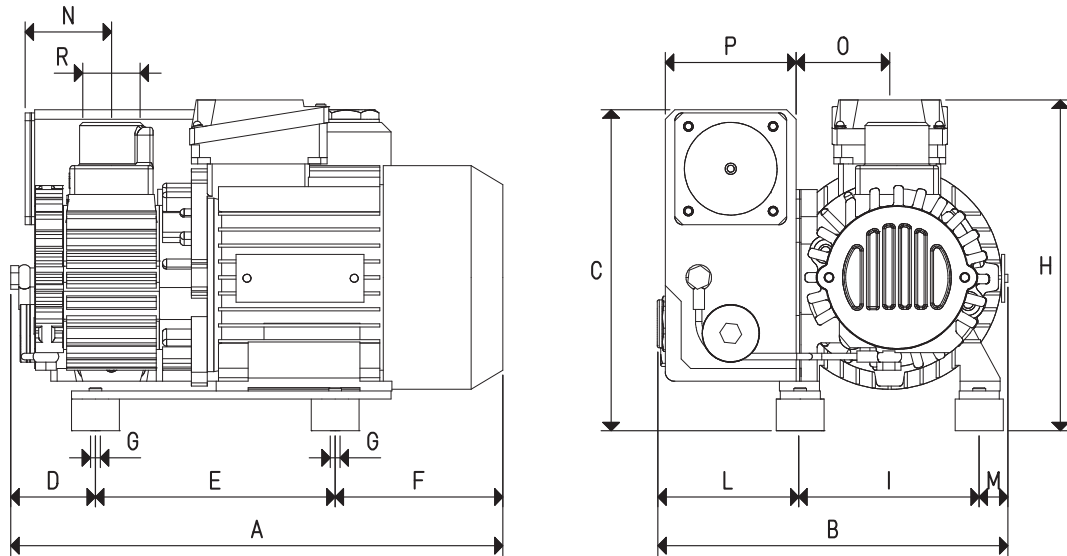




To calculate the emptying time of a volume of V_1 , use the following formula: $t_1 = \frac{t \times V_1}{100}$

- Curve relative to the flow rate (referring to the suction pressure)
- - - Curve relative to the flow rate (referring to a 1013 mbar pressure)
- Curve regarding the emptying time of a 100-litre volume

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



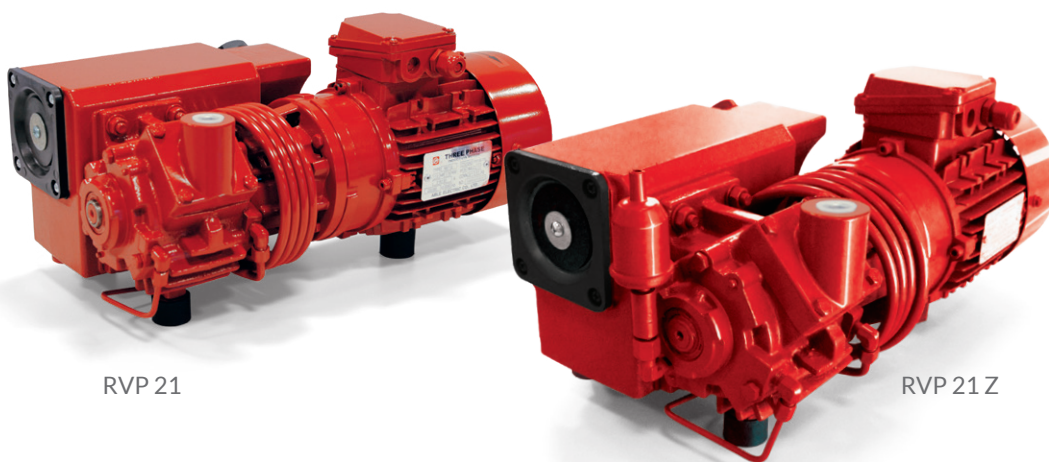
Item		RVP 15		
Frequency		50 Hz		60 Hz
Flow rate	m ³ /h	15.0		18.0
Final pressure	mbar abs.		2	
Motor performance	3~	230/400 ± 10%		275/480 ± 10%
Volt	1~	230 ± 10%		275 ± 10%
Motor power	3~	0.55		0.66
Kw	1~	0.55		0.66
Motor protection	IP		55	
Rotation speed	g/min ⁻¹	2700		3240
Motor shape			B14	
Motor size			90	
Noise level	dB(A)	63		64
Max weight	3~		15.0	
Kg	1~		15.5	
A			308	
B			221	
C			200	
D			53	
E			150	
F			105	
G	Ø		M8	
H			195	
I			112	
L			89	
M			19	
N			54	
O			58	
P			82	
R	Ø gas		G1/2"	

Accessories and Parts		RVP 15		
Oil charge	L		0.50	
Lubricating oil	type		VT OIL 68	
Deoiling cartridge	item		00 RVP 15 05	
3 vanes	item		00 RVP 15 04	
Sealing kit	item		00 RVP 15 06	
Check valve	item		00 RVP 15 03	
Suction filter	item		FC 20	

Note: Add the letter M to the item for a pump supplied with a single-phase electric motor (Example: RVP 15 M).

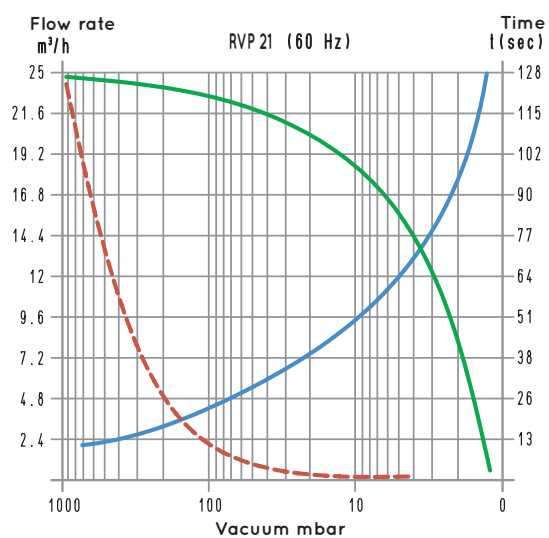
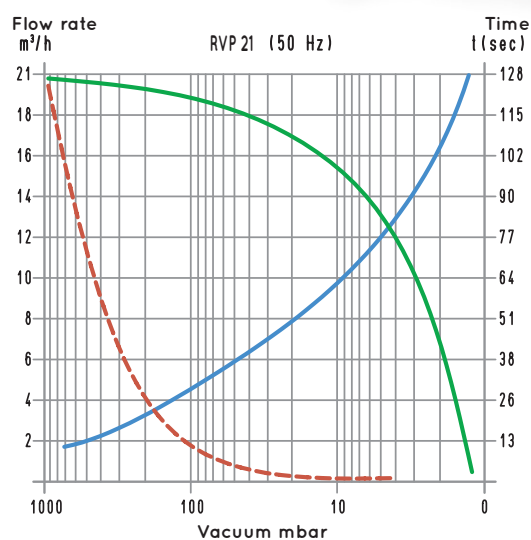


OIL-BATH VACUUM PUMP RVP 21



RVP 21

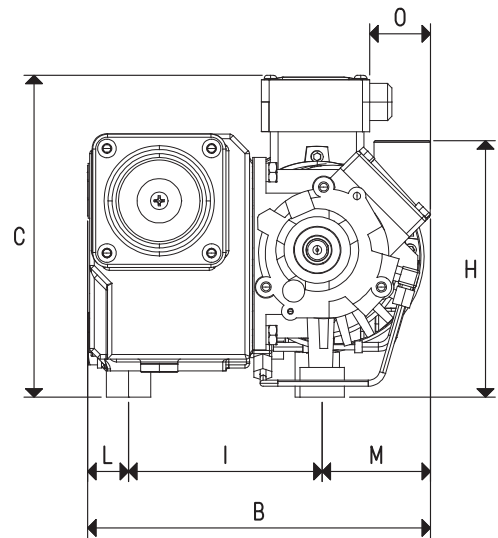
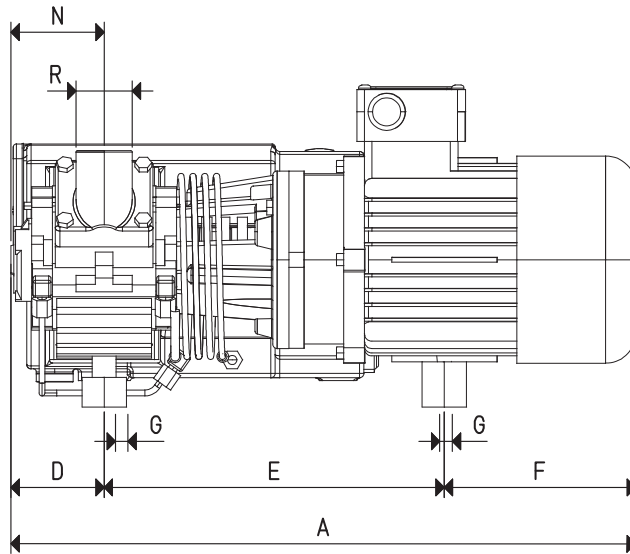
RVP 21 Z



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

- Curve relative to the flow rate (referring to the suction pressure)
- - - Curve relative to the flow rate (referring to a 1013 mbar pressure)
- Curve regarding the emptying time of a 100-litre volume

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



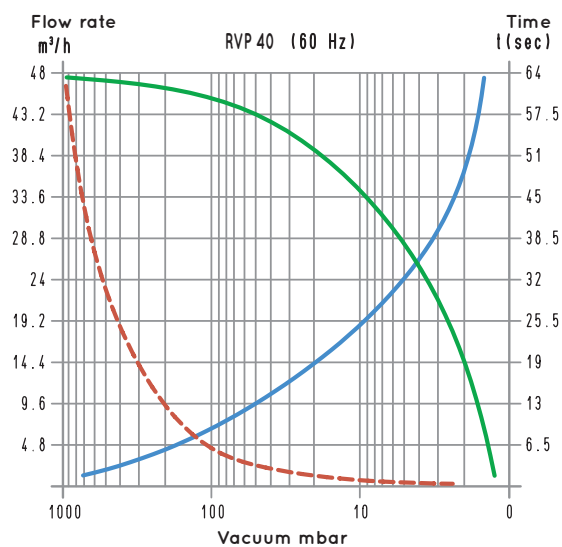
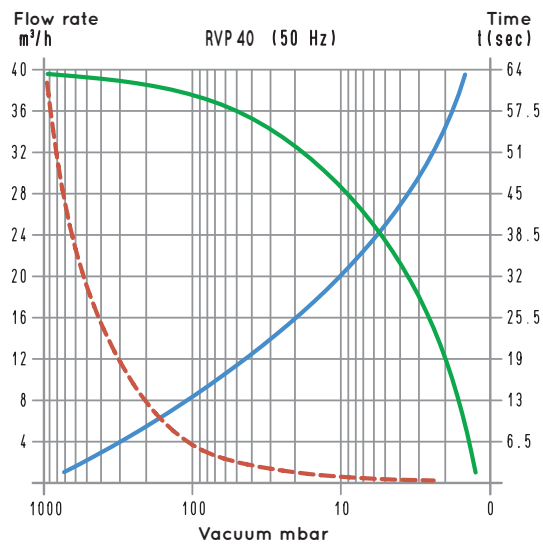
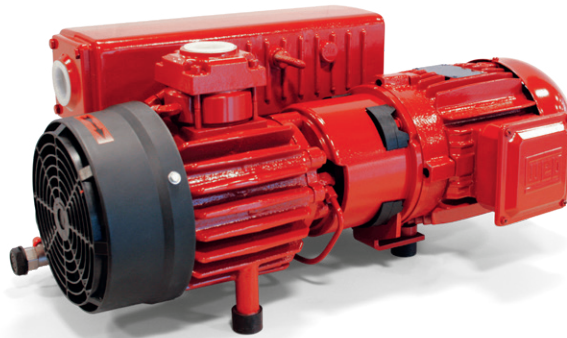
Item		RVP 21	
Frequency		50 Hz	60 Hz
Flow rate	m ³ /h	21.0	25.0
Final pressure	mbar abs.	1	
Motor performance	3~	230/400 ± 10%	275/480 ± 10%
Volt	1~	230 ± 10%	275 ± 10%
Motor power	3~	0.75	0.90
Kw	1~	0.75	0.90
Motor protection	IP	55	
Rotation speed	g/min ⁻¹	2700	3240
Motor shape		B14	
Motor size		90	
Noise level	dB(A)	64	65
Max weight	3~	18.5	
Kg	1~	19.0	
A		421	
B		232	
C		225	
D		63	
E		230	
F		128	
G	Ø	M8	
H		173	
I		131	
L		28	
M		73	
N		62	
O		41	
R	Ø gas	G1/2"	
Accessories and Parts		RVP 21	
Oil charge	L	0.50	
Lubricating oil	type	VT OIL 68	
Deoiling cartridge	item	00 RVP 21 05	
3 vanes	item	00 RVP 21 04	
Sealing kit	item	00 RVP 21 06	
Check valve	item	00 RVP 21 03	
Suction filter	item	FC 20	
Ballast valve	item	VZR 01	

Note: Add the letter M to the item for a pump supplied with a single-phase electric motor (Example: RVP 21 M).

Add the letter Z to the item for a pump supplied with a ballast valve (Example: RVP 21 Z).



