# **RV3 Two Stage Rotary Vane Pump**

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 including GCMS and other small bench top type applications.

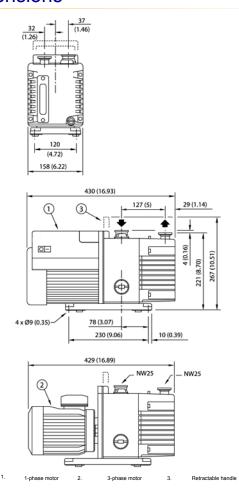
All pumps are approved to UL and CSA standards by an external test house. Edwards has a global network, providing world-wide support for product applications and service.

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

#### Features & Benefits

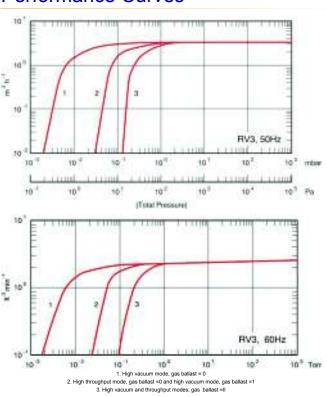
- 48 dBA and intrusive frequencies minimised.
- Dual mode. Suitable for high throughput and high vacuum applications.
- Easy-to-use gas ballast.
- Fast acting inlet valve for system protection.
- High torque, dual voltage/dual frequency motor, electronic start relay.

#### **Dimensions**



## **Applications**

- · Analytical instruments
- · Laboratory bench top vacuum
- Turbomolecuar backing pumps
- Freeze drying
- Research and development



Displacement	
50Hz	$3.7 \mathrm{m}^3 \mathrm{h}^{-1} / 2.2 \mathrm{ft}^3 \mathrm{min}^{-1}$
60Hz	$4.5 \mathrm{m}^3 \mathrm{h}^{-1} / 2.6 \mathrm{ft}^3 \mathrm{min}^{-1}$
Speed (Pneurop 6602)	
50Hz	$3.3 \mathrm{m}^3\mathrm{h}^{-1}/2 \mathrm{ft}^3\mathrm{min}^{-1}$
60Hz	$3.9 \mathrm{m}^3\mathrm{h}^{-1}/2.3 \mathrm{ft}^3\mathrm{min}^{-1}$
Ultimate pressure	$2.0 \times 10^{-3} \text{ mbar} / 1.5 \times 10^{-3} \text{ Torr}$
Ultimate pressure GB I	$3.0 \times 10^{-2} \text{ mbar} / 2.3 \times 10^{-2} \text{ Torr}$
Ultimate pressure GB II	1.2 x 10 <sup>-1</sup> mbar / 9.1 x 10 <sup>-2</sup> Torr
Ultimate Pressure with Fomblin®	2 x 10 <sup>-2</sup> mbar / 1.5 x 10 <sup>-2</sup> Torr
Max inlet pressure for water vapour	80 mbar / 60 Torr
Max water vapour pumping rate – GB I	60 gh <sup>-1</sup>
Max water vapour pumping rate – GB II	220 gh <sup>-1</sup>
Max allowed outlet pressure	1 bar gauge / 14 psig
Max allowed outlet pressure Max allowed inlet and gas ballast pressure	
Max allowed inlet and gas	1 bar gauge / 14 psig
Max allowed inlet and gas ballast pressure	1 bar gauge / 14 psig 0.5 bar gauge / 7 psig
Max allowed inlet and gas ballast pressure Motor power 50/60Hz	1 bar gauge / 14 psig 0.5 bar gauge / 7 psig 450 / 550W
Max allowed inlet and gas ballast pressure Motor power 50/60Hz Power connector 1-ph	1 bar gauge / 14 psig 0.5 bar gauge / 7 psig 450 / 550W IEC EN60320 C13
Max allowed inlet and gas ballast pressure Motor power 50/60Hz Power connector 1-ph Nominal rotation speed 50/60Hz	1 bar gauge / 14 psig 0.5 bar gauge / 7 psig 450 / 550W IEC EN60320 C13 1500 / 1800rpm
Max allowed inlet and gas ballast pressure Motor power 50/60Hz Power connector 1-ph Nominal rotation speed 50/60Hz Weight (without oil)	1 bar gauge / 14 psig 0.5 bar gauge / 7 psig 450 / 550W IEC EN60320 C13 1500 / 1800rpm 25 kg / 55 lb
Max allowed inlet and gas ballast pressure Motor power 50/60Hz Power connector 1-ph Nominal rotation speed 50/60Hz Weight (without oil) Oil capacity min/max	1 bar gauge / 14 psig 0.5 bar gauge / 7 psig 450 / 550W IEC EN60320 C13 1500 / 1800rpm 25 kg / 55 lb 0.42/0.7 litres
Max allowed inlet and gas ballast pressure Motor power 50/60Hz Power connector 1-ph Nominal rotation speed 50/60Hz Weight (without oil) Oil capacity min/max Recommended oil	1 bar gauge / 14 psig 0.5 bar gauge / 7 psig 450 / 550W IEC EN60320 C13 1500 / 1800rpm 25 kg / 55 lb 0.42/0.7 litres Ultragrade 19
Max allowed inlet and gas ballast pressure Motor power 50/60Hz Power connector 1-ph Nominal rotation speed 50/60Hz Weight (without oil) Oil capacity min/max Recommended oil Inlet flange	1 bar gauge / 14 psig 0.5 bar gauge / 7 psig 450 / 550W IEC EN60320 C13 1500 / 1800rpm 25 kg / 55 lb 0.42/0.7 litres Ultragrade 19 NW25

