

# Technical data

Type		RC 6
Maximum pumping speed 50/60 Hz (ISO 21360)	cfm (m <sup>3</sup> /h)	3.5 / 4.1 (5.9 / 6.9)
Ultimate partial pressure without gas ballast <sup>a.)</sup>	Torr (mbar)	3*10 <sup>-4</sup> (4*10 <sup>-4</sup> )
Ultimate total pressure without gas ballast <sup>b.)</sup>	Torr (mbar)	1.5*10 <sup>-3</sup> (2*10 <sup>-3</sup> )
Ultimate total pressure with gas ballast	Torr (mbar)	0.75*10 <sup>-2</sup> (1*10 <sup>-2</sup> )
Water vapor tolerance <sup>c.)</sup>	Torr (mbar)	>>30 (>>40)
Oil capacity min./max.	quarts (ml)	0.36 / 0.53 (340 / 500)
Total pressure in oil reservoir <sup>d.)</sup>	Torr (mbar)	13.5 (18)
Oil temperature <sup>e.)</sup> (under typical operating conditions) approx.	°F (°C)	140 (60)
Recommended oil		VACUUBRAND B-oil
Maximum permissible inlet / outlet pressure (absolute)	psi (bar)	16 (1.1)
Maximum permissible 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 alti- tude above mean sea level	ft (m)	6500 (2000)
Rated motor power	hp (kW)	0.4 (0.30)
No-load speed 50/60 Hz	rpm	1500 / 1800
Maximum permissible range of supply voltage ( ±10% ) <b>Attention: Observe specifications of rating plate!</b>		230 V~ 50/60 Hz  100 – 120 V~ 50/60 Hz
Fuse, slow blow fuse (120 V version only)		2 x 10 AT 250 VAC, 5 x 20 mm, breaking capacity: 1000 A at 250 VAC
Starting current (120 V version only)		25 A for 100 ms

Type	RC 6	
Rated current during operation at: 230 V~ 50/60 Hz 100 – 120 V~ 50/60 Hz	A A	2.6 / 2.6 4.3 / 4.9
Motor protection	self-hold thermal cutout, manual reset <sup>f.)</sup>	
Overvoltage category	II	
Degree of protection IEC 60529	IP 40	
Pollution degree	2	
A-weighted emission sound pressure level <sup>g.)</sup> (uncertainty $K_{pA}$ : 3 dB(A))	dB(A)	50
Inlet	small flange KF DN 16 <sup>h.)</sup>	
Outlet	hose nozzle for tubing I.D. 3/8" (hose nozzle DN 10 mm)	
Dimensions L x W x H approx.	in (mm)	20.7 x 11.9 x 8.9 (526 x 302 x 226)
Weight with oil filling approx.	lbs. (kg)	55.1 (25.0)

- a.) Partial pressure of permanent gases measured at pump inlet.
- b.) The total pressure is higher than the partial pressure because the former includes the vapor pressure of the pump oil and other condensable vapors (e.g., water); the condition of the oil (cleanliness, content of hydrocarbons with higher partial pressures) is crucial for this value.
- c.) The maximum inlet pressure for water vapor, or rather the maximum inlet pressure for vapor, cannot be specified in accordance with ISO 21360-2 because it cannot be determined for the HYBRID pump in accordance with this standard. Because the diaphragm pump reduces the pressure in the oil-sealed part of the RC 6, however, the water vapor tolerance is considerably higher than that of a conventional oil-sealed rotary-vane pump.
- d.) With inlet sealed and without gas ballast.
- e.) Oil temperature and pressure in the oil reservoir are the relevant parameters for maximum vapor inlet pressure and chemical resistance.
- f.) In case of supply voltage below 115 V, the lock of the cutout might be restricted.
- g.) Measurement according to EN ISO 2151:2009 and EN ISO 3744:1995 at 230 V / 50 Hz and ultimate vacuum with exhaust tube at outlet.
- h.) **Pumps 22614824 and 22614825:** Additional adapter small flange KF DN 16 / hose nozzle DN 19 mm (material: aluminum) and adapter small flange KF DN 16 / hose nozzle 1/2" (material: PP)

## 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)

## Wetted parts

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

**The pump RC 6 doesn't contain any nonferrous heavy metal.**

## Abbreviations

- FFKM:** Perfluoro elastomer
- FPM:** Fluoroelastomer
- NBR:** Nitrile butadiene rubber
- PBT:** Polybutylene terephthalate
- PEEK:** Polyether ether ketone
- PFA:** Perfluoroalkoxy
- PMP:** Polymethylpentene
- PPS:** Polyphenylene sulfide
- PTFE:** Polytetrafluoroethylene
- PVC:** Polyvinyl chloride

**We reserve the right for technical modification without prior notice!**