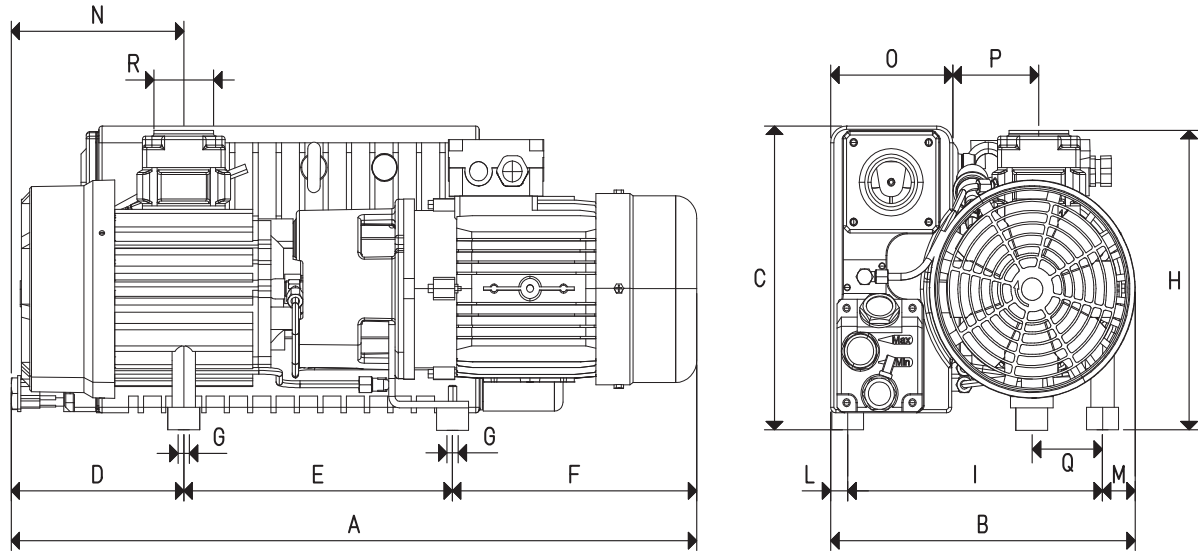
OIL-BATH VACUUM PUMP RVP 40



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

- Curve relative to the flow rate (referring to the suction pressure)
- - - Curve relative to the flow rate (referring to a 1013 mbar pressure)
- Curve regarding the emptying time of a 100-litre volume

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

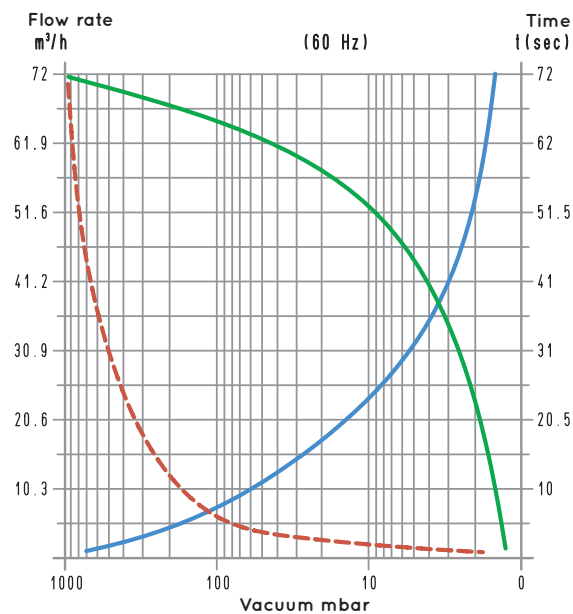
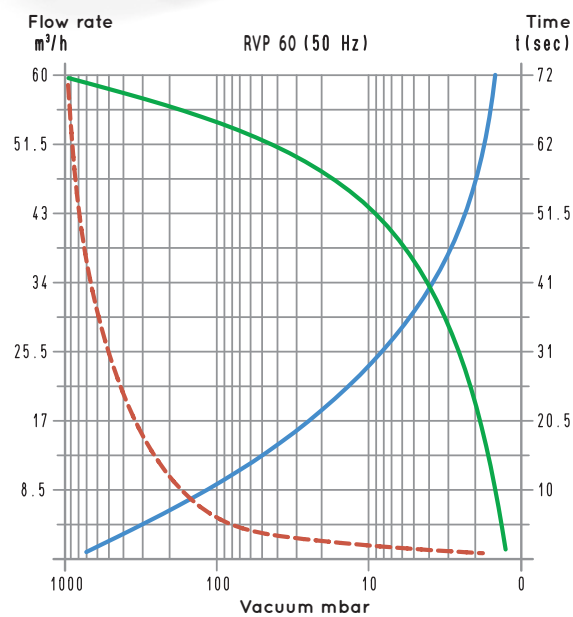
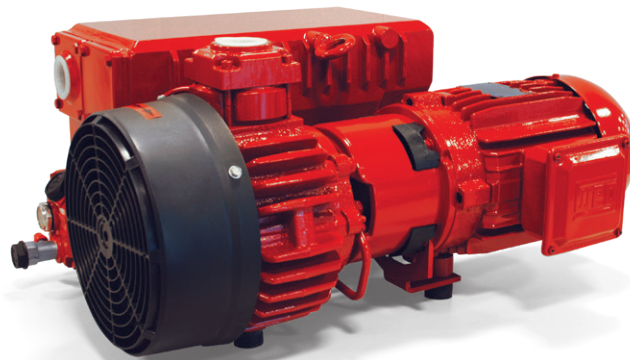


Item		RVP 40		
Frequency		50 Hz		60 Hz
Flow rate	m ³ /h	40.0		48.0
Final pressure	mbar abs.		0.5	
H ₂ O steam quantity permitted	Kg/h		0,7	
Motor performance 3~	Volt	230/400 ± 10%		275/480 ± 10%
Motor power 3~	Kw	1.10		1.35
Motor protection	IP		55	
Rotation speed	g/min ⁻¹	1450		1740
Motor shape			B14	
Motor size			100	
Noise level	dB(A)	64		65
Max weight	Kg		49.0	
A			645	
B			286	
C			266	
D			157	
E			335	
F			225	
G	Ø		M8	
H			260	
I			240	
L			15	
M			31	
N			157	
O			115	
P			80	
Q			66	
R	Ø gas		G1"1/4	

Accessories and Parts		RVP 40		
Oil charge	L		1.25	
Lubricating oil	type		VT OIL 100	
Oil filter	item		00 RVP 40 07	
Deoiling cartridge	item		00 RVP 40 05	
3 vanes	item		00 RVP 40 04	
Sealing kit	item		00 RVP 40 06	
Check valve	item		00 RVP 40 03	
Suction filter	item		FC 35	
Ballast valve	item		integrated	



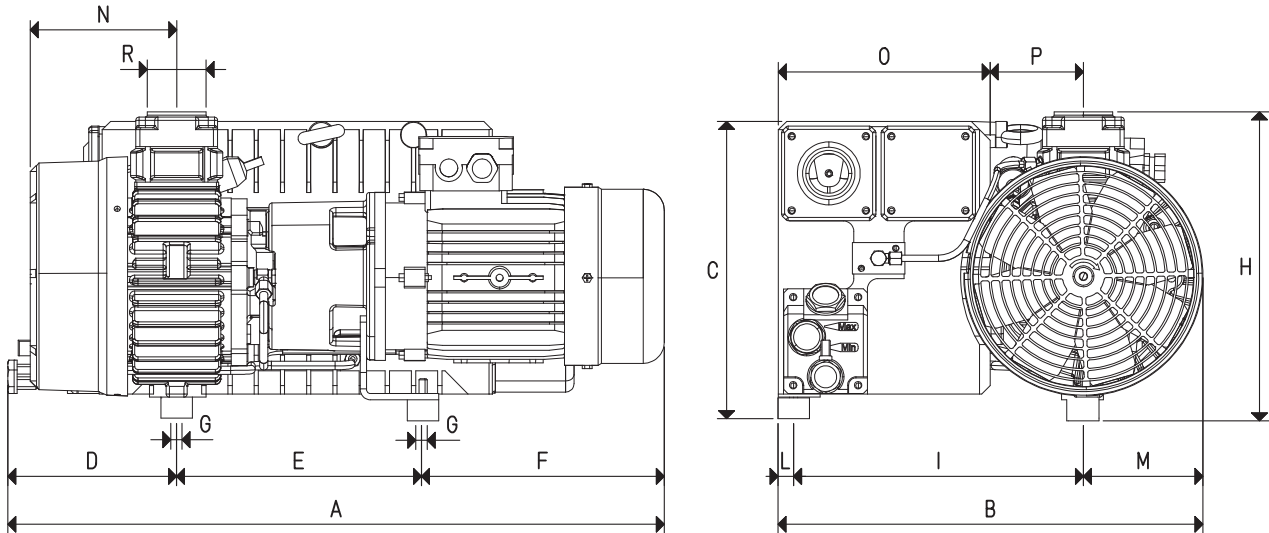
OIL-BATH VACUUM PUMP RVP 60



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

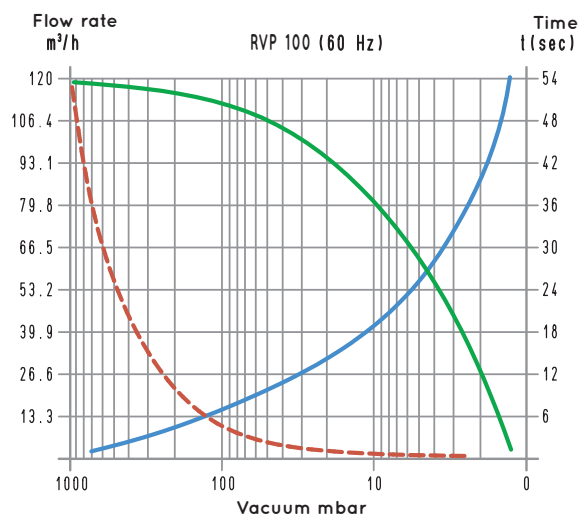
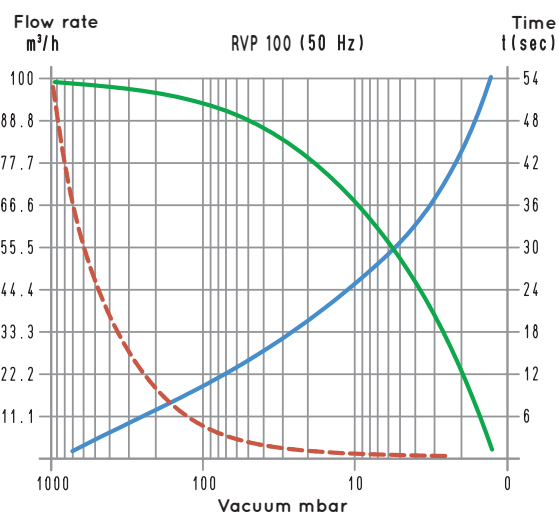
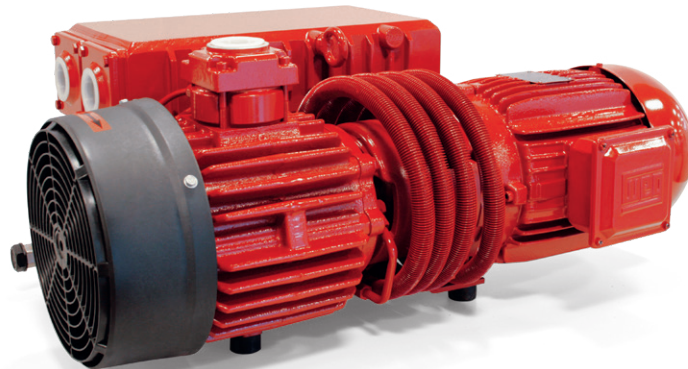
- Curve relative to the flow rate (referring to the suction pressure)
- - - Curve relative to the flow rate (referring to a 1013 mbar pressure)
- Curve regarding the emptying time of a 100-litre volume

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



Item		RVP 60		
Frequency		50 Hz		60 Hz
Flow rate	m ³ /h	60.0		72.0
Final pressure	mbar abs.		0.5	
H ₂ O steam quantity permitted	Kg/h		1	
Motor performance 3~	Volt	230/400 ± 10%		275/480 ± 10%
Motor power 3~	Kw	1.50		1.80
Motor protection	IP		55	
Rotation speed	g/min ⁻¹	1450		1740
Motor shape			B14	
Motor size			100	
Noise level	dB(A)	65		66
Max weight	Kg		59.0	
A			615	
B			420	
C			290	
D			148	
E			317	
F			217	
G	Ø		M8	
H			298	
I			276	
L			15	
M			129	
N			140	
O			200	
P			89	
R	Ø gas		G1"1/4	

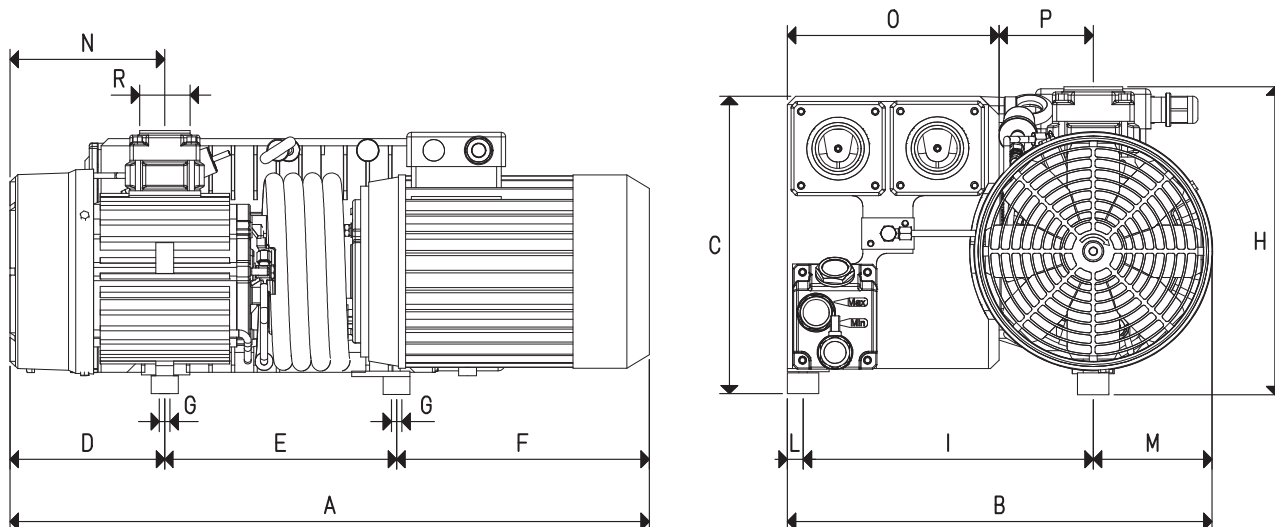
Accessories and Parts		RVP 60		
Oil charge	L		2	
Lubricating oil	type		VT OIL 100	
Oil filter	item		00 RVP 60 07	
2 deoiling cartridges	item		00 RVP 60 05	
3 vanes	item		00 RVP 60 04	
Sealing kit	item		00 RVP 60 06	
Check valve	item		00 RVP 60 03	
Suction filter	item		FC 35	
Ballast valve	item		integrated	



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

- Curve relative to the flow rate (referring to the suction pressure)
- - - Curve relative to the flow rate (referring to a 1013 mbar pressure)
- Curve regarding the emptying time of a 100-litre volume

