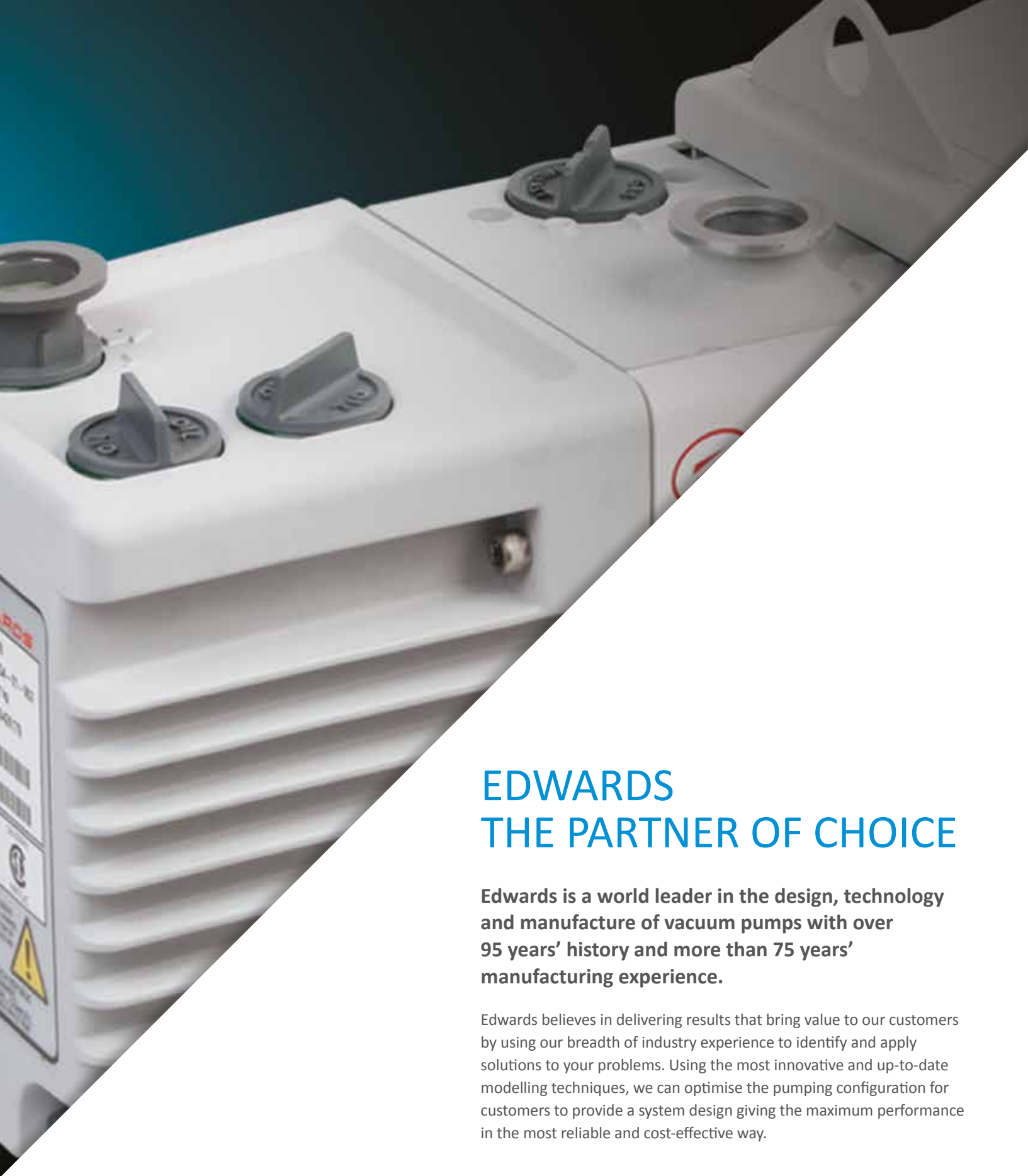


RV OIL SEALED ROTARY VANE PUMPS





EDWARDS THE PARTNER OF CHOICE

Edwards is a world leader in the design, technology and manufacture of vacuum pumps with over 95 years' history and more than 75 years' manufacturing experience.

