

# Ротационные пластинчатые насосы RV3, RV5, RV8, RV12, nRV14i

## Технические характеристики

По вопросам продаж и поддержки обращайтесь:

Алматы (727)345-47-04  
Ангарск (3955)60-70-56  
Архангельск (8182)63-90-72  
Астрахань (8512)99-46-04  
Барнаул (3852)73-04-60  
Белгород (4722)40-23-64  
Благовещенск (4162)22-76-07  
Брянск (4832)59-03-52  
Владивосток (423)249-28-31  
Владикавказ (8672)28-90-48  
Владимир (4922)49-43-18  
Волгоград (844)278-03-48  
Вологда (8172)26-41-59  
Воронеж (473)204-51-73  
Екатеринбург (343)384-55-89

Иваново (4932)77-34-06  
Ижевск (3412)26-03-58  
Иркутск (395)279-98-46  
Казань (843)206-01-48  
Калининград (4012)72-03-81  
Калуга (4842)92-23-67  
Кемерово (3842)65-04-62  
Киров (8332)68-02-04  
Коломна (4966)23-41-49  
Кострома (4942)77-07-48  
Краснодар (861)203-40-90  
Красноярск (391)204-63-61  
Курск (4712)77-13-04  
Курган (3522)50-90-47  
Липецк (4742)52-20-81

Магнитогорск (3519)55-03-13  
Москва (495)268-04-70  
Мурманск (8152)59-64-93  
Набережные Челны (8552)20-53-41  
Нижний Новгород (831)429-08-12  
Новокузнецк (3843)20-46-81  
Ноябрьск (3496)41-32-12  
Новосибирск (383)227-86-73  
Омск (3812)21-46-40  
Орел (4862)44-53-42  
Оренбург (3532)37-68-04  
Пенза (8412)22-31-16  
Петрозаводск (8142)55-98-37  
Псков (8112)59-10-37  
Пермь (342)205-81-47

Ростов-на-Дону (863)308-18-15  
Рязань (4912)46-61-64  
Самара (846)206-03-16  
Санкт-Петербург (812)309-46-40  
Саратов (845)249-38-78  
Севастополь (8692)22-31-93  
Саранск (8342)22-96-24  
Симферополь (3652)67-13-56  
Смоленск (4812)29-41-54  
Сочи (862)225-72-31  
Ставрополь (8652)20-65-13  
Сургут (3462)77-98-35  
Сыктывкар (8212)25-95-17  
Тамбов (4752)50-40-97  
Тверь (4822)63-31-35

Тольятти (8482)63-91-07  
Томск (3822)98-41-53  
Тула (4872)33-79-87  
Тюмень (3452)66-21-18  
Ульяновск (8422)24-23-59  
Улан-Удэ (3012)59-97-51  
Уфа (347)229-48-12  
Хабаровск (4212)92-98-04  
Чебоксары (8352)28-53-07  
Челябинск (351)202-03-61  
Череповец (8202)49-02-64  
Чита (3022)38-34-83  
Якутск (4112)23-90-97  
Ярославль (4852)69-52-93

Россия +7(495)268-04-70

Казахстан +7(727)345-47-04

Беларусь +(375)257-127-884

Узбекистан +998(71)205-18-59

Киргизия +996(312)96-26-47

эл.почта: [ewc@nt-rt.ru](mailto:ewc@nt-rt.ru) || сайт: <https://edwards.nt-rt.ru/>

# RV ROTARY VANE PUMPS



RV oil sealed pumps have been the industry standard rotary vane pump for laboratory applications for many years thanks to design features that make them low cost to operate and maintain versus other rotary pumps.

With their unique mode selector, one pump can be used for both high throughput and high vacuum applications; self-centring mechanism, no dowels to set and can replace any component; high vapour pumping capability and broad range of accessories makes RV pumps the best long term proposition for laboratory applications.

Edwards new nRV14i two stage oil sealed rotary vane pump has been designed to deliver an enhanced and a consistent performance worldwide. By incorporating Edwards drive technology, with the industry leading RV pump, oil sealed vacuum technology has been brought into the 21st century.



## PRODUCT FEATURES

### UNIQUE MODE SELECTOR SWITCH

enables high vacuum and high throughput operation from a single pump.

### HIGH GAS BALLAST FLOW RATE

for up to 220  $\text{gh}^{-1}$  water vapour pumping capacity.

### FAST ACTING INLET VALVE

with controlled opening for system protection.

### HIGH QUALITY OILS

with additives to prolong life whilst not impacting vapour pressure.

