

EH Mechanical Booster Pumps



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 $3000 \text{ m}^3\text{h}^{-1} / 1776 \text{ ft}^3\text{min}^{-1}$ 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:

Symbol	Meaning
	Specifies that the chemical EH pump can be used in a potentially explosive atmosphere
II	Equipment group II
2 G	Equipment category 2 (gas)
c	Constructional safety
IIB	Suitable to pump gas group IIB
T3 / T160	Gas auto-ignition temperature

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

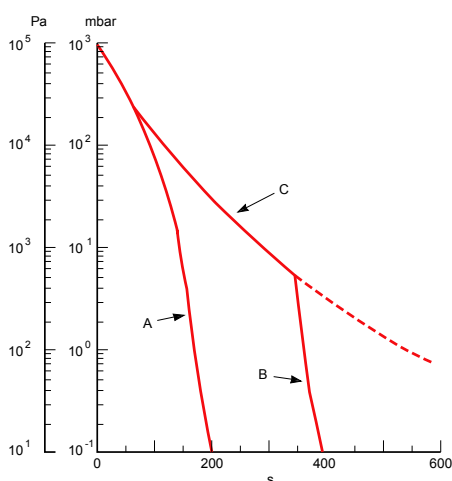
EH booster pumps have a unique and patented hydrokinetic fluid drive, which couples the motor to the pumping mechanism. The hydrokinetic drive offers the following advantages:

- 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

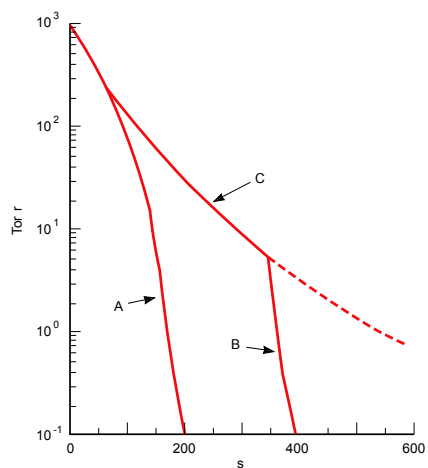
EH booster pumps have universal voltage, air-cooled motors and are available with effective pumping speeds of up to $4140 \text{ m}^3\text{h}^{-1}$ / $2440 \text{ ft}^3\text{min}^{-1}$. The pump bodies of the EH1200, EH2600 and EH4200 pumps are water-cooled.

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 m^3 / 100 ft^3 chamber, with a $2600 \text{ m}^3\text{h}^{-1}$ / $2600 \text{ ft}^3\text{min}^{-1}$ mechanical booster pump and a $255 \text{ m}^3\text{h}^{-1}$ / $150 \text{ ft}^3\text{min}^{-1}$ backing pump.



- A** With backing pump and EH mechanical booster pump switched on together
- B** With mechanical booster pump switched on at 5 mbar
- C** With backing pump only (pumping through booster pump)



- A** With backing pump and EH mechanical booster pump switched on together
- B** With mechanical booster pump switched on at 5 mbar
- C** With backing pump only (pumping through booster 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.

EH250 Mechanical Booster Pump

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.

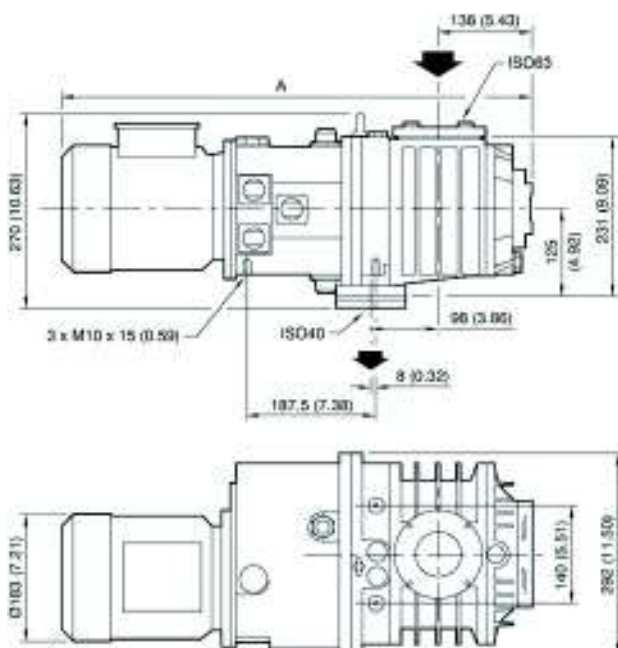
Operating at relatively low pressures, the mechanical booster pump is not exposed to the same concentrations of corrosive process media as is the backing pump, which makes it highly reliable.



