The EH mechanical booster pumps feature the unique hydrokinetic drive, providing an efficient power transmission with benefits in economy, performance and compactness. The hydrokinetic drive provides the following features:

- Pump down times cut by 50%, when compared with direct drive pumps
- No bypass lines or pressure switches required
- Universal voltage motors
- Reduced capital and operating costs
- Air cooled motors – with water cooled options
- Quiet, minimum vibration

The EH mechanical booster pumps, based on the simple Roots principle, remain the favorite pumps for applications where high pumping speeds over 3000 m³/h / 1776 ft³/min are required in the pressure region of 0.01 to 50 mbar / 0.0075 to 37.5 Torr. These pumps must always be backed by another pump which can deliver against a high pressure differential to atmospheric pressure. Operating at relatively low pressures, the mechanical booster pump is not exposed to the same concentrations of corrosive process media as is the backing pump, which makes it highly reliable.

High Performance Pumping Mechanism

The EH has a high quality, oil-free pumping mechanism. This offers:

- Quiet, vibration free operation
- Rugged and corrosion resistant
- Advanced shaft-seal technology – no oil contamination of process chamber

The corrosion resistant pumping mechanism is manufactured from high grade cast iron. The proven shaft-seal arrangement ensures that no oil enters the pumping stator, and the absence of internal and external by-pass lines and valves which may corrode or stick minimizes maintenance requirements.

The design of the shaft seals is optimised to ensure that no lubricants can migrate into the pumping mechanism. This maintains booster pump performance in applications which demand the highest standard of cleanliness. In addition, this prevents the build-up of trapped particles on the rotor lobes and end-faces which have very close tolerances.

The dynamically balanced rotors and precision ground gears contribute to the smooth, quiet operation of the pumps, as demanded by manufacturers of advanced technology equipment.

Broad Application Coverage

EH mechanical boosters are available to cover a broad range of industrial and chemical process applications.

Industrial

Industrial EH boosters are safe to handle non-flammable gases and vapours within the normal operating parameters of the booster.

ATEX

ATEX classified EH boosters are annotated with the suffix "T3" or "T160".

- EH boosters may be supplied with ATEX classification either as part of a pump system or stand-alone, on application. Please consult Edwards.
- ATEX compliance is typically specified for use in Europe, but may also be required in other areas.

ATEX compliant EH boosters are suitable for operation in ATEX systems rated as follows:

All of the EH1200C, EH1200 T160, EH2600C, EH2600 T3, EH2600 T160, EH4200C, EH4200 T3 and EH4200 T160 chemical EH pumps are fitted with flameproof motors:

- Pumps suitable for 50 Hz operation are fitted with a flameproof motor approved to EEx d. Gas Group IIA, IIB, Temperature Class T4.
- Pumps suitable for 60 Hz operation are fitted with a flameproof motor approved to CSA, Division 1 area, Gas Class I Group C & D, and Dust Class II Group F & G, Temperature Class T3C.

Internal and External Classifications

II 2G c IIB T3
or
II 2G c IIB T160

The notations used in these ratings are as follows:

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<thead>
<tr>
<th>Symbol</th>
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<tr>
<td>II</td>
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<td>T3 / T160</td>
<td>Gas auto-ignition temperature</td>
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Equipment Category

For equipment category 1 (gas) consult Edwards.

Gas Auto-Ignition Temperature

The temperature classifications applied to the chemical EH pumps relate to the auto-ignition temperature of flammable materials that can be pumped:

- The EH1200C, EH2600C, EH4200C and chemical EH pumps that have a T3 classification are suitable for pumping flammable materials that have an auto-ignition temperature greater than 200 °C.
- Chemical EH pumps that have a T160 classification are suitable for pumping flammable materials that have an auto-ignition temperature greater than 160 °C.
Explosion Proof

Explosion proof boosters are annotated with the suffix "C".

- EH boosters may be ordered with explosion proof motors either individually, or as part of an explosion proof system.
- Explosion proof is generally applicable in N. America and the rest of the world (excluding Europe).

Explosion-proof boosters will be supplied fitted with an explosion-proof motor (suitable for 60 Hz operation) approved to CSA, Division 1 area, Gas Class I Group C & D and Dust Class II Group F & G, Temperature Class T3C.

EH Pumps with Hydrokinetic Drive

EH booster pumps have a unique and patented hydrokinetic fluid drive, which couples the motor to the pumping mechanism. The hydrokinetic drive offers the following advantages:

- Pump down times cut by up to 50%
- Reduced capital and operating costs
- No pressure sensors, by-pass lines or valves
- Can operate continuously at all pressures – when used with a backing pump

EH booster pumps have universal voltage, air-cooled motors and are available with effective pumping speeds of up to 4140 m³h⁻¹ / 2440 ft³min⁻¹. The pump bodies of the EH1200, EH2600 and EH4200 pumps are water-cooled.

Two versions of each EH booster pump are available, with different oils used for the lubrication of the seals and gears. The standard version uses mineral oils, such as Ultragrade 20. The alternative version has PFPE (perfluoropolyether) oils and is suitable for applications where oxygen or other reactive and corrosive gases are processed.

Pump-Down Times cut by up to 50% - The hydrokinetic drive allows the booster pump to be started at the same time as the backing pump (at atmospheric pressure) as it prevents motor overload. The EH booster pump therefore assists the pumping process from the start of pump-down. In comparison pumping systems with conventional, direct drive mechanical booster pumps (where the booster pump is switched on when the chamber pressure has been reduced to, typically, less than 10 mbar / 7.5 Torr), the total evacuation time can be reduced by as much as 50%. The graph below shows data for a 2.8 m³ / 100 ft³ chamber, with a 2600 m³h⁻¹ / 2600 ft³min⁻¹ mechanical booster pump and a 255 m³h⁻¹ / 150 ft³min⁻¹ backing pump.

Automatic Overload Protection - The hydrokinetic drive automatically varies the rotational speed of the pump. This protects the motor from overload, prevents over-heating, and allows the pump to operate with high pressure differentials. Consequently, EH booster pumps are not damaged by sudden increases of inlet pressure and even by the entry of solid debris into the pump.

Important Cost Savings - When you use EH mechanical booster pumps, you save money on installation and operation. Your capital costs are reduced as you do not need valves, by-pass lines and pressure switches, and you can use a smaller backing pump than with conventional drive booster pumps. Operation costs are reduced because EH booster pumps have smaller motors than direct drive pumps and, when operating at full speed, they use only a fraction of the rated power.

Shop online at www.edwardsvacuum.com
The EH mechanical booster pump, based on the simple Roots principle, remains the favourite pump for applications where high pumping speeds are required for pressures in the region of 0.01 to 10 mbar. This pump must always be backed by another pump, which can deliver against a high-pressure differential to atmospheric pressure.

Operating at relatively low pressures, the mechanical booster pump is not exposed to the same concentrations of corrosive process media as is the backing pump, which makes it highly reliable.

Features & Benefits
- Suitable for applications where high pumping speeds over 3000 m$^3$h$^{-1}$/1776 ft$^3$min$^{-1}$ are required in the pressure region of 0.01 to 50 mbar/0.0075 to 37.5 Torr.
- Operating at relatively low pressures makes it highly reliable.
- The EH pumps have a high quality, oil-free pumping mechanism. This offers:
  - Quiet, vibration free operation.
  - Rugged and corrosion resistant.

Applications
- Semiconductor processing
- Vacuum distillation
- Vacuum packaging
- Steel degassing
- Thin film coating

Dimensions

Performance Curves

Shop online at www.edwardsvacuum.com
Technical Data

Displacement (swept volume)
50Hz  310 m³ h⁻¹ / 185 ft³ min⁻¹
60Hz  375 m³ h⁻¹ / 220 ft³ min⁻¹

Effective pumping speed with backing pump
E2M40  240 m³ h⁻¹ / 141 ft³ min⁻¹
E2M80  274 m³ h⁻¹ / 161 ft³ min⁻¹

Pressure differential across pump
50Hz  0-180 mbar / 0-140 Torr
60Hz  0-150 mbar / 0-115 Torr

Inlet connection  ISO63
Outlet connection  ISO40

Rotational speed ±
50Hz  0-2900 rpm
60Hz  0-3500 rpm

Operating continuous inlet pressure  0-1000 mbar / 0-760 Torr
Maximum outlet pressure  1000 mbar / 760 Torr
Recommended backing pumps  GV80, E2M40, E2M80

Electrical supply voltage, 3-ph
50Hz  220 – 240V / 380 – 415V
60Hz  208-230V / 460V

Motor power
Hydrocarbon  2.2 kW / 3 hp
PFPE  1.5 kW / 2 hp
ATEX  2.2 kW
Explosion proof  3 hp