Edwards believes in delivering results that bring value to our customers by using our breadth of industry experience to identify and apply solutions to your problems. Using the most innovative and up-to-date modelling techniques, we can optimise the pumping configuration for customers to provide a system design giving the maximum performance in the most reliable and cost-effective way.

PERFORMANCE YOU CAN RELY ON

The RV series is the ultimate range of small oil sealed rotary vane pumps

The result of more than 75 years' experience and a clean sheet design programme, these rugged vacuum pumps offer an excellent ultimate with good pumping speeds as well as superior vapour handling capabilities and quiet operation.

High vapour handling

Quicker process

Superior particulate handling

High reliability

Fast acting, automatic inlet valve for best in class anti-suck back protection

Safe process and systems

Mode selector and two position gas ballast

Configured to meet your vacuum needs

Designed for easy maintenance

No unplanned downtime

Quiet running

Better work environment

Applications

You can be assured Edwards has the application expertise and the RV pump or integrated system solution to meet your needs.

Mass spectrometry

- GCMS, LCMS, ICPMS, MALDI, RGA, surface science, leak detectors

Electron microscopy

- TEM, SEM, sample coatiers

Sample preparation

- Gel dryers, glove boxes, rotary evaporators, centrifuges

Research and development

- Chamber evacuation, coating systems, turbomolecular pump backing

High energy physics

- Beam lines, accelerators, mobile pump carts, turbomolecular pump backing, laser evacuation

Industrial

- Glove boxes, coating systems, freeze drying, gas bottle filling/emptying, refrigeration system manufacture, degassing/ curing (oil, epoxy resin)

Chemical

- Gel dryers, glove boxes, rotary evaporators, centrifuges, distillation/extraction/filtration

Features and benefits

Gas ballast

Two position gas ballast allows either 60 g/hr or a class leading 220 g/hr (290 g/hr on RV12) of water vapour to be handled. This can be combined with an oil return accessory and an oil mist filter to enable continuous pumping with no loss of lubrication. Gas ballast can be automated by fitting the optional solenoid operated gas ballast valve.

Motor

Universal motor to cover the widest possible voltage and frequency range from a single motor. The single phase motor has an external switch to change from high to low voltage range. A universal 3 phase motor is also available on all models and for special applications, pumps with flameproof ATEX approved motors can be offered.

Designed for easy maintenance

- One size hex-head wrench to dismantle all parts
- All parts self-aligning so no jigs or special assemblies required
- Polymer blades with no springs or pins for easier assembly and greater reliability
- Shaft seals can be replaced from the motor side without dismantling the pump mechanism
- No O-rings between the slices for easier assembly

Inlet

Best in class anti-suckback protection

- Smooth controlled opening by oil pressure to eliminate pressure surges
- Rapid closing within 0.4 seconds of pump stopping due to dump valve

All Edwards RV pumps are supplied with an inlet seal and integrated inlet mesh filter.

Oil

Edwards RV pumps are supplied with an initial charge of Ultragrade 19 oil. This premium quality oil has been specifically formulated with a unique package of additives to give the best vacuum performance of any mineral oil. As such it combines an extremely tightly controlled vapour pressure with a high resistance to oxidation for a long life. For oxygen rich applications PFPE prepared pumps are also available. Fomblin® must be purchased separately for PFPE prepared pumps.

Mode switch

The unique mode selector switch means that one pump fits all, so you only need one model for both high throughput and high vacuum applications.