Features & Benefits

- Suitable for applications where high pumping speeds over $3000 \text{ m}^3 \text{ h}^{-1}$ / $1776 \text{ ft}^3 \text{ min}^{-1}$ 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.

Dimensions

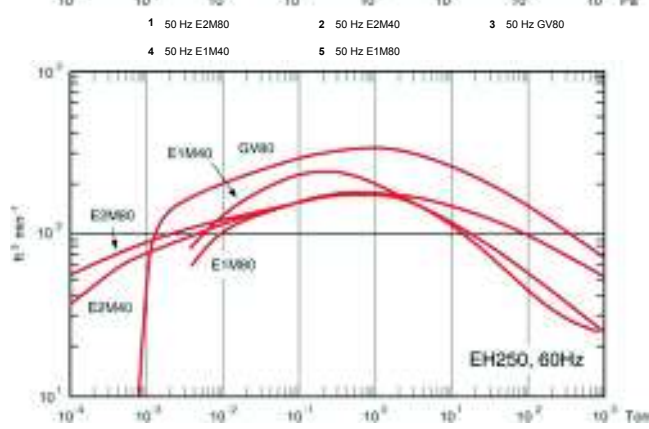
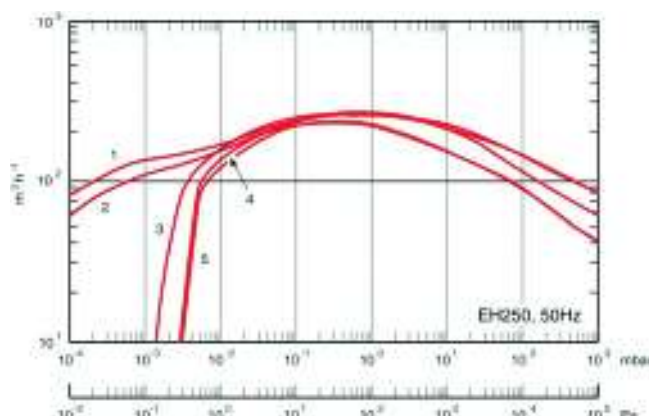


Pump is shown with inlet and outlet blanking flanges fitted. Dimensions are to the top surface of the pump flange.

Applications

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

Performance Curves



Technical Data

Displacement (swept volume)	
50Hz	310 m ³ h ⁻¹ / 185 ft ³ min ⁻¹
60Hz	375 m ³ h ⁻¹ / 220 ft ³ min ⁻¹
Effective pumping speed with backing pump	
E2M40	240 m ³ h ⁻¹ / 141 ft ³ min ⁻¹
E2M80	274 m ³ h ⁻¹ / 161 ft ³ 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

EH500 Mechanical booster pump

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.



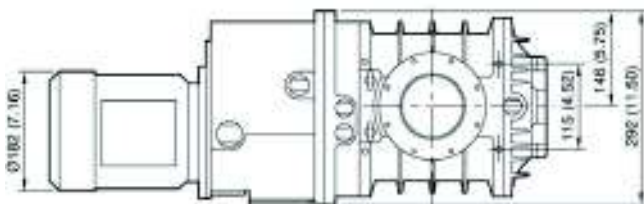
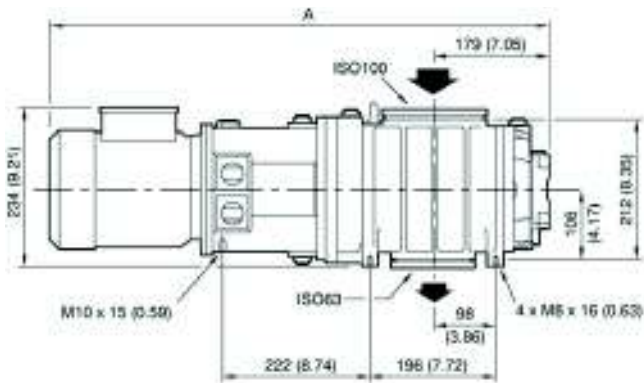
Features & Benefits

- Suitable for applications where high pumping speeds over $3000 \text{ m}^3 \text{ h}^{-1} / 1776 \text{ ft}^3 \text{ min}^{-1}$ 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