Ambient temperature range
Operating  5 to 40°C / 40 to 104°F
Storage  -10 to 80°C / 14 to 176°F
Maximum operating humidity  90% RH
Cooling method  Air cooled
Recommended oil  Ultragrade 20

Oil capacity
Coupling cover  1.5 litre / 1.6 qt
Shaft seal reservoir  0.125 litre / 0.25 qt
Weight  61 kg / 134 lb

Ordering Information

Product Description | Order No.
--- | ---
EH250IND 200V, 3-ph, 60Hz, 3hp | NRC221000
EH250IND 200V, 3-ph, 50Hz, 2.2kW | NRC222000
EH250IND 220-240/380-415V, 3-ph, 50Hz, 2.2kW | A30151945
EH250IND 208 – 230V or 460V, 3-ph, 60Hz, 3 hp | A30152946
PFPE EH250FX 220-240/380-415V, 3-ph, 50Hz, 1.5kW | A30153935
PFPE EH250FX 208-230/460V, 3-ph, 60Hz, 2 hp | A30154936
EH250C 460V, 3-ph 60Hz, 3 hp | NRA997000
EH250T160 220-240/380-415V, 3-ph 50Hz, 2.2kW | NRA996000

Accessories & Spares | Order No.
--- | ---
Spares Kit Con C&O EH/QMB250/500A | A30151815
Spares Kit Module EH/QMB250/500A | A30151820
Spares Kit Shim EH/QMB250/500A | A30151825
Inlet Mesh Assy 3.3 mm ISO63 | A60041029
ISO63 Screen Centring S/S Viton | C10521085

Shop online at www.edwardsvacuum.com
The EH mechanical booster pump, based on the simple Roots principle, remains the favourite pump for applications where high pumping speeds are required for pressures in the region of 0.01 to 10 mbar. This pump must always be backed by another pump, which can deliver against a high-pressure differential to atmospheric pressure.

Operating at relatively low pressures, the mechanical booster pump is not exposed to the same concentrations of corrosive process media as is the backing pump, which makes it highly reliable.

Features & Benefits

- Suitable for applications where high pumping speeds over 3000 m³ h⁻¹ / 1776 ft³ min⁻¹ are required in the pressure region of 0.01 to 50 mbar / 0.0075 to 37.5 Torr.
- Operating at relatively low pressures makes it highly reliable.
- The EH pumps have a high quality, oil-free pumping mechanism. This offers:
  - Quiet, vibration free operation.
  - Rugged and corrosion resistant.

Applications

- Semiconductor processing
- Vacuum distillation
- Vacuum packaging
- Steel de-gassing
- Thin film coating

Dimensions

![Diagram of EH500 Mechanical booster pump dimensions](image)

Pump is shown with inlet and outlet flange unions fitted. Dimensions are to the top surface of the pump flange.

Performance Curves

![Performance curves for EH500 Mechanical booster pump](image)
Technical Data

Displacement (swept volume)
50Hz 505 m³ h⁻¹ / 300 ft³ min⁻¹
60Hz 605 m³ h⁻¹ / 335 ft³ min⁻¹

Effective pumping speed with backing pump
E2M40 350 m³ h⁻¹ / 206 ft³ min⁻¹
E2M80 400 m³ h⁻¹ / 236 ft³ min⁻¹
E2M175 440 m³ h⁻¹ / 259 ft³ min⁻¹
E2M275 460 m³ h⁻¹ / 271 ft³ min⁻¹

Pressure differential across pump †
50Hz 0-110 mbar / 0-83 Torr
60Hz 0-90 mbar / 0-68 Torr

Inlet connection ISO100
Outlet connection ISO63

Rotational speed
50Hz 0-2900 rpm
60Hz 0-3500 rpm

Operating continuous inlet pressure 0-1000 mbar / 0-760 Torr

Maximum outlet pressure 1000 mbar / 760 Torr

Recommended backing pumps GV80, E2M80

Electrical supply
50Hz 220-240V / 380-415V
60Hz 208-230V / 460V

Motor power
Hydrocarbon 2.2kW / 3hp
PFPE 1.5 kW / 2hp
ATEX 2.2kW

Explosion proof 3hp

Ambient temperature range
Operating 5 to 40°C / 40 to 104°F
Storage -10 to 80°C / 14 to 176°F

Maximum operating humidity 90% RH

Cooling method Air cooled

Recommended oil
Standard version Ultragrade 20
PFPE version Fomblin® YVAC 16/6

Oil capacity
Coupling cover 1.5 litre / 1.6 qt
Shaft seal reservoir 0.125 litre / 0.25 qt
Weight 74 kg / 163 lb

†. Depends on pressure

Ordering Information

Product Description Order No.
EH500IND 208-230/460V, 3-ph, 60Hz, 3 hp A30272946
EH500IND 200V, 3-ph 60Hz, 3 hp NRC219000
EH500IND 200V, 3-ph 50Hz, 2.2kW NRC220000
EH500IND 220-240/380-415V, 3-ph, 50Hz, 2.2kW A30271945
EH500AFX 220-240/380-415V, 3-ph 50Hz, 1.5 kW A30273935
EH500AFX 208-230/460V, 3-ph, 60Hz, 2 hp A30274936
EH500C 460V, 3-ph, 60Hz, 3 hp NRA999000
EH500T3 220-240/380-415V, 3-ph, 50Hz, 2.2kW NRA998000

Accessories & Spares Order No.
Spares Kit Con C&O EH/QMB250/500A A30151815
Spares Kit Module EH/QMB250/500A A30151820
Spares Kit Shim EH/QMB250/500A A30151825
ISO100 Screen Centring S/S Viton C10523085
Inlet Mesh Assembly EH250/EH500A A60041569

Shop online at www.edwardsvacuum.com
The EH mechanical booster pump, based on the simple Roots principle, remains the favourite pump for applications where high pumping speeds are required for pressures in the region of 0.01 to 10 mbar. This pump must always be backed by another pump, which can deliver against a high-pressure differential to atmospheric pressure.

Operating at relatively low pressures, the mechanical booster pump is not exposed to the same concentrations of corrosive process media as is the backing pump, which makes it highly reliable.

### Features & Benefits

- Suitable for applications where high pumping speeds over 3000 m³ h⁻¹/1776 ft³ min⁻¹ are required in the pressure region of 0.01 to 50 mbar/0.0075 to 37.5 Torr.
- Operating at relatively low pressures makes it highly reliable.
- The EH pumps have a high quality, oil-free pumping mechanism. This offers:
  - Quiet, vibration free operation.
  - Rugged and corrosion resistant.

### Applications

- Semiconductor processing
- Vacuum distillation
- Vacuum packaging
- Steel de-gassing
- Thin film coating

### Dimensions

Pump is shown with inlet and outlet blanking flanges fitted. Dimensions are to the top surface of the pump flange.

### Performance Curves

Shop online at www.edwardsvacuum.com
Technical Data

Displacement (swept volume)

- **50Hz**
  - 1195 m³ h⁻¹ / 715 ft³ min⁻¹
- **60Hz**
  - 1435 m³ h⁻¹ / 845 ft³ min⁻¹

Effective pumping speed with backing pump

- **E2M80**
  - 840 m³ h⁻¹ / 495 ft³ min⁻¹
- **E2M175**
  - 930 m³ h⁻¹ / 548 ft³ min⁻¹
- **E2M275**
  - 1020 m³ h⁻¹ / 601 ft³ min⁻¹

Pressure differential across pump

- **50Hz**
  - 0-90 mbar / 0-68 Torr
- **60Hz**
  - 0-75 mbar / 0-56 Torr

Inlet connection

- ISO160

Outlet connection

- ISO100

Rotational speed

- **50Hz**
  - 0-2900 rpm
- **60Hz**
  - 0-3500 rpm

Operating continuous inlet pressure

- 0-1000 mbar / 0-760 Torr

Maximum outlet pressure

- 1000 mbar / 760 Torr

Recommended backing pumps

- GV160, GV250, E2M80, E2M175

Electrical supply

- **50Hz**
  - 220-240V / 380-415V
- **60Hz**
  - 208-230V / 460V

Motor power

- Hydrocarbon
  - 3kW / 4hp
- PFPE
  - 3kW / 4hp
- ATEX
  - 3kW
- Explosion proof
  - 4hp

Ambient temperature range

- Operating
  - 5 to 40°C / 40 to 104°F
- Storage
  - -10 to 80°C / 14 to 176°F

Maximum operating humidity

- 90% RH

Recommended cooling water flow (inlet temperature 20°C)

- 120l/h⁻¹ / 0.53 gal min⁻¹

Recommended cooling water supply pressure

- 2-6 bar

Cooling water connections

- 3/8 inch BSP male

Recommended oil

- Standard version
  - Ultragrade 20
- PFPE version
  - Fomblin® YVAC 16/6

Oil capacity

- Gear case
  - 1.25 litre / 1.3 qt
- Coupling cover
  - 1.5 litre / 1.6 qt
- Shaft seal reservoir
  - 0.125 litre / 0.25 qt
- Weight
  - 74 kg / 163 lb

* Under many circumstances, pumps may operate without cooling water. Apply to Edwards for more information.
† Depends on pressure

Ordering Information

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<th>Accessories &amp; Spares</th>
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<td>Spares Kit Module EH/QMB1200</td>
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<td>Shim kit</td>
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<td>ISO160 Screen Centring S/S Viton</td>
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<td>Inlet Mesh Assembly EH2600/EH4200</td>
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Shop online at www.edwardsvacuum.com
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**Features & Benefits**

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  - Rugged and corrosion resistant.