Product Description	Order No.
RV3 115/230V, 1-ph, 50/60Hz, Factory set to 230V for Europe	A65201903
RV3 100/200V, 1-ph, 50/60Hz, Factory set to 200V for Japan	A65201904
RV3 200-220/380-415V, 3-ph, 50Hz and 200-230/460V, 3-ph, 60Hz Factory set to 380/460V	A65201905
RV3 115/230V, 1-ph, 50/60Hz, Factory set to 115V for USA	A65201906
PFPE RV3 115/230V, 1-ph, 50/60 Hz, Factory set to 230V for Europe	A65209903
PFPE RV3 100/200V, 1-ph, 50/60Hz, Factory set to 200V for Japan	A65209904
PFPE RV3 200-220/380-415V, 3-ph, 50Hz and 200-230/460V, 3-ph, 60Hz, Factory set to 380/460V	A65209905
PFPE RV3 115/230V, 1-ph, 50/60Hz, Factory set to 115V for USA	A65209906
Accessories & Spares	Order No.
2m electrical supply cable for 1-ph pumps, UK, Three-pin plug	A50505000
2m electrical supply cable for 1-ph pumps, North European plug	A50506000
2m electrical supply cable for 1-ph pumps, North America/Japan plug	A50507000
2m electrical supply cable for 1-ph pumps, no plug	A50508000
RV gas-ballast adaptor	A50502000
RV exhaust nozzle kit	A50509000
Model EMF10 mist filter	A46226000
Clean and overhaul kit	A65201131
Clean and overhaul kit (Nitrile)	A65201137
Blade Kit RV3	A65201130
Outer Shaft Seal Kit RV	A65201134
Spares Kit Inlet Valve RV3/5/8/12	A65201036

# **RV5 Two Stage Rotary Vane Pump**

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 including GCMS and other small bench top type applications.

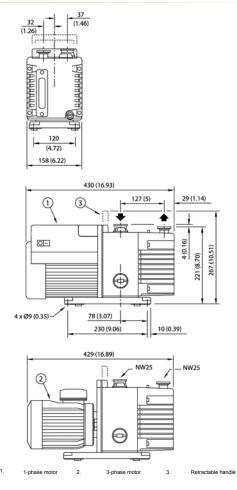
All pumps are approved to UL and CSA standards by an external test house. Edwards has a global network, providing world-wide support for product applications and service.