### LOW NOISE

at just 48 dB(A).

### O RING SEALED SIGHT GLASS

allows visual inspection of oil level condition.

### FORCED AIR COOLING

ensures low pump surface temperature.

### FLEXIBLE CONTROL - ENJOY THE DIFFERENCE

control is at the core of nRVi, either manual, simple I/O remote or serial communications may be utilised to provide real control and better installation for the system builder. Standby mode allows the user to set the pumping speed and tune performance.

## Technical data

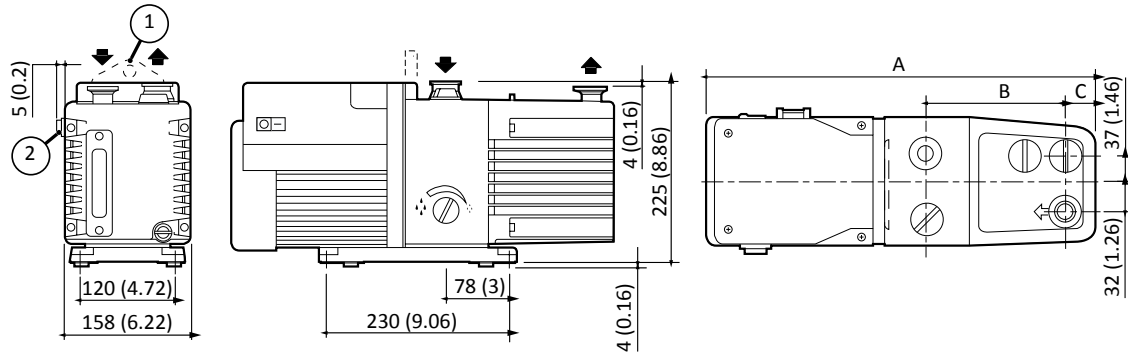
|                                                 | Units                   | RV3                                                                                                              | RV5       | RV8                                                 | RV12                                             | nRV14i      |
|-------------------------------------------------|-------------------------|------------------------------------------------------------------------------------------------------------------|-----------|-----------------------------------------------------|--------------------------------------------------|-------------|
| Vacuum data                                     |                         |                                                                                                                  |           |                                                     |                                                  |             |
| Peak pumping speed, 50 Hz (60 Hz)               | m³h <sup>-1</sup> (cfm) | 3.3 (2.3)                                                                                                        | 5.1 (3.6) | 8.5 (5.9)                                           | 12 (8.4)                                         | 14.2 (8.4)  |
| Ultimate vacuum <sup>(1)</sup>                  | mbar (Torr)             | 2.0 x 10 <sup>-3</sup> (1.5 x 10 <sup>-3</sup> ); 2.0 x 10 <sup>-2</sup> (1.5 x 10 <sup>-2</sup> ) with PFPE oil |           |                                                     |                                                  |             |
| Ultimate vacuum with gas ballast 1              | mbar (Torr)             | 3.0 x 10 <sup>-2</sup> (2.3 x 10 <sup>-2</sup> )                                                                 |           |                                                     |                                                  |             |
| Ultimate vacuum with gas ballast 2              | mbar (Torr)             | 1.2 x 10 <sup>-1</sup><br>(9.1 x 10 <sup>-2</sup> )                                                              |           | 6.0 x 10 <sup>-2</sup><br>(4.6 x 10 <sup>-2</sup> ) | 1.2 x 10 <sup>-1</sup> (9.1 x 10 <sup>-2</sup> ) |             |
| Ultimate vacuum in high throughput mode         | mbar (Torr)             | 3.0 x 10 <sup>-2</sup> (2.3 x 10 <sup>-2</sup> )                                                                 |           |                                                     |                                                  |             |
| Water vapour tolerance                          | mbar (Torr)             | 80 (60)                                                                                                          | 50 (38)   | 60 (45)                                             | 32 (24)                                          | 32 (24)     |
| Water vapour handling capacity                  | gh <sup>-1</sup>        | 220                                                                                                              |           |                                                     | 290                                              | 290         |
| Maximum continous inlet pressure <sup>(2)</sup> | mbar a (Torr a)         | 1013 (760)                                                                                                       |           |                                                     |                                                  |             |
| Maximum gas ballast/purge pressure              | bar gauge (psig)        | 0.5 (7)                                                                                                          |           |                                                     |                                                  |             |
| Motor data                                      |                         |                                                                                                                  |           |                                                     |                                                  |             |
| Motor rating 1 phase (nominal), 50 Hz (60 Hz)   | W                       | 450 (550)                                                                                                        |           |                                                     |                                                  |             |
| Motor rating 3 phase, 50 Hz (60 Hz)             | W                       | 250 (300)                                                                                                        |           | 450 (550)                                           |                                                  | N/A         |
| Nominal rotational speed, 50 Hz (60 Hz)         | rpm                     | 1470 (1760)                                                                                                      |           |                                                     |                                                  | 1800        |
| Physical data                                   |                         |                                                                                                                  |           |                                                     |                                                  |             |
| Weight                                          | kg (lb)                 | 25 (55)                                                                                                          |           | 28 (61.6)                                           | 29 (63.8)                                        | 31.5 (69.3) |
| Oil type (recommended)                          |                         | Ultragrade 19                                                                                                    |           |                                                     |                                                  |             |
| Oil capacity (min - max)                        | litres                  | 0.42 - 0.7                                                                                                       |           | 0.45 - 0.75                                         | 0.65 - 1.0                                       |             |
| Inlet connection                                |                         | NW25                                                                                                             |           |                                                     |                                                  |             |
| Exhaust connection                              |                         | NW25                                                                                                             |           |                                                     |                                                  |             |
| Noise level at ultimate (50 Hz)                 | dB(A)                   | 48                                                                                                               |           |                                                     |                                                  | 54.5        |
| Noise level with Acoustic Enclosure (50 Hz)     | dB(A)                   | 41                                                                                                               |           |                                                     |                                                  | 48          |
| Vibration at inlet flange                       | mm <sup>-1</sup> (rms)  | < 4.5                                                                                                            |           |                                                     |                                                  |             |
| Operating temperature range                     | °C (°F)                 | 12 to 40 (54 to 104)                                                                                             |           |                                                     |                                                  |             |