**Applications**

- Semiconductor processing
- Vacuum distillation
- Vacuum packaging
- Steel de-gassing
- Thin film coating

**Dimensions**

**Performance Curves**

Pump is shown with inlet and outlet blanking flanges fitted. Dimensions are to the top surface of the pump flange.

*Alternative outlet position*

Shop online at www.edwardsvacuum.com
## Technical Data

### Displacement (swept volume)

| 50Hz  | 2590 m³/h / 1525 ft³ min⁻¹ |
| 60Hz  | 3110 m³/h / 1830 ft³ min⁻¹ |

### Effective pumping speed with backing pump

| E2M175 | 1750 m³/h / 1031 ft³ min⁻¹ |
| E2M275 | 1900 m³/h / 1119 ft³ min⁻¹ |

### Pressure differential across pump †

| 50Hz   | 0-80 mbar / 0-60 Torr |
| 60Hz   | 0-67 mbar / 0-50 Torr |

### Inlet connection

ISO160

### Outlet connection

ISO100

### Rotational speed

| 50Hz | 2900 rpm |
| 60Hz | 3500 rpm |

### Operating continuous inlet pressure

0-1000 mbar / 0-760 Torr

### Maximum outlet pressure

1000 mbar / 760 Torr

### Recommended backing pumps

GV250, GV400, E2M175, E2M275

### Electrical supply

| 50Hz  | 220-240V / 380-415V |
| 60Hz  | 208-230V / 460V |

### Motor power

| Hydrocarbon | 11kW / 15hp |
| PFPE       | 7.5kW / 10hp |
| ATEX       | 11kW |
| Explosion proof | 15hp |

### Ambient temperature range

| Operating | 5 to 40°C / 40 to 104°F |
| Storage   | -10 to 80°C / 14 to 176°F |

### Recommended cooling water flow (inlet temperature 20°C)*

250lh⁻¹ / 1.1 gal min⁻¹

### Recommended cooling water supply pressure*

2-6 bar

### Cooling water connections*

3/8 inch BSP male

### Recommended oil

| Standard version | Ultragrade 20 |
| PFPE version     | Fomblin® YVAC 16/6 |

### Oil capacity

| Gear case | 3.5 litre / 3.3 qt |
| Coupling cover | 6.5 litre / 7 qt |
| Shaft seal reservoir | 1.5 litre / 1.4 qt |
| Weight   | 308 kg / 679 lb |

* Under many circumstances, pumps may operate without cooling water. Apply to Edwards for more information.

†. Depends on pressure

## Ordering Information

### Product Description

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### Accessories & Spares

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### Inlet Mesh Assembly EH2600/EH4200

A60041570

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**Features & Benefits**
- Suitable for applications where high pumping speeds over 3000 m³ h⁻¹/1776 ft³ min⁻¹ are required in the pressure region of 0.01 to 50 mbar/0.0075 to 37.5 Torr.
- Operating at relatively low pressures makes it highly reliable.
- The EH pumps have a high quality, oil-free pumping mechanism. This offers:
  - Quiet, vibration free operation.
  - Rugged and corrosion resistant.

**Applications**
- Semiconductor processing
- Vacuum distillation
- Vacuum packaging
- Steel de-gassing
- Thin film coating

**Dimensions**

![Diagram of EH4200 Mechanical booster pump](image)

*Alternative outlet position

**Performance Curves**

![Performance Curves](image)
## Technical Data

### Displacement (swept volume)

<table>
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<th>Frequency</th>
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<th>Volume $\text{ft}^3 \text{min}^{-1}$</th>
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<td>60Hz</td>
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### Effective pumping speed with backing pump

- **E2M275**: $3100 \text{m}^3 \text{h}^{-1}$ / $1825 \text{ft}^3 \text{min}^{-1}$

### Pressure differential across pump

- **50Hz**: 0-60 mbar / 0-45 Torr
- **60Hz**: 0-50 mbar / 0-38 Torr

### Inlet connection: ISO250

### Outlet connection: ISO100

### Rotational speed

- **50Hz**: 0-2900 rpm
- **60Hz**: 0-3500 rpm

### Operating continuous inlet pressure

- **Maximum outlet pressure**: 1000 mbar / 760 Torr

### Recommended backing pumps

- GV400, E2M275

### Electrical supply

- **50Hz**: 220-240V / 380-415V
- **60Hz**: 208-230V / 460V

### Motor power

- **Hydrocarbon**: 11kW / 15hp
- **PFPE**: 11kW / 15hp
- **ATEX**: 11kW
- **Explosion proof**: 15hp

### Ambient temperature range

- **Operating**: 5 to 40°C / 40 to 104°F
- **Storage**: -10 to 80°C / 14 to 176°F

### Maximum operating humidity

- **90% RH

### Recommended cooling water flow (inlet temperature 20°C)*

- **250lh$^{-1}$ / 1.1 gal min$^{-1}$

### Recommended cooling water supply pressure*

- **2-6 bar

### Cooling water connections*

- **3/8 inch BSP male

### Recommended oil

- **Standard version**: Ultragrade 20
- **PFPE version**: Fomblin® YVAC 16/6

### Oil capacity

- **Gear case**: 3.5 litre / 3.3 qt
- **Coupling cover**: 6.5 litre / 7 qt
- **Shaft seal reservoir**: 1.5 litre / 1.4 qt
- **Weight**: 400 kg / 882 lb

---

* Under many circumstances, pumps may operate without cooling water. Apply to Edwards for more information.

† Depends on pressure

---

## Ordering Information

### Product Description

<table>
<thead>
<tr>
<th>Description</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>EH4200IND 380-415V, 3-ph, 50Hz, 11kW</td>
<td>A30975946</td>
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<tr>
<td>EH4200IND 200V, 3-ph, 60Hz, 15hp</td>
<td>NRB988000</td>
</tr>
<tr>
<td>EH4200IND 200V, 3-ph, 50Hz, 11kW</td>
<td>NRC215000</td>
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<tr>
<td>EH4200IND 208-230/460V, 3-ph, 60Hz, 15hp</td>
<td>A30976982</td>
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<tr>
<td>EH4200C 230/460V, 3-ph, 60Hz, 15hp</td>
<td>A30956982</td>
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<tr>
<td>EH4200T3 380-415V, 3-ph, 50Hz, 11kW</td>
<td>A30941935</td>
</tr>
<tr>
<td>EH4200T160 380-415V, 3-ph, 50Hz, 11kW</td>
<td>A30979900</td>
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### Accessories & Spares

<table>
<thead>
<tr>
<th>Description</th>
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<tbody>
<tr>
<td>Spares Kit Con C&amp;O EH/QMB26/4200</td>
<td>A30751815</td>
</tr>
<tr>
<td>Spares Kit Module EH/QMB26/4200</td>
<td>A30751820</td>
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<tr>
<td>Spares Kit Shim EH/QMB12/26/4200</td>
<td>A30751825</td>
</tr>
<tr>
<td>Inlet Mesh Assembly EH2600</td>
<td>A60041571</td>
</tr>
</tbody>
</table>

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Shop online at www.edwardsvacuum.com
OLM500 Oil Level Monitor

Fit the OLM500 in place of the oil sight-glass on the EH250 and EH500 oil seal reservoirs, and on the EH1200, EH2600 and EH4200 oil seal reservoirs and gear boxes. The OLM500 provides a switched output for remote activation or warning devices. Technical data: 24 V a.c. or d.c., maximum current 0.5 A.

Ordering Information

<table>
<thead>
<tr>
<th>Product Description</th>
<th>Order No.</th>
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<tbody>
<tr>
<td>OLM500 oil level monitor*</td>
<td>A50434000</td>
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<td></td>
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</tbody>
</table>

* Not suitable for ATEX boosters

Inlet Seal with Mesh Screen

Designed to prevent objects falling into the inlet of our booster pumps, the mesh aperture is 3.3 mm.

