

Technical data

General technical data valid for all pumps		
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 / 54 to 104 (-10 to +60 / +12 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)
No-load speed 50/60 Hz	rpm	1500 / 1800
Motor protection single-phase motor three-phase motor		self-hold thermal cutout, manual reset circuit-breaker isolating all poles in case of overload
Overvoltage category		II
Degree of protection IEC 529		IP 40
Pollution degree		2
Water vapor tolerance	Torr (mbar)	30 (40)
Recommended oil		VACUUBRAND B-oil

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)

Type		RE 2.5	RE 6	RZ 2.5	RZ 6
Maximum pumping speed 50/60 Hz (ISO 21360)	cfm (m ³ /h)	1.4 / 1.7 (2.3 / 2.8)	3.4 / 4.0 (5.7 / 6.8)	1.4 / 1.7 (2.3 / 2.8)	3.4 / 4.0 (5.7 / 6.8)
Ultimate partial pressure without gas ballast	Torr (mbar)	2.3*10 ⁻¹ (3*10 ⁻¹)	7.5*10 ⁻² (1*10 ⁻¹)	3*10 ⁻⁴ (4*10 ⁻⁴)	3*10 ⁻⁴ (4*10 ⁻⁴)
Ultimate total pressure without gas ballast	Torr (mbar)	2.3*10 ⁻¹ (3*10 ⁻¹)	7.5*10 ⁻² (1*10 ⁻¹)	1.5*10 ⁻³ (2*10 ⁻³)	1.5*10 ⁻³ (2*10 ⁻³)
Ultimate total pressure with gas ballast	Torr (mbar)	6*10 ⁻¹ (8*10 ⁻¹)	4.5*10 ⁻¹ (6*10 ⁻¹)	7.5*10 ⁻³ (1*10 ⁻²)	7.5*10 ⁻³ (1*10 ⁻²)
Oil capacity min./max.	quarts (ml)	0.19 / 0.48 (180 / 450)	0.38 / 0.85 (360 / 800)	0.11 / 0.26 (100 / 250)	0.36 / 0.69 (340 / 650)
Rated motor power (single-phase/three-phase)	hp (kW)	0.24 / - (0.18 / -)	0.4 / - (0.3 / -)	0.24 / - (0.18 / -)	0.4 / 0.4 (0.3 / 0.3)
Maximum permissible range of supply voltage Attention: Observe speci- fications of rating plate!		120 V~ +5%/-10% 60 Hz 230 V~ ±10% 50/60 Hz 400 V 3~ ±10% 50 Hz 100-115 V~ ±10% 50/60 Hz, 120 V~ ±10% 60 Hz, 200-230 V~ ±10% 50/60 Hz 100-120 V~ ±10% 50/60 Hz 200-230 V~ ±10% 50/60 Hz			
Rated current ^{a.)} during operation at:					
120 V~ 60 Hz	A	3.0	4.6	3.0	4.6
230 V~ 50/60 Hz	A	1.6 / 1.5	2.5 / 2.4	1.6 / 1.5	2.5 / 2.4
400 V 3~ 50 Hz	A	-	-	-	0.8
100-115 V~ 50/60 Hz/ 120 V~ 60 Hz	A	4.0 / 2.6	-	4.0 / 2.6	-
200-230 V~ 50/60 Hz	A	2.0 / 1.4	-	2.0 / 1.4	-
100-120 V~ 50/60 Hz	A	-	5.4 / 4.0	-	5.4 / 4.0
200-230 V~ 50/60 Hz	A	-	2.7 / 2.0	-	2.7 / 2.0
Fuse (slow blow fuse), only pumps with dual-voltage motor		2 x 10 AT 250 VAC, 5 x 20 mm, breaking capacity: 1000 A at 250 VAC			
Inlet		small flange KF DN 16 ^{b.)}			
Outlet		hose nozzle for tubing I.D. 3/8" (hose nozzle DN 10 mm)			
A-weighted emission sound pressure level ^{c.)} (uncertainty K _{pA} : 3 dB(A))	dB(A)	43	50	43	50

Type		RE 2.5	RE 6	RZ 2.5	RZ 6
Dimensions L x W x H approx. (without handle)	in	12.4 x 4.9 x 7.5 ^{d.)}	14.6 x 5.6 x 8.1 ^{e.)}	12.4 x 4.9 x 7.5 ^{d.)}	14.6 x 5.6 x 8.1 ^{e.)}
	(mm)	(316 x 125 x 190 ^{d.)}	(370 x 142 x 207 ^{e.)}	(316 x 125 x 190 ^{d.)}	(370 x 142 x 207 ^{e.)}
Weight with oil filling approx. 120 V / 230 V / 400 V	lbs.	23.1 / 22.5 / - ^{f.)}	34.8 / 34.0 / - ^{g.)}	25.6 / 25.1 / - ^{h.)}	37.0 / 36.2 / 37.3 ^{i.)}
	(kg)	(10.5 / 10.2 / - ^{f.)}	(15.8 / 15.4 / - ^{g.)}	(11.6 / 11.4 / - ^{h.)}	(16.8 / 16.4 / 16.9 ^{i.)}

