

# CM Booster

Horizontal, multistage centrifugal boosters  
50/60 Hz



INFO: <https://szivattyuk.hu/grundfos-cmbe.html>

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**GRUNDFOS** 

## 2. CMBE TWIN

### CMBE TWIN Booster



Fig. 6 CMBE TWIN Booster

TM06 8671 1017

### Applications

The compact Grundfos CMBE TWIN Booster is suitable for clean water supply and pressure boosting in domestic and commercial applications. The CMBE TWIN Booster keeps a constant pressure in the pipe system and is mainly used in places such as:

- two-family houses
- cluster homes
- blocks of flats
- schools
- small hotels
- small office buildings
- small industrial plants and businesses
- hospitals
- agriculture and irrigation.

### Product Description

The CMBE TWIN Booster system consists of two CMBE Boosters connected in parallel and mounted on a common base plate.

Accessories:

- vibration dampers (PN 99217259)
- inlet/outlet pipes with ball valve and unions and 1 1/2" outlet connection.  
(PN 99229422 for 1" inlet connection)  
(PN 99229453 for 1 1/4" inlet connection)

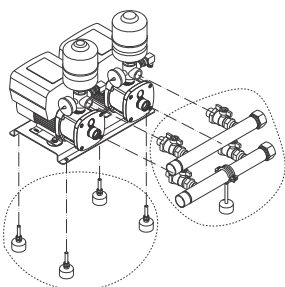


Fig. 7 Accessories

TM06 8740 1017

### 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
- cascade control and pump alternation
- dry-running protection
- compact
- robust, stainless steel design
- easy installation
- low energy consumption
- noise level below 55 dBA and even lower at controlled speed.

#### Constant pressure

The integrated speed controller keeps a constant pressure in the pipe system. A pressure sensor monitors changes in the water consumption and signals to the speed controller to adjust the motor speed up or down.

#### Cascade control

Cascade control ensures that the performance of the booster system is automatically adapted to the consumption by switching pumps on or off and by changing the speed of the pumps in operation. The system runs as energy-efficiently as possible with a constant pressure and only the number of pumps required.

#### Pump alternation

Pump alternation ensures that the operating hours are distributed evenly on the pumps over time. CMBE TWIN Booster automatically alternates the pumps and will start the available pump with the lowest number of running hours since the last time the power was switched off.

#### Dry-running protection

Dry-running protection is very important as dry running may damage the bearings and shaft seals. Lack of inlet pressure or water shortage is indicated by the motor speed. When dry running is detected, the CMBE Booster will stop and go into alarm mode.

#### Easy installation

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

## 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	0-60 °C.
Ambient temperature	Max. +55 °C. Min. -20 °C.
Relative 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 <sub>max</sub> [A]	P <sub>1</sub> [W]	Plug type
CMBE 3-30	1 x 200-240	6.7 - 5.6	688	Schuko or fuse box
CMBE 3-62	1 x 200-240	6.7 - 5.6	1210	
CMBE 3-93	1 x 200-240	9.1 - 7.6	1720	
CMBE 5-31	1 x 200-240	6.7 - 5.6	1090	
CMBE 5-62	1 x 200-240	9.1 - 7.6	1720	

## Approvals

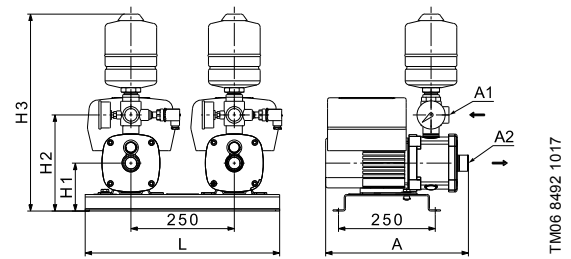
The product is built according to European drinking water approvals.