Ordering Information

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<thead>
<tr>
<th>Product Description</th>
<th>Order No.</th>
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<tbody>
<tr>
<td>Inlet seal with mesh screen</td>
<td>C10521085</td>
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<td>ISO63</td>
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<tr>
<td>ISO100</td>
<td>C10523085</td>
</tr>
<tr>
<td>ISO160</td>
<td>C10524085</td>
</tr>
</tbody>
</table>

* Not suitable for ATEX boosters

Shop online at www.edwardsvacuum.com
Stokes 6" Series Mechanical Booster Pumps

Stokes 6" series mechanical boosters are available in sizes 1020-6630 m³/h / 612-3900 ft³/min. Features include:
- Rugged design for reliable and extended operation
- Simple maintenance features incorporated in design
- Vertical or horizontal gas flow
- Options of direct drive motors or bare shaft machines
- Options of bypass technology to reduce pump down time and process isolation seals
- Dynamically balanced impellers

Overview

Used in conjunction with rotary-piston, rotary vane, dry vacuum and liquid ring pumps, Stokes 6" series will increase pumping speed at working pressures and shorten pump down time significantly. Whether your objective is to reduce valuable time from the front end of your pumping cycle, or to substantially boost pumping capacity for high out-gassing applications, the result is the same - significantly reduced cycle times.

Stokes 6" series are compatible with any make or type of vacuum pumping system. The boosters can be mounted separately, or on the inlet of the backing pump. The latter forms a compact integrated package as a mechanical booster system. For even lower-pressure applications, two Stokes 6" series can be used in series with one backing pump. This results in a significantly lower-cost and space-saving pumping system.

Bypass technology is available in the 615 model to enhance your productivity further, while also assuring consistent, reproducible vacuum processing. The bypass valve limits the maximum differential pressure, enabling the booster to start from atmosphere and provide increased pumping capacity over the full pressure range. Eliminating the electrical pressure switch insures continuous, booster operation regardless of vacuum level.

The 1 11/16 inch extra large shaft diameter engineered into the Stokes 6" series provides the capability for use with higher powered motors, in addition to ensuring a uniquely rugged and durable mechanical booster. The use of higher powered motors in conjunction with the high differential specification, allows the pumps to operate at their full displacement from atmospheric pressure, with appropriately sized backing pumps the 612MB offers these advantages in a standard package.

The Stokes 6" series is also available in a process isolation series (five mechanical seals) for optimum protection from dust and particulate contamination in arduous duty applications. All mechanical vacuum boosters must be backed by a primary vacuum pump designed to discharge to atmospheric pressure. Below is a list of commonly used backing pumps:
- Oil Sealed Pumps (EM or EV)
- Liquid Ring Pump (Two-stage LR Series)
- Piston Pumps (Stokes Microvac Series)
- Dry Pump (GV Drystar or Chemical Drystar)

Features & Benefits

- Mechanical shaft seal - improved life and serviceability
- Ringfeder® keyless gear locking system - stronger, faster timing
- Large shaft diameters - allowing improved performance at high pressures
- Belt drive or direct drive capability - flexibility of operating speeds and motor power
- Vertical or horizontal gas flow - flexibility of orientation
- Drive end roller bearing - resists belt pull and thermal effects
- Over-sized anti-friction bearings - increased uptime and longer service intervals
- Rugged proven design and construction
- Air Cooled - utility savings
- Unique impeller design - Dynamically balanced to minimise vibration
- High volumetric efficiency - optimal performance
- High differential pressure - operation capability
- Available by-pass option for improved pumpdown
- Available process isolation seal option - optimum protection from dust and particulate contamination

Applications

Typical applications for the Stokes 6" series mechanical booster pumps includes:
- Automotive
- Chemical processing
- Heat treatment
- Leak detection
- Metallurgy
- PET processing
- Pharmaceuticals
- Thermal processing
- Transformer drying and cable fluid conditioning
- Vacuum coating
- Vacuum melting
- Many other industrial applications

Shop online at www.edwardsvacuum.com
Stokes 607 Series Mechanical Booster Pumps

Stokes 6” series mechanical boosters are designed to be used in conjunction with rotary-piston, dry vacuum, rotary vane and liquid ring pumps to increase pumping speed at working pressures and shorten pump down time significantly. The Stokes 6” series can be mounted separately or on the inlet of the backing pump to create a compact integrated package.

Featuring an extra large diameter shaft, the Stokes 6” series has the capability for use with higher powered motors in addition to ensuring a uniquely rugged and durable mechanical booster. This allows the pumps to operate at their full displacement from atmospheric pressure with an appropriately sized backing pump.

Features & Benefits

- Mechanical shaft seal – improved life and serviceability
- Ringfeder® keyless gear locking system – stronger, faster timing
- Large shaft diameters – allowing improved performance at high pressures
- Belt drive or direct drive capability
- Vertical or horizontal gas flow

Technical Data

<table>
<thead>
<tr>
<th>Displacement</th>
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<tbody>
<tr>
<td>V belt 2750 rpm</td>
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<tr>
<td>Direct drive 1800 rpm</td>
</tr>
<tr>
<td>Direct drive 3000 rpm</td>
</tr>
<tr>
<td>Direct drive 3600 rpm</td>
</tr>
</tbody>
</table>

Inlet/outlet flanges 6” ASA/ANSI

Motor power 5 / 20hp (7.5kW)

Cooling method Air Cooled

Oil capacity (horizontal flow) 1.9 litre / 0.51gal

Oil capacity (vertical flow) 4.1 litre / 1.1gal

Max pressure differential 506mbar / 380Torr

Max temp rise 135°C / 275°F

Max discharge temp 191°C / 375°F

Weight bare shaft 215kg / 475lbs

Weight TEFC direct drive 408kg / 900lbs

Dimensions

Ordering Information

Product Description | Order No.
--- | ---
607 MHR CE, 7.5kW, 230/400V, 3-ph, 50Hz @3000rpm | 900607MHR601
607 MHR CE, 7.5kW, 200-220V/380V, 3-ph, 50/60Hz @3000/3600rpm | 900607MHR602
607 MVR CE, 7.5kW, 230/400V, 3-ph, 50Hz @ 3000rpm | 900607MVR601
607 MVR CE, 7.5kW, 200-220V/380V, 3-ph, 50/60Hz @3000/3600rpm | 900607MVR602
607 MHR (Bare shaft) Horizontal flow | 900607MHR101
607 MVR (Bare shaft) Vertical flow | 900607MVR101
607 MH20, 20 hp, 230/460V, 3-ph, 60Hz @ 1800rpm | 900-607-MH20
607 MV05, 5 hp, 230/460V, 3-ph, 60Hz @ 1800rpm | 900607MV05
607 MV20, 20 hp, 230/460V, 3-ph, 60Hz @ 1800rpm | 900607MV20
607 MH05, 5 hp, 230/460V, 3-ph, 60Hz @ 1800rpm | 900607MH05

Accessories & Spares

<table>
<thead>
<tr>
<th>Order No.</th>
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</table>
| Replacement 6” booster Mseal - seal kit | 607552001
| Replacement 6” booster - maintenance kit | 607552002

Shop online at www.edwardsvacuum.com
Stokes 607 Series Process Isolation Boosters

Stokes 6” series mechanical boosters are designed to be used in conjunction with rotary-piston, dry vacuum, rotary vane and liquid ring pumps to increase pumping speed at working pressures and shorten pump down time significantly. They incorporate five mechanical seals for optimum protection from dust and particulate contamination and can be mounted separately or on the inlet of the backing pump to create a compact integrated package.

Featuring an extra large diameter shaft, the Stokes 6” series has the capability for use with higher powered motors in addition to ensuring a uniquely rugged and durable mechanical booster.

