

EH MECHANICAL BOOSTER PUMP

THE INTELLIGENT CHOICE



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 and Benefits

- **Performance** - fast pump down time due to unique hydrokinetic drive
 - **Increased productivity** - faster pump down time
 - **More performance for less** - larger displacement than equivalent competitor models
 - **Stable operation** - optimised clearances and after coolers
- **Simplicity** - Continuous operation at all pressures
 - **Simple installation** - no need for pressure switches, bypass lines or variable frequency drives
 - **Reliability** - automatic overload protection, reliable shaft seal design
 - **Safe operation** - automatic overload protection
 - **Robust operation even for harsh duties** - proven shaft seal design to protect pumping mechanism and gearbox from cross-contamination
 - **High uptime and low maintenance** - internal evacuation of gearboxes extends shaft seal life
- **Reassurance** - industry proven, with a large installed base
 - **Peace of mind** - industry proven with large installed base

Applications

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

Pump Range

- EH
- EH250
 - EH500
 - EH1200
 - EH2600
 - EH4200



Performance Curves

EH250 Mechanical Booster Pump

EH250



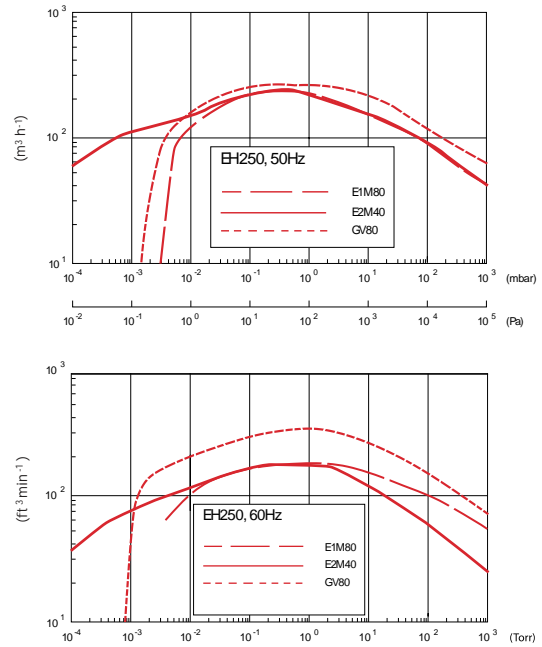
Displacement	
50Hz	310 m ³ h ⁻¹
	185 ft ³ min ⁻¹
60Hz	375 m ³ h ⁻¹
	220 ft ³ min ⁻¹

Ordering information

Product description	Order no:
EH250IND 200 / 380 V 3 ph 60 Hz	A30152934
EH250IND 200 / 380 V 3 ph 50 Hz	A30151934
EH250IND 220-240/380-415V, 3-ph, 50Hz, 2.2kW	A30151945
EH250IND 230V or 460V, 3-ph, 60Hz, 3 hp	A30152946
EH250FX 220-240/380-415V, 3-ph, 50Hz, 1.5kW	A30153935
EH250FX 230/460V, 3-ph, 60Hz, 2 hp	A30154936
EH250T4 220-240/380-415V, 3-ph 50Hz, 2.2kW	NRA996000

Please note that Fomblin (R) must be purchased separately with PFPE Prepared pumps
Fomblin YVac 16/6 is appropriate

EH250 Performance Curve



EH500 Mechanical Booster Pump

EH500



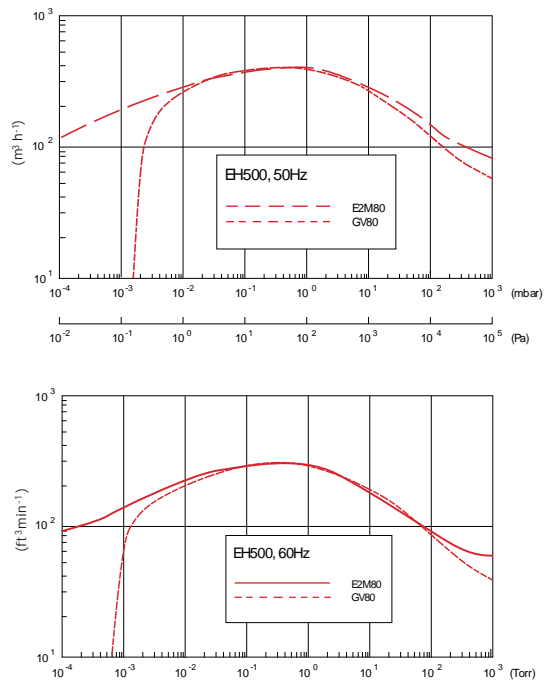
Displacement	
50Hz	505 m ³ h ⁻¹
	300 ft ³ min ⁻¹
60Hz	605 m ³ h ⁻¹
	335 ft ³ min ⁻¹