## Wetted parts

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

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
Drain plug	Technopolymer	PES 30 % GF

## Dimensional drawings



Pump type	H3	H2	H1	L	A	A1 [inch]	A2 [inch]
CMBE 3-30	485	235	110	475	330	1	1
CMBE 3-62	485	235	110	475	344	1	1
CMBE 3-93	495	250	125	475	404	1	1
CMBE 5-31	485	235	110	475	326	1	1 1/4
CMBE 5-62	495	250	125	475	350	1	1 1/4

## Control panel

The control panel on the pump terminal box makes it possible to change the setpoint settings manually. The operating condition of the pump is indicated by the Grundfos Eye on the control panel. See fig. 8, pos. A.

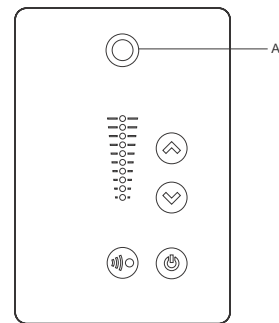
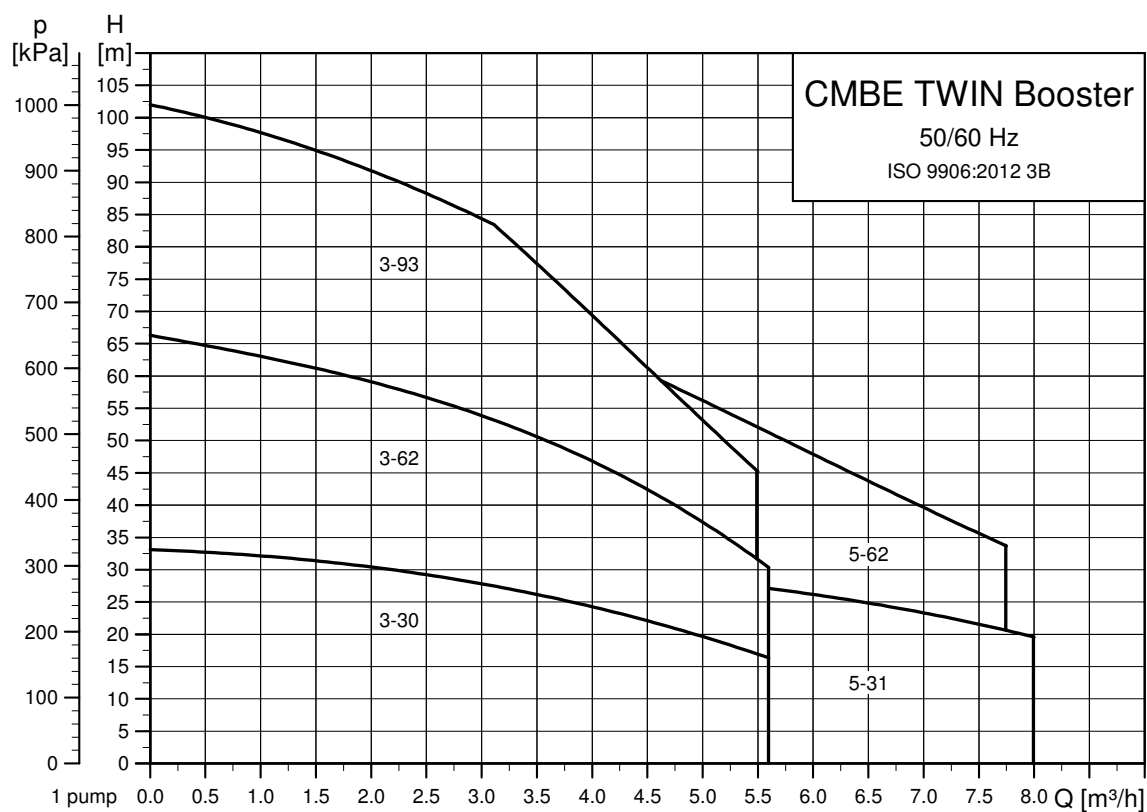


Fig. 8 Control panel

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.

