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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:

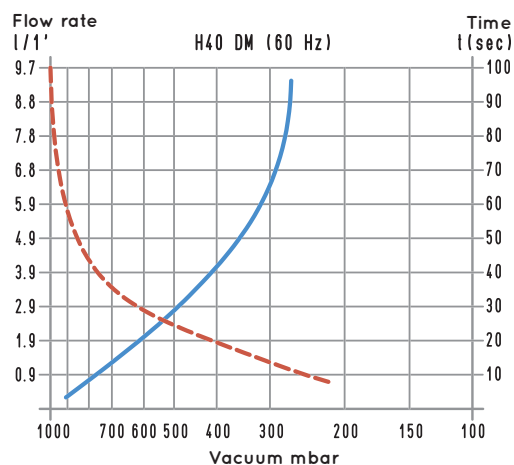
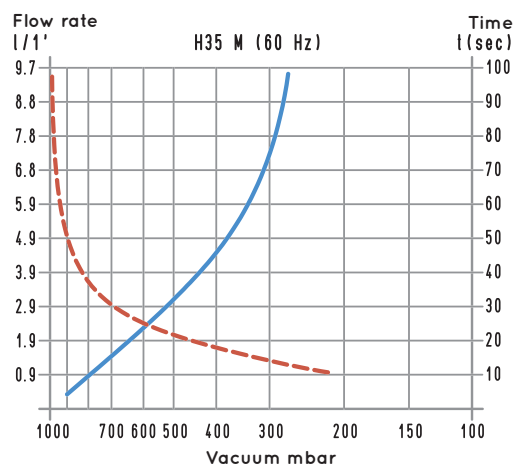
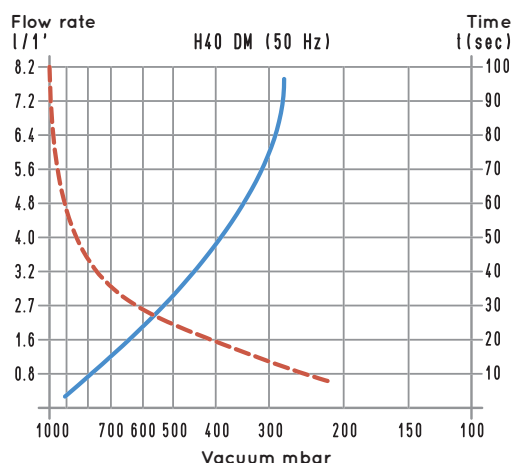
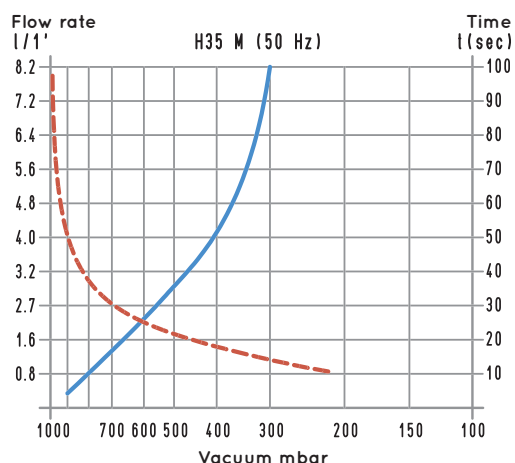
- An air-cooled single-phase electric motor with protection class IP 00 (assembly execution).
- A pump body made of plastic corrosion-resistant material, complete with fittings at both suction and blowing ports or, upon request, with threaded connections.
- A Viton membrane, fixed to a connecting rod, 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: $t_1 = \frac{t \times V_1}{6}$

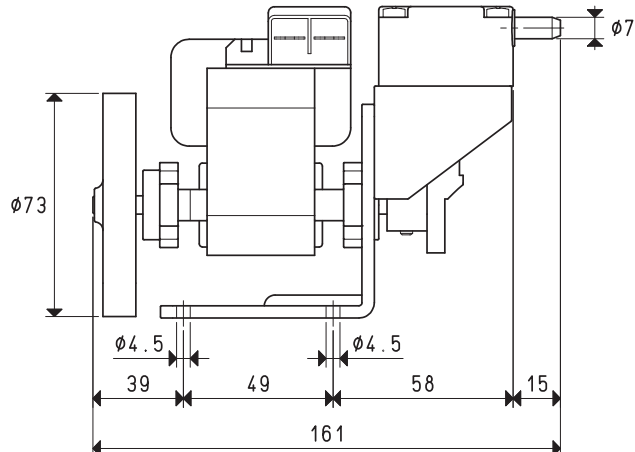
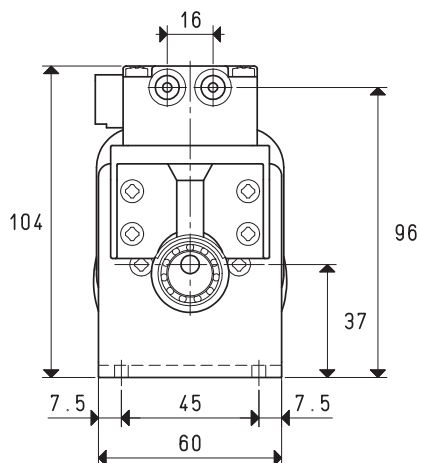
- Curve relative to the flow rate (referring to a 1013 mbar pressure)
- Curve relative to the emptying time of a 6-litre volume

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

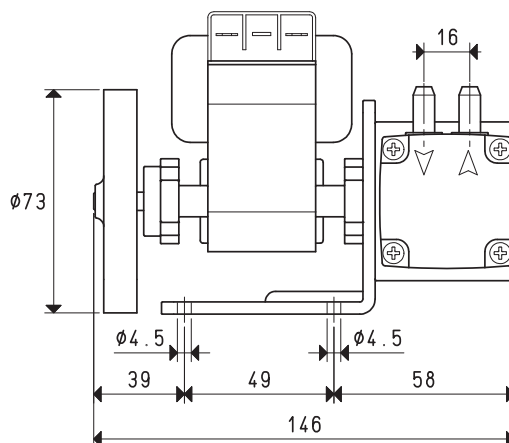
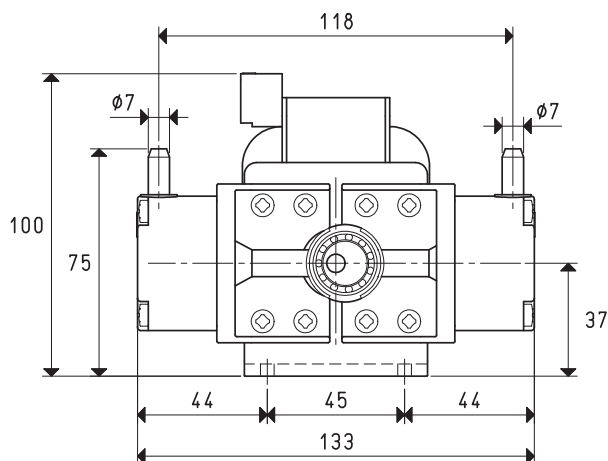


MEMBRANE VACUUM MINI PUMPS

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)

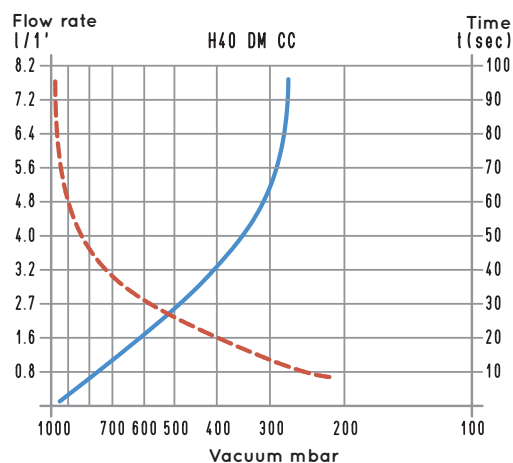
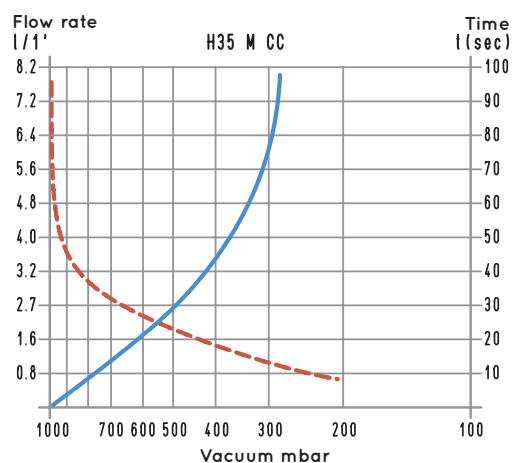
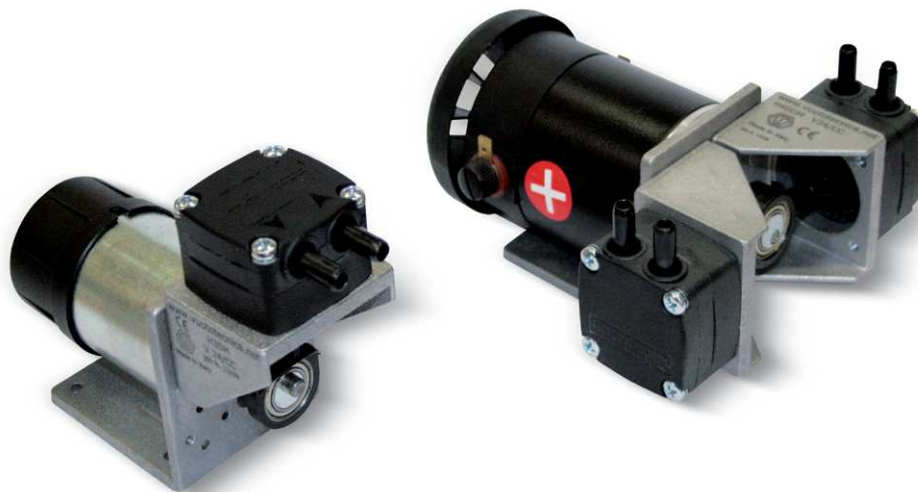
inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$

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

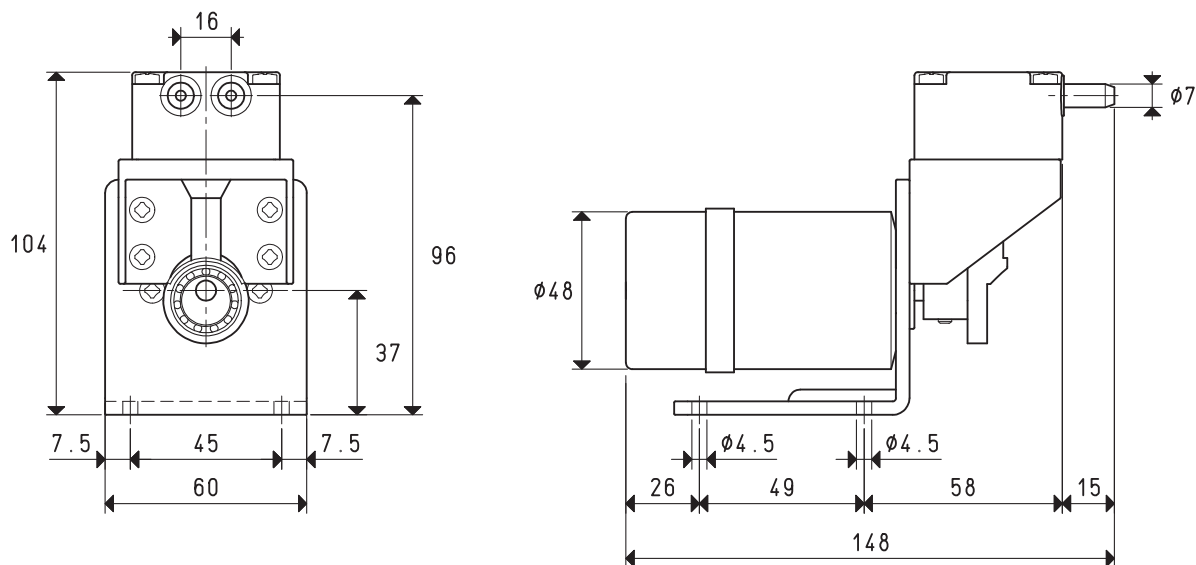
V_1 : Volume to be emptied (l)
 t_1 : time to be calculated (sec)
 t : time obtained in the table (sec)



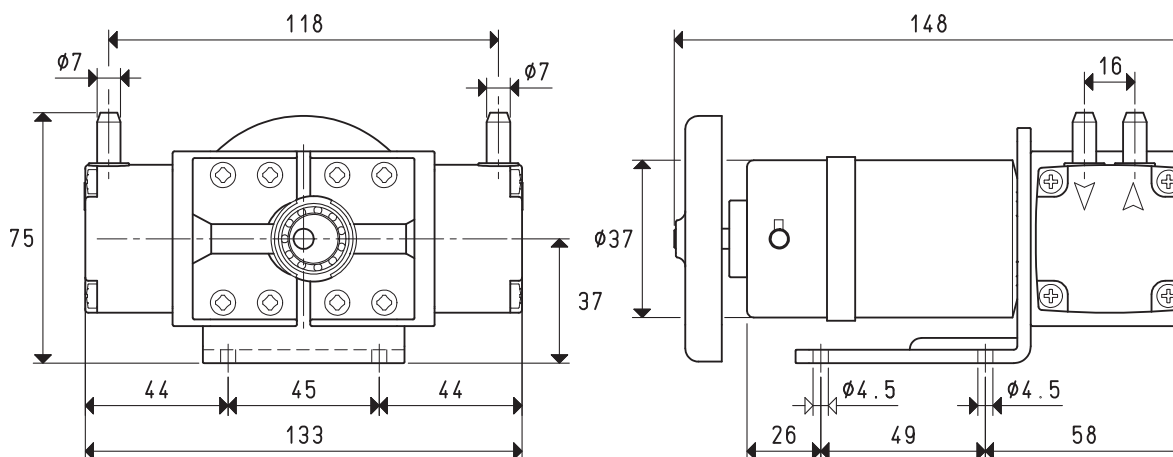
MEMBRANE VACUUM MINI PUMPS, WITH DC MOTOR

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 = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$

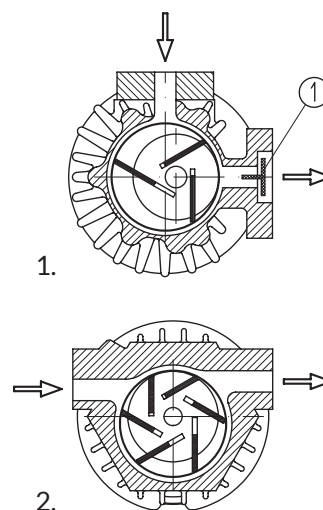
cfm= m³/h x 0.588; inch Hg= mbar x 0.0295; psi= bar x 14.6

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.

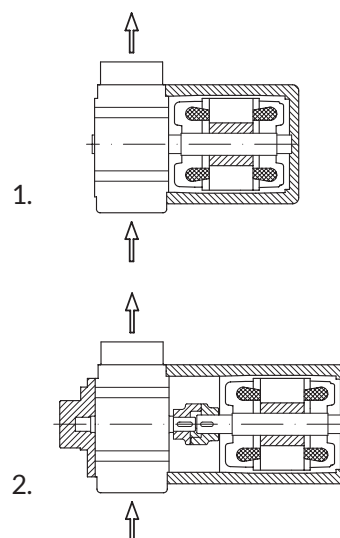
Figure 2 illustrates a system with six rotary blades and therefore with several chambers, which is mainly used in the rough vacuum field.



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

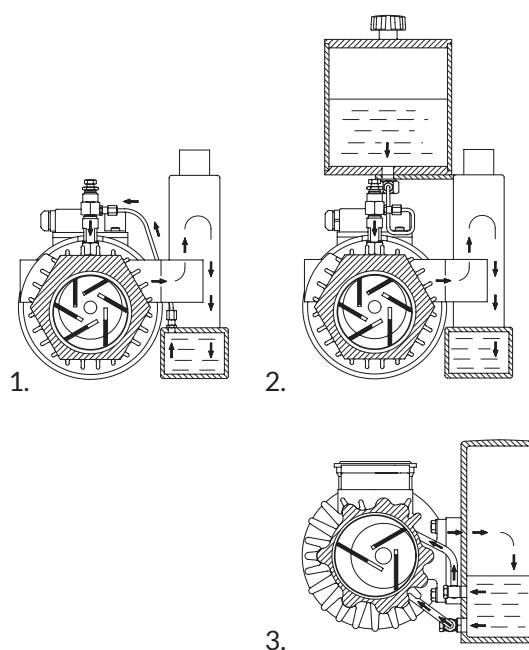
The main lubrication systems used by us are vacuum with oil recirculation or waste oil for vacuum pumps in the VTL series and an oil bath for pumps in the RVP series.

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

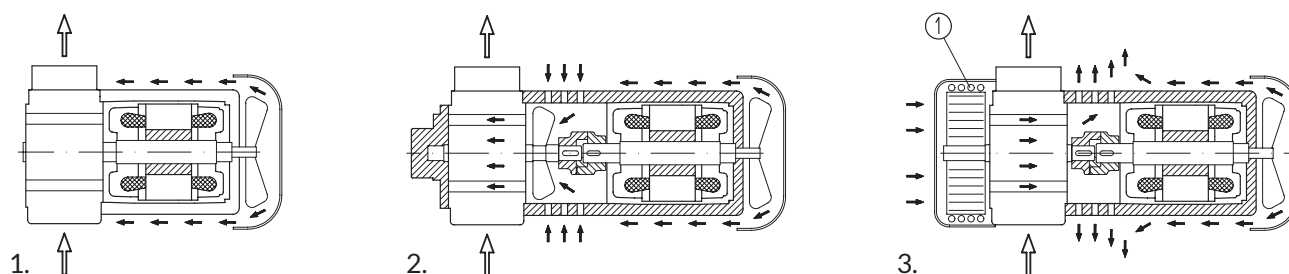
Dry vacuum pumps

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

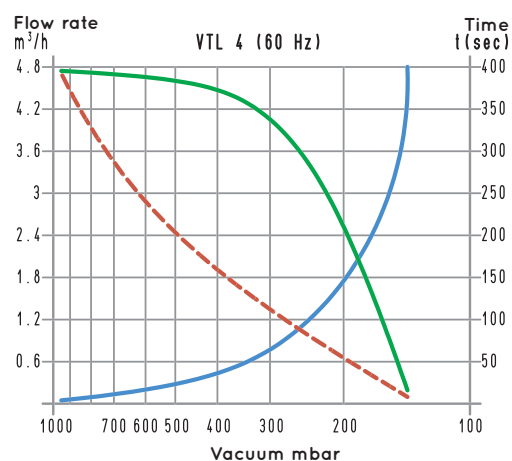
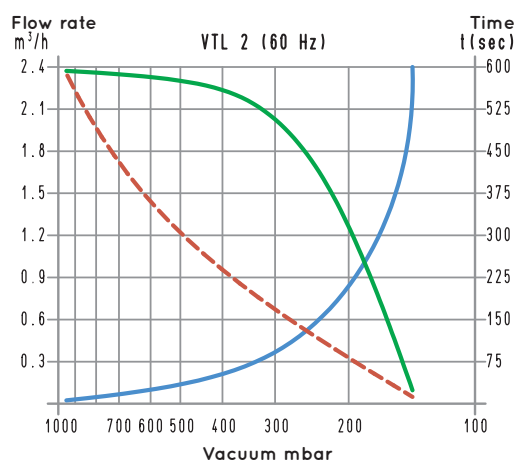
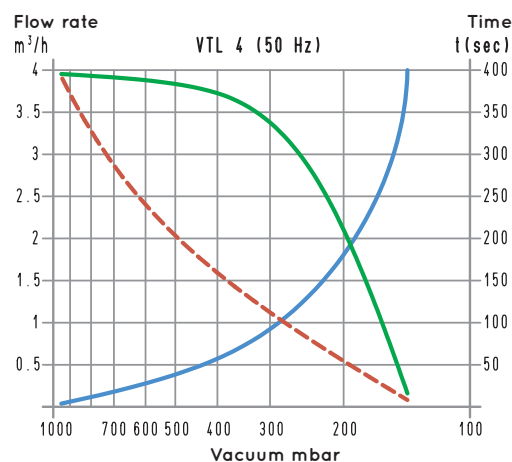
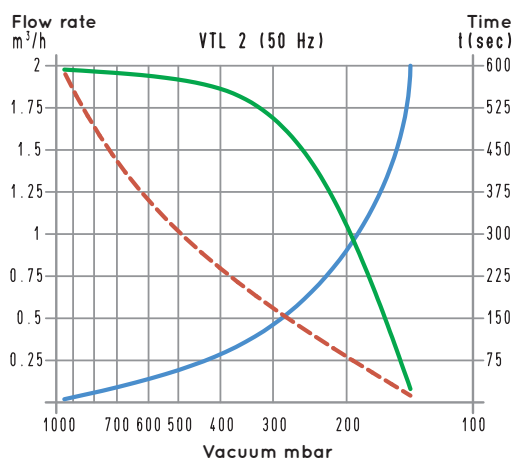
These small vacuum pumps have a suction flow rate of 2 and 4 m³/h. They feature a wick lubrication with oil recirculation, while the rotor, which is cantilevered-fitted on the motor shaft, allows reducing the overall dimensions to the minimum.

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)

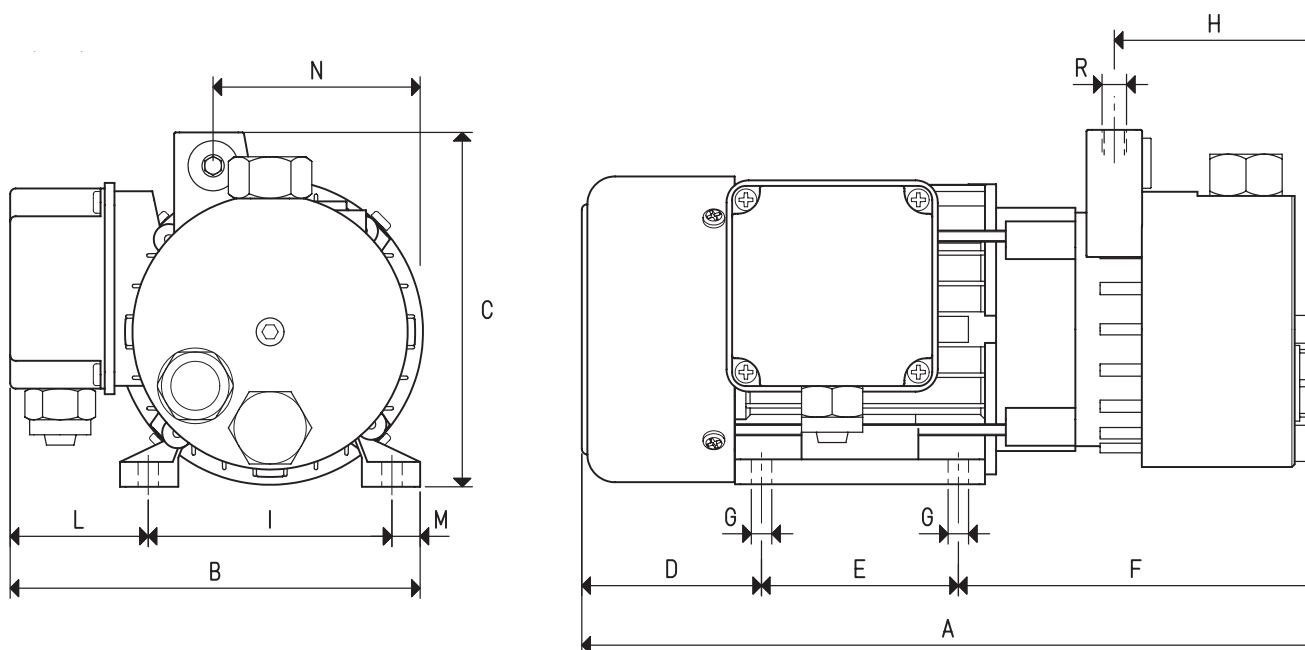
t_1 : time to be calculated (sec)

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	m³/h	2.0	2.4	4.0	4.8
Final pressure	mbar abs.	150		150	
Motor performance	3~	230/400±10%	265/460±10%	230/400±10%	265/460±10%
Volt	1~	230±10%		230±10%	
Motor power	3~	0.12	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).

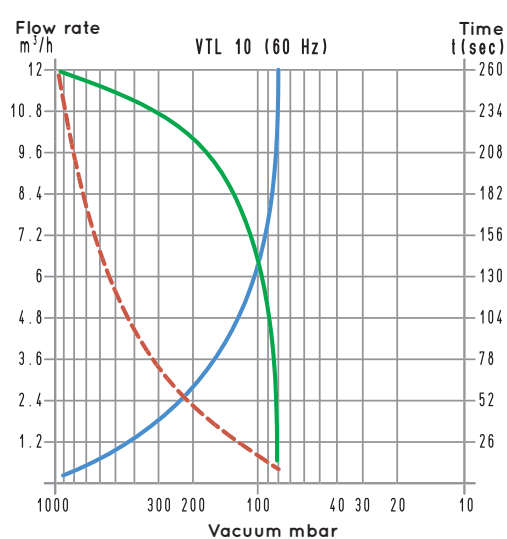
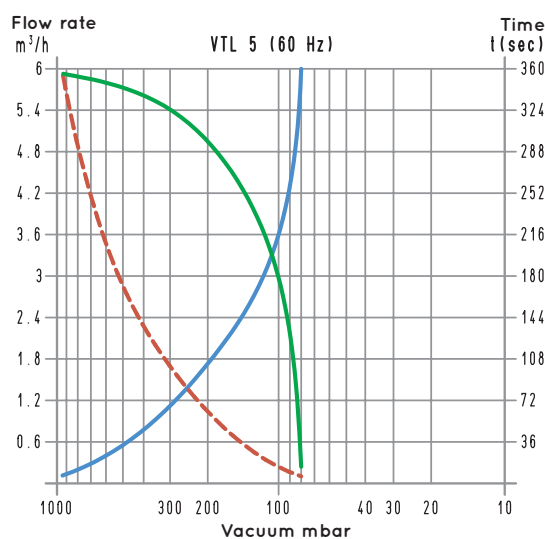
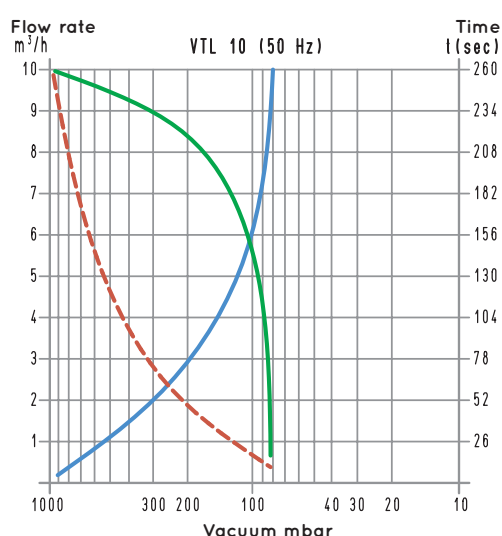
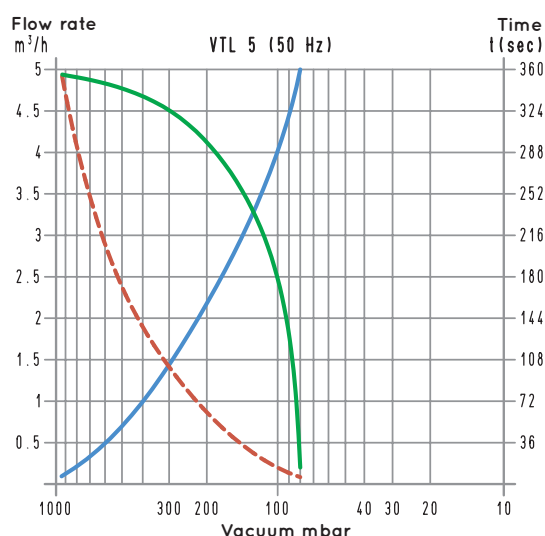
Transformation ratio: N (newton) = Kg x 9.81 (force of gravity)

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: $t_1 = \frac{t \times V_1}{100}$

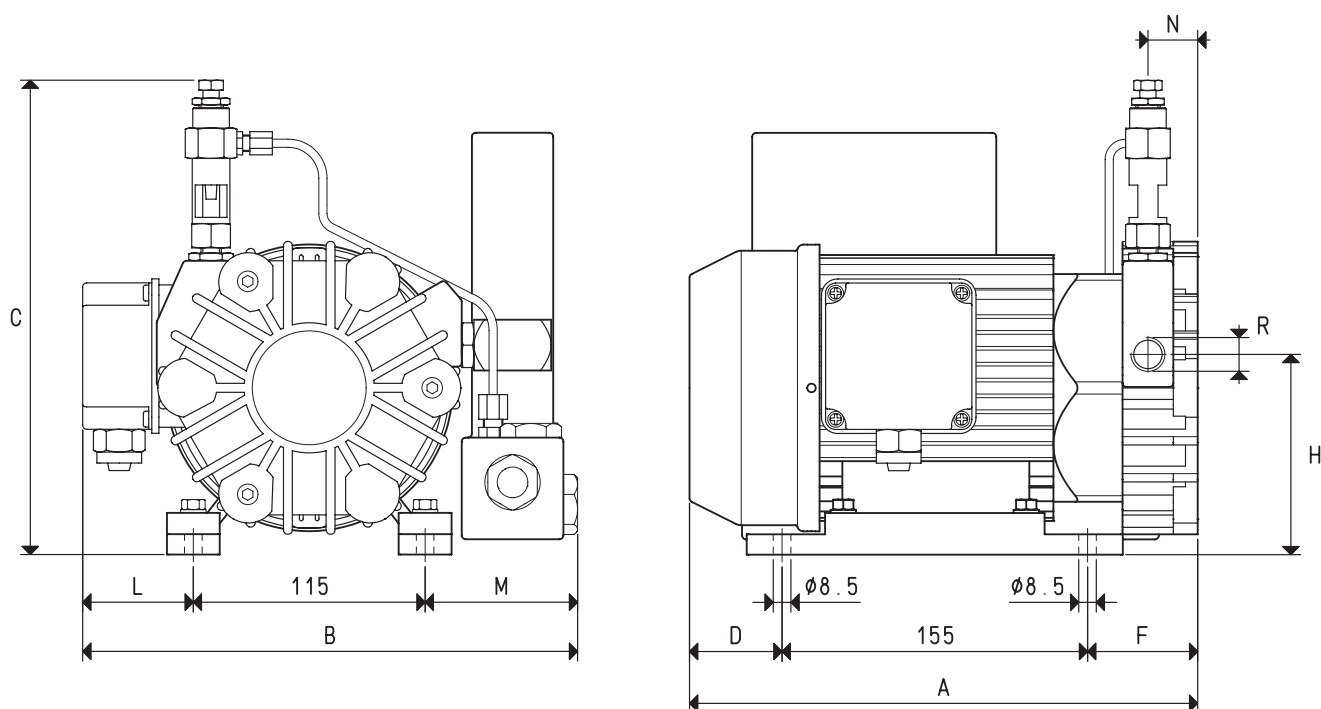
- Curve relative to the flow rate (referring to the suction pressure)
- - - Curve relative to the flow rate (referring to a 1013 mbar pressure)
- Curve regarding the emptying time of a 100-litre volume

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

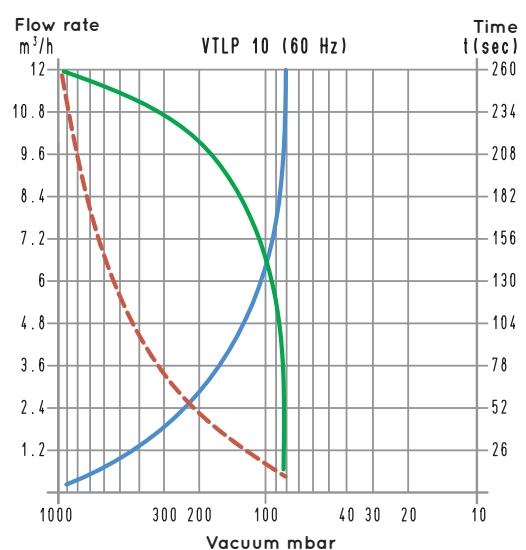
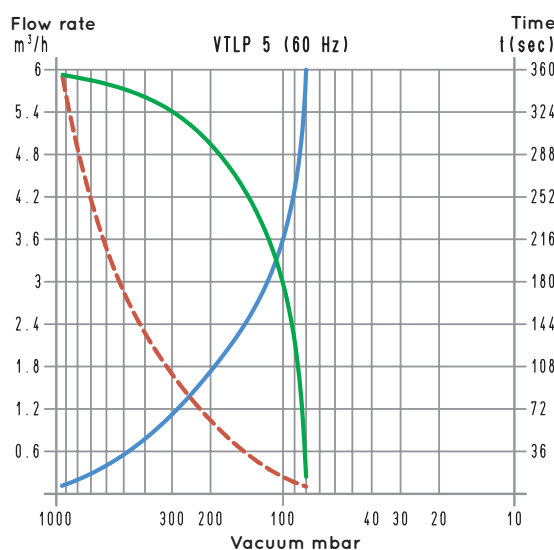
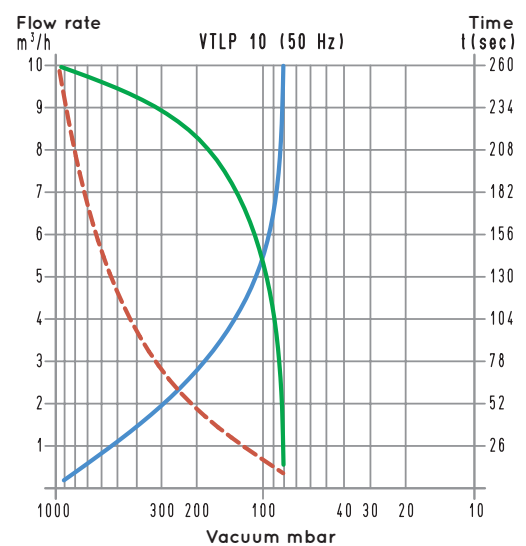
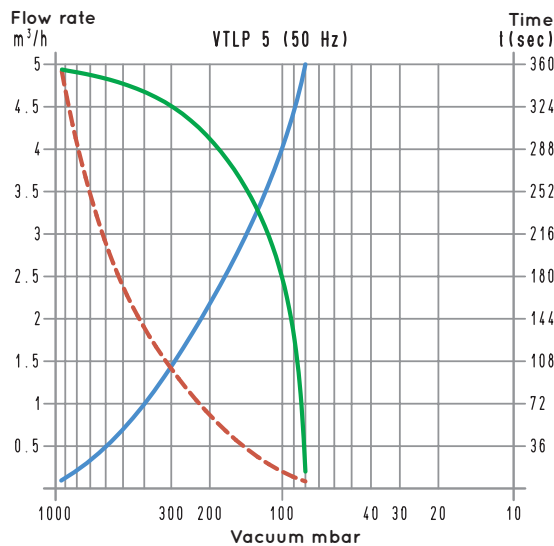
Note: Add the letter M to the item for a pump supplied with a single-phase electric motor (Example: VTL 5 M).