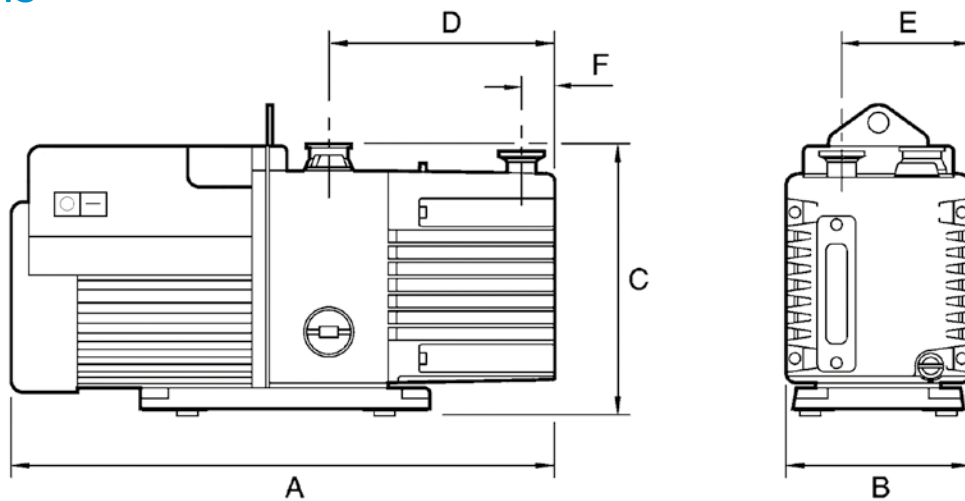
In high throughput mode the selector switch increases the oil flow to the high vacuum stage allowing the pump to operate continuously with high inlet pressures without any wear or loss of lubrication.





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|---|--|--|
| <p>1 Fast acting inlet valve</p> <p>4 Large water vapour handling capacity: gas ballast valve</p> <p>7 Wide voltage motors</p> | <p>2 Easy control: Motor on/off switch</p> <p>5 No customer wiring: integral IEC connector</p> | <p>3 Unique mode selector switch means that one pump fits all</p> <p>6 All pumps externally approved to UL and CSA standards</p> |
|---|--|--|

Dimensions



	A	B	C	D	E	F
RV3	430 (16.93)	158 (6.22)	225 (8.86)	156 (6.41)	111 (4.37)	29 (1.14)
RV5	430 (16.93)	158 (6.22)	225 (8.86)	156 (6.41)	111 (4.37)	29 (1.14)
RV8	470 (18.50)	158 (6.22)	225 (8.86)	196 (7.72)	111 (4.37)	35 (1.38)
RV12	490 (19.29)	158 (6.22)	225 (8.86)	216 (8.50)	111 (4.37)	35 (1.38)

Note: Single phase pump diagram shown, 3 phase pumps look different but share the same dimensions.

Dimensions shown in mm(inch).

Technical data

	Hz	Units	RV3	RV5	RV8	RV12
Vacuum Data						
Peak pumping speed	60	cfm	2.3	3.6	5.9	8.4
	50	m³/h	3.3	5.1	8.5	12
Ultimate pressure (Total)	60	Torr	1.5 x 10 ⁻³ (1.5 x 10 ⁻² with Fomblin®)			
	50	mbar	2.0 x 10 ⁻³ (2.0 x 10 ⁻² with Fomblin®)			
Ultimate pressure GB I (Total)	50/60	Torr	2.3 x 10 ⁻²			
		mbar	3.0 x 10 ⁻²			
Ultimate pressure GB II (Total)	50/60	Torr	9.1 x 10 ⁻²	9.1 x 10 ⁻²	4.6 x 10 ⁻²	9.1 x 10 ⁻²
		mbar	1.2 x 10 ⁻¹	1.2 x 10 ⁻¹	6.0 x 10 ⁻²	1.2 x 10 ⁻¹
High throughput mode	50/60	Torr	2.3 x 10 ⁻²			
		mbar	3.0 x 10 ⁻²			
Water vapour tolerance		Torr	60	38	38	24
		mbar	80	50	60	32
Water vapour capacity - GB I		g/h	60	60	60	60
Water vapour capacity - GB II		g/h	220	220	220	290
Motor Data						
Motor rating 1 phase (nominal)	60	W	550			
	50	W	450			
Motor rating 3 phase	60	W	300	300	550	550
	50	W	250	250	450	450
Nominal rotation speed	60	rpm	1800			
	50	rpm	1500			
Physical Data						
Weight		lb	55	55	61.6	63.8
		kg	25	25	28	29
Oil capacity		litres	0.7	0.7	0.75	1
Oil type (Ultragrade)			19			
Inlet flange			NW25			
Exhaust flange			NW25			
Noise level	50 Hz	dB(A)	48			
Noise level (with Acoustic Enclosure)*	50 Hz	dB(A)	41			
Operating temperature range		°C	12 to 40			

* approximate noise reduction of 7 dB(A)