- a.) When the pump is starting, the current draw might for a short period (depending on the ambient temperature) be two or three times as high as during operation.
- b.) 120V version: Additional adapter small flange KF DN 16 / hose nozzle DN 10 mm (material: PP)
- c.) Measurement according to EN ISO 2151:2004 and EN ISO 3744:1995 at 230V/50Hz and at ultimate vacuum with exhaust tube at outlet.
- d.) Dimensions of **120V version**: 12.4" x 5.2" x 6.9" (316mm x 133mm x 175mm),
Dimensions of **100-120/200-230V version**: 12.4" x 5.1" x 7.9" (314mm x 130mm x 200mm)
- e.) Dimensions of **400V version**: 14.6" x 5.6" x 8.5" (370mm x 142mm x 216mm)
Dimensions of **100-120/200-230V version**: 14.6" x 5.6" x 8.5" (370mm x 142mm x 217mm)
- f.) Weight of RE 2.5 **100-120/200-230V version**: 26.0lbs. (11.8kg)
- g.) Weight of RE 6 **100-120/200-230V version**: 34.6lbs. (15.7kg)
- h.) Weight of RZ 2.5 **100-120/200-230V version**: 28.7lbs. (13.0kg)
- i.) Weight of RZ 6 **100-120/200-240V version**: 37.3lbs. (16.9kg)

We reserve the right for technical modification without prior notice!

Type		RE 9	RZ 9
Maximum pumping speed 50/60 Hz (ISO 21360)	cfm (m ³ /h)	5.2 / 6.0 (8.9 / 10.2)	5.2 / 6.0 (8.9 / 10.2)
Ultimate partial pressure without gas ballast	Torr (mbar)	7.5*10 ⁻² (1*10 ⁻¹)	3*10 ⁻⁴ (4*10 ⁻⁴)
Ultimate total pressure without gas ballast	Torr (mbar)	7.5*10 ⁻² (1*10 ⁻¹)	1.5*10 ⁻³ (2*10 ⁻³)
Ultimate total pressure with gas ballast	Torr (mbar)	4.5*10 ⁻¹ (6*10 ⁻¹)	7.5*10 ⁻³ (1*10 ⁻²)
Oil capacity min./max.	quarts (ml)	0.42 / 1.27 (400/1200)	0.21 / 0.74 (200/700)
Rated motor power (single-phase/three-phase)	hp (kW)	0.50 / - (0.37 / -)	0.5 / 0.5 (0.37/0.37)
Maximum permissible range of supply voltage Attention: Observe speci- fications of rating plate!		120 V~ +5%/-10% 60 Hz 230 V~ ±10% 50/60 Hz 400 V 3~ ±10% 50 Hz	
Rated current during operation at:			
120 V~ 60 Hz ^{a.)}	A	-	5.3
230 V~ 50/60 Hz ^{a.)}	A	2.7 / 2.6	2.7 / 2.6
400 V 3~ 50 Hz	A	-	1.1
Inlet		small flange KF DN 25 ^{b.)}	
Outlet		small flange KF DN 25 ^{b.)}	
A-weighted emission sound pressure level ^{c.)} (uncertainty K _{pA} : 3 dB(A))	dB(A)	52	52
Dimensions L x W x H approx. (without handle)	in (mm)	18.1 x 6.0 x 9.5 (460 x 152 x 240)	18.1 x 6.0 x 9.5 (460 x 152 x 240)
Weight with oil filling approx.	lbs. (kg)	47.2 (21.4)	53.4 (24.2)

a.)When the pump is starting, the current draw might for a short period (depending on the ambient temperature) be two or three times as high as during operation.

RE/RZ 9: During the start-up period of the pump (first 6 minutes after switching-on) the current draw might be elevated (up to twice the given rated current draw).

b.)120V version: Additional adapter small flange KF DN 25 / hose nozzle DN 15 mm (material: PP)

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

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Wetted parts

Components	Wetted materials
Metal parts	aluminum alloy, stainless steel, grey cast iron, steel (partly plasma nitrated), nickel-plated, zinc
Plastic materials	epoxy resin, FPM, NBR, PBT, PEEK, PPS glass-fiber reinforced

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Abbreviations

- FPM:** Fluoroelastomer
NBR: Nitrile butadiene rubber
PBT: Polybutylene terephthalate
PEEK: Polyether ether ketone
PPS: Polyphenylene sulfide

Pump parts

Position	Component
1	Inlet
2	Outlet
3	Manual gas ballast valve
4	ON/OFF switch
5	Power connection
6	Handle
7	Rating plate with min. / max. mark for oil level
8	Oil inlet
9	Oil outlet
10	Sight glass for oil level
11	Voltage selection switch
12	Internal fuse