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: $t_1 = \frac{t \times V_1}{100}$

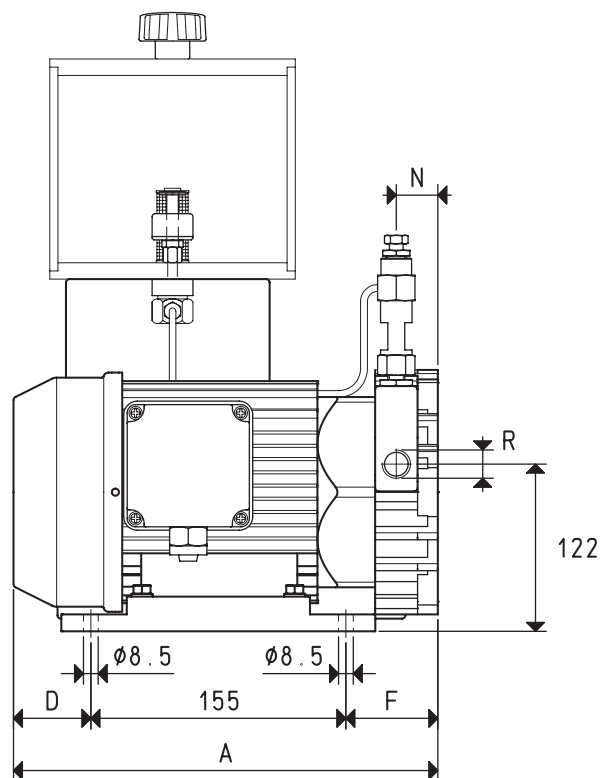
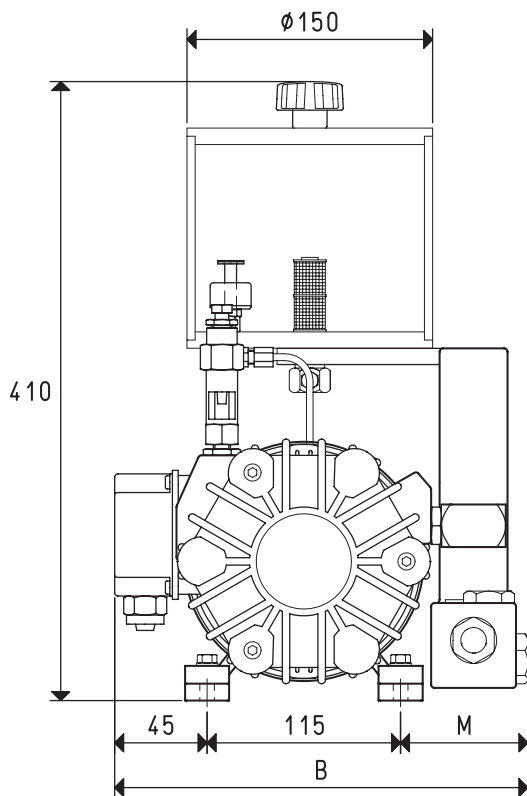
- Green line: Curve relative to the flow rate (referring to the suction pressure)
- - - Red line: Curve relative to the flow rate (referring to a 1013 mbar pressure)
- Blue line: Curve regarding the emptying time of a 100-litre volume

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



VACUUM PUMPS VTLP 5 and 10 WITH DISPOSABLE LUBRICATION

3D drawings are available on vuototecnica.net



Item		VTLP 5		VTLP 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~	15.6		21.6	
Kg	1~	16.1		22.1	
A		260		310	
B		245		262	
D		52		70	
F		53		85	
M		85		102	
N		27		52	
R	Ø gas	G3/8"		G1/2"	

Accessories and Parts		VTLP 5		VTLP 10	
Oil charge	L	1.8		1.8	
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	
Oil level switch	item	00 LP VTL 99		00 LP VTL 99	
Oil filter	item	00 LP VTL 40		00 LP VTL 40	
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: VTLP 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

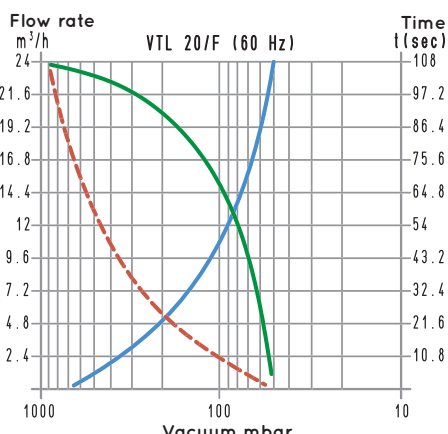
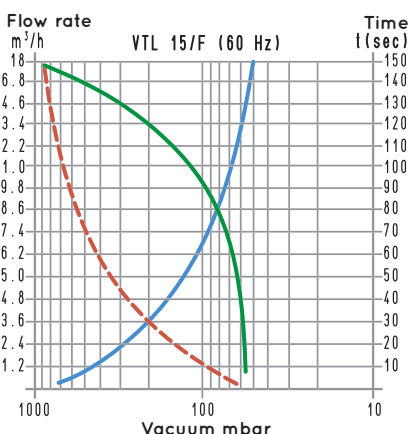
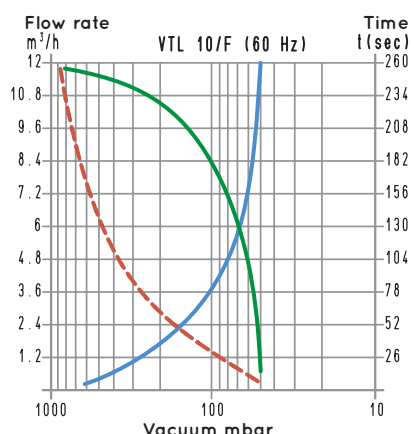
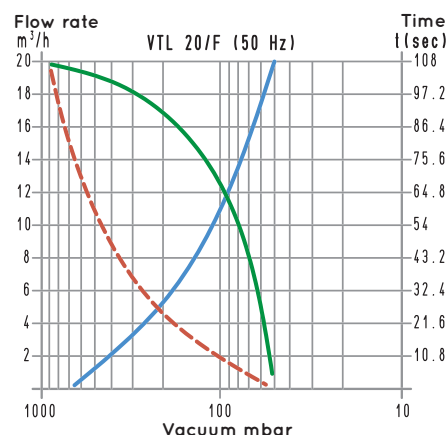
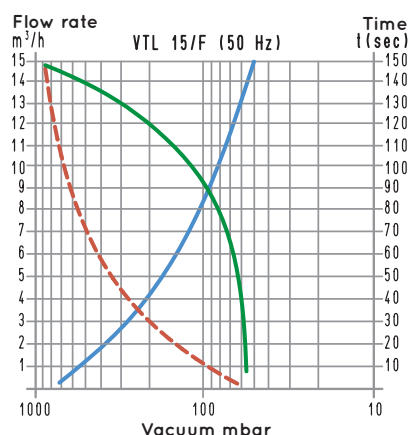
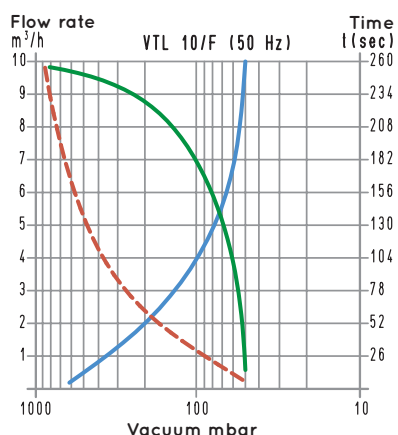
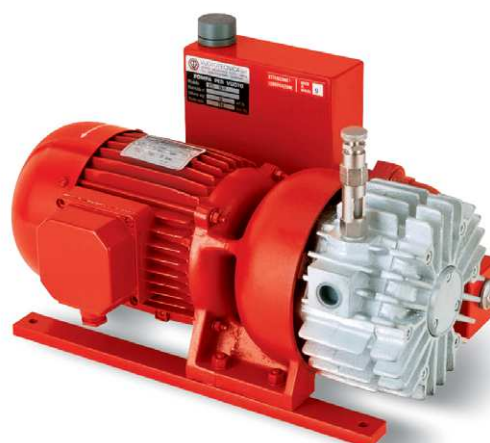
VACUUM PUMPS VTL 10/F, 15/F and 20/F

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: $t_1 = \frac{t \times V_1}{100}$

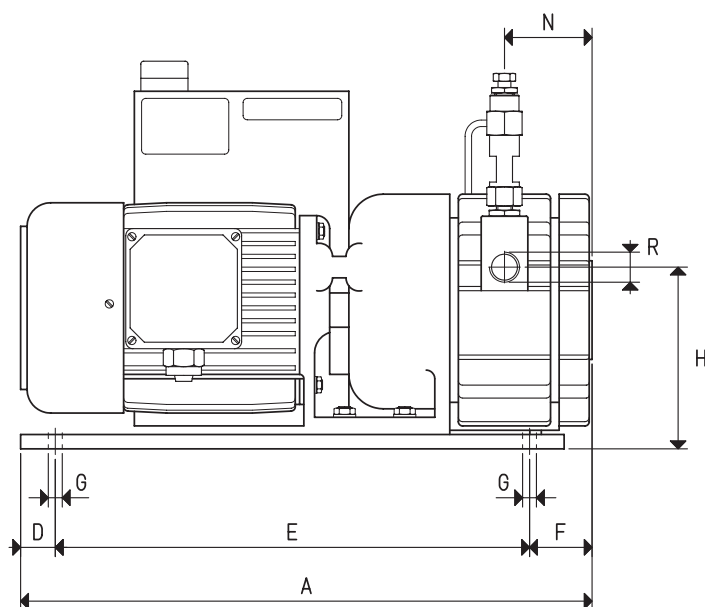
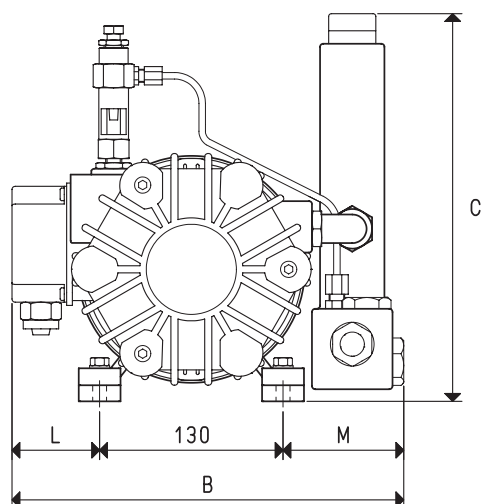
- Curve relative to the flow rate (referring to the suction pressure)
- - - Curve relative to the flow rate (referring to a 1013 mbar pressure)
- Curve regarding the emptying time of a 100-litre volume

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.

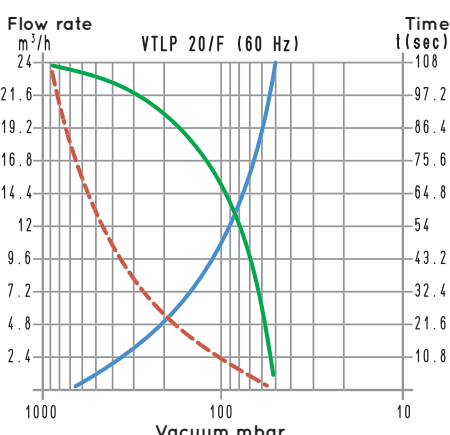
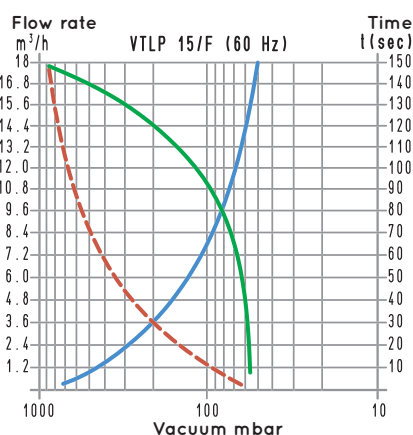
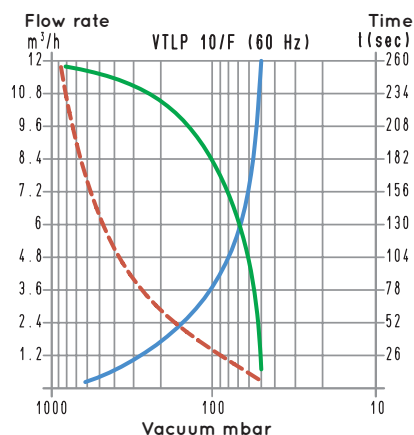
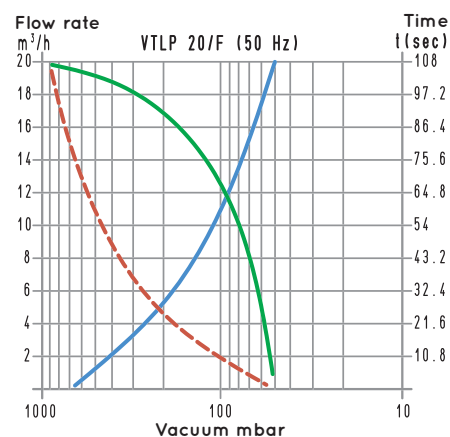
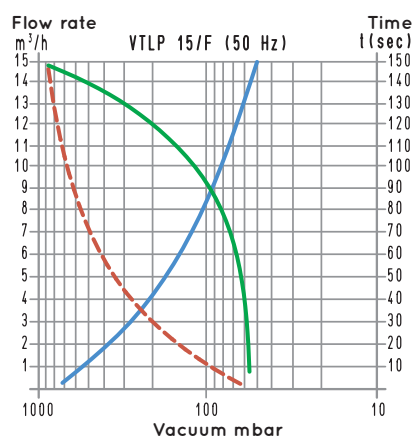
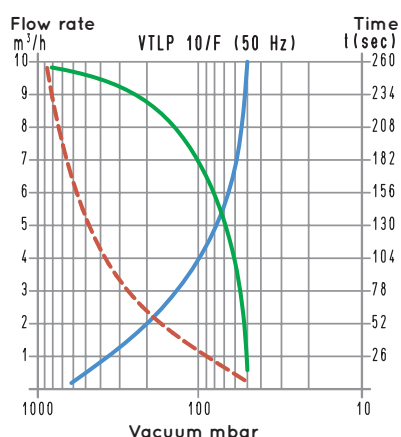
An oil recovery tank is installed on the pump exhaust. This tank contains a separator filter that prevents oil mists and reduces noise.

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: $t_1 = \frac{t \times V_1}{100}$

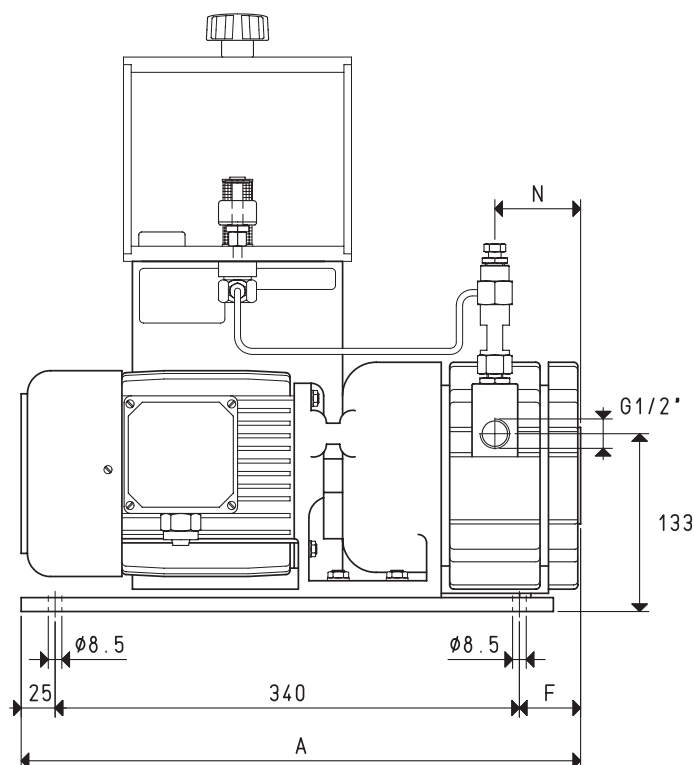
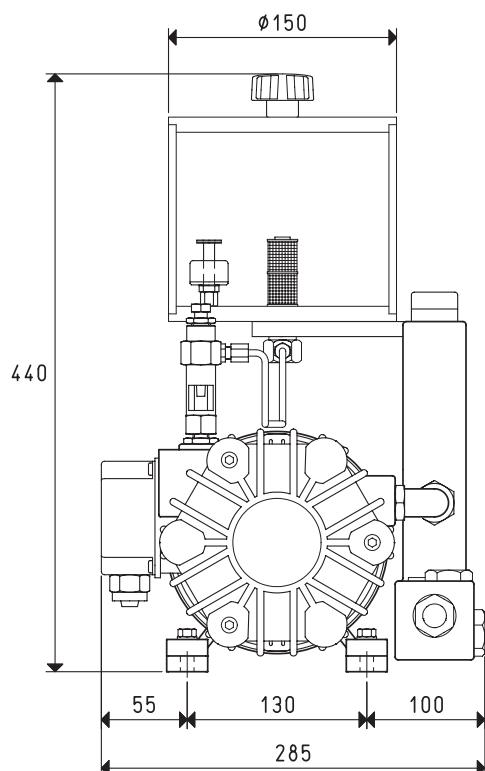
- Curve relative to the flow rate (referring to the suction pressure)
- - - Curve relative to the flow rate (referring to a 1013 mbar pressure)
- Curve regarding the emptying time of a 100-litre volume

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	m³/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.

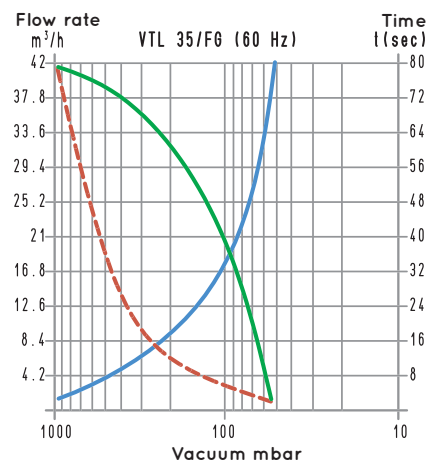
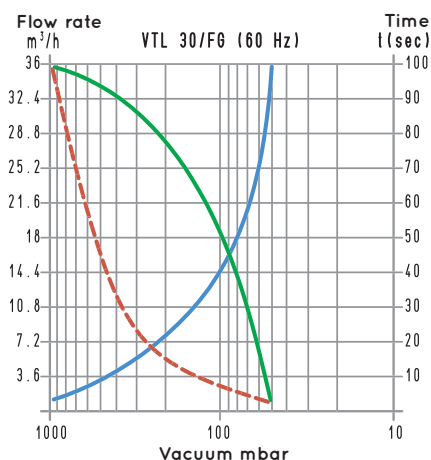
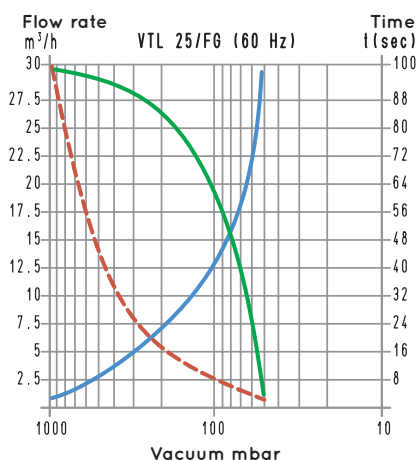
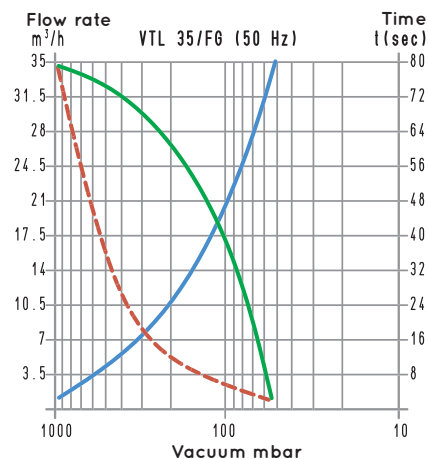
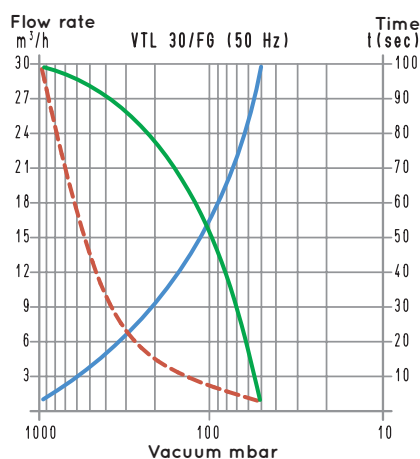
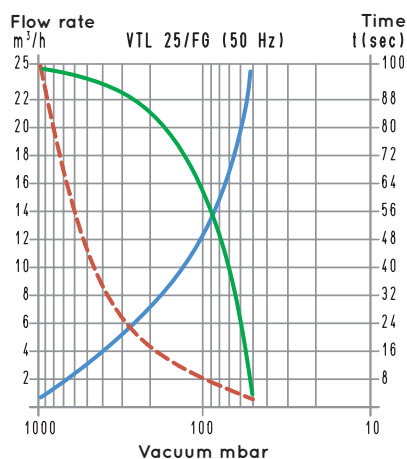
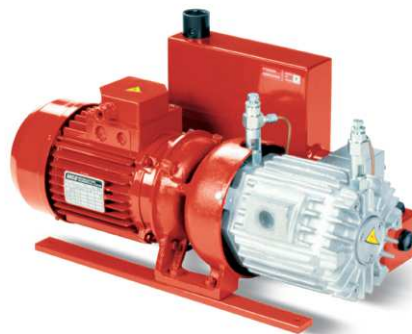
The pump and the electric motor are, therefore, two independent units and fixed onto a special support and connected to each other via an elastic transmission joint.

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: $t_1 = \frac{t \times V_1}{100}$

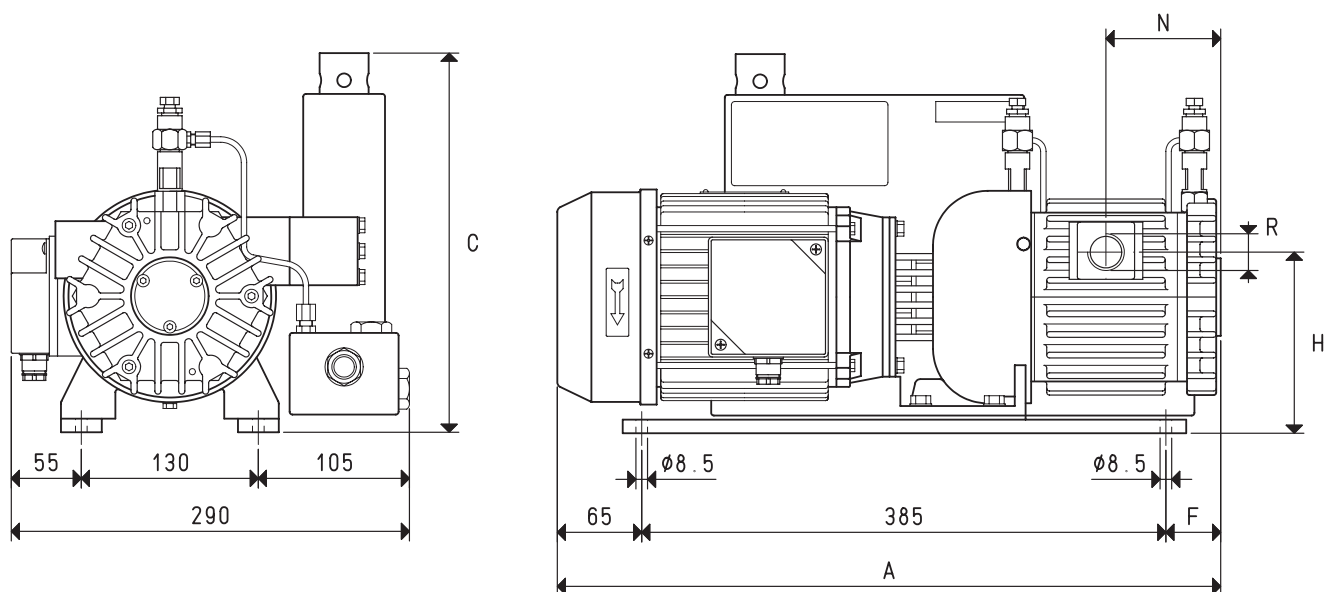
- Curve relative to the flow rate (referring to the suction pressure)
- - - Curve relative to the flow rate (referring to a 1013 mbar pressure)
- Curve regarding the emptying time of a 100-litre volume

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.

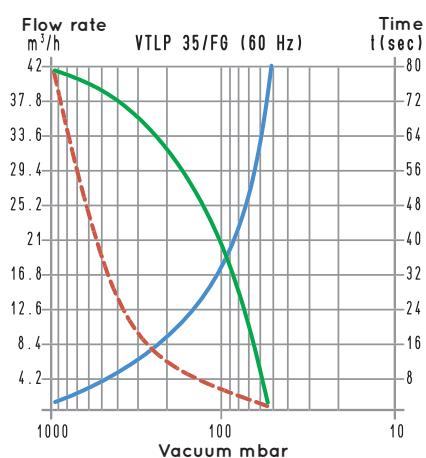
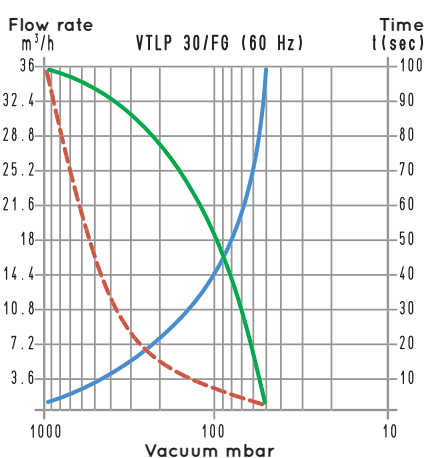
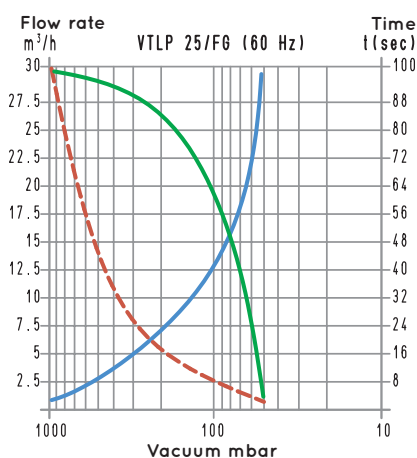
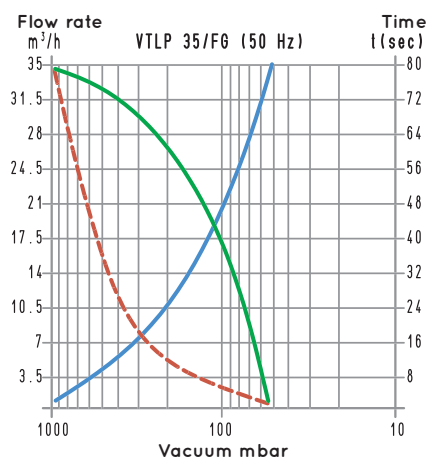
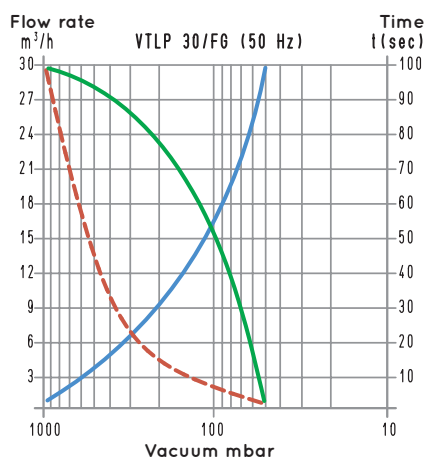
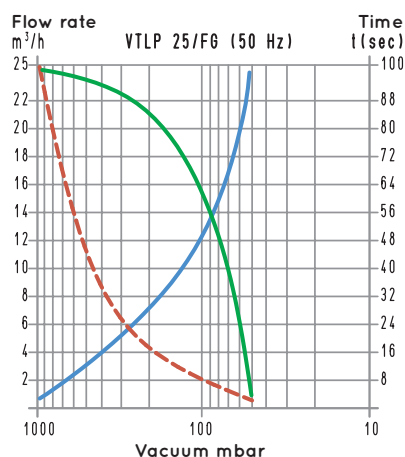
A safety valve is also installed on the tank for the automatic drainage of the exhaust oil when not regularly drained.

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)

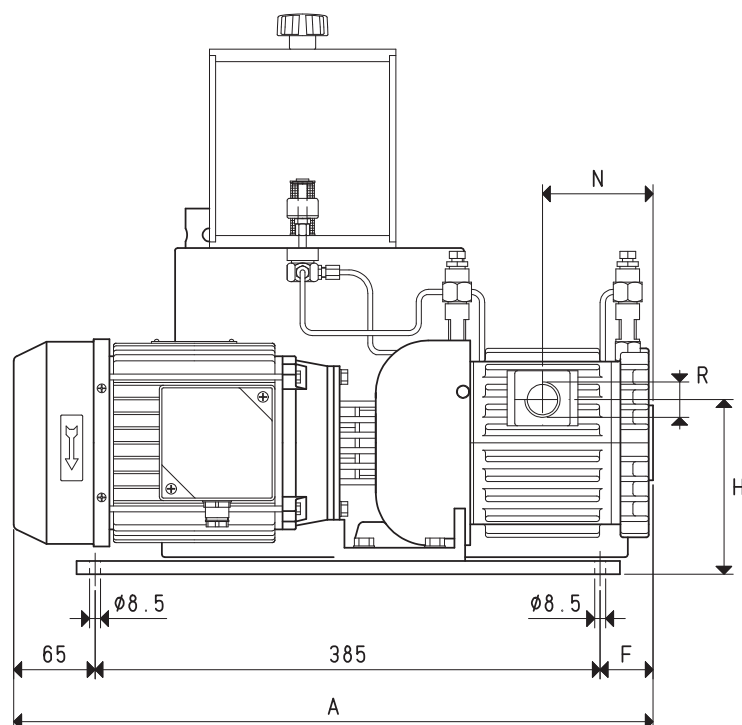
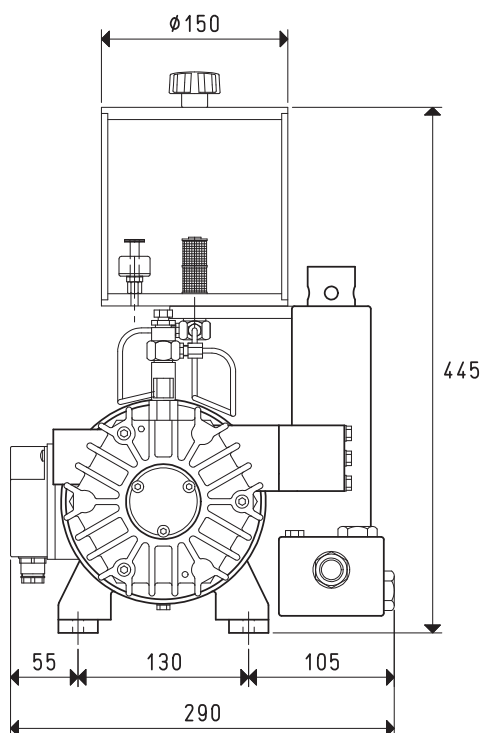
t_1 : time to be calculated (sec)

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.

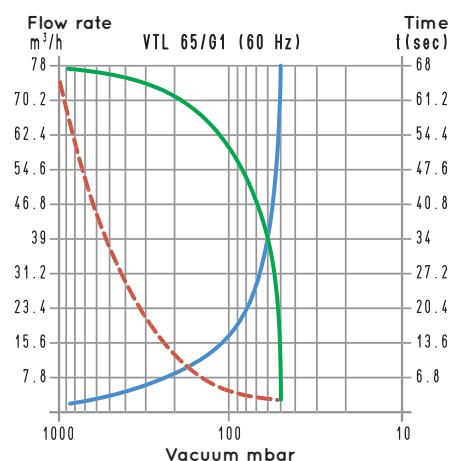
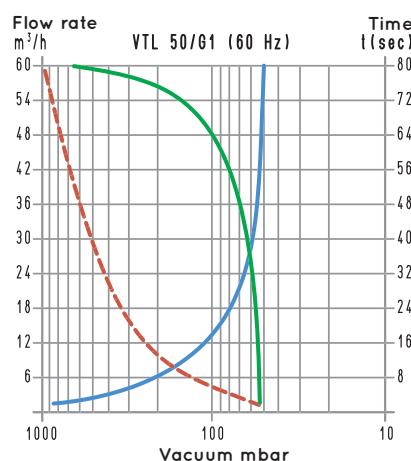
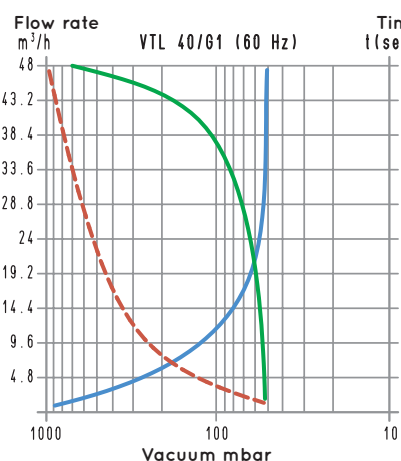
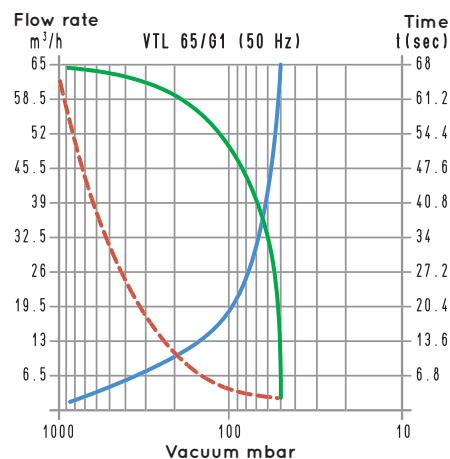
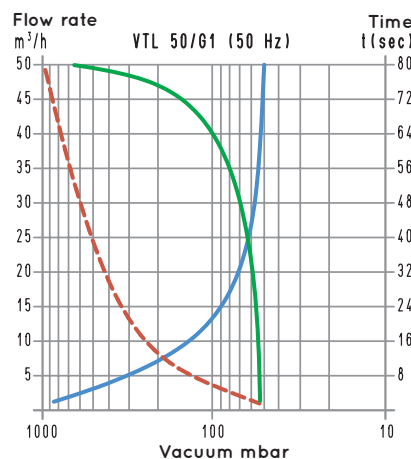
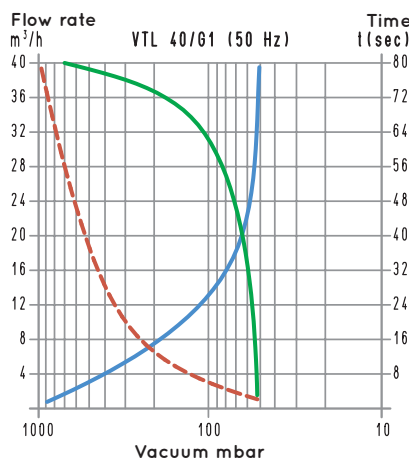
All this allows using standard electric motors, in the shapes and sizes indicated in the table.