Features & Benefits

- Mechanical shaft seal – improved life and serviceability
- Ringfeder® keyless gear locking system – stronger, faster timing
- Large shaft diameters – allowing improved performance at high pressures
- Belt drive or direct drive capability
- Vertical or horizontal gas flow

Technical Data

<table>
<thead>
<tr>
<th>Displacement</th>
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<tbody>
<tr>
<td>V belt (2750 rpm)</td>
<td>1589 m³/h / 939 ft³/min</td>
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<tr>
<td>Direct drive (3000 rpm)</td>
<td>1733 m³/h / 1020 ft³/min</td>
</tr>
<tr>
<td>Direct drive (3600 rpm)</td>
<td>2080 m³/h / 1224 ft³/min</td>
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Inlet/outlet flanges

- 6” ASA/ANSI flange

Motor power

- EU/Asia: 7.5kW
- US TEFC: 10hp

Cooling water

- 7.6-11.4l min⁻¹ / 2-3gal min⁻¹

Oil capacity (horizontal flow)

- 1.9 litre / 0.51gal

Oil capacity (vertical flow)

- 4. litre / 1.1gal

Max pressure differential

- 506 mbar / 380 Torr

Max temp rise

- 135°C / 275°F

Max discharge temp

- 191°C / 375°F

Weight bare shaft

- 215kg / 475lbs

Weight TEFC direct drive

- 345kg / 760lbs

Dimensions

Ordering Information

<table>
<thead>
<tr>
<th>Product Description</th>
<th>Order No.</th>
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<tbody>
<tr>
<td>607 SHR CE 7.5kW, 230/400V, 3-ph, 50Hz @ 3000rpm</td>
<td>900607SHR601</td>
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<tr>
<td>607 SHR CE 7.5kW, 200-220/380V, 3-ph, 50/60Hz @ 3000/3600rpm</td>
<td>900607SHR602</td>
</tr>
<tr>
<td>607 SHR (Bare shaft) Horizontal flow</td>
<td>900607SHR101</td>
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<tr>
<td>607 SVH5, 10hp, 230/460V, 3-ph, 60Hz @ 1800rpm</td>
<td>900607SVH10</td>
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<tr>
<td>607 SVH5 (Bare shaft) Vertical flow</td>
<td>900607SVH10</td>
</tr>
<tr>
<td>607 SVR CE 7.5kW, 230/400V, 3-ph, 50Hz @ 3000rpm</td>
<td>900607SVR601</td>
</tr>
<tr>
<td>607 SVR CE 7.5kW, 200-220/380V, 3-ph, 50/60Hz @ 3000/3600rpm</td>
<td>900607SVR602</td>
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<table>
<thead>
<tr>
<th>Accessories &amp; Spares</th>
<th>Order No.</th>
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<tbody>
<tr>
<td>Replacement 6” booster MoSeal - seal kit</td>
<td>607552001</td>
</tr>
<tr>
<td>Replacement 6” booster - maintenance kit</td>
<td>607552002</td>
</tr>
<tr>
<td>Process isolation seal kit</td>
<td>607552004</td>
</tr>
</tbody>
</table>

Shop online at www.edwardsvacuum.com
Stokes 6" Series Mechanical Booster Pumps

Stokes 6" series mechanical boosters are designed to be used in conjunction with rotary-piston, dry vacuum, rotary vane and liquid ring pumps to increase pumping speed at working pressures and shorten pump down time significantly. The Stokes 6" series can be mounted separately or on the inlet of the backing pump to create a compact integrated package.

Featuring an extra large diameter shaft, the Stokes 6" series has the capability for use with higher powered motors in addition to ensuring a uniquely rugged and durable mechanical booster. This allows the pumps to operate at their full displacement from atmospheric pressure with an appropriately sized backing pump.

Features & Benefits

- Mechanical shaft seal – improved life and serviceability
- Ringfeder® keyless gear locking system – stronger, faster timing
- Large shaft diameters – allowing improved performance at high pressures
- Belt drive or direct drive capability
- Vertical or horizontal gas flow

Technical Data

**Displacement**

- V belt (2750 rpm) 3375 m³/h / 2000 ft³ min⁻¹
- Direct drive (1800 rpm) 2210 m³/h / 1300 ft³ min⁻¹
- Direct drive (3000 rpm) 3685 m³/h / 2170 ft³ min⁻¹
- Direct drive (3600 rpm) 4420 m³/h / 2600 ft³ min⁻¹

**Inlet/outlet flanges**

- 8" ASA/ANSI flange

**Motor power**

- EU/Asia 11kW
- US TEFC 10hp

**Cooling method**

- Air cooled

**Oil capacity**

- Horizontal flow 1.9 liter / 0.51 gal
- Vertical flow 4.1 liter / 1.1 gal

**Max pressure differential**

- 506 mbar / 380 Torr

**Max temp rise**

- 135°C / 275°F

**Max discharge temp**

- 191°C / 375°F

**Weight**

- Bare shaft 234 kg / 515 lbs
- TEFC direct drive 390 kg / 860 lbs

Dimensions

Ordering Information

<table>
<thead>
<tr>
<th>Product Description</th>
<th>Order No.</th>
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<tr>
<td>615 MHR CE 11kW, 400V, 3-ph, 50Hz @ 3000rpm</td>
<td>900615MHR601</td>
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<tr>
<td>615 MHR CE 11kW, 200/220/380V, 3-ph, 50/60Hz @ 3000/3600rpm</td>
<td>900615MHR602</td>
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<tr>
<td>615 MV10, 10hp, 230/460V, 3-ph, 60Hz @ 1800rpm</td>
<td>900615MV10</td>
</tr>
<tr>
<td>615 MV15, 15hp, 230/460V, 3-ph, 60Hz @ 3600rpm</td>
<td>900615MV15</td>
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<tr>
<td>615 MVR (Bare shaft) Vertical flow</td>
<td>900615MVR101</td>
</tr>
<tr>
<td>615 MVR CE 11kW, 400V, 3-ph, 50Hz @ 3000rpm</td>
<td>900615MVR601</td>
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<tr>
<td>615 MVR CE 11kW, 200-220/380V, 3-ph, 50/60Hz @ 3000/3600rpm</td>
<td>900615MVR602</td>
</tr>
<tr>
<td>615 MH10, 10hp, 230/460V, 3-ph, 60Hz @ 1800rpm</td>
<td>900-615-MH10</td>
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<tr>
<td>615 MH15, 15hp, 230/460V, 3-ph, 60Hz @ 3600rpm</td>
<td>900615MH15</td>
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<td>615 MHR (Bare shaft) Horizontal flow</td>
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Accessories & Spares

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<td>607552002</td>
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</table>

Shop online at www.edwardsvacuum.com
Stokes 615 Series Process Isolation Boosters

Stokes 6" series process isolation boosters are designed to be used in conjunction with rotary-piston, dry vacuum, rotary vane and liquid ring pumps to increase pumping speed at working pressures and shorten pump down time significantly. They incorporate five mechanical seals for optimum protection from dust and particulate contamination, and can be mounted separately or on the inlet of the backing pump to create a compact integrated package.

Featuring an extra large diameter shaft, the Stokes 6" series has the capability for use with higher powered motors in addition to ensuring a uniquely rugged and durable mechanical booster. This allows the pumps to operate at their full displacement from atmospheric pressure with an appropriately sized backing pump.

Features & Benefits

- Mechanical shaft seal – improved life and serviceability
- Ringfeder® keyless gear locking system – stronger, faster timing
- Large shaft diameters – allowing improved performance at high pressures
- Belt drive or direct drive capability
- Vertical or horizontal gas flow

Technical Data

<table>
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<tr>
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<tbody>
<tr>
<td>V belt (2750 rpm)</td>
<td>3375 m³/h / 2000 ft³/min⁻¹</td>
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<tr>
<td>Direct drive (3000 rpm)</td>
<td>3685 m³/h / 2170 ft³/min⁻¹</td>
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<tr>
<td>Direct drive (3600 rpm)</td>
<td>4420 m³/h / 2600 ft³/min⁻¹</td>
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<tr>
<td>Inlet/outlet flanges</td>
<td>8&quot; ASA/ANSI flange</td>
</tr>
<tr>
<td>Motor power EU/Asia</td>
<td>11kW</td>
</tr>
<tr>
<td>Motor power US TEFC</td>
<td>15hp</td>
</tr>
<tr>
<td>Cooling water</td>
<td>7.6-11.4 l/min⁻¹ / 2-3 gal/min⁻¹</td>
</tr>
<tr>
<td>Oil capacity (horizontal flow)</td>
<td>1.9 l / 0.51 gal</td>
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<tr>
<td>Oil capacity (vertical flow)</td>
<td>4.1 l / 1.1 gal</td>
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<tr>
<td>Max pressure differential</td>
<td>506 mbar / 380 Torr</td>
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<tr>
<td>Max temp rise</td>
<td>135°C / 275°F</td>
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<tr>
<td>Max discharge temp</td>
<td>191°C / 375°F</td>
</tr>
<tr>
<td>Weight bare shaft</td>
<td>234kg / 515lbs</td>
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<tr>
<td>Weight TEFC direct drive</td>
<td>397kg / 875lbs</td>
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Dimensions

Ordering Information

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<thead>
<tr>
<th>Product Description</th>
<th>Order No.</th>
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<tbody>
<tr>
<td>615 5HR CE 11kW, 230-400V, 3-ph, 50Hz @ 3000rpm</td>
<td>9006155HR601</td>
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<tr>
<td>615 5HR CE 11kW, 220-220/380V, 3-ph, 50/60Hz @ 3000/3600rpm</td>
<td>9006155HR602</td>
</tr>
<tr>
<td>615 5HR, 15hp, 230/460V, 3-ph, 60Hz @ 3600rpm</td>
<td>9006155H15</td>
</tr>
<tr>
<td>615 5HR (Bare shaft) Horizontal flow</td>
<td>9006155HR101</td>
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<tr>
<td>615 5V15, 10hp, 230/460V, 3-ph, 60Hz @ 3600rpm</td>
<td>9006155V15</td>
</tr>
<tr>
<td>615 5VR (Bare Shaft) Vertical flow</td>
<td>9006155VR101</td>
</tr>
<tr>
<td>615 5VR CE 11kW, 230/400V, 3-ph, 50Hz @ 3000rpm</td>
<td>9006155VR601</td>
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<tr>
<td>615 5VR CE 11kW, 200-220/380V, 3-ph, 50/60Hz @ 3000/3600rpm</td>
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Accessories & Spares

