

2. CMBE

CME booster



TM05 7512 3713

The Grundfos CME booster is a compact booster for water supply in domestic applications. Thanks to the integrated speed controller, the booster keeps a constant pressure in the pipe system. A pressure sensor monitoring changes in the water consumption will signal to the speed controller to change the motor speed to adapt the performance to the new situation. The optional inlet pressure switch prevents the pump from operating in case of low inlet pressure.

The booster is very easy to install. When the booster has been connected to the pipework, it is all a matter of plugging the plug into a socket, and the system is operational.

The CME booster consists of these components:

- CME pump with integrated frequency converter
- 5-way fitting with non-return valve
- diaphragm tank
- pressure gauge
- pressure sensor
- inlet pressure switch (optional).

Applications

The CME booster is mainly used for domestic and light commercial water supply or pressure boosting.

Application	CME 1	CME 3	CME 5	CME 10
Single-family houses	•	•	○	○
Two-family houses	○	•	•	•
Cluster homes		•	•	•
Blocks of flats		•	•	•
Schools		•	•	•
Small hotels/guest houses		•	•	•
Small office buildings		•	•	•
Agriculture		○	•	•
Irrigation		○	•	•

- Recommended
- Applicable.

Motor

No external motor protection is required. The MGE motor incorporates thermal protection against slow overloading and blocking (TP 211 according to IEC 34.11).

Features

- constant pressure via integrated speed control
- compact
- robust, stainless steel design
- easy installation
- low energy consumption
- dry-running protection
- noise level below 55 dBA and even lower at controlled speed
- inlet pressure switch meets DIN 1988-500 (optional pressure monitoring required).

Grundfos blueflux®

Grundfos blueflux® technology represents the best from Grundfos within energy-efficient motors and frequency converters. Grundfos blueflux® solutions either meet or exceed legislative requirements, such as the EuP IE3 and IE4 grades.



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Fig. 4 Grundfos blueflux® label

To read more about the energy challenge and Grundfos blueflux®, please visit grundfos.com/energy.

Operating conditions

System pressure	Max. 10 bar.
Suction lift	Max. 1 m, including suction-pipe pressure loss at a liquid temperature of +20 °C.
Liquid temperature	0 °C to +60 °C.
Ambient temperature	Max. +55 °C. Min. -20 °C.
Relative air humidity	Max. 95 %.
Enclosure class	IP55.
Insulation class	F.
Sound pressure level	The sound pressure level of the pump is below 55 dB(A).
Supply voltage	1 x 200-240 V, 50/60 Hz.
Start/stop frequency	Max. 100 per hour.
Cut-in pressure	0.5 bar below setpoint.

Electrical data

Pump type	Voltage [V]	I_{max} [A]	P1 [W]	Plug type
CMBE 1-44	1 x 200-240	3.4 - 2.9	685	Schuko, US, AU, UK or without plug
CMBE 1-75	1 x 200-240	6.55 - 5.45	969	
CMBE 1-99	1 x 200-240	6.55 - 5.45	1050	
CMBE 3-30	1 x 200-240	6.55 - 5.45	815	
CMBE 3-62	1 x 200-240	6.55 - 5.45	1220	
CMBE 3-93	1 x 200-240	8.9 - 7.45	1300	
CMBE 5-31	1 x 200-240	6.55 - 5.45	1300	
CMBE 5-62	1 x 200-240	8.9 - 7.45	1400	
CMBE 10-27	1 x 200-240	6.55 - 5.45	1190	
CMBE 10-54	1 x 200-240	8.9 - 7.45	1250	

Approvals

The product is built according to European drinking water approvals.

Performance curves

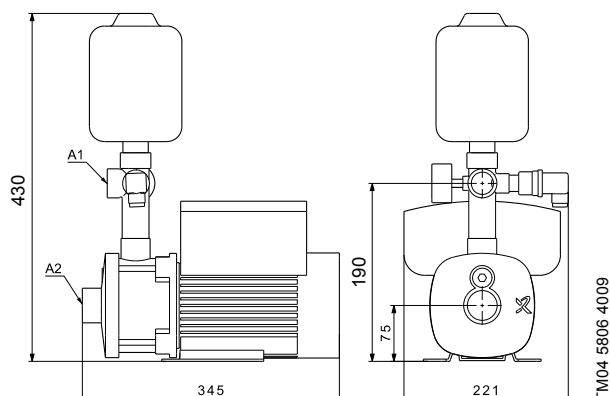
Performance curves are found in WebCAPS available on www.grundfos.com.

Wetted parts

The table below specifies the parts of the pump that are in contact with water.

Designation	Material	Technical description
Pump sleeve	Stainless steel	EN 1.4301 AISI 304
Impeller	Stainless steel	EN 1.4301 AISI 304
Diffuser	Technopolymer	PP 20 % Talc
Ejector	Technopolymer	PPE/PS 20 % GF
Nozzle	Stainless steel	EN 1.4301 AISI 304
Shaft	Stainless steel	EN 1.4301 AISI 304
Shaft seal	Carbon with resin/ceramic	CVBP
Filling plug	Technopolymer	PES 30 % GF
Drainage plug	Technopolymer	PES 30 % GF

Dimensional drawings



Pump type	H	H1	L	A1	A2
CMBE 1-44	430	190	325.9	1"	1"
CMBE 1-75	430	190	432.0	1"	1"
CMBE 1-99	430	190	468.0	1"	1"
CMBE 3-30	430	190	360.0	1"	1"
CMBE 3-62	430	190	396.0	1"	1"
CMBE 3-93	430	190	477.5	1"	1"

Pump type	H	H1	L	A1	A2
CMBE 5-31	430	190	360.0	1"	1 1/4"
CMBE 5-62	430	190	470.5	1"	1 1/4"
CMBE 10-27	430	190	417.0	1 1/2"	1 1/2"
CMBE 10-54	430	190	490	1 1/2"	1 1/2"

Materials

Designation	Material
Terminal box	Composite PC/ASA and silumin (Alu)
Stator housing	Silumin (Alu)
Fan cover	Composite PBT/PC
Pump housing	Stainless steel, EN 1.4301/AISI 304
Shaft and impeller	Stainless steel, EN 1.4301/AISI 304
Flange	Cast iron

Control panel

The control panel on the E-pump terminal box makes it possible to change the setpoint settings manually.

MG E 0.37 to 2.2 kW

The operating condition of the pump is indicated by the Grundfos Eye on the control panel. See fig. 5, pos. A.

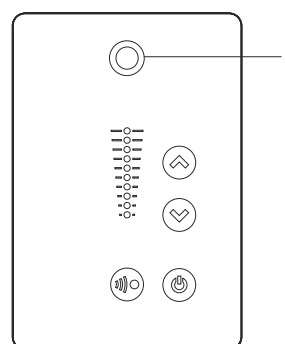


Fig. 5 Control panel on CRE pump

Set the desired setpoint by pressing or . The light fields on the control panel will indicate the setpoint set. Continuously pressing will stop the pump.

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