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

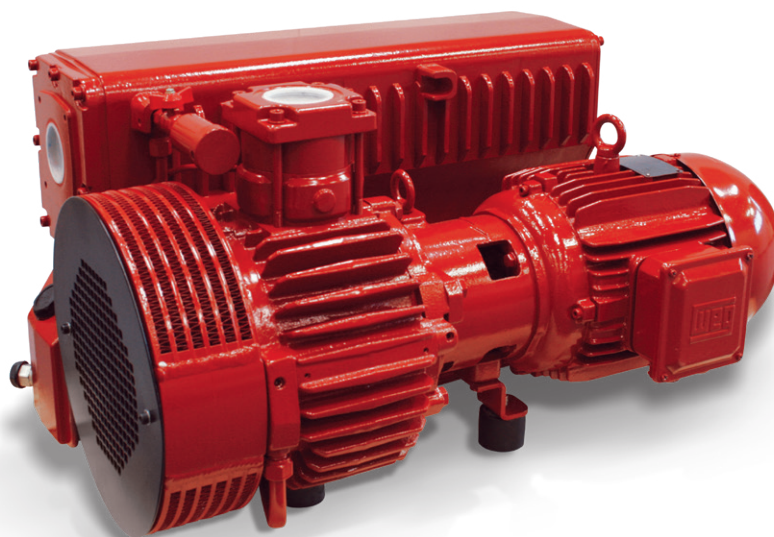


Item		RVP 100	
Frequency		50 Hz	60 Hz
Flow rate	m ³ /h	100.0	120.0
Final pressure	mbar abs.	0.5	
H ₂ O steam quantity permitted	Kg/h	1.5	
Motor performance 3~	Volt	230/400 ± 10%	275/480 ± 10%
Motor power 3~	Kw	2.2	3.0
Motor protection	IP	55	
Rotation speed	g/min ⁻¹	1450	1740
Motor shape		B14	
Motor size		100	
Noise level	dB(A)	67	69
Max weight	Kg	78.0	
A		710	
B		405	
C		280	
D		175	
E		360	
F		275	
G	Ø	M8	
H		290	
I		277	
L		15	
M		113	
N		170	
O		200	
P		90	
R	Ø gas	G1"1/4	

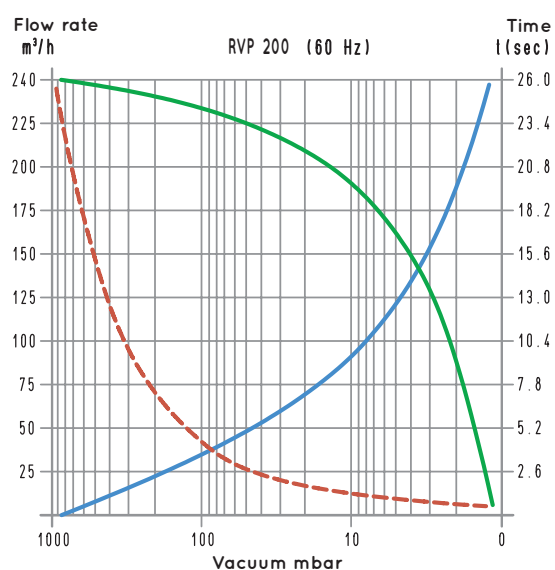
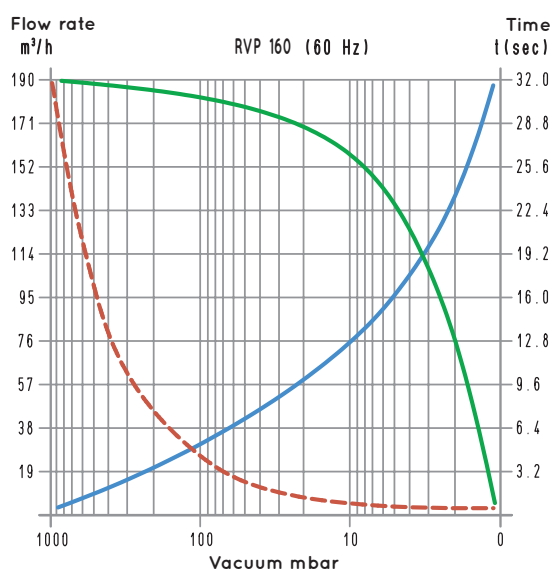
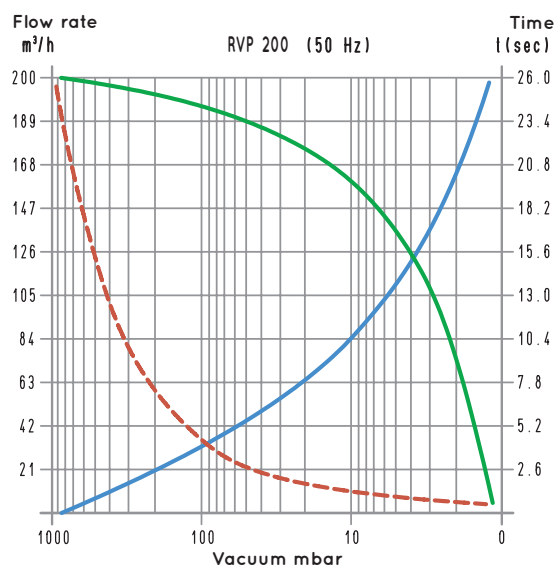
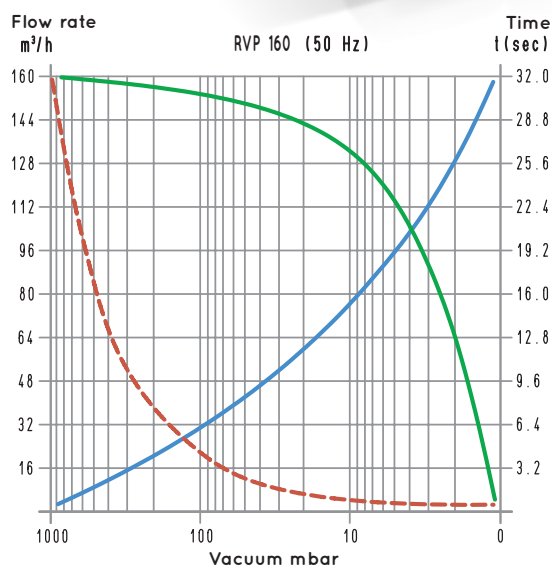
Accessories and Parts		RVP 100	
Oil charge	L	2	
Lubricating oil	type	VT OIL 100	
Oil filter	item	00 RVP 100 07	
2 deoiling cartridges	item	00 RVP 100 05	
3 vanes	item	00 RVP 100 04	
Sealing kit	item	00 RVP 100 06	
Check valve	item	00 RVP 100 03	
Suction filter	item	FC 35	
Ballast valve	item	integrated	



OIL-BATH VACUUM PUMPS RVP 160 and RVP 200



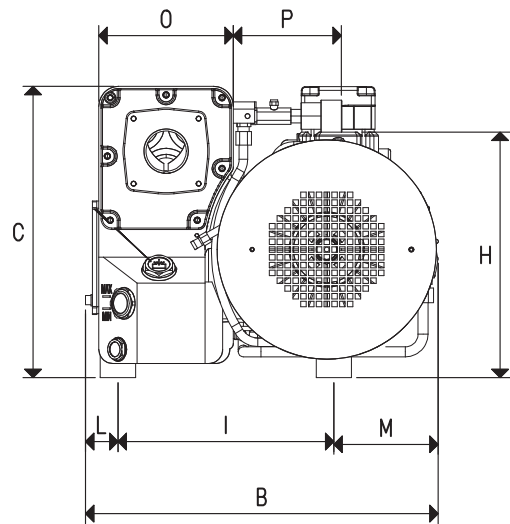
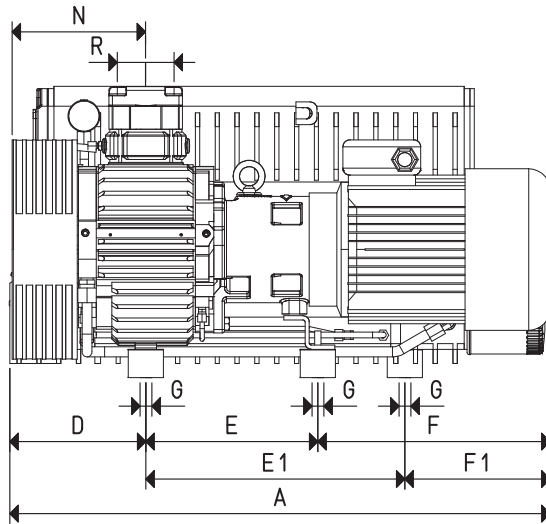
3D drawings are available on vuototecnica.net



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

- Curve relative to the flow rate (referring to the suction pressure)
- - - Curve relative to the flow rate (referring to a 1013 mbar pressure)
- Curve regarding the emptying time of a 100-litre volume

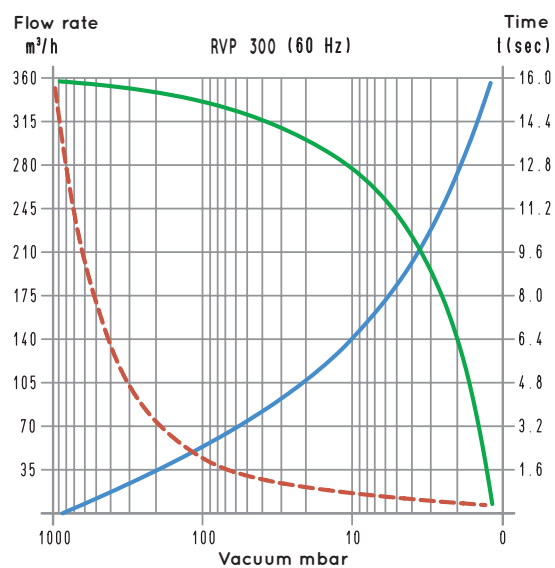
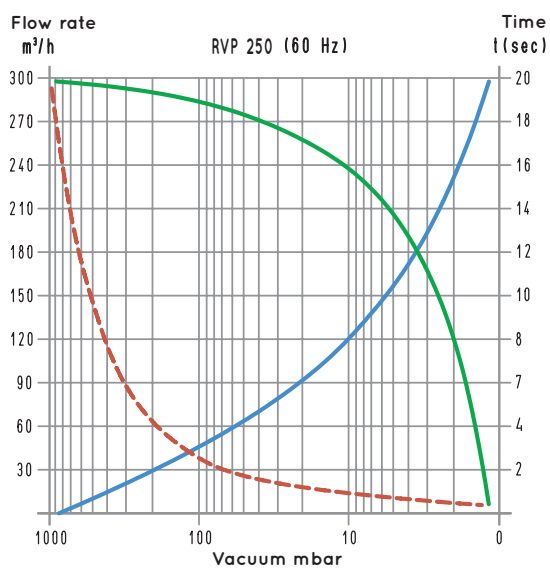
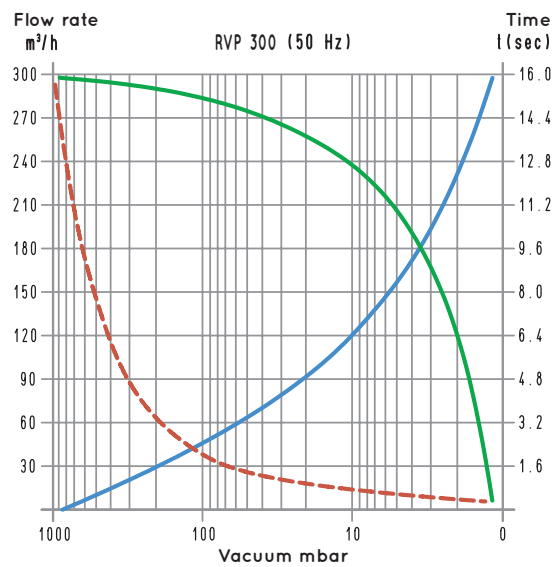
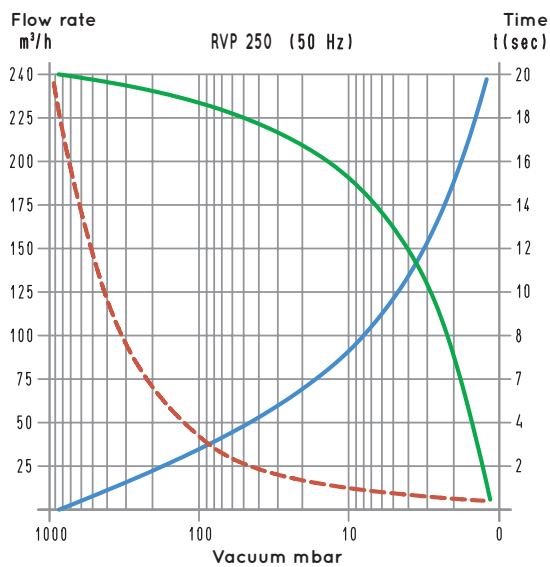
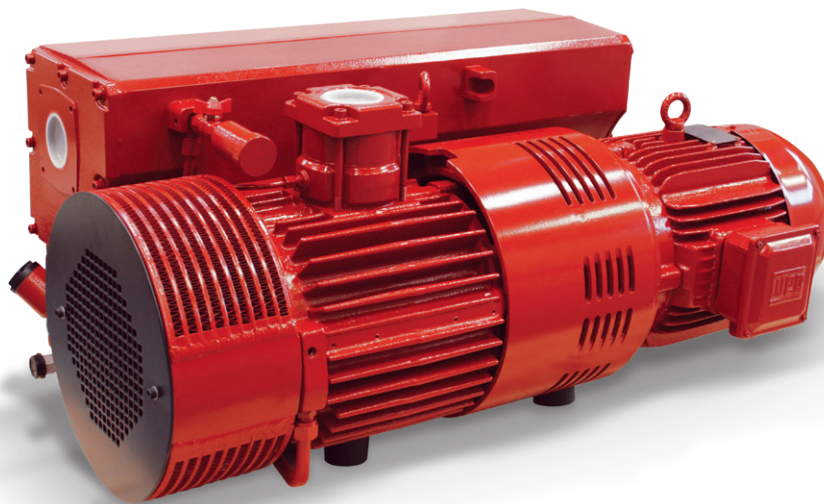
V_1 : Volume to be emptied (l)
 t_1 : time to be calculated (sec)
 t : time obtained in the table (sec)