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<tr>
<th>Product Description</th>
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<tbody>
<tr>
<td>Replacement 6&quot; booster Mosel - seal kit</td>
<td>607552001</td>
</tr>
<tr>
<td>Replacement 6&quot; booster - maintenance kit</td>
<td>607552002</td>
</tr>
<tr>
<td>Process isolation seal kit</td>
<td>607552004</td>
</tr>
</tbody>
</table>

Shop online at www.edwardsvacuum.com
Stokes 61B Series By-Pass Mechanical Booster Pumps

Stokes 61B by-pass mechanical boosters are designed to be used in conjunction with rotary-piston, dry vacuum, rotary vane and liquid ring pumps to increase pumping speed at working pressures and shorten pump down time significantly. The Stokes 61B by-pass boosters include an integral by-pass valve enabling the booster to start from atmosphere, eliminating the need for a vacuum pressure switch and ensures continuous operation regardless of vacuum level. The Stokes 61B can be mounted separately or on the inlet of the backing pump to create a compact integrated package.

Features & Benefits
- Mechanical shaft seal – improved life and serviceability
- Ringfeder® keyless gear locking system – stronger, faster timing
- Large shaft diameters – allowing improved performance at high pressures
- Belt drive or direct drive capability
- Vertical or horizontal gas flow

Technical Data
- Displacement
  - V belt (2750 rpm) 3375 m³/h / 2000 ft³/min
  - Direct drive (1800 rpm) 2210 m³/h / 1300 ft³/min
  - Direct drive (3000 rpm) 3685 m³/h / 2170 ft³/min
  - Direct drive (3600 rpm) 4420 m³/h / 2600 ft³/min
- Inlet/outlet flanges 8” ASA/ANSI flange
- Motor power EU/Asia 18.5kW
- Motor power US TEFC 10/25hp
- By-pass available Yes
- Cooling method Air cooled
- Oil capacity (horizontal flow) 1.9 litre / 0.51gal
- Oil capacity (vertical flow) 4.1 litre / 1.1gal
- Max temp rise 135°C / 275°F
- Max discharge temp 191°C / 375°F
- Weight bare shaft 284kg / 625lbs
- Weight TEFC direct drive 530kg / 1170lbs

Dimensions

Ordering Information

<table>
<thead>
<tr>
<th>Product Description</th>
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<tbody>
<tr>
<td>61B MHR CE, 18.5kW, 400V, 3-ph, 50Hz @ 3600rpm</td>
<td>90061BMHR601</td>
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<tr>
<td>61B MHR CE, 18.5kW, 200-220/380V, 3-ph, 50/60Hz @ 3000/3600rpm</td>
<td>90061BMHR602</td>
</tr>
<tr>
<td>61B MH10, 10hp, 230/460V, 3-ph, 60Hz @ 1800rpm</td>
<td>90061BMH10</td>
</tr>
<tr>
<td>61B MH25, 25hp, 230/460V, 3-ph, 60Hz @ 3600rpm</td>
<td>90061BMH25</td>
</tr>
<tr>
<td>61B MHR (Bare shaft) Horizontal flow</td>
<td>90061BMHR101</td>
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<tr>
<td>61B MV10, 10hp, 230/460V, 3-ph, 60Hz @ 1800rpm</td>
<td>90061BMV10</td>
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<tr>
<td>61B MV25, 25hp, 230/460V, 3-ph, 60Hz @ 3600rpm</td>
<td>90061BMV25</td>
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<tr>
<td>61B MVR (Bare shaft) Vertical flow</td>
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<tr>
<td>61B MVR CE, 18.5kW, 400V, 3-ph, 50Hz @ 3000rpm</td>
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<tr>
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<tbody>
<tr>
<td>Replacement 6&quot; booster Msseal - seal kit</td>
<td>607552001</td>
</tr>
<tr>
<td>Replacement 6&quot; booster - maintenance kit</td>
<td>607552002</td>
</tr>
</tbody>
</table>

Shop online at www.edwardsvacuum.com
Stokes 61B series process isolation boosters are designed to be used in conjunction with rotary-piston, dry vacuum, rotary vane and liquid ring pumps to increase pumping speed at working pressures and shorten pump down time significantly. It incorporates five mechanical seals for optimum protection from dust and particulate contamination. It also includes an integral by-pass valve enabling the booster to start from atmosphere, eliminating the need for a vacuum pressure switch to ensure continuous operation regardless of vacuum level. The Stokes 61B series can be mounted separately or on the inlet of the backing pump to create a compact integrated package.

Features & Benefits

- Mechanical shaft seal – improved life and serviceability
- Ringfeder® keyless gear locking system – stronger, faster timing
- Large shaft diameters – allowing improved performance at high pressures
- Belt drive or direct drive capability
- Vertical or horizontal gas flow

Dimensions

Technical Data

<table>
<thead>
<tr>
<th>Displacement</th>
<th>3375 m³ h⁻¹ / 2000 ft³ min⁻¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>V belt (2750 rpm)</td>
<td>3685 m³ h⁻¹ / 2170 ft³ min⁻¹</td>
</tr>
<tr>
<td>Direct drive (3000 rpm)</td>
<td>4420 m³ h⁻¹ / 2600 ft³ min⁻¹</td>
</tr>
<tr>
<td>Direct drive (3600 rpm)</td>
<td></td>
</tr>
<tr>
<td>Inlet/outlet flanges</td>
<td>8&quot; ASA/ANSI flange</td>
</tr>
<tr>
<td>Motor power EU/Asia</td>
<td>18.5 kW</td>
</tr>
<tr>
<td>Motor power US TEFC</td>
<td>25 hp</td>
</tr>
<tr>
<td>By-pass available</td>
<td>Yes</td>
</tr>
<tr>
<td>Cooling water</td>
<td>7.6-11.41 min⁻¹ / 2-3 gal min⁻¹</td>
</tr>
<tr>
<td>Oil capacity (horizontal flow)</td>
<td>1.9 litre / 4.1 gal</td>
</tr>
<tr>
<td>Oil capacity (vertical flow)</td>
<td>4.1 litre / 8.8 gal</td>
</tr>
<tr>
<td>Max temp rise</td>
<td>135°C / 275°F</td>
</tr>
<tr>
<td>Max discharge temp</td>
<td>191°C / 375°F</td>
</tr>
<tr>
<td>Weight bare shaft</td>
<td>284 kg / 625 lbs</td>
</tr>
<tr>
<td>Weight TEFC direct drive</td>
<td>538 kg / 1185 lbs</td>
</tr>
</tbody>
</table>

Ordering Information

<table>
<thead>
<tr>
<th>Product Description</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>61B 5HR CE 18.5kW, 230/400 V, 3-ph, 50Hz @ 3000 rpm</td>
<td>9061B5HR601</td>
</tr>
<tr>
<td>61B 5HR CE 18.5kW, 200-220/380 V, 3-ph, 50/60Hz @ 3000/3600 rpm</td>
<td>9061B5HR602</td>
</tr>
<tr>
<td>61B 5HS, 25hp, 230/460 V, 3-ph, 60Hz @ 3600 rpm</td>
<td>9061B5V525</td>
</tr>
<tr>
<td>61B 5HR (Bare Shaft) Horizontal flow</td>
<td>9061B5HR101</td>
</tr>
<tr>
<td>61B 5V25, 25hp, 230/460 V, 3-ph, 60Hz @ 3600 rpm</td>
<td>9061B5V25</td>
</tr>
<tr>
<td>61B 5VR (Bare shaft) Vertical flow</td>
<td>9061B5VR101</td>
</tr>
<tr>
<td>61B 5VR CE 18.5kW, 230/400 V, 3-ph, 50Hz @ 3000 rpm</td>
<td>9061B5VR601</td>
</tr>
<tr>
<td>61B 5VR CE 18.5kW, 200-220/380 V, 3-ph, 50/60Hz @ 3000/3600 rpm</td>
<td>9061B5VR602</td>
</tr>
</tbody>
</table>

Accessories & Spares

<table>
<thead>
<tr>
<th>Accessory</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Replacement 6” booster Mseal - seal kit</td>
<td>607552001</td>
</tr>
<tr>
<td>Replacement 6” booster - maintenance kit</td>
<td>607552002</td>
</tr>
<tr>
<td>Process isolation seal kit</td>
<td>607552004</td>
</tr>
</tbody>
</table>

Shop online at www.edwardsvacuum.com
Stokes 622 Series Mechanical Booster Pumps

Stokes 6" series mechanical boosters are designed to be used in conjunction with rotary-piston, dry vacuum, rotary vane and liquid ring pumps to increase pumping speed at working pressures and shorten pump down time significantly. The Stokes 6" series can be mounted separately or on the inlet of the backing pump to create a compact integrated package.