Ordering information

Product description	Order no:
EH500IND 208-230/460V, 3-ph, 60Hz, 3 hp	A30272946
EH500IND 200 / 380V 3 ph 60Hz	A30272934
EH500IND 200 / 380V 3 ph 50Hz	A30271934
EH500IND 220-240/380-415V, 3-ph, 50Hz, 2.2kW	A30271945
EH500FX 220-240/380-415V, 3-ph 50Hz, 2.2 kW	A30273935
EH500FX 208-230/460V, 3-ph, 60Hz, 3 hp	A30274936
EH500C 460V, 3-ph, 60Hz, 3 hp	NRA999000
EH500T3 220-240/380-415V, 3-ph, 50Hz, 2.2kW	NRA998000

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Fomblin YVac 16/6 is appropriate

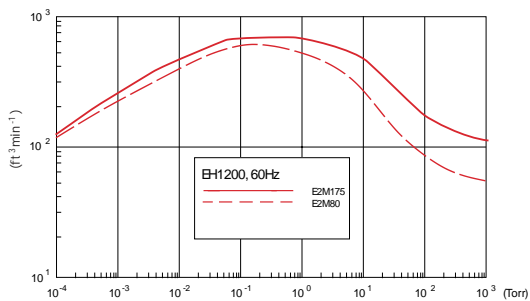
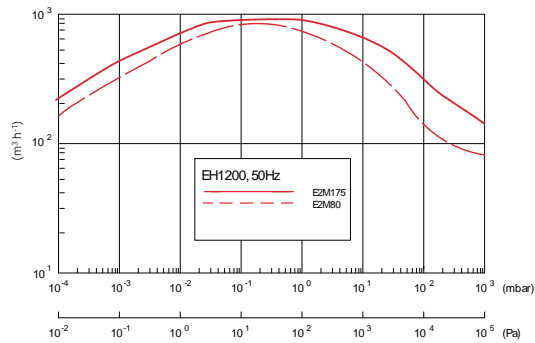
EH500 Performance Curve



EH1200 Mechanical Booster Pump

EH1200 Performance Curve

EH1200



Displacement

50Hz	1195 m ³ h ⁻¹
	715 ft ³ min ⁻¹
60Hz	1435 m ³ h ⁻¹
	845 ft ³ min ⁻¹



Ordering information

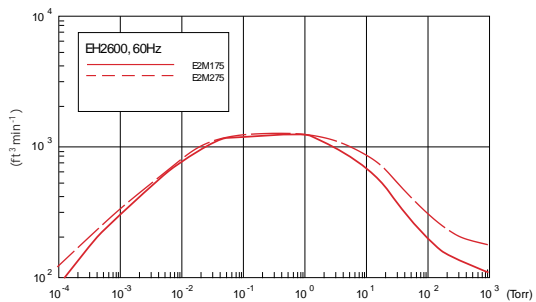
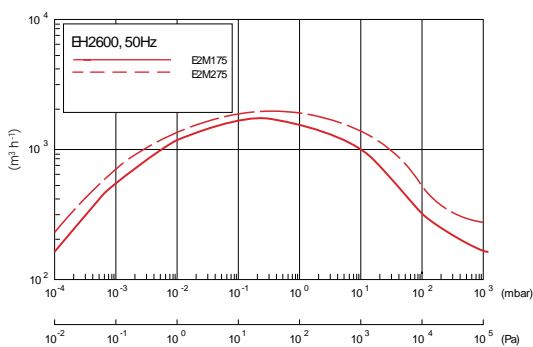
Product description	Order no:
EH1200IND 220-240/380-415V, 3-ph, 50Hz, 3kW	A30590935
EH1200IND 230/460V, 3-ph, 60Hz, 4 hp	A30591936
EH1200IND 200 / 380V 3 ph 60 Hz	A30591934
EH1200IND 200 / 380 V 3 ph 50 Hz	A30590934
EH1200FX 220-240/380-415V, 3-ph, 50Hz, 3 kW	A30592935
EH1200FX 230/460V, 3-ph, 60Hz, 4 hp	A30593936
EH1200C 230/460V, 3-ph, 60Hz, 4 hp	A30556982
EH1200T4 380-415V, 3-ph, 50Hz, 3kW	A30557900

