

RV OIL-SEALED ROTARY VANE PUMP

PERFORMANCE YOU CAN RELY ON



Edwards RV pumps have become the industry standard for scientific primary pumping applications. RV pumps are uniquely capable of delivering high or low throughputs with high ultimate vacuum. This, combined with low noise levels, makes them ideal for a wide range of applications including GCMS and other small bench top type applications. All pumps are approved to UL and CSA standards by an external test house. Edwards has a global network, providing world-wide support for product applications and service.

Supplied with: 1 litre of Ultragrade 19 oil, inlet filter and O-ring. Fomblin® must be purchased separately for PFPE RV pumps.

Features and Benefits

- **High reliability** - generous lubrication of moving parts
- **Safe process and systems** - fast acting inlet valve for best in class anti-suck back protection
- **Configured to meet your vacuum needs** - mode selector and two position gas ballast
- **No unplanned downtime** - designed for easy maintenance
- **Better work environment** - quiet running and intrusive frequencies minimised

Applications

- Analytical instruments
- Laboratory bench top vacuum
- Backing turbomolecular pumps
- Freeze drying
- Research and development

Pump Range

RV3	RV8
- RV3	- RV8
- RV3 ATEX	- RV8 ATEX
- PFPE RV3	- PFPE RV8
RV5	RV12
- RV5	- RV12
- RV5 ATEX	- RV12 ATEX
- PFPE RV5	- PFPE RV12

Performance Curves

RV3 Oil Sealed Rotary Pump

RV3



Displacement

50Hz	3.7 m ³ h ⁻¹
	2.2 ft ³ min ⁻¹
60Hz	4.5 m ³ h ⁻¹
	2.6 ft ³ min ⁻¹

Speed (Pneurop 6602)

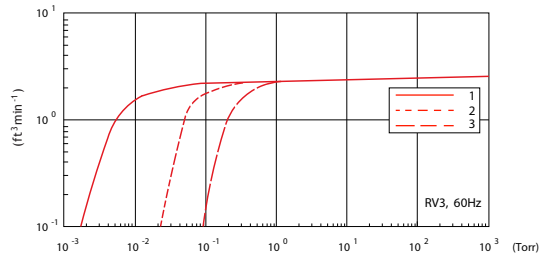
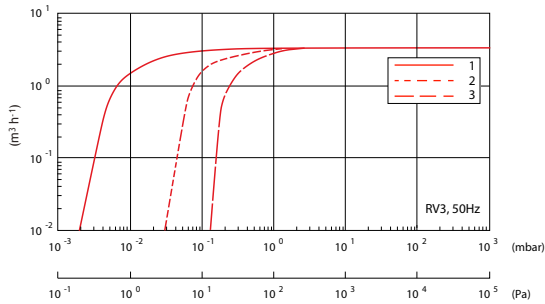
50Hz	3.3 m ³ h ⁻¹
	2.0 ft ³ min ⁻¹
60Hz	3.9 m ³ h ⁻¹
	2.3 ft ³ min ⁻¹

- 1 High vacuum mode, gas ballast =0

- 2 High throughput mode, gas ballast mode = 0 and High vacuum mode, gas ballast = 1

- 3 High vacuum and throughput mode, gas ballast =II

RV3 Performance Curve



RV5 Oil Sealed Rotary Pump

RV5



Displacement

50Hz	5.8 m ³ h ⁻¹
	3.4 ft ³ min ⁻¹
60Hz	7.0 m ³ h ⁻¹
	4.1 ft ³ min ⁻¹

Speed (Pneurop 6602)

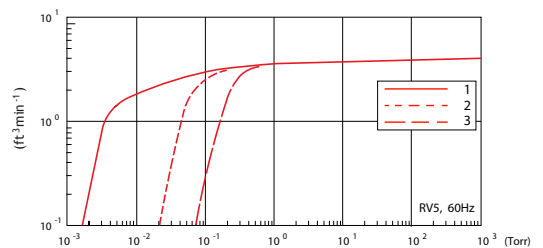
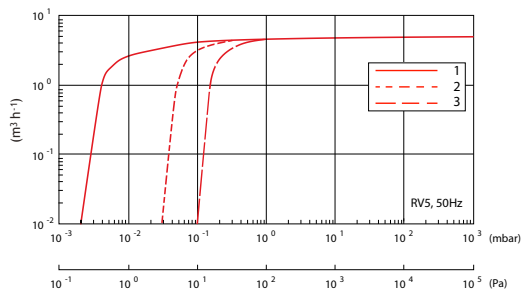
50Hz	5.1 m ³ h ⁻¹
	3.0 ft ³ min ⁻¹
60Hz	6.2 m ³ h ⁻¹
	3.7 ft ³ min ⁻¹

