

E1M18 One Stage, E2M18 Two Stage Rotary Vane Pumps



The EM range of oil-sealed rotary pumps - renowned for their high ultimate vacuum, rapid pumping speed, quiet operation and ability to handle vapour - have become the industry standard for laboratory and light industrial applications.

The E1M18 and E2M18 pumps are direct drive, sliding vane pumps. The pump is oil sealed and designed for reliable, long-term operation. The pump is a freestanding unit with the drive provided through a flexible coupling by either a single-phase or three-phase (four-pole) motor.



Supplied with: Ultragrade 19 oil, NW25 O-ring and centering ring. Fomblin® must be purchased separately for PFPE pumps.

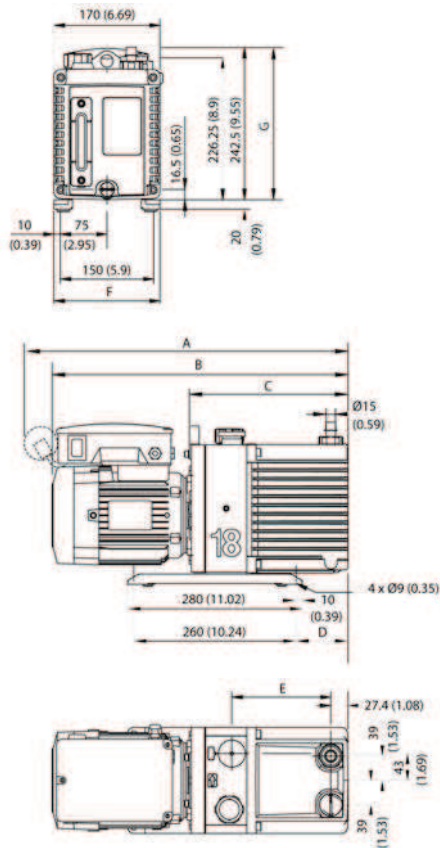
Features & Benefits

- The pump is designed for reliable, long-term operation.
- Thermal overload device prevents overheating (single phase only).
- The drive is provided through a flexible coupling by a single-phase or three-phase (four pole) motor.
- The motors are totally enclosed and are cooled by the motor-cooling fan.
- Pressure die cast oil box with integral oil seals prevents oil leaks.

Applications

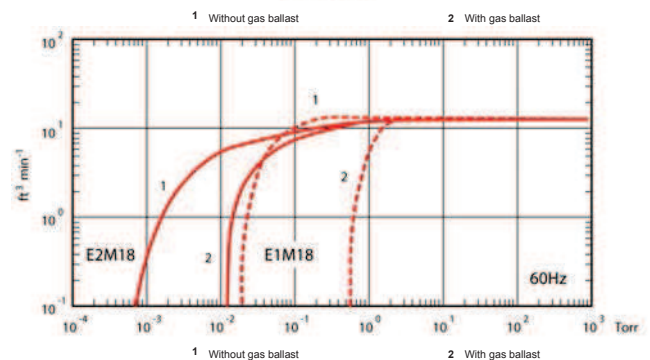
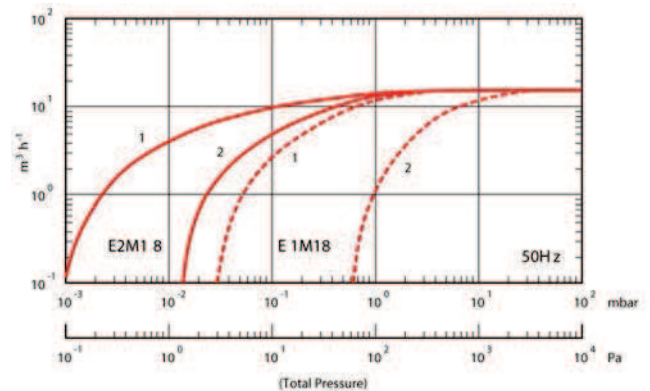
- Analytical instruments
- Leak detectors, Helium
- Research and development
- Backing Turbomolecular pumps

Dimensions



| Order No. | A | B | C | D | E | F | G |
|-----------|-----|-----|-----|-----|-----|-------|-----|
| A34310940 | - | 474 | 247 | 83 | 159 | 171.4 | 217 |
| A34315904 | 518 | 474 | 247 | 83 | 159 | 171.4 | 241 |
| A34317984 | - | 504 | 247 | 83 | 159 | 171.4 | 251 |
| A36310940 | - | 520 | 295 | 131 | 207 | 171.4 | 217 |
| A36315904 | 564 | 520 | 295 | 131 | 207 | 171.4 | 241 |
| A36317984 | - | 550 | 295 | 131 | 207 | 171.4 | 251 |