Please note that Fomblin (R) must be purchased separately with PFPE Prepared pumps
Fomblin YVac 16/6 is appropriate

EH2600 Mechanical Booster Pump

EH2600 Performance Curve

EH2600



Displacement

50Hz	2590 m ³ h ⁻¹
	1525 ft ³ min ⁻¹
60Hz	3110 m ³ h ⁻¹
	1830 ft ³ min ⁻¹



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 200 / 380 V 3ph 50 Hz	A30754934
EH2600IND 200V, 3-ph, 50Hz, 11 kW	A30753934
EH2600FX 220-240/380-415V, 3-ph, 50Hz, 11kW	A30753935
EH2600FX 230/460V, 3-ph, 60Hz, 15 hp	A30754936
EH2600C 230/460V, 3-ph, 60Hz, 15 hp	A30756982
EH2600T3 380-415V, 3-ph, 50Hz, 11 kW	A30741935
EH2600T4 380-415V, 3-ph, 50Hz, 11 kW	A30779900

Please note that Fomblin (R) must be purchased separately with PFPE Prepared pumps
Fomblin YVac 16/6 is appropriate

Performance Curves

EH4200 Mechanical Booster Pump

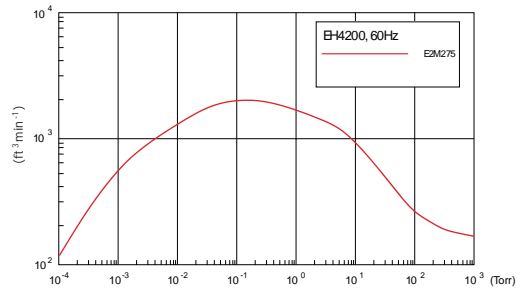
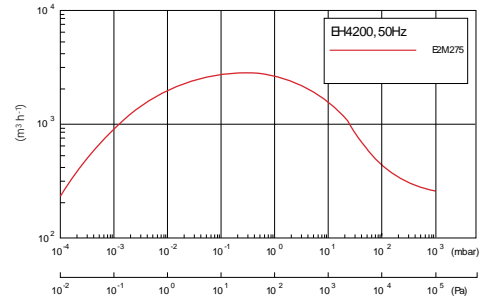
EH4200