Item		RVP 160		RVP 200	
Frequency		50 Hz	60 Hz	50 Hz	60 Hz
Flow rate	m³/h	160.0	190.0	200.0	240.0
Final pressure	mbar abs.	0.5		0.5	
H ₂ O steam quantity permitted	Kg/h	2.5		4	
Motor performance 3~	Volt	400/690 ± 10%		400/690 ± 10%	
Motor power 3~	Kw	4		4	
Motor protection	IP	55		55	
Rotation speed	g/min ⁻¹	1450		1450	
Motor shape		B14		B14	
Motor size		112		112	
Noise level	dB(A)	72		74	
Max weight	kg	142.0		145.0	
A		761		761	
B		495		495	
C		411		411	
D		192		192	
E		243		243	
E1		366		366	
F		326		326	
F1		205		205	
G	Ø	M10		M10	
H		310		310	
I		305		305	
L		25		25	
M		165		165	
N		189		189	
O		80		80	
P		65		65	
R	Ø gas	G2"		G2"	
Accessories and Parts		RVP 160		RVP 200	
Oil charge	L	8		8	
Lubricating oil	type	VT OIL 100		VT OIL 100	
Oil filter	item	00 RVP 160 07		00 RVP 200 07	
3 deoiling cartridges	item	00 RVP 160 05		00 RVP 200 05	
3 vanes	item	00 RVP 160 04		00 RVP 200 04	
Sealing kit	item	00 RVP 160 06		00 RVP 200 06	
Check valve	item	00 RVP 160 03		00 RVP 200 03	
Suction filter	item	FC 60		FC 60	
Ballast valve	item	integrated		integrated	



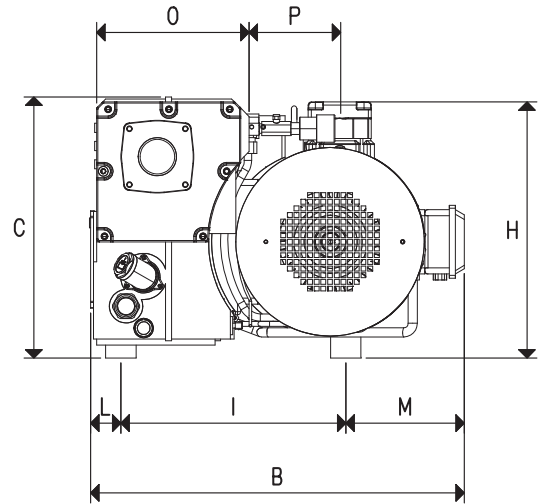
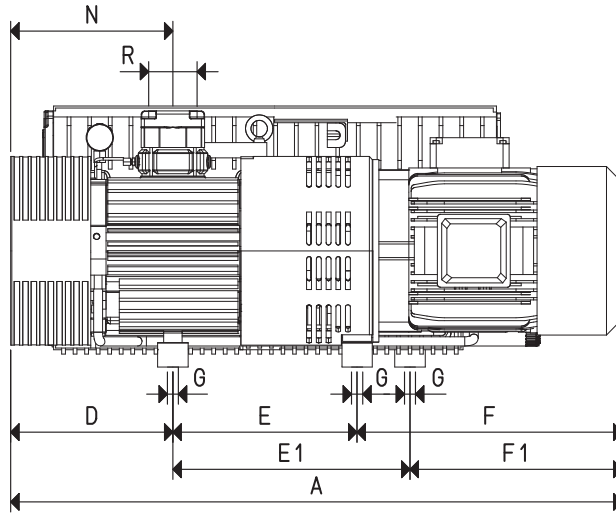
OIL-BATH VACUUM PUMPS RVP 250 and RVP 300



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

- Curve relative to the flow rate (referring to the suction pressure)
- - - Curve relative to the flow rate (referring to a 1013 mbar pressure)
- Curve regarding the emptying time of a 100-litre volume

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




Item		RVP 250		RVP 300	
Frequency		50 Hz	60 Hz	50 Hz	60 Hz
Flow rate	m³/h	250	300	300	360
Final pressure	mbar abs.	0.5		0.5	
H ₂ O steam quantity permitted	Kg/h	4		4.5	
Motor performance 3~	Volt	400/690 ± 10%		400/690 ± 10%	
Motor power 3~	Kw	5.5		7.5	
Motor protection	IP	55		55	
Rotation speed	g/min ⁻¹	1450		1450	
Motor shape		B5		B5	
Motor size		132		132	
Noise level	dB(A)	74		75	
Max weight	Kg	198.0		212.0	
A		975		1010	
B		579		579	
C		411		411	
D		287		287	
E		303		303	
E1		390		390	
F		385		420	
F1		350		350	
G	Ø	M10		M10	
H		421		421	
I		369		369	
L		50		50	
M		185		185	
N		267		267	
O		242		242	
P		150		150	
R	Ø gas	G2"		G2"	
Accessories and Parts		RVP 250		RVP 300	
Oil charge	L	8		8	
Lubricating oil	type	VT OIL 100		VT OIL 100	
Oil filter	item	00 RVP 250 07		00 RVP 300 07	
4 deoiling cartridges	item	00 RVP 250 05		00 RVP 300 05	
3 vanes	item	00 RVP 250 04		00 RVP 300 04	
Sealing kit	item	00 RVP 250 06		00 RVP 300 06	
Check valve	item	00 RVP 250 03		00 RVP 300 03	
Suction filter	item	FC 60		FC 60	
Ballast valve	item	integrated		integrated	



LUBRICATED VACUUM PUMP ACCESSORIES AND SPARE PARTS

3D drawings are available on vuototecnica.net



	Item	Quantity	For pump item
	00 VTL 02 10	4	VTL 2
	00 VTL 04 10	4	VTL 4
	00 VTL 05 10	6	VTL 5 - VTLP 5
	00 VTL 10 10	6	VTL 10 - VTLP 10
	00 VTL 10F 10	6	VTL 10/F - VTLP 10/F
	00 VTL 15F 10	6	VTL 15/F - VTLP 15/F
	00 VTL 20F 10	6	VTL 20/F - VTLP 20/F
	00 VTL 25FG 10	6	VTL 25/FG - VTLP 25/FG
	00 VTL 30FG 10	6	VTL 30/FG - VTLP 30/FG
	00 VTL 35FG 10	6	VTL 35/FG - VTLP 35/FG
	00 VTL 40G1 10	6	VTL 40/G1 - VTLP 40/G1
	00 VTL 50G1 10	6	VTL 50/G1 - VTLP 50/G1
	00 VTL 65G1 10	6	VTL 65/G1 - VTLP 65/G1
	00 VTL 75G1 10	6	VTL 75/G1 - VTLP 75/G1
	00 VTL 90G1 10	6	VTL 90/G1 - VTLP 90/G1
	00 VTL 105G1 10	6	VTL 105/G1 - VTLP 105/G1
	00 RVP 15 04	3	RVP15
	00 RVP 21 04	3	RVP21
	00 RVP 40 04	3	RVP40
	00 RVP 60 04	3	RVP60
	00 RVP 100 04	3	RVP100
	00 RVP 160 04	3	RVP160
	00 RVP 200 04	3	RVP200
	00 RVP 250 04	3	RVP250
	00 RVP 300 04	3	RVP300

	Item	Quantity	For pump item
Sealing kit 	00 KIT VTL 02	1	VTL 2
	00 KIT VTL 04	1	VTL 4
	00 KIT VTL 05	1	VTL 5 - VTLP 5
	00 KIT VTL 10	1	VTL 10 - VTLP 10
	00 KIT VTL 10F	1	VTL 10/F - VTLP 10/F
	00 KIT VTL 15F	1	VTL 15/F - VTLP 15/F
	00 KIT VTL 20F	1	VTL 20/F - VTLP 20/F
	00 KIT VTL 25FG	1	VTL 25/FG - VTLP 25/FG
	00 KIT VTL 30FG	1	VTL 30/FG - VTLP 30/FG
	00 KIT VTL 35FG	1	VTL 35/FG - VTLP 35/FG
	00 KIT VTL 40G1	1	VTL 40/G1 - VTLP 40/G1
	00 KIT VTL 50G1	1	VTL 50/G1 - VTLP 50/G1
	00 KIT VTL 65G1	1	VTL 65/G1 - VTLP 65/G1
	00 KIT VTL 75G1	1	VTL 75/G1 - VTLP 75/G1
	00 KIT VTL 90G1	1	VTL 90/G1 - VTLP 90/G1
	00 KIT VTL 105G1	1	VTL 105/G1 - VTLP 105/G1
	00 RVP 15 06	1	RVP15
	00 RVP 21 06	1	RVP21
	00 RVP 40 06	1	RVP40
	00 RVP 60 06	1	RVP60
	00 RVP 100 06	1	RVP100
	00 RVP 160 06	1	RVP160
	00 RVP 200 06	1	RVP200
	00 RVP 250 06	1	RVP250
	00 RVP 300 06	1	RVP300
Check valves 	10 01 15	1	VTL 2
	10 02 15	1	VTL 4
	10 02 10	1	VTL 5 - VTLP 5
	10 03 10	1	VTL 10 - VTLP 10
			VTL 10/F - VTLP 10/F
			VTL 15/F - VTLP 15/F
			VTL 20/F - VTLP 20/F
	10 04 10	1	VTL 25/FG - VTLP 25/FG
			VTL 30/FG - VTLP 30/FG
	10 05 10	1	VTL 35/FG - VTLP 35/FG
			VTL 40/G1 - VTLP 40/G1
			VTL 50/G1 - VTLP 50/G1
			VTL 65/G1 - VTLP 65/G1
	10 06 10	1	VTL 75/G1 - VTLP 75/G1
			VTL 90/G1 - VTLP 90/G1
	10 07 10	1	VTL 105/G1 - VTLP 105/G1



LUBRICATED VACUUM PUMP ACCESSORIES AND SPARE PARTS

3D drawings are available on vuototecnica.net

FB



FB



FC



Adjustable drip oiler



Item	Quantity	For pump item
FB 5	1	VTL 2
FB 10	1	VTL 4
FB 20	1	VTL 5 - VTLP 5
FB 28	1	VTL 10 - VTLP 10
FB 30	1	VTL 10/F - VTLP 10/F
FB 40	1	VTL 15/F - VTLP 15/F
FB 50	1	VTL 20/F - VTLP 20/F
FC 10	1	VTL 25/FG - VTLP 25/FG
FC 20	1	VTL 30/FG - VTLP 30/FG
FC 25	1	VTL 35/FG - VTLP 35/FG
FC 30	1	VTL 40/G1 - VTLP 40/G1
FC 35	1	VTL 50/G1 - VTLP 50/G1
FC 40	1	VTL 65/G1 - VTLP 65/G1
FC 50	1	RVP15
FC 60	1	RVP21
		VTL 25/FG - VTLP 25/FG
		VTL 30/FG - VTLP 30/FG
		VTL 35/FG - VTLP 35/FG
		VTL 40/G1 - VTLP 40/G1
		VTL 50/G1 - VTLP 50/G1
		VTL 65/G1 - VTLP 65/G1
		RVP40
		RVP60
		RVP100
		VTL 75/G1 - VTLP 75/G1
		VTL 90/G1 - VTLP 90/G1
		VTL 105/G1 - VTLP 105/G1
		RVP160
		RVP200
		RVP250
		RVP300
00 VTL 00 11		VTL - All
		VTLP - All

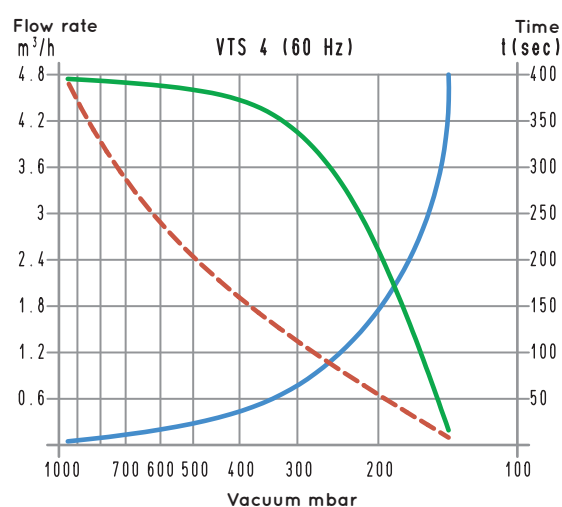
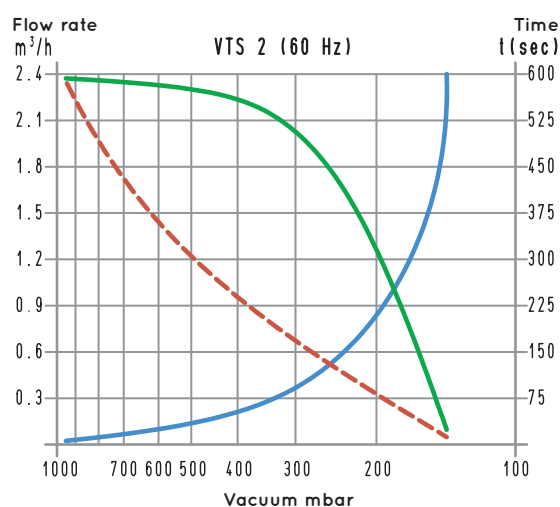
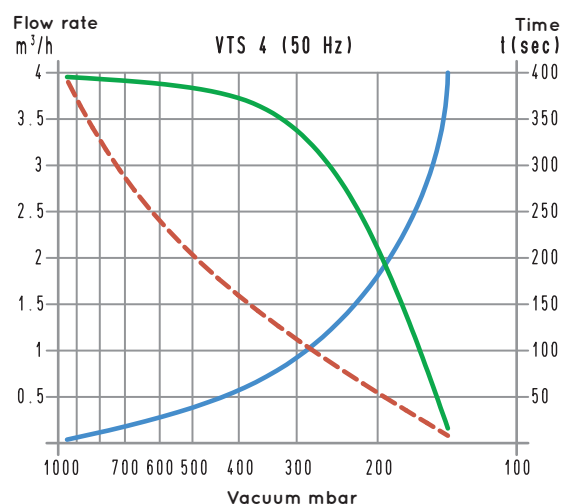
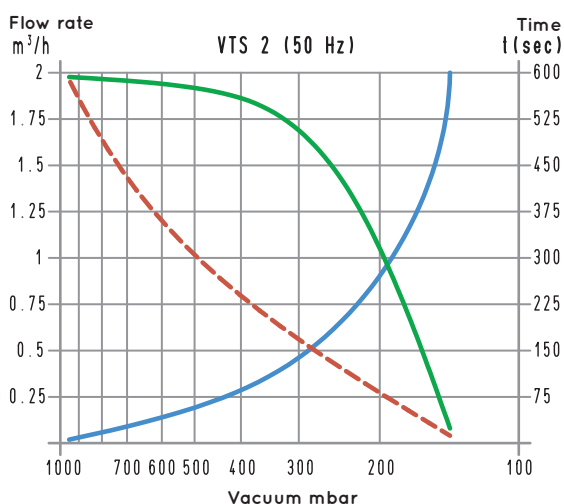
	Item	Quantity	For pump item
Oil level switch	00 LP VTL 99	1	VTLP - All
			
Oil filters	00 LP VTL 40	1	VTLP - All
	00 RVP 40 07	1	RVP40
	00 RVP 60 07	1	RVP60
	00 RVP 100 07	1	RVP100
	00 RVP 160 07	1	RVP160
	00 RVP 200 07	1	RVP200
	00 RVP 250 07	1	RVP250
	00 RVP 300 07	1	RVP300
Deoiling cartridges	00 VTL 75G1 29	1	VTL 75/G1 - VTLP 75/G1
	00 VTL 90G1 29	1	VTL 90/G1 - VTLP 90/G1
	00 VTL 105G1 29	1	VTL 105/G1 - VTLP 105/G1
	00 RVP 15 05	1	RVP15
	00 RVP 21 05	1	RVP21
	00 RVP 40 05	1	RVP40
	00 RVP 60 05	2	RVP60
	00 RVP 100 05	2	RVP100
	00 RVP 160 05	3	RVP160
	00 RVP 200 05	3	RVP200
	00 RVP 250 05	4	RVP250
	00 RVP 300 05	4	RVP300
Mineral lubricating oil	ISO 32 - 68 - 100 - 150	1 - 2 - 5 - 10 L packs	
			
Synthetic lubricating oil	VT OIL 32 - 68 - 100	1 - 2 - 5 - 10 L packs	
			
"Non-toxic" synthetic oil for the food industry	VT OIL FI 68 - 100	1 - 2 - 5 - 10 L packs	
			



DRY VACUUM PUMPS VTS 2 and 4

These small lubrication-free rotary vane vacuum pumps have a suction flow rate of 2 and 4 m³/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).