(1) measured as total pressure

(2) pump should be operated in high throughput mode for continuous operation above 100 mbar



Dimensions



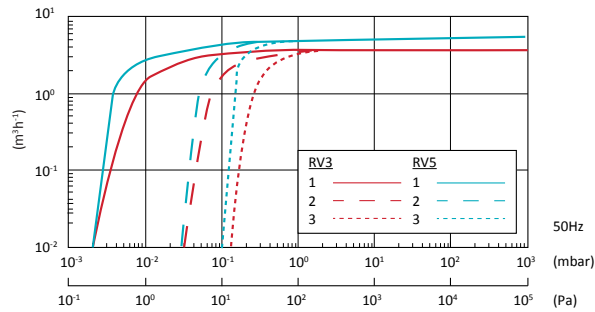
1. Lifting bracket (RV8 and RV12 pumps only; a lifting handle is fitted to the RV3 and RV5 pumps).
2. On-off switch (single-phase pumps only).

|      | 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) |

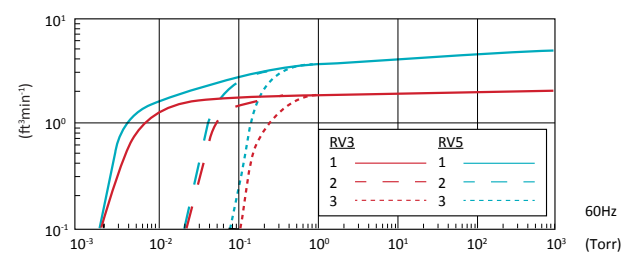
Single phase pump diagram shown, 3 phase pumps look different but share the same dimensions.  
 Dimensions shown in mm(inch).

Performance

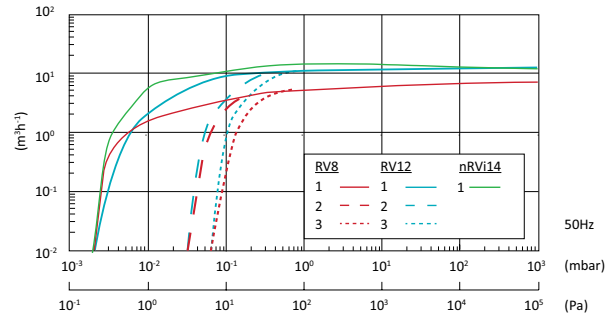
RV3/RV5 50 Hz



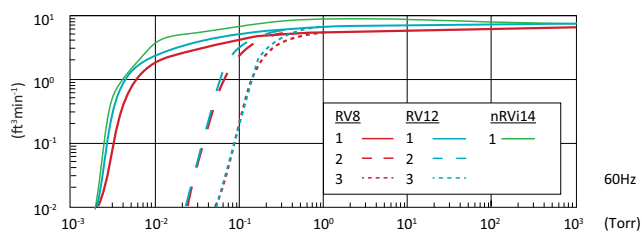
RV3/RV5 60 Hz



RV8/RV12/nRV14i 50 Hz



RV8/RV12/nRV14i 60 Hz



1. High vacuum mode, gas ballast = 0
2. High throughput mode, gas ballast = 0, High vacuum mode, gas ballast = I
3. High throughput and vacuum mode, gas ballast = II