Pressing Ⓜ will enable infrared communication with the Grundfos GO Remote and with other products of same type using infrared.

## Performance curves



TM06 8495 0817

### 3. CMBE

#### CMBE Booster



Fig. 9 CMBE Booster

#### Applications

The compact Grundfos CMBE Booster is suitable for clean water supply and pressure boosting in domestic and light commercial applications.

The CMBE Booster keeps a constant pressure in the pipe system and is mainly used in places such as:

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

- Recommended
- Applicable.

#### Product Description

The CMBE Booster consists of these components:

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

#### 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
- dry-running protection
- compact
- robust, stainless steel design
- easy installation
- low energy consumption
- noise level below 55 dBA and even lower at controlled speed.

#### Constant pressure

The integrated speed controller keeps a constant pressure in the pipe system. A pressure sensor monitors changes in the water consumption and signals to the speed controller to adjust the motor speed up or down.

#### Dry-running protection

Dry-running protection is very important as dry running may damage the bearings and shaft seals. The inlet pressure of the system or the water level in a possible tank on the inlet side is monitored. Lack of inlet pressure or water shortage is indicated by the motor speed. When dry running is detected, the CMBE Booster will stop and go into alarm mode.

#### Easy installation

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

#### 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	0-60 °C.
Ambient temperature	Max. +55 °C. Min. -20 °C.
Relative 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 <sub>max</sub> [A]	P1 [W]	Plug type
CMBE 1-44	1 x 200-240	3.45 - 2.9	615	Schuko, US, AU, UK or without plug
CMBE 1-75	1 x 200-240	6.7 - 5.6	998	
CMBE 1-99	1 x 200-240	6.7 - 5.6	1250	
CMBE 3-30	1 x 200-240	6.7 - 5.6	688	
CMBE 3-62	1 x 200-240	6.7 - 5.6	1210	
CMBE 3-93	1 x 200-240	9.1 - 7.6	1720	
CMBE 5-31	1 x 200-240	6.7 - 5.6	1090	
CMBE 5-62	1 x 200-240	9.1 - 7.6	1720	
CMBE 10-54	1 x 200-240	9.1 - 7.6	1710	

## Approvals

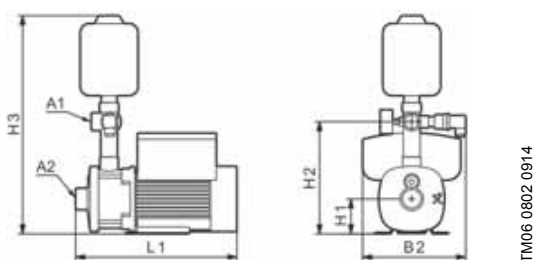
The product is built according to European drinking water approvals.

## Wetted parts

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

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
Drain plug	Technopolymer	PES 30 % GF

## Dimensional drawings



Pump type	H3	H2	H1	L1	B2	A1 [inch]	A2 [inch]
CMBE 1-44	440	200	75	326	217	1	1
CMBE 1-75	440	200	75	362	217	1	1
CMBE 1-99	440	200	75	398	217	1	1
CMBE 3-30	440	200	75	326	217	1	1
CMBE 3-62	440	200	75	344	217	1	1
CMBE 3-93	455	215	90	404	217	1	1
CMBE 5-31	440	200	75	326	217	1	1 1/4
CMBE 5-62	455	215	90	350	217	1	1 1/4
CMBE 10-54	510	253	92	377	232	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.

The operating condition of the pump is indicated by the Grundfos Eye on the control panel. See fig. 10, pos. A.

