

8 Annex

8.1 Technical data

Product designation
Product names

Chemistry pumping unit series

PC 510 select	PC 610 select
PC 511 select	PC 611 select
PC 520 select	PC 620 select


Technical data

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Ambient conditions

		(US)
Ambient temperature	10–40 °C	50–104 °F
Installation height, max.	2000 m above sea level	6562 ft above sea level
Humidity	30–85 %, non-condensing	
Degree of contamination	2	
Impact energy	5 J	
Protection class (IEC 60529)	IP 20	
Protection class (UL 50E)	Type 1	
Avoid condensate or contamination from dust, liquids and corrosive gases.		

Operating conditions

		(US)
Operating temperature	10–40 °C	50–104 °F
Storage/transport temperature	-10–60 °C	14–140 °F
Maximum permissible media temperature (gas) of non-explosive atmospheres:		
short-term	80 °C	176 °F
Continuous operation	40 °C	104 °F
ATEX conformity	II 3/- G Ex h IIC T3 Gc X Internal Atm. Only Tech. File: VAC-EX02	
Maximum permissible media temperature (gas) of  atmospheres:		
short-term	40 °C	104 °F
Continuous operation	40 °C	104 °F

Connections

Vacuum, inlet IN	Hose nozzle DN 8/10
Gas ballast GB	Gas ballast valve, manual
Inert gas adapter – OPTION	Small flange GB NT KF DN 16

	Hose nozzle GB NT DN 6-10		
Venting valve (venting with inert gas) – OPTION	Silicone rubber hose 3-6		
Coolant EK	2x hose nozzles DN 6-8		
Exhaust gas, outlet EX	Hose nozzle DN 8/10		
Cold connector	+ power connection CEE, CH, CN, UK, IN, US		
Plug-in connector	VACUU·BUS®		
Electrical data	(US)		
Nominal voltage	230 VAC ±10 %	100-115 VAC ±10 %	120 VAC ±10 %
Nominal frequency	50/60 Hz	50/60 Hz	60 Hz
Rated speed	1500/ 1800 min ⁻¹	1500/ 1800 rpm	1800 rpm
Nominal current PC5xx	1,8 A	3.4 A	2.9 A
Nominal power PC5xx	0,18 kW	0.24 hp	0.24 hp
Nominal current PC6xx	3,0 A	5.7 A	4.0 A
Nominal power PC6xx	0,25 kW	0.34 hp	0.34 hp
Overvoltage category	II		
Interface	VACUU·BUS®		
Power cord	2 m		
Device fuse 2x	6,3 AT 5x20		
Vacuum data	(US)		
Inlet pressure / outlet pressure / differential pressure, absolute	1.1 bar	825 Torr	
Pressure at gas connections, absolute max.	1.2 bar	900 Torr	
Sensor	integrated	integrated	
Measurement principle	Ceramic membrane (aluminum oxide), capacitive, gas-type independent, absolute pressure		
Measurement accuracy	±1 mbar/hPa/Torr, ±1 digit (after adjustment, constant temperature)		
Upper measurement limit	1080 mbar	810 Torr	
Lower measurement limit	0.1 mbar	0.1 Torr	
Temperature drift	< 0.15 mbar/K	0.11 Torr/K	
PC 510/511/520			

Pumping speed, max.	2.0 m ³ /h	1.2 cfm
End vacuum, absolute	7 mbar	5 Torr
End vacuum with GB, absolute	12 mbar	9 Torr
Number of cylinders/steps	2/2	
PC 610/611/620		
Pumping speed, max.	3.4 m ³ /h	2.2 cfm
End vacuum, absolute	1.5 mbar	1.1 Torr
End vacuum with GB, absolute	3 mbar	2.2 Torr
Number of cylinders/steps	4/3	
Weights* and dimensions (l x w x h)		(US)
PC 510 select	418 mm x 272 mm x 457 mm	16.5 in x 10.7 in x 18.0 in
Weight*	17,9 kg	39.5 lb
PC 511 select	435 mm x 272 mm x 457 mm	17.1 in x 10.7 in x 18.0 in
Weight*	18,1 kg	39.9 lb
PC 520 select	435 mm x 272 mm x 457 mm	17.1 in x 10.7 in x 18.0 in
Weight*	18,4 kg	40.6 lb
PC 610 select	419 mm x 243 mm x 457 mm	16.5 in x 9.6 in x 18.0 in
Weight*	20,4 kg	45 lb
PC 611 select	435 mm x 243 mm x 457 mm	17.1 in x 9.6 in x 18.0 in
Weight*	20,6 kg	45.4 lb
PC 620 select	435 mm x 243 mm x 457 mm	17.1 in x 9.6 in x 18.0 in
Weight*	20,6 kg	45.4 lb
* without cable		
Other information		
Sensor type	VACUU·SELECT Sensor	
Controller	VACUU·SELECT	
Volume of separator flask	500 ml each	
Sound pressure level	45 dBA	

8.2 Wetted materials

Wetted materials

Component	Wetted materials
Pump	
Head cover	ETFE carbon fiber reinforced
Diaphragm clamping disc	ETFE carbon fiber reinforced
Diaphragms	PTFE
Valves	FFKM
O-rings	FKM
Valve terminal	ECTFE, carbon fiber reinforced
Gas ballast pipe	Carbon fiber reinforced PTFE
Elbow (at valve terminal)	ETFE/ECTFE
Pumping unit	
Inlet	PBT or PP
Outlet	PET
Distributor head (inlet PC 510/610)	PPS glass fiber reinforced
Valve block (inlet PC 511/520/611/620)	PP
Flow control diaphragm (PC 511/611)	PTFE
Housing (solenoid valve)	PVDF / PE / PPS
Valve plate (solenoid valve)	Fluoroelastomer
O-ring on separator	Fluoroelastomer
Pressure relief valve at the vapor condenser	Silicone rubber, PTFE film
Vapor condenser	Borosilicate glass
Round bottom flask	Borosilicate glass
Hoses	PTFE
Hose fitting	ETFE, ECTFE
O-ring on separator	Fluoroelastomer
Peltronic vapor condenser	ETFE, ECTFE, PP, PA
Silencer OPTION	PBT, PVF, rubber
VACUU-SELECT Sensor	
Vacuum sensor	Aluminum oxide ceramic, gold-coated
Measuring chamber	PPS
Small flange OPTION	PP
Seal on sensor	Chemical-resistant fluoroelastomer
Hose nozzle	PP