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VACUUM PUMPS AND PUMPSETS

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MEMBRANE VACUUM MINI PUMPS

The mini pumps described in this page are membrane-type.

They can be used both as vacuum pumps and compressors. In the latter version they can supply compressed air 100% oil-free up to a maximum 2 bar (g) pressure. They are composed of:

- An air-cooled single-phase electric motor with protection class IP 00 (assembly execution).

- A pump body made of plastic corrosion-resistant material, complete with fittings at both suction and blowing ports.

- A Viton membrane, resistant to wear and corrosion, solidly connected to a connecting rod.

- A connecting rod with built-in "long life" bearing activated by a balanced eccentric system fitted on the motor shaft.

- An aluminium support for fixing the pump.

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

Membrane vacuum mini pumps are very silent (\leq 50dB(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 V₁, apply the formula $t_1 = \frac{t_1 \times V_1}{c_1}$

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

- V₁: Volume to be emptied
- t₁ : Time to be calculated (sec)
- t : Time obtained in the table (sec)





Capacity



drawings available at www.vuototecnica.net

3D







H 40 DM





Art.		H3	5 M	H40	H40 DM	
Frequency		50Hz	60Hz	50Hz	60Hz	
Nominal capacity:						
Connection in series	I / 1'	17.5	21.0	18.0	21.5	
Connection in parallel	l / 1'	=	=	18.0 + 18.0	21.5 + 21.5	
Final pressure:						
Connection in series	mbar abs.	20	00	6	0	
Connection in parallel	mbar abs.	:	=	16	50	
Max. pressure	bar (g)		2		2	
Motor execution	1~	230 ±	± 10%	230 ±	= 10%	
Volt						
Motor power	1~	15	18	16.5	20	
Watt						
Electric absorption	А	0.	60	0.3	80	
Rotation speed	rev/min ⁻¹	2800	3300	2800	3300	
Noise level	dB(A)	≤	50	S	50	
Max. we <mark>ight</mark>	Kg	1	.3	1.	.6	
Accessories and spare parts						
Membrane	art.	00 H3	5M 15	00 H40	DM 15	
Lid with <mark>fittings</mark>	art.	00 H3	5M 16	00 H40	DM 20	

MEMBRANE VACUUM MINI PUMPS WITH DC MOTOR

The mini pumps described in this page are the same as the previously described ones, only with a DC motor instead of AC. The performance is practically the same.







To calculate the emptying time of a volume V₁, apply the formula $t_1 = \frac{t \times V_1}{6}$

- – Curve regarding capacity (referring to a 1013 bar pressure)
 Curve regarding the emptying of a 6-litre volume
- V₁: Volume to be emptied
- t₁ : Time to be calculated (sec)
- t : Time obtained in the table (sec)

MEMBRANE VACUUM MINI PUMPS WITH DC MOTOR

H 35 M CC









***** Ø7

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

Ø48

Ц

7.04

ROTARY VANE VACUUM PUMPS – GENERAL DESCRIPTION

Operation principle

The rotor rotates eccentrically inside a stator and it has grooves in which the vanes move freely and are pushed against the stator inside wall due to the centrifugal force, thus creating as many chambers as the number of vanes. During rotation, the volume of these chambers varies according to their position with respect to the eccentric axis. The chamber volume increase makes the air inside of them expand, thus creating vacuum (suction phase); the volume reduction, on the other hand, generates air compression (exhaust or delvery phase).

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

We have created two different sucked air conveying principles for our pumps. Figure 1 shows a three-vane rotary system with exhaust valve (1). This system is especially used in high vacuum applications.

Figure 2 shows a six-vane (therefore with more chambers) rotary system which is mainly used for low vacuum applications.







Rotor housing

In the smaller and more compact pumps, the rotor is cantilevered-fitted on the motor shaft end (fig.1), while in the high power versions or in those with frequent start-ups, the rotor is supported by bearings on both sides (fig. 2). In the latter case, the pump and the electric motor are two independent units and the two shafts are coupled via an elastic transmission joint.



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

As for oil recycle lubrication (fig.1), the oil sucked in the working chamber via adjustable oilers that control the flow, is drained together with the sucked air into the recovery tank and it is separated from the air through a special filtre contained in it and put in circulation again.

As for the disposable oil lubrication (fig.2), the lubricating oil is contained in a special transparent container controlled by a magnetic level switch, and follows the same path as the one described above, only it is collected in the recovery tank without being put in circulation again. This lubrication system is recommended when the sucked air contains water condensation, solvent vapours or anything else that can effect the oil properties.

As for the oil-bath lubrication (fig.3), the oil is sucked in the chamber directly from the recovery tank via calibrated nozzles that control the quantity, and it is kept and separated from the air in the exhaust phase via special microfibre deoiling cartridges located in the tank.

With this lubrication system, the quantity of oil in circulation is much higher than the previous two systems. This results in a better sealing between stator and rotor and lower friction between the rotating parts and the fixed ones, as well as in an increase of the vacuum level, lower heating and less noise.







ROTARY VANE VACUUM PUMPS – GENERAL DESCRIPTION

Dry vacuum pumps

The particular conformation of the chamber and the special graphite with which the vanes and the locking flanges are made, allow these pumps to operate with no need for lubrication.

These pumps are **not recommended** when the fluid to be sucked contains vapours and water or oil condensation.

Cooling

The pump cooling system we use is by airflow on their surface. The heat developed by the pump is dispersed from the external surface which is specially finned, via the electric motor fan in the smaller pumps, and by a radial fan fitted on the pump shaft while in the larger ones. Pumps with capacities from 100 cum/h upwards, are also equipped with a serpentine radiator (1). In this case, the lubrication oil, which passes through the radiator before entering the chamber, is cooled by the radial fan that sucks the cooling air through the radiator, thus allowing a further reduction of the heat developed by the pump.





Used materials

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

Electric motors

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

Certifications

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

7.06

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available at

drawings

30

VANE MINI VACUUM PUMPS



These rotating vane mini vacuum pumps, when needed, can be used even for compressing air. They are composed of a single-phase induction electric motor with condenser, a sintered metal self-lubricating stator, a white metal rotor fitted onto the motor shaft and slotted for housing the hardened steel vanes and a silencer on the exhaust. The operation principle is the same as that of the larger series of vane vacuum pumps. They are noiseless and lubrication-free and require no maintenance. Thanks to their minimal overall dimensions and their reduced weight, they are particularly suited for being installed on portable equipment. They are suitable for discontinuous, non-intense use.













To calculate the emptying time of a volume V₁, apply the formula $t_1 = \frac{\sqrt{1} \times \sqrt{1}}{6}$

- — Curve regarding capacity (referring to a 1013 bar pressure)
 Curve regarding the emptying of a 6-litre volume
- $\frac{t \times V_1}{6}$
- V₁: Volume to be emptied t₁: Time to be calculated (sec)
- t : Time obtained in the table (sec)
- t : Time obtained in the table (sec)

7.07

H 25 R H 45 R











Art.		H2	5 R	H4	5 R	H45 DR	
Frequency		50Hz	60Hz	50Hz	60Hz	50Hz	60Hz
Nominal capacity:							
Connection in series	1/1'	11.5	13.8	13.0	15.5	11.0	13.2
Connection in parallel	1/1'	=	=	=	=	10 + 10	12 + 12
Final pressure:							
Connection in series	mbar abs.	1	50	2	00		40
Connection in parallel	mbar abs.		=	:	=	1	50
Max. pressure	bar (g)		2		2		2
Motor execution	1~	230 =	± 10%	230 -	± 10%	230	± 10%
Volt							
Motor power	1~	28	33.5	35	42	40	48
Watt							
Condenser	uF	2.	50	3.	15	3	.15
Electric absorption	А	1	.2	1	.5	1	.8
Rotation speed	rev/min-1	2800	3300	2800	3300	2800	3300
Noise level	dB(A)	≤	60	≤	60	5	60
Max. weight	Kg	1.	45	2	.0		2.1
Α		1	48	1	65	1	80
В		45	5.5	4	7.5	6	3.5
C		3	8	5	53	:	53
Accesso <mark>ries and</mark> spare parts							
Vanes	art.	n° 10 00	H25R 03	n° 10 00	H45R 02	n° 20 00) H25R 03
Silencer filtre	art.	FE FE	3 1	FE	3 1	F	B 1
Fittings	art.	RN	IM5	RM	1M5	RN	/M5

7.08

VANE MINI VACUUM PUMPS WITH DC MOTOR

The previously described mini pumps can be supplied with a DC motor instead of an AC one. The performance is practically the same.









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

- – Curve regarding capacity (referring to a 1013 bar pressure)
 Curve regarding the emptying of a 6-litre volume
- $t_1 = \frac{1 \times 11}{6}$ V₁: Volume to be emptied
- t₁ : Time to be calculated (sec)
- t : Time obtained in the table (sec)

VANE MINI VACUUM PUMPS WITH DC MOTOR

H 25 R CC H 45 R CC





H 45 DR CC





Art.		H25 R CC	H45 R CC	H45 DR CC
lominal capacity:				
Connection in series	I/ 1'	11.5	14.5	13.5
Connection in parallel	I/ 1'	=	=	13 + 13
inal pressure:				
Connection in series	mbar abs.	200	200	60
Connection in parallel	mbar abs.	=	=	200
lax. pressure	bar (g)	2	2	2
lotor execution	Volt	24 CC	24 CC	24 CC
lotor power	Watt	20	24	30
ectric absorption A	1.5	1.6	1.8	
otation speed	rev/min ⁻¹	3000	3000	3000
oise level	dB(A)	≤ 60	≤ 60	≤ 60
lax. weight	Kg	0.96	1.29	1.44
		130	148	154
		57	77	83
		73	71	71
ccesso <mark>ries and</mark> spare parts				
anes	art.	n° 10 00 H25R 03	n° 10 00 H45R 02	n° 20 00 H25R 03
ilencer <mark>filtre</mark>	art.	FB 1	FB 1	FB 1
ittings	art.	RMM5	RMM5	RMM5

VACUUM PUMPS VTL 2 and 4

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

The motor and the pump are cooled by the motor fan (surface cooling). The pumps are equipped with a small tank in line with the pump, which contains the lubrication oil as well as a separator filtre to prevent oil mists and to reduce noise. We strongly recommend installing a check valve and a filtre 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 V₁, apply the formula $t_1 = \frac{f_1 \times V_1}{100}$

- Curve regarding capacity (referring to the suction pressure) Curve regarding capacity (referring to a 1013 bar pressure) Curve regarding the emptying of a 100-litre volume
- V₁: Volume to be emptied
- t₁ : Time to be calculated (sec)
- t : Time obtained in the table (sec)





Art		VTI	0	VTI	4
AIL.			2		.4
Frequency	0.0	50Hz	60Hz	50Hz	60HZ
Capacity	m³/h	2.0	2.4	4.0	4.8
Final pressure	mbar abs.	150)	15	0
Motor execution	3~	230/400±10%	275/480±10%	230/400±10%	275/480±10%
Volt	1~	230±1	0%	230±	10%
Motor power	3~	0.13	0.15	0.18	0.21
Kw	1~	0.13	0.15	0.15	0.18
Motor protection	IP	54		54	ļ
Rotation speed	rev/min-1	2800	3300	2800	3300
Motor shape		Spec	ial	Spec	cial
Motor size		56		63	}
Noise level	dB(A)	62	65	62	65
Max. weight	3~	5.7		7.3	3
Kg	1~	6.0		7.5	ō
Α		260)	28	5
В		145)	16	0
C		126	3	13	2
D		62		66	3
E		71		80)
F		127	7	13	9
G	Ø	6.5		7.5	ō
Н		72		80)
I		90		10	0
L		43		48	}
Μ		12		12	2
N		76		86	3
R	Ø gas	G1/4	"	G3/	8"
Accessories and spare parts					
Oil load	I	0.05	ō	0.0	5
Synthetic oil	VT OIL	ISO 3	32	ISO	32
4 vanes	art.	00 VTL (02 10	00 VTL	04 10
Sealing kit	art.	00 KIT V	TL 02	00 KIT V	/TL 04
Check valve	art.	10 01	15	10 02	2 15
Suction filtre	art.	FB S	ō	FB 10/	FC 10

Note: The pump will be supplied with single-phase electric motor by adding the letter M to the article (E.g.: VTL 2 M).

VACUUM PUMPS VTL 5 and 10

These vacuum pumps have a suction capacity of 5 and 10 cum/h. The vacuum lubrication with oil recirculation can be adjusted via an oiler located in correspondence of the suction inlet.

The rotor is cantilevered-fitted on the motor shaft and, as a result, the overall dimensions are reduced.

The motor and the pump are cooled by the motor fan (surface cooling). An oil recovery tank is installed on the pump exhaust. This tank contains a separator filtre that prevents oil mists and reduces noise.

We strongly recommend installing a check valve and a filtre on the suction inlet. Pumps VTL 5 and 10 can also be supplied with a single-phase electric motor.











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

- Curve regarding capacity (referring to the suction pressure) Curve regarding capacity (referring to a 1013 bar pressure) Curve regarding the emptying of a 100-litre volume
- V₁: Volume to be emptied
- t₁ : Time to be calculated (sec)
- t : Time obtained in the table (sec)





Art.		VTL	.5	VTL	10
Frequency		50Hz	60Hz	50Hz	60Hz
Capacity	m³/h	5.0	6.0	10.0	12.0
Final pressure	mbar abs.	80)	80)
Motor execution	3~	230/400±10%	275/480±10%	230/400±10%	275/480±10%
Volt	1~	230±	10%	230±	10%
Motor power	3~	0.25	0.30	0.35	0.40
Kw	1~	0.25	0.30	0.25	0.30
Motor protection	IP	54	1	54	ļ
Rotation speed	rev/min ⁻¹	1450	1740	1450	1740
Motor shape		Spe	cial	Spec	cial
Motor size		7'	1	71	
Noise level	dB(A)	62	64	62	64
Max. weight	3~	14	.5	20.	5
Kg	1~	15	.0	21.	0
Α		26	0	31	D
В		24	5	26	2
C		24	5	24	5
D		52	2	70)
F		53	3	85	
H		12	2	12	2
L		45	ō	45	
Μ		85	ō	10	2
N		27	7	52	
R	Ø gas	G3/	8"	G1/	2"
Accessories and spare parts					
Oil load	1	0.2	25	0.4	0
Synthetic oil	VT OIL	ISO	32	ISO	32
6 vanes	art.	00 VTL	05 10	00 VTL	10 10
Sealing kit	art.	00 KIT \	/TL 05	00 KIT V	TL 10
Check valve	art.	10 02	2 10	10 03	3 10
Suction filtre	art.	FB 10/	FC 10	FB 20/F	-C 20
Adjustab <mark>le drip o</mark> iler	art.	00 VTL	00 11	00 VTL	00 11

Note: The pump will be supplied with single-phase electric motor by adding the letter M to the article (E.g.: VTL 5 M).