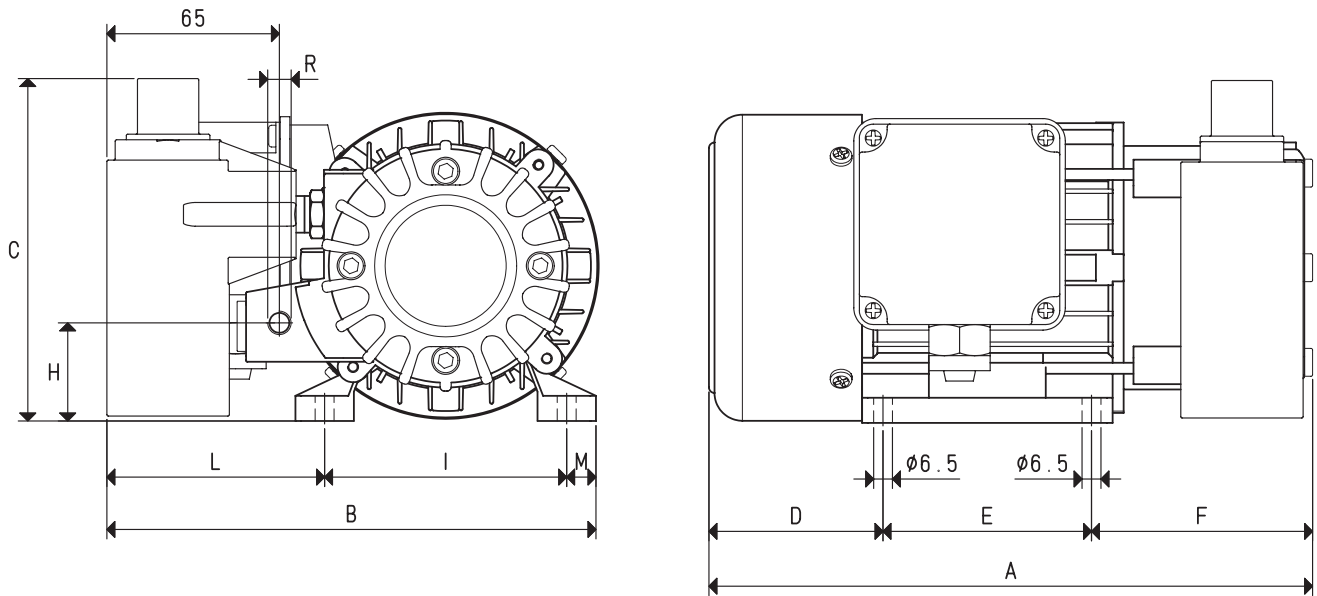
A filter that functions as a silencer is installed on the suction inlet. We strongly recommend installing a filter on the suction inlet against possible impurities. These pumps are not recommended when the fluid to be sucked contains water or oil vapours or condensations. Vacuum pumps VTS 2 and 4 can also be supplied with single-phase electric motor.



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

- Curve relative to the flow rate (referring to the suction pressure)
- - - Curve relative to the flow rate (referring to a 1013 mbar pressure)
- Curve regarding the emptying time of a 100-litre volume

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



Item		VTS 2		VTS 4	
Frequency		50Hz	60Hz	50Hz	60Hz
Flow rate	m ³ /h	2.0	2.4	4.0	4.8
Final pressure	mbar abs.	200		150	
Motor performance		230/400±10%	265/460±10%	230/400±10%	265/460±10%
Volt	1~	230±10%		230±10%	
Motor power	3~	0.12	0.15	0.18	0.21
Kw	1~	0.12	0.15	0.18	0.21
Motor protection	IP	55		55	
Rotation speed	g/min ⁻¹	2800	3300	2800	3300
Motor shape					
Motor size		56		63	
Noise level	dB(A)	64	66	64	66
Max weight	3~	5.3		6.8	
Kg	1~	5.5		7.0	
A		217		251	
B		180		186	
C		121		131	
D		66		78	
E		71		81	
F		80		92	
H		35		45	
I		90		100	
L		79		73	
M		11		13	
R	Ø gas	G1/4"		G1/4"	

Accessories and Parts		VTS 2	VTS 4
4 graphite vanes	item	00 VTS 02 10	00 VTS 04 10
Front flange complete with graphite disc	item	00 VTS 02 11	00 VTS 04 11
Rear flange complete with graphite disc	item	00 VTS 02 15	00 VTS 02 15
Sealing kit	item	00 KIT VTS 02	00 KIT VTS 04
Check valve	item	10 01 15	10 01 15
Suction filter	item	FB 5	FB 5

Note: Add the letter M to the item for a pump supplied with a single-phase electric motor (Example: VTS 2 M).

Transformation ratio: N (newton) = Kg x 9.81 (force of gravity)

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

cfm= m³/h x 0.588; inch Hg= mbar x 0.0295; psi= bar x 14.6



DRY VACUUM PUMPS VTS 6 and 10

These lubrication-free rotary vane vacuum pumps have a suction flow rate of 6 and 10 m³/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 filter that functions as a silencer is installed on the suction inlet.

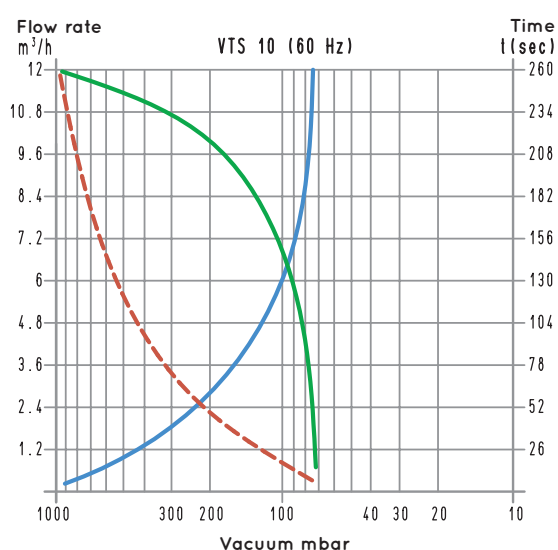
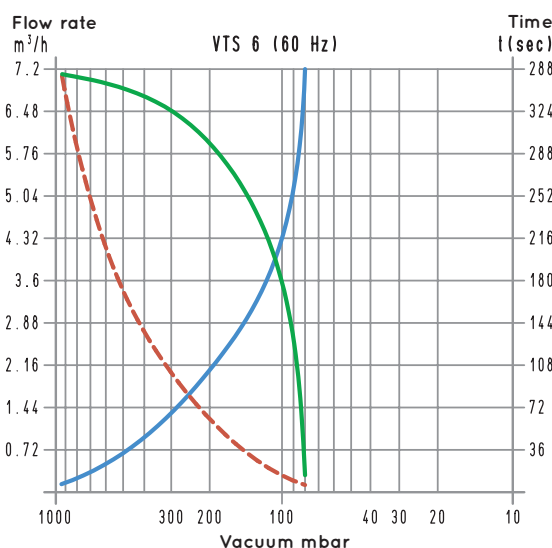
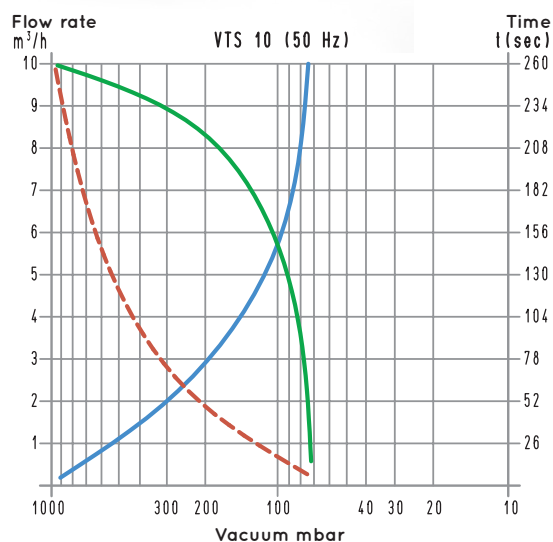
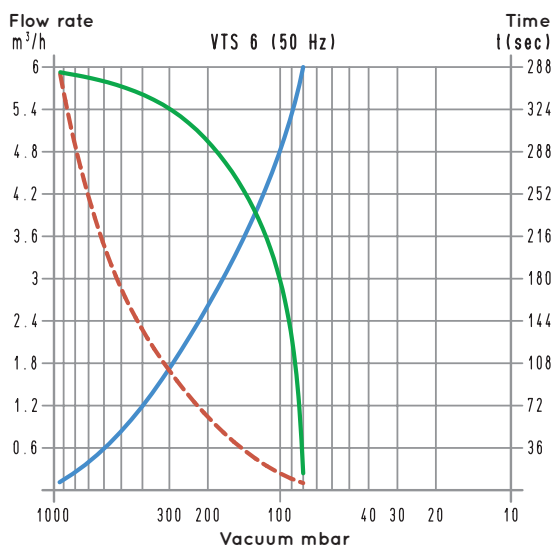
We strongly recommend installing a filter on the suction inlet against possible impurities. These pumps are not recommended when the fluid to be sucked contains water or oil vapours or condensations.

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



VTS 6

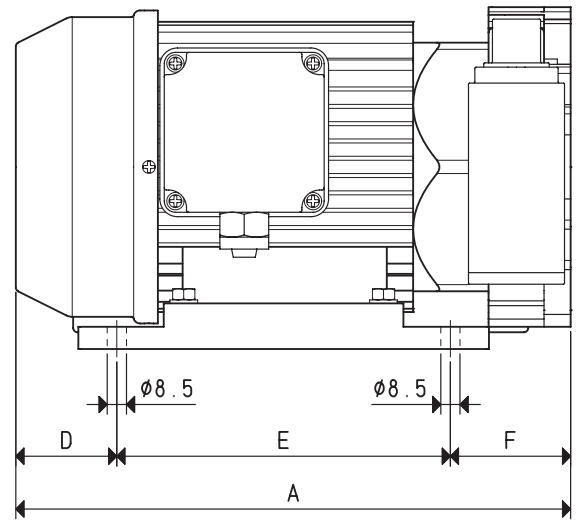
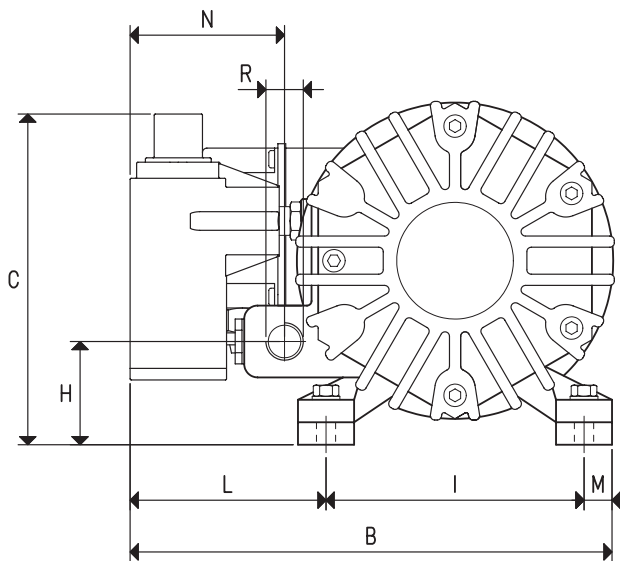
VTS 10



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

- Curve relative to the flow rate (referring to the suction pressure)
- - - Curve relative to the flow rate (referring to a 1013 mbar pressure)
- Curve regarding the emptying time of a 100-litre volume

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



Item		VTS 6		VTS 10	
Frequency		50Hz	60Hz	50Hz	60Hz
Flow rate	m³/h	6.0	7.2	10.0	12.0
Final pressure	mbar abs.	80		80	
Motor performance		230/400±10%	265/460±10%	230/400±10%	265/460±10%
Volt	1~	230±10%		230±10%	
Motor power	3~	0.25	0.30	0.37	0.40
Kw	1~	0.25	0.30	0.37	0.40
Motor protection	IP	55		55	
Rotation speed	g/min ⁻¹	1400	1680	1400	1680
Motor shape		Special		Special	
Motor size		71		71	
Noise level	dB(A)	64	66	64	66
Max weight	3~	11.8		15.0	
Kg	1~	12.0		15.2	
A		268		290	
B		210		182	
C		156		156	
D		55		55	
E		155		155	
F		58		88	
H		43		53	
I		115		115	
L		82.5		52.5	
M		12.5		12.5	
N		68		13	
R	Ø gas	G3/8"		G3/8"	

Accessories and Parts		VTS 6	VTS 10
6 graphite vanes	item	00 VTS 06 10	00 VTS 10 10
Front flange complete with graphite disc	item	00 VTS 06 07	00 VTS 10 11
Rear flange complete with graphite disc	item	00 VTS 06 12	00 VTS 10 20
Sealing kit	item	00 KIT VTS 06	00 KIT VTS 10
Check valve	item	10 01 15	10 02 10
Suction filter	item	FB 5	FB 10/FC 10

Note: Add the letter M to the item for a pump supplied with a single-phase electric motor (Example: VTS 6 M).