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

#### Features & Benefits

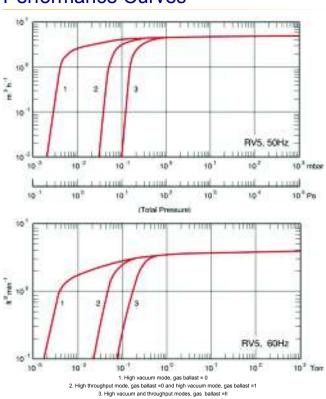
- 48 dBA and intrusive frequencies minimised.
- Dual mode. Suitable for high throughput and high vacuum applications.
- Easy-to-use gas ballast.
- Fast acting inlet valve for system protection.
- High torque, dual voltage/dual frequency motor, electronic start relav

#### **Dimensions**



## **Applications**

- · Analytical instruments
- Centrifuges, ultra-high speed
- Coating
- Degassing/curing oil, epoxy resin
- Distillation/extraction/filtration



Displacement	
50Hz	5.8 m <sup>3</sup> h <sup>-1</sup> / 3.4 ft <sup>3</sup> min <sup>-1</sup>
60Hz	7.0 m h / 4.1 ft min
Speed (Pneurop 6602)	7.0 111 11 7 4.1 11 111111
50Hz	5.1 m <sup>3</sup> h <sup>-1</sup> / 3.0 ft <sup>3</sup> min <sup>-1</sup>
60Hz	6.2 m h / 3.7 ft min
Ultimate pressure	$2.0 \times 10^{-3} \text{ mbar} / 1.5 \times 10^{-3} \text{ Torr}$
Ultimate pressure GB I	$3.0 \times 10^{-2} \text{ mbar} / 2.3 \times 10^{-2} \text{ Torr}$
Ultimate pressure GB II	1.0 x 10 <sup>-1</sup> mbar / 7.5 x 10 <sup>-2</sup> Torr
Ultimate Pressure with Fomblin®	$2.0 \times 10^{-2} \text{ mbar} / 1.5 \times 10^{-2} \text{ Torr}$
Max inlet pressure for water vapour	50 mbar / 38 Torr
Max water vapour pumping rate – GB I	60 gh <sup>-1</sup>
Max water vapour pumping rate – GB II	220 gh <sup>-1</sup>
	220 gh <sup>-1</sup> 1 bar gauge / 14 psig
– GB II	
<ul><li>– GB II</li><li>Max allowed outlet pressure</li><li>Max allowed inlet and gas</li></ul>	1 bar gauge / 14 psig
<ul> <li>GB II</li> <li>Max allowed outlet pressure</li> <li>Max allowed inlet and gas ballast pressure</li> </ul>	1 bar gauge / 14 psig 0.5 bar gauge / 7 psig
<ul> <li>GB II</li> <li>Max allowed outlet pressure</li> <li>Max allowed inlet and gas ballast pressure</li> <li>Motor power 50/60Hz</li> </ul>	1 bar gauge / 14 psig 0.5 bar gauge / 7 psig 450 / 550W
- GB II  Max allowed outlet pressure  Max allowed inlet and gas ballast pressure  Motor power 50/60Hz  Power connector 1-ph	1 bar gauge / 14 psig 0.5 bar gauge / 7 psig 450 / 550W IEC EN60320 C13
<ul> <li>GB II</li> <li>Max allowed outlet pressure</li> <li>Max allowed inlet and gas ballast pressure</li> <li>Motor power 50/60Hz</li> <li>Power connector 1-ph</li> <li>Nominal rotation speed 50/60Hz</li> </ul>	1 bar gauge / 14 psig 0.5 bar gauge / 7 psig 450 / 550W IEC EN60320 C13 1500 / 1800rpm
- GB II  Max allowed outlet pressure  Max allowed inlet and gas ballast pressure  Motor power 50/60Hz  Power connector 1-ph  Nominal rotation speed 50/60Hz  Weight (without oil)	1 bar gauge / 14 psig 0.5 bar gauge / 7 psig 450 / 550W IEC EN60320 C13 1500 / 1800rpm 25 kg / 55 lb
- GB II  Max allowed outlet pressure  Max allowed inlet and gas ballast pressure  Motor power 50/60Hz  Power connector 1-ph  Nominal rotation speed 50/60Hz  Weight (without oil)  Oil capacity min/max	1 bar gauge / 14 psig 0.5 bar gauge / 7 psig 450 / 550W IEC EN60320 C13 1500 / 1800rpm 25 kg / 55 lb 0.42/0.7 litres
- GB II  Max allowed outlet pressure  Max allowed inlet and gas ballast pressure  Motor power 50/60Hz  Power connector 1-ph  Nominal rotation speed 50/60Hz  Weight (without oil)  Oil capacity min/max  Recommended oil	1 bar gauge / 14 psig 0.5 bar gauge / 7 psig 450 / 550W IEC EN60320 C13 1500 / 1800rpm 25 kg / 55 lb 0.42/0.7 litres Ultragrade 19
- GB II  Max allowed outlet pressure  Max allowed inlet and gas ballast pressure  Motor power 50/60Hz  Power connector 1-ph  Nominal rotation speed 50/60Hz  Weight (without oil)  Oil capacity min/max  Recommended oil  Inlet flange	1 bar gauge / 14 psig 0.5 bar gauge / 7 psig 450 / 550W IEC EN60320 C13 1500 / 1800rpm 25 kg / 55 lb 0.42/0.7 litres Ultragrade 19 NW25