- 1 High vacuum mode, gas ballast =0

- 2 High throughput mode, gas ballast mode = 0 and High vacuum mode, gas ballast = 1

- 3 High vacuum and throughput mode, gas ballast =II

RV5 Performance Curve



Performance Curves

RV8 Oil Sealed Rotary Pump

RV8



Displacement

50Hz	9.7 m ³ h ⁻¹
	5.7 ft ³ min ⁻¹
60Hz	11.7 m ³ h ⁻¹
	6.9 ft ³ min ⁻¹

Speed (Pneuop 6602)

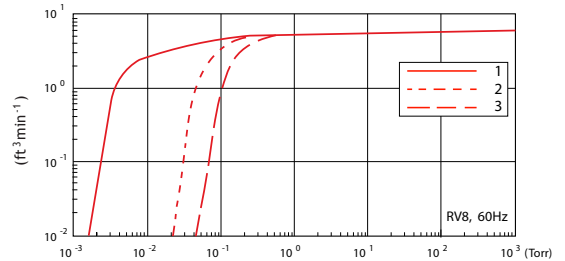
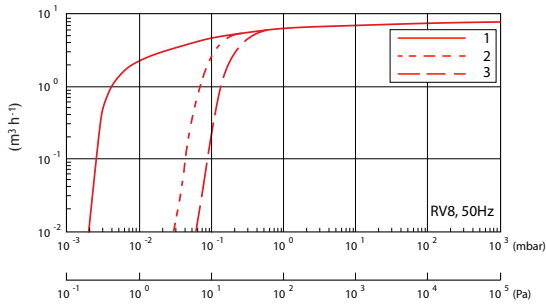
50Hz	8.5 m ³ h ⁻¹
	5.0 ft ³ min ⁻¹
60Hz	10 m ³ h ⁻¹
	5.9 ft ³ min ⁻¹

- 1 High vacuum mode, gas ballast = 0

- 2 High throughput mode, gas ballast mode = 0 and High vacuum mode, gas ballast = 1

- 3 High vacuum and throughput mode, gas ballast = II

RV8 Performance Curve



RV12 Oil Sealed Rotary Pump

RV12



Displacement

50Hz	14.2 m ³ h ⁻¹
	8.4 ft ³ min ⁻¹
60Hz	17 m ³ h ⁻¹
	10 ft ³ min ⁻¹

Speed (Pneuop 6602)

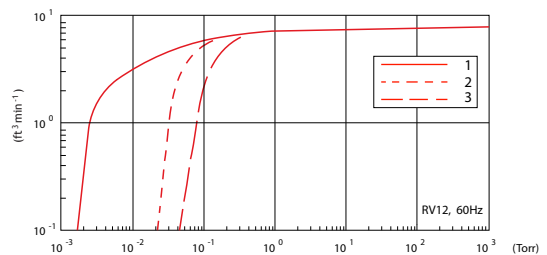
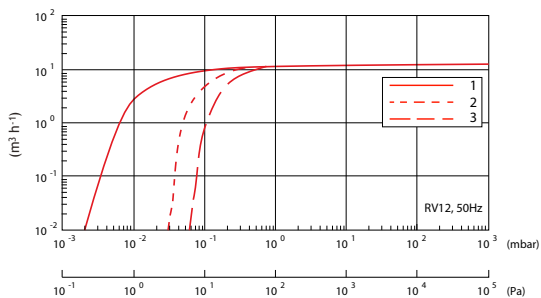
50Hz	12 m ³ h ⁻¹
	7.1 ft ³ min ⁻¹
60Hz	14.2 m ³ h ⁻¹
	8.4 ft ³ min ⁻¹