VACUUM PUMPS VTLP 5 and 10 WITH DISPOSABLE LUBRICATION











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

- Curve regarding capacity (referring to the suction pressure)
 Curve regarding capacity (referring to a 1013 bar pressure)
 Curve regarding the emptying of a 100-litre volume
- V₁: Volume to be emptied
- t1 : Time to be calculated (sec)
- t : Time obtained in the table (sec)

VACUUM PUMPS VTL 5 AND 10





Art.		VTL	P 5	VTLF	P 10
Frequency		50Hz	60Hz	50Hz	60Hz
Capacity	m³/h	5.0	6.0	10.0	12.0
Final pressure	mbar abs.	80)	8	D
Motor execution	3~	230/400±10%	275/480±10%	230/400±10%	275/480±10%
Volt	1~	230±	10%	230±	10%
Motor power	3~	0.25	0.30	0.35	0.40
Kw	1~	0.25	0.30	0.25	0.30
Motor protection	IP	54	1	54	4
Rotation speed	rev/min-1	1450	1740	1450	1740
Motor shape		Spec	cial	Spe	cial
Motor size		71		7	1
Noise level	dB(A)	62	64	62	64
Max. weight	3~	15.	6	21	.6
Kg	1~	16.	1	22	.1
Α		26	0	31	0
В		24	5	26	2
D		52	2	70)
F		53	}	8	5
Μ		85	5	10	2
N		27	7	52	2
R	Ø gas	G3/	8"	G1/	/2"
Accessories and spare parts					
Oil load		1.8	3	1.	8
Synthetic oil	VT OIL	ISO	32	ISO	32
6 vanes	art.	00 VTL	05 10	00 VTL	10 10
Sealing kit	art.	00 KIT \	/TL 05	00 KIT V	/TL 10
Check valve	art.	10 02	2 10	10 0	3 10
Suction filtre	art.	FB 10/I	-C 10	FB 20/	FC 20
Oil level switch	art.	00 LP V	TL 99	00 LP \	/TL 99
Oil filtre	art.	00 LP V	TL 40	00 LP \	/TL 40
Adjustab <mark>le drip o</mark> iler	art.	00 VTL	00 11	00 VTL	00 11

Note: The pump will be supplied with single-phase electric motor by adding the letter M to the article (E.g.: VTLP 5 M).

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

These vacuum pumps having a suction capacity of 10, 15 and 20 cum/h. The vacuum lubrication with oil recirculation can be adjusted via an oiler located in correspondence of the suction inlet.

The rotor is cantilevered-fitted on the motor shaft and supported by independent bearings housed in the two pump flanges.

The pump is surface cooled. Heat is dispersed from the outer surface, suitably finned, by means of a radial fan placed between

motor and pump. An oil recovery tank is installed on the pump exhaust. This tank contains a separator filtre that prevents oil mists and reduces noise. We strongly recommend installing a check valve and a filtre on the suction inlet.

Also this range of pumps can be supplied with single-phase electric motors.















To calculate the emptying time of a volume V₁, apply the formula t₁ = $\frac{4 \times V_1}{100}$

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

- V₁: Volume to be emptied
- t1 : Time to be calculated (sec)
- t : Time obtained in the table (sec)





Art.		VTL	10/F	VTL ⁻	15/F	VTL	VTL 20/F	
Frequency		50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	
Capacity	m³/h	10.0	12.0	15.0	18.0	20.0	24.0	
Final pressure	mbar abs.	5	0	50		50		
Motor execution	3~	230/400±10%	275/480±10%	230/400±10%	275/480±10%	230/400±10%	275/480±10%	
Volt	1~	230±	±10%	230±	10%	230±	10%	
Motor power	3~	0.55	0.66	0.55	0.66	0.88	1.05	
Kw	1~	0.55	0.66	0.55	0.66	0.66	0.80	
Motor protection	IP	5	4	54	1	5	4	
Rotation speed	rev/min-1	1450	1740	1450	1740	1450	1740	
Motor shape		Spe	ecial	Spe	cial	Spe	cial	
Motor size		8	0	80)	8	0	
Noise level	dB(A)	62	64	63	65	64	66	
Max. weight	3~	25	5.0	27	.0	30	.0	
Kg	1~	25.5		27.5		30.5		
Α		385		40	5	425		
В		28	85	285		285		
C		2	59	259		259		
D		2	15	25		25		
E		34	40	340		340		
F		2	0	40		60		
н		1:	33	13	3	13	33	
L		5	5	55	5	5	5	
М		10	00	10	0	10	00	
N		5	3	63	3	7	3	
R	Ø gas	G1	/2"	G1/	2"	G1	/2"	
Accessories and spare parts								
Oil load	I	0	.4	0.	5	0.0	65	
Synthetic oil	VT OIL	ISC	68	ISO	68	ISO	68	
6 vanes	art.	00 VTL	10F 10	00 VTL	15F 10	00 VTL	20F 10	
Sealing kit	art.	00 KIT 1	VTL 10F	00 KIT V	TL 15F	00 KIT \	/TL 20F	
Check valve	art.	10 0	3 10	10 03	3 10	10 0	3 10	
Suction filtre	art.	FB 20	/FC 20	FB 20/	FC 20	FB 20/	FC 20	
Adjustable drip oiler	art.	00 VTL	. 00 11	00 VTL	00 11	00 VTL	00 11	

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

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

These vacuum pumps having a suction capacity of 10, 15 and 20 cum/h. The vacuum lubrication with oil recirculation can be adjusted via an oiler located in correspondence of the suction inlet.

The rotor is cantilevered-fitted on the motor shaft and supported by independent bearings housed in the two pump flanges.

The pump is surface cooled. Heat is dispersed from the outer surface, suitably finned, by means of a radial fan placed between

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

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

The lubrication oil is contained in a special transparent container, fixed to the pump via its support, and controlled by a magnetic level switch.

In pumps with disposable lubrication, the oil is sucked in the pump through an adjustable drip oiler and drained together with the sucked air in the recovery tank, without being put in circulation again. These pumps are necessary when the air to be sucked contains water condensation, solvent vapours or anything else that could effect oil properties.

We strongly recommend installing a check valve and a filtre on the suction inlet. Also this range of pumps can be supplied with single-phase electric motors.









VTLP 10/F (60 Hz)

Vacuum mbai

Capacity cum/h

10.8

9.6

8.4

7.2

4 8

3.6

2.4

1.2

1000

6





To calculate the emptying time of a volume V₁, apply the formula $t_1 = \frac{f_1 \times V_1}{100}$

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

208

-182

-156

-104

-78

-52

.76

10

- V₁: Volume to be emptied
- t₁: Time to be calculated (sec)
- t : Time obtained in the table (sec)

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



Art.		VTI	_P 10/F	VTL	.P 15/F	N	VTLP 20/F	
Frequency		50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	
Capacity	m³/h	10.0	12.0	15.0	18.0	20.0	24.0	
Final pressure	mbar abs.	ţ	50		50		50	
Motor execution	3~	230/400±10%	275/480±10%	230/400±10%	275/480±10%	230/400±10%	275/480 ±10%	
Volt	1~	230:	±10%	230	±10%	230	230±10%	
Motor power	3~	0.55	0.66	0.55	0.66	0.88	1.05	
Kw	1~	0.55	0.66	0.55	0.66	0.66	0.80	
Motor protection	IP	Ę	54		54		54	
Rotation speed	rev/min-1	1450	1740	1450	1740	1450	1740	
Motor shape		Spi	ecial	Sp	ecial	Sp	pecial	
Motor size		8	80		80		80	
Noise level	dB(A)	62	64	63	65	64	66	
Max. weight	3~	2	6.1	2	28.1		31.1	
Kg	1~	2	6.6	28.6		3	31.6	
Α		3	85	4	05	4	425	
F			20		40	60		
N		Ę	53		63		73	
Accessories and spare parts								
Oil load	I I	1	.8		.8		1.8	
Synthetic oil	VT OIL	ISC) 68	ISO	0 68	IS	0 68	
6 vanes	art.	00 VTL	. 10F 10	00 VTI	_ 15F 10	00 VT	L 20F 10	
Sealing kit	art.	00 KIT	VTL 10F	00 KIT	VTL 15F	00 KIT	VTL 20F	
Check valve	art.	10 (03 10	10	03 10	10	03 10	
Suction filtre	art.	FB 20	/FC 20	FB 20)/FC 20	FB 2	0/FC 20	
Oil level <mark>switch</mark>	art.	00 LP	VTL 99	00 LP	VTL 99	00 LF	P VTL 99	
Oil filtre	art.	00 LP	VTL 40	00 LP	VTL 40	00 LF	PVTL 40	
Adjustab <mark>le drip o</mark> iler	art.	00 VTI	_ 00 11	00 VT	L 00 11	00 VT	L 00 11	

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

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

These vacuum pumps have a suction capacity of 10, 15 and 20 cum/h. The vacuum lubrication with oil recirculation is adjusted via two oilers located in correspondence of the support bearings. The rotor is cantilevered-fitted on the motor shaft and supported by independent bearings housed in the two pump flanges. The pump and the electric motor are, therefore, two independent units and fixed onto a special support and connected to each other via an elastic transmission joint. All this allows using standard electric motors, in the shapes and sizes indicated in the table. The pump is surface cooled. Heat is dispersed from the outer surface, suitably finned, by means of a radial fan placed between motor and pump. An oil recovery tank is installed on the pump exhaust. This tank contains a separator

filtre that prevents oil mists and reduces noise.

We strongly recommend installing a check valve and a filtre on the suction inlet. These pumps are supplied with three-phase electric motors only.









Time t(sec)

-80

-72

64

-56







To calculate the emptying time of a volume V₁, apply the formula $t_1 = \frac{f_1 \times V_1}{100}$

- Curve regarding capacity (referring to the suction pressure) Curve regarding capacity (referring to a 1013 bar pressure) Curve regarding the emptying of a 100-litre volume
- V₁: Volume to be emptied
- t₁: Time to be calculated (sec)
- t : Time obtained in the table (sec)

3D





Art.		V	TL 25/FG	VTL	30/FG	V	TL 35/FG	
Frequency		50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	
Capacity	m³/h	25.0	30.0	30.0	36.0	35.0	42.0	
Final pressure	mbar abs.		50	5	50		50	
Motor execution	3~	230/400±10%	275/480±10%	230/400±10%	275/480±10%	230/400±10%	275/480 ±10%	
Volt								
Motor power	3~	0.88	1.05	1.00	1.20	1.00	1.20	
Kw								
Motor protection	IP		54	5	4	:	54	
Rotation speed	rev/min-1	1450	1740	1450	1740	1450	1740	
Motor shape			B14	B	14	E	14	
Motor size			80	8	0	:	30	
Noise level	dB(A)	64	66	65	67	65	67	
Max. weight	3~		31.0		35.0		37.0	
Kg								
Α			470	49	90	5	10	
C			280	28	30	2	80	
F			20	4	0	(60	
H			133	1:	33	1	33	
N			73	8	3	9	93	
R	Ø gas	(33/4"	G3	/4"	G	3/4"	
Accessories and spare parts								
Oil load			0.65	0.	85	0	.85	
Synthetic oil	VT OIL	15	SO 68	ISO	68	ISO) 68	
6 vanes	art.	00 VT	L 25FG 10	00 VTL :	30FG 10	00 VTL	35FG 10	
Sealing <mark>kit</mark>	art.	00 KIT	VTL 25FG	00 KIT V	TL 30FG	00 KIT V	/TL 35FG	
Check valve	art.	10	04 10	10 0	4 10	10 (04 10	
Suction filtre	art.	FB 2	25/FC 25	FB 25	/FC 25	FB 25	5/FC 25	
Adjustab <mark>le drip o</mark> iler	art.	00 V	TL 00 11	00 VTL	. 00 11	00 VT	L 00 11	

7.22

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

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

These vacuum pumps have a suction capacity of 25, 30 and 35 cum/h. The vacuum lubrication with oil recirculation is adjusted via two oilers located in

correspondence of the support bearings.

The rotor is cantilevered-fitted on the motor shaft and supported by independent bearings housed in the two pump flanges.

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

All this allows using standard electric motors, in the shapes and sizes indicated in the table. The pump is surface cooled. Heat is dispersed from the outer surface, suitably

finned, by means of a radial fan placed between motor and pump.

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

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

The lubrication oil is contained in a special transparent container, fixed to the pump via its support, and controlled by a magnetic level switch.

In pumps with disposable lubrication, the oil is sucked in the pump through an adjustable drip oiler and drained together with the sucked air in the recovery tank, without being put in circulation again. These pumps are necessary when the air to be sucked contains water condensation, solvent vapours or anything else that could effect oil properties.

