

# *RV ROTARY VANE PUMPS*



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INNOVATIVE PRODUCTS

GLOBAL STRENGTH

LOCAL SUPPORT

VACUUM EXPERTISE

# Proven performance that sets the industry standard

Edwards 30 years of experience in scientific applications affords us a deep understanding of research practices and the critical role that vacuum plays within them. From this platform, and through collaboration with the major analytical instrument manufacturers, we develop and support innovative vacuum products that underpin our clients' entire research process.

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 ultra-low noise levels, makes them ideal for a wide range of applications and environments.

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.

## Typical Applications

	RV 3/5	RV 8/12
Analytical instruments - GCMS	•	
Analytical instruments - LCMS		•
Centrifuges, ultra-high speed	•	•
Coating	•	•
Degassing/curing - oil, epoxy resin	•	•
Distillation/extraction/filtration	•	•
Freeze drying	•	•
Furnaces	•	•
Gas bottle filling/emptying	•	•
Gel drying	•	•
Glove boxes, ovens	•	•
Laboratory bench top vacuum	•	•
Leak detectors, Helium	•	•
Load locks and transfer chambers	•	•
Refrigeration manufacture	•	•
Research and development	•	•
Rotary, centrifugal evaporators	•	•
Scanning electron microscopes - SEM	•	•
SEM/FIB (ion beam repair)	•	•
Solvent recovery	•	•
Surface science instruments	•	•
Turbomolecular backing pumps	•	•

### Adjustable gas ballast

Excellent water vapor handling capacity

### Patented inlet valve

Smooth opening, fast closing

### Integral air bleed

Quiet operation

### Wide voltage motors

All major countries covered with less stock holding

### Integral IEC 60320 connector

No customer wiring

All pumps externally approved to EN61010, CSA C22.2 1010, UL 61010 standards

Safe product



*Motor on/off switch*

Easy controls

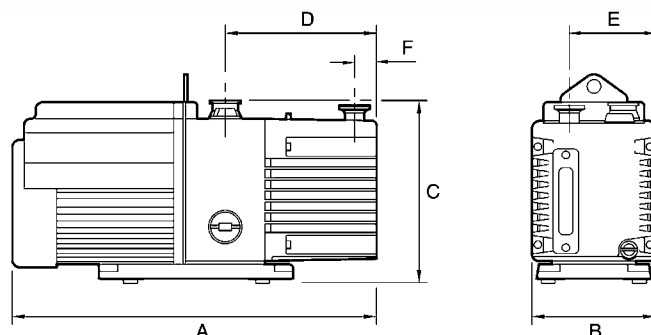
*Patented mode switch*

High vacuum or high throughput in one pump



## Dimensions - mm

	A	B	C	D	E	F
RV3	430	158	225	156	111	29
RV5	430	158	225	156	111	29
RV8	470	158	225	196	111	35
RV12	490	158	225	216	111	35



## Specifications

	Hz	Units	RV3	RV5	RV8	RV12
<b>VACUUM DATA</b>						
Peak pumping speed	60	cfm	2.3	3.6	5.9	8.4
	50	m <sup>3</sup> /h	3.3	5.1	8.5	12
Ultimate pressure (Total)	60	Torr	1.5 x 10 <sup>-3</sup>	1.5 x 10 <sup>-3</sup>	1.5 x 10 <sup>-3</sup>	1.5 x 10 <sup>-3</sup>
	50	mbar	2.0 x 10 <sup>-3</sup>	2.0 x 10 <sup>-3</sup>	2.0 x 10 <sup>-3</sup>	2.0 x 10 <sup>-3</sup>
Ultimate pressure GB I (Total)	50/60	Torr	2.3 x 10 <sup>-2</sup>	2.3 x 10 <sup>-2</sup>	2.3 x 10 <sup>-2</sup>	2.3 x 10 <sup>-2</sup>
		mbar	3.0 x 10 <sup>-2</sup>	3.0 x 10 <sup>-2</sup>	3.0 x 10 <sup>-2</sup>	3.0 x 10 <sup>-2</sup>
Ultimate pressure GB II (Total)	50/60	Torr	9.1 x 10 <sup>-2</sup>	9.1 x 10 <sup>-2</sup>	4.6 x 10 <sup>-2</sup>	9.1 x 10 <sup>-2</sup>
		mbar	1.2 x 10 <sup>-1</sup>	1.2 x 10 <sup>-1</sup>	6.0 x 10 <sup>-2</sup>	1.2 x 10 <sup>-1</sup>
High throughput mode	50/60	Torr	2.3 x 10 <sup>-2</sup>	2.3 x 10 <sup>-2</sup>	2.3 x 10 <sup>-2</sup>	2.3 x 10 <sup>-2</sup>
		mbar	3.0 x 10 <sup>-2</sup>	3.0 x 10 <sup>-2</sup>	3.0 x 10 <sup>-2</sup>	3.0 x 10 <sup>-2</sup>
Water vapor tolerance		Torr	60	38	38	24
		mbar	80	50	60	32
Water vapor capacity - GB I		g/h	60	60	60	60
Water vapor capacity - GB II		g/h	220	220	220	290
<b>MOTOR DATA</b>						
Motor rating 1 phase (nominal)	60	W	300	300	550	550
	50	W	250	250	450	450
Motor rating 3 phase						
Nominal rotation speed	60	rpm	1800	1800	1800	1800
	50	rpm	1500	1500	1500	1500
<b>PHYSICAL DATA</b>						
Weight		lb	47.5	47.5	57	58
		kg	21.5	21.5	26	26.3
Oil capacity		liters	0.7	0.7	0.75	1
Oil type (Ultragrade)			19	19	19	19
Inlet flange			NW25	NW25	NW25	NW25
Exhaust flange			NW25	NW25	NW25	NW25
Noise level	50	dBA	48	48	48	48
Operating temperature range		°C	12 to 40	12 to 40	12 to 40	12 to 40