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)

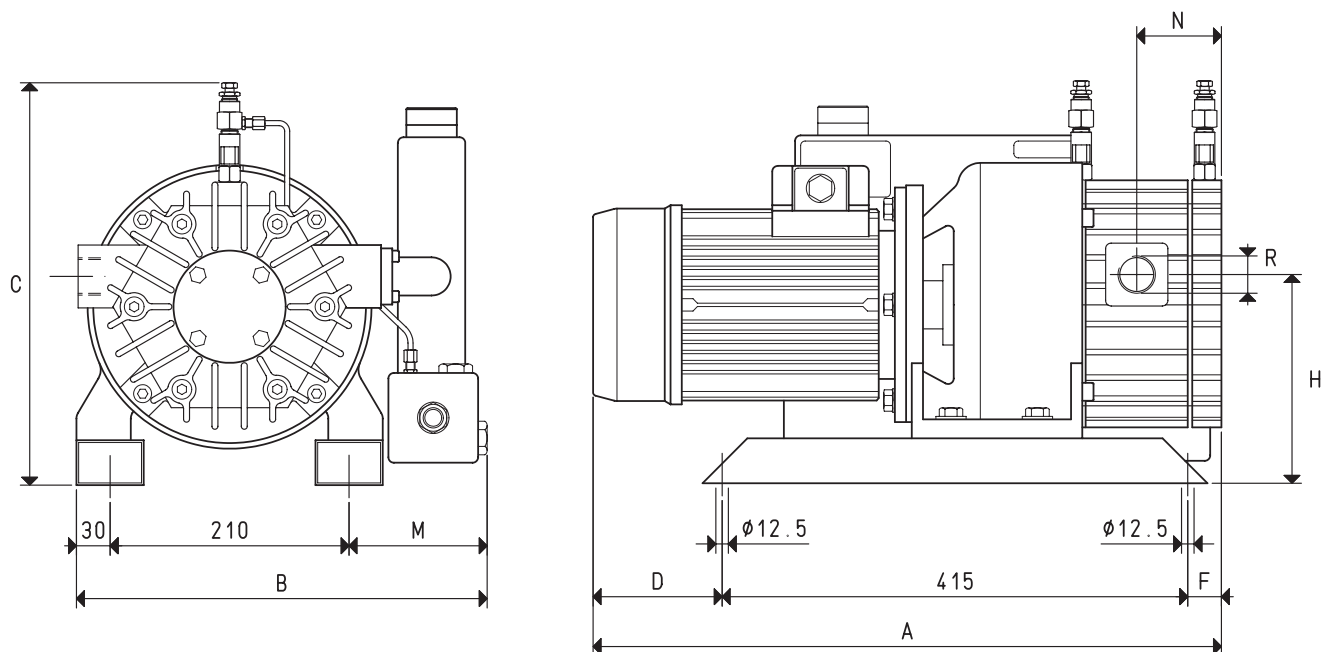
t_1 : time to be calculated (sec)

t : time obtained in the table (sec)



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

3D drawings are available on vuototecnica.net



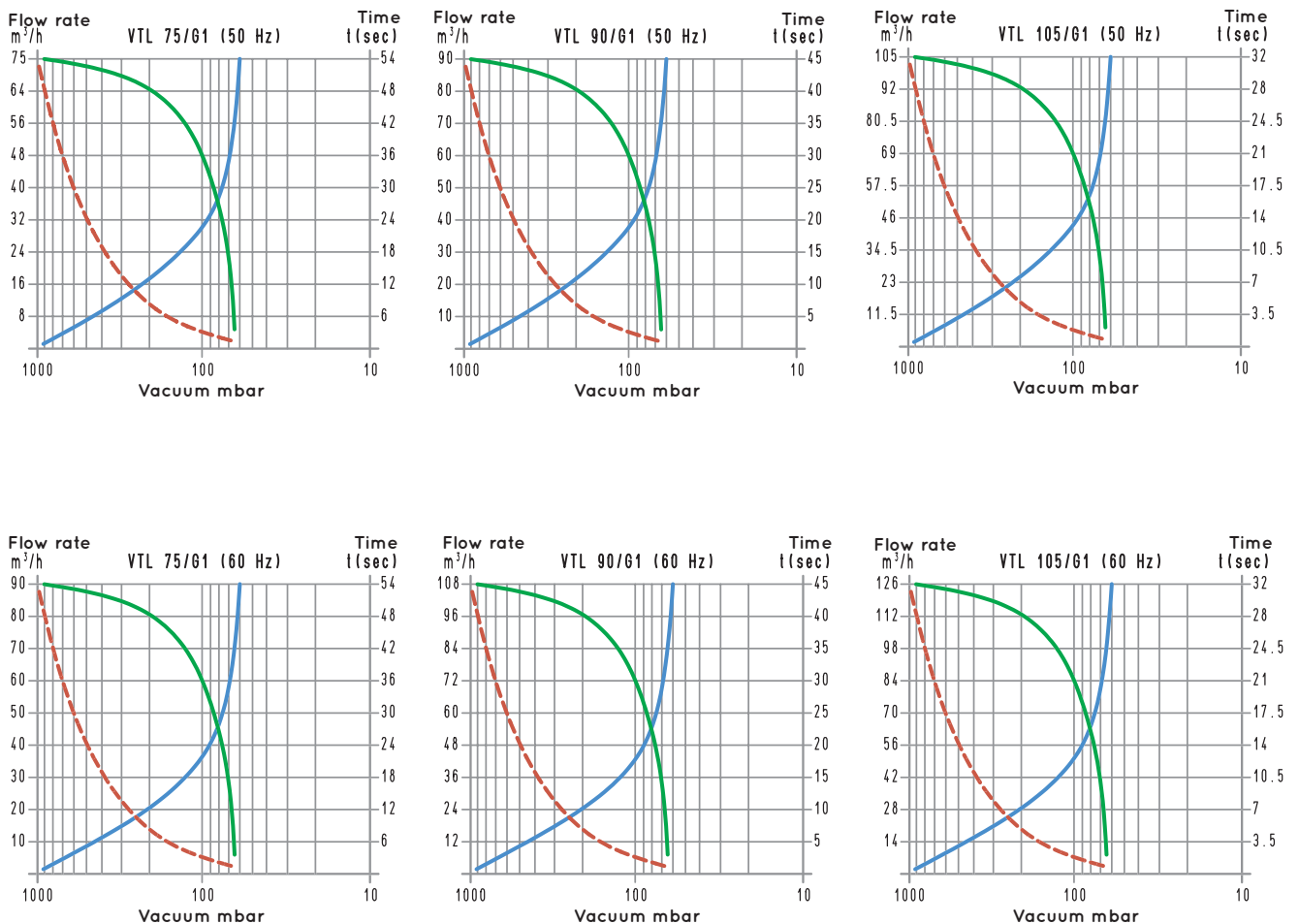
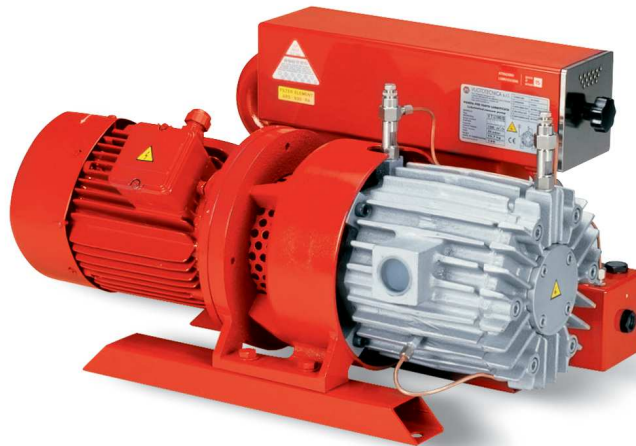
Item		VTL 40/G1		VTL 50/G1		VTL 65/G1	
Frequency		50Hz	60Hz	50Hz	60Hz	50Hz	60Hz
Flow rate	m ³ /h	40.0	48.0	50.0	60.0	65.0	78.0
Final pressure	mbar abs.	50		50		50	
Motor performance 3~	volt	230/400±10%	265/460±10%	230/400±10%	265/460±10%	230/400±10%	265/460±10%
Motor power 3~	Kw	1.10	1.35	1.50	1.80	1.50	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	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: $t_1 = \frac{t \times V_1}{100}$

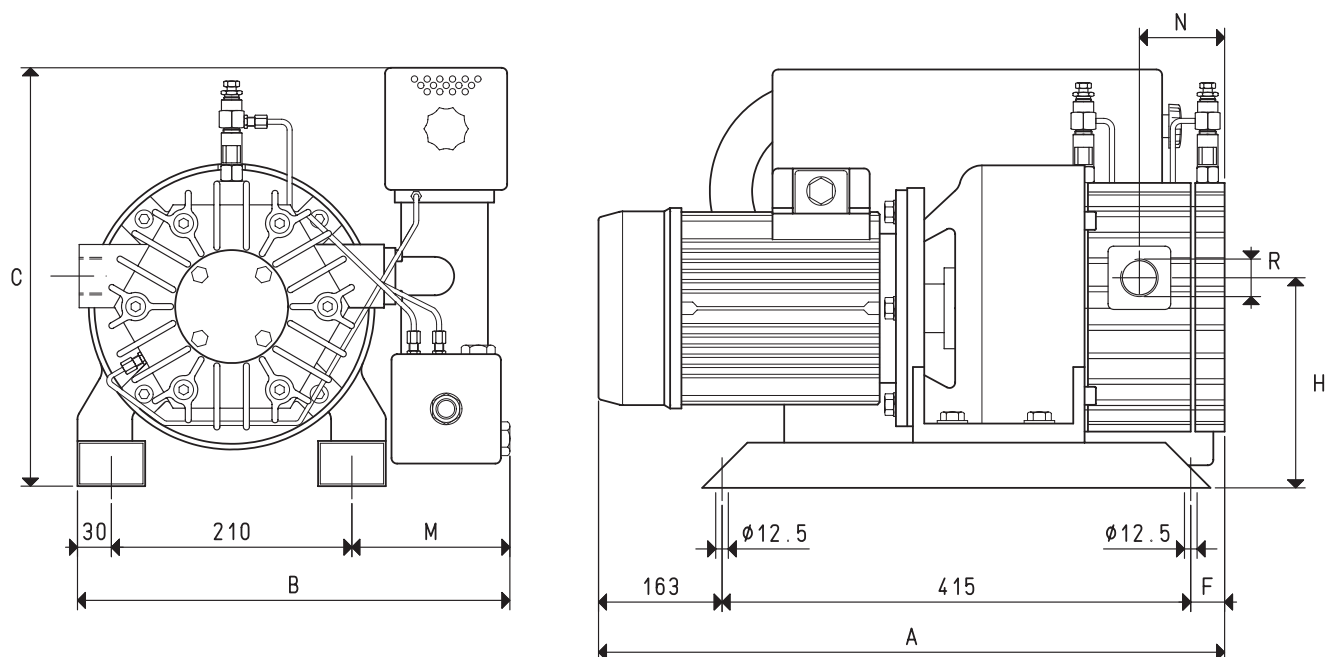
- Curve relative to the flow rate (referring to the suction pressure)
- - - Curve relative to the flow rate (referring to a 1013 mbar pressure)
- Curve regarding the emptying time of a 100-litre volume

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.

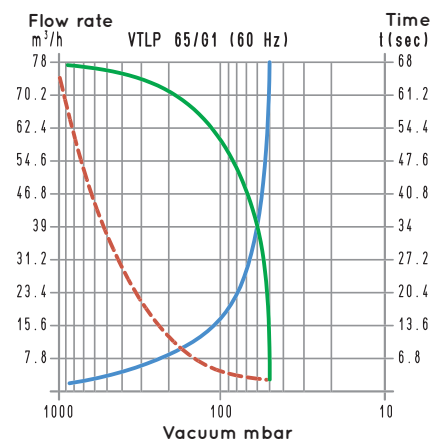
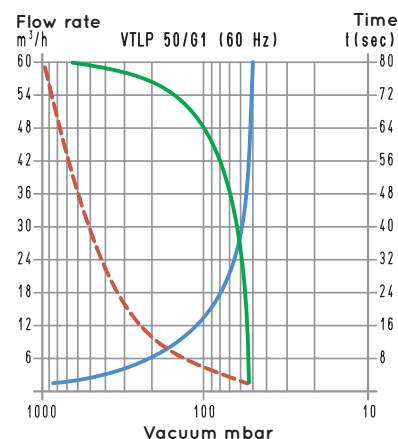
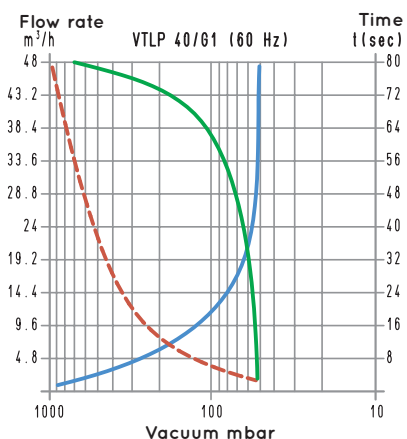
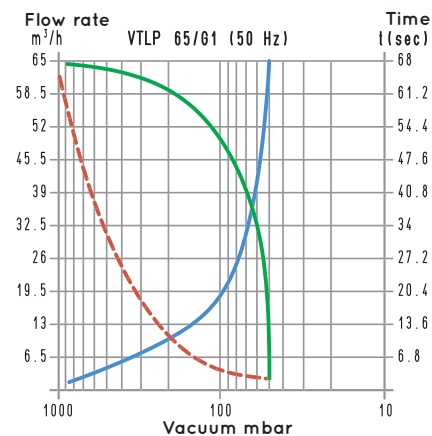
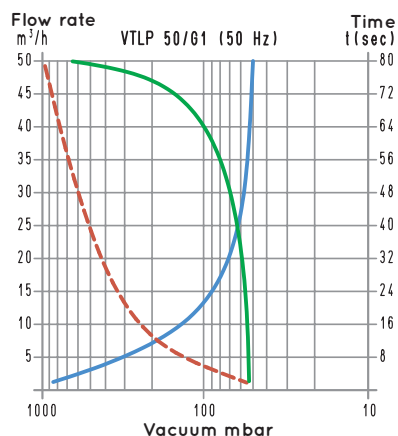
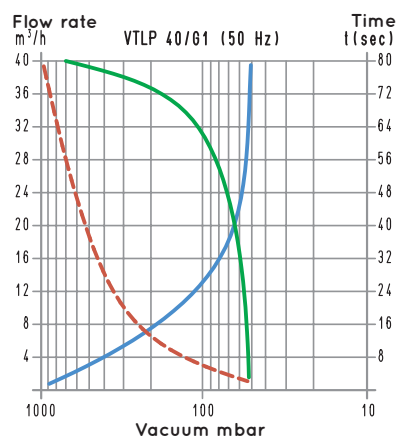
A safety valve is also installed on the tank for the automatic drainage of the exhaust oil when not regularly drained.

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: $t_1 = \frac{t \times V_1}{100}$

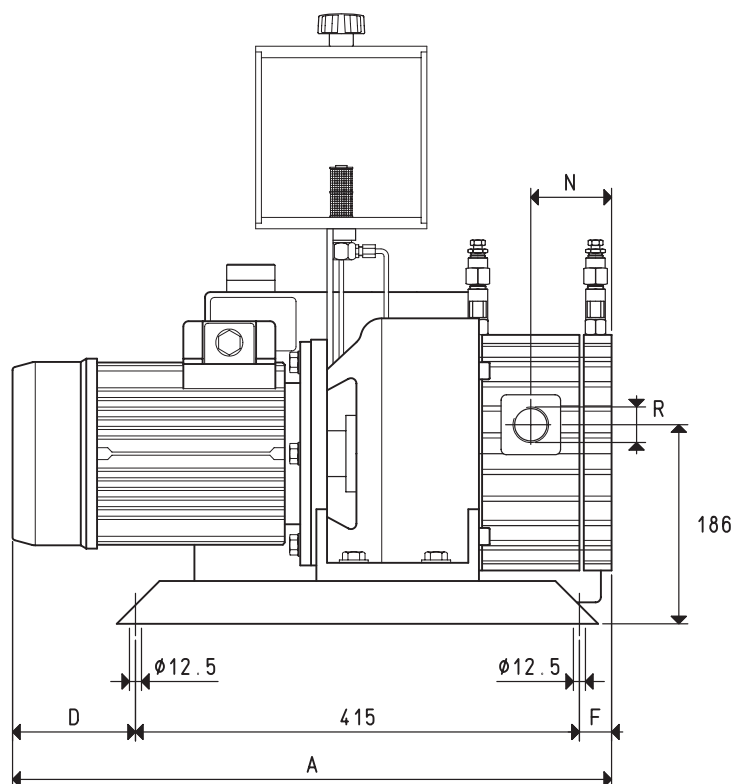
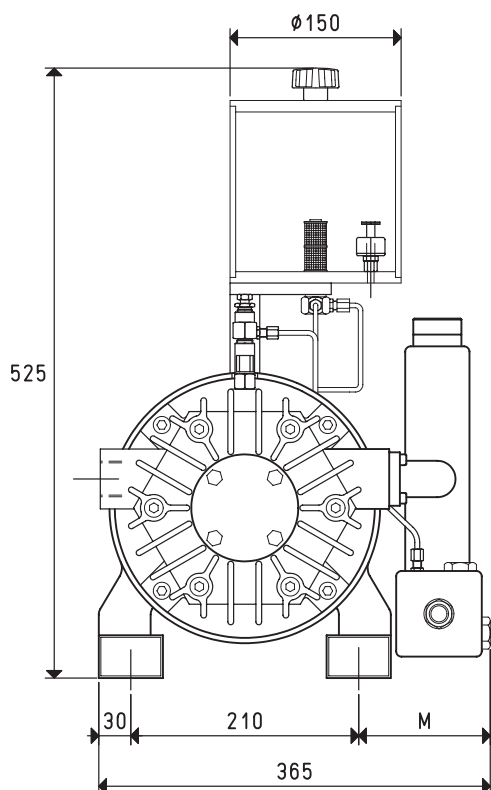
- Curve relative to the flow rate (referring to the suction pressure)
- - - Curve relative to the flow rate (referring to a 1013 mbar pressure)
- Curve regarding the emptying time of a 100-litre volume

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



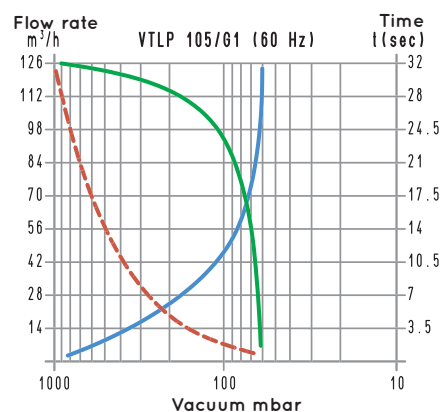
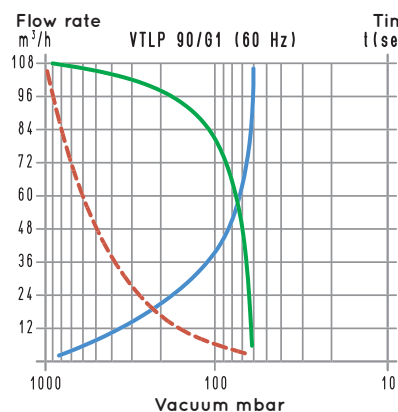
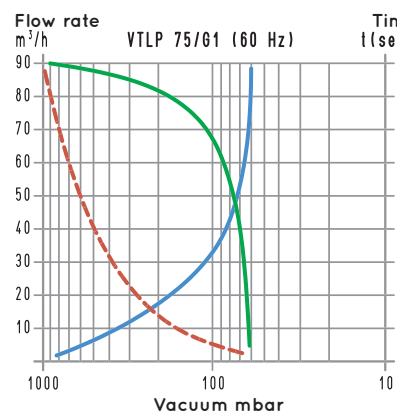
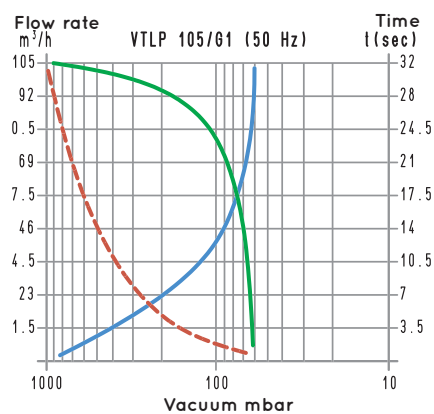
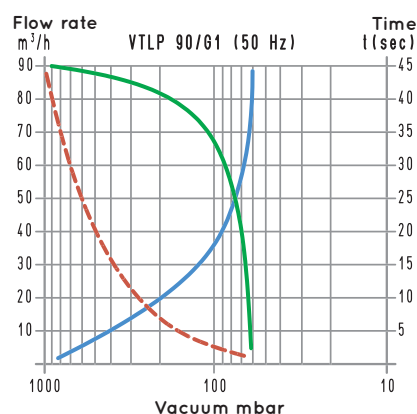
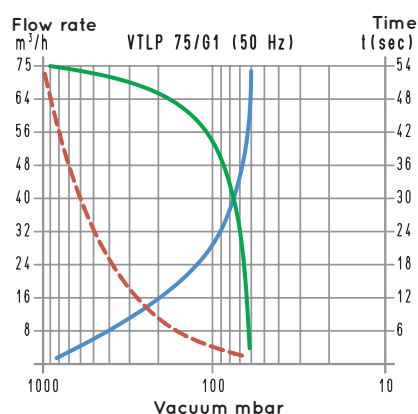
Item		VTLP 40/G1		VTLP 50/G1		VTLP 65/G1	
Frequency		50Hz	60Hz	50Hz	60Hz	50Hz	60Hz
Flow rate	m³/h	40.0	48.0	50.0	60.0	65.0	78.0
Final pressure	mbar abs.	50		50		50	
Motor performance 3~	volt	230/400±10%	265/460±10%	230/400±10%	265/460±10%	230/400±10%	265/460±10%
Motor power 3~	Kw	1.10	1.35	1.50	1.80	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	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: $t_1 = \frac{t \times V_1}{100}$

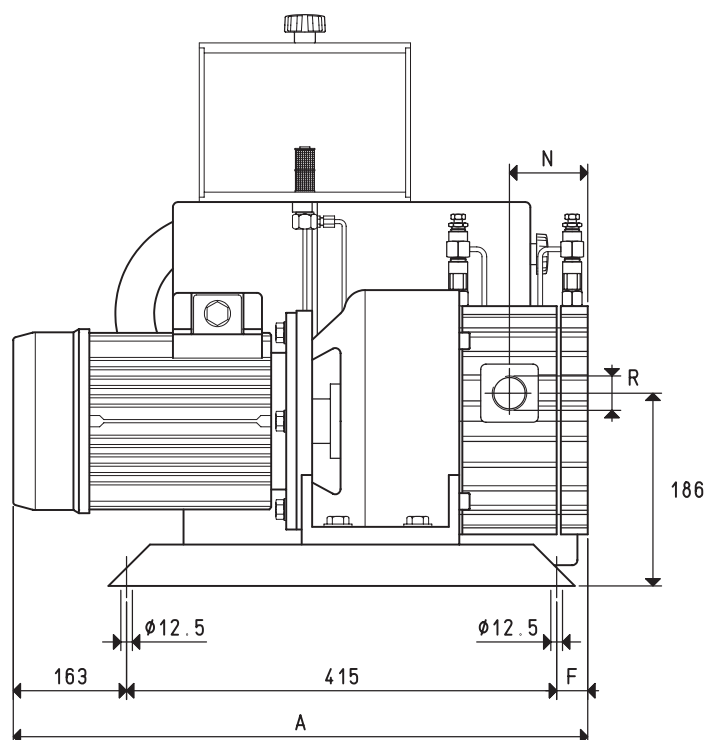
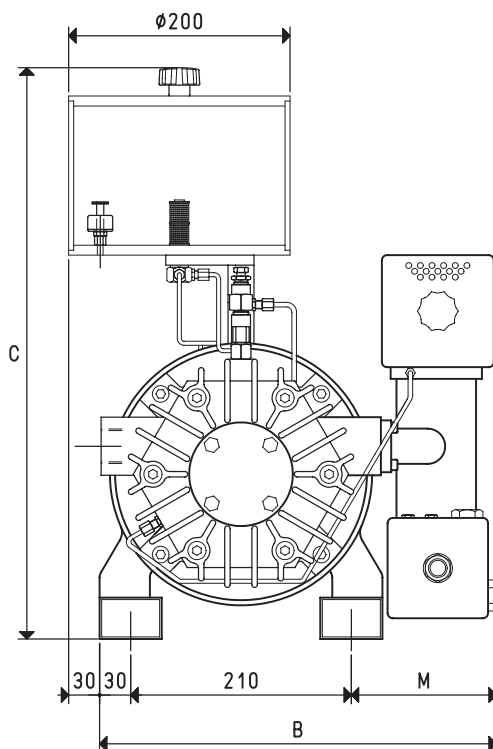
- Curve relative to the flow rate (referring to the suction pressure)
- - - Curve relative to the flow rate (referring to a 1013 mbar pressure)
- Curve regarding the emptying time of a 100-litre volume

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.

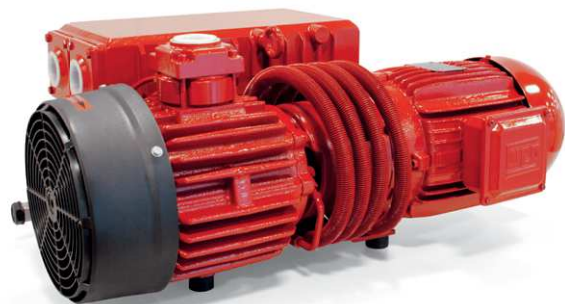
With the exception of electric motors with power lower than 0.75 KW, the efficiency class corresponds to IE3 = Premium Efficiency, with protection degree IP 55, Tolerance of nominal Voltage $\pm 10\%$ and Class of Insulation F.

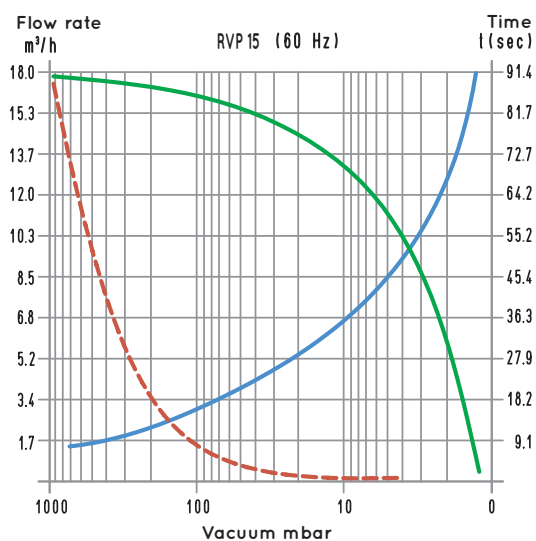
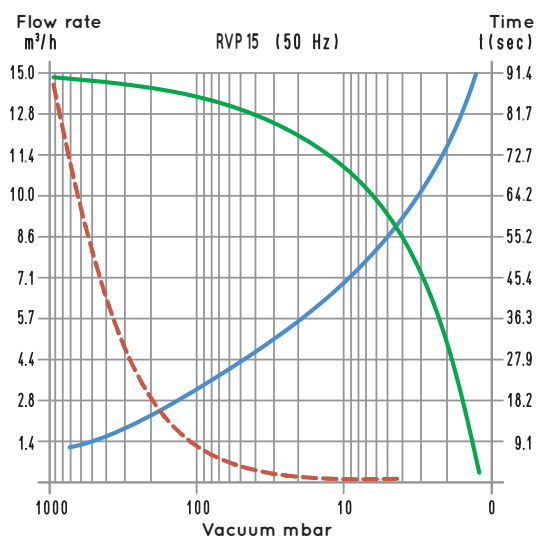
A centrifuge fan fitted on the pump shaft ensures a suitable air flow for optimal pump body and radiator cooling (forced surface cooling).

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.

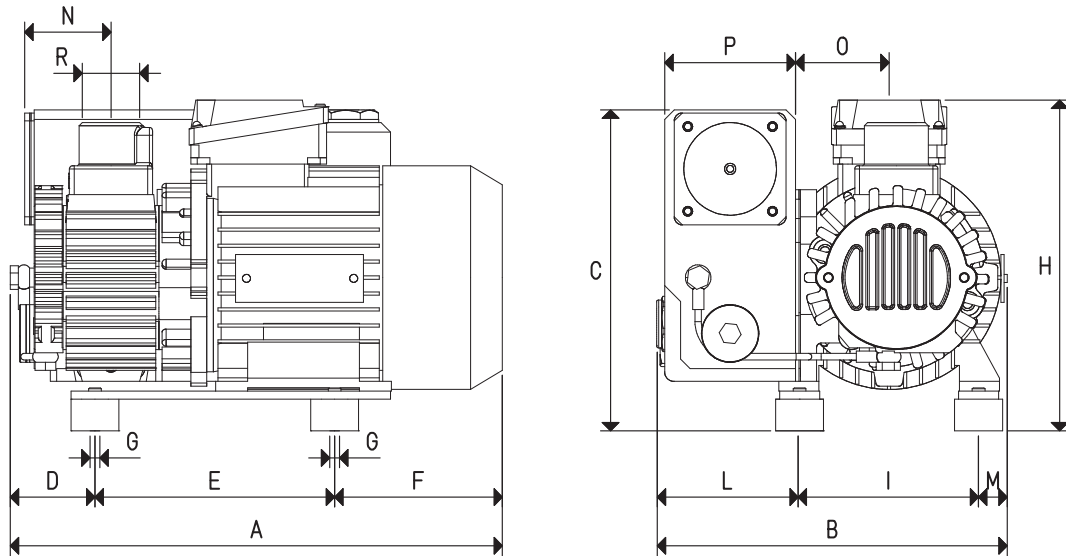




To calculate the emptying time of a volume of V_1 , use the following formula: $t_1 = \frac{t \times V_1}{100}$

- 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)



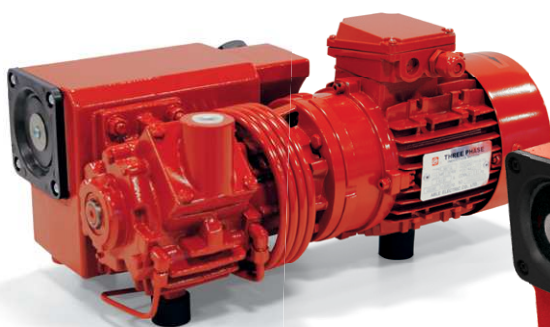
Item		RVP 15		
Frequency		50 Hz		60 Hz
Flow rate	m ³ /h	15.0		18.0
Final pressure	mbar abs.		2	
Motor performance	3~	230/400 ± 10%		275/480 ± 10%
Volt	1~	230 ± 10%		275 ± 10%
Motor power	3~	0.55		0.66
Kw	1~	0.55		0.66
Motor protection	IP		55	
Rotation speed	g/min ⁻¹	2700		3240
Motor shape			B14	
Motor 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).



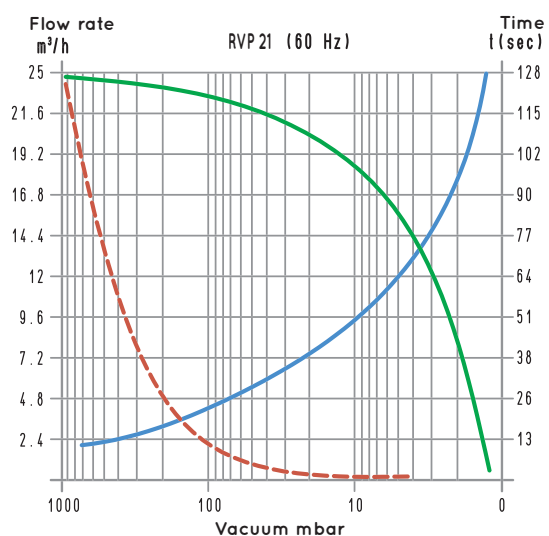
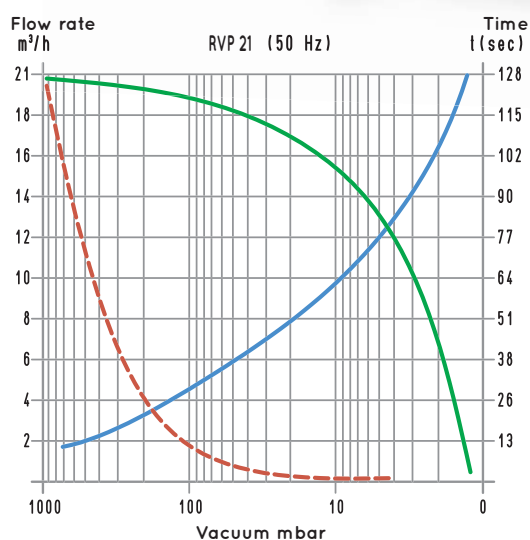
OIL-BATH VACUUM PUMP RVP 21



RVP 21



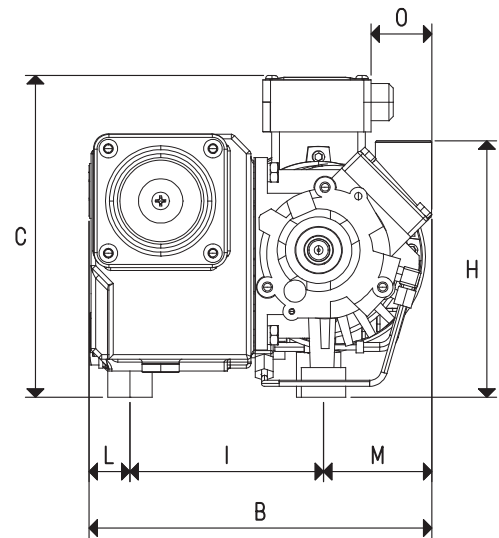
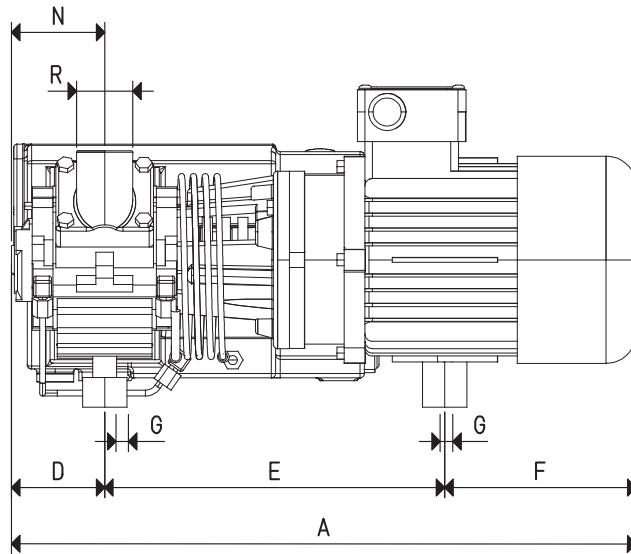
RVP 21 Z



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	m³/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"	

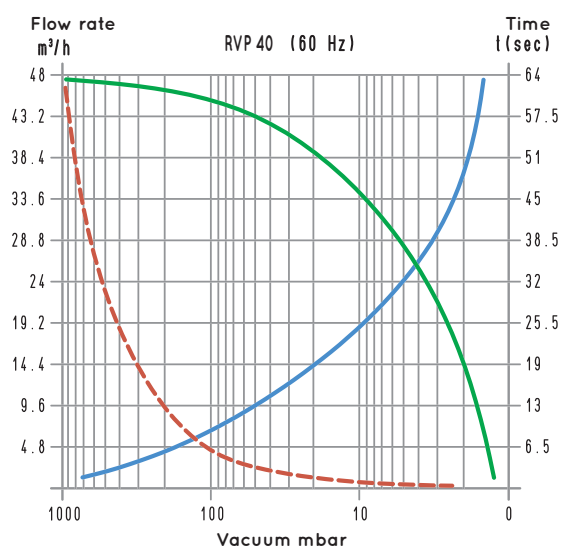
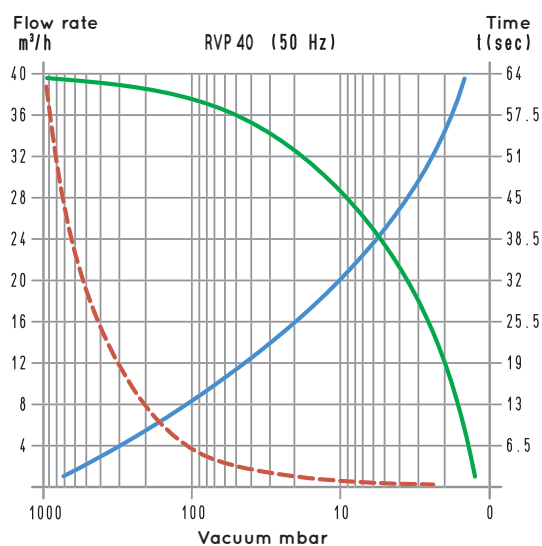
Accessories and Parts		RVP 21	
Oil charge	L	0.50	
Lubricating oil	type	VT OIL 68	
Deoiling cartridge	item	00 RVP 21 05	
3 vanes	item	00 RVP 21 04	
Sealing kit	item	00 RVP 21 06	
Check valve	item	00 RVP 21 03	
Suction filter	item	FC 20	
Ballast valve	item	VZR 01	

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).