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

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











Curve regarding capacity (referring to the suction pressure)

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





t : Time obtained in the table (sec)

3D

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





Kit Frequency Solt-z 60Hz	Art		VTI	P 25/FG	VTI F	20/FG	V	TI P 35/FG
induction joint			500-	60U-7	50Uz	60U-	50Uz	60U-7
Capacity III/III 2.50 3.00	Prequency			00002	30HZ		JUHZ	00HZ
Final pressure mbar abs. 50 50 50 50 Motor execution 3- 230/400±10% 275/480±10% 230/400±10% 275/480±10% 230/400±10% 275/480±10% 230/400±10% 275/480±10% 230/400±10% 275/480±10% 230/400±10% 275/480±10% 230/400±10% 275/480±10% 230/400±10% 275/480±10% 230/400±10% 275/480±10% 275/480±10% 230/400±10% 275/480±10% <th></th> <th>m9n </th> <th>25.0</th> <th>30.0</th> <th>30.0</th> <th>30.0</th> <th>35.0</th> <th>42.0</th>		m9n 	25.0	30.0	30.0	30.0	35.0	42.0
Motor execution 3 230/400±10% 275/480±10% 275/480±10% 230/400±10% 275/480±10% 230/400±10% 275/480±10% 230/400±10% 275/480±10% 230/400±10% 275/480±10% 230/400±10% 275/480±10% 230/400±10% 275/480±10% 230/400±10% 275/480±10% 230/400±10% 275/480±10% 230/400±10% 275/480±10% 230/400±10% 275/480±10% 230/400±10% 275/480±10% 120 1.00 <t< th=""><th>Final pressure</th><th>mbar abs.</th><th></th><th>50</th><th>L.</th><th>0</th><th></th><th>50</th></t<>	Final pressure	mbar abs.		50	L.	0		50
Volt Notor proveer 3~ 0.88 1.05 1.00 1.20 1.00 1.20 Kw 54 54 54 54 Rotation speed IP 54 1450 1740 1450 1740 1450 1740 Motor shape IP B14 B14 B14 B14 B14 Motor size IB B14 B14 B14 B14 B14 Motor size IB B14 B14 B14 B14 B14 B14 Motor size IB B14	Motor execution	3~	230/400±10%	275/480±10%	230/400±10%	275/480±10%	230/400±10%	275/480 ±10%
Motor power 3~ 0.88 1.05 1.00 1.20 1.00 1.20 Kw Image: Solution speed Image: Solution speed Image: Solution speed 1450 1740 1450 1740 1450 1740 Motor speed rev/min* B14 B14 B14 B14 B14 Motor size B14 B14 B14 B14 B14 B14 Motor size B14 B14 B14 B14 B14 B14 Motor size B14	Volt							
Kvr F F F F F Motor protection P 54 54 54 Rotation speed rev/min* 1450 1740 1450 1740 1450 1740 1450 1740 Motor size 80 80 80 80 80 80 Noise level dB(A) 64 66 65 67 65 67 Max.weight 3~ 32.0 36.0 38.0 36.0 38.0 Kg 470 490 610 60 51 57 Kg 133 133 133 133 133 133 N 73 83 93 36	Motor power	3~	0.88	1.05	1.00	1.20	1.00	1.20
Νdtor protection IP 54 54 Rotation speed rev/min ¹ 1450 1740 1450 1740 1450 1740 Motor shape F B14 B14 B14 B14 Motor size B14 B14 B14 B14 B14 Motor size I A70 490 510 B14 Motor Size I	Kw							
Rotation speedrev/min ⁻¹ 145017401450174014501740Motor shapeEB14B14B14B14Motor size808080Noise leveldB(A)646665676567Max. weight3~32.036.038.038.038.0KgFFFFFFA4.004.9051051060F2.024.004.906060H133133133133N9.036.34/*6.34/*6.34/*Ol gas6.34/*6.34/*6.34/*6.34/*Ol loadJ1.81.8Synthetic oilVT OLISO 68ISO 68ISO 686 vanesart0.0VTL 25FG 100.0VTL 30FG 100.0VTL 35FG 10Sution filtreart0.0EVTL 25FG0.0EVTL 30FG 100.0EVTL 35FG 10Check valveart0.0EVTL 25FG 100.0EVTL 30FG 100.0EVTL 35FG 10Sution filtreart0.0EVTL 25FG 100.0EVTL 30FG 100.0EVTL 35FG 10Check valveart0.0EVTL 25FG 15FB 25/FC 25FB 25/FC 25Oil level switchart0.0EVTL 990.0EVTL 900.0EVTL 90Oil level switchart0.0EVTL 990.0EVTL 900.0EVTL 90Oil filtreart0.0EVTL 400.0EVTL 400.0EVTL 40Augustable drip oilerart0.0EVTL 00110.0E	Motor protection	IP		54	Ę	54		54
Notor shapeB14B14B14Motor size808080Noise leveldB(A)646665676567Max. weight3~32.036.038.0Kg	Rotation speed	rev/min-1	1450	1740	1450	1740	1450	1740
Motor size 80 80 80 Noise level dB(A) 64 66 65 67 65 67 Max. weight 3~ 32.0 36.0 38.0 Kg 37.0 38.0 A 2.0 36.0 38.0 37.0 38.0 37.0	Motor shape		E	314	В	14	E	314
Noise level dB(A) 64 66 65 67 65 67 Max. weight 3~ 32.0 36.0 38.0 Kg -	Motor size			80	8	30		80
Max. weight 3~ 32.0 36.0 38.0 Kg	Noise level	dB(A)	64	66	65	67	65	67
Kg 4 470 490 510 F 20 40 60 H 133 133 133 N 73 83 93 R 0 gas 63/4" 63/4" Accessories and spare parts 63/4" 63/4" Oil load I 1.8 1.8 Synthetic oil VT OIL ISO 68 ISO 68 6 vanes art. 00 VTL 25FG 10 00 VTL 30FG 10 00 VTL 35FG 10 Sealing kit art. 10 04 10 10 04 10 10 04 10 Suction filtre art. FB 25/FC 25 FB 25/FC 25 FB 25/FC 25 Oil level switch art. 00 LP VTL 99 00 LP VTL 99 00 LP VTL 99 Oil filtre art. 00 LP VTL 40 00 LP VTL 40 00 LP VTL 40	Max. weight	3~	3	2.0	36	6.0	3	8.0
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 spare parts 0 1 1.8 1.8 3 Oil load I 1.8 1.8 1.8 1.8 Synthetic oil VT OIL ISO 68 ISO 68 ISO 68 ISO 68 6 vanes art. 00 VTL 25FG 10 00 VTL 30FG 10 00 VTL 35FG 10 Sealing kit art. 10 04 10 10 04 10 10 04 10 Suction filtre art. 10 04 10 10 04 10 10 04 10 Suction filtre art. 00 LP VTL 25FG FB 25/FC 25 FB 25/FC 25 Oil level switch art. 00 LP VTL 99 00 LP VTL 99 00 LP VTL 99 Oil filtre art. 00 LP VTL 40 00 LP VTL 40 00 LP VTL 40 Adjustable drip oiler art. 00 VTL 00 11 00 VTL 00 11 00 VTL 00 11	Kg							
F 20 40 60 H 133 133 133 N 133 133 133 N 0 gas 63/4" 63/4" 63/4" Accessories and spare parts 0 63/4" 63/4" 63/4" Oil load I 1.8 1.8 1.8 Synthetic oil VT OIL ISO 68 ISO 68 ISO 68 6 vanes art. 00 VTL 25FG 10 00 VTL 30FG 10 00 VTL 35FG 10 Sealing kit art. 10 04 10 10 04 10 10 04 10 Suction filtre art. 17 00 LP VTL 25FG 90 LP VTL 30FG 90 LP VTL 35FG Oil level switch art. 10 04 10 10 04 10 10 04 10 Suction filtre art. 00 LP VTL 99 00 LP VTL 99 00 LP VTL 99 Oil level switch art. 00 LP VTL 40 00 LP VTL 40 00 LP VTL 40 Adjustable drip oiler art. 00 VTL 00 11 00 VTL 00 11 00 VTL 00 11	Α		4	70	4	90	5	510
H 133 133 133 N Ø gas G3/4" G3/4" G3/4" Accessories and spare parts Ø gas G3/4" G3/4" G3/4" Oil load I 1.8 1.8 1.8 Synthetic oil VT OL ISO 68 ISO 68 ISO 68 6 vanes art. 00 VTL 25FG 10 00 VTL 30FG 10 00 VTL 35FG 10 Sealing kit art. 00 KIT VTL 25FG 00 KIT VTL 30FG 00 KIT VTL 35FG Check valve art. 10 04 10 10 04 10 10 04 10 Suction filtre art. 00 LP VTL 99 00 LP VTL 99 00 LP VTL 99 Oil level switch art. 00 LP VTL 99 00 LP VTL 99 00 LP VTL 99 Oil filtre art. 00 LP VTL 40 00 LP VTL 40 00 LP VTL 40 Adjustable drip oiler art. 00 VTL 00 11 00 VTL 00 11 00 VTL 00 11	F			20	2	10		60
N 73 83 93 R Ø gas G3/4" G3/4" G3/4" Accessories and spare parts I 1.8 G3/4" G3/4" Oil load I 1.8 1.8 1.8 Source Synthetic oil VT OIL ISO 68 ISO 69 ISO 69 <th< th=""><th>н</th><th></th><th>1</th><th>33</th><th>1:</th><th>33</th><th>1</th><th>33</th></th<>	н		1	33	1:	33	1	33
R Ø gas G3/4" G3/4" G3/4" Accessories and spare parts - - - - Oil load I 1.8 1.8 1.8 - Synthetic oil VT OIL ISO 68 ISO 68 ISO 68 ISO 68 - 6 vanes art. 00 VTL 25FG 10 00 VTL 30FG 10 00 VTL 35FG 10 Sealing kit art. 00 KIT VTL 25FG 00 KIT VTL 30FG 00 KIT VTL 35FG Check valve art. 10 04 10 10 04 10 10 04 10 10 04 10 Suction filtre art. FB 25/FC 25 FB 25/FC 25 FB 25/FC 25 FB 25/FC 25 Oil level switch art. 00 LP VTL 99 00 LP VTL 99 00 LP VTL 99 Oil filtre art. 00 VTL 00 11 00 VTL 00 11 00 VTL 00 11	N			73	8	33		93
Accessories and spare parts 1.8 1.8 Oil load I 1.8 1.8 1.8 Synthetic oil VT OIL ISO 68 ISO 68 ISO 68 6 vanes art. 00 VTL 25FG 10 00 VTL 30FG 10 00 VTL 35FG 10 Sealing kit art. 00 KIT VTL 25FG 00 KIT VTL 30FG 00 KIT VTL 35FG Check valve art. 10 04 10 10 04 10 10 04 10 Suction filtre art. FB 25/FC 25 FB 25/FC 25 FB 25/FC 25 Oil level switch art. 00 LP VTL 99 00 LP VTL 99 00 LP VTL 99 Oil filtre art. 00 LP VTL 40 00 LP VTL 40 00 LP VTL 40 Adjustable drip oiler art. 00 VTL 00 11 00 VTL 00 11 00 VTL 00 11	R	Ø gas	G	3/4"	G3	3/4"	G	3/4"
Oil load I 1.8 1.8 1.8 Synthetic oil VT OIL ISO 68 ISO 68 ISO 68 ISO 68 6 vanes art. 00 VTL 25FG 10 00 VTL 30FG 10 00 VTL 35FG 10 Sealing kit art. 00 KIT VTL 25FG 00 KIT VTL 30FG 00 KIT VTL 35FG Check valve art. 10 04 10 10 04 10 10 04 10 10 04 10 Suction filtre art. FB 25/FC 25 FB 25/FC 25 FB 25/FC 25 FB 25/FC 25 OI LP VTL 99 00 LP VTL 99 00 LP VTL 99 00 LP VTL 99 00 LP VTL 40 00 LP VTL 40 00 VTL 00 11 00 VTL 00 11 00 VTL 00 11	Accessories and spare parts							
Synthetic oil VT OIL ISO 68 ISO 68 ISO 68 6 vanes art. 00 VTL 25FG 10 00 VTL 30FG 10 00 VTL 35FG 10 Sealing kit art. 00 KIT VTL 25FG 00 KIT VTL 30FG 00 KIT VTL 35FG Check valve art. 10 04 10 10 04 10 10 04 10 Suction filtre art. FB 25/FC 25 FB 25/FC 25 FB 25/FC 25 Oil level switch art. 00 LP VTL 99 00 LP VTL 99 00 LP VTL 99 Oil filtre art. 00 LP VTL 40 00 LP VTL 40 00 LP VTL 40 Adjustable drip oiler art. 00 VTL 00 11 00 VTL 00 11 00 VTL 00 11	Oil load			1.8	1	.8		1.8
6 vanes art. 00 VTL 25FG 10 00 VTL 30FG 10 00 VTL 35FG 10 Sealing kit art. 00 KIT VTL 25FG 00 KIT VTL 30FG 00 KIT VTL 35FG Check valve art. 10 04 10 10 04 10 10 04 10 10 04 10 Suction filtre art. FB 25/FC 25 FB 25/FC 25 FB 25/FC 25 FB 25/FC 25 OU LP VTL 99 00 LP VTL 40 00 UP VTL 40 00 UP VTL 40 00 VTL 00 11	Synthetic oil	VT OIL	IS	D 68	ISC) 68	IS	0 68
Sealing kit art. 00 KIT VTL 25FG 00 KIT VTL 30FG 00 KIT VTL 35FG Check valve art. 10 04 10 10 04 10 10 04 10 10 04 10 Suction filtre art. FB 25/FC 25 OU LP VTL 99 00 LP VTL 40 00 UP VTL 40 00 UP VTL 40 00 VTL 00 11	6 vanes	art.	00 VTL	25FG 10	00 VTL	30FG 10	00 VTL	35FG 10
Check valve art. 10 04 10 10 04 10 10 04 10 Suction filtre art. FB 25/FC 25 FB 25/FC 25 FB 25/FC 25 Oil level switch art. 00 LP VTL 99 00 LP VTL 99 00 LP VTL 99 Oil filtre art. 00 LP VTL 40 00 LP VTL 40 00 UP VTL 40 Adjustable drip oiler art. 00 VTL 00 11 00 VTL 00 11 00 VTL 00 11	Sealing kit	art.	00 KIT	VTL 25FG	00 KIT V	/TL 30FG	00 KIT '	VTL 35FG
Suction filtre art. FB 25/FC 25 FB 25/FC 25 FB 25/FC 25 Oil level switch art. 00 LP VTL 99 00 LP VTL 99 00 LP VTL 99 Oil filtre art. 00 LP VTL 40 00 LP VTL 40 00 LP VTL 40 Adjustable drip oiler art. 00 VTL 00 11 00 VTL 00 11 00 VTL 00 11	Check valve	art.	10	04 10	10 0	04 10	10	04 10
Oil level switch art. 00 LP VTL 99 00 LP VTL 99 00 LP VTL 99 Oil filtre art. 00 LP VTL 40 00 LP VTL 40 00 LP VTL 40 Adjustable drip oiler art. 00 VTL 00 11 00 VTL 00 11 00 VTL 00 11	Suction filtre	art.	FB 25	5/FC 25	FB 25	/FC 25	FB 25	5/FC 25
Oil filtre art. 00 LP VTL 40 00 LP VTL 40 00 LP VTL 40 Adjustable drip oiler art. 00 VTL 00 11 00 VTL 00 11 00 VTL 00 11	Oil level switch	art.	00 LP	VTL 99	00 LP	VTL 99	00 LP	VTL 99
Adjustable drip oiler art. 00 VTL 00 11 00 VTL 00 11 00 VTL 00 11	Oil filtre	art.	00 LP	VTL 40	00 LP	VTL 40	00 LP	9 VTL 40
	Adjustab <mark>le drip </mark> oiler	art.	00 VT	L 00 11	00 VTI	_ 00 11	00 VT	L 00 11

7.24

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

VACUUM PUMPS VTL 40/G1 ÷ 105/G1

These vacuum pumps have a suction capacity of 40, 50, 65, 75, 90 and 105 cum/h. The vacuum lubrication with oil recirculation is adjusted via two oilers located in correspondence of the support bearings.