# **RV8 Two Stage Rotary Vane Pump**

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 including GCMS and other small bench top type applications.

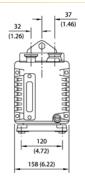
All pumps are approved to UL and CSA standards by an external test house. Edwards has a global network, providing world-wide support for product applications and service.

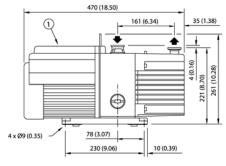
Supplied with: 1 litre of Ultragrade 19 oil, inlet filter and O-ring. Fomblin® must be purchased separately for PFPE RV pumps.

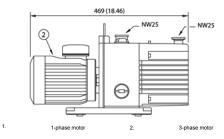
#### Features & Benefits

- 48 dBA and intrusive frequencies minimised.
- Dual mode. Suitable for high throughput and high vacuum applications.
- Easy-to-use gas ballast.
- Fast acting inlet valve for system protection.
- High torque, dual voltage/dual frequency motor, electronic start relav

#### **Dimensions**



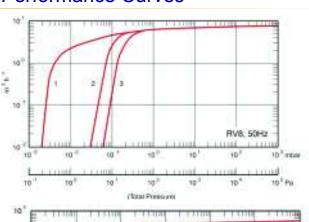


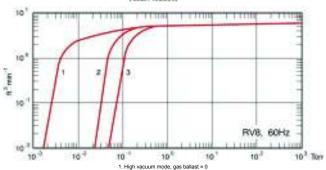




## **Applications**

- Analytical instruments
- Centrifuges, ultra-high speed
- Coating
- Degassing/curing oil, epoxy resin
- Distillation/extraction/filtration





High throughput mode, gas ballast =0 and high vacuum mode, gas ballast =1
 3. High vacuum and throughput modes, gas ballast =II

Displacement	
50Hz	9.7 m <sup>3</sup> h <sup>-1</sup> / 5.7 ft <sup>3</sup> min <sup>-1</sup>
60Hz	11.7 m <sup>3</sup> h <sup>-1</sup> / 6.9ft min <sup>-1</sup>
Speed (Pneurop 6602)	
50Hz	$8.5 \mathrm{m}^3 \mathrm{h}^{-1} / 5 \mathrm{ft}^3 \mathrm{min}^{-1}$
60Hz	10 m <sup>3</sup> h <sup>-1</sup> / 5.9 ft <sup>3</sup> min <sup>-1</sup>
Ultimate pressure	$2 \times 10^{-3}$ mbar / $1.5 \times 10^{-3}$ Torr
Ultimate pressure GB I	$3 \times 10^{-2} \text{ mbar} / 2.3 \times 10^{-2} \text{ Torr}$
Ultimate pressure GB II	6 x 10 <sup>-2</sup> mbar / 4.6 x 10 <sup>-2</sup> Torr
Ultimate pressure with Fomblin®	$2 \times 10^{-2}$ mbar / $1.5 \times 10^{-2}$ Torr
Max inlet pressure for water vapour	38 mbar / 28.5 Torr
Max water vapour pumping rate – GB I	60 gh <sup>-1</sup>
Max water vapour pumping rate – GB II	220 gh <sup>-1</sup>
Max allowed outlet pressure	1 bar gauge / 14 psig
Max allowed inlet and gas ballast pressure	0.5 bar gauge / 7 psig
Motor power 50/60Hz	450 / 550W
Power connector 1-ph	IEC EN60320 C13
Nominal rotation speed 50/60Hz	1500 / 1800rpm
Weight (without oil)	28 kg / 61.6 lb
Oil capacity min/max	0.45 / 0.75 litres
Recommended oil	Ultragrade 19
Inlet flange	NW25
Exhaust flange	NW25
Noise level	48 dBA @ 50 Hz
Operating temperature range	12 – 40 °C