- 1 High vacuum mode, gas ballast = 0

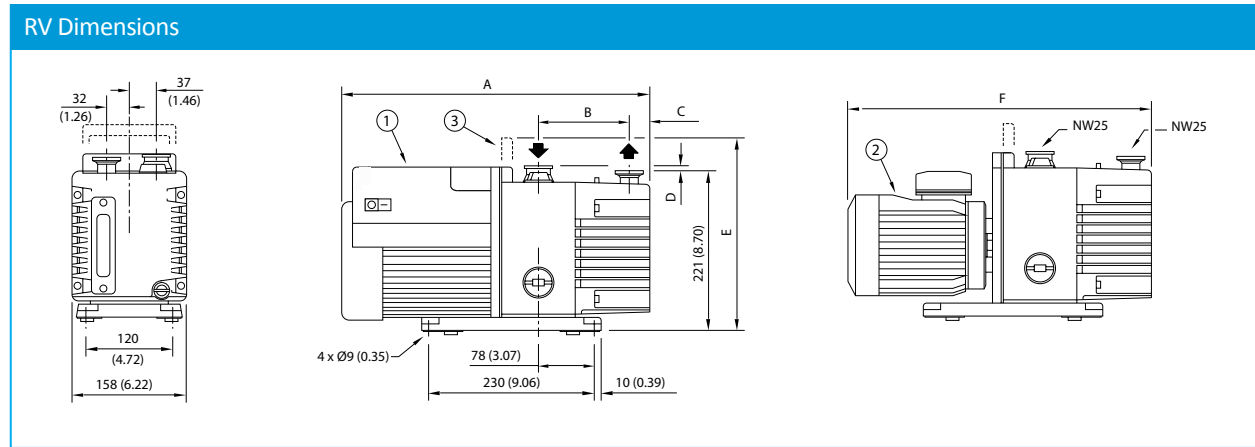
- 2 High throughput mode, gas ballast mode = 0 and High vacuum mode, gas ballast = 1

- 3 High vacuum and throughput mode, gas ballast = II

RV12 Performance Curve



Dimensions



	RV3/5	RV8	RV12
A	430 (16.93)	470 (18.50)	490 (19.29)
B	127 (5)	161 (6.34)	181 (7.13)
C	29 (1.14)	35 (1.38)	35 (1.38)
D	4 (0.16)	4 (0.16)	4 (0.16)
E	267 (10.51)	261 (10.28)	261 (10.28)
F	429 (16.89)	469 (18.46)	489 (19.25)
1	1-Phase motor		
2	3-Phase motor		
3	Retractable handle		

Technical Data



Units	RV3	RV5	RV8	RV12	
Displacement					
50Hz	m ³ h ⁻¹ / ft ³ min ⁻¹	3.7/ 2.2	5.8/ 3.4	9.7/ 5.7	14.2/ 8.4
60Hz	m ³ h ⁻¹ / ft ³ min ⁻¹	4.5/ 2.6	7.0/ 4.1	11.7/ 6.9	17/ 10
Speed (Pneurop 6602)					
50Hz	m ³ h ⁻¹ / ft ³ min ⁻¹	3.3/ 2	5.1/ 3.0	8.5/ 5	12/ 7.1
60Hz	m ³ h ⁻¹ / ft ³ min ⁻¹	3.9/ 2.3	6.2/ 3.7	10/ 5.9	14.2/ 8.4
Ultimate pressure	mbar/ Torr	2.0 x 10 ⁻³ / 1.5 x 10 ⁻³			
Ultimate pressure GB I	mbar/ Torr	3.0 x 10 ⁻² / 2.3 x 10 ⁻²			
Ultimate pressure GB II	mbar/ Torr	1.2 x 10 ⁻¹ / 9.1 x 10 ⁻²	1.0 x 10 ⁻¹ / 7.5 x 10 ⁻²	6 x 10 ⁻² / 4.6 x 10 ⁻²	
Ultimate Pressure with Fomblin®	mbar/ Torr	2 x 10 ⁻² / 1.5 x 10 ⁻²			
Max inlet pressure for water vapour	mbar/ Torr	80/ 60	50/ 38	38/ 28.5	32/ 24
Max water vapour pumping rate – GB I	gh ⁻¹	60			
Max water vapour pumping rate – GB II	gh ⁻¹	220			
Max allowed outlet pressure	bar gauge/ psig	0.2/ 2.8			
Max allowed inlet and gas ballast pressure	bar gauge/ psig	0.5/ 7			
Motor power 50/60Hz	W	450 / 550			
Power connector 1-ph		IEC EN60320 C13			
Nominal rotation speed 50/60Hz	rpm	1500 / 1800			
Weight (without oil)	kg/ lb	25/ 55		28/ 61.6	29/ 63.8
Oil capacity min/max	litres	0.42/0.7		0.4/ 0.75	0.65/ 1
Recommended oil		Ultragrade 19			
Inlet flange		NW25			
Exhaust flange		NW25			
Noise level	dB(A)	48 @ 50 Hz			
Operating temperature range	°C	12 – 40			