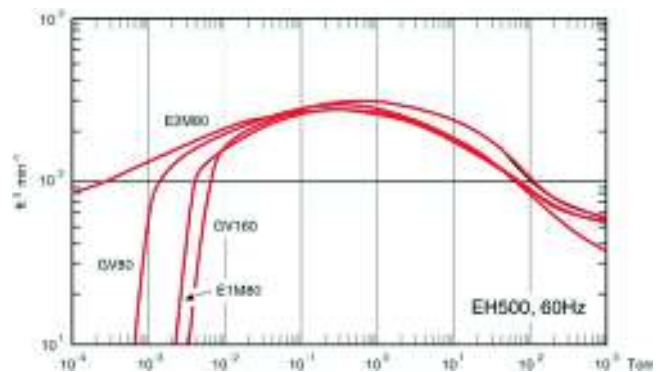
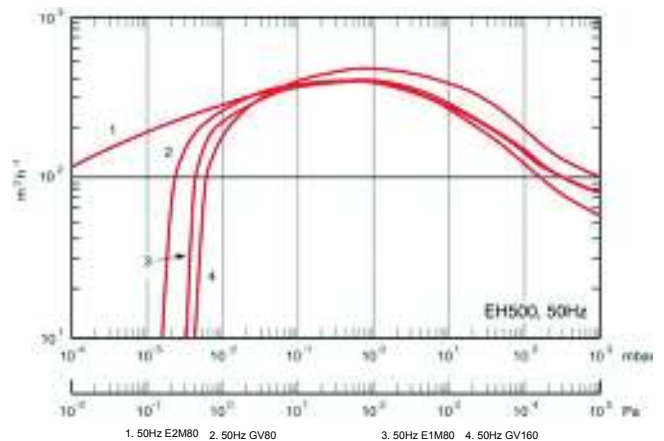
- Semiconductor processing
- Vacuum distillation
- Vacuum packaging
- Steel de-gassing
- Thin film coating

Dimensions



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

Performance Curves



Technical Data

Displacement (swept volume)	
50Hz	505 m ³ h ⁻¹ / 300 ft ³ min ⁻¹
60Hz	605 m ³ h ⁻¹ / 335 ft ³ min ⁻¹
Effective pumping speed with backing pump	
E2M40	350 m ³ h ⁻¹ / 206 ft ³ min ⁻¹
E2M80	400 m ³ h ⁻¹ / 236 ft ³ min ⁻¹
E2M175	440 m ³ h ⁻¹ / 259 ft ³ min ⁻¹
E2M275	460 m ³ h ⁻¹ / 271 ft ³ 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

EH1200 Mechanical booster pump

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.



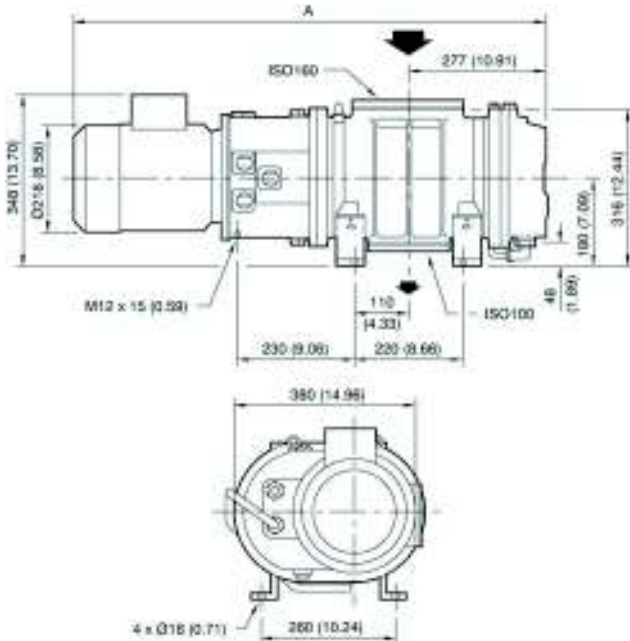
Features & Benefits

- Suitable for applications where high pumping speeds over $3000 \text{ m}^3 \text{ h}^{-1} / 1776 \text{ ft}^3 \text{ min}^{-1}$ 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