## Ordering information

	Product description	Order No. Ultragrade Oil	Order No. PFPE prepared*
RV3	115/230V, 50/60Hz set to 230V	A65201903	A65209903
	100/200V, 50/60Hz	A65201904	A65209904
	200-220v/380-415V, 50Hz 200-230/460V, 60Hz, 3 phase	A65201905	A65209905
RV5	115/230V, 50/60Hz set to 115V	A65201906	A65209906
	115/230V, 50/60Hz set to 230V	A65301903	A65309903
	100/200V, 50/60Hz	A65301904	A65309904
	200-220v/380-415V, 50Hz	A65301905	A65309905
	200-230/460V, 60Hz, 3 phase	A65301906	A65309906
	115/230V, 50/60Hz set to 115V	A65301906	A65309906
RV8	115/230V, 50/60Hz set to 230V	A65401903	A65409903
	100/200V, 50/60Hz	A65401904	A65409904
	200-220v/380-415V, 50Hz 200-230/460V, 60Hz, 3 phase	A65401905	A65409905
	115/230V, 50/60Hz set to 115V	A65401906	A65409906
	115/230V, 50/60Hz set to 230V	A65501903	A65509903
	100/200V, 50/60Hz	A65501904	A65509904
RV12	200-220v/380-415V, 50Hz	A65501905	A65509905
	200-230/460V, 60Hz, 3 phase	A65501906	A65509906
	115/230V, 50/60Hz set to 115V	A65501906	A65509906

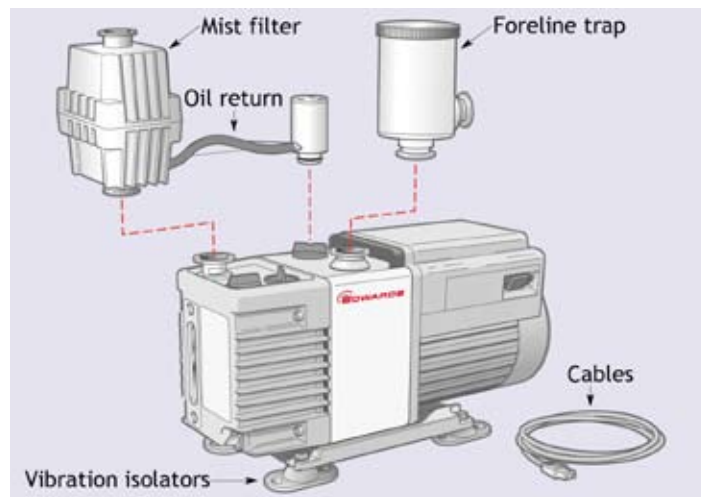
Flameproof motor options also available

Pumps are supplied with initial charge of Ultragrade oil

\*PFPE fluid not included

	Product description	Order No.
Cord sets	UK, three pin plug	A50505000
	North European plug	A50506000
	North American plug	A50507000
	No plug	A50508000
Oil	Ultragrade 19, 1 liter bottle	H11025015
	Fomblin YVAC 06/6 1kg (532 ml)	H11301019
Inlet accessories	Foreline trap - FL20K	A13305000
Outlet accessories	Oil mist filter - EMF10	A46226000
	Oil mist filter - EMF20	A46229000
Oil returns	Clean application (no gas ballast)	A50420000
	Adjustable gas ballast	A50523000
Vibration isolators		A24801404
Spare kits	Clean and overhaul kit	A65201131

## Accessories



Edwards – the company you have known and trusted for nearly 100 years - continues to deliver innovative vacuum pumps and related systems. We strive to lower your cost of ownership, increase your productivity and enhance your final product quality. Edwards products are based on a solid foundation of manufacturing excellence, field-proven technologies and are supported by a renowned global services network.

Edwards stands behind each product with exceptional integrity and strength, supporting our customers beyond standard expectations. Edwards is essential to your process.

### **PRODUCTS:**

- Dry Vacuum Pumps
- Oil-sealed Vacuum Pumps
- Turbomolecular Pumps
- Exhaust Management
- Integrated Vacuum and Abatement
- Liquid Abatement
- Chemical Management
- Chillers
- Coating Systems
- Vacuum System Components

### **SERVICES:**

- Equipment Service and Repair
- Product Exchange
- Refurbished Equipment
- Field and On-site Services
- Remote e-Diagnostics
- Product Training

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