Featuring an extra large diameter shaft, the Stokes 6" series has the capability for use with higher powered motors in addition to ensuring a uniquely rugged and durable mechanical booster. This allows the pumps to operate at their full displacement from atmospheric pressure with an appropriately sized backing pump.

Features & Benefits

- Mechanical shaft seal – improved life and serviceability
- Ringfeder® keyless gear locking system – stronger, faster timing
- Large shaft diameters – allowing improved performance at high pressures
- Belt drive or direct drive capability
- Vertical or horizontal gas flow

Technical Data

Displacement
- V belt (2750 rpm) 5100 m³/h / 3000 ft³/min
- Direct drive (3000 rpm) 5525 m³/h / 2350 ft³/min
- Direct drive (3600 rpm) 6630 m³/h / 3900 ft³/min

Inlet/outlet flanges
8" ASA/ANSI flange

Motor power
- EU/Asia 18.5kW
- Motor power US TEFC 25hp

Cooling method
- Air cooled

Oil capacity (horizontal flow)
- 1.9 litre / 0.51gal

Oil capacity (vertical flow)
- 4.1 litre / 1.1gal

Max pressure differential
- 333 mbar / 250 Torr

Max temp rise
- 151°C / 275°F

Max discharge temp
- 177°C / 350°F

Weight
- Bare shaft 335kg / 740lbs
- TEFC direct drive 617kg / 1360lbs

Dimensions

Ordering Information

<table>
<thead>
<tr>
<th>Product Description</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>622 MHR CE 18.5kW, 400V, 3-ph, 50Hz @ 3000rpm</td>
<td>900622MHR601</td>
</tr>
<tr>
<td>622 MHR CE 18.5kW, 200-220/380V, 3-ph, 50/60Hz @ 3000/3600rpm</td>
<td>900622MHR602</td>
</tr>
<tr>
<td>622 MH25, 25hp, 230/460V, 3-ph, 60Hz @ 3600rpm</td>
<td>900622MH25</td>
</tr>
<tr>
<td>622 MHR (Bare shaft) Horizontal flow</td>
<td>900622MHR101</td>
</tr>
<tr>
<td>622 MV25, 25hp, 230/460V, 3-ph, 60Hz @ 3600rpm</td>
<td>900622MV25</td>
</tr>
<tr>
<td>622 MVR (Bare shaft) Vertical flow</td>
<td>900622MVR101</td>
</tr>
<tr>
<td>622 MVR CE 18.5kW, 400V, 3-ph, 50Hz @ 3000rpm</td>
<td>900622MVR601</td>
</tr>
<tr>
<td>622 MVR CE 18.5kW, 200-220/380V, 3-ph, 50/60Hz @ 3000/3600rpm</td>
<td>900622MVR602</td>
</tr>
</tbody>
</table>

Accessories & Spares

<table>
<thead>
<tr>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Replacement 6&quot; booster Moael - seal kit</td>
</tr>
<tr>
<td>Replacement 6&quot; booster - maintenance kit</td>
</tr>
</tbody>
</table>

Shop online at www.edwardsvacuum.com
Stokes 622 Series Process Isolation Boosters

Stokes 6” series process isolation boosters are designed to be used in conjunction with rotary-piston, dry vacuum, rotary vane and liquid ring pumps to increase pumping speed at working pressures and shorten pump down time significantly. They incorporate five mechanical seals for optimum protection from dust and particulate contamination and can be mounted separately or on the inlet of the backing pump to create a compact integrated package.

Featuring an extra large diameter shaft, the Stokes 6” series has the capability for use with higher powered motors in addition to ensuring a uniquely rugged and durable mechanical booster.

**Features & Benefits**
- Mechanical shaft seal – improved life and serviceability
- Ringfeder® keyless gear locking system – stronger, faster timing
- Large shaft diameters – allowing improved performance at high pressures
- Belt drive or direct drive capability
- Vertical or horizontal gas flow

**Technical Data**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Displacement</td>
<td></td>
</tr>
<tr>
<td>V belt (2750 rpm)</td>
<td>5100 m³/h / 3000 ft³ min⁻¹</td>
</tr>
<tr>
<td>Direct drive (3000 rpm)</td>
<td>5525 m³/h / 2350 ft³ min⁻¹</td>
</tr>
<tr>
<td>Direct drive (3600 rpm)</td>
<td>6630 m³/h / 3900 ft³ min⁻¹</td>
</tr>
<tr>
<td>Inlet/outlet flanges</td>
<td>8” ASA/ANSI flange</td>
</tr>
<tr>
<td>Motor power EU/Asia</td>
<td>18.5kW</td>
</tr>
<tr>
<td>Motor power US TEFC</td>
<td>25hp</td>
</tr>
<tr>
<td>Cooling water</td>
<td>7.6-11.4 l/min / 2.3 gal/min</td>
</tr>
<tr>
<td>Oil capacity (horizontal flow)</td>
<td>1.9 litre / 0.4 gal</td>
</tr>
<tr>
<td>Oil capacity (vertical flow)</td>
<td>4.1 litre / 8.8 gal</td>
</tr>
<tr>
<td>Max pressure differential</td>
<td>333 mbars / 250 Torr</td>
</tr>
<tr>
<td>Max temp rise</td>
<td>121°C / 250°F</td>
</tr>
<tr>
<td>Max discharge temp</td>
<td>177°C / 350°F</td>
</tr>
<tr>
<td>Weight bare shaft</td>
<td>335 kg / 740 lbs</td>
</tr>
<tr>
<td>Weight TEFC direct drive</td>
<td>625 kg / 1370 lbs</td>
</tr>
</tbody>
</table>

**Ordering Information**

**Product Description** | **Order No.**
--- | ---
622 SHR CE 18.5kW, 230/400V, 3-ph, 50Hz @ 3000rpm | 9006225HR601
622 SHR CE 18.5kW, 200-220/380V, 3-ph, 50/60Hz @ 3000/3600rpm | 9006225HR602
622 5H25, 25hp, 230/460V, 3-ph, 60Hz @ 3600rpm | 9006225H25
622 5HR (Bare shaft) Horizontal flow | 9006225HR101
622 5V25, 25hp, 230/460V, 3-ph, 60Hz @ 3600rpm | 9006225V25
622 5VR (Bare shaft) Vertical flow | 9006225VR101
622 5VR CE 18.5kW, 230/400V, 3-ph, 50Hz @ 3000rpm | 9006225VR601
622 5VR CE 18.5kW, 200-220/380V, 3-ph, 50/60Hz @ 3000/3600rpm | 9006225VR602

**Accessories & Spares** | **Order No.**
--- | ---
Replacement 6” booster Molal - seal kit | 607552001
Replacement 6” booster - maintenance kit | 607552002

**Dimensions**

---

**Mechanical shaft seal** – improved life and serviceability
**Ringfeder® keyless gear locking system** – stronger, faster timing
**Large shaft diameters** – allowing improved performance at high pressures
**Belt drive or direct drive capability**
**Vertical or horizontal gas flow**

---

Shop online at www.edwardsvacuum.com
The Edwards HV8000 high vacuum mechanical booster has been developed to provide high reliability operation in aggressive environments. With a nominal pumping speed of 7200 m$^3$h$^{-1}$ (4241 ft$^3$min$^{-1}$) at 50Hz, it is ideal for large industrial and chemical applications including, steel degassing, metallurgy, coating, electron beam welding and the process engineering industries.

**Features & Benefits**

- Derived from the successful range of HV pressure blowers, the HV8000 is designed for arduous duty cycles and high power applications.
- Ideal for larger scale, harsh industrial and chemical applications, the HV8000 is available in Industrial, ATEX or Explosion Proof configurations.
- The HV8000 may be ordered as either bare-shaft or with motor fitted. Variable frequency drives may be specified for greater versatility.
- The HV8000 is available in vertical or horizontal gas flow configuration.
- For long service life, the external shaft seal is water-cooled.