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

an elastic transmission joint. All this allows using standard electric motors, in the shapes and sizes indicated in

the table. The pump is surface cooled. Heat is dispersed from the outer surface, suitably finned, by means of a radial fan placed between motor and pump.

An oil recovery tank is installed on the pump exhaust. This tank contains a separator

filtre that prevents oil mists and reduces noise.

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

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

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







Time

Capacity



VTL 40/61 (60 Hz)

100

Vacuum mbar

Capacity

43.2

38.

33

28 8

24

19.2

14 4

9.6

4.8

1000



16

- 8

10

15.6

7.8

1000



To calculate the emptying time of a volume V₁, apply the formula $t_1 = \frac{4 \times V_1}{100}$

100

Vacuum mbar

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

Time t(sec)

-80

-72

-64 -56

48

40

32

-74

16

8

10

Capacity

54

48

42

36

30

24

18

12

6

1000

- V₁: Volume to be emptied
- t₁ : Time to be calculated (sec)
- t : Time obtained in the table (sec)

3D

drawings available at www.vuototecnica.net





Art.		VTI	_ 40/G1	VTL	50/G1	VTL	65/G1
Frequency		50Hz	60Hz	50Hz	60Hz	50Hz	60Hz
Capacity	m³/h	40.0	48.0	50.0	60.0	65.0	78.0
Final pressure	mbar abs.		50	:	50		50
Motor execution	3~	230/400±10%	275/480±10%	230/400±10%	275/480±10%	230/400±10%	275/480 ±10%
Volt							
Motor power	3~	1.10	1.35	1.50	1.80	1.50	1.80
Kw							
Motor protection	IP		54	:	54		54
Rotation speed	rev/min-1	1450	1740	1450	1740	1450	1740
Motor shape			B5	I	35		B5
Motor size			90	9	90		90
Noise level	dB(A)	68	70	68	70	70	72
Max. weight	3~		51.0	5	4.0	7	1.0
Kg							
Α			520	5	60	Ę	580
В			365	3	65	3	865
C			350	3	50	3	350
D			60	1	15	1	20
F			45	:	30		45
н			186	1	86	1	86
M			125	1	25	1	25
N			70	;	80		80
R	Ø gas		G1"	(31"	(31"
Accessories and spare parts							
Oil load	I I		0.85	1	.00	1	.00
Synthetic oil	VT OIL	IS	0 100	ISC	100	ISC	100
6 vanes	art.	00 VT	L 40G1 10	00 VTL	50G1 10	00 VTL	65G1 10
Sealing <mark>kit</mark>	art.	00 KIT	VTL 40G1	00 KIT V	/TL 50G1	00 KIT \	/TL 65 G1
Check valve	art.	10	05 10	10 (05 10	10	05 10
Suction filtre	art.	FB 3	30/FC 30	FB 30)/FC 30	FB 30)/FC 30
Adjustab <mark>le drip o</mark> iler	art.	00 V	TL 00 11	00 VT	L 00 11	00 VT	L 00 11

7.26















To calculate the emptying time of a volume V₁, apply the formula $t_1 = \frac{4 \times V_1}{100}$

- Curve regarding capacity (referring to the suction pressure) Curve regarding capacity (referring to a 1013 bar pressure) Curve regarding the emptying of a 100-litre volume
- V₁: Volume to be emptied
- t1 : Time to be calculated (sec)
- t : Time obtained in the table (sec)





Art.		VT	L 75/G1	VTL 9	10/G1	VTL 1	105/G1
Frequency		50Hz	60Hz	50Hz	60Hz	50Hz	60Hz
Capacity	m³/h	75.0	90.0	90.0	108.0	105.0	126.0
Final pressure	mbar abs.		50	5	0	:	50
Motor execution	3~	230/400±10%	275/480±10%	230/400±10%	275/480±10%	230/400±10%	275/480 ±10%
Volt							
Motor power	3~	2.20	2.70	3.00	3.60	3.00	3.60
Kw							
Motor protection	IP		54	5	4	:	54
Rotation speed	rev/min-1	1450	1740	1450	1740	1450	1740
Motor shape			B5	В	5	I	35
Motor size			100	10	00	1	00
Noise level	dB(A)	70	72	71	73	72	74
Max. weight	3~		76.5	84	.0	9	7.6
Kg							
Α			640	66	60	6	90
В			385	40	00	4	00
C			400	40	00	4	45
F			62	8	2	1	12
н			186	18	36	1	86
M			145	15	50	1	60
N			80	9	2	1	22
R	Ø gas	G	1"1/4	G1"	1/4	G1	"1/2
Accessories and spare parts							
Oil load	1		2.0	2	6	2	2.6
Synthetic oil	VT OIL	IS	0 100	ISO	100	ISC	100
Deoiling cartridge	art.	00 VT	L 75G1 29	00 VTL 9	90G1 29	00 VTL	105G1 29
6 vanes	art.	00 VT	L 75G1 10	00 VTL 9	90G1 10	00 VTL -	105G1 10
Sealing <mark>kit</mark>	art.	00 KIT	VTL 75G1	00 KIT V	TL 90G1	00 KIT V	TL 105G1
Check valve	art.	10	06 10	10 0	6 10	10 (07 10
Suction filtre	art.	FB 4	10/FC 40	FB 40/	/FC 40	FB 50	/FC 50
Adjustable drip oiler	art.	00 V	TL 00 11	00 VTL	.00 11	00 VT	L 00 11

7.28

VACUUM PUMPS VTLP 40/G1 ÷ 105/G1, WITH DISPOSABLE LUBRICATION

These vane vacuum pumps have a suction capacity of 40, 50, 65, 75, 90 and 105 cum/h. The vacuum lubrication with oil recirculation is adjusted via two oilers located in correspondence of the support bearings.

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

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

he pump is surface cooled. Heat is dispersed from the outer surface, suitably finned, by means of a radial fan placed between motor and pump.

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

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

The lubrication oil is contained in a special transparent container, fixed to the pump via its support, and controlled by a magnetic level switch.

In pumps with disposable lubrication, the oil is sucked in the pump through an adjustable drip oiler and drained together with the sucked air in the recovery tank, without being put in circulation again. These pumps are necessary when the air to be sucked contains water condensation, solvent vapours or anything else that could effect oil properties.

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

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



Capacity

VTL 40/61 (50 Hz)

Vacuum mbar

VTL 40/61 (60 Hz)

100

Vacuum mbar

cum/h ₄0⊥

36

32

28

24

20

16

12

1000

Capacity

cum/h 1.8

43.2

38 4

33.6

28.8 24

19.2

14.4

9.6 4.8

1000





Capacity

cum/h

45

40

35

30

25

20

15

10

5

1000

Capacity

cum/h

6.0

54

48

42

36

30

24

18

12

6

1000

Time t(sec)

80

.72

-64

-56

-48

40

-32

-21

16

- 8

10

time

-80

-72

-64

-56

- 4 8

- <u>/</u> N

-32

-24 16

10

- t₁: Time to be calculated (sec)
- t : Time obtained in the table (sec)

3D

drawings available at www.vuototecnica.net



Art.		VTL	.P 40/G1	VTLP	50/G1	VTLI	P 65/G1
Frequency		50Hz	60Hz	50Hz	60Hz	50Hz	60Hz
Capacity	m³/h	40.0	48.0	50.0	60.0	65.0	78.0
Final pressure	mbar abs.		50		50		50
Motor execution	3~	230/400±10%	275/480±10%	230/400±10%	275/480±10%	230/400±10%	275/480 ±10%
Volt							
Motor power	3~	1.10	1.35	1.50	1.80	1.50	1.80
Kw							
Motor protection	IP		54		54		54
Rotation speed	rev/min-1	1450	1740	1450	1740	1450	1740
Motor shape			B5		35		B5
Motor size			90		90		90
Noise level	dB(A)	68	70	68	70	70	72
Max. weight	3~		52.5	5	5.1	7	2.1
Kg							
Α			520	Ę	60	1	580
D			60	1	15		120
F			45		30		45
M			125	1	25		125
N			70		80		80
R	Ø gas		G1"	(31"		G1"
Accessories and spare parts							
Oil load	I		1.80	1	.80	1	.80
Synthetic oil	VT OIL	15	60 100	ISC	100	ISO	0 100
6 vanes	art.	00 VT	L 40G1 10	00 VTL	50G1 10	00 VTL	.65G1 10
Sealing kit	art.	00 KI	F VTL 40G1	00 KIT	/TL 50G1	00 KIT	VTL 65G1
Check valve	art.	10	0 05 10	10	05 10	10	05 10
Suction filtre	art.	FB:	30/FC 30	FB 30	0/FC 30	FB 3	0/FC 30
Oil level switch	art.	00 L	P VTL 99	00 LF	VTL 99	00 LF	P VTL 99
Oil filtre	art.	00 L	PVTL 40	00 LF	VTL 40	00 LF	9 VTL 40
Adjustab <mark>le drip o</mark> iler	art.	00 \	/TL 00 11	00 VT	L 00 11	00 V	°L 00 11

7.30

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















To calculate the emptying time of a volume V₁, apply the formula $t_1 = \frac{4 \times V_1}{100}$

- Curve regarding capacity (referring to the suction pressure)
 Curve regarding capacity (referring to a 1013 bar pressure)
 Curve regarding the emptying of a 100-litre volume
- V₁: Volume to be emptied
- t₁ : Time to be calculated (sec)
- t : Time obtained in the table (sec)





Art.		VTL	P 75/G1	VTLP	90/G1	VTLP	105/G1
Frequency		50Hz	60Hz	50Hz	60Hz	50Hz	60Hz
Capacity	m³/h	75.0	90.0	90.0	108.0	105.0	126.0
Final pressure	mbar abs.		50	Ę	60		50
Motor execution	3~	230/400±10%	275/480±10%	230/400±10%	275/480±10%	230/400±10%	275/480 ±10%
Volt							
Motor protection	IP		54	5	4		54
Motor power	3~	2.20	2.70	3.00	3.60	3.00	3.60
Kw							
Rotation speed	rev/min ⁻¹	1450	1740	1450	1740	1450	1740
Motor shape			B5	E	35		B5
Motor size			100	1	00		100
Noise level	dB(A)	70	72	71	73	72	74
Max. weight	3~		78.3	8	5.8	g	9.4
Kg							
Α			640	6	60	6	590
В			415	4	30	2	130
C			575	5	75	6	620
F			62	8	32		112
Μ			145	1	50		160
N			80	ę	12		122
R	Ø gas	G	1 1/4"	G1	1/4"	G1	1/2"
Accessories and spare parts							
Oil load	I		3.8	3	.8	:	3.8
Synthetic oil	VT OIL	IS	0 100	ISO	100	ISC	0 100
Deoiling cartridge	art.	00 VTI	_ 75G1 29	00 VTL	90G1 29	00 VTL	105G1 29
6 vanes	art.	00 VTI	_ 75G1 10	00 VTL	90 G110	00 VTL	105 G110
Sealing kit	art.	00 KIT	VTL 75G1	00 KIT V	TL 90G1	00 KIT \	/TL 105G1
Check valve	art.	10	06 10	10 0	16 10	10	07 10
Suction filtre	art.	FB 4	0/FC 40	FB 40	/FC 40	FB 50	0/FC 50
Oil level switch	art.	00 LI	P VTL 99	00 LP	VTL 99	00 LF	9 VTL 99
Oil filtre	art.	00 L	P VTL 40	00 LP	VTL 40	00 LF	VTL 40
Adjustab <mark>le drip o</mark> iler	art.	00 V	TL 00 11	00 VTI	. 00 11	00 VT	'L 00 11

3D drawings available at www.vuototecnica.net

7.32

VACUUM PUMP VTL 6 DC WITH DC MOTOR

The extremely reduced size, the excellent final vacuum level that can be reached and the DC electric motor are the main features of this rotating vane vacuum pump. The internal vacuum lubrication is with oil recirculation.

Both the motor and the pump are cooled my the motor pump (surface cooling). The pump is equipped with a small tank in line with its axis, which contains the lubrication oil and a condensation separator that prevents exhaust oil mists and reduces noise. A check valve on the suction inlet is integral part of the pump. Upon request, it can be supplied with a special filtre.