## Order information

Pumps:

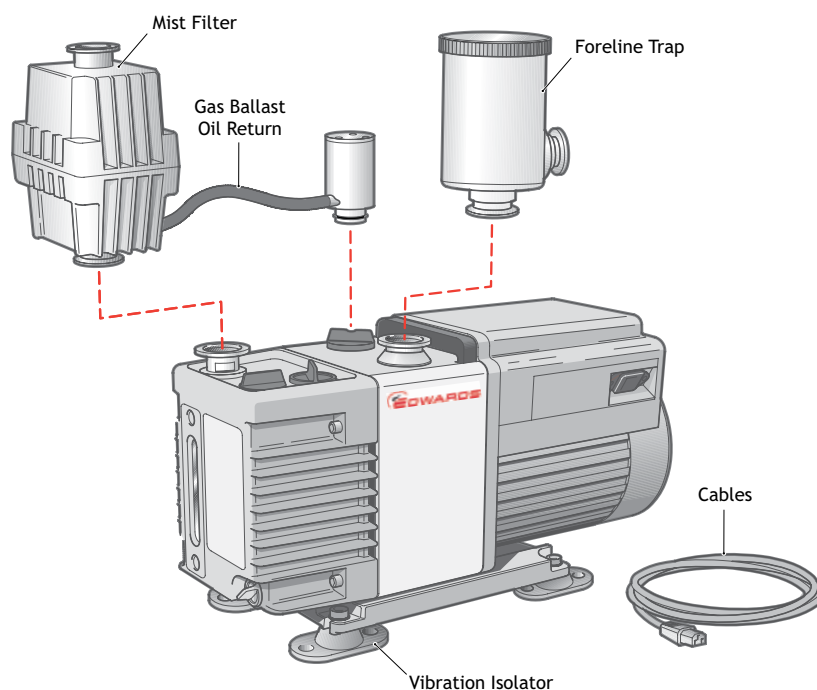
| Product description |                                                       | Order no.      | Order no.                    |
|---------------------|-------------------------------------------------------|----------------|------------------------------|
|                     |                                                       | Ultragrade Oil | PFPE prepared <sup>(1)</sup> |
| RV3                 | 115/230V, 50/60Hz set to 230V                         | A65201903      | A65209903                    |
|                     | 100/200V, 50/60Hz                                     | A65201904      | A65209904                    |
|                     | 200-220/380-415V, 50Hz<br>200-230/460V, 60Hz, 3 phase | A65201905      | A65209905                    |
|                     | 115/230V, 50/60Hz set to 115V                         | A65201906      | A65209906                    |
| RV5                 | 115/230V, 50/60Hz set to 230V                         | A65301903      | A65309903                    |
|                     | 100/200V, 50/60Hz                                     | A65301904      | A65309904                    |
|                     | 200-220/380-415V, 50Hz<br>200-230/460V, 60Hz, 3 phase | A65301905      | A65309905                    |
|                     | 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                    |
|                     | 200-220/380-415V, 50Hz<br>200-230/460V, 60Hz, 3 phase | A65401905      | A65409905                    |
|                     | 115/230V, 50/60Hz set to 115V                         | A65401906      | A65409906                    |
| RV12                | 115/230V, 50/60Hz set to 230V                         | A65501903      | A65509903                    |
|                     | 100/200V, 50/60Hz                                     | A65501904      | A65509904                    |
|                     | 200-220/380-415V, 50Hz<br>200-230/460V, 60Hz, 3 phase | A65501905      | A65509905                    |
|                     | 115/230V, 50/60Hz set to 115V                         | A65501906      | A65509906                    |
| nRV14i              | 100-127/200-240V<br>1-ph 50/60 Hz                     | A65921983      | -                            |