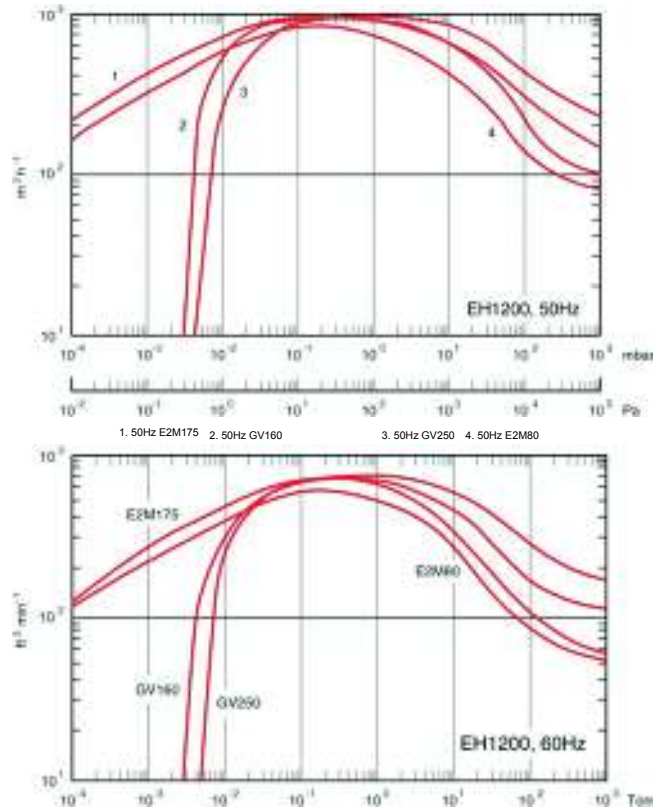
- Semiconductor processing
- Vacuum distillation
- Vacuum packaging
- Steel de-gassing
- Thin film coating

Dimensions



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

Performance Curves



Technical Data

Displacement (swept volume)	
50Hz	1195 m ³ h ⁻¹ / 715 ft ³ min ⁻¹
60Hz	1435 m ³ h ⁻¹ / 845 ft ³ min ⁻¹
Effective pumping speed with backing pump	
E2M80	840 m ³ h ⁻¹ / 495 ft ³ min ⁻¹
E2M175	930 m ³ h ⁻¹ / 548 ft ³ min ⁻¹
E2M275	1020 m ³ h ⁻¹ / 601 ft ³ 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)*	120lh ⁻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

Product Description	Order No.
EH1200IND 220-240/380-415V, 3-ph, 50Hz, 3kW	A30590935
EH1200IND 208-230/460V, 3-ph, 60Hz, 4 hp	A30591936
EH1200IND 200V, 3-ph, 60Hz, 4 hp	NRC217000
EH1200IND 200V, 3-ph, 50Hz, 3 kW	NRC218000
EH1200FX 220-240/380-415V, 3-ph, 50Hz, 3 kW	A30592935
EH1200FX 208-230/460V, 3-ph, 60Hz, 4 hp	A30593936
EH1200C 230/460V, 3-ph, 60Hz, 4 hp	A30556982
EH1200T160 380-415V, 3-ph, 50Hz, 3kW	A30557900
Accessories & Spares	Order No.
Spares Kit Con C&O EH/QMB1200	A30551815
Spares Kit Module EH/QMB1200	A30551820
Shim kit	A30551825
ISO160 Screen Centring S/S Viton	C10524085
Inlet Mesh Assembly EH2600/EH4200	A60041570

EH2600 Mechanical booster pump

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.



