



*** For internal use only***

AML 9820910166 rev 4 Date 6/4/2017

QCV-090 / 110 Vacuum Claw Pump

PRODUCT REFERENCES

Model	QCV-090 / QCV-110
Product Company	API
Cooling (COOL)	Air Cooled
Supply Voltage (50Hz)	200/230/400/500
Supply Voltage (60Hz)	200/230/380/460/575
Supply Voltage Dual (60Hz only)	Dual voltage 230/460
Frequency (Hz)	50 / 60
Variant (MDVAR)	Floor mounted
Oil type	AC Fluid Plus 100

REFERENCE CONDITIONS

Relative humidity (%)	0
Ambient barometric pressure (mbar(a) / psi(a))	1013 / 14.7
Air inlet temperature (°C / °F)	20 / 68
Cooling medium inlet air temperature (°C / °F)	20 / 68
Exhaust back pressure (bar(g) / psi(g))	0 / 0
Motor shaft speed (rpm 50Hz)	3000

LIMITATIONS

Minimum ambient temperature (°C / °F)	0 / 32
Maximum ambient temperature (°C / °F)	40 / 104
Minimum allowable gas inlet temperature (°C / °F)	0 / 32
Maximum allowable gas inlet temperature (°C / °F)	40 / 104
Maximum inlet pressure (mbar(a) "HG V / Torr)	1050 / 31 / 787
Maximum exhaust back pressure (mbar(g) / psi)	300 / 4.35
Maximum altitude (m) - refer to the Product Manager at higher altitudes	1000
Minimum motor shaft speed (rpm) Hz / rpm	20 / 1200
Maximum motor shaft speed (rpm) Hz / rpm	60 / 3600

PERFORMANCE DATA

Ultimate pressure (mbar(a) / "HG V / Torr) (2)	50 / 28.4 / 37.5
Maximum displacement @ 50 Hz (m³/h / cfm)	152 / 89
Maximum displacement @ 60 Hz (m³/h / cfm)	184 / 108
Nominal motor power @ 50Hz (kW / Hp)	4.6 / 6.1
Nominal motor power @ 60Hz (kW / Hp)	6.1 / 8.2
Service factor for drive motor 50Hz / 60Hz	1.1 / 1.46
Gas exhaust temperature Maximum (°C / °F)	230 / 446
Gas exhaust temperature @ 50Hz - 50mbar(a) + ambient temp (°C / °F)	100 / 212
Gas exhaust temperature @ 50Hz - 100mbar(a) + ambient temp (°C / °F)	125 / 257
Gas exhaust temperature @ 50Hz - 600mbar(a) + ambient temp (°C / °F)	75 / 167
Gas exhaust temperature @ 60Hz - 50mbar(a) + ambient temp (°C / °F)	130 / 266
Gas exhaust temperature @ 60Hz - 100mbar(a) + ambient temp (°C / °F)	140 / 284
Gas exhaust temperature @ 60Hz - 600mbar(a) + ambient temp (°C / °F)	80 / 176
Mean Sound pressure level dB(A) (3) 50Hz / 60Hz	76 / 78
Maximum oil content of exhaust air (mg/m³)	0

Volumetric flowrate at the canopy (m³/h) (1) m3/hr to cfm x 0.6

Pressure mbar(a) mbar to "Hg x 0.03

rpm	1000	800	600	400	300	200	100	75	50
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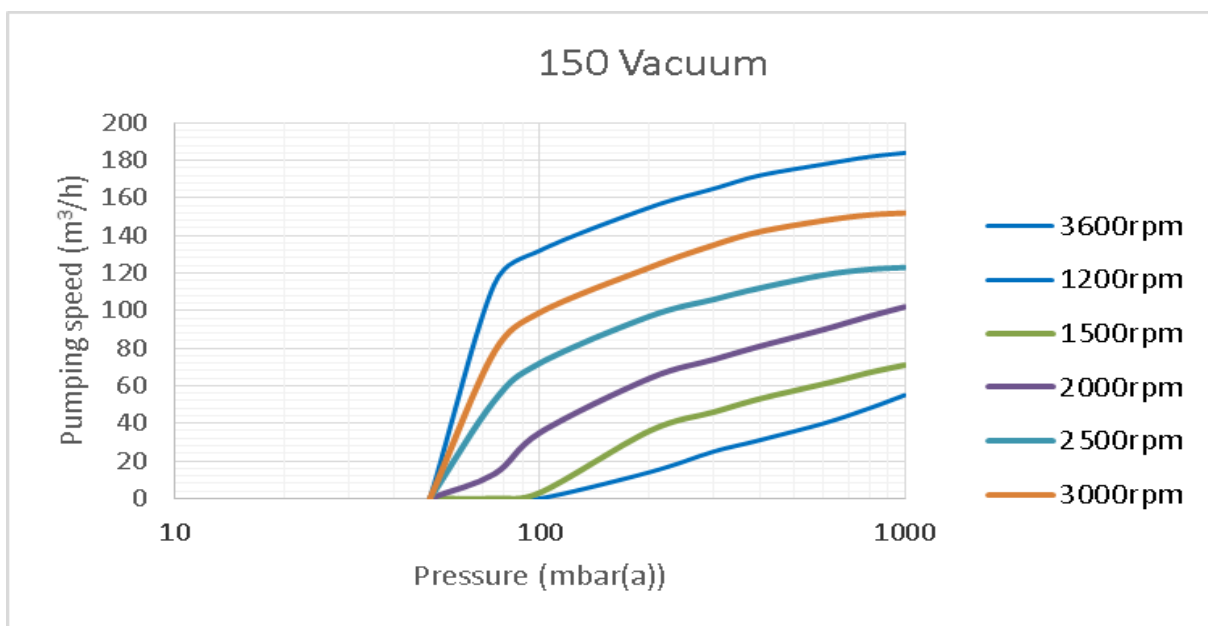
1200	55	48	40	31	25	14			
1500	71	67	61	53	46	36	3		
2000	102	97	90	81	74	64	35	13	
2500	123	122	119	112	106	97	72	52	
3000	152	151	148	142	135	123	99	78	
3600	184	182	178	172	165	155	132	114	