(1) PFPE fluid not included

Accessories and spares:

|             | Product description                   | Order no. |
|-------------|---------------------------------------|-----------|
| Accessories | Foreline trap - FL20K                 | A13305000 |
|             | Oil mist filter - EMF10               | A46226000 |
|             | Oil mist filter - EMF20               | A46229000 |
|             | Clean application oil return kit      | A50419000 |
|             | Adjustable gas ballast oil return kit | A50523000 |
|             | Vibration isolators (pack of 4)       | A24801404 |
|             | Acoustic enclosure 110-120V           | NRD317000 |
|             | Acoustic enclosure 200-240V           | NRD318000 |
| Spares      | Clean and overhaul kit                | A65201131 |
|             | RV3 blade kit                         | A65201130 |
|             | RV5 blade kit                         | A65301130 |
|             | RV8 blade kit                         | A65401130 |
| Oil         | RV12/nRV14i blade kit                 | A65501130 |
|             | Ultragrade 19, 1 litre bottle         | H11025015 |
|             | Ultragrade 19, 4 litre bottle         | H11025013 |
|             | Fomblin YVAC 06/6 1 kg (532 ml)       | H11301019 |
| Cord sets   | Fomblin YVAC 06/6 5 kg                | H11301020 |
|             | UK, three pin plug                    | A50505000 |
|             | North European plug                   | A50506000 |
|             | North American plug                   | A50507000 |
|             | No plug                               | A50508000 |

Pumps fitted with ATEX approved motors are available, contact Edwards for details  
Pumps are supplied with initial charge of Ultragrade oil.





## По вопросам продаж и поддержки обращайтесь:

Алматы (727)345-47-04  
Ангарск (3955)60-70-56  
Архангельск (8182)63-90-72  
Астрахань (8512)99-46-04  
Барнаул (3852)73-04-60  
Белгород (4722)40-23-64  
Благовещенск (4162)22-76-07  
Брянск (4832)59-03-52  
Владивосток (423)249-28-31  
Владикавказ (8672)28-90-48  
Владимир (4922)49-43-18  
Волгоград (844)278-03-48  
Вологда (8172)26-41-59  
Воронеж (473)204-51-73  
Екатеринбург (343)384-55-89

Иваново (4932)77-34-06  
Ижевск (3412)26-03-58  
Иркутск (395)279-98-46  
Казань (843)206-01-48  
Калининград (4012)72-03-81  
Калуга (4842)92-23-67  
Кемерово (3842)65-04-62  
Киров (8332)68-02-04  
Коломна (4966)23-41-49  
Кострома (4942)77-07-48  
Краснодар (861)203-40-90  
Красноярск (391)204-63-61  
Курск (4712)77-13-04  
Курган (3522)50-90-47  
Липецк (4742)52-20-81

Магнитогорск (3519)55-03-13  
Москва (495)268-04-70  
Мурманск (8152)59-64-93  
Набережные Челны (8552)20-53-41  
Нижегород (831)429-08-12  
Новокузнецк (3843)20-46-81  
Ноябрьск (3496)41-32-12  
Новосибирск (383)227-86-73  
Омск (3812)21-46-40  
Орел (4862)44-53-42  
Оренбург (3532)37-68-04  
Пенза (8412)22-31-16  
Петрозаводск (8142)55-98-37  
Псков (8112)59-10-37  
Пермь (342)205-81-47

Ростов-на-Дону (863)308-18-15  
Рязань (4912)46-61-64  
Самара (846)206-03-16  
Санкт-Петербург (812)309-46-40  
Саратов (845)249-38-78  
Севастополь (8692)22-31-93  
Саранск (8342)22-96-24  
Симферополь (3652)67-13-56  
Смоленск (4812)29-41-54  
Сочи (862)225-72-31  
Ставрополь (8652)20-65-13  
Сургут (3462)77-98-35  
Сыктывкар (8212)25-95-17  
Тамбов (4752)50-40-97  
Тверь (4822)63-31-35

Тольятти (8482)63-91-07  
Томск (3822)98-41-53  
Тула (4872)33-79-87  
Тюмень (3452)66-21-18  
Ульяновск (8422)24-23-59  
Улан-Удэ (3012)59-97-51  
Уфа (347)229-48-12  
Хабаровск (4212)92-98-04  
Чебоксары (8352)28-53-07  
Челябинск (351)202-03-61  
Череповец (8202)49-02-64  
Чита (3022)38-34-83  
Якутск (4112)23-90-97  
Ярославль (4852)69-52-93

**Россия** +7(495)268-04-70

**Казахстан** +7(727)345-47-04

**Беларусь** +(375)257-127-884

**Узбекистан** +998(71)205-18-59

**Киргизия** +996(312)96-26-47

эл.почта: [ewc@nt-rt.ru](mailto:ewc@nt-rt.ru) || сайт: <https://edwards.nt-rt.ru/>