Transformation ratio: N (newton) = Kg x 9.81 (force of gravity)

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

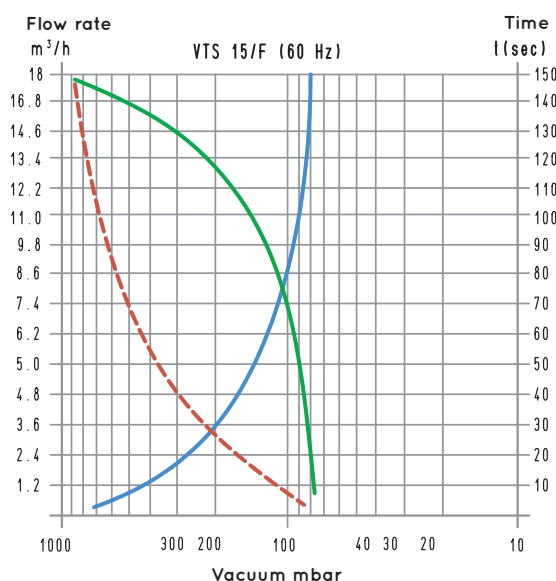
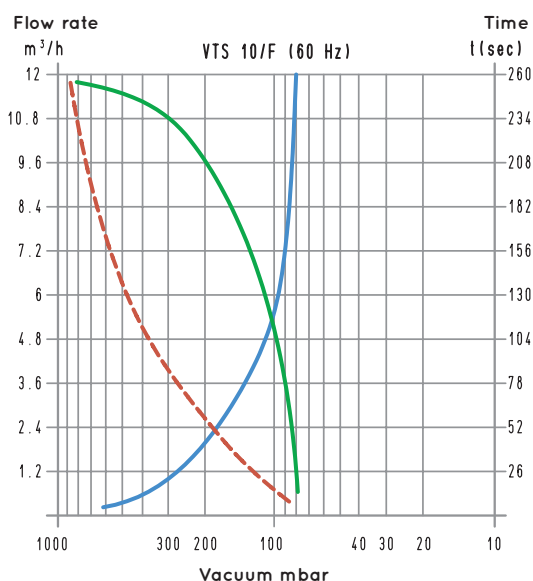
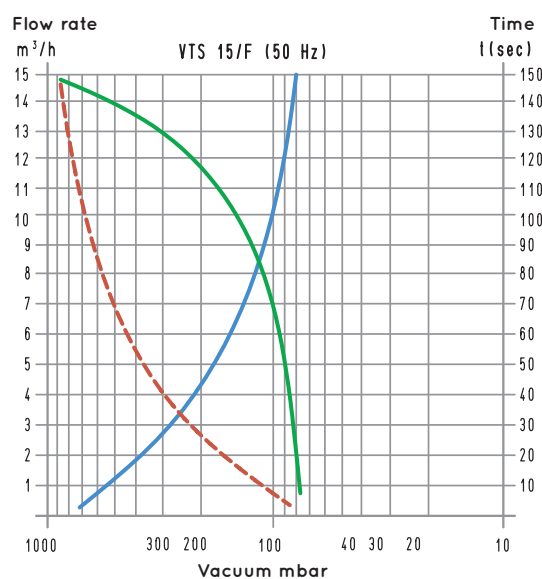
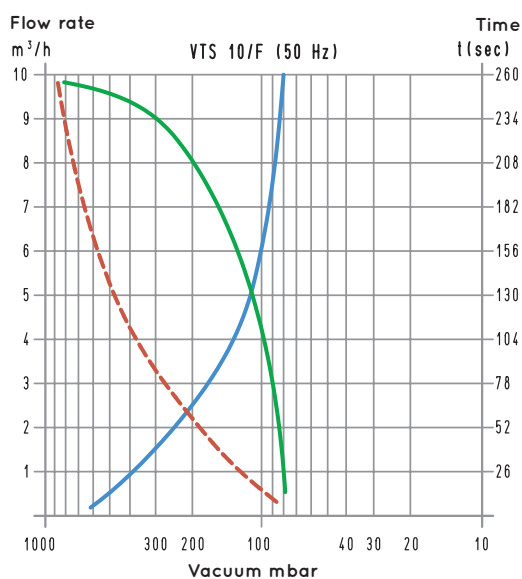
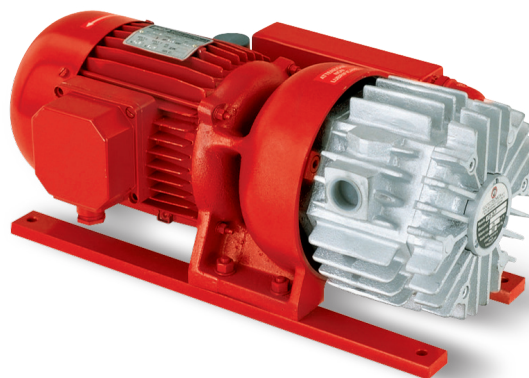
cfm= m³/h x 0.588; inch Hg= mbar x 0.0295; psi= bar x 14.6



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

These lubrication-free rotary vane vacuum pumps have a suction flow rate of 10, 15, 20 and 25 m³/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. Heat is dispersed from the outer surface, suitably finned, by means of a radial fan placed between motor and pump.

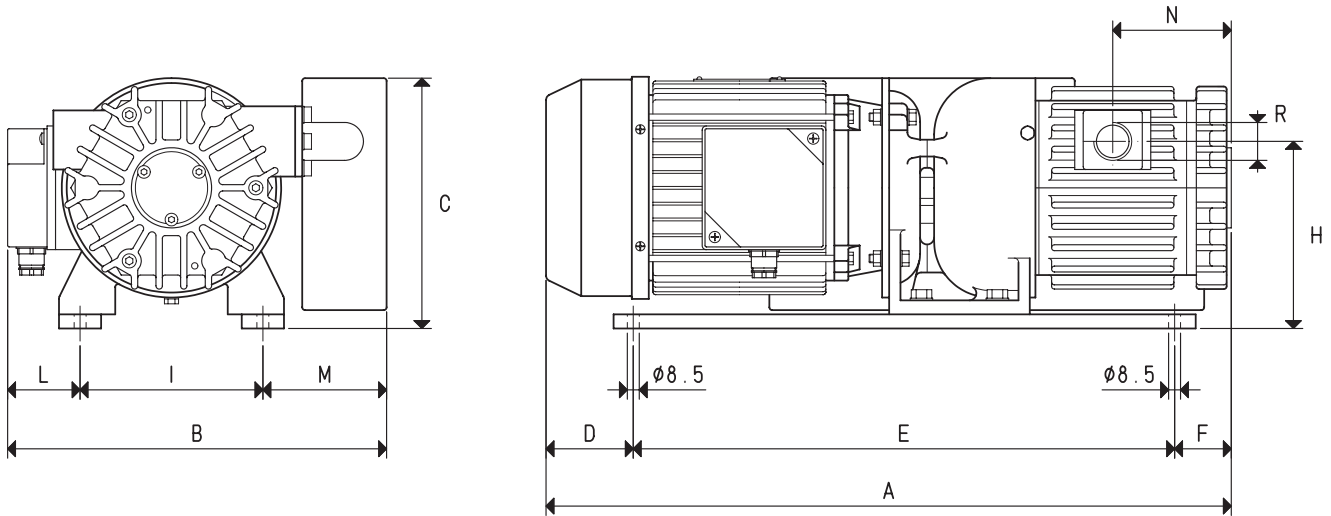
A filter that functions as a silencer is installed on the suction inlet. We strongly recommend installing a filter on the suction inlet against possible impurities. These pumps are not recommended when the fluid to be sucked contains water or oil vapours or condensations. This range of pumps can be also supplied with single-phase electric motors.



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

- Curve relative to the flow rate (referring to the suction pressure)
- - - Curve relative to the flow rate (referring to a 1013 mbar pressure)
- Curve regarding the emptying time of a 100-litre volume

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



Item		VTS 10/F		VTS 15/F	
Frequency		50Hz	60Hz	50Hz	60Hz
Flow rate	m³/h	10.0	12.0	15.0	18.0
Final pressure	mbar abs.	80		80	
Motor performance		230/400±10%	265/460±10%	230/400±10%	265/460±10%
Volt	1~	230±10%		230±10%	
Motor power	3~	0.55	0.66	0.55	0.66
Kw	1~	0.55	0.66	0.55	0.66
Motor protection	IP	55		55	
Rotation speed	g/min ⁻¹	1400	1680	1400	1680
Motor shape		Special		Special	
Motor size		80		80	
Noise level	dB(A)	64	66	65	67
Max weight	3~	22.1		24.1	
Kg	1~	22.5		24.5	
A		388		408	
B		260		260	
C		187		187	
D		24		24	
E		340		340	
F		24		44	
H		133		133	
I		130		130	
L		55		55	
M		75		75	
N		53		63	
R	Ø gas	G1/2"		G1/2"	

Accessories and Parts		VTS 10/F	VTS 15/F
6 graphite vanes	item	00 VTS 10F 10	00 VTS 15F 10
Front flange complete with graphite disc	item	00 VTS 10F 15	00 VTS 10F 15
Rear flange complete with graphite disc	item	00 VTS 10F 19	00 VTS 10F 19
Sealing kit	item	00 KIT VTS 10F	00 KIT VTS 15F
Check valve	item	10 03 10	10 03 10
Suction filter	item	FB 20/FC 20	FB 20/FC 20

Note: Add the letter M to the item for a pump supplied with a single-phase electric motor (Example: VTS 10/F M).

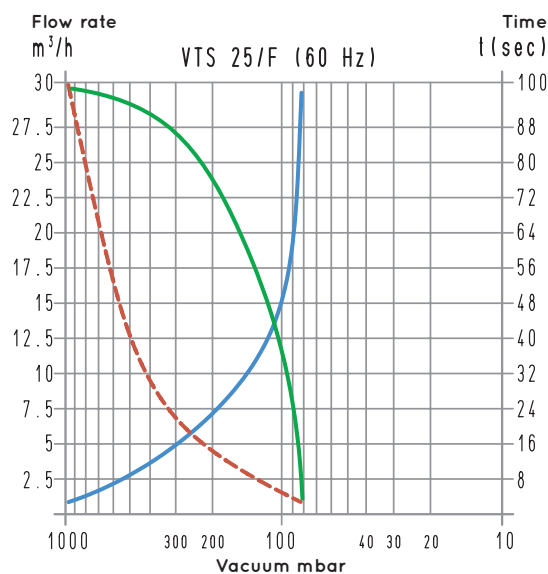
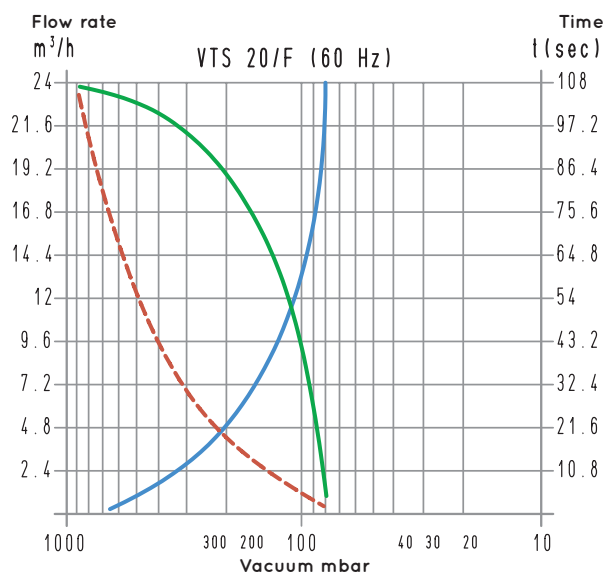
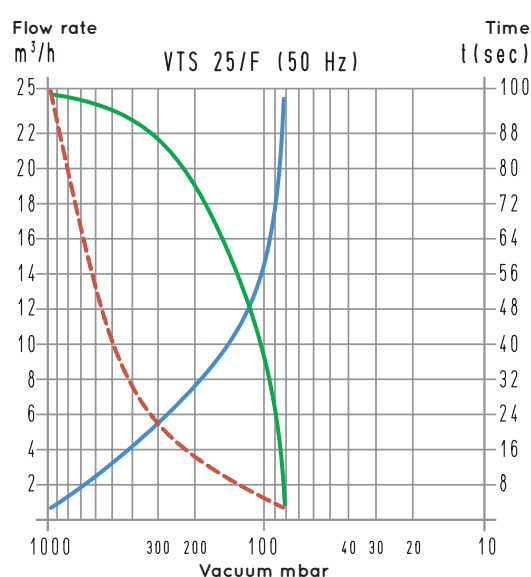
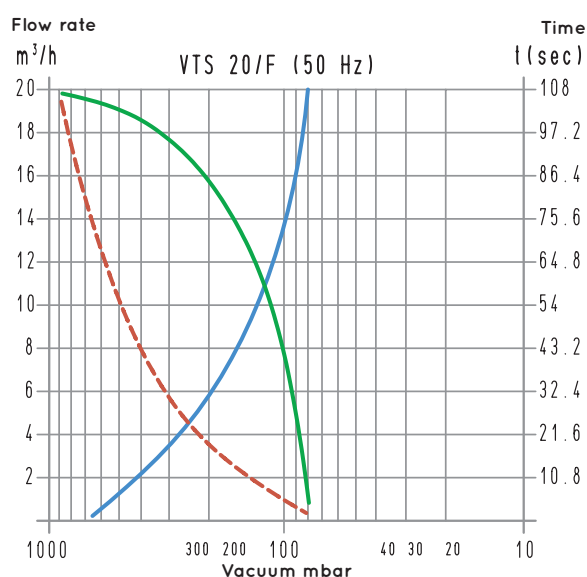
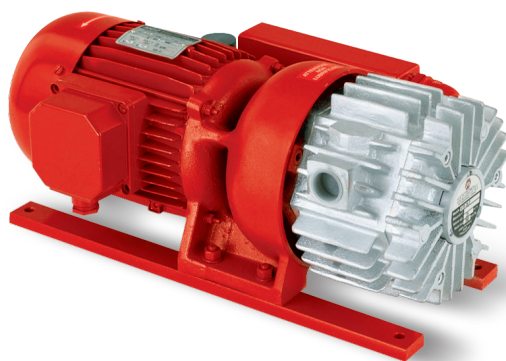
Transformation ratio: N (newton) = Kg x 9.81 (force of gravity)