**Dimensions**

Shop online at www.edwardsvacuum.com
### Technical Data

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Displacement (swept volume) (50Hz)</td>
<td>$7200 \text{ m}^3 \text{ h}^{-1} / 4241 \text{ ft}^3 \text{ min}^{-1}$</td>
</tr>
<tr>
<td>Max rotation speed (50Hz)</td>
<td>3000 rpm</td>
</tr>
<tr>
<td>Max pressure differential (50Hz)</td>
<td>190 mbar / 143 Torr</td>
</tr>
<tr>
<td>Ultimate (depends on backing set) (50Hz)</td>
<td>$1.5 \times 10^{-4}$ mbar / $1 \times 10^{-4}$ Torr</td>
</tr>
<tr>
<td>Ultimate (depends on backing set) (60Hz)</td>
<td>$2 \times 10^{-4}$ mbar / $1.5 \times 10^{-4}$ Torr</td>
</tr>
<tr>
<td>Electrical supply voltage (50Hz)</td>
<td>380-415V, 3-ph</td>
</tr>
<tr>
<td>Electrical supply voltage (60Hz)</td>
<td>440-460V, 3-ph</td>
</tr>
<tr>
<td>Standard motor power (50Hz)</td>
<td>15 kW / 20 hp</td>
</tr>
<tr>
<td>Standard motor power (60Hz)</td>
<td>18.5 kW / 25 hp</td>
</tr>
<tr>
<td>Standard backing set speed requirements</td>
<td>$2600 \text{ m}^3 \text{ h}^{-1} / 1530 \text{ ft}^3 \text{ min}^{-1}$</td>
</tr>
<tr>
<td>Recommended oil</td>
<td>Mobile SHC 629</td>
</tr>
<tr>
<td>Max oil capacity (vertical gas flow config)</td>
<td>8.3 litre / 2.18 US gal</td>
</tr>
<tr>
<td>Inlet/outlet connection</td>
<td>10&quot; class 150 ASME B16.5</td>
</tr>
<tr>
<td>Inlet/outlet cooling water connection</td>
<td>Rp $\frac{1}{2}$ ISO 7-1 ($\frac{1}{2}$ BSP)</td>
</tr>
<tr>
<td>End cover purge gas inlet</td>
<td>Rp $\frac{3}{6}$ ISO 7-1 ($\frac{3}{6}$ BSP)</td>
</tr>
<tr>
<td>Max cooling water supply pressure</td>
<td>4 bar / 58 psi</td>
</tr>
<tr>
<td>Max cooling water supply temperature</td>
<td>35°C / 95°F</td>
</tr>
<tr>
<td>Cooling water flow rate</td>
<td>15 l min$^{-1}$ / 3.96 US gal min$^{-1}$</td>
</tr>
<tr>
<td>Noise level</td>
<td>82 dB(A)</td>
</tr>
<tr>
<td>Weight (without motor)</td>
<td>580 kg / 1279 lb</td>
</tr>
<tr>
<td>Weight (with standard motor)</td>
<td>720 kg / 1587 lb</td>
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</tbody>
</table>

### Ordering Information

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<thead>
<tr>
<th>Product Description</th>
<th>Order No.</th>
</tr>
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<tbody>
<tr>
<td>HV8000 IND VF 380-415V, 3-ph, 50Hz, 18.5kW</td>
<td>A31101935</td>
</tr>
<tr>
<td>HV8000 IND VF 440-460V, 3-ph, 60Hz, 25hp</td>
<td>A31101936</td>
</tr>
<tr>
<td>HV8000 IND VF bareshaft</td>
<td>A31101985</td>
</tr>
<tr>
<td>HV8000 IND HF 380-415V, 3-ph, 50Hz, 18.5kW</td>
<td>A31102935</td>
</tr>
<tr>
<td>HV8000 IND HF 440-460V, 3-ph, 60Hz, 25hp</td>
<td>A31102936</td>
</tr>
<tr>
<td>HV8000 IND HF bareshaft</td>
<td>A31102985</td>
</tr>
</tbody>
</table>

### Accessories & Spares

<table>
<thead>
<tr>
<th>Product Description</th>
<th>Order No.</th>
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</thead>
<tbody>
<tr>
<td>HV8000 VF motor mounting kit IEC</td>
<td>A31101002</td>
</tr>
<tr>
<td>HV8000 VF motor mounting kit NEMA</td>
<td>A31101006</td>
</tr>
<tr>
<td>HV8000 HF motor mounting kit IEC</td>
<td>A31102002</td>
</tr>
<tr>
<td>HV8000 HF motor mounting kit NEMA</td>
<td>A31102006</td>
</tr>
<tr>
<td>Gear Box Oil 4 Ltr Mobil SHC 629</td>
<td>H11023011</td>
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<tr>
<td>HV8000 Set of O-Rings spare</td>
<td>A31101801</td>
</tr>
<tr>
<td>HV8000 Mech seal kit spare</td>
<td>A31101802</td>
</tr>
<tr>
<td>HV8000 mech seal + sleeve kit spare</td>
<td>A31101803</td>
</tr>
<tr>
<td>HV8000 gear set spare</td>
<td>A31101804</td>
</tr>
<tr>
<td>HV8000 bearings kit spare</td>
<td>A31101805</td>
</tr>
<tr>
<td>HV8000 rotors kit spare</td>
<td>A31101806</td>
</tr>
<tr>
<td>HV8000 oil reservoir spare</td>
<td>A31101807</td>
</tr>
<tr>
<td>HV8000 sight glass spare</td>
<td>A31101808</td>
</tr>
</tbody>
</table>

Shop online at www.edwardsvacuum.com
The HV pump systems combine Edwards expertise in manufacture and assembly of complete industrial vacuum systems with Dresser’s world-renowned Roots pump technology. These pumps are backed by Edwards Dry Pumps or Mechanical Booster pumps.

This range of high capacity mechanical booster pumps is designed to operate reliably for long periods with no need for maintenance. The HV pumps can be fitted with an inverter to allow them to be started at atmospheric pressure, at the same time as the dry pumps.

**Features & Benefits**
- Water cooled shaft seals and after cooler
- Fitted with thermal snap-switch, to protect the pump from over temperature
- Nitrogen purge inlet fitted as standard
- Vertical flow, direct drive (horizontal optional)
- Control with inverter, or interlock with a pressure switch input

**Applications**
- Semiconductor processing
- Vacuum distillation
- Vacuum packaging
- Steel degassing
- Thin film coating

**Dimensions**

**Performance Curves**

In their most efficient range, booster pumps (1) fill the gap between the pumping speeds of vapor diffusion pumps (2), vapor booster pumps (3) and rotary or dry high vacuum pumps (4).

Shop online at www.edwardsvacuum.com
## Technical Data

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Displacement</td>
<td>30000 m³ h⁻¹</td>
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<tr>
<td>50 Hz Supply</td>
<td>17700 ft³ min⁻¹</td>
</tr>
<tr>
<td>60 Hz Supply</td>
<td>36000 m³ h⁻¹</td>
</tr>
<tr>
<td></td>
<td>21204 ft³ min⁻¹</td>
</tr>
<tr>
<td>Maximum pressure differential</td>
<td>29 mbar</td>
</tr>
<tr>
<td>50 Hz Supply</td>
<td>22 Torr</td>
</tr>
<tr>
<td>60 Hz Supply</td>
<td>24 mbar</td>
</tr>
<tr>
<td></td>
<td>18 Torr</td>
</tr>
<tr>
<td>Recommended backing pumps</td>
<td>2 x GV400 / DP400 and 2 x EH4200</td>
</tr>
<tr>
<td>Electrical supply</td>
<td>400 V 50 Hz 3-ph or 460 V 60 Hz 3-ph</td>
</tr>
<tr>
<td>Motor power 50 Hz</td>
<td>30 kW / 40 hp</td>
</tr>
<tr>
<td>Motor power 60 Hz</td>
<td>#</td>
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<tr>
<td>Cooling-water supply</td>
<td></td>
</tr>
<tr>
<td>Maximum pressure</td>
<td>10 bar / 145 psi</td>
</tr>
<tr>
<td>Inlet temperature</td>
<td>20 °C</td>
</tr>
<tr>
<td>Recommended oil</td>
<td>Ultragrade 20</td>
</tr>
<tr>
<td>Oil capacity</td>
<td>33 l / 34.9 qt</td>
</tr>
<tr>
<td>Ambient operating temperature</td>
<td>5°C - 40°C</td>
</tr>
<tr>
<td>Maximum operating humidity</td>
<td>100% RH</td>
</tr>
<tr>
<td>Weight (without motor)</td>
<td>3100 kg / 6820 lb</td>
</tr>
</tbody>
</table>

# On request

## Ordering Information

<table>
<thead>
<tr>
<th>Product Description</th>
<th>Order No.</th>
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</thead>
<tbody>
<tr>
<td>HV30000 High Capacity Mechanical Booster Pump</td>
<td>HV30000 Mechanical Booster Pump</td>
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</table>

Shop online at www.edwardsvacuum.com