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





To calculate the emptying time of a volume V₁, apply the formula $t_1 = \frac{f_1 \times V_1}{100}$

- Curve regarding capacity (referring to the suction pressure)
 Curve regarding capacity (referring to a 1013 bar pressure)
 Curve regarding the emptying of a 100-litre volume
- V1: Volume to be emptied
- t₁ : Time to be calculated (sec)
- t : Time obtained in the table (sec)

VACUUM PUMP VTL 6 DC WITH DC MOTOR





Art.		VTL 6 CC
Capacity	m³/h	6
Final pressure	mbar abs.	2
Motor execution	Volt	24 CC
Motor power	Kw	0.28
Max. absorption at 24 V CC	А	15
Motor protection	IP	54
Rotation speed	rev/min ⁻¹	3000
Motor shape		Special
Motor size		71
Noise level	dB(A)	68
Max. weight	Kg	10.5
Α		335
В		168
C		195
D		124
E		65
F		146
G		8
н		128
I		1 12
L		12
Μ		44
N		32
0		14.5
R	Ø gas	G3/8"
Accessories and spare parts		
Oil load	1	0.20
Synthetic oil	VT OIL	ISO 32
3 vanes	art.	00 VTL 06 10
Sealing kit	art.	00 KIT VTL 06
Check valve	art.	Built-in
Suction filtre	art	FB 10/FC 10

3D drawings available at www.vuototecnica.net

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

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

A large oil recovery tank with built-in microfibre deoiling cartridges, located on the pump exhaust, serves as a silencer and as a fume collector.

The oil contained in the system lubricates, cools and seals the rotating and the fixed parts of the pumps.

The standard check valve on the suction inlet is integral part of the pumps. Upon request, a filtre for trapping possible impurities can also be provided. Pumps included between the MV 20 and the MV 100 are set for the installation of a gas ballast valve (upon request) which allows for a high compatibility to water vapour. In the other pumps, starting from MV 160R up to MV 300R, the built-in gas ballast valve is a standard.

The features described above associated with a strong and compact construction make the pumps of the MV series suitable for continuous and intense use.











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

- Curve regarding capacity (referring to the suction pressure)
 Curve regarding capacity (referring to a 1013 bar pressure)
 Curve regarding the emptying of a 100-litre volume
- V₁ : Volume to be emptied
- t1 : Time to be calculated (sec)
- t : Time obtained in the table (sec)

OIL-BATH VACUUM PUMPS MV 20 AND MV 20A





Art.		MV	20	MV 20A		
Frequency		50Hz	60Hz	50Hz	60Hz	
Capacity	m³/h	20.0	24.0	20.0	24.0	
Final pressure	mbar abs.	40	40		7	
Motor execution	3~	230/400±10%	275/480±10%	230/400±10%	275/480±10%	
Volt	1~	230±1	0%	230±	10%	
Motor power	3~	0.75	0.90	0.75	0.90	
Kw	1~	0.75	0.90	0.75	0.90	
Motor protection	IP	55		55		
Rotation speed	rev/min-1	2800	3350	2800	3350	
Motor shape		B14	ļ	B14	4	
Motor size		80		80		
Noise level	dB(A)	64	66	64	66	
Max. weight	3~	21.5	5	21.	5	
Kg	1~	22.0)	22.	0	
A		425	5	425		
В		235	5	23	5	
C		215	5	215		
D		145	5	145		
E		220)	220		
F		60		60		
G	Ø	6.5		6.5		
Н		170)	170)	
1		113	}	113		
L		82		82		
Μ		40		40		
N		60		60		
0		30		30		
R	Ø gas	G1/2)" 	G1/2	2"	
Accessories and spare parts						
Oil load		0.70)	0.7	0	
Synthetic oil	VT OIL	ISO 6	68	ISO	68	
Deoiling cartridge	art.	00 MV 2	20 11	00 MV 2	20 11	
3 vanes	art.	00 MV 2	20 10	00 MV 2	20 10	
Sealing kit	art.	00 KIT N	IV 20	00 KIT N	/IV 20	
Check valve	art.	Built-	in	Built	-in	
Suction filtre	art.	FC 2	0	FC 2	20	
Ballast valve	art.	VZ 0	1	VZ 01		

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

7.36

OIL-BATH VACUUM PUMPS MV 40 and MV 40A









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

- Curve regarding capacity (referring to the suction pressure) Curve regarding capacity (referring to a 1013 bar pressure) Curve regarding the emptying of a 100-litre volume
- V₁: Volume to be emptied
- t₁ : Time to be calculated (sec)
- t : Time obtained in the table (sec)

OIL-BATH VACUUM PUMPS MV 40 AND MV 40A



Art.		M\	/ 40	MV	40A
Frequency		50Hz	60Hz	50Hz	60Hz
Capacity	m³/h	40.0	48.0	40.0	48.0
Final pressure	mbar abs.	4	40	0.	7
Motor execution	3~	230/400±10%	275/480±10%	230/400±10%	275/480±10%
Volt					
Motor power	3~	1.10	1.35	1.10	1.35
Kw					
Motor protection	IP	5	55	5	5
Rotation speed	rev/min ⁻¹	1450	1740	1450	1740
Motor shape		В	14	B1	4
Motor size		ę	90	91	C
Noise level	dB(A)	66	68	66	68
Max. weight	3~	4	5.0	45	.0
Kg					
C		3	00	30	0
D		8	30	80	
E		4	15	415	
F		1	33	133	
H		2	50	250	
I		2	10	210	
L		90	0.5	90.5	
M		3	7.5	37.5	
N		1	88	188	
0		1	00	10	0
Р		1	43	14	3
R	Ø gas	G1	"1/4	G1"	1/4
Accessories and spare parts					
Oil load	T	2.	.00	2.0	00
Synthetic oil	VT OIL	ISC) 68	ISO	68
Deoiling cartridge	art.	00 M\	/ 40 50	00 MV	40 50
3 vanes	art.	00 M\	/ 40 10	00 MV	40 10
Sealing kit	art.	00 KIT	MV 40	00 KIT	MV 40
Check valve	art.	Bu	ilt-in	Buil	t-in
Suction filtre	art.	FC	35	FC	35
Ballast v <mark>alve</mark>	art.	VZ	2 02	VZ 02	

3D drawings available at www.vuototecnica.net

OIL-BATH VACUUM PUMPS MV 60 and MV 60A











To calculate the emptying time of a volume V₁, apply the formula t₁ = $\frac{4 \times V_1}{100}$

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

- V₁: Volume to be emptied
- t : Time to be calculated (sec) t : Time obtained in the table (sec)

OIL-BATH VACUUM PUMPS MV 60 and MV 60A





Art.		MV	60	MV	MV 60A		
Frequency		50Hz	60Hz	50Hz	60Hz		
Capacity	m³/h	60.0	72.0	60.0	72.0		
Final pressure	mbar abs.	4	40		40		7
Motor execution	3~	230/400±10%	275/480±10%	230/400±10%	275/480±10%		
Volt							
Motor power	3~	1.50	1.80	1.50	1.80		
Kw							
Motor protection	IP	5	5	5	ō		
Rotation speed	rev/min ⁻¹	1450	1740	1450	1740		
Motor shape		B	14	B1	4		
Motor size		9	0	91)		
Noise level	dB(A)	68	70	68	70		
Max. weight	3~	53	3.0	53	.0		
Kg							
C		30	00	30	0		
D		14	40	140			
E		4	15	415			
F		13	33	133			
Н		25	50	250			
I		21	10	210			
L		12	23	123			
М		9	7	97			
N		18	38	188			
0		10	00	10	0		
Р		14	43	14	3		
R	Ø gas	G1"	'1/4	G1"	1/4		
Accessories and spare parts							
Oil load	T	2.0	00	2.0	00		
Synthetic oil	VT OIL	ISO	68	ISO	68		
Deoiling cartridge	art.	00 MV	60 50	00 MV	60 50		
3 vanes	art.	00 MV	60 10	00 MV	60 10		
Sealing kit	art.	00 KIT	MV 60	00 KIT	MV 60		
Check valve	art.	Bui	lt-in	Buil	t-in		
Suction filtre	art.	FC	35	FC	35		
Ballast valve	art.	VZ	02	VZ 02			

7.40

OIL-BATH VACUUM PUMPS MV 100 and MV 100A











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

- Curve regarding capacity (referring to the suction pressure) Curve regarding capacity (referring to a 1013 bar pressure) Curve regarding the emptying of a 100-litre volume
- V₁: Volume to be emptied
- t : Time to be calculated (sec) t : Time obtained in the table (sec)

3D

OIL-BATH VACUUM PUMPS MV 100 and MV 100A





Art.		MV 1	100	MV 1	MV 100A		
Frequency		50Hz	60Hz	50Hz	60Hz		
Capacity	m³/h	100.0	120.0	100.0	120.0		
Final pressure	mbar abs.	40)	0.	7		
Motor execution	3~	230/400±10%	275/480±10%	230/400±10%	275/480±10%		
Volt							
Motor power	3~	2.20	2.70	2.20	2.70		
Kw							
Motor protection	IP	55	Ď	55	ō		
Rotation speed	rev/min ⁻¹	1450	1740	1450	1740		
Motor shape		B1	4	B1	4		
Motor size		10	0	10	0		
Noise level	dB(A)	68	70	68	70		
Max. weight	3~	80.	.0	80	80.0		
Kg							
C		33	0	33	330		
4		29	0	29	290		
		27	5	27	275		
		11	5	11	115		
M		40)	40			
1		24	0	24	240		
)		13	0	13	130		
)		18	0	18	0		
R	Ø gas	G1"	1/4	G1"	1/4		
Accessories and spare parts							
Dil load		3.5	i0	3.5	0		
Synthetic oil	VT OIL	ISO 1	100	ISO -	100		
2 deoiling cartridges	art.	00 MV 1	00 MV 100 06		00 06		
3 vanes	art.	00 MV 1	00 MV 100 10		100 10		
Sealing <mark>kit</mark>	art.	00 KIT N	/IV 100	00 KIT N	/IV 100		
Check va <mark>lve</mark>	art.	Built	-in	Built	-in		
Suction <mark>filtre</mark>	art.	FC :	35	FC	FC 35		
Ballast v <mark>alve</mark>	art.	VZ	02	VZ	02		

7.42

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











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

- Curve regarding capacity (referring to the suction pressure) Curve regarding capacity (referring to a 1013 bar pressure) Curve regarding the emptying of a 100-litre volume
- V₁: Volume to be emptied
- t : Time to be calculated (sec) t : Time obtained in the table (sec)

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



Art.		MV 1	60R	MV 160RA		
Frequency		50Hz	60Hz	50Hz	60Hz	
Capacity	m³/h	150	180	150	180	
Final pressure	mbar abs.	10)	0.	5	
Motor execution	3~	230/400±10%	275/480±10%	230/400±10%	275/480±10%	
Volt						
Motor power	3~	3.0	4.0	3.0	4.0	
Kw						
Motor protection	IP	55	5	5	ō	
Rotation speed	rev/min ⁻¹	1500	1800	1500	1800	
Motor shape		B	5	В	5	
Motor size		10	0	100		
Noise level	dB(A)	71	72	71	72	
Max. weight	3~	104	110	104	110	
Kg						
Α		217	226	217	226	
L		805	814	805	814	
Accessories and spare parts						
Oil load		3.0	0	3.	0	
Synthetic oil	VT OIL	ISO 1	100	ISO	100	
2 deoiling cartridges	art.	00 MV 1	60R 06	00 MV 1	60R 06	
3 vanes	art.	00 MV 1	60R 10	00 MV 1	60R 10	
Sealing kit	art.	00 KIT M	V 160R	00 KIT N	IV 160R	
Check valve	art.	Built	Built-in		t-in	
Oil filtre	art.	00 MV 1	60R 07	00 MV 1	60R 07	
Suction filtre	art.	FC	50	FC	50	
Ballast v <mark>alve</mark>	art.	Built	-in	Built-in		

7.44

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

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



Capacity

cum/h 210

189

168

147

126





26.0 23.4 20.8 18.2 15.6 13.0 10.4 7.8 5.2 2.6 Vacuum mbar

MV 200RA (50 Hz)

Time t(sec)



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

- Curve regarding capacity (referring to the suction pressure)
 Curve regarding capacity (referring to a 1013 bar pressure)
 Curve regarding the emptying of a 100-litre volume
- V₁: Volume to be emptied
- t₁ : Time to be calculated (sec)
- t : Time obtained in the table (sec)

Art.		MV 2	00R	MV 2	DORA
Frequency		50Hz	60Hz	50Hz	60Hz
Capacity	m³/h	205	245	205	245
Final pressure	mbar abs.	10)	0.	5
Motor execution	3~	230/400±10%	275/480±10%	230/400±10%	275/480±10%
Volt					
Motor power	3~	4.0	5.5	4.0	5.5
Kw					
Motor protection	IP	55	ō	5	5
Rotation speed	rev/min ⁻¹	1500	1800	1500	1800
Motor shape		BS	5	В	5
Motor size		11	2	11	2
Noise level	dB(A)	70	72	70	72
Max. weight	3~	161	171	161	171
Kg					
A		208	257	208	257
L		895	944	895	944
Accessories and spare parts					
Oil load		7.0	0	7.	0
Synthetic oil	VT OIL	ISO 1	100	ISO	100
2 deoiling cartridges	art.	00 MV 2	00R 50	00 MV 2	200R 50
3 vanes	art.	00 MV 2	00R 10	00 MV 2	200R 10
Sealing kit	art.	00 KIT M	IV 200R	00 KIT N	IV 200R
Check valve	art.	Built	t-in	Buil	t-in
Oil filtre	art.	00 MV 2	00R 07	00 MV 2	200R 07
Suction filtre	art.	FC	60	FC	60
Ballast valve	art.	Built	t-in	Buil	t-in

7.46

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

Capacity

cum/h

300

270

MV 300RA (50 Hz)

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

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

V₁: Volume to be emptied

t₁ : Time to be calculated (sec)

t : Time obtained in the table (sec)

Time t(sec)

16.0

14.4

3D

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

MV 300R MV300RA Art. Frequency 50Hz 60Hz 50Hz 60Hz Capacity m³/h 300 350 300 350 **Final pressure** mbar abs. 0.5 10 Motor execution 400/650±10% 480/828±10% 400/650±10% 480/828±10% 3~ Volt Motor power 7.5 3~ 5.5 7.5 5.5 Kw IP 55 Motor protection 55 **Rotation speed** rev/min-1 1500 1800 1500 1800 Motor shape B5 B5 **Motor size** 112 112 Noise level dB(A) 71 73 71 73 Max. weight 3~ 188 192 188 192 Kg 297 A 257 979 L 1019 Accessories and spare parts **Oil load** 7.0 7.0 1 Synthetic oil VT OIL ISO 100 ISO 100 **3 deoiling cartridges** 00 MV 300R 50 00 MV 300R 50 art. 3 vanes art. 00 MV 300R 10 00 MV 300R 10 Sealing kit art. 00 KIT MV 300R 00 KIT MV 300R Check valve art. Built-in Built-in **Oil filtre** 00 MV 300R 07 00 MV 300R 07 art. Suction filtre FC 60 FC 60 art. Ballast v<mark>alve</mark> Built-in art. Built-in