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

cfm= m³/h x 0.588; inch Hg= mbar x 0.0295; psi= bar x 14.6



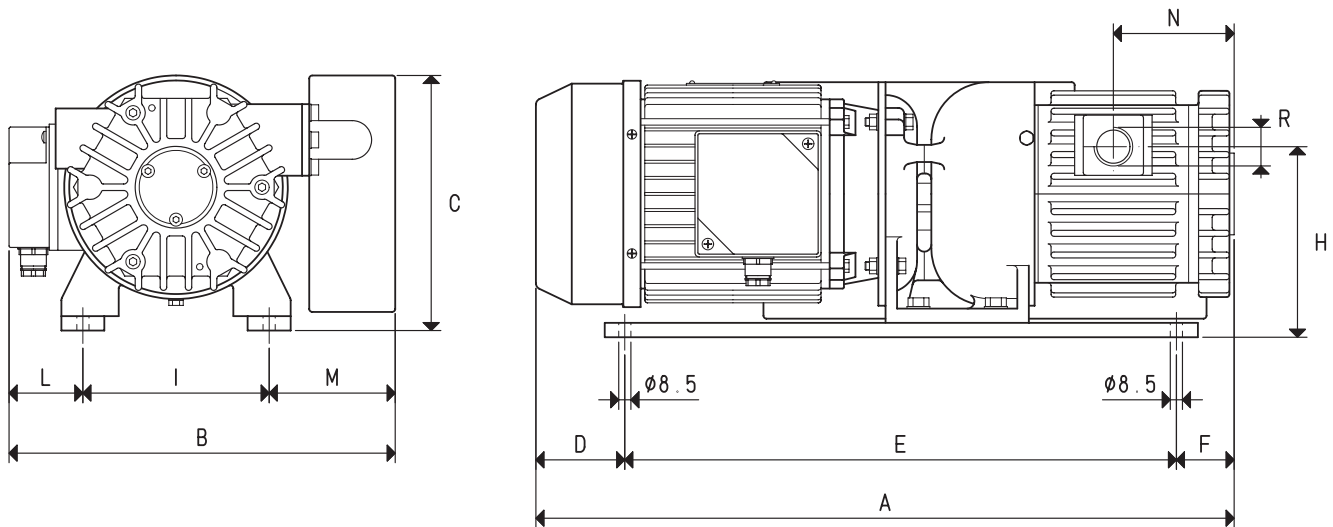
DRY VACUUM PUMPS VTS 20/F and 25/F



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

- Curve relative to the flow rate (referring to the suction pressure)
- - - Curve relative to the flow rate (referring to a 1013 mbar pressure)
- Curve regarding the emptying time of a 100-litre volume

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



Item		VTS 20/F		VTS 25/F	
Frequency		50Hz	60Hz	50Hz	60Hz
Flow rate	m³/h	20.0	24.0	25.0	30.0
Final pressure	mbar abs.	80		80	
Motor performance		230/400±10%	265/460±10%	230/400±10%	265/460±10%
Volt	1~	230±10%		230±10%	
Motor power	3~	0.55	0.66	0.75	0.90
Kw	1~	0.55	0.66	0.75	0.90
Motor protection	IP	55		55	
Rotation speed	g/min ⁻¹	1400	1680	1400	1680
Motor shape		Special		Special	
Motor size		80		80	
Noise level	dB(A)	65	67	65	67
Max weight	3~	27.4		28.1	
Kg	1~	27.9		28.6	
A		428		428	
B		260		260	
C		187		187	
D		24		24	
E		340		385	
F		64		19	
H		133		133	
I		130		130	
L		55		55	
M		75		75	
N		73		73	
R	Ø gas	G1/2"		G3/4"	

Accessories and Parts		VTS 20/F	VTS 25/F
6 graphite vanes	item	00 VTS 20F 10	00 VTS 25F 10
Front flange complete with graphite disc	item	00 VTS 10F 15	00 VTS 10F 15
Rear flange complete with graphite disc	item	00 VTS 10F 19	00 VTS 25F 05
Sealing kit	item	00 KIT VTS 20F	00 KIT VTS 25F
Check valve	item	10 03 10	10 04 10
Suction filter	item	FB 20/FC 20	FB 28/FC 25

Note: Add the letter M to the item for a pump supplied with a single-phase electric motor (Example: VTS 20/F M).

Transformation ratio: N (newton) = Kg x 9.81 (force of gravity)

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

cfm= m³/h x 0.588; inch Hg= mbar x 0.0295; psi= bar x 14.6



DRY VACUUM PUMPS VTS 10/FG - 35/FG

These lubrication-free rotary vane vacuum pumps have a suction flow rate of 10, 15, 20, 25, 30 and 35 m³/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 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.

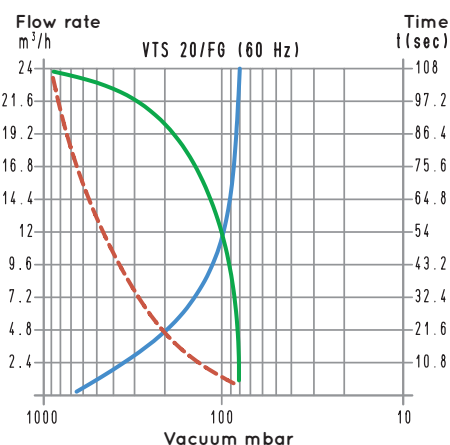
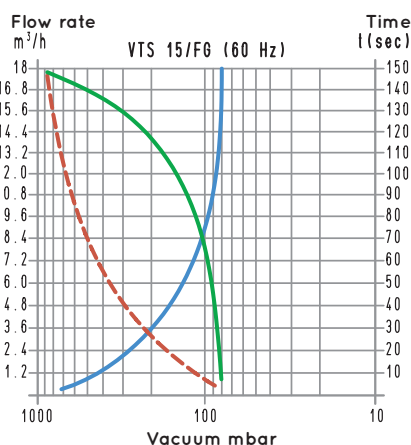
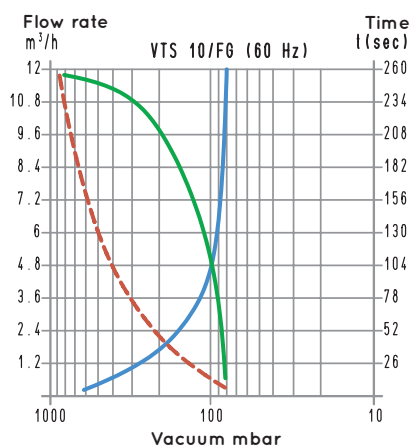
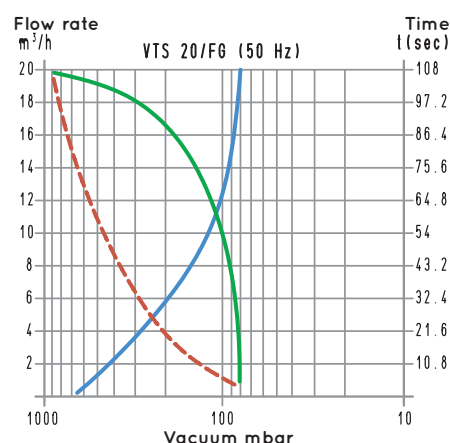
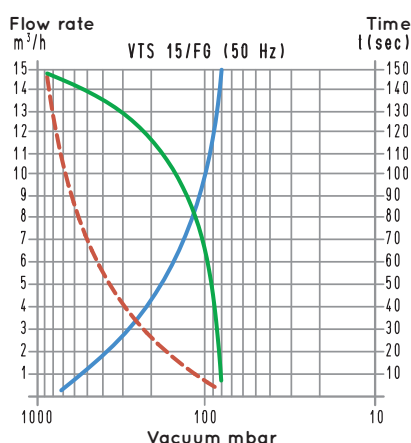
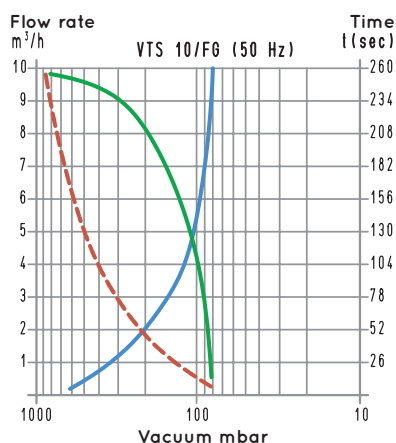
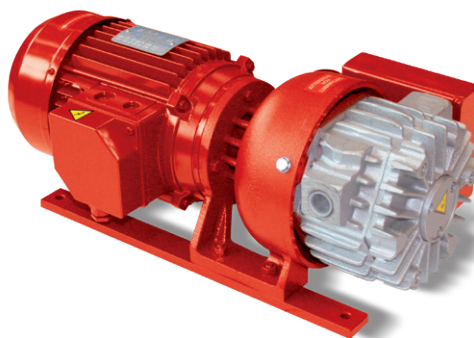
All this allows using standard electric motors, in the shapes and sizes indicated in the table.

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.

A filter that functions as a silencer is installed on the suction inlet.

We strongly recommend installing a filter 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.

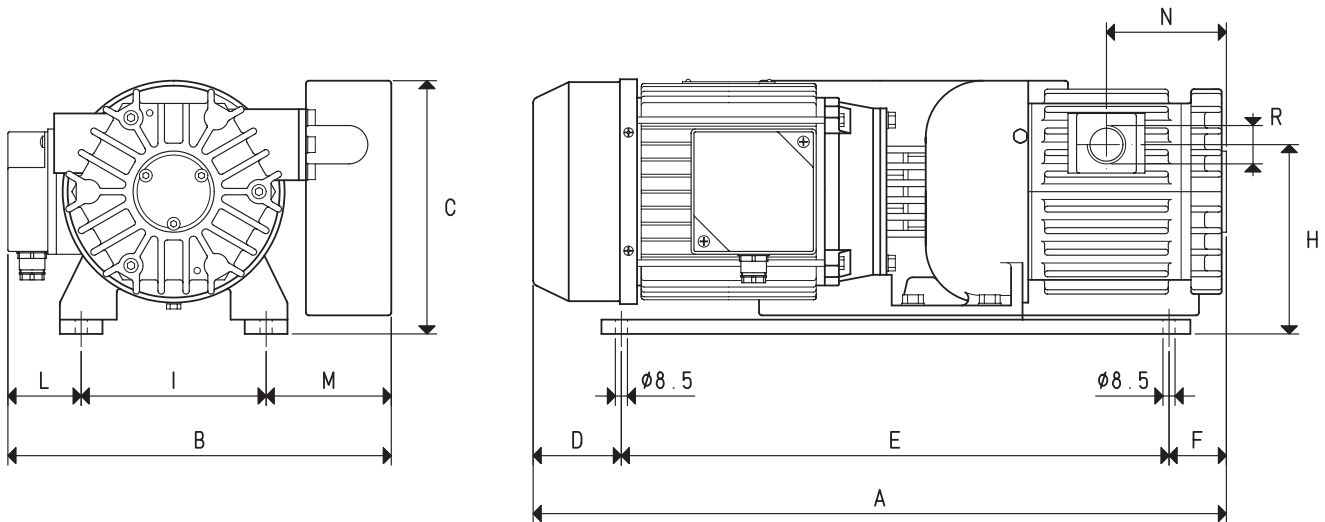
These pumps with flow rate up to 20 m³/h can also be supplied with single-phase electric motors.



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

- Curve relative to the flow rate (referring to the suction pressure)
- - - Curve relative to the flow rate (referring to a 1013 mbar pressure)
- Curve regarding the emptying time of a 100-litre volume

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



Item		VTS 10/FG		VTS 15/FG		VTS 20/FG	
Frequency		50Hz	60Hz	50Hz	60Hz	50Hz	60Hz
Flow rate	m³/h	10.0	12.0	15.0	18.0	20.0	24.0
Final pressure	mbar abs.	80		80		80	
Motor performance		230/400±10%	265/460±10%	230/400±10%	265/460±10%	230/400±10%	265/460±10%
Volt	1~	230±10%		230±10%		230±10%	
Motor power	3~	0.35	0.40	0.55	0.66	0.55	0.66
Kw	1~	0.25	0.30	0.55	0.66	0.55	0.66
Motor protection	IP	55		55		55	
Rotation speed	g/min ⁻¹	1400	1680	1400	1680	1400	1680
Motor shape		B14		B14		B14	
Motor size		80		80		80	
Noise level	dB(A)	64	66	65	67	65	67
Max weight	3~	22.0		24.0		27.3	
Kg	1~	22.4		24.4		27.8	
A		430		450		470	
B		265		265		265	
C		170		170		170	
D		65		65		65	
E		340		340		340	
F		25		45		65	
H		133		133		133	
I		130		130		130	
L		55		55		55	
M		80		80		80	
N		73		83		93	
R	Ø gas	G1/2"		G1/2"		G1/2"	

Accessories and Parts		VTS 10/FG	VTS 15/FG	VTS 20/FG
6 graphite vanes	item	00 VTS 10FG 10	00 VTS 15FG 10	00 VTS 20FG 10
Front flange complete with graphite disc	item	00 VTS 10FG 17	00 VTS 15FG 17	00 VTS 20FG 17
Rear flange complete with graphite disc	item	00 VTS 10FG 26	00 VTS 15FG 26	00 VTS 20FG 26
Sealing kit	item	00 KIT VTS 10FG	00 KIT VTS 15FG	00 KIT VTS 20FG
Check valve	item	10 03 10	10 03 10	10 03 10
Suction filter	item	FB 20/FC 20	FB 20/FC 20	FB 20/FC 20

Note: Add the letter M to the item for a pump supplied with a single-phase electric motor (Example: VTS 10/FG M).