Displacement

50Hz	4140 m ³ h ⁻¹
	2440 ft ³ min ⁻¹
60Hz	4940 m ³ h ⁻¹
	2935 ft ³ min ⁻¹

EH4200 Performance Curve

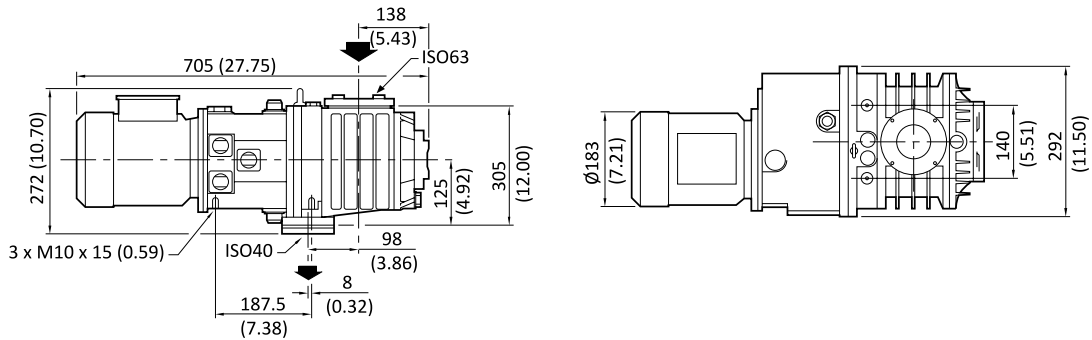


Ordering information

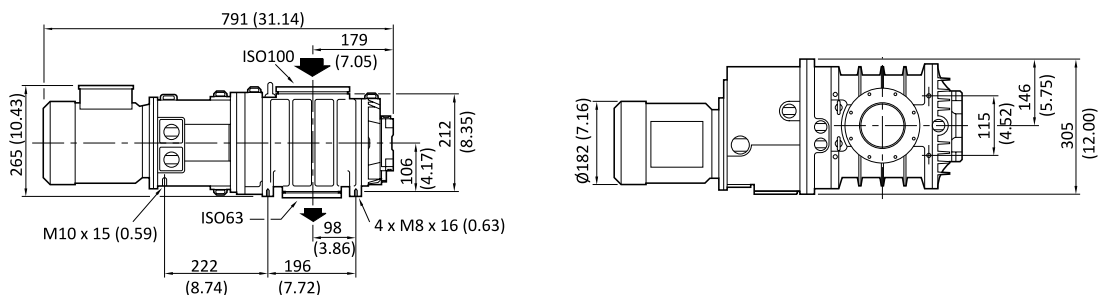
Product description	Order no:
EH4200IND 380-415V, 3-ph, 50Hz, 11kW	A30975946
EH4200IND 200 / 380V 3 ph 60 Hz	A30976934
EH4200IND 200 / 380 V 3 ph 50 Hz	A30975934
EH4200IND 230/460V, 3-ph, 60Hz, 15 hp	A30976982
EH4200C 230/460V, 3-ph, 60Hz, 15 hp	A30956982
EH4200T3 380-415V, 3-ph, 50Hz, 11 kW	A30941935
EH4200T4 380-415V, 3-ph, 50Hz, 11 kW	A30979900

Dimensions

EH250 Dimensions



EH500 Dimensions



Technical Data



Units		EH250	EH500	EH1200	EH2600	EH4200
Displacement (swept volume)						
50Hz	m ³ h ⁻¹ / ft ³ min ⁻¹	310 / 185	505 / 300	1195 / 715	2590/ 1525	4140/ 2440
60Hz	m ³ h ⁻¹ / ft ³ min ⁻¹	375 / 220	605 / 335	1435 / 845	3110/ 1830	4985/ 2935
Effective pumping speed with backing pump						
E2M40	m ³ h ⁻¹ / ft ³ min ⁻¹	240 / 141	350 / 206	840/ 495	-	-
E2M80	m ³ h ⁻¹ / ft ³ min ⁻¹	274 / 161	400 / 236	840/ 495	-	-
E2M175	m ³ h ⁻¹ / ft ³ min ⁻¹	-	440 / 259	930/ 548	1750/ 1031	-
E2M275	m ³ h ⁻¹ / ft ³ min ⁻¹	-	460 / 271	1020/ 601	1900/ 1119	3100/ 1825
Pressure differential across pump						
50Hz	mbar/ Torr	0-180/ 0-140	0-110 / 0-83	0-90/ 0-68	0-120/ 0-90	0-70/ 0-52
60Hz	mbar/ Torr	0-150/ 0-115	0-90 / 0-68	0-75/ 0-56	0-67/ 0-50	0-50/ 0-38
Inlet connection		ISO63	ISO100	ISO160	ISO160	ISO250
Outlet connection		ISO40	ISO63	ISO100	ISO100	ISO100
Rotational speed ‡						
50Hz	rpm	0-2900 rpm				
60Hz	rpm	0-3500 rpm				
Operating continuous inlet pressure	mbar/ Torr	0-1000 mbar / 0-760 Torr				
Maximum outlet pressure	mbar/ Torr	1000 mbar / 760 Torr				
Recommended backing pumps		GV80, E2M40, E2M80	GV80, E2M80	GXS160, GXS250, E2M80, E2M175	GXS250, GXS450, E2M175, E2M275	GXS450, E2M275
Electrical supply voltage, 3-ph						
50Hz		220-240V / 380-415V				
60Hz		230V / 460V				
Motor power						
Hydrocarbon	kW/ hp	2.2 / 3		3 / 4	11 / 15	
PFPE	kW/ hp	2.2 / 3		3 / 4	11 / 15	
ATEX	kW	2.2		3	11	
Explosion proof		3		4	15	
Ambient temperature range						
Operating	°C / F	5 to 40 / 40 to 104				
Storage	°C / F	-10 to 80 / 14 to 176				
Maximum operating humidity	RH	90%				
Cooling method		Air cooled			Water cooled	
Recommended oil						
Standard version		Ultragrade 20				
PFPE version		Fomblin® YVAC 16/6				
Oil capacity						
Gear case	litre	-	-	1.25	3.5	3.5
Coupling cover	litre	1.5		2.4	6.5	6.5 l
Shaft seal reservoir	litre	0.125			1.5	
Weight*	kg / lb	69/ 152	106/ 233	149/ 328	345/ 759	481/ 1058