3D

7.48

LUBRICATED VACUUM PUMP ACCESSORIES AND SPARE PARTS

	Art.	Quantity	For pump art.
Fibre vanes	00 VTL 02 10	4	VTL 2
	00 VTL 04 10	4	VTL 4
	00 VTL 05 10	6	VTL 5
	00 VTL 10 10	6	VTL 10
	00 VTL 10F 10	6	VTL 10/F
	00 VTL 15F 10	6	VTL 15/F
	00 VTL 20F 10	6	VTL 20/F
	00 VTL 25FG 10	6	VTL 25/FG
	00 VTL 30FG 10	6	VTL 30/FG
	00 VTL 35FG 10	6	VTL 35/FG
	00 VTL 40G1 10	6	VTL 40/G1
	00 VTL 50G1 10	6	VTL 50/G1
	00 VTL 65G1 10	6	VTL 65/G1
	00 VTL 75G1 10	6	VTL 75/G1
	00 VTL 90G1 10	6	VTL 90/G1
	00 VTL 105G1 10	6	VTL 105/G1
	00 VTL 06 10	3	VTL 6 CC
	00 MV 20 10	3	MV 20
	00 MV 40 10	3	MV 40
	00 MV 60 10	3	MV 60
	00 MV 100 10	3	MV 100
	00 MV 160R 10	3	MV 160R
	00 MV 200R 10	3	MV 200R
	00 MV 300R 10	3	MV 300R
Sealing kits	00 KIT VTL 02	1	VTL 2
	00 KIT VTL 04	1	VTL 4
	00 KIT VTL 05	1	VTL 5
	00 KIT VTL 10	1	VTL 10
	00 KIT VTL 10F	1	VTL 10/F
	00 KIT VTL 15F	1	VTL 15/F
	00 KIT VTL 20F	1	VTL 20/F
	00 KIT VTL 25FG	1	VTL 25/FG
	00 KIT VTL 30FG	1	VTL 30/FG
	00 KIT VTL 35FG	1	VTL 35/FG
	00 KIT VTL 40G1	1	VTL 40/G1
	00 KIT VTL 50G1	1	VTL 50/G1
	00 KIT VTL 65G1	1	VTL 65/G1
	00 KIT VTL 75G1	1	VTL 75/G1
	00 KIT VTL 90G1	1	VTL 90/G1
	00 KIT VTL 105G1	1	VTL 105/G1
	00 KIT VTL 06	1	VTL 6 CC
	00 KIT MV 20	1	MV 20
	00 KIT MV 40	1	MV 40
	00 KIT MV 60	1	MV 60
	00 KIT MV 100	1	MV 100
	00 KIT MV 160R	1	MV 160R
	00 KIT MV 200R	1	MV 200R
	00 KIT MV 300R	1	MV 300R