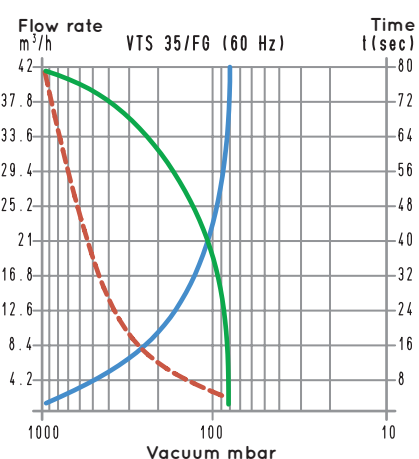
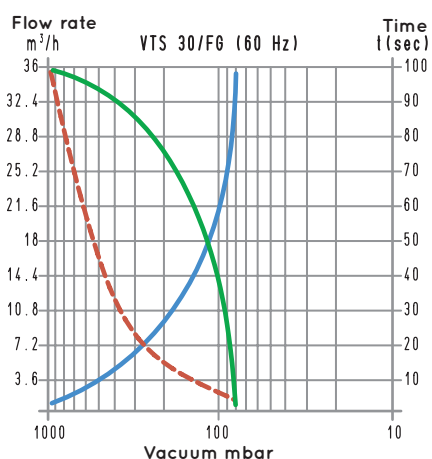
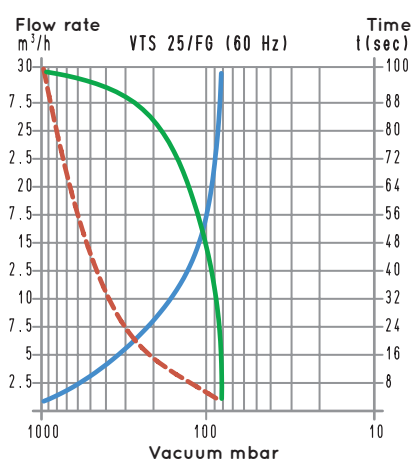
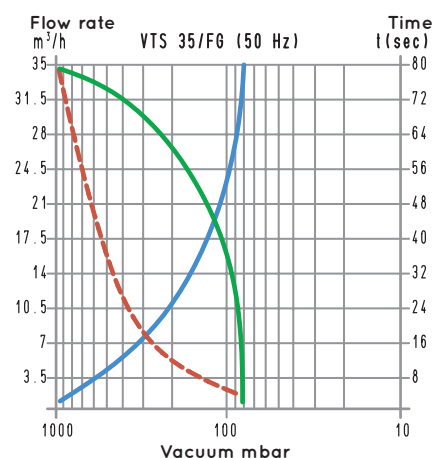
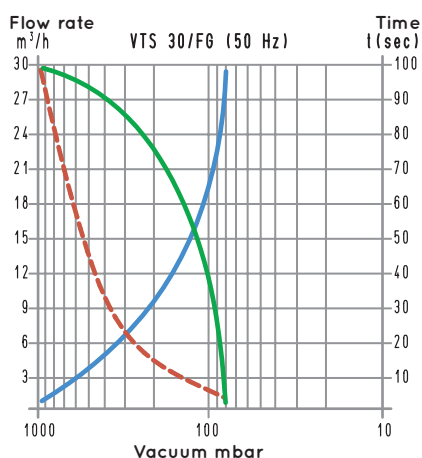
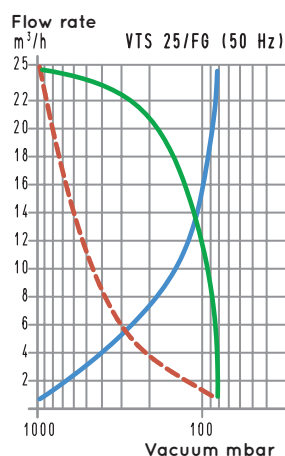
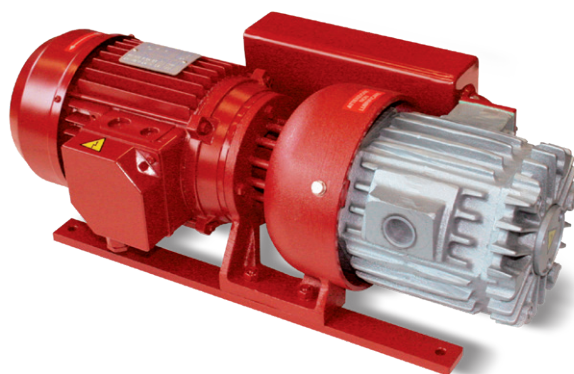
Transformation ratio: N (newton) = Kg x 9.81 (force of gravity)

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

cfm= m³/h x 0.588; inch Hg= mbar x 0.0295; psi= bar x 14.6



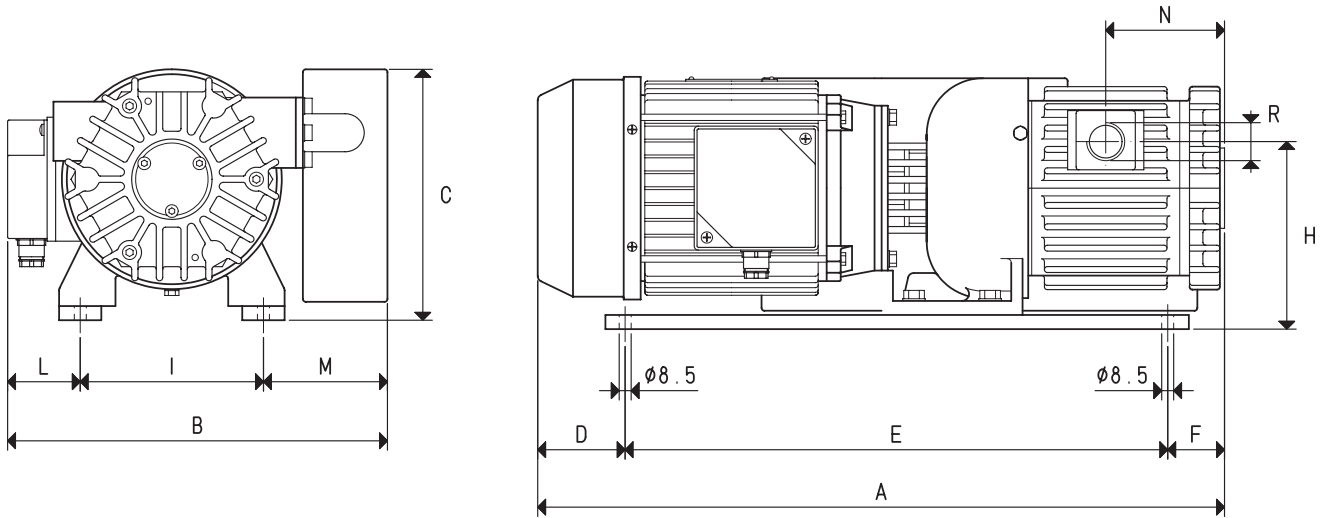
DRY VACUUM PUMPS VTS 25/FG, 30/FG and 35/FG



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

- Curve relative to the flow rate (referring to the suction pressure)
- - - Curve relative to the flow rate (referring to a 1013 mbar pressure)
- Curve regarding the emptying time of a 100-litre volume

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

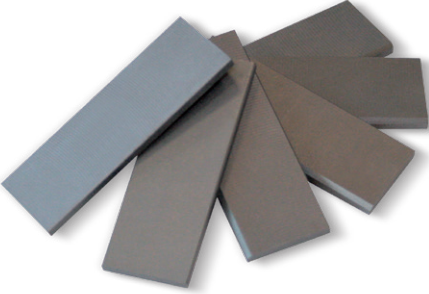
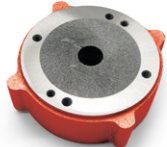

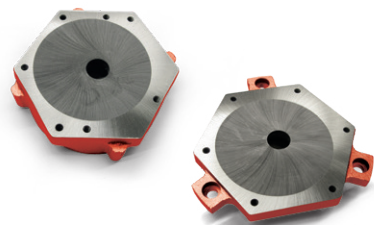
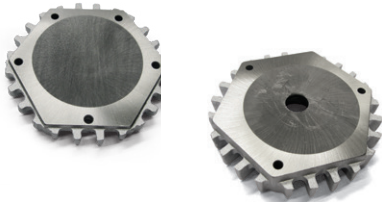


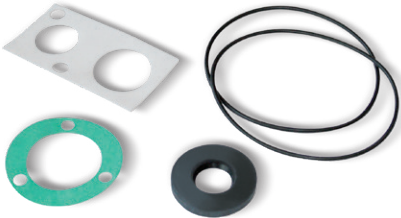




Item		VTS 25/FG		VTS 30/FG		VTS 35/FG	
Frequency		50Hz	60Hz	50Hz	60Hz	50Hz	60Hz
Flow rate	m³/h	25.0	30.0	30.0	36.0	35.0	42.0
Final pressure	mbar abs.	80		80		80	
Motor performance 3~	Volt	230/400±10%	265/460±10%	230/400±10%	265/460±10%	230/400±10%	265/460±10%
Motor power 3~	Kw	0.75	0.90	0.75	0.90	1.10	1.35
Motor protection	IP	55		55		55	
Rotation speed	g/min ⁻¹	1410	1640	1410	1640	1440	1750
Motor shape		B14		B14		B14	
Motor size		80		80		80	
Noise level	dB(A)	66	68	68	70	70	72
Max weight	kg	78.3		85.8		99.4	
A		470		490		510	
B		265		265		265	
C		170		170		170	
D		65		65		65	
E		385		385		385	
F		20		40		60	
H		133		133		133	
I		130		130		130	
L		55		55		55	
M		80		80		80	
N		73		83		93	
R	Ø gas	G3/4"		G3/4"		G3/4"	

Accessories and Parts		VTS 25/FG	VTS 30/FG	VTS 35/FG
6 graphite vanes	item	00 VTS 25FG 10	00 VTS 30FG 10	00 VTS 35FG 10
Front flange complete with graphite disc	item	00 VTS 25FG 17	00 VTS 30FG 18	00 VTS 35FG 18
Rear flange complete with graphite disc	item	00 VTS 25FG 26	00 VTS 30FG 27	00 VTS 35FG 27
Sealing kit	item	00 KIT VTS 25FG	00 KIT VTS 30FG	00 KIT VTS 35FG
Check valve	item	10 04 10	10 04 10	10 04 10
Suction filter	item	FB 28/FC 25	FB 28/FC 25	FB 28/FC 25



DRY VACUUM PUMP ACCESSORIES AND SPARE PARTS

	Item	Quantity	For pump item
Graphite vanes 	00 VTS 02 10	4	VTS 2
	00 VTS 04 10	4	VTS 4
	00 VTS 06 10	6	VTS 6
	00 VTS 10 10	6	VTS 10
	00 VTS 10F 10	6	VTS 10/F
	00 VTS 15F 10	6	VTS 15/F
	00 VTS 20F 10	6	VTS 20/F
	00 VTS 25F 10	6	VTS 25/F
	00 VTS 10FG 10	6	VTS 10/FG
	00 VTS 15FG 10	6	VTS 15/FG
	00 VTS 20FG 10	6	VTS 20/FG
	00 VTS 25FG 10	6	VTS 25/FG
	00 VTS 30FG 10	6	VTS 30/FG
	00 VTS 35FG 10	6	VTS 35/FG
Front flange complete with graphite disc 	00 VTS 02 11	1	VTS 2
	00 VTS 04 11	1	VTS 4
Rear flange complete with graphite disc 	00 VTS 02 15	1	VTS 2 VTS 4
Front flange complete with graphite disc 	00 VTS 06 07	1	VTS 6
	00 VTS 10 11	1	VTS 10
	00 VTS 10F 15	1	VTS 10/F
			VTS 15/F
			VTS 20/F
			VTS 25/F
	00 VTS 10FG 17	1	VTS 10/FG
	00 VTS 15FG 17	1	VTS 15/FG
	00 VTS 20FG 17	1	VTS 20/FG
	00 VTS 25FG 17	1	VTS 25/FG
Rear flange complete with graphite disc 	00 VTS 30FG 18	1	VTS 30/FG
	00 VTS 35FG 18	1	VTS 35/FG
	00 VTS 06 12	1	VTS 6
	00 VTS 10 20	1	VTS 10
	00 VTS 10F 19	1	VTS 10/F
			VTS 15/F
			VTS 20/F
			VTS 25/F
	00 VTS 25F 05	1	VTS 25/F
	00 VTS 10FG 26	1	VTS 10/FG
	00 VTS 15FG 26	1	VTS 15/FG
	00 VTS 20FG 26	1	VTS 20/FG
	00 VTS 25FG 26	1	VTS 25/FG
	00 VTS 30FG 27	1	VTS 30/FG
	00 VTS 35FG 27	1	VTS 35/FG

	Item	Quantity	For pump item
	Sealing kit		
	00 KIT VTS 02	1	VTS 2
	00 KIT VTS 04	1	VTS 4
	00 KIT VTS 06	1	VTS 6
	00 KIT VTS 10	1	VTS 10
	00 KIT VTS 10F	1	VTS 10/F
	00 KIT VTS 15F	1	VTS 15/F
	00 KIT VTS 20F	1	VTS 20/F
	00 KIT VTS 25F	1	VTS 25/F
	00 KIT VTS 10FG	1	VTS 10/FG
	00 KIT VTS 15FG	1	VTS 15/FG
	00 KIT VTS 20FG	1	VTS 20/FG
	00 KIT VTS 25FG	1	VTS 25/FG
	00 KIT VTS 30FG	1	VTS 30/FG
	00 KIT VTS 35FG	1	VTS 35/FG
	Check valves		
	10 01 15	1	VTS 2
			VTS 4
			VTS 6
	10 02 10	1	VTS 10
	10 03 10	1	VTS 10/F
			VTS 15/F
			VTS 20/F
			VTS 10/FG
			VTS 15 /FG
	Suction filters		
	FB 5	1	VTS 2
			VTS 4
			VTS 6
	FB 10	1	VTS 10
	FB 20	1	VTS 10/F
			VTS 15/F
			VTS 20/F
			VTS 10/FG
			VTS 15/FG
			VTS 20/FG
	FB 28	1	VTS 25/F
			VTS 25/FG
			VTS 30/FG
			VTS 35/FG
	Suction filters		
	FC 10	1	VTS 10
	FC 20	1	VTS 10/F
			VTS 15/F
			VTS 20/F
			VTS 10/FG
			VTS 15/FG
			VTS 20/FG
	Suction filters		
	FC 25	1	VTS 25/F
			VTS 25/FG
			VTS 30/FG
			VTS 35/FG