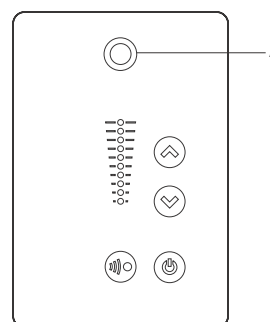


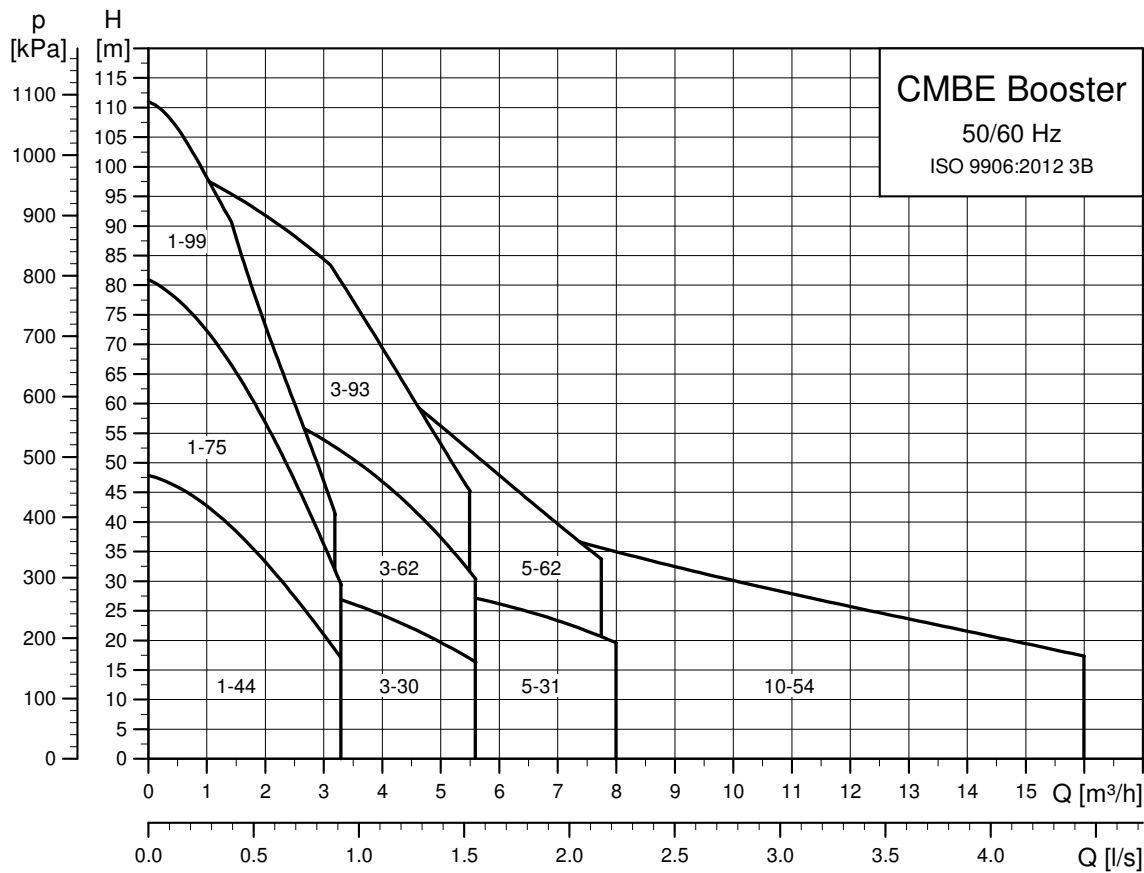
Fig. 10 Control panel

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.

Pressing ☼ will enable infrared communication with the Grundfos GO Remote and with other products of same type using infrared.

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Performance curves



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## 10. Product numbers

### CMBE TWIN

D: Integrated frequency converter.