LUBRICATED VACUUM PUMP ACCESSORIES AND SPARE PARTS

Leek values 10 01 15 1 VI. 4 10 02 15 1 VI. 5 10 02 10 1 VI. 15 10 03 10 1 VI. 15 VI. 10 1 VI. 15 10 05 10 1 VI. 156 10 06 10 1 VI. 156 10 07 10 1 VI. 106 10 07 10 1 VI. 107		Art.	Quantity	For pump art.
$ \left \begin{array}{cccccccccccccccccccccccccccccccccccc$	Check valves	10 01 15	1	VTL 2
$ \left \begin{array}{cccccccccccccccccccccccccccccccccccc$		10 02 15	1	VIL 4
$ \left \begin{array}{cccccccccccccccccccccccccccccccccccc$		10 02 10	1	VIL 5
$ \left \begin{array}{cccccccccccccccccccccccccccccccccccc$		10 03 10	1	VIL 10
$ \left \begin{array}{cccccccccccccccccccccccccccccccccccc$				VTL 10/F
$\left \begin{array}{cccccccccccccccccccccccccccccccccccc$				VTL 15/F
10 04 10 1 VII. 2646 VII. 3676 10 05 10 1 VII. 4051 10 06 10 1 VII. 2661 10 06 10 1 VII. 2661 10 07 10 1 VII. 2661 11 VII. 10 07 VII. 2661 VII. 2676 11 VII. 10 07 1 VII. 2676 11 VII. 10 07 VII. 2676 VII. 2676 12 07 10 VII. 2676 VII. 2676 12 07 10 VII. 2676 VII. 2676 12 07 10 VII. 2676 VII. 2676 13 07 10 VII.	and the second	10.04.10		VIL 20/F
ID 05 10 1 VIL 36/6 VIL 36/	M I W	10 04 10	1	VIL 25/FG
100510 1 VIL 40(5) VIL 50(5) VIL 50(5) 100510 1 VIL 50(5) 100710 1 VIL 20(6) 100710 1 VIL 50(6) 100710 1 VIL 50(6) 100710 1 VIL 20(6) 100710 1 VIL 20(7) 100711 1 VI				VIL 30/FG
IU 05 10 1 VIL 40/CI VIL 05/CI VIL 05/CI 10 06 10 1 VIL 25/CI 10 07 10 1 VIL 15/CI Suction filtres F5.5 1 VIL 26/CI F8.0 1 VIL 26/CI VIL 26/CI F8.10 1 VIL 36/CI VIL 36/CI F8.20 1 VIL 10/CI VIL 10/CI VIL 10/CI VIL 10/CI VIL 10/CI VIL 30/CI F8.20 1 VIL 10/CI VIL 30/CI F8.20 1 VIL 30/CI VIL 30/CI F0.20 1 VIL 30/CI VIL 30/CI				VIL 35/FG
NL 80/61 VIL 80/61 10 06 10 1 VIL 56/11 10 07 10 1 VIL 20/61 Suction filtres FB 5 1 VIL 20/61 FB 10 1 VIL 20/61 VIL 15 VIL 10/6 1 VIL 20/61 VIL 20/61 VIL 20/61 VIL 20/61 VIL 20/61 VIL 20/61 VIL 20/61 VIL 20/61 VIL 20/61 VIL 20/61 VIL 20/61 FB 30 1 VIL 20/61 FB 40 1 VIL 20/61 VIL 20/61 VIL 20/61 VIL 20/61 VIL 20/61 VIL 20/61 VIL 20/61 FB 40 1 VIL 20/61 FC 10 1 VIL 4 VIL 50/61 FC 10 1 VIL 16/61 VIL 50/61 VIL 10/6 VIL 10/61 VIL 10/61 VIL 20/61 VIL 10/6 VIL 10/61 VIL 10/61 VIL 10/61 VIL 10/61 VIL 10/61 VIL 10/61 VIL 10/61 VIL 20/61 VIL 20/61 VIL 20/61 VIL 20/		10 05 10	1	VIL 40/G1
June 10 1 VIL 25/61 VIL 10/61 Suction filtres H5 1 VIL 26/61 FB 10 1 VIL 26/61 FB 20 1 VIL 10/61 VIL 10/61 VIL 25/61 VIL 26/61 VIL 10/61 VIL 10/61 VIL 10/61 VIL 10/61 VIL 10/61 VIL 25/61 VIL 10/61 VIL 25/61 VIL 25/61 VIL 10/61 VIL 10/61 VIL 25/61 VIL 10/61 VIL 10/61 VIL 10/61 VIL 10/61 VIL 10/61 VIL 25/61 VIL 10/61 VIL 25/61 VIL 25/61 VIL 25/61 VIL 25/61 VIL 25/61 VIL 25/61 VI				VIL 50/G1
10 10 10 1 VIL 29/61 10 07 10 1 VIL 105/01 Suction filtres P8 5 1 VIL 2 FB 10 1 VIL 5 VIL 5 VIL 105 VIL 105 VIL 105 VIL 105 VIL 105 VIL 105 VIL 105 VIL 105 VIL 25/63 1 VIL 25/63 VIL 25/63 VIL 25/63 VIL 25/63 VIL 25/63				VIL 65/G1
Suction filtres PE 5 FB 10 1 VTL 0561 FB 20 1 VTL 4 VTL 5C VTL 6C FB 20 1 VTL 00 VTL 10F VTL 10F VTL 10F VTL 10F VTL 10F VTL 10F VTL 10F VTL 10F VTL 10F VTL 10F VTL 10F VTL 10F VTL 20F6 VTL 20F6 VTL 20F6 VTL 20F6 VTL 20F6 VTL 20F6 WV 20A VTL 20F6 VTL 20F6		10 06 10	1	VIL 75/GI
Suction filtres FB 5 FB 10 1 FB 20 VL 2 FB 10 VL 2 FB 10 FB 20 1 VT 10 VT 15 VT 15 VT 10F VT 10F VT 10F FB 20 1 VT 10F VT 10F VT 10F FB 20 1 VT 10F VT 10F VT 10F FB 20 1 VT 2FF VT 2FF VT 2FF FD 20 1 VT 2FF VT 2FF VT 2FF FD 20 1 VT 2FF VT 2FF VT 2FF FD 30 1 VT 2FF VT 2FF VT 2FF FD 40 1 VT 2FF VT 2FF VT 2FF FD 40 1 VT 2FF VT 2FF VT 2FF FD 40 1 VT 2FF VT 2FF VT 2FF FD 40 1 VT 2FF VT 2FF VT 2FF FD 40 1 VT 2FF VT 2FF VT 2FF VT 20F MV 20A VT 2FF VT 2FF VT 2FF VT 20F MV 20A VT 2FF VT 2FF VT 2FF				VIL 90/G1
Suction filtres FB 5 1 VTL 2 FB 10 1 VTL 6C VTL 6C VTL 00C VTL 00C VTL 00C VTL 00C VTL 00F VTL 00F VTL 00F		10 07 10	1	VIL 105/G1
JACKAN INTES IP 3 FF 10 1 FF 10 VIL 2 VIL 5 VIL 5 VIL 10F FF 20 1 VIL 10 VIL 10F VIL 10F VIL 10F VIL 20F6 VIL 20F6 FE 40 1 VIL 20F6 VIL 001 VIL 20F6 VIL 20F6 VIL 10F VIL 10F VIL 10F VIL 10F VIL 10F VIL 10F VIL 10F VIL 10F VIL 10F VIL 10F VIL 20F6 VIL 10F VIL 10F VIL 10F VIL 20F6 </td <td>Suction filtres</td> <td>ER 5</td> <td>1</td> <td>VTI 2</td>	Suction filtres	ER 5	1	VTI 2
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Suction intres	FD J EP 10	1	
FB 20 1 VIL 3C VIL 3C VIL 10F FB 25 1 VIL 20F FB 30 1 VIL 30FG VIL 50FG VIL 30FG VIL 30FG VIL 50FG VIL 50FG VIL 50FG VIL 10F VIL 50FG VIL 50FG VIL 10F VIL 50FG VIL 50FG VIL 20F MV 20A VIL 20FF FC 20 1 VIL 50FG VIL 20FF MV 20A VIL 20FF FC 30 1 VIL 50FG VIL 50FG VIL 50FG MV 40A MV 40A MV 40A MV 40A MV 60A MV 60A MV 60A MV 60A MV 60A <		FB IU	I	
FB 20 1 VL 10 VL 10F VTL 20F VTL 20F				VIL 5
FB 20 I VIL 10 VIL 10F VIL 10F VIL 10F VIL 10F VIL 10F VIL 10F VIL 25FG VIL 25FG VIL 25FG VIL 25FG VIL 25FG VIL 25FG VIL 25FG VIL 25FG VIL 25FG FB 40 1 VIL 25FG VIL 00G1 VIL 25FG VIL 00G1 VIL 10F VIL 10F VIL 10F VIL 10F VIL 10F VIL 10F VIL 10F VIL 25FG VIL 25FG VIL 20FF MV 20 MV 20 MV 20F FC 20 1 VIL 25FG VIL 25FG VIL 25FG V			4	
FB 25 1 VII. 15F VII. 20F VII. 20F VII. 20F VII. 20F VII. 30F6 VII. 30F6 VII. 40/61 VII. 50F6 FB 40 1 VII. 75/61 FB 50 1 VII. 105/61 FC 10 1 VII. 40/61 FC 20 1 VII. 105/61 VII. 20F VII. 20F VII. 20F VII. 20F VII. 105/61 VII. 20F VII. 20F VII. 20F VII. 20F VII. 20F <t< td=""><td></td><td>FB 20</td><td>I</td><td></td></t<>		FB 20	I	
$ \begin{array}{ c c c c c } FB 25 & 1 & VI 20F \\ $				VIL IU/F
FB 25 1 VI 23/FG VI 30/FG FB 30 1 VI 40/FI VI 30/FG FB 30 1 VI 40/FI VI 50/FI FB 40 1 VI 10/FI VI 50/FI FB 50 1 VI 10/FI VI 10/FI FC 10 1 VI 10/FI VI 10/FI FC 20 1 VI 10/FI VI 10/FI VI 10/FI VI 10/FI VI 10/FI VI 10/FI VI 10/FI VI 10/FI VI 10/FI VI 10/FI VI 20/FI VI 20/FI VI 20/FI FC 25 1 VI 25/FG VI 20/FI VI 20/FI VI 20/FI VI 20/FI <td></td> <td></td> <td></td> <td>VIL 15/F</td>				VIL 15/F
HB 25 I VIL 20/FG VIL 35/FG VIL 35/FG VIL 40/G1 VIL 40/G1 VIL 65/G1 VIL 65/G1 VIL 65/G1 VIL 65/G1 VIL 65/G1 VIL 65/G1 VIL 67/G1 VIL 65/G1 VIL 67/G1 VIL 105/G1 VIL 10/G1 VIL 10/G1 VIL 20/F VIL 30/FG VIL 30/FG VIL 30/FG VIL 30/FG VIL 30/FG VIL 50/G1 VIL 50/G1 <	Contraction of the		4	VIL 20/F
HB 30 1 VTL 30/FG FB 30 1 VTL 50/G1 VTL 50/G1 VTL 56/G1 VTL 56/G1 FB 40 1 VTL 56/G1 FB 50 1 VTL 105/G1 FC 10 1 VTL 5 FC 20 1 VTL 5 VTL 10 VTL 5 VTL 6 VTL 20/F WX 20 WX 20 MX 20 MX 20 MX 20 FC 30 1 VTL 25/FG VTL 30/FG VTL 30/FG VTL 30/FG VTL 30/FG VTL 40/G1 VTL 50/G1 VTL 50/G1 VTL 50/G1 VTL 50/G1 VTL 50/G1 VTL 50/G1 VTL 90/G1 VTL 50/G1 VTL 105/G1 MX 40 MV 400 MV 40 MV 40 MV 1000 MV 100A MV 100A <td></td> <td>FB 25</td> <td>1</td> <td>VIL 25/FG</td>		FB 25	1	VIL 25/FG
FB 30 1 VIL 30/FG VIL 50/G1 VIL 50/G1 VIL 50/G1 FB 40 1 VIL 50/G1 VIL 65/G1 FB 50 1 VIL 105/G1 FC 10 1 VIL 65/G1 VIL 6 1 VIL 105/G1 VIL 105/G1 VIL 6 VIL 6 FC 20 1 VIL 105/G1 VIL 6 VIL 105/G1 VIL 6 VIL 105/G1 VIL 105/G1 VIL 6 VIL 20/F NV 20 NV 20 MV 20 NV 20 NV 20 MV 20 NV 20 NV 20 FC 25 1 VIL 25/FG VIL 35/FG VIL 35/FG VIL 35/FG FC 30 1 VIL 40/G1 VIL 50/G1 VIL 50/G1 VIL 50/G1 MV 400 MV 40 MV 40 MV 400 MV 40A MV 40A MV 400 MV 40A MV 40A MV 40A MV 40A MV 40A MV 40A MV 40A MV 40A MV 100A VIL 105/G1 MV 40A <td></td> <td></td> <td></td> <td>VIL 30/FG</td>				VIL 30/FG
H5 30 1 VIL 40/G1 VIL 50/G1 FB 40 1 VIL 50/G1 FB 50 1 VIL 105/G1 FC 10 1 VIL 4 FC 20 1 VIL 105/G1 VIL 105/G1 VIL 4 VIL 5 VIL 0 1 VIL 105/G1 VIL 10 VIL 10 VIL 10/F VIL 10/F VIL 10/F VIL 10/F VIL 10/F VIL 20/F VIL 20/F W 20A VIL 30/FG VIL 30/FG VIL 30/FG VIL 30/FG VIL 30/FG VIL 50/G1 VIL 50/G1 VIL 50/G1 VIL 50/G1 VIL 50/G1 WV 400 MV 400 MV 400 MV 400 MV 600 MV 400 MV 400 MV 600 MV 400 MV 400 MV 600 MV 400 MV 400 MV 100/A MV 100/A	1			VIL 35/FG
FB 40 1 VTL 50/G1 VTL 65/G1 FB 50 1 VTL 50/G1 FC 10 1 VTL 4 FC 20 1 VTL 5 FC 20 1 VTL 50/G1 VTL 50/G1 VTL 5 VTL 5 VTL 5 VTL 5 VTL 5 FC 20 1 VTL 10 VTL 20/F VTL 20/F WV 20 WV 20 WV 20 WV 20 FC 25 1 VTL 35/FG VTL 30/FG VTL 30/FG VTL 50/G1 VTL 50/G1 VTL 50/G1 VTL 50/G1 FC 30 1 VTL 60/G1 VTL 50/G1 VTL 50/G1 WV 60 WV 60 MV 40 MV 40 MV 60 MV 40 MV 40 MV 60 MV 40 MV 40 MV 60 MV 60 MV 60 MV 60 MV 100 VTL 90/G1 MV 100 VTL 90/G1 VTL 90/G1 MV 100 MV 100/PA MV 100/PA MV 100/PA	A start and a start of the	FB 30	1	VTL 40/G1
FB 40 1 VIL 65/G1 VIL 90/G1 FB 50 1 VIL 105/G1 FC 10 1 VIL 4 FC 20 1 VIL 5 VIL 0 VIL 5 VIL 0 VIL 10/F VIL 10/F VIL 10/F VIL 10/F VIL 10/F VIL 10/F VIL 20/F MV 20 MV 20 FC 25 1 VIL 25/F6 VIL 30/F6 VIL 30/F6 VIL 30/F6 VIL 30/F6 VIL 30/F6 VIL 30/F6 FC 30 1 VIL 50/G1 VIL 50/G1 VIL 50/G1 VIL 50/G1 VIL 50/G1 VIL 50/G1 MV 40A MV 60A MV 40A MV 40A MV 60A MV 100A MV 100A MV 100A MV 100A MV 100A <	A REAL PROPERTY AND A REAL			VTL 50/G1
FB 40 1 VTL 75/G1 VTL 105/G1 1 VTL 105/G1 FC 10 1 VTL 4 VTL 6 VTL 10 VTL 10 VTL 10 VTL 10 VTL 10 VTL 20/F VTL 20/F VTL 20/F VTL 30/FG VTL 50/G1 VTL 50/G1 VTL 50/G1 VTL 50/G1 VTL 50/G1 VTL 50/G1 VTL 50/G1 WT 100 WT 100 WT 100 WT 100 WT 100 VTL 105/G1 WT 100/F WT 100 WT 100/F WT 100/F WT 100 WT 100/F WT 100/F WT 100 WT 100/F WT 10/F </td <td></td> <td></td> <td></td> <td>VTL 65/G1</td>				VTL 65/G1
FB 50 1 VIL 90/G1 FC 10 1 VIL 105/G1 FC 20 1 VIL 6 FC 20 1 VIL 10/F VIL 10/F VIL 10/F VIL 20/F VIL 20/F MV 20 MV 20 MV 20 MV 20 MV 20 FC 25 1 VIL 20/FG FC 30 1 VIL 30/FG FC 30 1 VIL 30/FG VIL 30/FG VIL 30/FG VIL 30/FG VIL 50/G1 VIL 30/FG VIL 30/FG VIL 50/G1 VIL 30/FG VIL 30/FG VIL 50/G1 VIL 40/G1 VIL 30/FG VIL 50/G1 VIL 40/G1 VIL 40/G1 VIL 10/F VIL 10/F VIL 10/F VIL 10/F VIL 10/F VIL 10/F VIL 10/F VIL 10/F		FB 40	1	VIL 75/G1
FB 50 1 VIL 105/61 FC 10 1 VIL 4 VIL 5 VIL 6 CC VIL 10 VIL 10 VIL 10/F VIL 10/F VIL 10/F VIL 10/F VIL 10/F VIL 10/F VIL 20/F MV 20 MV 20 MV 20 MV 20 MV 20 FC 25 1 VIL 30/F6 VIL 30/F6 VIL 30/F6 VIL 30/F6 VIL 30/F6 VIL 50/G1 VIL 60/G1 VIL 50/G1 VIL 50/G1 VIL 50/G1 VIL 50/G1 FC 35 1 MV 40 MV 60 MV 60 MV 100 MV 100A FC 40 1 VIL 50/G1 FC 50 1 VIL 105/G1 MV 160R MV 160R MV 160R MV 160R MV 160RA MV 160RA				VTL 90/G1
FC 10 1 VTL 4 VTL 6 CC VTL 6 CC VTL 10 VTL 10/F VTL 10/F VTL 10/F VTL 20/F MV 200 MV 20A MV 20A FC 25 1 VTL 30/F6 VTL 35/F6 VTL 30/F6 VTL 35/F6 VTL 30/F6 VTL 55/G1 VTL 30/F6 VTL 55/G1 VTL 50/G1 VTL 55/G1 VTL 50/G1 VTL 55/G1 VTL 50/G1 VTL 50/G1 VTL 50/G1 VTL 90/G1 VTL 50/G1 VTL 90/G1 VTL 90/G1 VTL 90/G1 VTL 90/G1 VT 90/G1 VTL 90/G1 VT 90/G1 <td></td> <td>FB 50</td> <td>1</td> <td>VTL 105/G1</td>		FB 50	1	VTL 105/G1
FC 20 1 VTL 5 VTL 6 CC FC 20 1 VTL 10 VTL 10F VTL 10F VTL 20/F MV 20 MV 20 MV 20 FC 25 1 VTL 25/F6 VTL 30/F6 VTL 35/F6 VTL 30/F6 VTL 35/F6 VTL 30/F6 VTL 35/F6 FC 30 1 VTL 35/F6 VTL 50/F1 VTL 30/F6 VTL 50/F1 VTL 50/F1 VTL 50/F1 VTL 50/F1 VTL 50/F1 MV 400 MV 400 MV 400 MV 400 MV 400 MV 1000 MV 1000		FC 10	1	VTL 4
FC 20 1 VTL 6 CC VTL 10/F VTL 10/F VTL 10/F VTL 20/F MV 20 MV 20 MV 20A VTL 35/FG FC 25 1 VTL 35/FG FC 30 1 VTL 45/FG FC 30 1 VTL 50/G1 VTL 65/G1 VTL 50/G1 VTL 65/G1 FC 35 1 MV 40A MV 60A MV 40A MV 40A MV 60A MV 100 MV 100 MV 100 MV 100 MV 100 FC 40 1 VTL 55/G1 FC 50 1 VTL 05/G1 MV 100RA MV 100RA MV 100RA MV 100RA MV 100RA MV 100RA				VTL 5
FC 20 1 VIL 10 VIL 10/F VIL 15/F VIL 20/F VIL 20/F WV 20 MV 20 FC 25 1 VIL 25/FG VIL 35/FG VIL 35/FG FC 30 1 VIL 35/FG FC 30 1 VIL 40/61 VIL 50/G1 VIL 50/G1 VIL 50/G1 FC 35 1 MV 40A MV 60 MV 40A MV 60 MV 60 MV 40A MV 60 FC 40 1 VIL 75/G1 FC 50 1 VIL 105/G1 MV 100R MV 100R MV 100R MV 160R MV 160R MV 160R MV 160R MV 160R MV 160R				VTL 6 CC
FC 25 1 VIL 15/F FC 25 1 VIL 25/FG VIL 35/FG VIL 35/FG FC 30 1 VIL 35/FG FC 30 1 VIL 40/61 VIL 50/61 VIL 50/61 VIL 50/61 FC 35 1 MV 40A MV 60 MV 40A MV 60 FC 40 1 VIL 75/G1 FC 50 1 VIL 50/G1 FC 50 1 VIL 65/G1 MV 100A MV 100A FC 40 1 VIL 15/FG1 MV 100A MV 100A MV 100A FC 50 1 MV 100A FC 50 1 WIL 105/G1 FC 50 1 WIL 105/G1 FC 60 1 WI 200R		FC 20	1	VTL 10
VTL 15/F VTL 20/F MV 20 FC 25 1 VTL 25/FG VTL 30/FG VTL 30/FG VTL 30/FG VTL 35/FG FC 30 1 VTL 40/G1 VTL 50/G1 VTL 50/G1 VTL 65/G1 MV 40A MV 40A MV 40A MV 40A MV 40A MV 40A MV 60A MV 100A FC 40 1 VTL 75/G1 VTL 75/G1 VTL 75/G1 VTL 90/G1 FC 50 1 VTL 15/G1 MV 160R MV 160R				VTL 10/F
FC 25 1 VTL 20/F MV 20 MV 20 MV 20A VTL 30/FG VTL 35/FG VTL 35/FG FC 30 1 VTL 40/G1 VTL 50/G1 VTL 50/G1 VTL 65/G1 VTL 65/G1 FC 35 1 MV 40A MV 60 MV 60 MV 100 MV 100 FC 40 1 VTL 75/G1 FC 50 1 VTL 105/G1 MV 160R MV 160R MV 160R MV 160R MV 160R MV 160R MV 160R MV 20R MV 20R				VTL 15/F
FC 25 FC 25 FC 30 FC 30 FC 30 FC 35 FC 40 FC 40				VTL 20/F
FC 25 1 VTL 25/FG VTL 30/FG VTL 30/FG FC 30 1 VTL 40/G1 VTL 50/G1 VTL 50/G1 VTL 50/G1 FC 35 1 WV 40 WV 40 WV 40 WV 40 WV 60 WV 60 WV 100 WV 100 FC 40 1 VTL 75/G1 VTL 90/G1 FC 50 1 WT 105/G1 WV 100 W				MV 20
FC 25 1 VTL 25/FG VTL 30/FG VTL 35/FG FC 30 1 VTL 40/G1 VTL 50/G1 VTL 50/G1 VTL 65/G1 FC 35 1 MV 40 MV 40 MV 40 MV 60 MV 60 MV 60 MV 60 MV 100 MV 100 MV 100 MV 100 FC 40 1 VTL 75/G1 VTL 90/G1 FC 50 1 VTL 90/G1 MV 160R MV 160R MV 160R MV 160R MV 160R MV 160R MV 160RA MV 160R MV				MV 20A
FC 30 1 VTL 30/FG VTL 35/FG VTL 40/G1 VTL 50/G1 VTL 65/G1 VTL 65/G1 NV 40A MV 40A MV 40A MV 60 MV 60A MV 100 MV 100 MV 100A VTL 90/G1 FC 50 1 VTL 105/G1 MV 160R MV 160R MV 160RA MV 160RA		FC 25	1	VTL 25/FG
FC 30 1 VTL 40/G1 VTL 50/G1 VTL 65/G1 VTL 65/G1 MV 40 MV 40A MV 40A MV 60 MV 60A MV 100 FC 40 1 VTL 75/G1 VTL 90/G1 FC 50 1 VTL 90/G1 MV 160R MV 160R MV 160R				VTL 30/FG
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FC 35 1 VTL 50/G1 VTL 65/G1 WV 40 WV 40A WV 40A WV 60 WV 60A WV 100 WV 100 FC 40 1 VTL 75/G1 VTL 90/G1 FC 50 1 VTL 90/G1 WV 160R WV 160R WV 160RA WV 160RA WV 160RA WV 160RA		FC 30	1	VTL 40/G1
FC 35 1 MV 40 MV 40A MV 40A MV 60 MV 60A MV 100 MV 100 MV 100A FC 40 1 VTL 75/G1 VTL 90/G1 VTL 90/G1 MV 160R MV 160R MV 160R MV 160RA MV 160RA				VTL 50/G1
FC 35 1 MV 40 MV 40A MV 60 MV 60A MV 100 MV 100A FC 40 1 VTL 75/G1 VTL 90/G1 VTL 90/G1 MV 160R MV 160R MV 160RA MV 160RA				VTL 65/G1
MV 40A MV 60 MV 60A MV 100 MV 100 MV 100 FC 40 1 FC 50 1 FC 50 1 VTL 75/G1 MV 100R MV 160R MV 160RA MV 160RA MV 160RA MV 200R		FC 35	1	MV 40
FC 40 1 VTL 75/G1 FC 50 1 VTL 90/G1 FC 50 1 VTL 105/G1 MV 160R MV 160R MV 160RA MV 160RA FC 60 1 MV 200R				MV 40A
FC 40 1 WV 60A FC 40 1 VTL 75/G1 VTL 90/G1 VTL 90/G1 FC 50 1 VTL 105/G1 MV 160R MV 160R FC 60 1 MV 200R				MV 60
FC 40 1 MV 100 FC 50 1 VTL 75/G1 VTL 90/G1 VTL 90/G1 FC 50 1 VTL 105/G1 MV 160R MV 160R FC 60 1 MV 200R				MV 60A
FC 40 1 VTL 75/G1 VTL 90/G1 FC 50 1 VTL 90/G1 FC 60 1 WV 160R MV 160R MV 160RA				MV 100
FC 40 1 VTL 75/G1 VTL 90/G1 VTL 105/G1 FC 50 1 VTL 105/G1 MV 160R MV 160R FC 60 1 MV 200R				MV 100A
FC 50 1 VTL 90/G1 VTL 105/G1 MV 160R MV 160R MV 160RA MV 200R		FC 40	1	VTL 75/G1
FC 50 1 VTL 105/G1 MV 160R MV 160RA FC 60 1 MV 200R				VTL 90/G1
FC 60 1 MV 160R MV 200R 1 MV 200R		FC 50	1	VTL 105/G1
FC 60 1 MV 160RA MV 200R				MV 160R
FC 60 1 MV 200R				MV 160RA
		FC 60	1	MV 200R
MV 200RA				MV 200RA
MV 300R				MV 300R
MV 300RA				MV 300RA