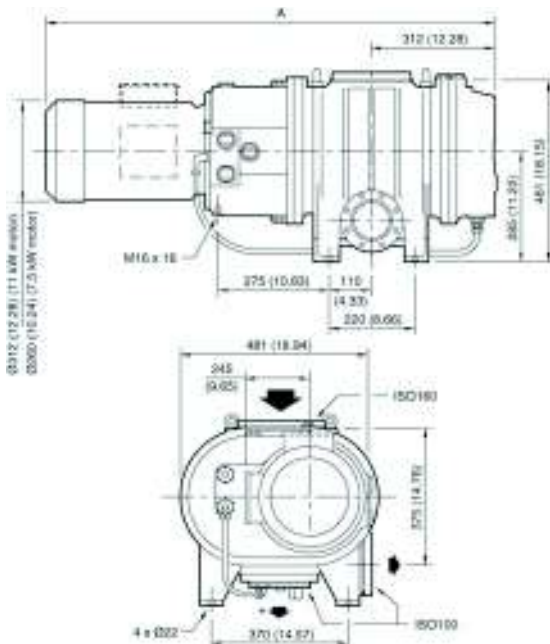
Features & Benefits

- 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

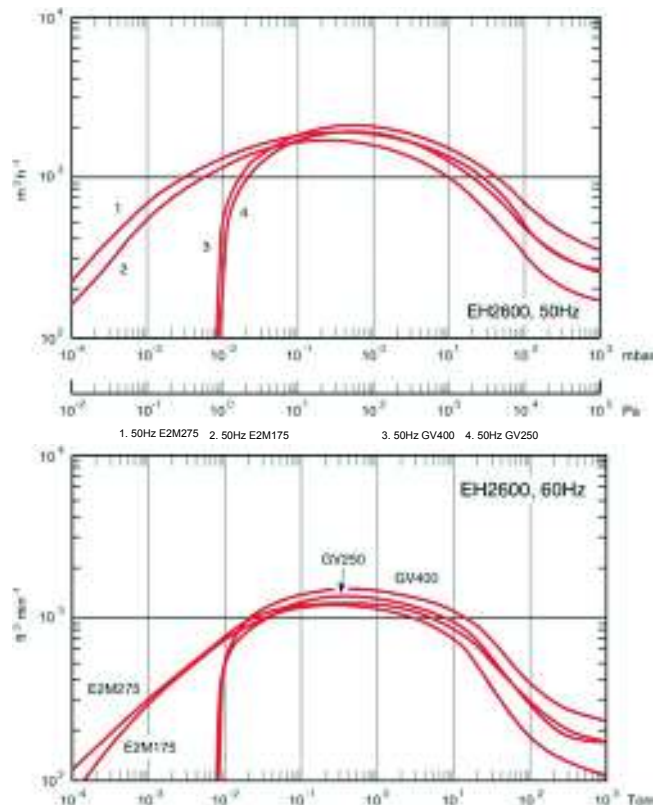
Dimensions



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

* Alternative outlet position

Performance Curves



Technical Data

Displacement (swept volume)	
50Hz	2590 m ³ h ⁻¹ / 1525 ft ³ min ⁻¹
60Hz	3110 m ³ h ⁻¹ / 1830 ft ³ min ⁻¹
Effective pumping speed with backing pump	
E2M175	1750 m ³ h ⁻¹ / 1031 ft ³ min ⁻¹
E2M275	1900 m ³ h ⁻¹ / 1119 ft ³ 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	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	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
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	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	Order No.
EH2600IND 380-415V, 3-ph, 50Hz, 11 kW	A30775946
EH2600IND 230/460V, 3-ph, 60Hz, 15 hp	A30776982
EH2600IND 200V, 3-ph, 60Hz, 15 hp	NRB989000
EH2600IND 200V, 3-ph, 50Hz, 11 kW	NRC216000
EH2600FX 220-240/380-415V, 3-ph, 50Hz, 7.5kW	A30753935
EH2600FX 208-230/460V, 3-ph, 60Hz, 10 hp	A30754936
EH2600C 230/460V, 3-ph, 60Hz, 15 hp	A30756982
EH2600T3 380-415V, 3-ph, 50Hz, 11 kW	A30741935
EH2600T160 380-415V, 3-ph, 50Hz, 11 kW	A30779900
Accessories & Spares	Order No.
Spares Kit Con C&O EH/QMB26/4200	A30751815
Spares Kit Module EH/QMB26/4200	A30751820
Spares Kit Shim EH/QMB12/26/4200	A30751825
ISO160 Screen Centring S/S Viton	C10524085
Inlet Mesh Assembly EH2600/EH4200	A60041570

EH4200 Mechanical booster pump

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.

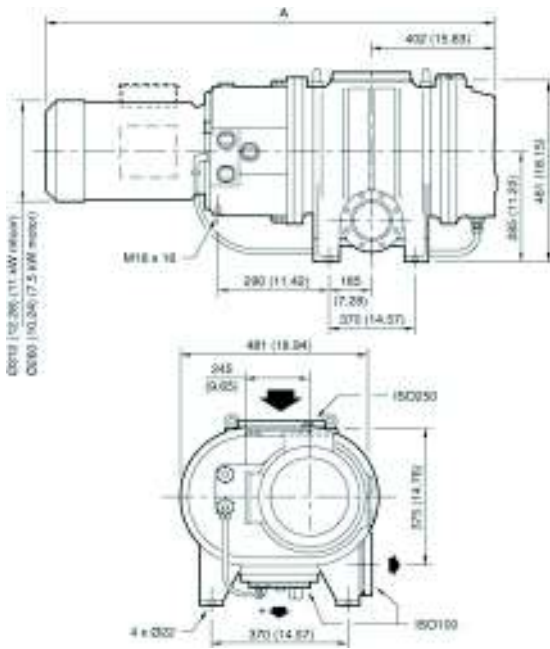
Operating at relatively low pressures, the mechanical booster pump is not exposed to the same concentrations of corrosive process media as is the backing pump, which makes it highly reliable.