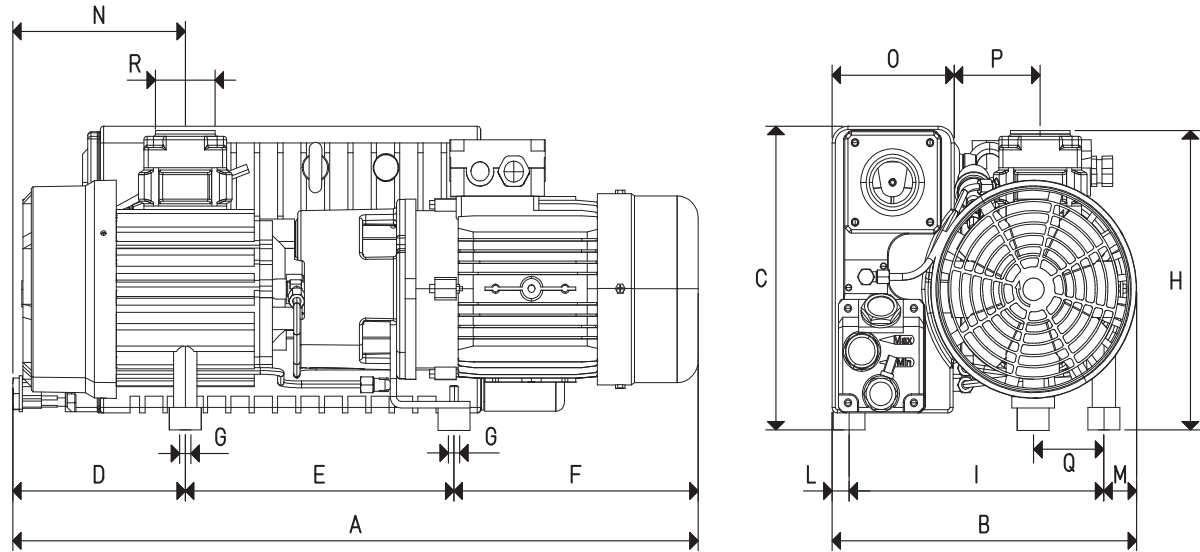
OIL-BATH VACUUM PUMP RVP 40



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)

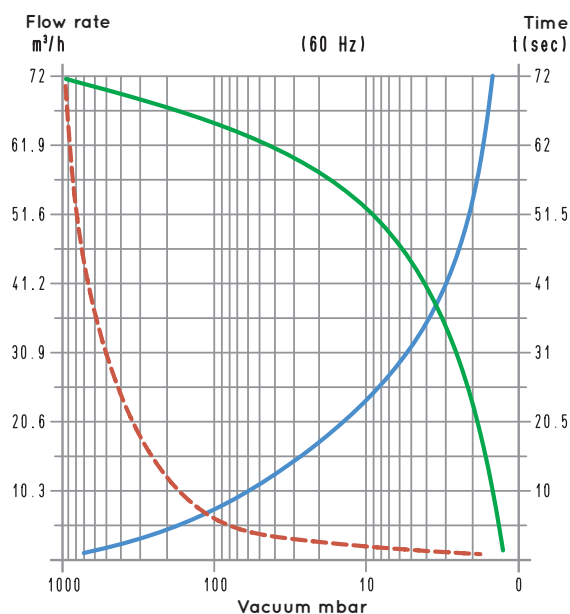
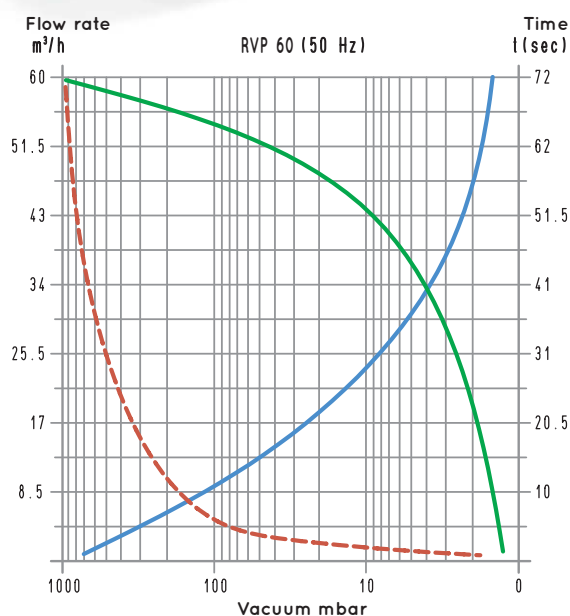
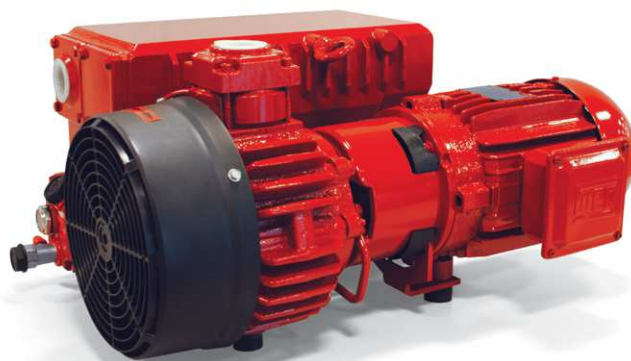


Item		RVP 40		
Frequency		50 Hz		60 Hz
Flow rate	m ³ /h	40.0		48.0
Final pressure	mbar abs.		0.5	
H ₂ O steam quantity permitted	Kg/h		0,7	
Motor performance 3~	Volt	230/400 ± 10%		275/480 ± 10%
Motor power 3~	Kw	1.10		1.35
Motor protection	IP		55	
Rotation speed	g/min ⁻¹	1450		1740
Motor shape			B14	
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	



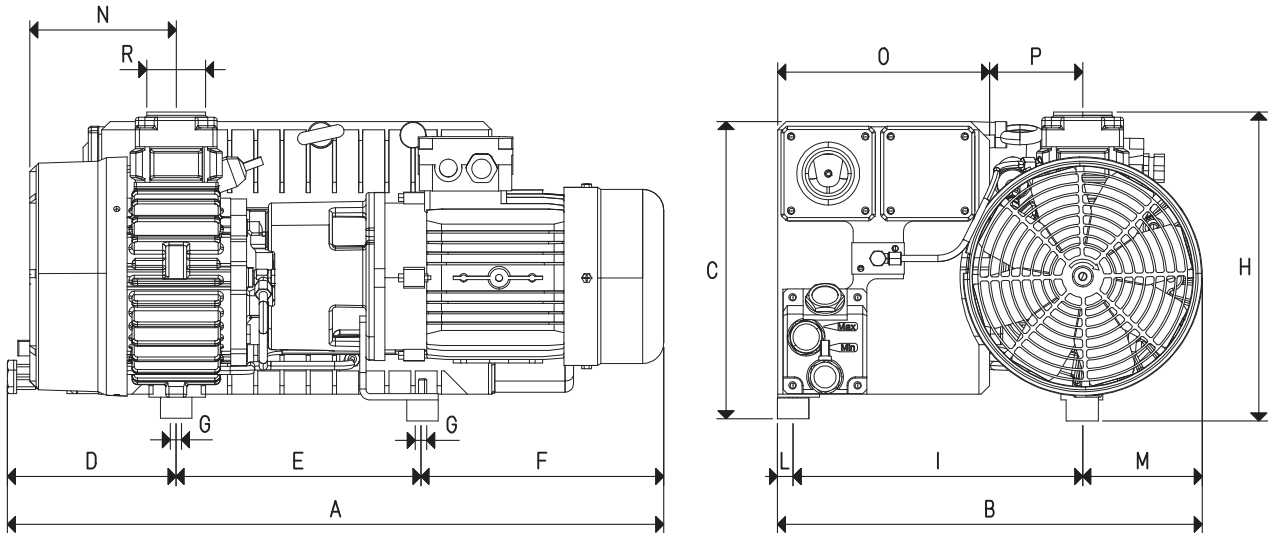
OIL-BATH VACUUM PUMP RVP 60



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

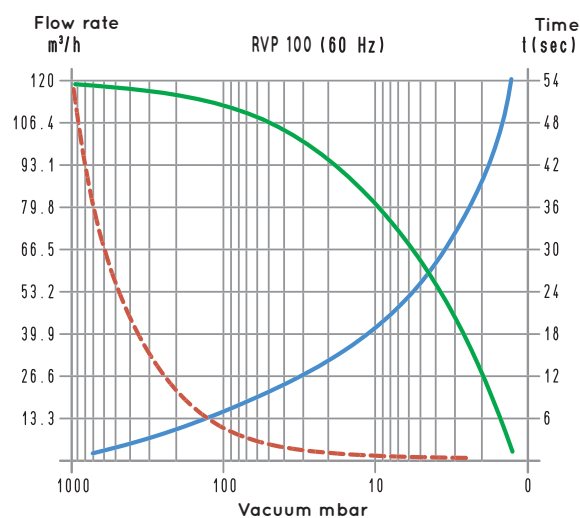
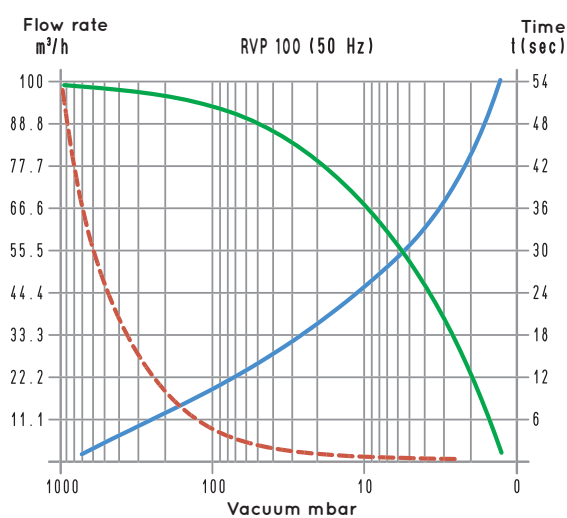
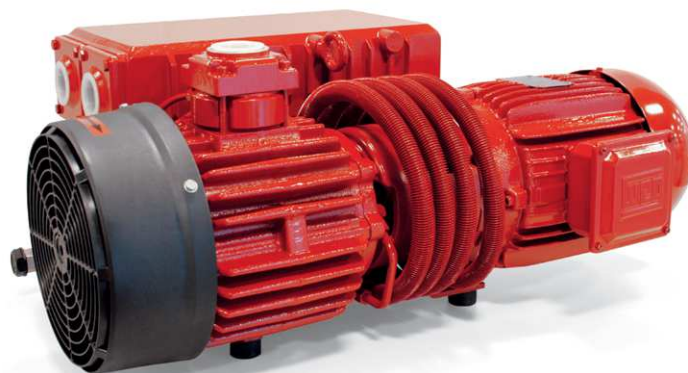
- Curve relative to the flow rate (referring to the suction pressure)
- - - Curve relative to the flow rate (referring to a 1013 mbar pressure)
- Curve regarding the emptying time of a 100-litre volume

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	

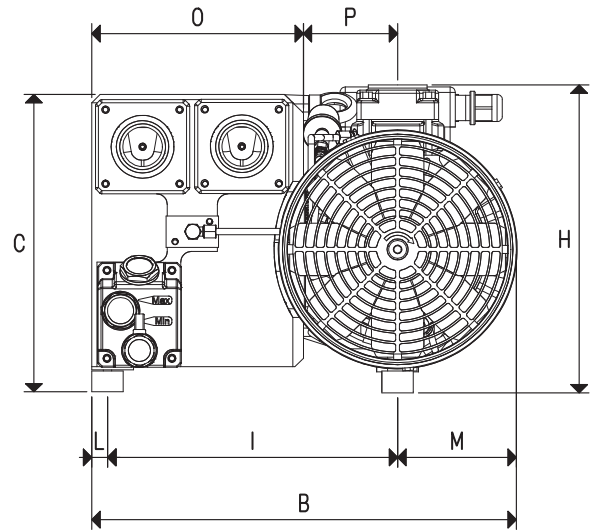
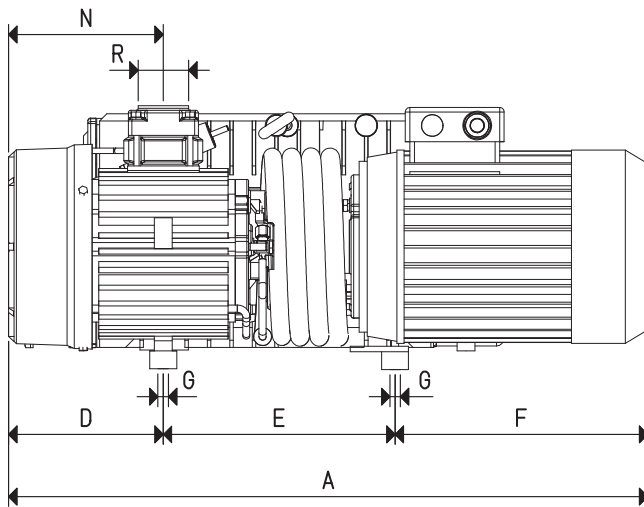
Accessories and Parts		RVP 60	
Oil charge	L	2	
Lubricating oil	type	VT OIL 100	
Oil filter	item	00 RVP 60 07	
2 deoiling cartridges	item	00 RVP 60 05	
3 vanes	item	00 RVP 60 04	
Sealing kit	item	00 RVP 60 06	
Check valve	item	00 RVP 60 03	
Suction filter	item	FC 35	
Ballast valve	item	integrated	



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)

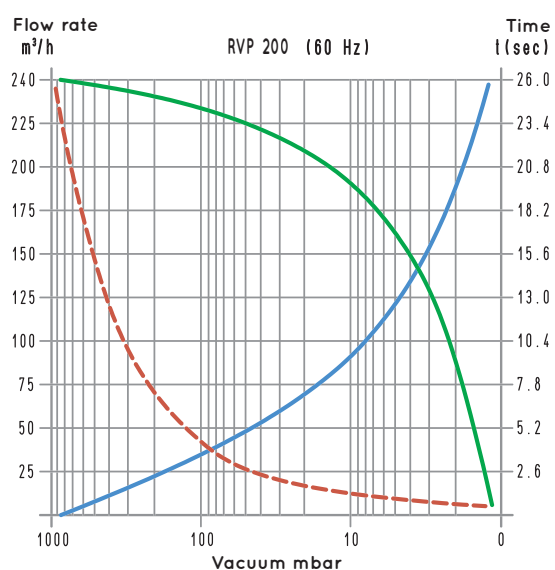
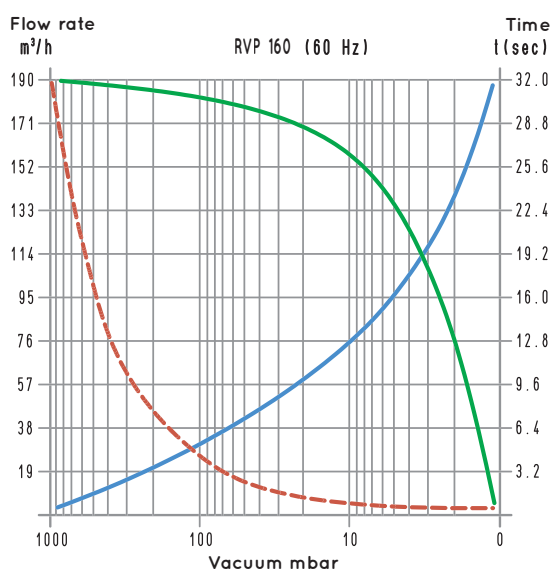
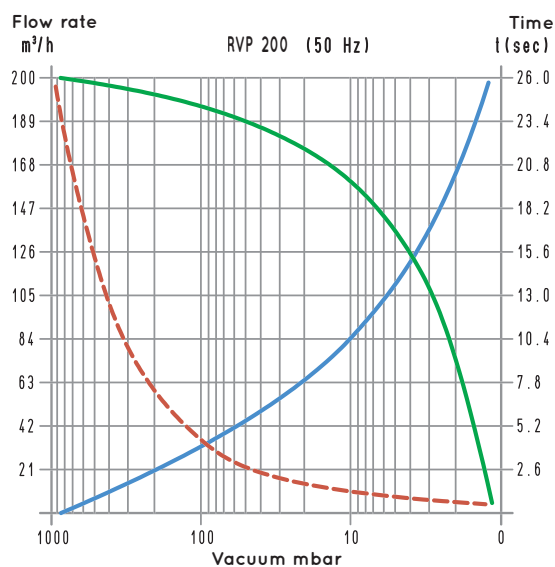
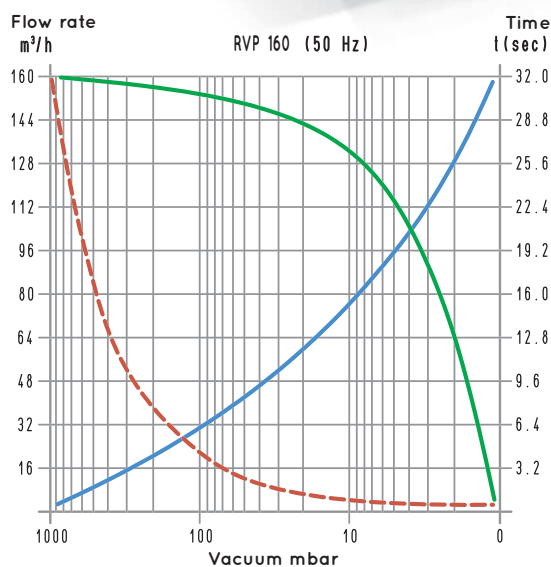


Item		RVP 100	
Frequency		50 Hz	60 Hz
Flow rate	m ³ /h	100.0	120.0
Final pressure	mbar abs.	0.5	
H ₂ O steam quantity permitted	Kg/h	1.5	
Motor performance 3~	Volt	230/400 ± 10%	275/480 ± 10%
Motor power 3~	Kw	2.2	3.0
Motor protection	IP	55	
Rotation speed	g/min ⁻¹	1450	1740
Motor shape		B14	
Motor size		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	



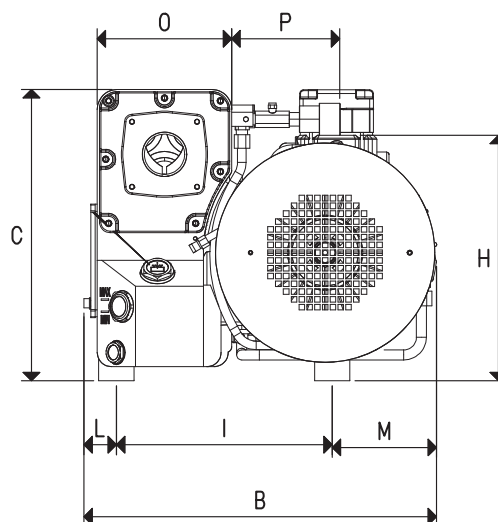
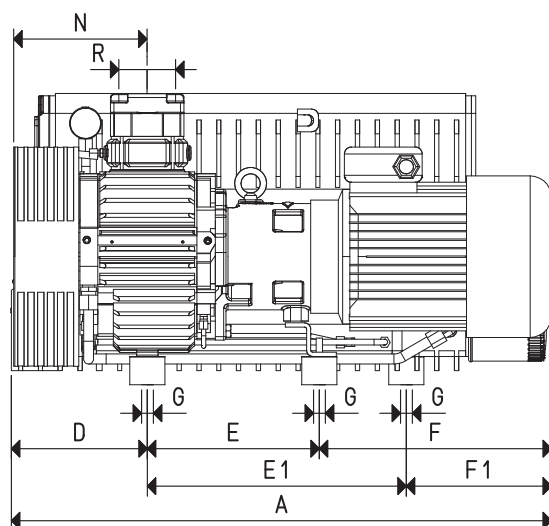
OIL-BATH VACUUM PUMPS RVP 160 and RVP 200



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

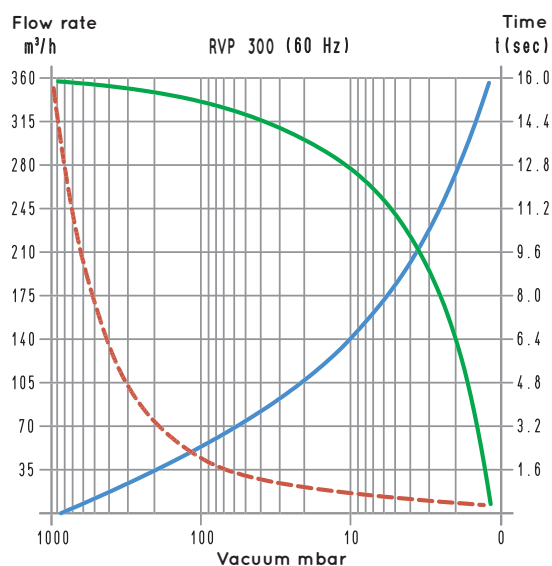
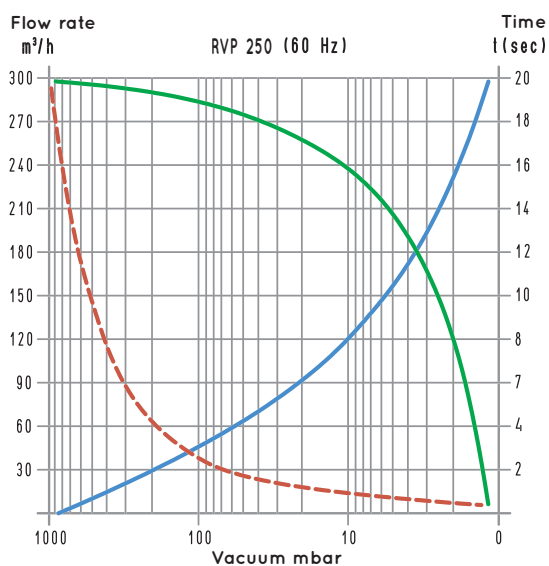
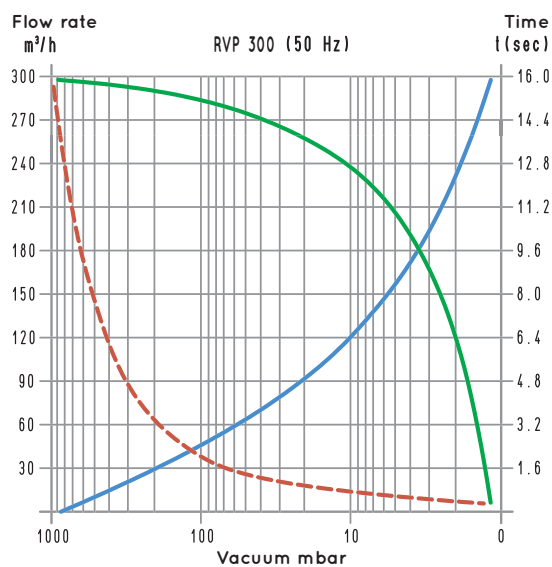
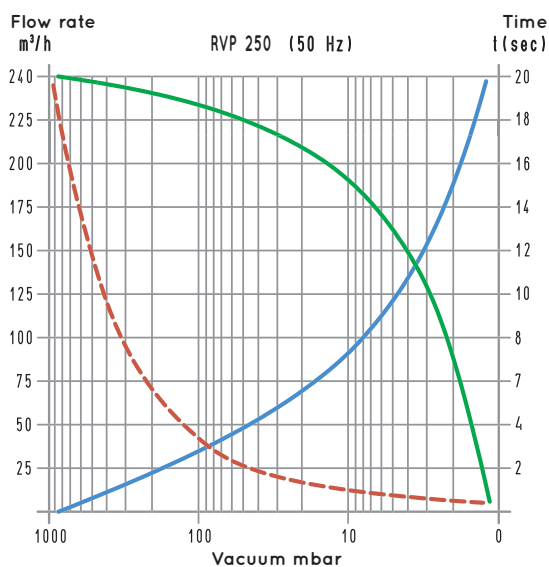
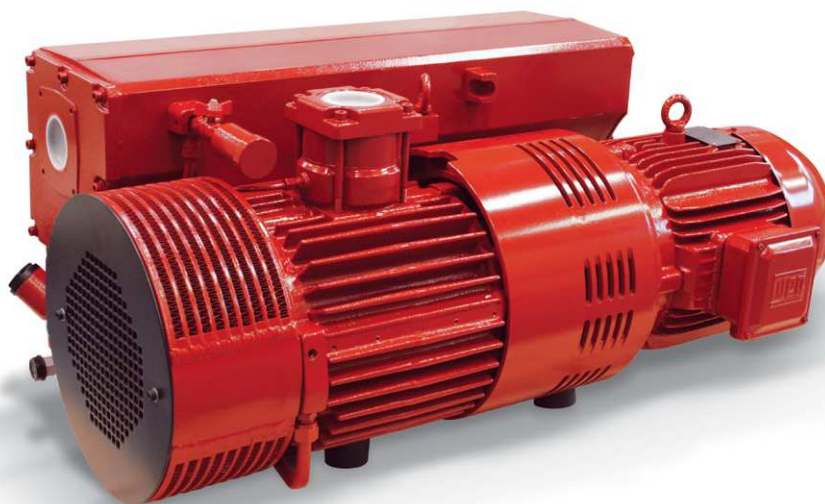
V_1 : Volume to be emptied (l)
 t_1 : time to be calculated (sec)
 t : time obtained in the table (sec)



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	



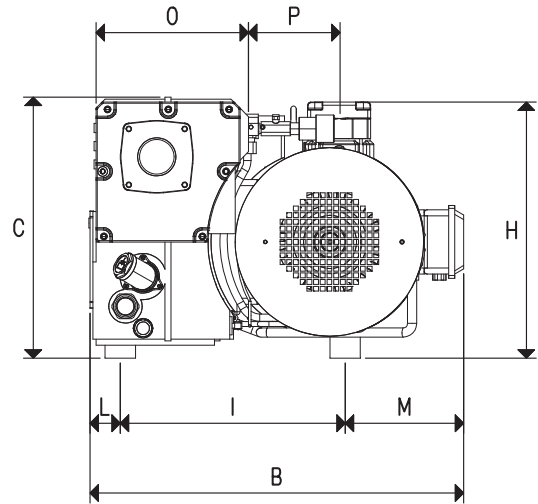
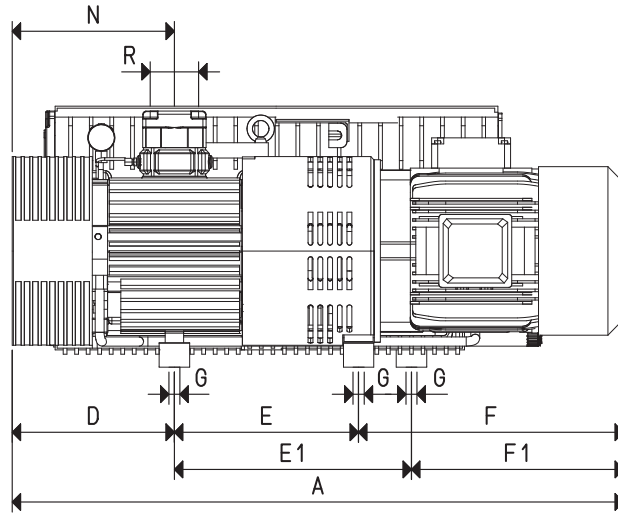
OIL-BATH VACUUM PUMPS RVP 250 and RVP 300



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	

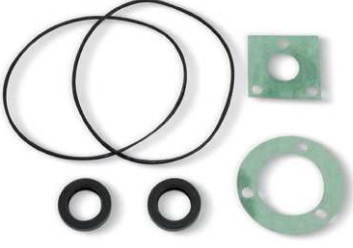


LUBRICATED VACUUM PUMP ACCESSORIES AND SPARE PARTS

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
	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
	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

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

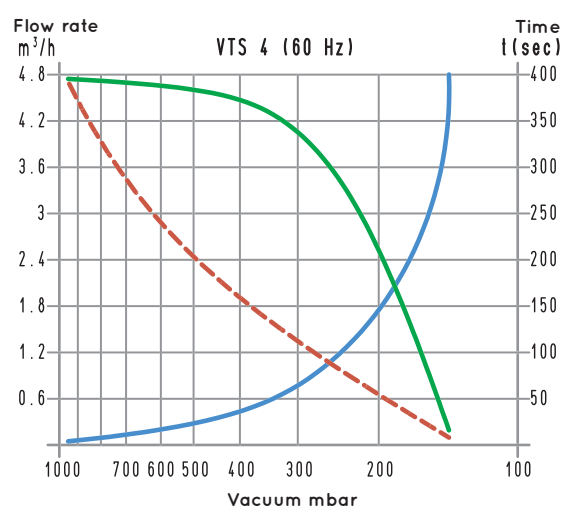
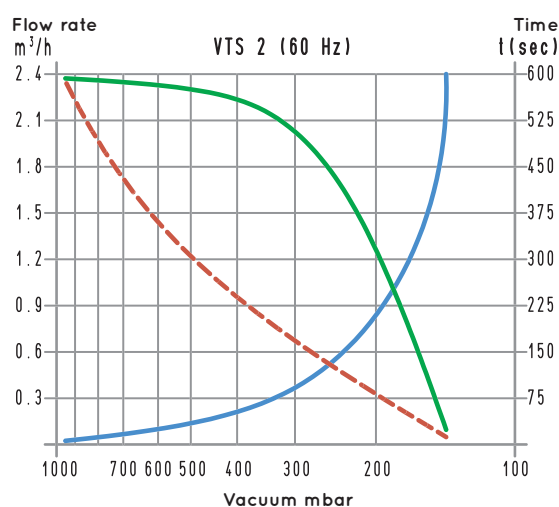
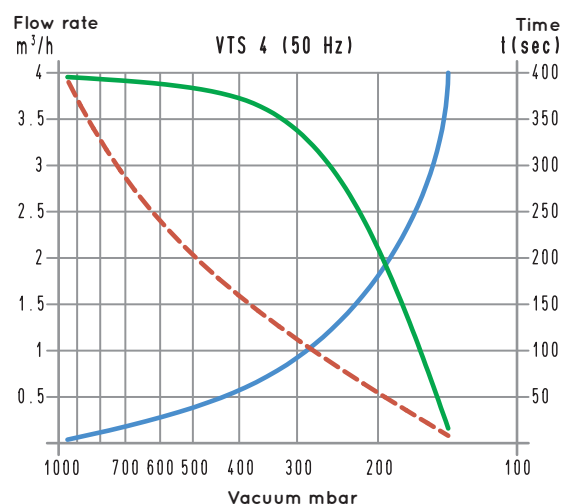
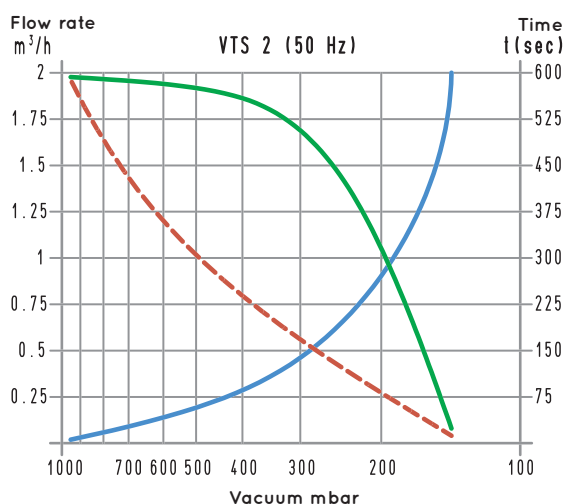
	Item	Quantity	For pump item
Oil level switch 	00 LP VTL 99	1	VTLP - All
Oil filters 	00 LP VTL 40	1	VTLP - All
	00 RVP 40 07	1	RVP40
	00 RVP 60 07	1	RVP60
	00 RVP 100 07	1	RVP100
	00 RVP 160 07	1	RVP160
	00 RVP 200 07	1	RVP200
	00 RVP 250 07	1	RVP250
	00 RVP 300 07	1	RVP300
Deoiling cartridges 	00 VTL 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).

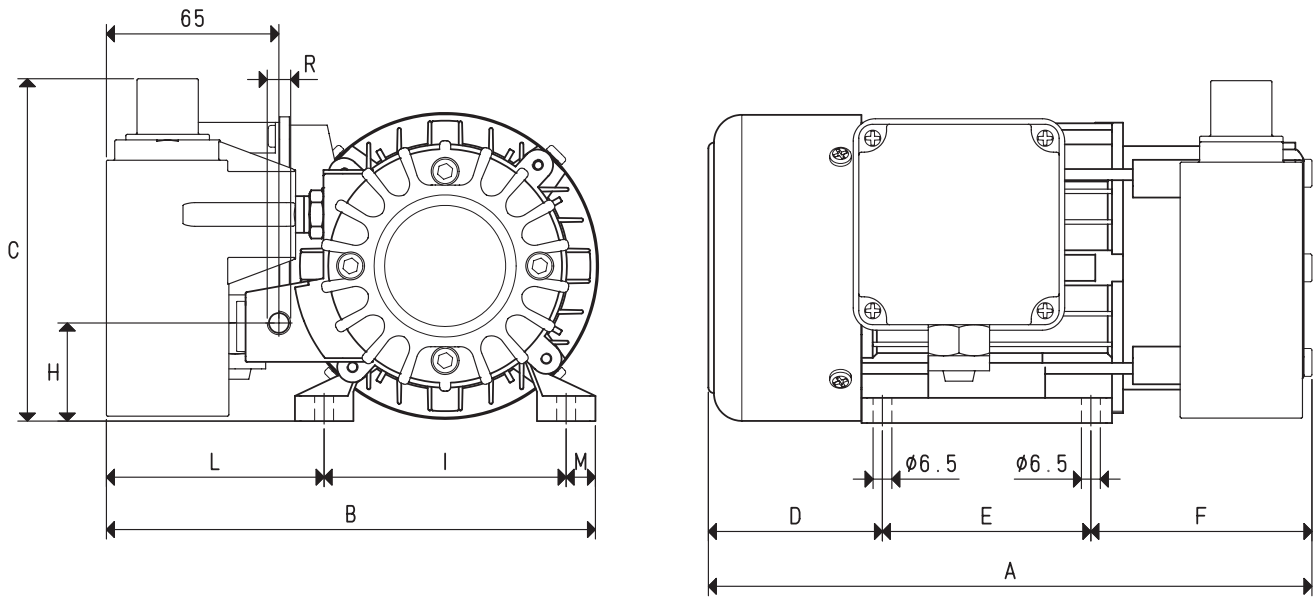
A filter that functions as a silencer is installed on the suction inlet. We strongly recommend installing a filter on the suction inlet against possible impurities. These pumps are not recommended when the fluid to be sucked contains water or oil vapours or condensations. Vacuum pumps VTS 2 and 4 can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



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

- Green line: Curve relative to the flow rate (referring to the suction pressure)
- - - Red line: Curve relative to the flow rate (referring to a 1013 mbar pressure)
- Blue line: 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	m³/h	2.0	2.4	4.0	4.8
Final pressure	mbar abs.	200		150	
Motor performance	3~	230/400±10%	265/460±10%	230/400±10%	265/460±10%
Volt	1~	230±10%		230±10%	
Motor power	3~	0.12	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.

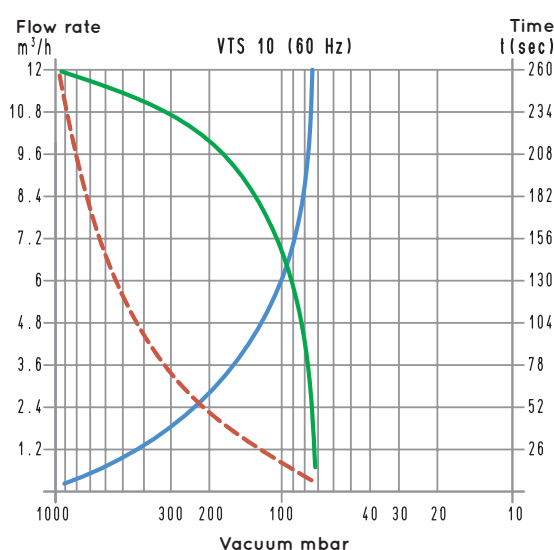
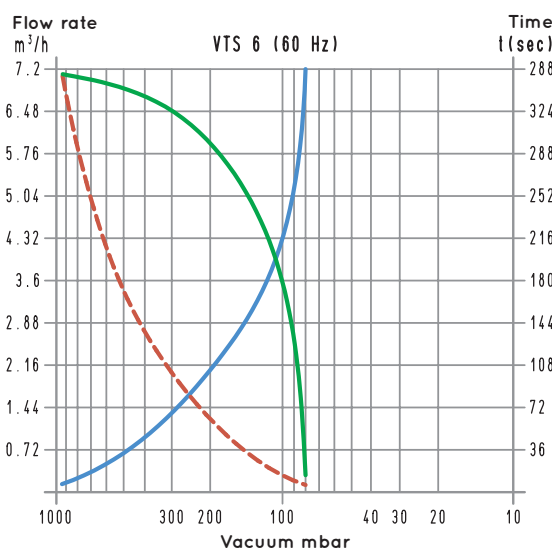
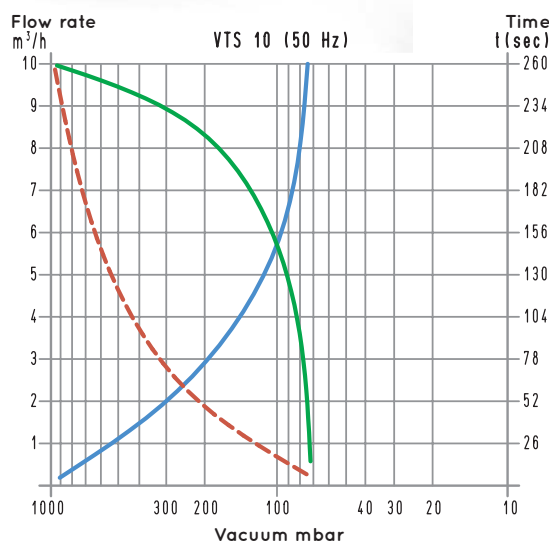
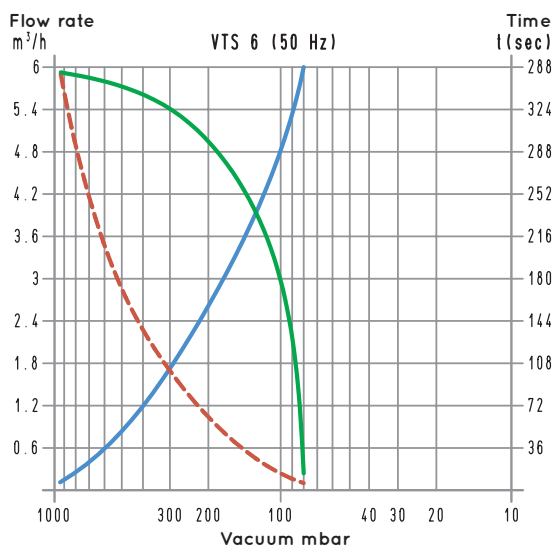
We strongly recommend installing a filter on the suction inlet against possible impurities. These pumps are not recommended when the fluid to be sucked contains water or oil vapours or condensations.

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



VTS 6

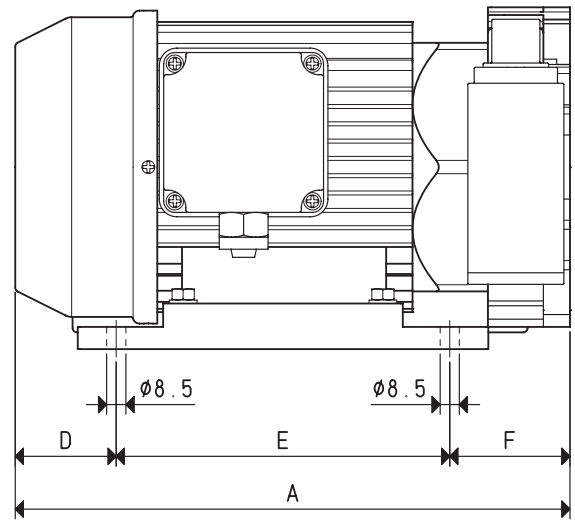
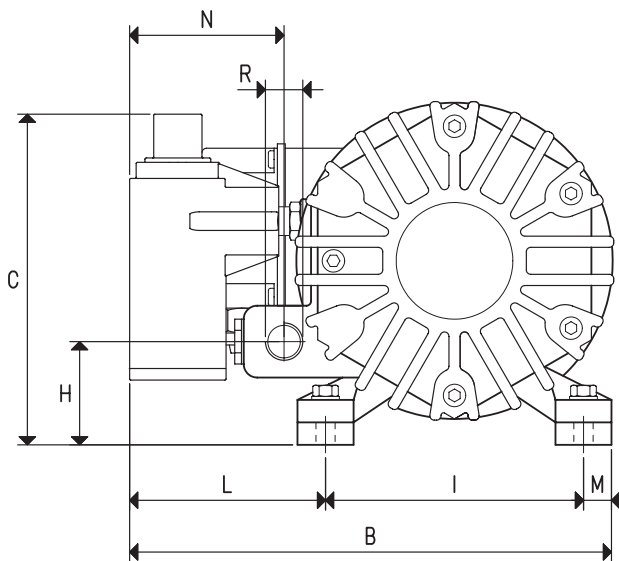
VTS 10



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 = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$

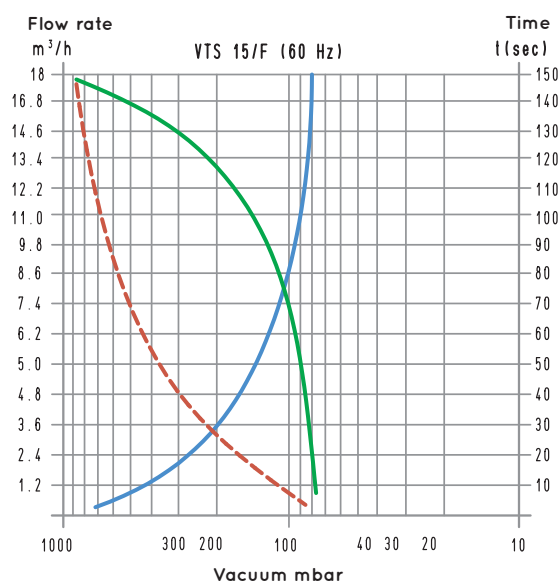
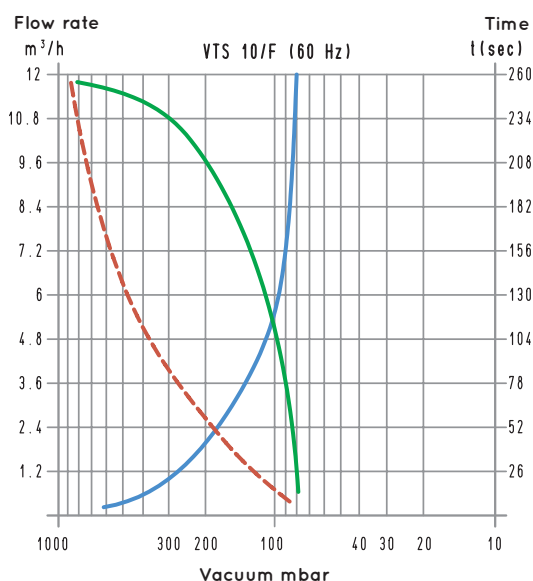
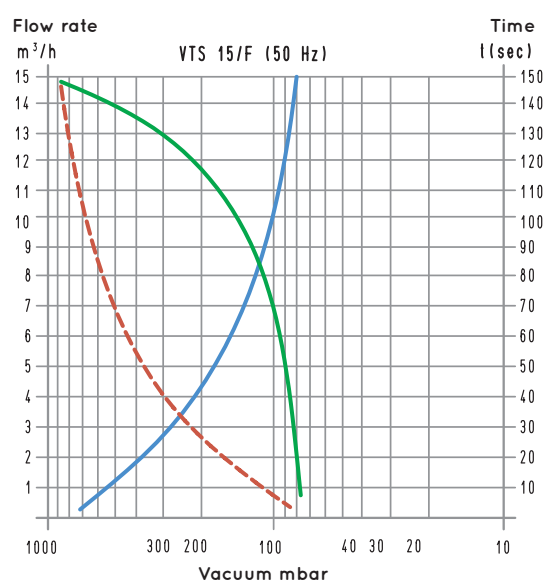
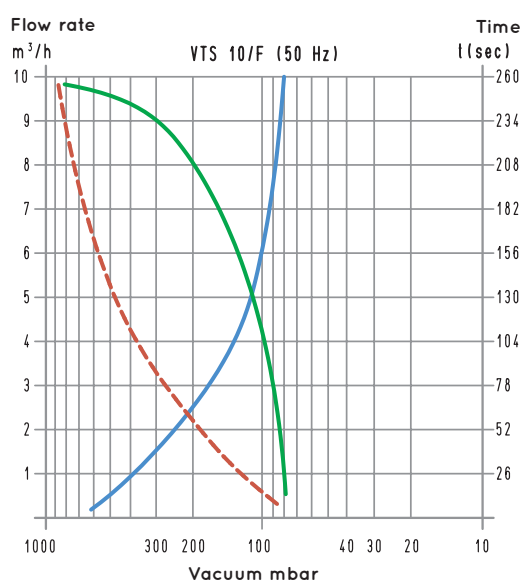
cfm= m³/h x 0.588; inch Hg= mbar x 0.0295; psi= bar x 14.6



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.