Total electric power (kW / HP) (1kW - 1.34HP)

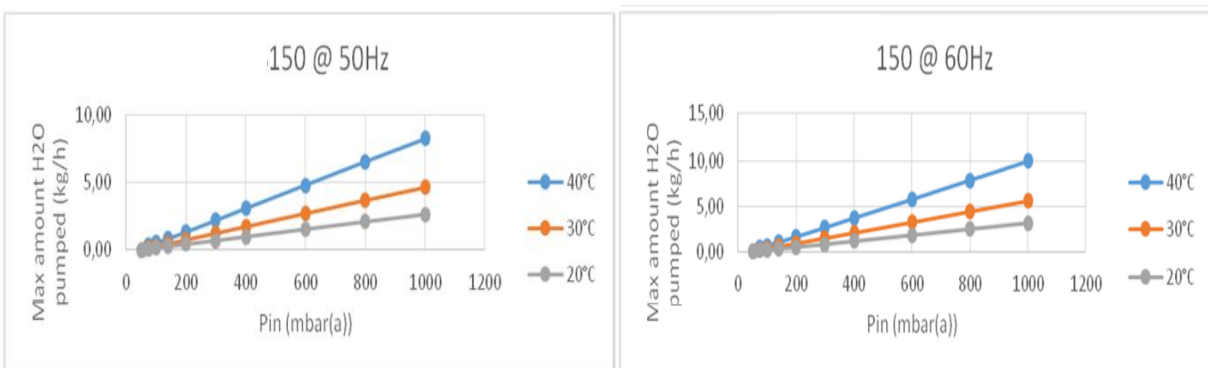
Pressure mbar(a) mbar to "Hg x 0.03

rpm	1000	800	600	400	300	200	100	75	50
1200	0.9	0.9	0.6	0.8	0.8	0.9	0.9		
1500	1.2	1.2	1.2	1.4	1.4	1.5	1.5	1.5	
2000	1.9	1.9	2.2	2.3	2.5	2.6	2.6	2.6	2.6
2500	2.7	2.7	3.1	3.2	3.4	3.4	3.4	3.4	3.4
3000	4.0	4.0	4.1	4.1	4.2	4.2	4.1	4.2	4.2
3600	5.4	5.4	5.4	5.3	5.2	5.2	5.1	5.1	5.1

PERFORMANCE CURVE



WATER HANDLING CAPACITY



DESIGN DATA

Canopy length (mm / inches)	934 / 36.7"
Canopy width (mm / inches)	394 / 15.5"
Canopy height (mm / inches)	545 / 21.4"
Shipping length (mm / inches)	1400 / 55"
Shipping width (mm / inches)	730 / 28.7"
Shipping height (mm / inches)	1040 / 40.9"
Net mass (kg / Lbs)	160 / 352.7

Shipping mass Europe (kg / Lbs)	190 / 419
Shipping mass overseas (kg / Lbs)	195 / 430
Shipping volume (m3 / ft3)	1.06 / 37.4
Number of compression stages	1
Maximum male rotor speed (rpm 50 / 60Hz)	3000 / 3600
Motor shaft speed at 50Hz	3000
Motor shaft speed at 60Hz	3600
Service factor drive motor (50Hz / 60Hz)	1.1 / 1.46
Oil capacity (approx.) (l / US Gal / Imp Gal)	0.6 / 0.16 / 0.13
Cooling air @ air inlet grating (cms / cfm)	1.3 / 2755
Drive motor installed power @ 50 Hz (kW / Hp)	3.7 / 5.0
Drive motor installed power @ 60 Hz (kW / Hp)	3.7 / 5.0
Drive motor efficiency at full load (50Hz / 60Hz)(%)	87.8 / 88.5
Electric cable passage (mm)	M32
Connection inlet	G 1 1/4" or NPT
Connection outlet	G 1 1/4" or NPT

REMARKS

- (1) Measured according ISO 21360-2:2012(E)
- (2) Volumetric flowrate measured according ISO 21360-2:2012(E). Tolerance: 0,20 mbar(a)
- (3) Measured according to ISO 2151:2004 using ISO 9614/2 (sound intensity method) +/- 3dB(a)

DATAPLATE DATA 50Hz

Name of product	QCV-090 / QCV-110
Ultimate pressure (mbar(a))	50
Motor shaft speed (VSD: maximum motor shaft speed) (rpm)	3000
Total of rated power (of all installed motors) (kW)	3.7
Total of rated power (of all installed motors) (Hp)	5
Frequency (Hz)	50
Voltage Motor variant dependant	200/230/400/500
Number of phases	3
Net mass (kg)	160

DATAPLATE DATA 60Hz

Name of product	QCV-090 / QCV-110
Ultimate pressure (mbar(a))	50
Motor shaft speed (VSD: maximum motor shaft speed) (rpm)	3600
Total of rated power (of all installed motors) (kW)	3.7
Total of rated power (of all installed motors) (Hp)	5
Frequency (Hz)	60
Voltage Motor variant dependant	200/230/380/460/575
Number of phases	3
Net mass (kg)	160