Features & Benefits

- Suitable for applications where high pumping speeds over $3000 \text{ m}^3 \text{ h}^{-1} / 1776 \text{ ft}^3 \text{ min}^{-1}$ 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.

Dimensions



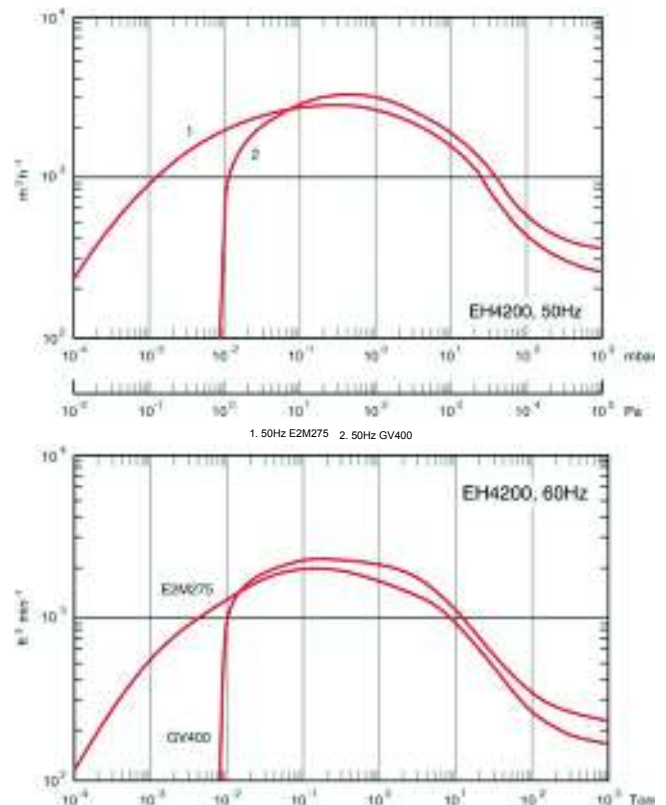
Pump is shown with inlet and outlet blanking flanges fitted. Dimensions are to the top surface of the pump flange.

* Alternative outlet position

Applications

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

Performance Curves



Technical Data

Displacement (swept volume)	
50Hz	4140 m ³ h ⁻¹ / 2440 ft ³ min ⁻¹
60Hz	4985 m ³ h ⁻¹ / 2935 ft ³ min ⁻¹
Effective pumping speed with backing pump	
E2M275	3100 m ³ h ⁻¹ / 1825 ft ³ 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	
	0-1000 mbar / 0-760 Torr
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	Order No.
EH4200IND 380-415V, 3-ph, 50Hz, 11kW	A30975946
EH4200IND 200V, 3-ph, 60Hz, 15 hp	NRB988000
EH4200IND 200V, 3-ph, 50Hz, 11 kW	NRC215000
EH4200IND 208-230/460V, 3-ph, 60Hz, 15 hp	A30976982
EH4200C 230/460V, 3-ph, 60Hz, 15 hp	A30956982
EH4200T3 380-415V, 3-ph, 50Hz, 11 kW	A30941935
EH4200T160 380-415V, 3-ph, 50Hz, 11 kW	A30979900
Accessories & Spares	Order No.
Spares Kit Con C&O EH/QMB26/4200	A30751815
Spares Kit Module EH/QMB26/4200	A30751820
Spares Kit Shim EH/QMB12/26/4200	A30751825
Inlet Mesh Assembly EH2600	A60041571

Mechanical Booster Pump Accessories

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

Product Description	Order No.
OLM500 oil level monitor*	A50434000

* 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

Product Description	Order No.
Inlet seal with mesh screen	
ISO63	C10521085
ISO100	C10523085
ISO160	C10524085