5 1 15 10	
Product Description	Order No.
RV8 115/230V, 1-ph, 50/60Hz, Factory set to 230V for Europe	A65401903
RV8 100/200V, 1-ph, 50/60Hz, Factory set to 200V for Japan	A65401904
RV8 200-220/380-415V, 3-ph, 50Hz and 200-230/460V, 3-ph, 60Hz, Factory set to 380/460V	A65401905
RV8 115/230V, 1-ph, 50/60Hz, Factory set to 115V for USA	A65401906
PFPE RV8 115/230V, 1-ph, 50/60Hz, Factory set to 230V for Europe	A65409903
PFPE RV8 100/200V, 1-ph, 50/60Hz, Factory set to 200V for Japan	A65409904
PFPE RV8 200-220/380-415V, 3-ph, 50Hz, and 200- 230/460V, 3-ph, 60Hz, Factory set to 380/460V	A65409905
PFPE RV8 115/230V, 1-ph, 50/60Hz, Factory set to 115V for Europe	A65409906
Accessories & Spares	Order No.
2m electrical supply cable for 1-ph pumps, UK, Three-pin plug	A50505000
2m electrical supply cable for 1-ph pumps, North European plug	A50506000
2m electrical supply cable for 1-ph pumps, North America/Japan plug	A50507000
2m electrical supply cable for 1-ph pumps, no plug	A50508000
RV gas-ballast adaptor	A50502000
RV exhaust nozzle kit	A50509000
Model EMF10 mist filter	A46226000
Clean and overhaul kit	A65201131
Clean and overhaul kit (Nitrile)	A65201137
Spares Kit Blade RV8	A65401130
Outer Shaft Seal Kit RV	A65201134
Spares Kit Inlet Valve RV3/5/8/12	A65201036
Spares Kit Cartridge RV8	A65401032

# **RV12 Two Stage Rotary Vane Pump**



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 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.

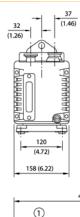
Supplied with: 1 litre of Ultragrade 19 oil, inlet filter and O-ring. Fomblin® must be purchased separately for PFPE RV pumps.

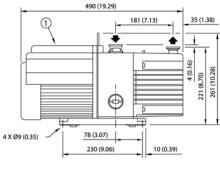
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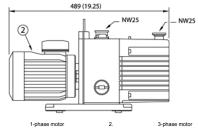
#### Features & Benefits

- 48 dBA and intrusive frequencies minimised.
- Dual mode. Suitable for high throughput and high vacuum applications.
- Easy-to-use gas ballast.
- Fast acting inlet valve for system protection.
- High torque, dual voltage/dual frequency motor, electronic start relay.