Performance Curves



Technical Data

| | E1M18 | E2M18 |
|-------------------------------------|---|---|
| Displacement (50Hz) | 20.5 m ³ h ⁻¹ / 12.1 ft ³ min ⁻¹ | 20.5 m ³ h ⁻¹ / 12.1 ft ³ min ⁻¹ |
| Displacement (60Hz) | 25.0 m ³ h ⁻¹ / 14.7 ft ³ min ⁻¹ | 25.0 m ³ h ⁻¹ / 14.7 ft ³ min ⁻¹ |
| Speed (Pneurop 6602) 50 Hz | 17.0 m ³ h ⁻¹ / 10 ft ³ min ⁻¹ | 17.0 m ³ h ⁻¹ / 10 ft ³ min ⁻¹ |
| Speed (Pneurop 6602) 60Hz | 20.4 m ³ h ⁻¹ / 12.1 ft ³ min ⁻¹ | 20.4 m ³ h ⁻¹ / 12.1 ft ³ min ⁻¹ |
| Ultimate vacuum (total pressure) | | |
| without gas purge | 3 x 10 ⁻² mbar / 2.2 x 10 ⁻² Torr | 1 x 10 ⁻³ mbar / 7.4 x 10 ⁻⁴ Torr |
| with gas purge | 6.5 x 10 ⁻¹ mbar / 4.8 x 10 ⁻¹ Torr | 1.5 x 10 ⁻¹ mbar / 1.1 x 10 ⁻² Torr |
| with Fomblin® | 3 x 10 ⁻¹ mbar / 2.56 x 10 ⁻² Torr | 1 x 10 ⁻² mbar / 7.5 x 10 ⁻³ Torr |
| Inlet connection | NW25 Nozzle 15 mm external Ø | NW25 Nozzle 15 mm external Ø |
| Outlet connection | removable from 3/4 in BSP tapped hole | removable from 3/4 in BSP tapped hole |
| Max permitted pressure at outlet | 0.5 bar gauge / 7 psig | 0.5 bar gauge / 7 psig |
| Max inlet pressure for water vapour | 50 mbar / 38 Torr | 20 mbar / 15 Torr |
| Max water vapour pumping rate | 0.65 kg h ⁻¹ | 0.3 kg h ⁻¹ |
| Operating temp range | 13-40°C | 13-40°C |
| Nominal Rotation speed 50/60Hz | 1440/1720 rpm | 1440/1720 rpm |
| Power connector 1-ph* | IEC EN60320 C19 | IEC EN60320 C19 |
| Motor power 50 Hz | 0.55 kW | 0.55 kW |
| Motor power 60 Hz | 0.75 kW | 0.75 kW |
| Weight | 37 kg / 82 lbs | 39 kg / 86 lbs |
| Noise @ 50Hz | 57 dB(A) | 57 dB(A) |
| Oil capacity - max | 1.4 litre | 1.05 litre |
| Oil capacity - min | 0.9 litre | 0.75 litre |
| Recommended oil (supplied) | Ultragrade 19 | Ultragrade 19 |

* Pumps listed with IEC connector only

Ordering Information

| Product Description | Order No. |
|--|------------------|
| E1M18 200-230/380-415V, 3-ph, 50Hz or 200-230/460V, 3-ph, 60Hz | A34310940 |
| E1M18 100/200V, 1-ph, 50Hz or 100-105/200-210V, 1-ph, 60Hz | A34315904 |
| E1M18 115/200-230V, 1-ph, 50/60Hz with IEC60320 connector, factory set to 230V | A34317984 |
| PFPE E1M18 115/200-230V, 1-ph, 50/60Hz with IEC60320 connector | A34325984 |
| E2M18 200-230/380-415V, 3-ph, 50Hz or 200-230/460V, 3-ph, 60Hz | A36310940 |
| E2M18 100/200V, 1-ph, 50Hz or 100-105/200-210V, 1-ph, 60Hz | A36315904 |
| E2M18 115/200-230V, 1-ph, 50/60Hz with IEC60320 connector | A36317984 |
| PFPE E2M18 200-230/380-415 V, 3-ph, 50 Hz or 200-230/460 V, 3-ph, 60 Hz | A36321940 |
| PFPE E2M18 100/200V, 1-ph, 50Hz or 100-105/200-210V, 1-ph, 60Hz | A36325904 |
| PFPE E2M18 115/200-230 V, 1-ph, 50/60 Hz with IEC60320 connector fitted | A36325984 |
| Accessories & Spares | Order No. |
| Model EMF20 mist filter | A46229000 |
| 2m Electrical supply cable, UK, three-pin plug | A50505003 |
| 2m Electrical supply cable, North European plug | A50506003 |
| 2m Electrical supply cable, North America/Japan plug | A50507003 |
| 2m Electrical supply cable, no plug | A50508003 |
| Spares Kit C&O E1M18/E2M18 | A36301131 |
| Spares Kit Blade E1M18 | A34301041 |
| Spares Kit Blade E2M18 | A36301020 |
| NW25 to 28mm bore tube adaptor | C10520201 |
| 3/4" BSP to NW25 outlet adaptor | C10501414 |