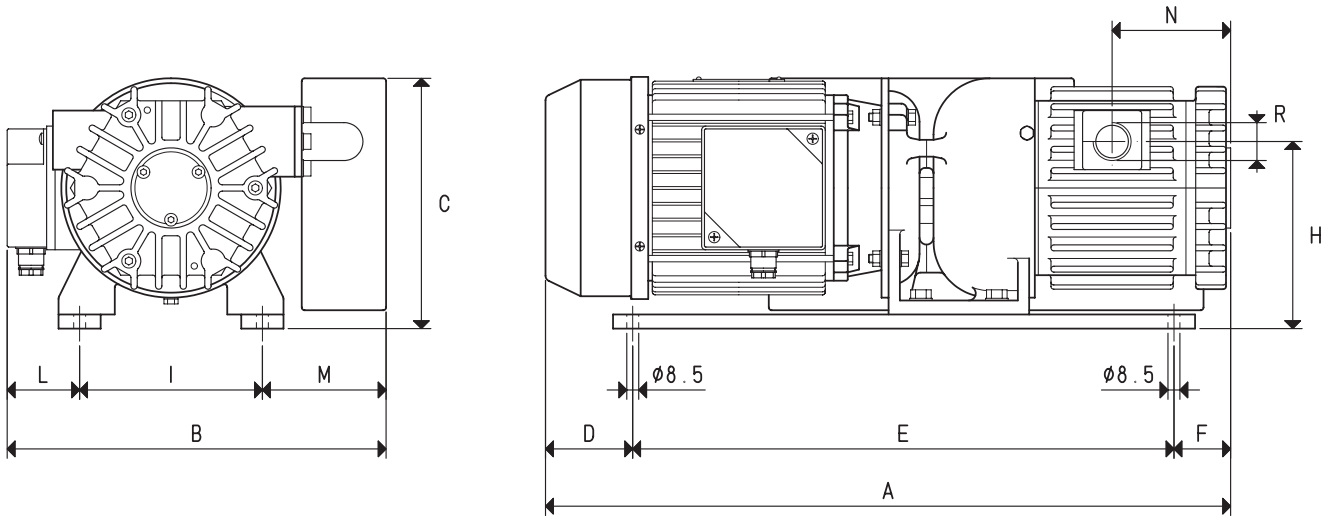
A filter that functions as a silencer is installed on the suction inlet. We strongly recommend installing a filter on the suction inlet against possible impurities. These pumps are not recommended when the fluid to be sucked contains water or oil vapours or condensations. This range of pumps can be also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

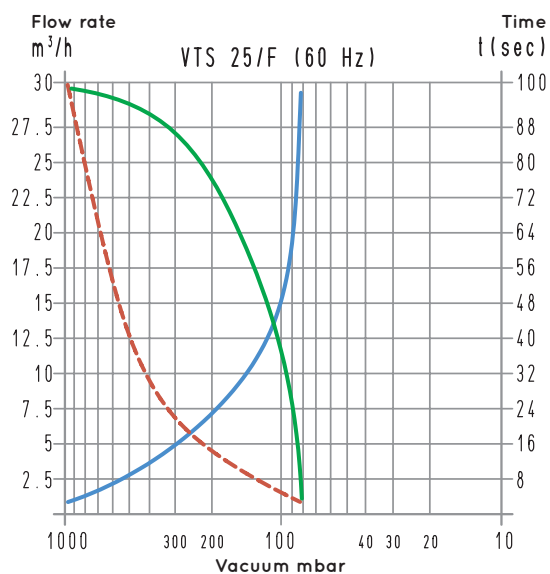
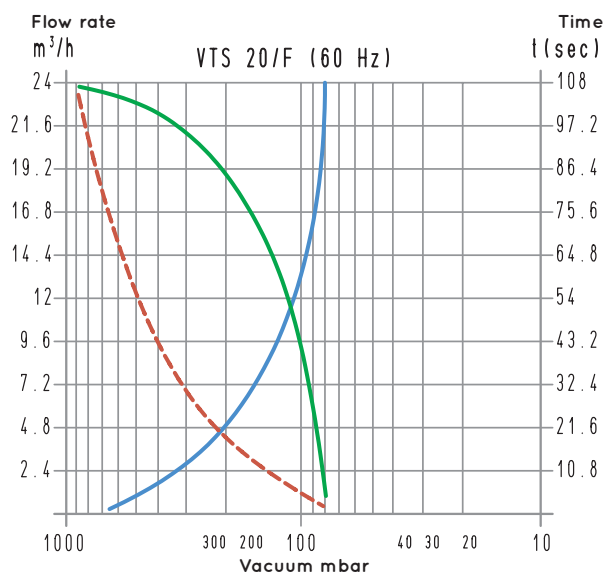
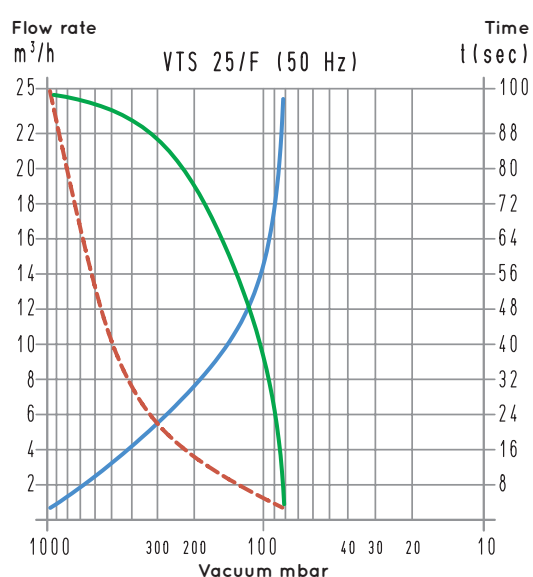
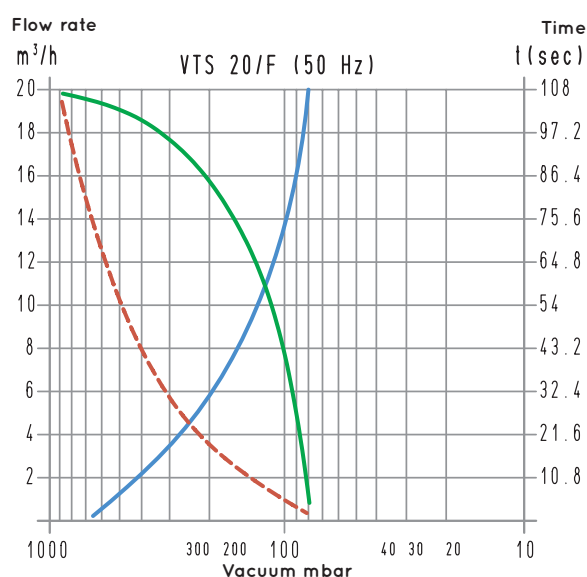
Transformation ratio: N (newton) = Kg x 9.81 (force of gravity)

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



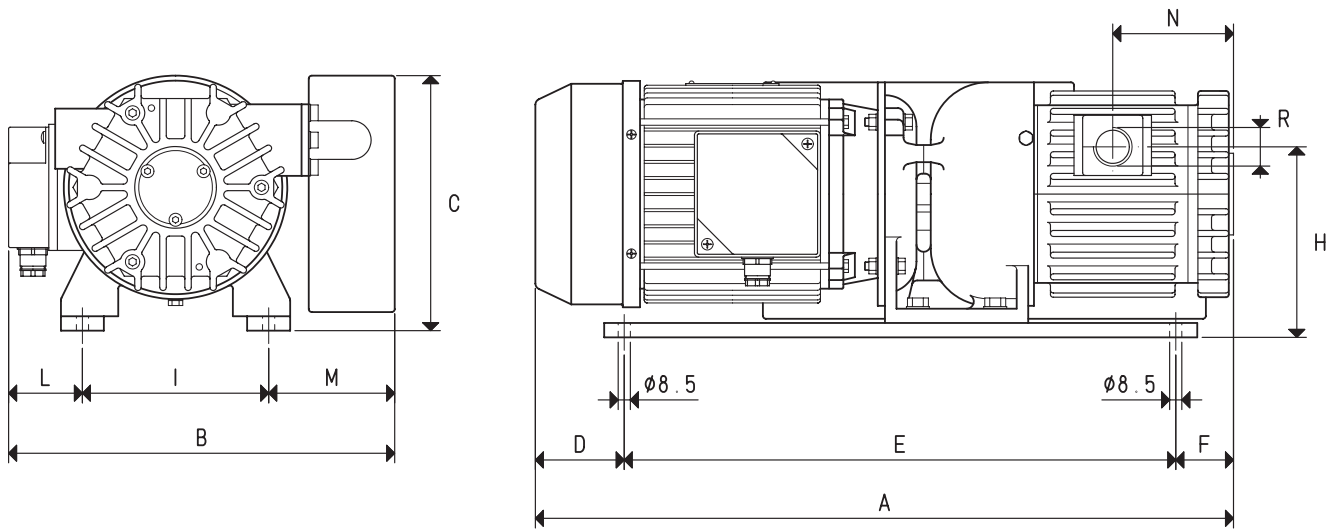
DRY VACUUM PUMPS VTS 20/F and 25/F



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.

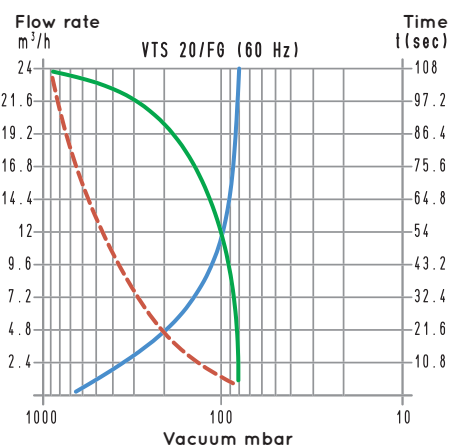
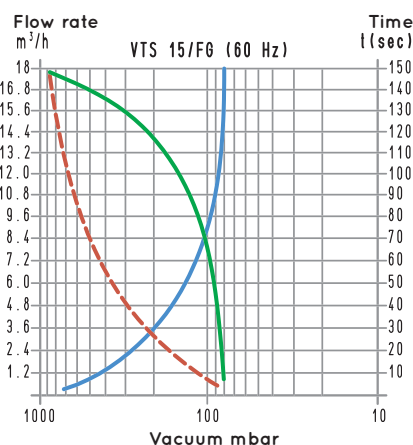
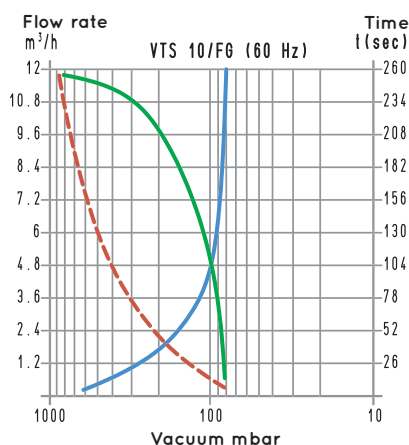
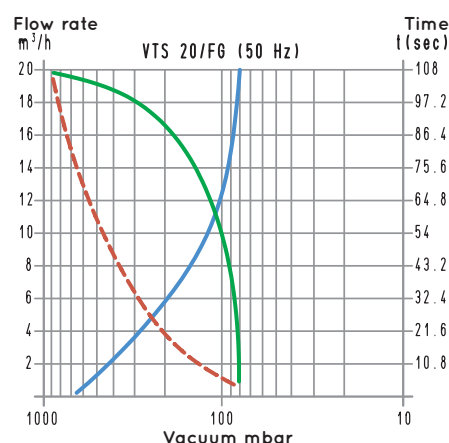
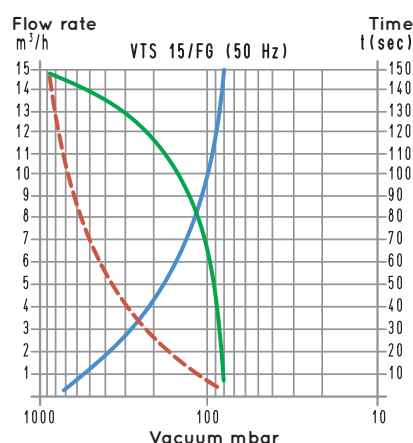
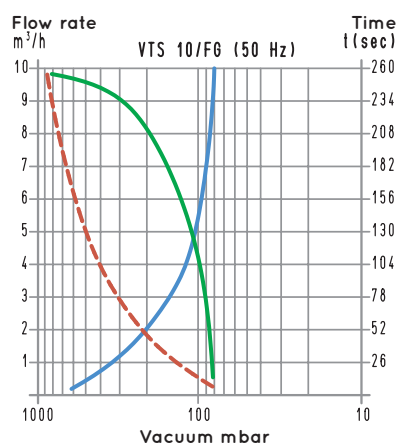
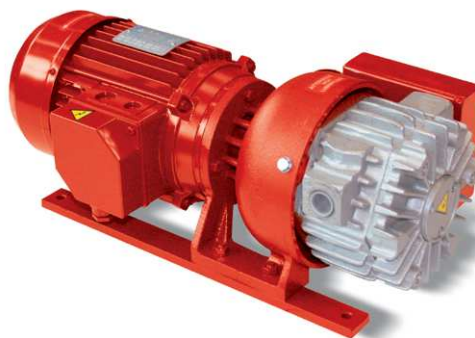
All this allows using standard electric motors, in the shapes and sizes indicated in the table.

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.

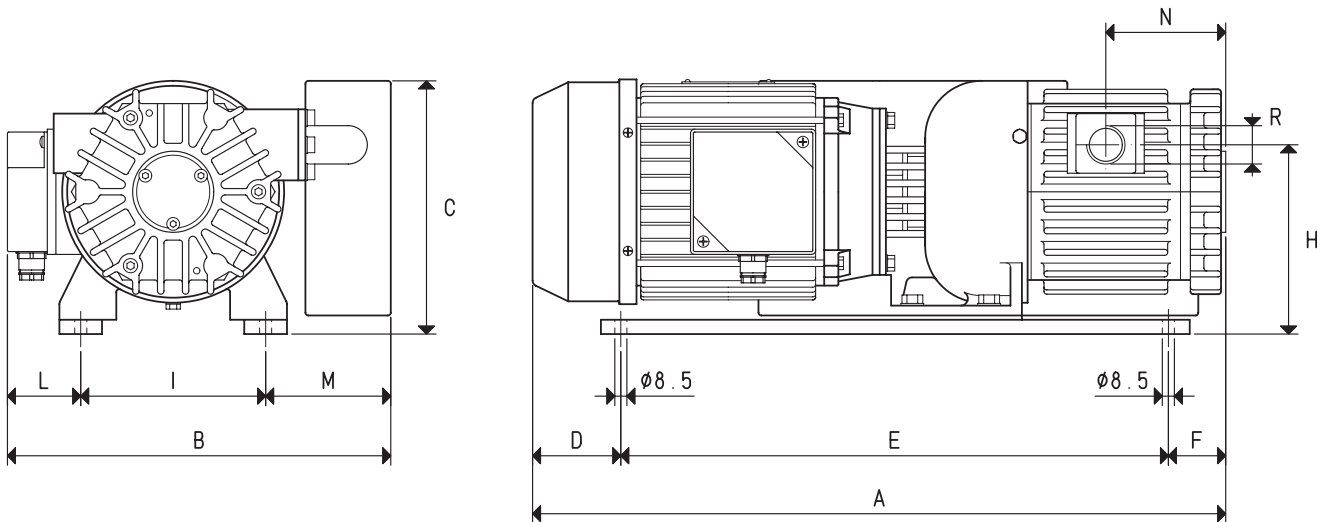
These pumps with flow rate up to 20 m³/h can also be supplied with single-phase electric motors.



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).

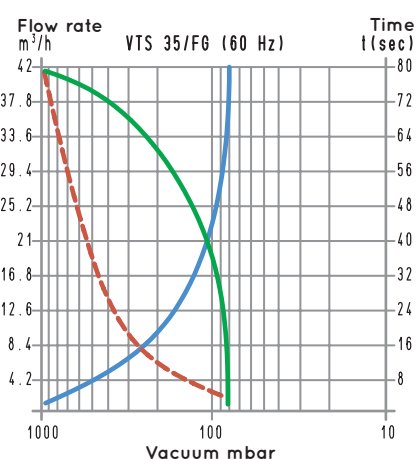
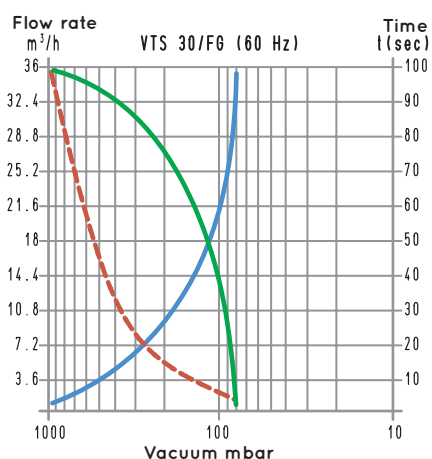
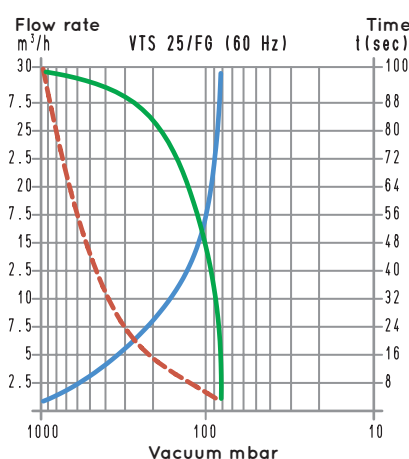
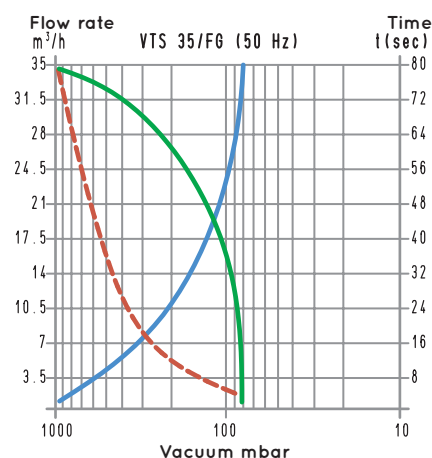
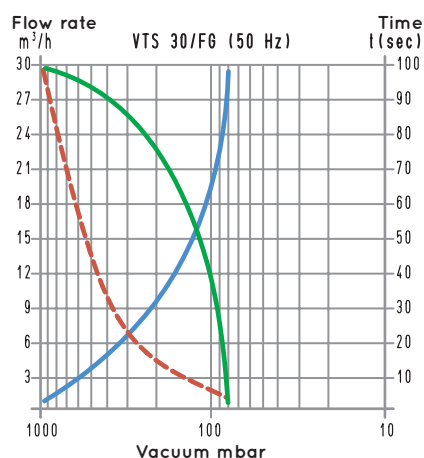
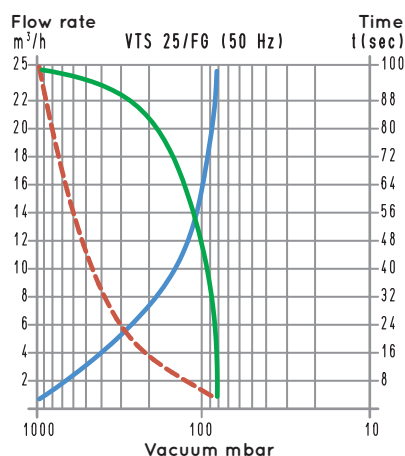
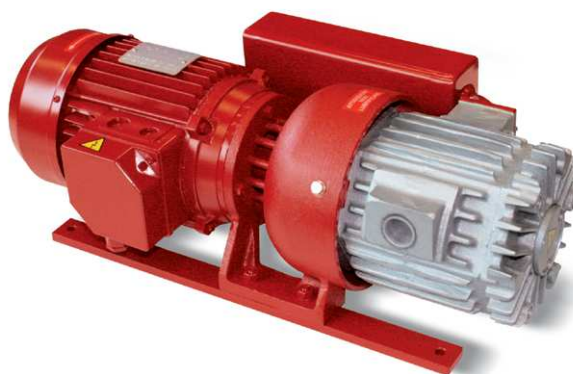
Transformation ratio: N (newton) = Kg x 9.81 (force of gravity)

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



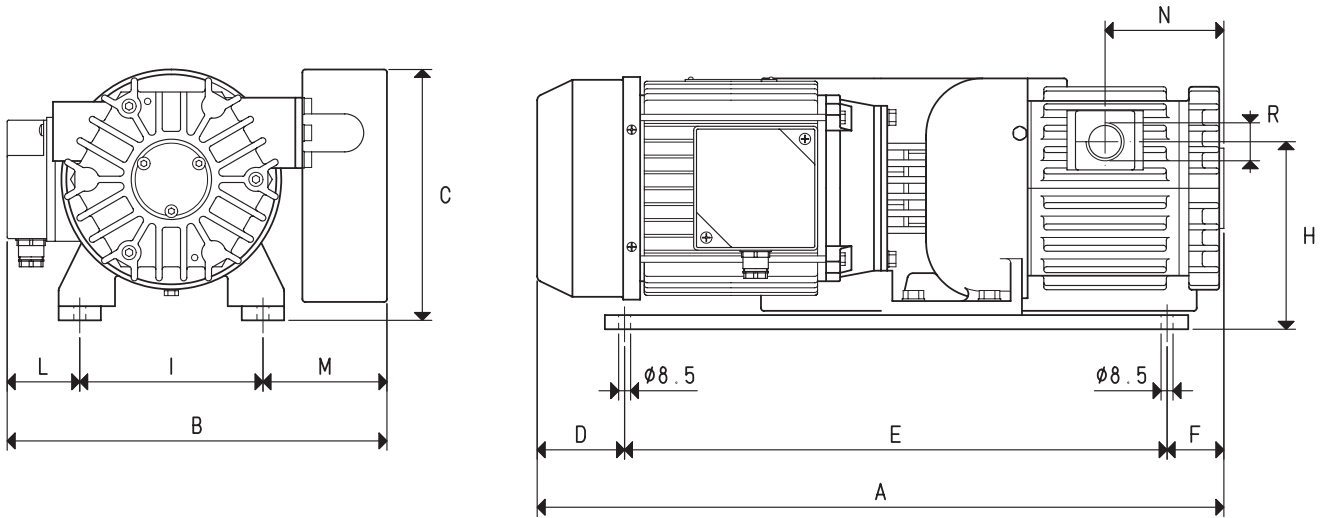
DRY VACUUM PUMPS VTS 25/FG, 30/FG and 35/FG



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
	00 VTS 30FG 18	1	VTS 30/FG
	00 VTS 35FG 18	1	VTS 35/FG
Rear flange complete with graphite disc 	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 10/FG
	00 VTS 10FG 26	1	VTS 15/FG
	00 VTS 15FG 26	1	VTS 20/FG
	00 VTS 20FG 26	1	VTS 25/FG
	00 VTS 25FG 26	1	VTS 30/FG
	00 VTS 30FG 27	1	VTS 35/FG
	00 VTS 35FG 27	1	

DRY VACUUM PUMP ACCESSORIES AND SPARE PARTS



	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
			VTS 20/FG
	10 04 10	1	VTS 20/FG
			VTS 25/F
			VTS 25/FG
			VTS 30/FG
			VTS 35/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
			VTS 10
	FC 10	1	VTS 10/F
	FC 20	1	VTS 15/F
			VTS 20/F
			VTS 10/FG
			VTS 15/FG
			VTS 20/FG
	FC 25	1	VTS 25/F
			VTS 25/FG
			VTS 30/FG
			VTS 35/FG



MINI PUMP SETS - GENERAL DESCRIPTION

Mini pump sets are small independent vacuum-producing units with reduced size.

They are composed of:

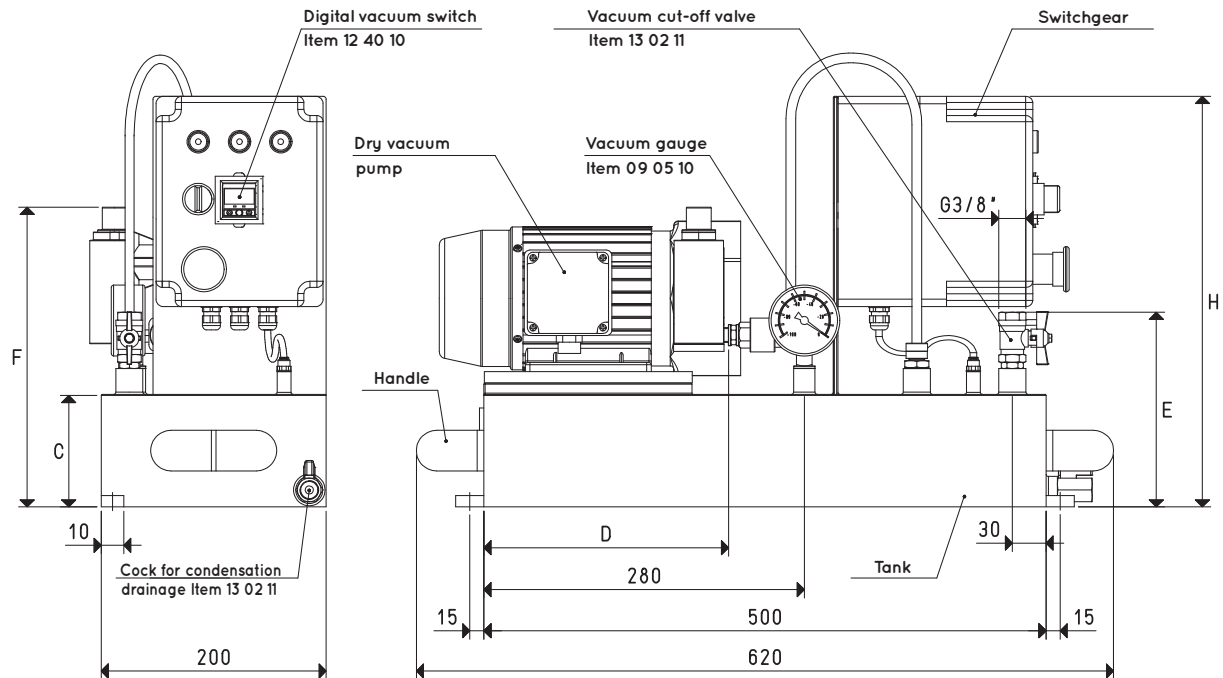
- A small welded sheet steel tank with perfect vacuum seal.
- A low-flow rate dry or lubricated rotating vane vacuum pump.
- A mini digital vacuum switch for adjusting the maximum level of vacuum.
- A vacuum gauge for reading the level of vacuum.
- Switchgear enclosed in a special casing.
- A manual valve for vacuum interception.
- A cock for condensation drainage.

The level of vacuum, preset via the digital vacuum switch is automatically maintained in the tank.

Mini pump sets can also be supplied with single-phase or DC electric motors and they are suited for equipping fixed or mobile working units that require vacuum, such as:

- Trolleys with vacuum cups for fixing and transporting glass and crystals.
- Vacuum clamping systems for ski maintenance, marble processing and for polishing copper, pewter or silver objects.
- Hoists with vacuum cups for lifting television sets and household appliances for glass installation in door and window frames, for laying ceramic tiles, for feeding sheet metal into presses, etc.

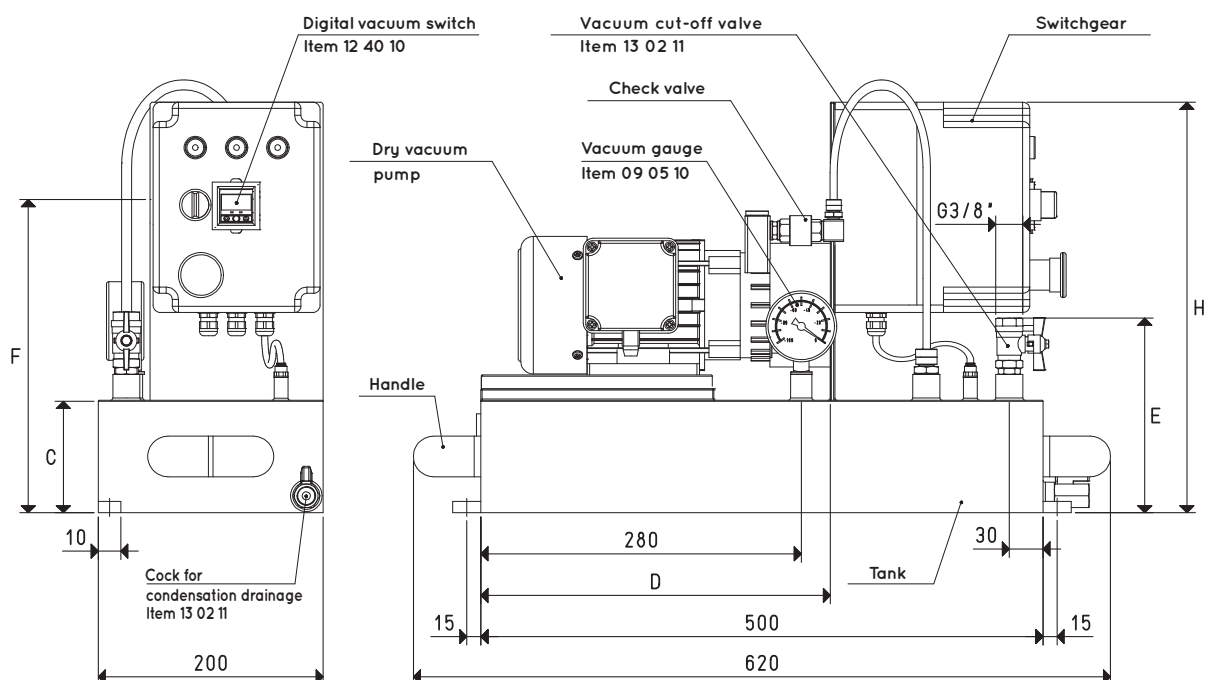


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MINI PUMP SETS DO 06V ... and DO 10V ... WITH LUBRICATED VACUUM PUMPS

3D drawings are available on vuototecnica.net



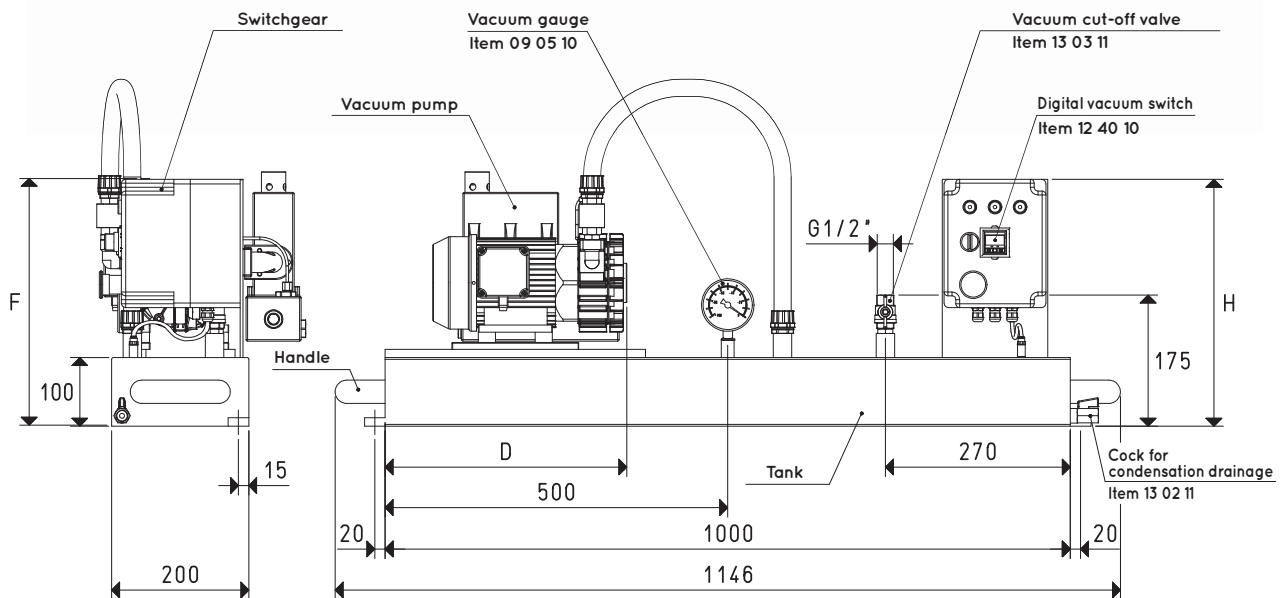
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Item	Tank Litres	Pump Mod.	Electric performance Volt	Motor switchgear item	C	D	E	F	H	Weight Kg	Filter accessories item
DO 06V VTL 2	6	VTL 2	3 ~ 230/400-50Hz	DO 06 97V	60	250	135	198	320	15.2	FB 10 / FC 10
DO 06V VTL 2 M	6	VTL 2 M	1 ~ 230-50Hz	DO 06 98V	60	250	135	198	320	15.5	FB 10 / FC 10
DO 06V VTL 4	6	VTL 4	3 ~ 230/400-50Hz	DO 06 97V	60	280	135	198	320	16.8	FB 10 / FC 10
DO 06V VTL 4 M	6	VTL 4 M	1 ~ 230-50Hz	DO 06 98V	60	280	135	198	320	17.0	FB 10 / FC 10
DO 06V VTL 5	6	VTL 5	3 ~ 230/400-50Hz	DO 06 97V	60	260	135	310	320	24.0	FB 10 / FC 10
DO 06V VTL 5 M	6	VTL 5 M	1 ~ 230-50Hz	DO 06 98V	60	260	135	310	320	24.5	FB 10 / FC 10
DO 10V VTL 2	10	VTL 2	3 ~ 230/400-50Hz	DO 06 97V	100	250	175	238	360	19.4	FB 10 / FC 10
DO 10V VTL 2 M	10	VTL 2 M	1 ~ 230-50Hz	DO 06 98V	100	250	175	238	360	19.7	FB 10 / FC 10
DO 10V VTL 4	10	VTL 4	3 ~ 230/400-50Hz	DO 06 97V	100	280	175	238	360	21.0	FB 10 / FC 10
DO 10V VTL 4 M	10	VTL 4 M	1 ~ 230-50Hz	DO 06 98V	100	280	175	238	360	21.2	FB 10 / FC 10
DO 10V VTL 5	10	VTL 5	3 ~ 230/400-50Hz	DO 06 97V	100	260	175	350	360	28.2	FB 10 / FC 10
DO 10V VTL 5 M	10	VTL 5 M	1 ~ 230-50Hz	DO 06 98V	100	260	175	350	360	28.7	FB 10 / FC 10

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

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

Adapters for GAS - NPT threading available on page 1.130



Item	Tank Litres	Pump Mod.	Electric performance Volt	Motor switchgear item	D	F	H	Weight Kg	Filter accessories item
DO 20V VTL 5	20	VTL 5	3 ~ 230/400-50Hz	DO 06 97V	320	345	360	38.5	FB 20 / FC 20
DO 20V VTL 5 M	20	VTL 5 M	1 ~ 230/50Hz	DO 06 98V	320	345	360	39.0	FB 20 / FC 20
DO 20V VTL 10	20	VTL 10	3 ~ 230/400-50Hz	DO 06 97V	352	345	360	44.5	FB 20 / FC 20
DO 20V VTL 10 M	20	VTL 10 M	1 ~ 230-50Hz	DO 06 98V	352	345	360	45.0	FB 20 / FC 20
DO 20V VTL 10/F	20	VTL 10/F	3 ~ 230/400-50Hz	DO 06 97V	390	360	360	49.0	FB 20 / FC 20
DO 20V VTL 10/F M	20	VTL 10/F M	1 ~ 230-50Hz	DO 06 98V	390	360	360	49.5	FB 20 / FC 20
DO 20V VTL 15/F	20	VTL 15/F	3 ~ 230/400-50Hz	DO 06 97V	410	360	360	51.0	FB 20 / FC 20
DO 20V VTL 15/F M	20	VTL 15/F M	1 ~ 230-50Hz	DO 06 98V	410	360	360	51.5	FB 20 / FC 20
DO 20V RVP 15	20	RVP 15	3 ~ 230/400-50Hz	DO 06 97V	350	335	360	39.0	FB 20 / FC 20
DO 20V RVP 15 M	20	RVP 15 M	1 ~ 230-50Hz	DO 06 98V	335	335	360	39.5	FB 20 / FC 20
DO 20V VTL 20/F	20	VTL 20/F	3 ~ 230/400-50Hz	DO 06 97V	430	360	360	54.0	FB 20 / FC 20
DO 20V VTL 20/F M	20	VTL 20/F M	1 ~ 230-50Hz	DO 06 98V	430	360	360	54.5	FB 20 / FC 20
DO 20V RVP 21	20	RVP 21	3 ~ 230/400-50Hz	DO 06 97V	430	315	360	42.5	FB 20 / FC 20
DO 20V RVP 21 M	20	RVP 21 M	1 ~ 230-50Hz	DO 06 98V	430	315	360	43.0	FB 20 / FC 20

Note: All RVP pumps .. are equipped as standard with an FC filter .. suitable for the size of their suction connection.



