Technical data

General technical data valid for all pumps		
ATEX approval if the ATEX marking is shown on the rating plate Inner part (pumped gases)		II 3/- G Ex h IIC T3 Gc X Internal Atm. only Tech.File: VAC-EX02
Maximum permissible inlet pressure (absolute)	psi (bar)	16 (1.1)
Maximum permissible outlet pressure (absolute)	psi (bar)	16 (1.1)
Maximum pressure difference between inlet and outlet	psi (bar)	16 (1.1)
Maximum permissible pressure (absolute) at gas ballast valve	psi (bar)	17.5 (1.2)
Permissible ambient temperature storage / operation	°F (°C)	14 to 140 / 50 to 104 (-10 to +60 / +10 to +40)
Permissible relative atmospheric moisture during operation (no condensation)	%	30 to 85
Maximum permissible installation altitude above mean sea level	ft (m)	6500 (2000)
Rated motor power	hp (kW)	0.71 (0.53)
No-load speed	rpm	1650
Maximum permissible range of supply voltage (±10%) Attention: Observe specifications of rating plate!		120 V~ 50/60 Hz 200-230 V~ 50/60 Hz
Maximum rated current at: 120 V~ 50/60 Hz 200-230 V~ 50/60 Hz	 A A	 8.0 3.5
Device fuse		2 slow blow fuses 250 V / 8AT - 5x20
Motor protection		temperature sensor in the winding
Overvoltage category		II
Degree of protection IEC 60529		IP 40
Pollution degree		2
Inlet		small flange KF DN 25

General technical data valid for all pumps		
Outlet + EK		hose nozzle for tubing I.D. 5/8” (hose nozzle DN 15 mm) hose nozzle for tubing I.D. 3/8” (hose nozzle DN 10 mm)
Coolant connection (waste vapor condenser, only ”EK”)		hose nozzle for tubing I.D. 1/4” - 5/16” (hose nozzle DN 6-8 mm)
Maximum permissible pressure of coolant at waste vapor condenser (”EK”)	psi (bar)	87 (absolute) (6 (absolute))
Permissible range of coolant temperature (waste vapor condenser, only ”EK”)	°F (°C)	5 to 68 (-15 to +20)
Volume of catchpot (only ”AK” / ”EK”)	quarts (ml)	0.52 (500)

Type		ME 16C NT ME 16C NT + EK
Maximum pumping speed* (ISO 21360)	cfm (m^3/h)	9.6 (16.3)
Ultimate vacuum (absolute) without gas ballast	Torr (mbar)	53 (70)
Ultimate vacuum (absolute) with gas ballast	Torr (mbar)	75 (100)
A-weighted emission sound pressure level** (uncertainty K_{pA} : 3 dB(A))	dB(A)	54
Weight approx. 120 V~ version + EK 200-230 V~ version + EK	 lbs. (kg) lbs. (kg) lbs. (kg) lbs. (kg)	 60.6 (27.5) 62.6 (28.4) 60.2 (27.3) 62.4 (28.3)

We reserve the right for technical modification without prior notice!

Type		MD 12C NT MD 12C NT + EK MD 12C NT + AK + EK
Maximum pumping speed* (ISO 21360)	cfm (m^3/h)	7.1 (12.0)
Ultimate vacuum (absolute) without gas ballast	Torr (mbar)	1.5 (2)
Ultimate vacuum (absolute) with gas ballast	Torr (mbar)	3.0 (4)
A-weighted emission sound pressure level** (uncertainty K_{pA} : 3 dB(A))	dB(A)	50
Weight approx. 120 V~ version + EK + AK + EK 200-230 V~ version + EK + AK + EK	 lbs. (kg) lbs. (kg) lbs. (kg) lbs. (kg) lbs. (kg) lbs. (kg)	 60.6 (27.5) 62.8 (28.5) 63.9 (29.0) 60.4 (27.4) 62.6 (28.4) 63.7 (28.9)

Type		MV 10C NT MV 10C NT + EK
Maximum pumping speed* (ISO 21360)	cfm (m^3/h)	5.6 (9.5)
Ultimate vacuum (absolute) without gas ballast	Torr (mbar)	0.68 (0.9)
Ultimate vacuum (absolute) with gas ballast	Torr (mbar)	1.1 (1.5)
A-weighted emission sound pressure level** (uncertainty K_{pA} : 3 dB(A))	dB(A)	50
Weight approx. 120 V~ version + EK + AK + EK 200-230 V~ version + EK + AK + EK	 lbs. (kg) lbs. (kg) lbs. (kg) lbs. (kg) lbs. (kg) lbs. (kg)	 60.4 (27.4) 62.6 (28.4) 63.9 (29.0) 60.2 (27.3) 62.4 (28.3) 63.7 (28.9)

* Pumping speed of diaphragm pump

** Measurement according to EN ISO 2151:2004 and EN ISO 3744:1995 at 230V/50Hz and ultimate vacuum with exhaust tube at outlet.

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Gas inlet temperatures

Operating condition	Inlet pressure	Permitted range of gas temperatures at inlet
Continuous operation	> 75 Torr (100 mbar) (high gas load)	➡ 50 °F to 104 °F (+10°C to +40°C)
Continuous operation	< 75 Torr (100 mbar) (low gas load)	➡ 32 °F to 140 °F* (0°C to +60°C*)
Short-time (< 5 minutes)	< 75 Torr (100 mbar) (low gas load)	➡ 14 °F to 176 °F* (-10°C to +80°C*)

* if pumping potentially explosive atmospheres: 50 °F to 104 °F (+10°C to +40°C)

Wetted parts

Components	Wetted materials
Head cover	ETFE carbon fiber reinforced
Diaphragm clamping disc	ETFE carbon fiber reinforced
Diaphragm	PTFE
Valves (ME 16C NT)	PTFE
Valves (MD 12C NT / MV 10C NT)	FFKM
O-rings	FPM
Valve head	ECTFE carbon fiber reinforced
Tubing	PTFE
Fittings	ETFE / ECTFE
Gas ballast tube	PTFE carbon reinforced
Inlet	PP glass fiber reinforced
Distributor / fitting towards outlet	PTFE carbon reinforced
Outlet	PTFE carbon reinforced
Hose nozzle at outlet	PP
Exhaust waste vapor condenser / catchpot	Borosilicate glass
Overpressure safety relief device at waste vapor condenser	PTFE / silicone rubber
Outlet at waste vapor condenser	PET
Separator (AK)	PP glass fiber reinforced / PE
O-ring / centring ring at separator (AK)	FEP
Adapter small flange KF DN 25 / hose nozzle DN 15 mm	PP

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