#### **Dimensions**

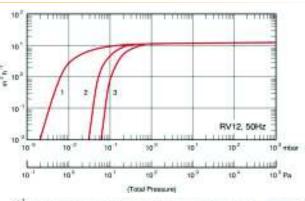


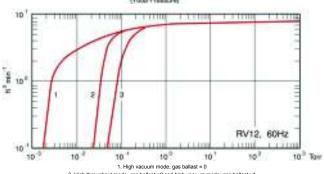




### **Applications**

- · Analytical instruments
- Centrifuges, ultra-high speed
- Coating
- Degassing/curing oil, epoxy resin
- Distillation/extraction/filtration





High throughput mode, gas ballast =0 and high vacuum mode, gas ballast =1
 High vacuum and throughput modes, gas ballast =II

Displacement	
50Hz	$14.2 \mathrm{m}^3 \mathrm{h}^{-1} / 8.4 \mathrm{ft}^3 \mathrm{min}^{-1}$
60Hz	17 m <sup>3</sup> h <sup>-1</sup> / 10 ft min <sup>-1</sup>
Speed (Pneurop 6602)	
50Hz	12 m <sup>3</sup> h <sup>-1</sup> / 7.1 ft <sup>3</sup> min <sup>-1</sup>
60Hz	14.2 m <sup>3</sup> h <sup>-1</sup> / 8.4 ft <sup>3</sup> min <sup>-1</sup>
Ultimate pressure	$2 \times 10^{-3}$ mbar / $1.5 \times 10^{-3}$ Torr
Ultimate pressure GB I	$3 \times 10^{-2} \text{ mbar} / 2.3 \times 10^{-2} \text{ Torr}$
Ultimate pressure GB II	$6 \times 10^{-2} \text{ mbar} / 4.6 \times 10^{-2} \text{ Torr}$
Ultimate pressure with Fomblin®	$2 \times 10^{-2}$ mbar / $1.5 \times 10^{-2}$ Torr
Max inlet pressure for water vapour	32 mbar / 24 Torr
Max water vapour pumping rate – GB I	60 gh <sup>-1</sup>
Max water vapour pumping rate – GB II	220 gh <sup>-1</sup>
Max allowed outlet pressure	1 bar gauge / 14 psig
Max allowed inlet and gas ballast pressure	0.5 bar gauge / 7 psig
Motor power 50/60Hz	450 / 550W
Power connector 1-ph	IEC EN60320 C13
Nominal rotation speed 50/60Hz	1500 / 1800rpm
Weight (without oil)	29 kg / 63.8 lb
Oil capacity min/max	0.65 / 1 litres
Recommended oil	Ultragrade 19
Inlet flange	NW25
Exhaust flange	NW25
Noise level	48 dBA @ 50 Hz
Operating temperature range	12 – 40 °C

Product Description	Order No.
RV12 115/230V, 1-ph, 50/60Hz, Factory set to 230V for Europe	A65501903
RV12 100/200V, 1-ph, 50/60Hz, Factory set to 200V for Japan	A65501904
RV12 200-220/380-415V, 3-ph, 50Hz and 200-230/460V, 3-ph, 60Hz, Factory set to 380/460V	A65501905
RV12 115/230V, 1-ph, 50/60Hz, Factory set to 115V for USA	A65501906
PFPE RV12 115/230V, 1-ph, 50/60Hz, Factory set to 230V for Europe	A65509903
PFPE RV12 100/200V, 1-ph, 50/60Hz, Factory set to 200V for Japan	A65509904
PFPE RV12 200-220/380-415V, 3-ph, 50Hz and 200- 230/460V, 3-ph, 60Hz, Factory set to 380/460V	A65509905
PFPE RV12 Two Stage Rotary Vane Pump 115/230V 1ph 50/60Hz, Factory set to 115V for USA	A65509906
Accessories & Spares	Order No.
2m electrical supply cable for 1-ph pumps, UK, Three-pin plug	A50505000
2m electrical supply cable for 1-ph pumps, North European plug	A50506000
2m electrical supply cable for 1-ph pumps, North America/Japan plug	A50507000
2m electrical supply cable for 1-ph pumps, no plug	A50508000
RV gas-ballast adaptor	A50502000
RV exhaust nozzle kit	A50509000
Model EMF20 mist filter	A46229000
Clean and overhaul kit (Nitrile)	A65201137
Spares Kit Blade RV12	A65501130
Outer Shaft Seal Kit RV	A65201134
Spares Kit Inlet Valve RV3/5/8/12	A65201036
Spares Kit Cartridge RV12	A65501032