HORIZONTAL PUMP SETS - GENERAL DESCRIPTION

As a standard, these pump sets are built with various capacities and they are composed of:

- A horizontal welded sheet steel tank with perfect vacuum seal.
- A rotary vane vacuum pump to be selected according to the required suction flow rate and level of vacuum.
- A digital vacuum switch for adjusting the level of vacuum within which to operate.
- A vacuum gauge for a direct reading of the level of vacuum in the tank.
- A switchgear enclosed in a special plastic casing for tanks from 25 to 50 litres and in a watertight metal casing for tanks of 100 litres upwards.
- A manual valve for vacuum interception.
- A cock for condensation drainage.

The level of vacuum, preset via the digital vacuum switch is automatically maintained in the tank.

The pump operation can be both continuous or automatic.

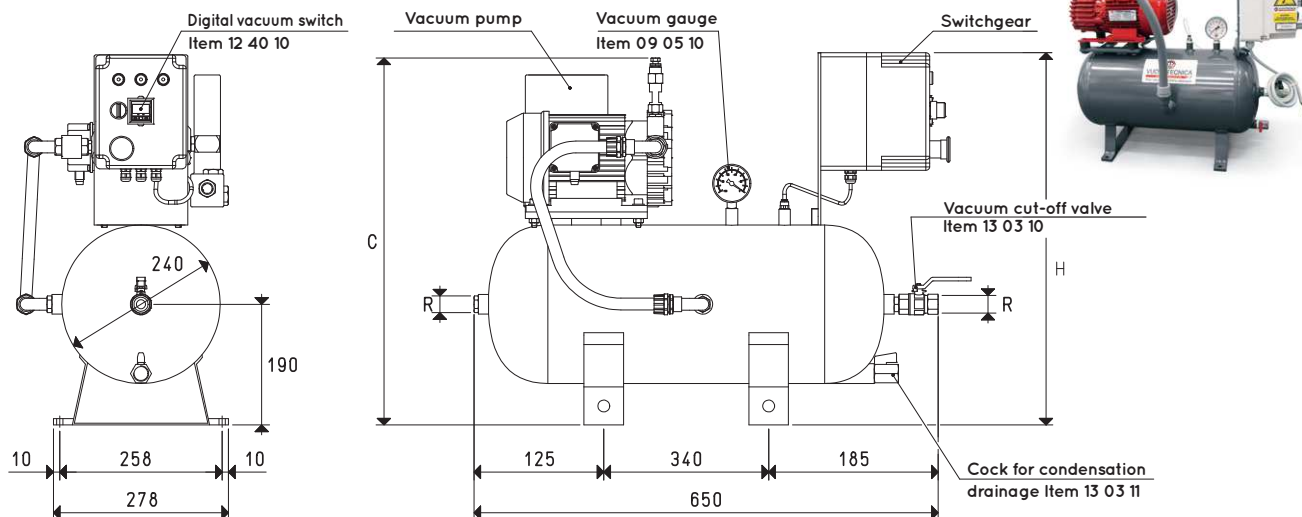
Pump sets are normally used for handling particularly heavy or valuable loads since, in case of electricity failure, they allow the vacuum cups to maintain the grip for a certain amount of time, according to the tank capacity.

These pump sets are recommended for multi-point applications, to centralise vacuum.

These pump sets offer many advantages in energy consumption, since the pump operates only when required by the machine.



HORIZONTAL PUMP SETS DO 25V ...

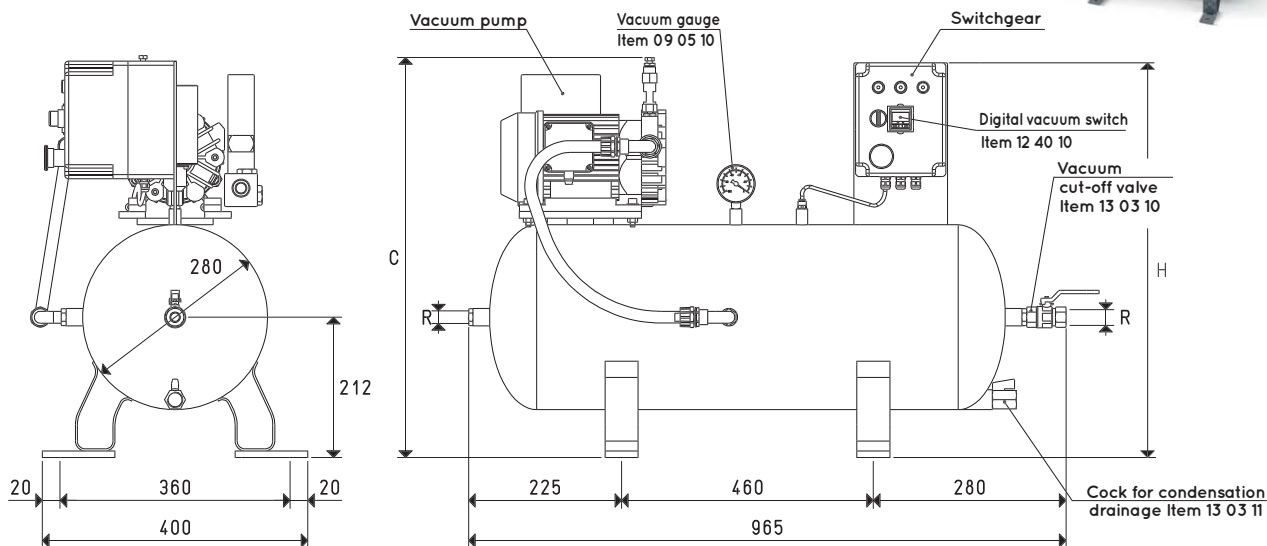


Item	Tank Litres	Pump Mod.	Motor performance Volt	Switchgear item	C	H	R Ø	Weight Kg	Filter Accessories item
DO 25V VTL 5	25	VTL 5	3 ~ 230/400-50Hz	DO 06 97V	540	570	G1/2"	33.5	FB 20 / FC 20
DO 25V VTL 5 M	25	VTL 5 M	1 ~ 230/50Hz	DO 06 98V	540	570	G1/2"	34.0	FB 20 / FC 20
DO 25V VTL 10	25	VTL 10	3 ~ 230/400-50Hz	DO 06 97V	540	570	G1/2"	39.5	FB 20 / FC 20
DO 25V VTL 10 M	25	VTL 10 M	1 ~ 230-50Hz	DO 06 98V	540	570	G1/2"	40.0	FB 20 / FC 20
DO 25V RVP 15	25	RVP 15	3 ~ 230/400-50Hz	DO 06 97V	525	570	G1/2"	35.0	FB 20 / FC 20
DO 25V RVP 15 M	25	RVP 15 M	1 ~ 230-50Hz	DO 06 98V	525	570	G1/2"	35.5	FB 20 / FC 20

Note: Add the letters SR to the item for a pump set supplied with sheets for movement (Example: DO 25V VTL 10 SR).

All RVP pumps .. are equipped as standard with an FC filter .. suitable for the size of their suction connection.

HORIZONTAL PUMP SETS DO 50V ...



Item	Tank Litres	Pump Mod.	Motor performance Volt	Switchgear item	C	H	R Ø	Weight Kg	Filter Accessories item
DO 50V VTL 5	50	VTL 5	3 ~ 230/400-50Hz	DO 06 97V	620	612	G1/2"	39.3	FB 20 / FC 20
DO 50V VTL 5 M	50	VTL 5 M	1 ~ 230/50Hz	DO 06 98V	620	612	G1/2"	39.8	FB 20 / FC 20
DO 50V VTL 10	50	VTL 10	3 ~ 230/400-50Hz	DO 06 97V	620	612	G1/2"	45.3	FB 20 / FC 20
DO 50V VTL 10 M	50	VTL 10 M	1 ~ 230-50Hz	DO 06 98V	620	612	G1/2"	45.8	FB 20 / FC 20
DO 50V RVP 15	50	RVP 15	3 ~ 230/400-50Hz	DO 06 97V	680	612	G1/2"	40.8	FB 20 / FC 20
DO 50V RVP 15 M	50	RVP 15 M	1 ~ 230-50Hz	DO 06 98V	680	612	G1/2"	41.3	FB 20 / FC 20

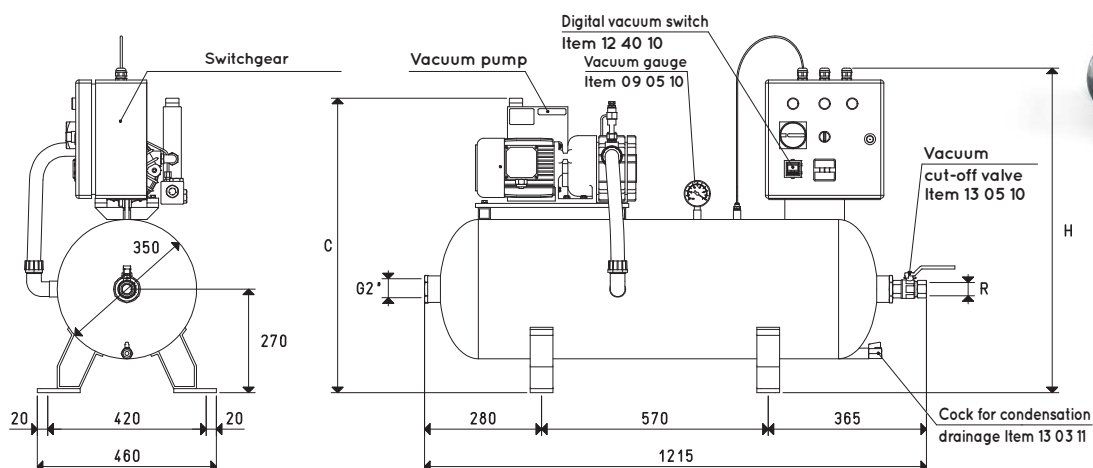
Note: Add the letters SR to the item for a pump set supplied with sheets for movement (Example: DO 50V VTL 10 SR).

All RVP pumps .. are equipped as standard with an FC filter .. suitable for the size of their suction connection.



HORIZONTAL PUMP SETS DO 100V ...

3D drawings are available on vuotecnica.net

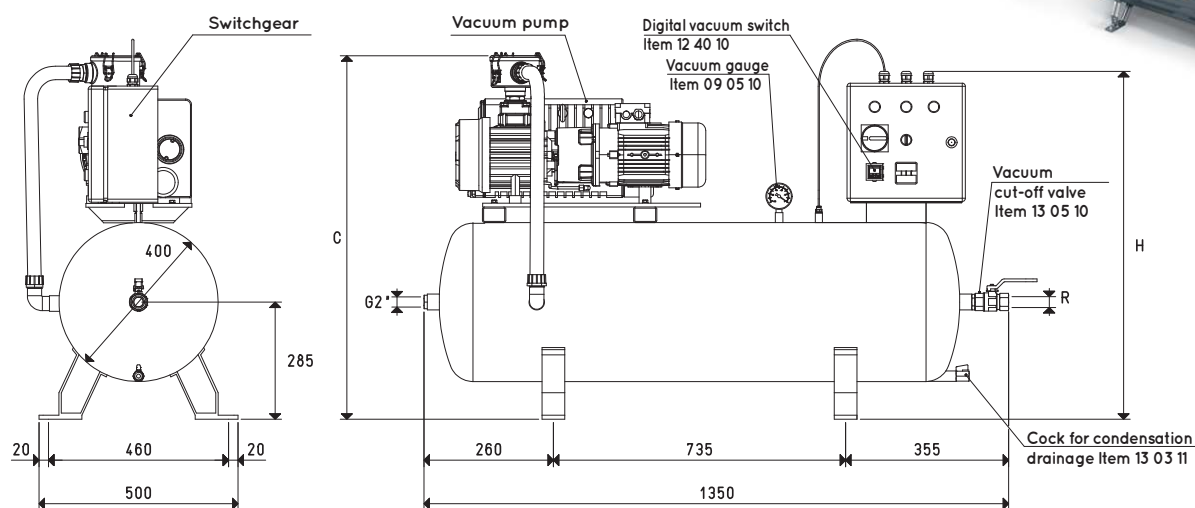


Item	Tank Litres	Pump Mod.	Motor performance Volt	Switchgear item	C	H	R Ø	Weight Kg	Filter Accessories item
DO 100V VTL 10/F	100	VTL 10/F	3 ~ 230/400-50Hz	DO 100 97V	710	800	G1"	66.7	FB 30 / FC 30
DO 100V VTL 10/F M	100	VTL 10/F M	1 ~ 230/50Hz	DO 100 98V	710	800	G1"	68.2	FB 30 / FC 30
DO 100V VTL 15/F	100	VTL 15/F	3 ~ 230/400-50Hz	DO 100 97V	710	800	G1"	68.7	FB 30 / FC 30
DO 100V VTL 15/F M	100	VTL 15/F M	1 ~ 230-50Hz	DO 100 98V	710	800	G1"	70.2	FB 30 / FC 30
DO 100V RVP 15	100	RVP 15	3 ~ 230/400-50Hz	DO 100 97V	770	800	G1"	56.2	FB 30 / FC 30
DO 100V RVP 15 M	100	RVP 15 M	1 ~ 230-50Hz	DO 100 98V	770	800	G1"	56.7	FB 30 / FC 30
DO 100V VTL 20/F	100	VTL 20/F	3 ~ 230/400-50Hz	DO 100 97V	710	800	G1"	71.7	FB 30 / FC 30
DO 100V VTL 20/F M	100	VTL 20/F M	1 ~ 230-50Hz	DO 100 98V	710	800	G1"	73.2	FB 30 / FC 30
DO 100V RVP 21	100	RVP 21	3 ~ 230/400-50Hz	DO 100 97V	765	800	G1"	62.2	FB 30 / FC 30
DO 100V RVP 21 M	100	RVP 21 M	1 ~ 230-50Hz	DO 100 98V	765	800	G1"	64.7	FB 30 / FC 30

Note: Add the letters SR to the item for a pump set supplied with sheets for movement (Example: DO 100V VTL 10/F SR).

All RVP pumps .. are equipped as standard with an FC filter .. suitable for the size of their suction connection.

HORIZONTAL PUMP SETS DO 150V ...



Item	Tank Litres	Pump Mod.	Motor performance Volt	Switchgear item	C	H	R Ø	Weight Kg	Filter Accessories item
DO 150V VTL 25/FG	150	VTL 25/FG	3 ~ 230/400-50Hz	DO 100 97V	805	840	G1"	79.0	FB 30 / FC 30
DO 150V VTL 30/FG	150	VTL 30/FG	3 ~ 230/400-50Hz	DO 100 97V	805	840	G1"	83.0	FB 30 / FC 30
DO 150V VTL 35/FG	150	VTL 35/FG	3 ~ 230/400-50Hz	DO 100 97V	805	840	G1"	85.0	FB 30 / FC 30
DO 150V RVP 40	150	RVP 40	3 ~ 230/400-50Hz	DO 100 97V	938	840	G1"	97.0	FB 30 / FC 30
DO 150V VTL 50/G1	150	VTL 50/G1	3 ~ 230/400-50Hz	DO 100 97V	880	840	G1"	102.0	FB 30 / FC 30
DO 150V RVP 60	150	RVP 60	3 ~ 230/400-50Hz	DO 100 97V	960	840	G1"	107.0	FB 30 / FC 30
DO 150V VTL 75/G1	150	VTL 75/G1	3 ~ 230/400-50Hz	DO 100 97V	930	840	G1"	118.5	FB 30 / FC 30

Note: Add the letters SR to the item for a pump set supplied with sheets for movement (Example: DO 150V VTL 30/FG SR).

All RVP pumps .. are equipped as standard with an FC filter .. suitable for the size of their suction connection.

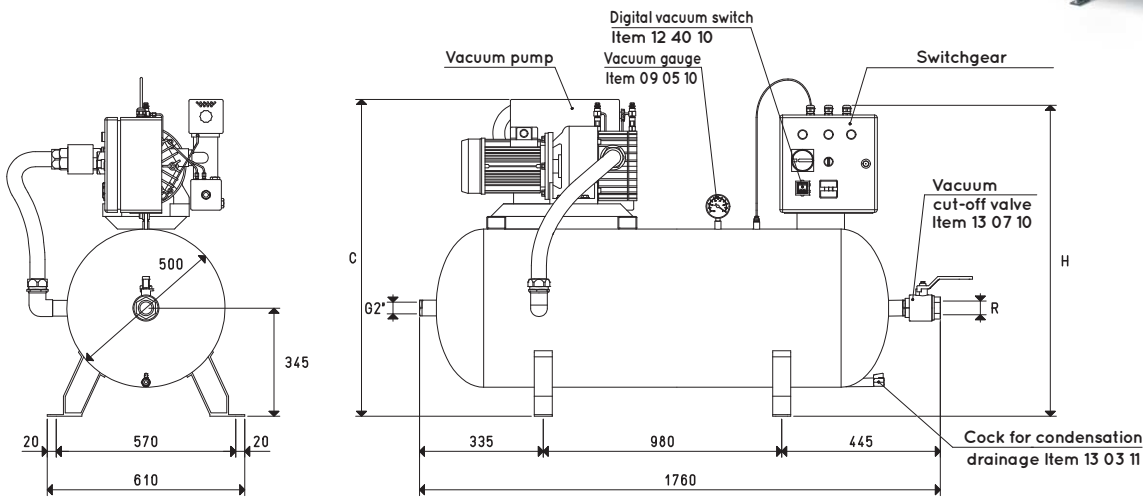
Transformation ratio: N (newton) = Kg x 9.81 (force of gravity)

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

Adapters for GAS - NPT threading available on page 1.130



HORIZONTAL PUMP SETS DO 300V ...

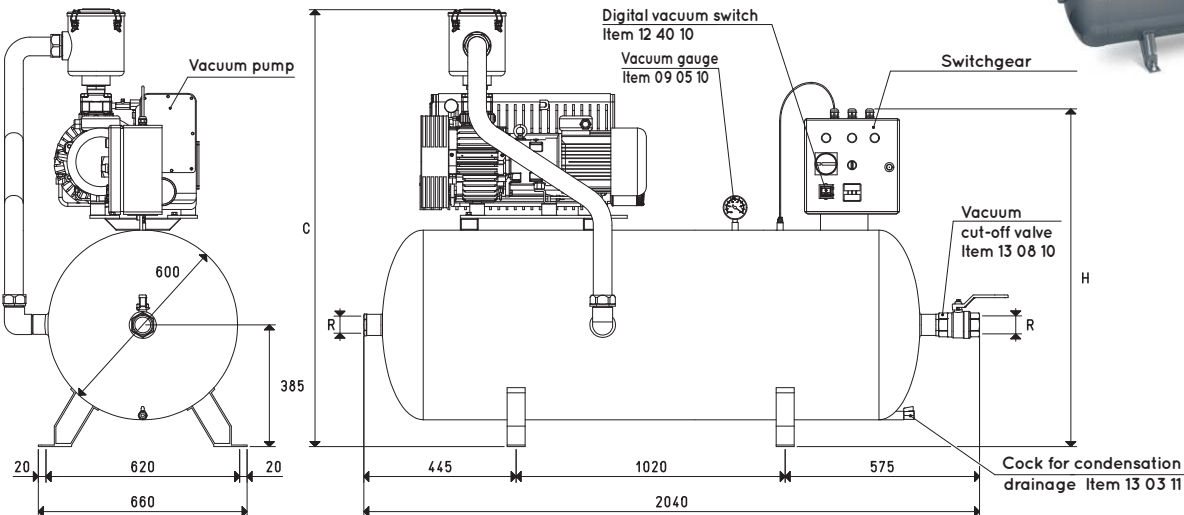


Item	Tank Litres	Pump Mod.	Motor performance Volt	Switchgear item	C	H	R Ø	Weight Kg	Filter Accessories item
DO 300V RVP 60	300	RVP 60	3 ~ 230/400-50Hz	DO 100 97V	1040	940	G1"1/2	141.3	FB 50 / FC 50
DO 300V VTL 75/G1	300	VTL 75/G1	3 ~ 230/400-50Hz	DO 100 97V	1040	940	G1"1/2	153.3	FB 50 / FC 50
DO 300V RVP 100	300	RVP 100	3 ~ 230/400-50Hz	DO 100 97V	1040	940	G1"1/2	164.3	FB 50 / FC 50
DO 300V VTL 105/G1	300	VTL 105/G1	3 ~ 230/400-50Hz	DO 100 97V	1080	940	G1"1/2	181.7	FB 50 / FC 50

Note: Add the letters SR to the item for a pump set supplied with sheets for movement (Example: DO 300V RVP 100 SR).

All RVP pumps .. are equipped as standard with an FC filter .. suitable for the size of their suction connection.

HORIZONTAL PUMP SETS DO 500V ...



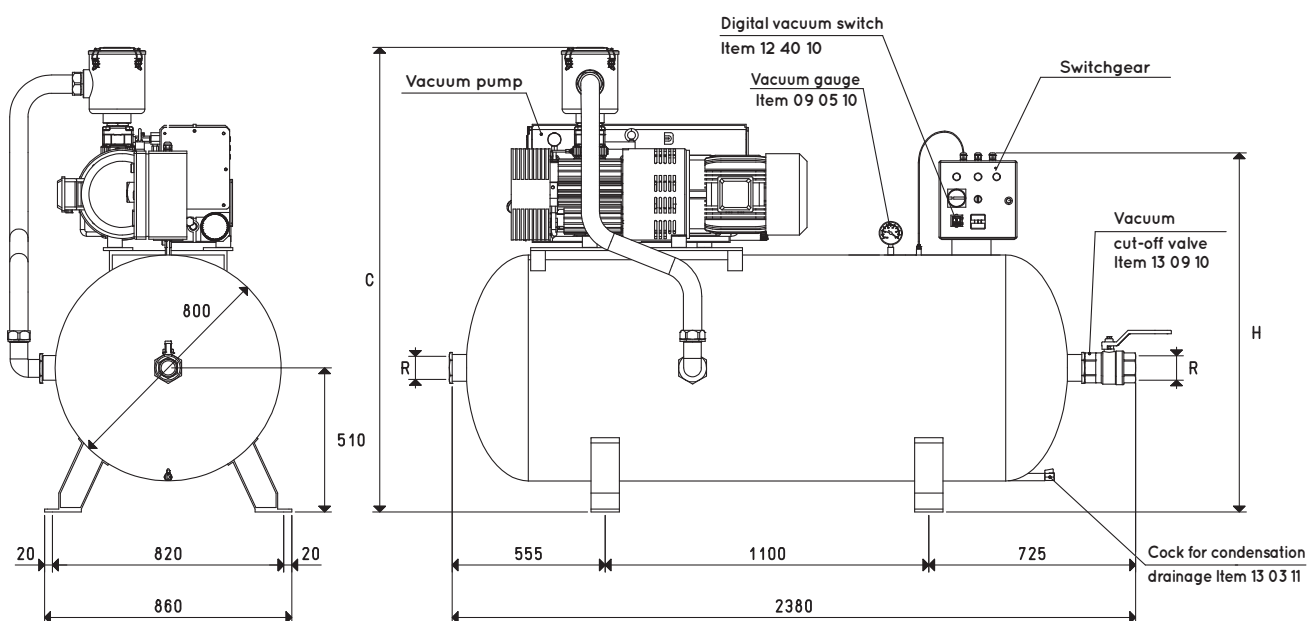
Item	Tank Litres	Pump Mod.	Motor performance Volt	Switchgear item	C	H	R Ø	Weight Kg	Filter Accessories item
DO 500V RVP 100	500	RVP 100	3 ~ 230/400-50Hz	DO 100 97V	1060	1010	G2"	234.2	FB 60 / FC 60
DO 500V VTL 105/G1	500	VTL 105/G1	3 ~ 230/400-50Hz	DO 100 97V	1180	1010	G2"	249.8	FB 60 / FC 60
DO 500V RVP 160	500	RVP 160	3 ~ 230/400-50Hz	DO 100 97V	1198	1010	G2"	311.8	FB 60 / FC 60
DO 500V RVP 200	500	RVP 200	3 ~ 230/400-50Hz	DO 100 97V	1220	1010	G2"	314.8	FB 60 / FC 60
DO 500V RVP 250	500	RVP 250	3 ~ 400/690-50Hz	DO 100 97V	1220	1010	G2"	365.2	FB 60 / FC 60
DO 500V RVP 300	500	RVP 300	3 ~ 400/690-50Hz	DO 100 97V	1220	1010	G2"	379.2	FB 60 / FC 60

Note: Add the letters SR to the item for a pump set supplied with sheets for movement (Example: DO 500V RVP 200 SR).

All RVP pumps .. are equipped as standard with an FC filter .. suitable for the size of their suction connection.



HORIZONTAL PUMP SETS DO 1000V ...



Item	Tank Litres	Pump Mod.	Motor performance Volt	Switchgear item	C	H	R Ø	Weight Kg	Filter Accessories item
DO 1000V RVP 200	1000	RVP 200	3 ~ 230/400-50Hz	DO 100 97V	1615	1250	G3"	443	FC 80
DO 1000V RVP 250	1000	RVP 250	3 ~ 400/690-50Hz	DO 100 97V	1615	1250	G3"	448	FC 80
DO 1000V RVP 300	1000	RVP 300	3 ~ 400/690-50Hz	DO 100 97V	1615	1250	G3"	464	FC 80

Note: All RVP pumps .. are equipped as standard with an FC filter .. suitable for the size of their suction connection.

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

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

Adapters for GAS - NPT threading available on page 1.130

HORIZONTAL SAFETY PUMP SETS – GENERAL DESCRIPTION

Safety pump sets have been designed to centralise vacuum in all work environments such as hospitals, laboratories, etc. where vacuum must be guaranteed 24/7.

They are essentially composed of:

- A horizontal welded sheet steel tank with perfect vacuum seal.
- Two rotary vane vacuum pumps to be selected according to the required suction flow rate and level of vacuum.
- A vacuum gauge for a direct reading of the level of vacuum in the tank.
- Two manual valves for vacuum interception, located between the pumps and the tank and one installed on the tank, for the exclusion or connection of the pump set on a user system.
- A cock for condensation drainage.
- A switchgear enclosed in a special watertight metal casing with switches for automatic or manual pump operation, an alarm device with sound and light signal, alarm-test buttons and hour-counter for counting the hours of actual operation of every single pump.

These safety pump sets normally provide for the operation of one pump with subsequent automatic insertion of the second one for larger consumptions and when, for whatever reason, the plant level of vacuum goes under the preset value.

The automatic timed inverter, located on the switchboard, accurately alternates the pump start-up, so that they are both subject to the same mechanical wear.

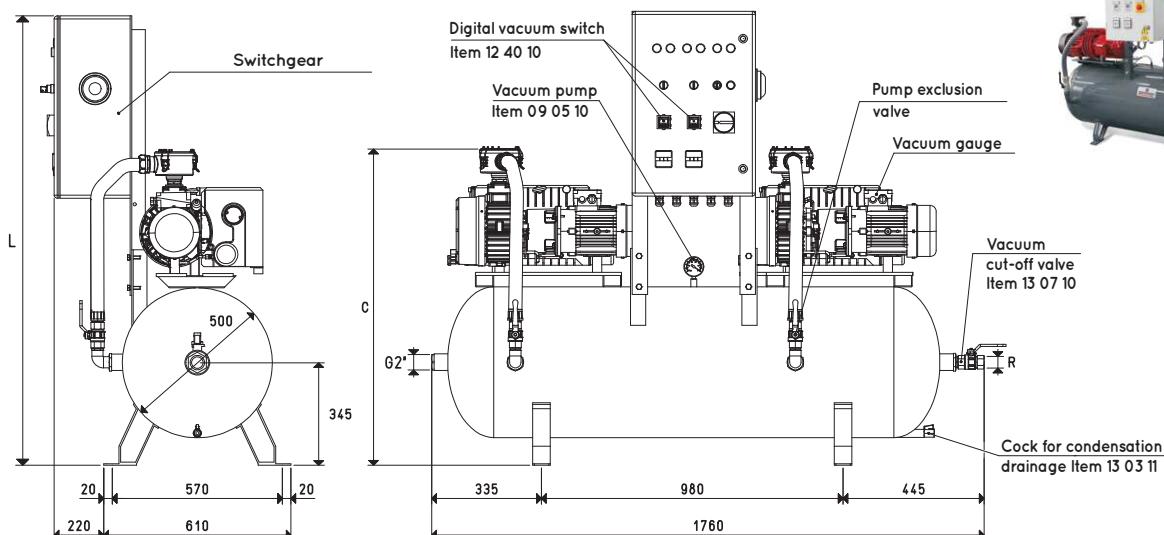
The switchboard and remote alarm systems operate when the plant level of vacuum is below the set safety value.





HORIZONTAL SAFETY PUMP SETS DSO 300V ...

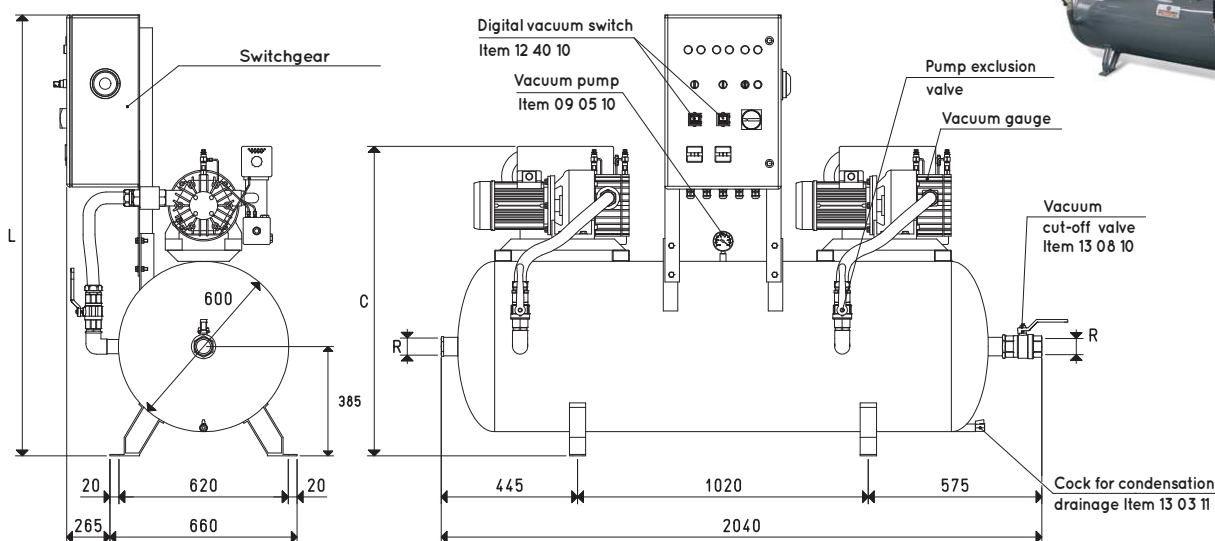
3D drawings are available on vuototecnica.net



Item	Tank Litres	2 Pumps Mod.	Motor performance Volt	Switchgear item	C	L	R Ø	Weight Kg	Filter Accessories item
DSO 300V RVP 40	300	RVP 40	3 ~ 230/400-50Hz	DSO 300 97V	1005	1480	G1"1/2	204.8	FB 50 / FC 50
DSO 300V VTL 50/G1	300	VTL 50/G1	3 ~ 230/400-50Hz	DSO 300 97V	990	1480	G1"1/2	214.8	FB 50 / FC 50
DSO 300V RVP 60	300	RVP 60	3 ~ 230/400-50Hz	DSO 300 97V	1040	1480	G1"1/2	224.8	FB 50 / FC 50
DSO 300V VTL 75/G1	300	VTL 75/G1	3 ~ 230/400-50Hz	DSO 300 97V	1040	1480	G1"1/2	259.8	FB 50 / FC 50
DSO 300V RVP 100	300	RVP 100	3 ~ 230/400-50Hz	DSO 300 97V	1040	1480	G1"1/2	270.8	FB 50 / FC 50
DSO 300V VTL 105/G1	300	VTL 105/G1	3 ~ 230/400-50Hz	DSO 300 97V	1080	1480	G1"1/2	302.0	FB 50 / FC 50

Note: All RVP pumps ... are equipped as standard with an FC filter ... suitable for the size of their suction connection.

HORIZONTAL SAFETY PUMP SETS DSO 500V ...



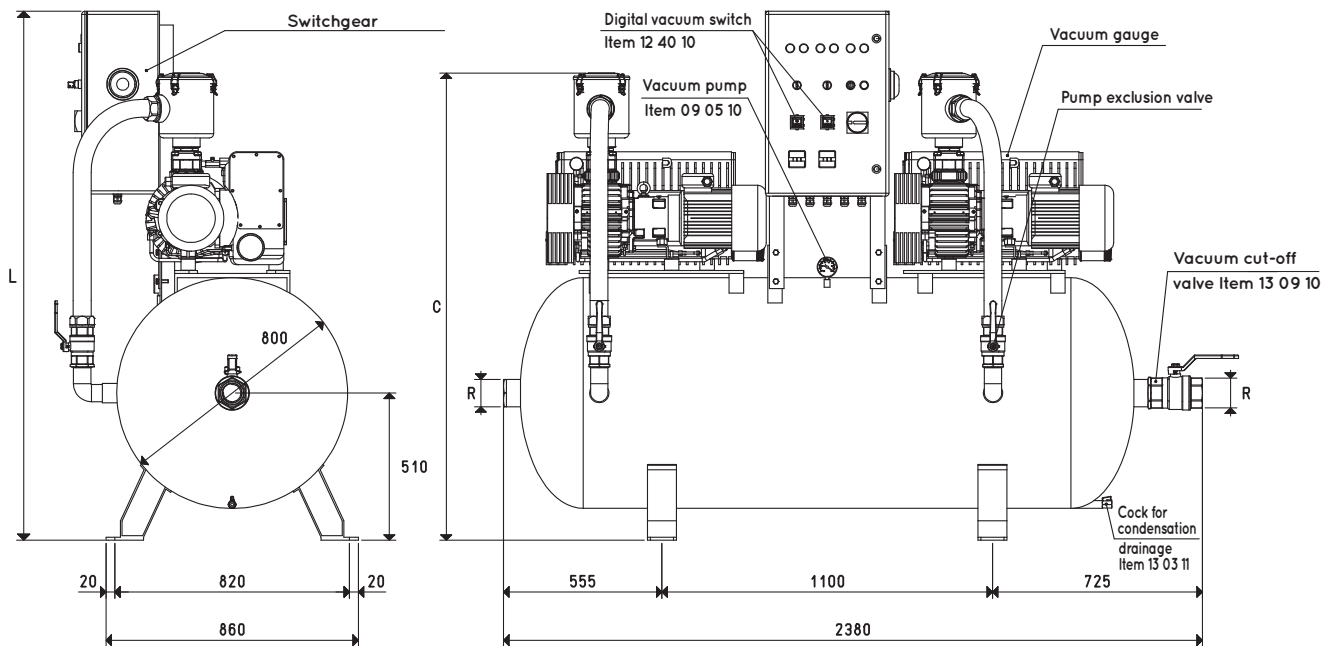
Item	Tank Litres	2 Pumps Mod.	Motor performance Volt	Switchgear item	C	L	R Ø	Weight Kg	Filter Accessories item
DSO 500V VTL 50/G1	500	VTL 50/G1	3 ~ 230/400-50Hz	DSO 300 97V	1090	1510	G2"	287.8	FB 60 / FC 60
DSO 500V RVP 60	500	RVP 60	3 ~ 230/400-50Hz	DSO 300 97V	1130	1510	G2"	297.0	FB 60 / FC 60
DSO 500V VTL 75/G1	500	VTL 75/G1	3 ~ 230/400-50Hz	DSO 300 97V	1140	1510	G2"	332.8	FB 60 / FC 60
DSO 500V RVP 100	500	RVP 100	3 ~ 230/400-50Hz	DSO 300 97V	1130	1510	G2"	343.3	FB 60 / FC 60
DSO 500V VTL 105/G1	500	VTL 105/G1	3 ~ 230/400-50Hz	DSO 300 97V	1180	1510	G2"	375.0	FB 60 / FC 60
DSO 500V RVP 160	500	RVP 160	3 ~ 230/400-50Hz	DSO 300 97V	1430	1510	G2"	475.0	FB 60 / FC 60
DSO 500V RVP 200	500	RVP 200	3 ~ 230/400-50Hz	DSO 300 97V	1430	1510	G2"	481.0	FB 60 / FC 60

Note: All RVP pumps ... are equipped as standard with an FC filter ... suitable for the size of their suction connection.