LUBRICATED VACUUM PUMP ACCESSORIES AND SPARE PARTS

00 VTL 00 11	quarty	VTL - All VTLP - All
		VTLP - Ali
00 LP VTL 99		VTLP - Ali
00 LP VTL 40		VTLP - All
00 MV 160R 07		MV 160R
00 MV 200R 07		MV 200R
00 MV 300R 07		MV 300R
00 VTL 75G1 29	1	VTL 75/G1
00 VTL 90G1 29	1	VTL 90/G1
00 VTL 105G1 29	1	VTL 105/G1
00 MV 20 11	1	MV 20
		MV 20A
00 MV 40 50	1	MV 40
		MV 40A
00 MV 60 50	1	MV 60
		MV 60A
00 MV 100 06	2	MV 100
		MV 100A
00 MV 160R 06	2	MV 160R
		MV 160RA
00 MV 200R 50	2	MV 200R
		MV 200RA
00 MV 300R 50	3	MV 300R
		MV 300RA
VZ 01	1	MV 20
		MV 20A
VZ 02	1	MV40
		MV 40A
		MV 60
		MV 60A
		MV 100
		MV 100A
ISO 32 - 68 - 100 - 150 - 220		Packages of I 2 - 5 - 7
VT OIL 32 - 68 - 100		Packages of I 2 - 5 - 7
	00 LP VTL 40 00 MV 160R 07 00 MV 200R 07 00 MV 200R 07 00 VTL 75G1 29 00 VTL 90G1 29 00 VTL 105G1 29 00 MV 20 11 00 MV 40 50 00 MV 40 50 00 MV 100 06 00 MV 100 06 00 MV 160R 06 00 MV 200R 50 00 MV 300R 50 VZ 01 VZ 01 VZ 02	00 LP VTL 40 00 MV 160R 07 00 MV 200R 07 00 MV 200R 07 00 VTL 75G1 29 1 00 VTL 90G1 29 1 00 MV 20 11 1 00 MV 20 11 1 00 MV 40 50 1 00 MV 60 50 1 00 MV 100 06 2 00 MV 100 06 2 00 MV 200R 50 2 00 MV 200R 50 3 VZ 01 1 VZ 02 1 ISO 32 - 68 - 100 - 150 - 220 VT 0L 32 - 68 - 100

DRY VACUUM PUMPS VTS 2 AND 4

These small dry vacuum pumps have a suction capacity of 2 and 4 cum/h. The particular shape of the working chamber and the special graphite, with which the locking flanges and vanes are made, allow these pumps to operate with no lubrication.

The rotor is cantilevered-fitted on the motor shaft, thus reducing overall dimensions to the minimum. The motor and the pump are cooled by the motor fan (surface cooling). A filtre that functions as a silencer is installed on the suction inlet.

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

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

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

- Curve regarding capacity (referring to the suction pressure) Curve regarding capacity (referring to a 1013 bar pressure) Curve regarding the emptying of a 100-litre volume
- V1: Volume to be emptied
- t₁: Time to be calculated (sec)
- t: Time obtained in the table (sec)

Art.		VTS 2		VTS 4		
Frequency		50Hz	60Hz	50Hz	60Hz	
Capacity	m³/h	2.0	2.4	4.0	4.8	
Final pressure	mbar abs.	15	0	150		
Motor execution	3~	230/400±10%	275/480±10%	230/400±10%	275/480±10%	
Volt	1~	230±	10%	230±10%		
Notor power	3~	0.13	0.15	0.15	0.18	
Kw	1~	0.13	0.15	0.15	0.18	
Notor protection	IP	54	1	54	1	
Rotation speed	rev/min ⁻¹	2800	3300	2800	3300	
Notor shape		Spe	cial	Special		
Notor size		56	3	63		
loise level	dB(A)	64	66	64	66	
Aax. weight	3~	5.	3	6.	8	
Kg	1~	5.5		7.0		
		217		251		
}		180		186		
		121		131		
		66		78		
		71		81		
		80		92	2	
l		35	ō	45	ō	
		90)	100		
		79	9	73		
Λ		1	1	13		
1	Ø gas	G1/4"		G1/4"		
Accessories and spare parts						
graphite vanes	art.	00 VTS	02 10	00 VTS 04 10		
erforated graphite disc	art.	00 VTS 02 12		00 VTS 02 12		
lon-perforated graphite disc	art.	00 VTS	00 VTS 02 16		02 16	
Sealing kit	art.	00 KIT \	/TS 02	00 KIT VTS 04		
Check valve	art.	10 0	10 01 15		1 15	
Suction filtre	art.	FB	5	FB	5	

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

DRY VACUUM PUMPS VTS 6 DC WITH DC MOTOR

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

This pump has a monobloc structure with the rotor fitted directly on the motor shaft. Both the motor and the pump are cooled by the motor fan (surface cooling).

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

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

Pumps VTS 6 DC can only be supplied with DC motor (service S1) conform with the EMC (89/336/EEC) Directive.

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

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

- V₁: Volume to be emptied
- t₁: Time to be calculated (sec)
- t: Time obtained in the table (sec)

Art.		VTS 6 CC
Capacity	m³/h	6.0
Final pressure	mbar abs.	150
Motor execution	Volt	24 CC
Motor power	Kw	0.28
Max. absorption at 24V/CC	А	15
Motor protection	IP	54
Rotation speed	rev/min ⁻¹	3000
Motor shape		Special
Motor size		71
Noise level	dB(A)	72
Max. weight	Kg	9.5
Α		290
В		136
C		193
D		124
E		65 5
F		101 👸
н		131
I		112
L		12
Μ		28
N		48 00
R	Ø gas	G1/4"
Accessories and spare parts		ava
4 vanes	art.	00 VTS 06 CC 10 8
Sealing kit	art.	00 KIT VTS 06 CC
Check valve	art.	10 01 15
Suction filtre	art.	FB 5

DRY VACUUM PUMPS VTS 6 and 10

These dry vacuum pumps have a suction capacity of 6 and 10 cum/h. The particular shape of the working chamber and the special graphite, with which the locking flanges and vanes are made, allow these pumps to operate without any lubrication.

The rotor is cantilevered-fitted on the motor shaft, thus reducing overall dimensions to the minimum. The motor and the pump are cooled by the motor fan (surface cooling). A filtre that functions as a silencer is installed on the suction inlet..

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

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

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

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

- V1: Volume to be emptied
- t1 : Time to be calculated (sec)
- t: Time obtained in the table (sec)

Art.		VTS	VTS 6		VTS 10	
Frequency		50Hz	60Hz	50Hz	60Hz	
Capacity	m³/h	6.0	7.2	10.0	12.0	
Final pressure	mbar abs.	80		80		
Motor execution	3~	230/400±10%	275/480±10%	230/400±10%	275/480±10%	
Volt	1~	230±1	0%	230±10%		
Motor power	3~	0.25	0.30	0.35	0.40	
Kw	1~	0.18	0.21	0.25	0.30	
Aotor protection	IP	54		54		
Rotation speed	rev/min-1	1450	1740	1450	1740	
Notor shape		Spec	ial	Spec	ial	
Notor size		71	71			
loise level	dB(A)	64	66	64	66	
/lax. weight	3~	11.8	11.8		15.0	
Kg	1~	12.0)	15.2		
		268		298		
}		210		180		
;		156		156		
)		55		55		
		155		155		
		58		88		
l		43 53				
		115	115		115	
		82.5	82.5		52.5	
Λ		12.5	ō	12.5		
I		68		13		
ł	Ø gas	G1/4	<i>n</i>	G3/8"		
Accessories and spare parts						
graphite vanes	art.	00 VTS (00 VTS 06 10		10 10	
ront graphite disc	art.	00 VTS (00 VTS 06 08		10 12	
lear graphite disc	art.	00 VTS (00 VTS 06 13		10 19	
Sealing kit	art.	00 KIT V	00 KIT VTS 06		TS 10	
Check valve	art.	10 01	15	10 02 10		
Suction filtre	art.	FB 5	5	FB 10/F	C 10	

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

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

These lubrication-free rotating vane vacuum pumps have a suction capacity of 10, 15, 20 and 25 cum/h. The particular shape of the working chamber and the special graphite, with which the locking flanges and vanes are made, allow these pumps to operate with no lubrication.

The pump rotor is fitted on the motor shaft and supported by independent bearings located on both the pump locking flanges. The pump is surface-cooled; the heat is dispersed from the especially finned external surface by a radial fan located between the motor and the pump.

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

This range of pumps can be also supplied with single-phase electric motors.

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

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

- V1 : Volume to be emptied
- t₁: Time to be calculated (sec)
- t : Time obtained in the table (sec)

Art.		VTS 10/F		VTS 15/F		
Frequency		50Hz	60Hz	50Hz	60Hz	
Capacity	m³/h	10.0	12.0	15.0	18.0	
Final pressure	mbar abs.	80		80		
Motor execution	3~	230/400±10%	275/480±10%	230/400±10%	275/480±10%	
Volt	1~	230±1	0%	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	54		54	1	
Rotation speed	rev/min-1	1450	1740	1450	1740	
Motor shape		Spec	ial	Spec	cial	
Motor size		80		80)	
Noise level	dB(A)	64	66	65	67	
Max. weight	3~	22.1 24.1		.1		
Kg	1~	22.5		24.5		
Α		388		408		
B		260		260		
C		187		187		
D		24		24	24	
E		340)	34	340	
F		24		44	1	
н		133	}	13	3	
I		130 130		0		
L		55		55	5	
M		75		75		
N		53		63		
R	Ø gas	G1/2"		G1/2"		
Accessories and spare parts						
6 graphite vanes	art.	00 VTS 10F 10		00 VTS -	00 VTS 15F 10	
Front graphite disc	art.	00 VTS 10F 21		00 VTS -	10F 21	
Rear graphite disc	art.	00 VTS 10F 21		00 VTS -	10F 21	
Sealing kit	art.	00 KIT VT	S 10F	00 KIT V	TS 15F	
Check valve	art.	10 03	10	10 03	3 10	
Suction filtre	art.	FB 20/F	C 20	FB 20/F	FC 20	

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

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drawings available at

3D

Art.		VTS 20/F		VTS 25/F		
Frequency		50Hz	60Hz	50Hz	60Hz	
Capacity	m³/h	20.0	24.0	25.0	30.0	
Final pressure	mbar abs.	80		80)	
Motor execution	3~	230/400±10%	275/480±10%	230/400±10%	275/480±10%	
Volt	1~	230±	10%	230±	10%	
Motor power	3~	0.88	1.05	0.88	1.05	
Kw	1~	0.88	1.05	0.88	1.05	
Motor protection	IP	54	1	54	1	
Rotation speed	rev/min-1	1450	1740	1450	1740	
Motor shape		Spe	cial	Spe	cial	
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		
Α		42	428		428	
В		260		260		
C		187		187		
D		24		24	1	
E		34	0	38	5	
F		64	1	19	9	
Н		13	3	13	3	
I		13	0	13	0	
L		55	5	55	5	
М		75	5	75		
N		73	3	73		
R	Ø gas	G1/2"		G3/4"		
Accessories and spare parts						
6 graphite vanes	art.	00 VTS :	20F 10	00 VTS :	00 VTS 25F 10	
Front graphite disc	art.	00 VTS 10F 21		00 VTS	00 VTS 10F 21	
Rear graphite disc	art.	00 VTS 10F 21		00 VTS	00 VTS 10F 21	
Sealing kit	art.	00 KIT V	TS 20F	00 KIT V	TS 25F	
Check valve	art.	10 03	3 10	10 04	4 10	
Suction filtre	art.	FB 20/	FC 20	FB 25/	FC 25	

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

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