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

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

Adapters for GAS - NPT threading available on page 1.130



Item	Tank Litres	2 Pumps Mod.	Motor performance Volt	Switchgear item	C	L	R Ø	Weight Kg	Filter Accessories item
DSO 1000V RVP 60	1000	RVP 60	3 ~ 230/400-50Hz	DSO 300 97V	1318	1730	G3"	366.8	FC 80
DSO 1000V VTL 75/G1	1000	VTL 75/G1	3 ~ 230/400-50Hz	DSO 300 97V	1380	1730	G3"	389.8	FC 80
DSO 1000V RVP 100	1000	RVP 100	3 ~ 230/400-50Hz	DSO 300 97V	1298	1730	G3"	396.8	FC 80
DSO 1000V VTL 105/G1	1000	VTL 105/G1	3 ~ 230/400-50Hz	DSO 300 97V	1430	1730	G3"	432.0	FC 80
DSO 1000V RVP 160	1000	RVP 160	3 ~ 230/400-50Hz	DSO 300 97V	1678	1730	G3"	446.0	FC 80
DSO 1000V RVP 200	1000	RVP 200	3 ~ 230/400-50Hz	DSO 300 97V	1678	1730	G3"	452.0	FC 80
DSO 1000V RVP 250	1000	RVP 250	3 ~ 400/690-50Hz	DSO 300 97V	1639	1730	G3"	545.2	FC 80
DSO 1000V RVP 300	1000	RVP 300	3 ~ 400/690-50Hz	DSO 300 97V	1639	1730	G3"	573.2	FC 80

Note: All RVP pumps ... are equipped as standard with an FC filter ... suitable for the size of their suction connection.

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

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

Adapters for GAS - NPT threading available on page 1.130



VERTICAL PUMP SETS - GENERAL DESCRIPTION

As a standard, these pump sets are built with various capacities and they are composed of:

- A vertical welded sheet steel tank with perfect vacuum seal.
- A rotary vane vacuum pump to be selected according to the required suction flow rate and level of vacuum.
- A digital vacuum switch for adjusting the level of vacuum within which to operate.
- A vacuum gauge for a direct reading of the level of vacuum in the tank.
- Switchgear enclosed in a special metal watertight casing.
- A manual valve for vacuum interception.
- A cock for condensation drainage.

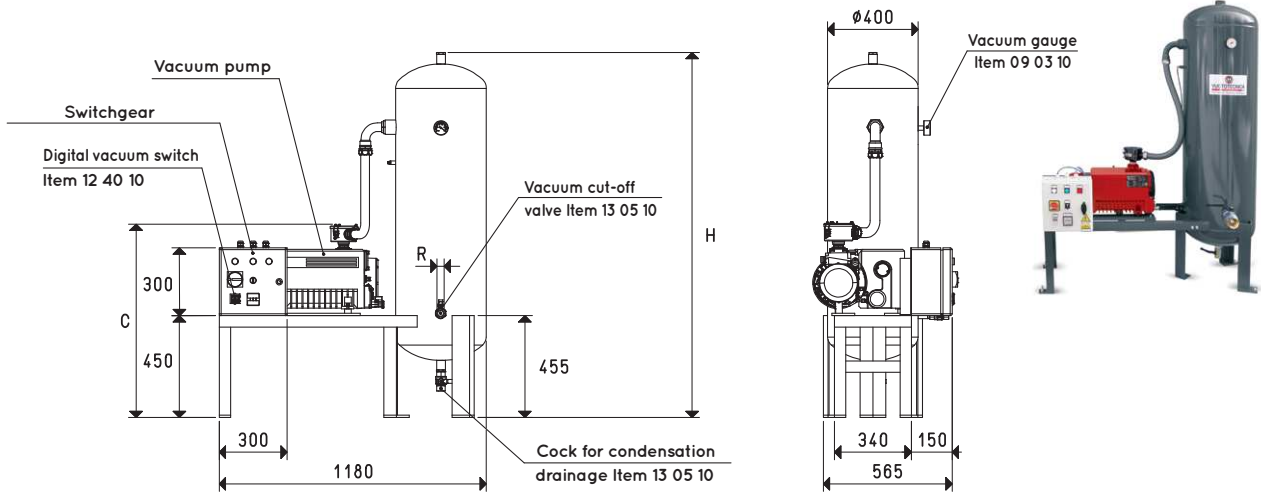
The level of vacuum, preset via the mini vacuum switch is automatically maintained in the tank. The pump operation can be both continuous or automatic.

The level of vacuum, preset via the mini vacuum switch is automatically maintained in the tank. The pump operation can be both continuous or automatic. These pump sets are normally used for interconnecting several vacuum-operated machines and, for safety reasons, for vacuum handlers since, in case of electricity failure, they allow the vacuum cups to maintain the grip for an amount of time proportional to the tank capacity.

As for energy consumption, in both cases these pump sets offer many advantages, since the pump operates only to restore vacuum in the tank within the preset values and its interventions depend exclusively on the quantity of air that is actually sucked at the service.



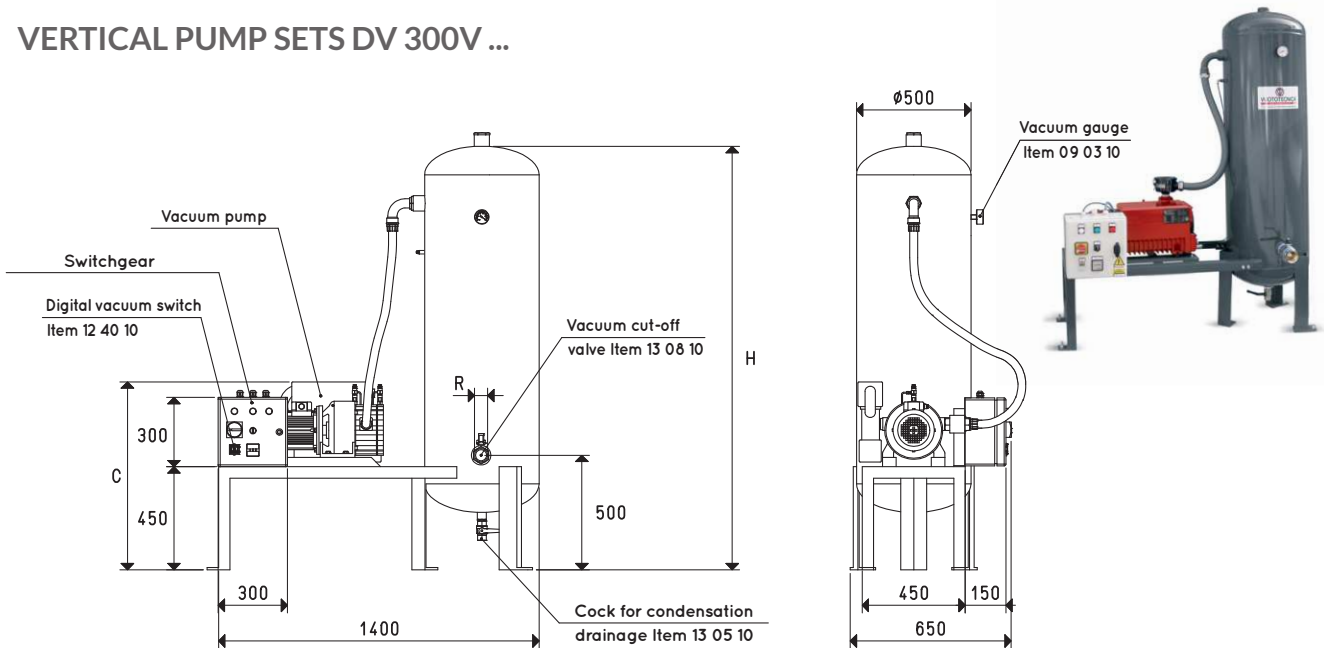
VERTICAL PUMP SETS DV 150V ...



Item	Tank Litres	Pump Mod.	Motor performance Volt	Switchgear item	C	H	R Ø	Weight Kg	Filter Accessories item
DV 150V VTL 25/FG	150	VTL 25/FG	3 ~ 230/400-50Hz	DO 100 97V	730	1600	G1"	103	FB 30 / FC 30
DV 150V VTL 30/FG	150	VTL 30/FG	3 ~ 230/400-50Hz	DO 100 97V	730	1600	G1"	107	FB 30 / FC 30
DV 150V VTL 35/FG	150	VTL 35/FG	3 ~ 230/400-50Hz	DO 100 97V	730	1600	G1"	109	FB 30 / FC 30
DV 150V RVP 40	150	RVP 40	3 ~ 230/400-50Hz	DO 100 97V	816	1600	G1"	120	FB 30 / FC 30
DV 150V VTL 50/G1	150	VTL 50/G1	3 ~ 230/400-50Hz	DO 100 97V	805	1600	G1"	126	FB 30 / FC 30
DV 150V RVP 60	150	RVP 60	3 ~ 230/400-50Hz	DO 100 97V	840	1600	G1"	131	FB 30 / FC 30
DV 150V VTL 75/G1	150	VTL 75/G1	3 ~ 230/400-50Hz	DO 100 97V	855	1600	G1"	148	FB 30 / FC 30

Note: All RVP pumps ... are equipped as standard with an FC filter ... suitable for the size of their suction connection.

VERTICAL PUMP SETS DV 300V ...



Item	Tank Litres	Pump Mod.	Motor performance Volt	Switchgear item	C	H	R Ø	Weight Kg	Filter Accessories item
DV 300V RVP 40	300	RVP 40	3 ~ 230/400-50Hz	DO 100 97V	974	1890	G2"	143	FB 60 / FC 60
DV 300V VTL 50/G1	300	VTL 50/G1	3 ~ 230/400-50Hz	DO 100 97V	805	1890	G2"	156	FB 60 / FC 60
DV 300V RVP 60	300	RVP 60	3 ~ 230/400-50Hz	DO 100 97V	998	1890	G2"	161	FB 60 / FC 60
DV 300V VTL 75/G1	300	VTL 75/G1	3 ~ 230/400-50Hz	DO 100 97V	855	1890	G2"	178	FB 60 / FC 60
DV 300V RVP 100	300	RVP 100	3 ~ 230/400-50Hz	DO 100 97V	988	1890	G2"	179	FB 60 / FC 60
DV 300V VTL 105/G1	300	VTL 105/G1	3 ~ 230/400-50Hz	DO 100 97V	900	1890	G2"	199	FB 60 / FC 60
DV 300V RVP 160	300	RVP 160	3 ~ 230/400-50Hz	DO 100 97V	1019	1890	G2"	206	FB 60 / FC 60
DV 300V RVP 200	300	RVP 200	3 ~ 230/400-50Hz	DO 100 97V	1019	1890	G2"	209	FB 60 / FC 60

Note: All RVP pumps ... are equipped as standard with an FC filter ... suitable for the size of their suction connection.

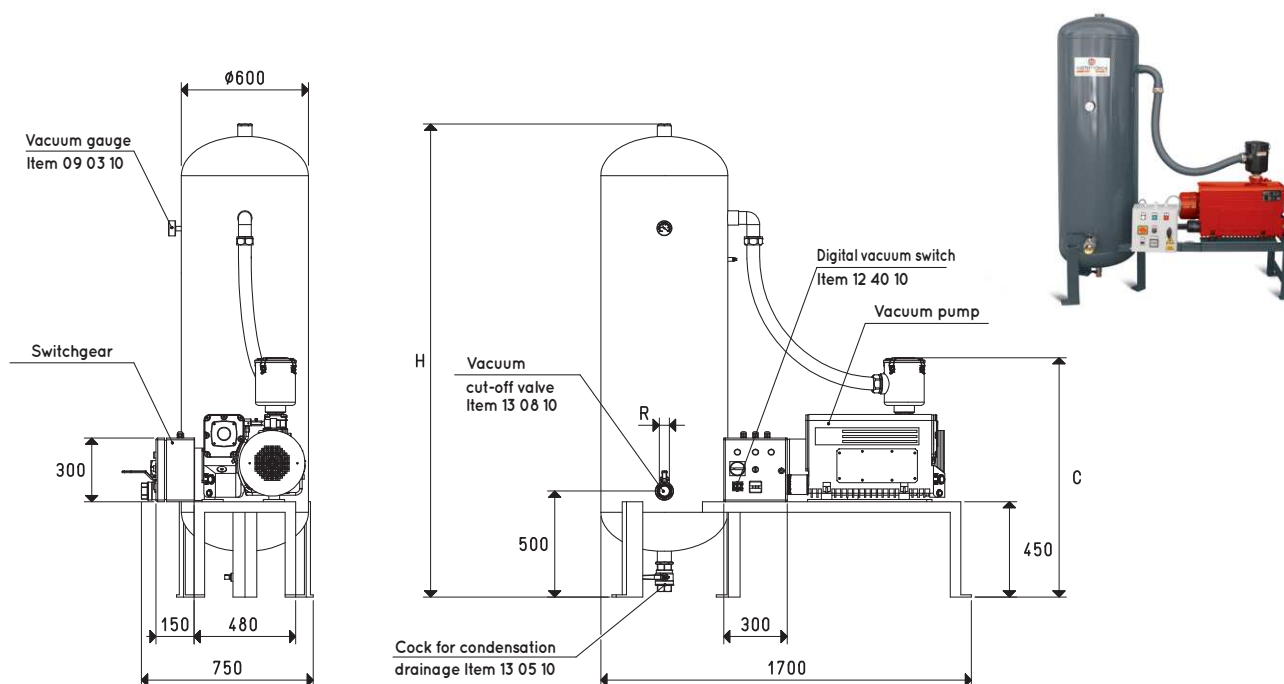
Transformation ratio: N (newton) = Kg x 9.81 (force of gravity)

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

Adapters for GAS - NPT threading available on page 1.130



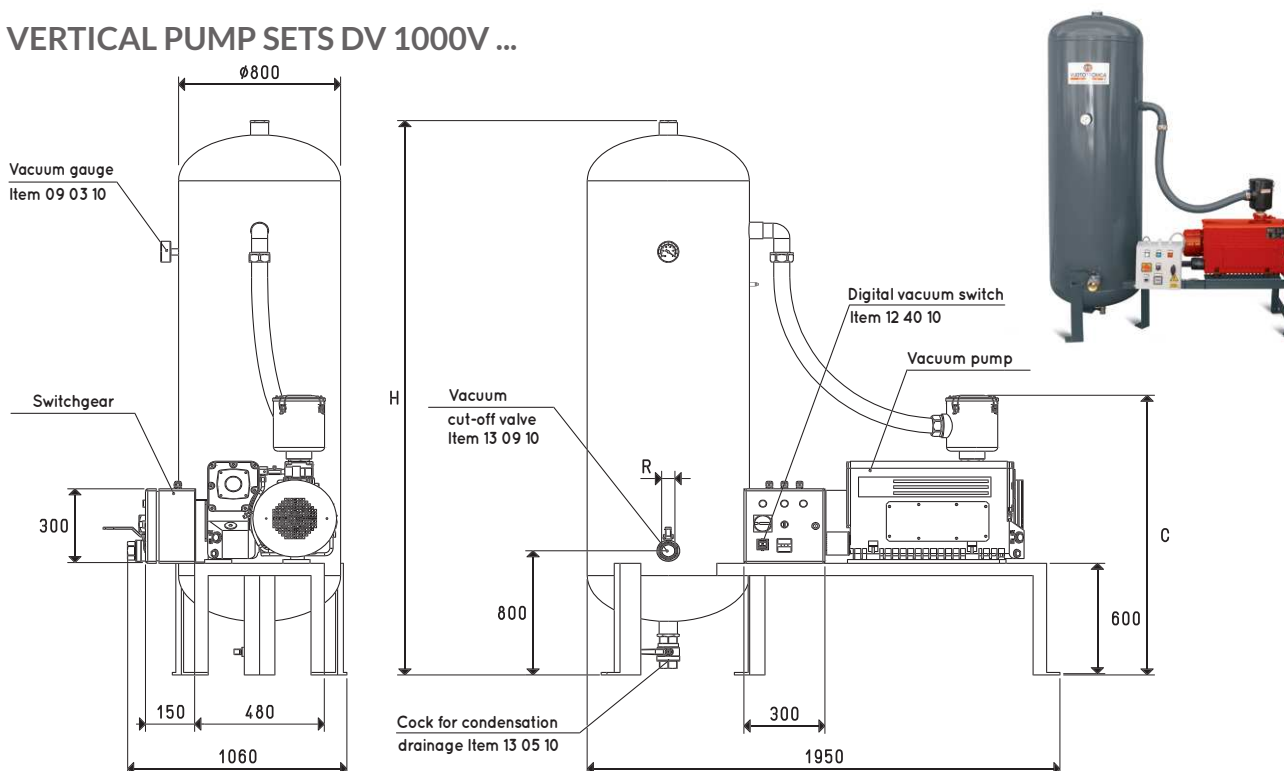
VERTICAL PUMP SETS DV 500V ...



Item	Tank Litres	Pump Mod.	Motor performance Volt	Switchgear item	C	H	R Ø	Weight Kg	Filter Accessories item
DV 500V RVP 160	500	RVP 160	3 ~ 230/400-50Hz	DO 100 97V	1146	2220	G2"	343	FB 60 / FC 60
DV 500V RVP 200	500	RVP 200	3 ~ 230/400-50Hz	DO 100 97V	1146	2220	G2"	346	FB 60 / FC 60
DV 500V RVP 250	500	RVP 250	3 ~ 400/690-50Hz	DO 100 97V	1146	2220	G2"	402	FB 60 / FC 60
DV 500V RVP 300	500	RVP 300	3 ~ 400/690-50Hz	DO 100 97V	1146	2220	G2"	416	FB 60 / FC 60

Note: All RVP pumps ... are equipped as standard with an FC filter ... suitable for the size of their suction connection.

VERTICAL PUMP SETS DV 1000V ...



Item	Tank Litres	Pump Mod.	Motor performance Volt	Switchgear item	C	H	R Ø	Weight Kg	Filter Accessories item
DV 1000V RVP 200	1000	RVP 200	3 ~ 230/400-50Hz	DO 100 97V	1334	2480	G3"	384	FC 80
DV 1000V RVP 250	1000	RVP 250	3 ~ 400/690-50Hz	DO 100 97V	1334	2480	G3"	451	FC 80
DV 1000V RVP 300	1000	RVP 300	3 ~ 400/690-50Hz	DO 100 97V	1334	2480	G3"	465	FC 80

Note: All RVP pumps ... are equipped as standard with an FC filter ... suitable for the size of their suction connection.

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

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

Adapters for GAS - NPT threading available on page 1.130

VERTICAL SAFETY PUMP SETS – GENERAL DESCRIPTION

Safety pump sets have been designed to centralise vacuum in all work environments such as hospitals, laboratories, etc. where vacuum must be guaranteed 24/7.

They are essentially composed of:

- A vertical welded sheet steel tank with perfect vacuum seal.
- Two rotary vane vacuum pumps to be selected according to the required suction flow rate and level of vacuum.
- A vacuum gauge for a direct reading of the level of vacuum in the tank.
- Two manual valves for vacuum interception, located between the pumps and the tank and one installed on the tank, for the exclusion or connection of the pump set on a user system.
- A cock for condensation drainage.
- A switchgear enclosed in a special watertight metal casing with switches for automatic or manual pump operation, an alarm device with sound and light signal, alarm-test buttons and hour-counter for counting the hours of actual operation of every single pump.

These safety pump sets normally provide for the operation of one pump with subsequent automatic insertion of the second one for larger consumptions and when, for whatever reason, the plant level of vacuum goes under the preset value.

The automatic timed inverter, located on the switchboard, accurately alternates the pump start-up, so that they are both subject to the same mechanical wear.

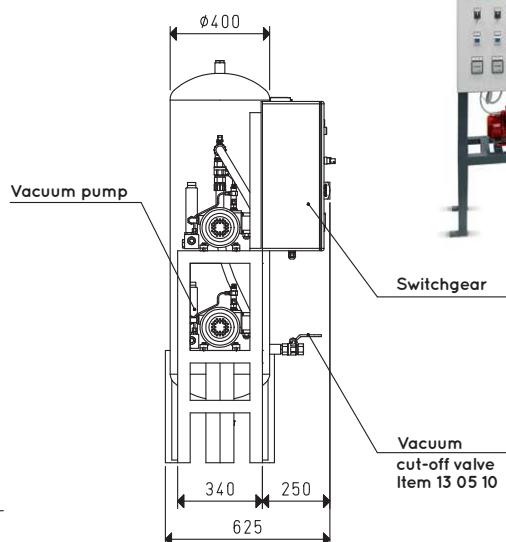
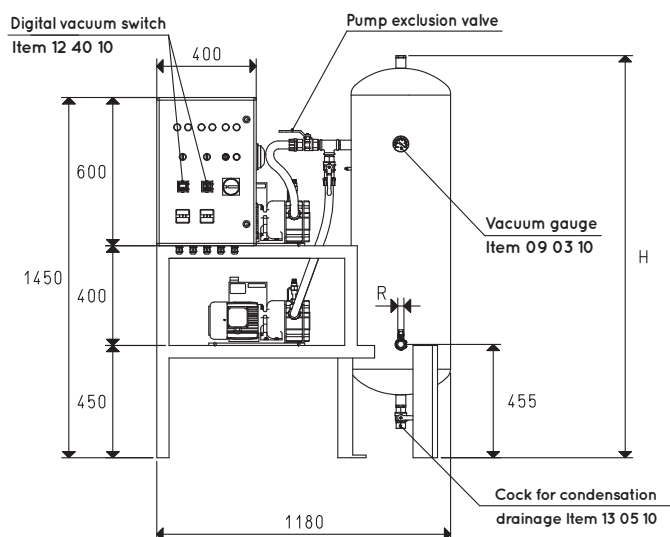
The switchboard and remote alarm systems operate when the plant level of vacuum is below the set safety value.





VERTICAL SAFETY PUMP SETS DSV 150V ..

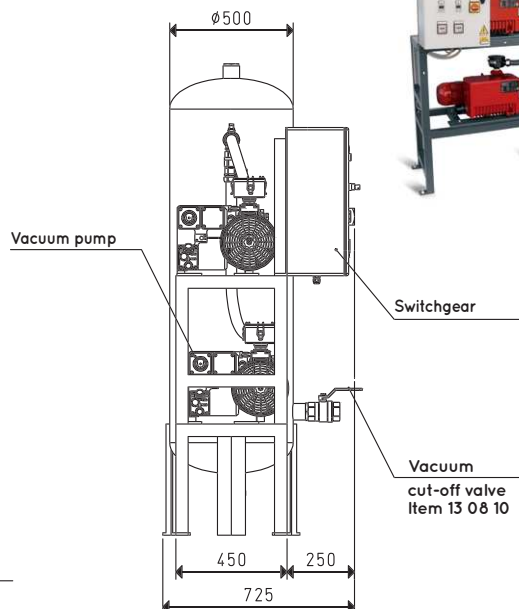
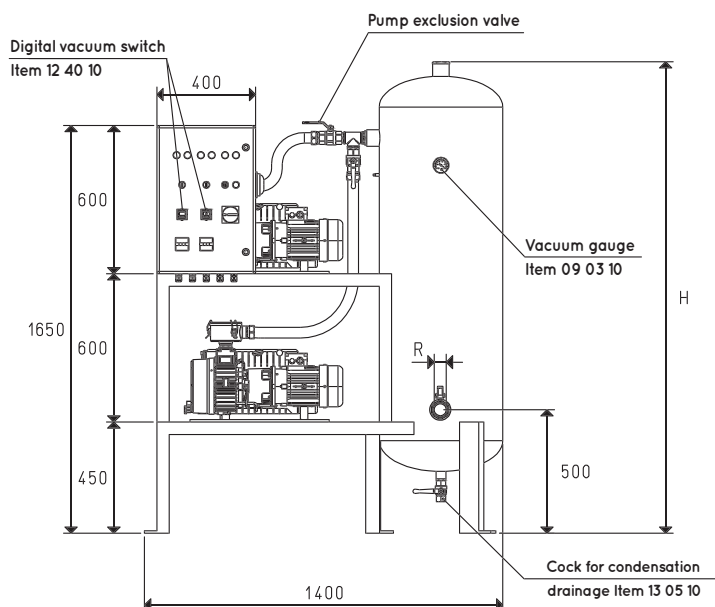
3D drawings are available on vuotecnica.net



Item	Tank Litres	2 Pumps Mod.	Motor performance Volt	Switchgear item	H	R Ø	Weight Kg	Filter Accessories item
DSV 150V VTL 10/F	150	VTL 10/F	3 ~ 230/400-50Hz	DSO 300 97V	1600	G1"	152	FB 30 / FC 30
DSV 150V VTL 15/F	150	VTL 15/F	3 ~ 230/400-50Hz	DSO 300 97V	1600	G1"	164	FB 30 / FC 30
DSV 150V RVP 15	150	RVP 15	3 ~ 230/400-50Hz	DSO 300 97V	1600	G1"	174	FB 30 / FC 30
DSV 150V VTL 20/F	150	VTL 20/F	3 ~ 230/400-50Hz	DSO 300 97V	1600	G1"	167	FB 30 / FC 30
DSV 150V RVP 21	150	RVP 21	3 ~ 230/400-50Hz	DSO 300 97V	1600	G1"	160	FB 30 / FC 30
DSV 150V VTL 25/FG	150	VTL 25/FG	3 ~ 230/400-50Hz	DSO 300 97V	1600	G1"	168	FB 30 / FC 30
DSV 150V VTL 30/FG	150	VTL 30/FG	3 ~ 230/400-50Hz	DSO 300 97V	1600	G1"	172	FB 30 / FC 30
DSV 150V VTL 35/FG	150	VTL 35/FG	3 ~ 230/400-50Hz	DSO 300 97V	1600	G1"	174	FB 30 / FC 30

Note: All RVP pumps ... are equipped as standard with an FC filter ... suitable for the size of their suction connection.

VERTICAL SAFETY PUMP SETS DSV 300V ..



Item	Tank Litres	2 Pumps Mod.	Motor performance Volt	Switchgear item	H	R Ø	Weight Kg	Filter Accessories item
DSV 300V RVP 40	300	RVP 40	3 ~ 230/400-50Hz	DSO 300 97V	1890	G2"	223	FB 60 / FC 60
DSV 300V VTL 50/G1	300	VTL 50/G1	3 ~ 230/400-50Hz	DSO 300 97V	1890	G2"	226	FB 60 / FC 60
DSV 300V RVP 60	300	RVP 60	3 ~ 230/400-50Hz	DSO 300 97V	1890	G2"	237	FB 60 / FC 60
DSV 300V VTL 75/G1	300	VTL 75/G1	3 ~ 230/400-50Hz	DSO 300 97V	1890	G2"	249	FB 60 / FC 60
DSV 300V RVP 100	300	RVP 100	3 ~ 230/400-50Hz	DSO 300 97V	1890	G2"	246	FB 60 / FC 60
DSV 300V VTL 105/G1	300	VTL 105/G1	3 ~ 230/400-50Hz	DSO 300 97V	1890	G2"	270	FB 60 / FC 60

Note: All RVP pumps ... are equipped as standard with an FC filter ... suitable for the size of their suction connection.

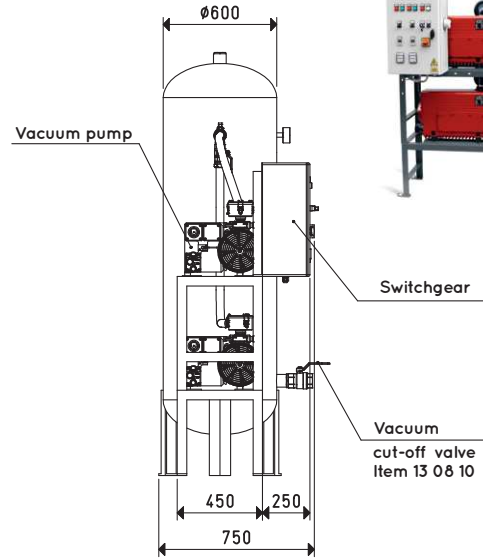
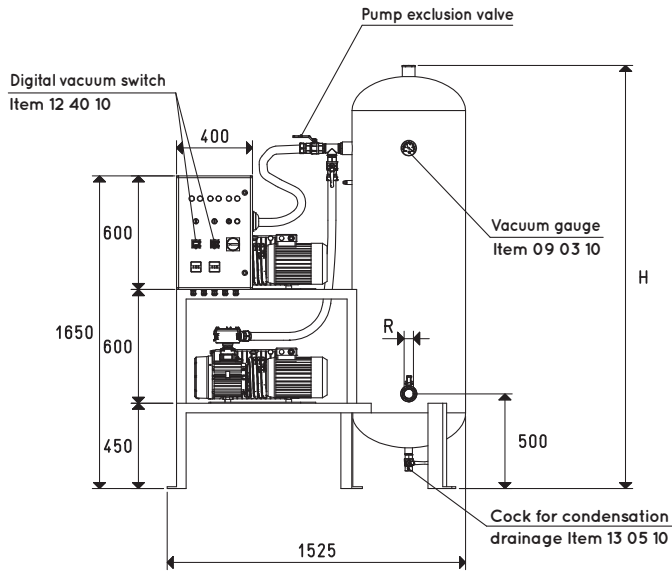
Transformation ratio: N (newton) = Kg x 9.81 (force of gravity)

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

Adapters for GAS - NPT threading available on page 1.130



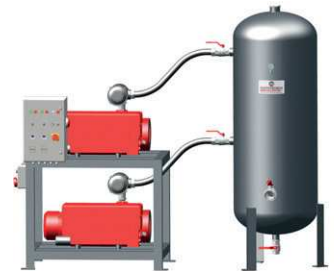
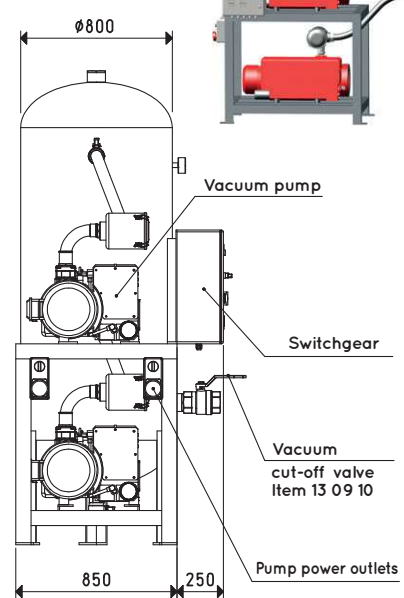
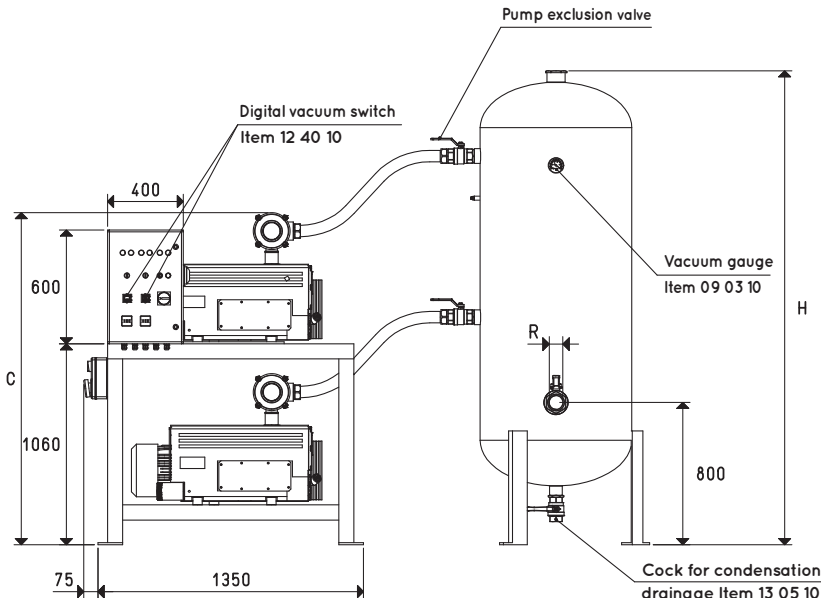
VERTICAL SAFETY PUMP SETS DSV 500V ..



Item	Tank Litres	2 Pumps Mod.	Motor performance Volt	Switchgear item	H	R Ø	Weight Kg	Filter Accessories item
DSV 500V RVP 60	500	RVP 60	3 ~ 230/400-50Hz	DSO 300 97V	2220	G2"	320	FB 60 / FC 60
DSV 500V VTL 75/G1	500	VTL 75/G1	3 ~ 230/400-50Hz	DSO 300 97V	2220	G2"	355	FB 60 / FC 60
DSV 500V RVP 100	500	RVP 100	3 ~ 230/400-50Hz	DSO 300 97V	2220	G2"	359	FB 60 / FC 60
DSV 500V VTL 105/G1	500	VTL 105/G1	3 ~ 230/400-50Hz	DSO 300 97V	2220	G2"	396	FB 60 / FC 60
DSV 500V RVP 160	500	RVP 160	3 ~ 230/400-50Hz	DSO 300 97V	2220	G2"	491	FB 60 / FC 60
DSV 500V RVP 200	500	RVP 200	3 ~ 230/400-50Hz	DSO 300 97V	2220	G2"	497	FB 60 / FC 60

Note: All RVP pumps ... are equipped as standard with an FC filter ... suitable for the size of their suction connection.

VERTICAL SAFETY PUMP SETS DSV 1000V ..



Item	Tank Litres	2 Pumps Mod.	Motor performance Volt	Switchgear item	C	H	R Ø	Weight Kg	Filter Accessories item
DSV 1000V RVP 160	1000	RVP 160	3 ~ 230/400-50Hz	DSO 300 97V	1751	2480	G3"	564	FC 80
DSV 1000V RVP 200	1000	RVP 200	3 ~ 230/400-50Hz	DSO 300 97V	1751	2480	G3"	570	FC 80
DSV 1000V RVP 250	1000	RVP 250	3 ~ 400/690-50Hz	DSO 300 97V	1751	2480	G3"	679	FC 80
DSV 1000V RVP 300	1000	RVP 300	3 ~ 400/690-50Hz	DSO 300 97V	1751	2480	G3"	707	FC 80

Note: All RVP pumps .. are equipped as standard with an FC filter .. suitable for the size of their suction connection.

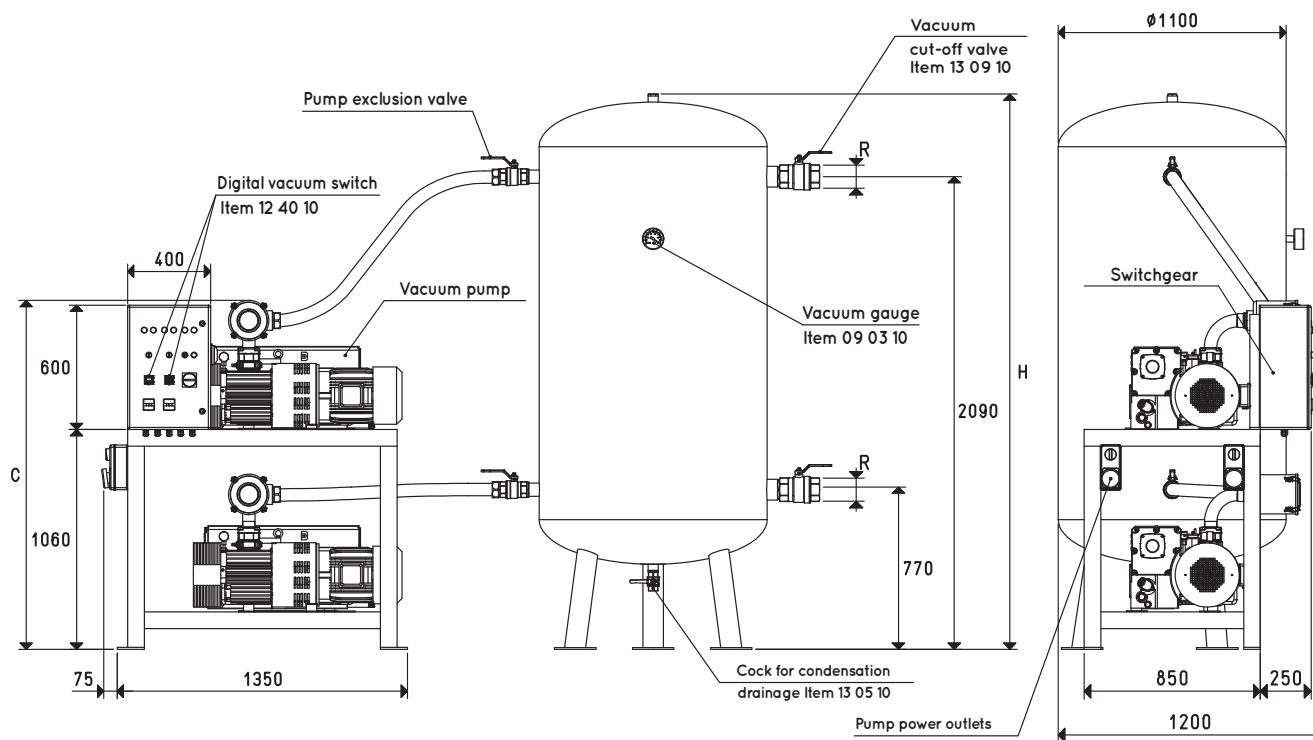
Transformation ratio: N (newton) = Kg x 9.81 (force of gravity)

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

Adapters for GAS - NPT threading available on page 1.130



VERTICAL SAFETY PUMP SETS DSV 2000V ..



Item	Tank Litres	2 Pumps Mod.	Motor performance Volt	Switchgear item	C	H	R Ø	Weight Kg	Filter Accessories item
DSV 2000V RVP 200	2000	RVP 200	3 ~ 230/400-50Hz	DSO 300 97V	1751	2450	G3"	888	FC 80
DSV 2000V RVP 250	2000	RVP 250	3 ~ 400/690-50Hz	DSO 300 97V	1751	2450	G3"	996	FC 80
DSV 2000V RVP 300	2000	RVP 300	3 ~ 400/690-50Hz	DSO 300 97V	1751	2450	G3"	1040	FC 80

Note: All RVP pumps ... are equipped as standard with an FC filter ... suitable for the size of their suction connection.

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

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

Adapters for GAS - NPT threading available on page 1.130



DV300VRVP300FS50BP



DS3V500VRVP100



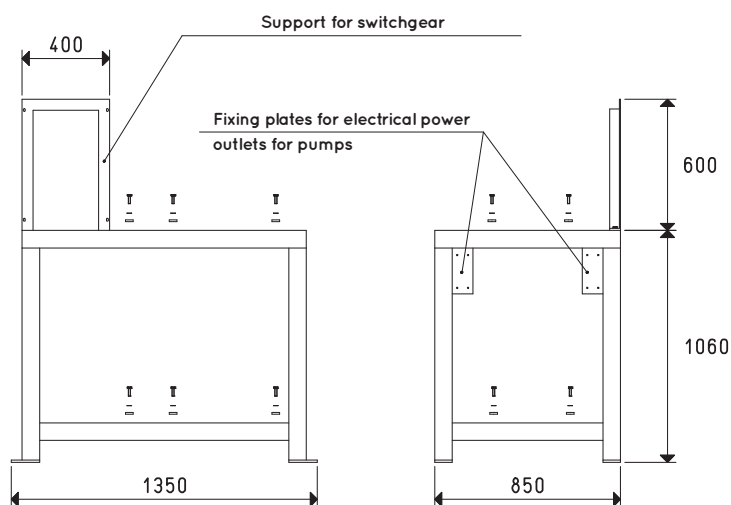
DO50VRVP40



DO500RVP200FS

SUPPORT FRAMES FOR TWO VACUUM PUMPS AND SWITCHGEAR

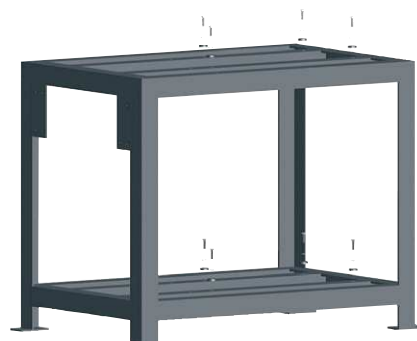
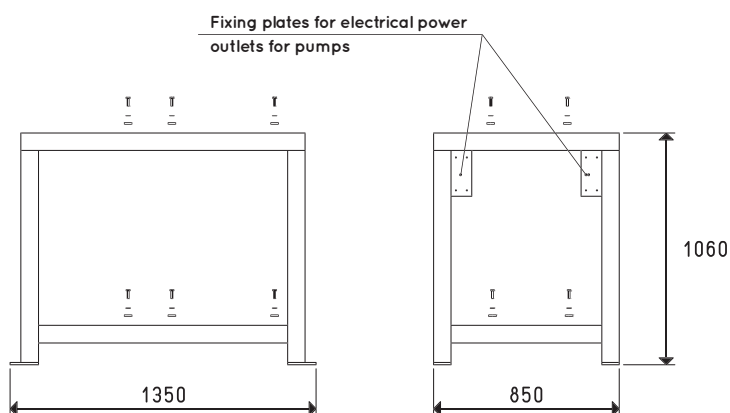
This frame is made with profiled steel and varnished with special weather-resistant paints.
It is suited for assembling two vacuum pumps and their switchgear.



Item	Weight Kg	Fitted for 2 Pumps Mod.	Fitted for switchgear item
00 DSV 16	120	RVP 160 - RVP 200 - RVP 250 - RVP 300	D2V 150 95V DSO 300 97V

SUPPORT FRAMES FOR TWO VACUUM PUMPS

This frame is made with profiled steel and varnished with special weather-resistant paints.
It is suited for assembling two vacuum pumps.

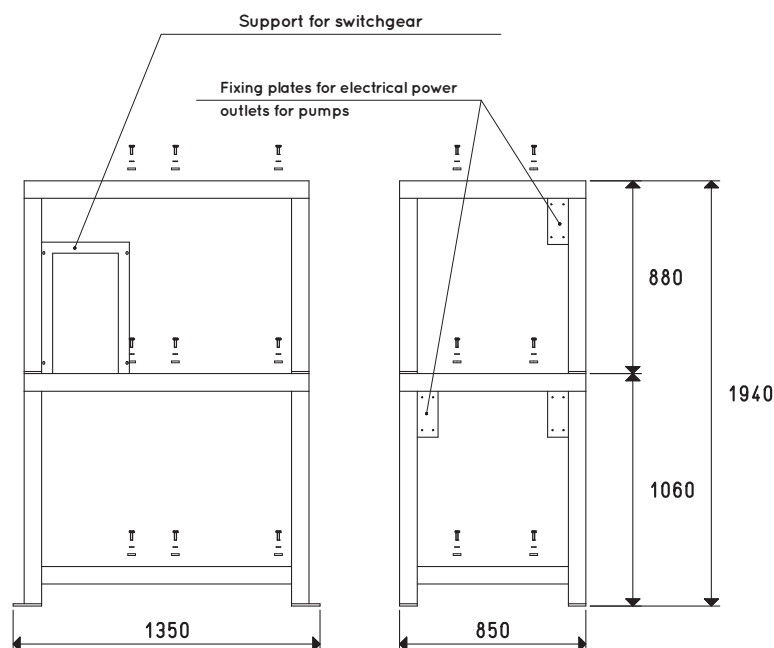


Item	Weight Kg	Fitted for 2 Pumps Mod.
00 DSV 18	117	RVP 160 - RVP 200 - RVP 250 - RVP 300



SUPPORT FRAMES FOR THREE VACUUM PUMPS AND SWITCHGEAR

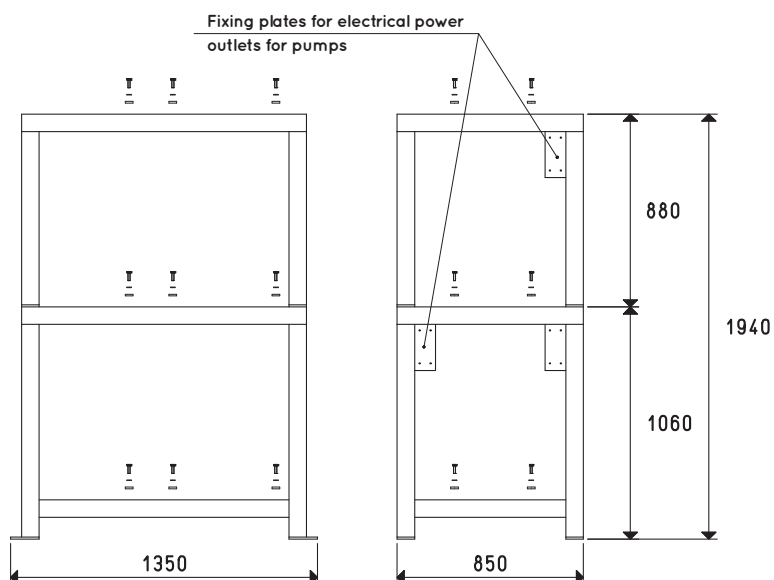
This frame is made with profiled steel and varnished with special weather-resistant paints.
It is suited for assembling three vacuum pumps and their switchgear.



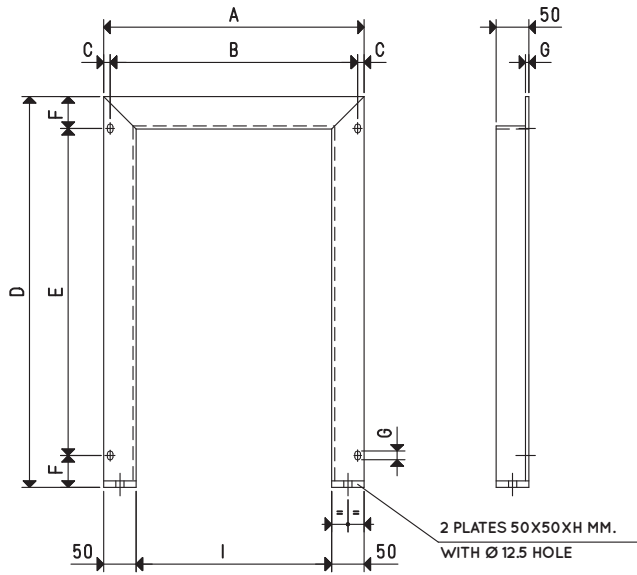
Item	Weight Kg	Fitted for 3 Pumps Mod.	Fitted for switchgear item
00 DSV 20	200	RVP 160 - RVP 200 - RVP 250 - RVP 300	DSO 300 98V

SUPPORT FRAMES FOR THREE VACUUM PUMPS

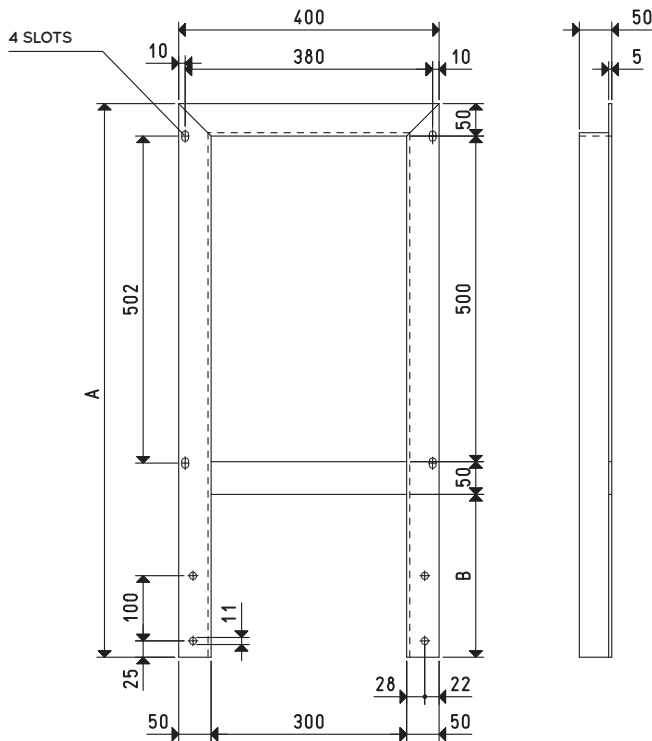
This frame is made with profiled steel and varnished with special weather-resistant paints.
It is suited for assembling three vacuum pumps.



Item	Weight Kg	Fitted for 3 Pumps Mod.
00 DSV 22	197	RVP 160 - RVP 200 - RVP 250 - RVP 300



Item	Weight Kg	A	B	C	D	E	F	G	H	I	Fitted for switchgear item
00 DV 16	1.5	300	256	22	300	256	22	3	10	200	DO 100 98V - DO 100 97V
00 DSV 08	5.5	400	380	10	700	502	49	5	10	300	D2V 150 95V - DSO 300 97V
00 DSV 33	7.0	500	480	10	700	602	49	5	10	400	DSO 300 98V - DSV 2000 99V



Item	Weight Kg	A	B	C	Fitted for switchgear item
00 DSO 07	7.5	850	250	850	DSO 300 97V
00 DSO 08	9.0	920	430	920	DSO 300 97V

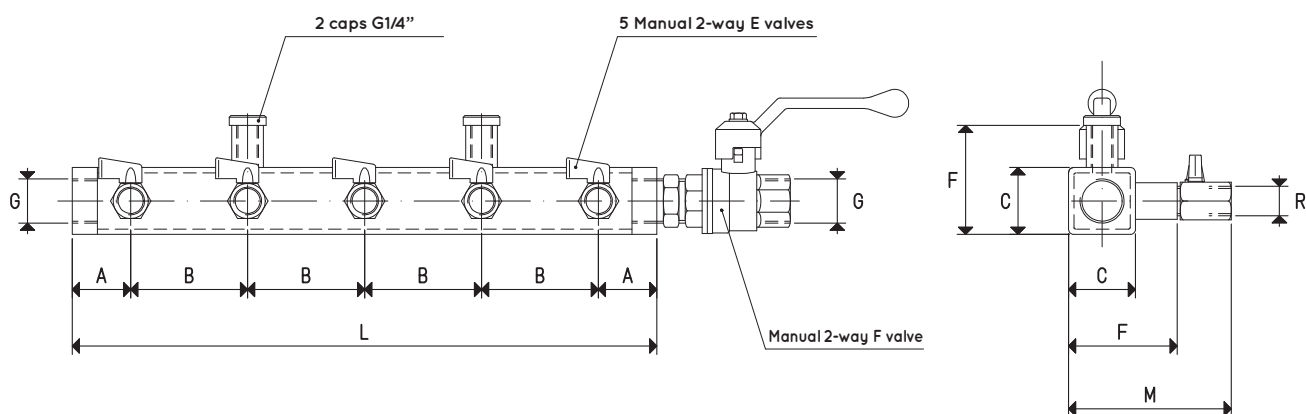


VACUUM PUMP AND PUMP SET MANIFOLDS

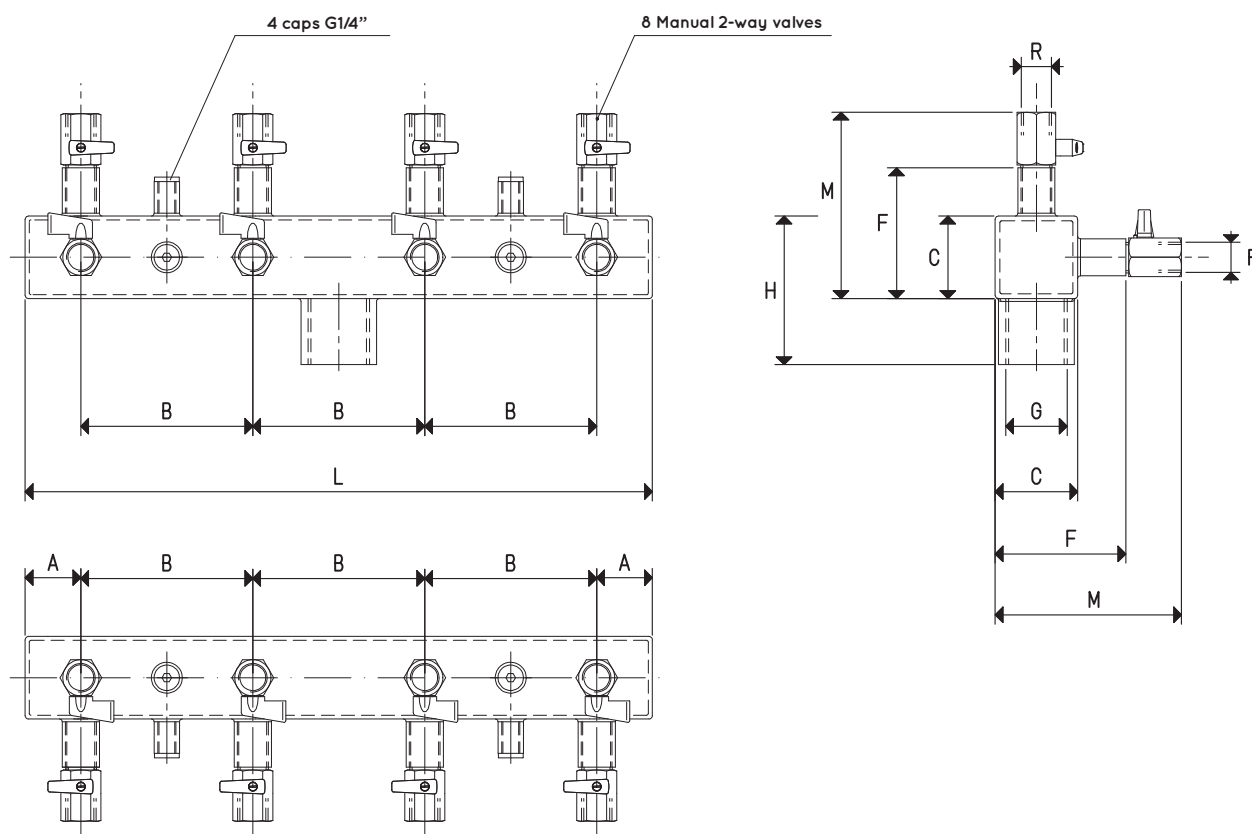
These manifolds are made to distribute the vacuum generated by the pumps and pump sets to several services.

They are composed of a varnished steel tubular onto which the interception valves and the connections to the level of vacuum reading and control devices are installed.

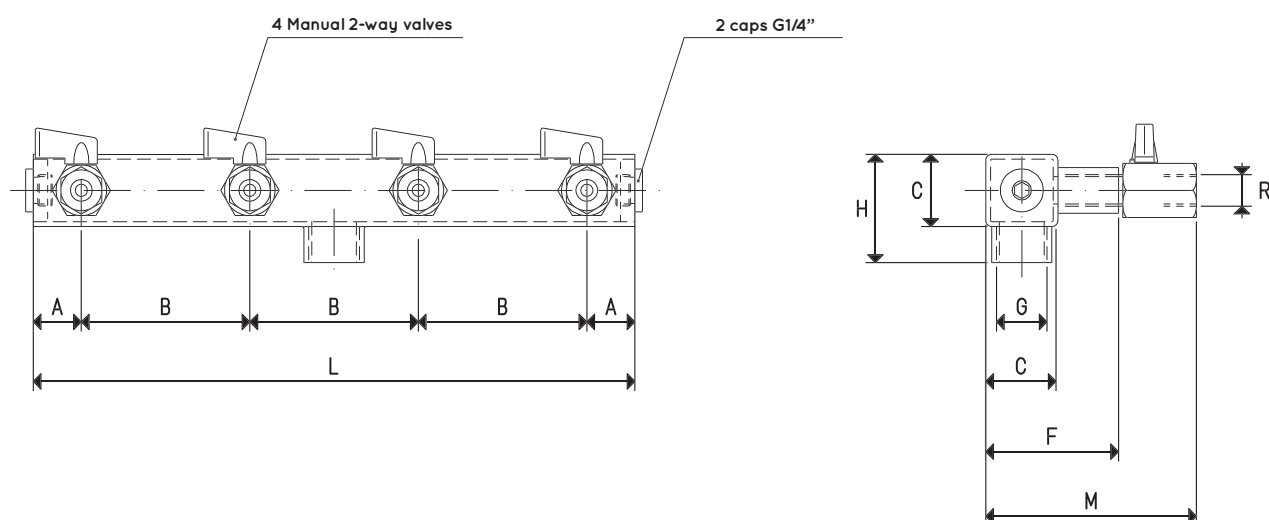
The manifolds described in these pages are standard. Upon request, they can be supplied with different shapes and sizes.



Item	A	B	C	F	G Ø	L	M	R Ø	Manual valve E item	Manual valve F item	Weight Kg
COLL 01 03	35	70	40	65	G1/2"	350	100	G1/4"	13 01 11	13 03 10	1.75
COLL 01 04	35	70	40	65	G3/4"	350	100	G3/8"	13 02 11	13 04 10	1.90
COLL 01 05	35	70	40	65	G1"	350	100	G3/8"	13 02 11	13 05 10	2.00
COLL 01 06	40	85	60	85	G1 1/4"	420	160	G1/2"	13 03 11	13 06 10	2.50
COLL 01 07	40	85	60	85	G1 1/2"	420	160	G1/2"	13 03 11	13 07 10	2.60



Item	A	B	C	F	G Ø	H	L	M	R Ø	Manual valve item	Weight Kg
COLL 02 03	37.5	125	40	65	G1/2"	74	450	97	G1/4"	13 01 11	2.5
COLL 02 05	37.5	125	40	66	G1"	84	450	96	G3/8"	13 02 11	2.7
COLL 02 07	37.5	125	60	94	G1 1/2"	108	450	127	G1/2"	13 03 11	2.9

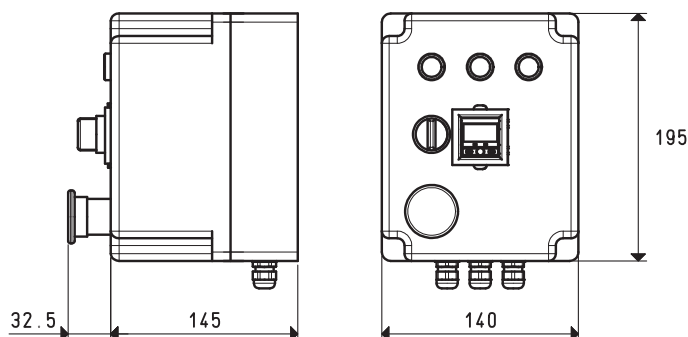


Item	A	B	C	F	G Ø	H	L	M	R Ø	Manual valve item	Weight Kg
COLL 03 03	20	70	30	55	G1/2"	64	250	87	G1/4"	13 01 11	1.2
COLL 03 05	20	70	40	66	G1"	84	250	96	G3/8"	13 02 11	1.4
COLL 03 07	20	70	60	94	G1 1/2"	108	250	127	G1/2"	13 03 11	1.5



MINI PUMP SET SWITCHGEAR

The mini pump set switchgear is enclosed in a special plastic casing. It can automatically manage a vacuum pump with a maximum power of 5.5 KW with AC and can also maintain the level of vacuum in the tank, set with the digital vacuum switch installed on the control panel. It is equipped with a remote control switch with thermal protection, a fuse, digital vacuum switch, a transformer for low voltage auxiliary command, a selector for automatic or manual pump operation, an emergency button and signalling lamps.

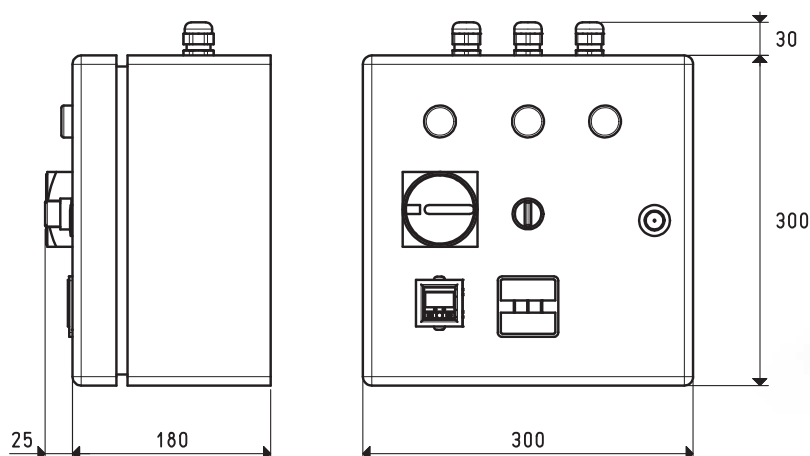


Item	Quantity of pumps No.	Motor performance Volt	Max pump power Kw	Weight Kg
DO 06 98V	1	1 ~ 230-50Hz	5.5	2
DO 06 97V	1	3 ~ 230/400-50Hz	5.5	2

SWITCHGEAR FOR PUMP SETS WITH ONE PUMP

The pump set switchgear is enclosed in a special watertight metal casing and can manage a vacuum pump with a power up to 7.5 KW as well as maintain the level of vacuum in the tank, set with the digital vacuum switch.

It is equipped with a remote control switch with thermal protection, fuses, a transformer for low voltage auxiliary command power supply, a line switch, a changeover switch for the automatic or manual pump operation, an easily-programmable digital vacuum switch suitable for setting and controlling all vacuum functions, an hour-counter for measuring the actual pump operation time and signalling lamps.

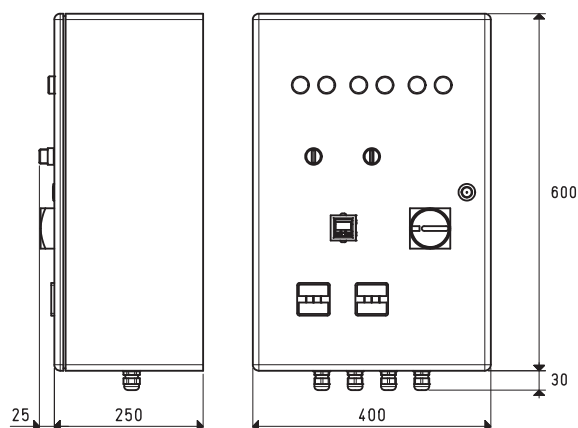


Item	Quantity of pumps No.	Motor performance Volt	Max pump power Kw	Weight Kg
DO 100 98V	1	1 ~ 230-50Hz	7.5	8
DO 100 97V	1	3 ~ 230/400-50Hz	7.5	8

SWITCHGEAR FOR PUMP SETS WITH TWO PUMPS

The pump set switchgear is enclosed in a special watertight metal casing and can manage two vacuum pumps, each with a power up to 7.5 KW as well as maintain the level of vacuum in the tank, set with the digital vacuum switch.

It is equipped with two remote control switches with thermal protection, fuses, a transformer for low voltage auxiliary command power supply, a line switch, a changeover switches for the automatic or manual pump operation, an easily-programmable digital vacuum switch suitable for setting and controlling all vacuum functions, two hour-counters for measuring the actual pump operation time and signalling lamps.



Item	Quantity of pumps No.	Motor performance Volt	Max pump power Kw	Weight Kg
D2V 150 95V	2	3 ~ 230/400-50Hz	7.5 cad.	24

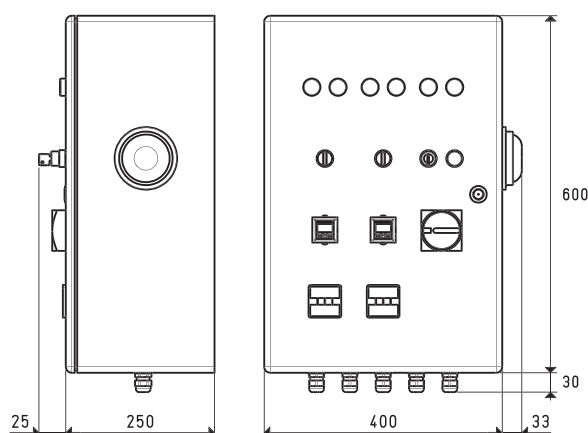
SWITCHGEAR FOR SAFETY PUMP SET WITH 2 PUMPS

The pump set switchgear, is enclosed in a special watertight metal casing and automatically manages two vacuum pumps, each with a power up to 7.5 KW and maintains the level of vacuum in the tank, set with the two easily-programmable digital vacuum switches, suitable for setting and controlling all vacuum functions.

It is equipped with two remote control switches with thermal protection, fuses, a transformer for low voltage auxiliary command power supply, a line switch, a changeover switches for the automatic or manual pump operation, two digital vacuum switches, two hour-counters for measuring the actual pump operation time, an alarm siren with acoustic and lit signalling, a key selector for any necessary exclusion of the siren, test buttons and signalling lamps.

The switchgear is normally provides for the operation of one pump with subsequent automatic insertion of the second one for larger consumptions and when, for whatever reason, the plant level of vacuum goes under the preset value.

The automatic timed inverter precisely alternates priority pump start-up of the services so that they are subjected to equal mechanical wear. The switchboard and remote alarm systems operate when the plant level of vacuum is below the set safety value.



Item	Quantity of pumps No.	Motor performance Volt	Max pump power Kw	Weight Kg
DSO 300 97V	2	3 ~ 230/400-50Hz	7.5 cad.	27

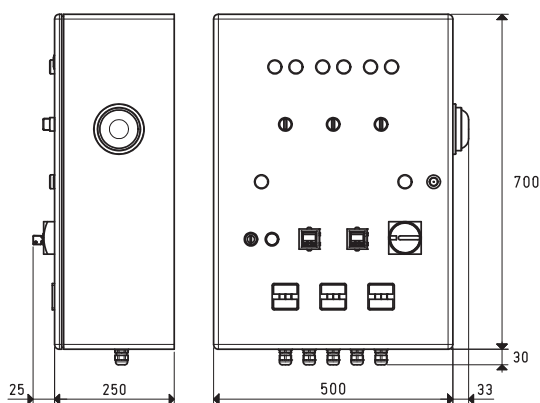


SWITCHGEAR FOR SAFETY PUMP SETS WITH THREE PUMPS

The pump set switchgear, is enclosed in a special watertight metal casing and automatically manages three vacuum pumps, each with a power up to 7.5 KW and maintains the level of vacuum in the tank, set with the two easily-programmable digital vacuum switches, suitable for setting and controlling all vacuum functions.

It is equipped with three remote control switches with thermal protection, fuses, a transformer for low voltage auxiliary command power supply, a line switch, a changeover switches for the automatic or manual pump operation, three digital vacuum switches, two hour-counters for measuring the actual pump operation time, an alarm siren with acoustic and lit signalling, a key selector for any necessary exclusion of the siren, test buttons and signalling lamps. The switchgear is normally provides for the operation of one pump with subsequent automatic insertion of the other two for larger consumptions and when, for whatever reason, the plant level of vacuum goes under the preset value.

The automatic timed inverter precisely alternates priority pump start-up of the services so that they are subjected to equal mechanical wear. The switchboard and remote alarm systems operate when the plant level of vacuum is below the set safety value.



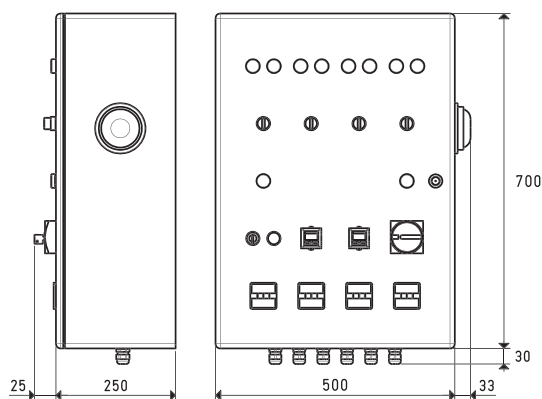
Item	Quantity of pumps No.	Motor performance Volt	Max pump power Kw	Weight Kg
DSO 300 98V	3	3 ~ 230/400-50Hz	7.5 cad.	29

SWITCHGEAR FOR SAFETY PUMP SET WITH FOUR PUMPS

The safety pump set switchgear is enclosed in a special watertight metal casing and it automatically manages four vacuum pumps, each with a power up to 7.5 KW, and maintains the level of vacuum in the tank, set with the two easily-programmable digital vacuum switches, suitable for setting and controlling all vacuum functions. It is equipped with four remote control switches with thermal protection, fuses, a transformer for low voltage auxiliary command power supply, a line switch, a changeover switches for the automatic or manual pump operation, two digital vacuum switches, four hour-counters for measuring the actual pump operation time, an alarm siren with acoustic and lit signalling, a key selector for any necessary exclusion of the siren, test buttons and signalling lamps.

These switchgears normally provide for the operation of two pumps and the subsequent automatic insertion of the other two for larger consumptions and when, for whatever reason, the plant level of vacuum goes below the preset value.

The automatic timed inverter precisely alternates priority pump start-up of the services so that they are subjected to equal mechanical wear. The switchboard and remote alarm systems operate when the plant level of vacuum is below the set safety value.



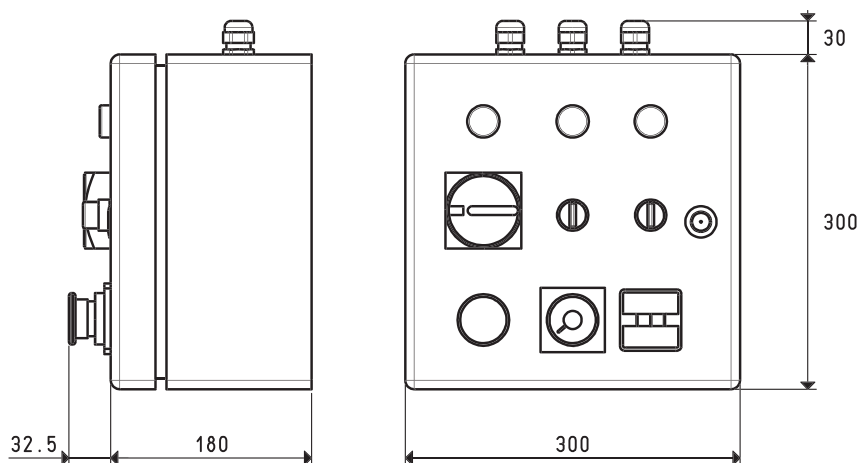
Item	Quantity of pumps No.	Motor performance Volt	Max pump power Kw	Weight Kg
DSV 2000 99V	4	3 ~ 230/400-50Hz	7.5 cad.	29.5

SWITCHGEAR FOR SINGLE PUMP

The need to use the same vacuum pump in various spots in the work environment, such as, for example, a shipyard, has led us to creating this mobile switchgear that allows for polarity reversal in presence of current, as well as for time setting pump operation and the automatic start-up restoration in case of accidental black-out. The switchgear is enclosed in a special watertight metal casing and it is composed of fuses, remote control switches with thermal protection and a transformer for low voltage auxiliary command power supply. The following are instead installed on the casing lid:

- A line switch with indicator light
- A changeover switch for pump start-up with indicator light
- A changeover switch for polarity reversal
- An emergency button
- A timer for setting the duration of pump operation
- An hour-counter for counting the actual pump operation time
- A malfunction warning light.

This switchgear is supplied in special metal watertight casing and can manage pumps with power up to 7.5 Kw.



Item	Quantity of pumps No.	Motor performance Volt	Max pump power Kw	Weight Kg
DO 100 94	1	3 ~ 230/400-50Hz	7.5	8.0

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

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



VACUUM PUMP QUESTIONNAIRE

For a correct dimensioning and selection of a vacuum pump, it is important to know and assess the use to be made as well as the working environment in which it will operate.

For this reason, we kindly ask you to fill in this form and send it back to us via e-mail or fax.

We will suggest the best vacuum pump to solve your problem.

E-mail: tecnico@vuototecnica.net

Fax: +39 039 5320015

Company

Address

Post code / City

Country

Contact person:

Telephone

Fax

E-mail

1) In what industry sector are the vacuum cups utilised?

- | | | | |
|--------------------------------------|---------------------------------------|---|---|
| ☐ Plastic | ☐ Packaging | ☐ Woodworking | ☐ Cosmetics |
| ☐ CD/DVD | ☐ Glass/Solar | ☐ Marble/Stone | ☐ Automotive |
| ☐ Electronics | ☐ Graphic arts | ☐ Medical/Pharmaceutical | ☐ Ceramics/Porcelain |
| ☐ Food | ☐ Bottling | ☐ Other sectors | |

2) Which service should the vacuum pump be designed for?

- | | |
|--|---|
| ☐ Handling with vacuum cups | ☐ Vacuum clamping |
| ☐ Degassing of silicon or resin mixtures | ☐ Vacuum packaging |
| ☐ Moulding of plastics/rubbers/resins/aluminium | |
| ☐ Emptying containers: Volume/L | Time required s Max vacuum mbar abs. |
| ☐ Other use | |

3) Where will the vacuum pump be located?

- | | |
|--|-------------------------------|
| ☐ Inside a plant or mobile unit | |
| ☐ Outside a plant or mobile unit | |
| ☐ Height above sea level of the place where the pump is installed m | |
| ☐ Temperature of the work environment: min °C | max °C Humidity % |

4) Type of sucked fluid?

- | | | | |
|---|---|---|---|
| ☐ Dry air | ☐ Moist air | ☐ Air with water | ☐ Air with oil vapours |
| ☐ Aggressive gases | ☐ Air with abrasive dust | | |
| ☐ Fluid temperature °C | | | |

5) Required flow rate?

- | | | |
|--|--------------------------------------|------------------------------------|
| ☐ m ³ /h | ☐ l/min | ☐ cfm |
|--|--------------------------------------|------------------------------------|

6) Required level of vacuum?

- | | | |
|---|-------------------------------------|-------------------------------------|
| ☐ mbar abs. | ☐ mmHg | ☐ -KPa |
|---|-------------------------------------|-------------------------------------|

7) Use of the vacuum pump and related work cycles

- Daily duration: ☐ 8 hours ☐ 16 hours ☐ 24 hours ☐ Hours?
- Number of work cycles/hour ☐ Intermittency times: ON/ s OFF/s
- Are there strong level of vacuum oscillations in the plant? ☐ Yes ☐ No
- If yes, within what values? min mbar max mbar





VACUUM PUMP QUESTIONNAIRE

8) When the pump stops, does the air return in the vacuum system need to be prevented?

☐ Yes☐ No

The seal is ensured by the check valves, whose use is:

- Mandatory, on lubricated vacuum pumps

- Optional, on dry vacuum pumps

Note: Check valves are integrated onto oil-bath vacuum pumps on the RVP series.

9) Vacuum holding time

Does the vacuum need to be maintained for a specific time? (for example, to support a suspended load with vacuum cups, in case of a blackout) ☐ Yes ☐ No

If yes, for how long? s

10) Vacuum tanks

☐ Required volume L ☐ Recommended volume L ☐ Available volume L

11) Purchase prospects

☐ Single request ☐ No pumps/year ☐ Required delivery:

11) Purchase prospects

☐ Single request ☐ No, pumps/year ☐ Required delivery:

12) In the event of vacuum pump replacement

☐ Model used to present: ☐ Flow rate m³/h ☐ Level of vacuum mbar

☐ Brand

Electrical power: ☐ Single-phase ☐ Volt 230-50 Hz ☐ Other Volt Hz

☐ Three-phase ☐ Volt 230/400-50 Hz ☐ Other Volt Hz

13) Contact

☐ Do you wish to be called back? Yes ☐ No ☐

☐ Are you interested in a visit? Yes ☐ No ☐ If yes, what date/time?