Pump type	Controller	Stainless steel	Cast iron	Self-priming	Inlet pressure switch	Plug	Product number
<b>CMBE 3, 1 x 200-240 V, 50/60 Hz</b>							
CMBE 3-30	D	•				Schuko	99219419
CMBE 3-30	D	•				Fuse Box	99220843
CMBE 3-62	D	•				Schuko	99219420
CMBE 3-62	D	•				Fuse Box	99220844
CMBE 3-93	D	•				Schuko	99219421
CMBE 3-93	D	•				Fuse Box	99220845
<b>CMBE 5, 1 x 200-240 V, 50/60 Hz</b>							
CMBE 5-31	D	•				Schuko	99219422
CMBE 5-31	D	•				Fuse Box	99220846
CMBE 5-62	D	•				Schuko	99219423
CMBE 5-62	D	•				Fuse Box	99220847
<b>CMBE TWIN Accessories</b>							
Accessory type	Ball valve	Unions	1 1/2" outlet connection	1" inlet connection	1/4" inlet connection		Product Number
Vibration damper kit							99217259
Inlet/outlet pipe kit	•	•	•	•			99229422
Inlet/outlet pipe kit	•	•	•		•		99229453

### CMBE

D: Integrated frequency converter.

Pump type	Controller	Stainless steel	Cast iron	Self-priming	Inlet pressure switch	Plug	Product number
<b>CMBE 1, 1 x 200-240 V, 50/60 Hz</b>							
CMBE 1-44	D	•				US	98374721
CMBE 1-44	D	•				Schuko	98374697
CMBE 1-44	D	•				none	98374679
CMBE 1-44	D	•				AU	98374705
CMBE 1-44	D	•				UK	98374713
CMBE 1-44	D	•			•	Schuko	98563698
CMBE 1-75	D	•				US	98374722
CMBE 1-75	D	•				Schuko	98374698
CMBE 1-75	D	•				none	98374680
CMBE 1-75	D	•				AU	98374706
CMBE 1-75	D	•				UK	98374714
CMBE 1-75	D	•			•	Schuko	98563702
CMBE 1-99	D	•				US	98374723
CMBE 1-99	D	•				Schuko	98374699
CMBE 1-99	D	•				none	98374691
CMBE 1-99	D	•				AU	98374707
CMBE 1-99	D	•				UK	98374715
CMBE 1-99	D	•			•	Schuko	98563704
<b>CMBE 3, 1 x 200-240 V, 50/60 Hz</b>							
CMBE 3-30	D	•				US	98374724
CMBE 3-30	D	•				Schuko	98374700
CMBE 3-30	D	•				none	98374692
CMBE 3-30	D	•				AU	98374708
CMBE 3-30	D	•				UK	98374716
CMBE 3-30	D	•			•	Schuko	98563707
CMBE 3-62	D	•				US	98374725
CMBE 3-62	D	•				Schuko	98374701
CMBE 3-62	D	•				none	98374693
CMBE 3-62	D	•				AU	98374709
CMBE 3-62	D	•				UK	98374717
CMBE 3-62	D	•			•	Schuko	98563709
CMBE 3-93	D	•				US	98374726
CMBE 3-93	D	•				Schuko	98374702
CMBE 3-93	D	•				none	98374694
CMBE 3-93	D	•				AU	98374710
CMBE 3-93	D	•				UK	98374718
CMBE 3-93	D	•			•	Schuko	98563722



Pump type	Controller	Stainless steel	Cast iron	Self-priming	Inlet pressure switch	Plug	Product number
<b>CMBE 5, 1 x 200-240 V, 50/60 Hz</b>							
CMBE 5-31	D	•				US	98374727
CMBE 5-31	D	•				Schuko	98374703
CMBE 5-31	D	•				none	98374695
CMBE 5-31	D	•				AU	98374711
CMBE 5-31	D	•				UK	98374719
CMBE 5-31	D	•			•	Schuko	98563725
CMBE 5-62	D	•				US	98374728
CMBE 5-62	D	•				Schuko	98374704
CMBE 5-62	D	•				none	98374696
CMBE 5-62	D	•				AU	98374712
CMBE 5-62	D	•				UK	98374720
CMBE 5-62	D	•			•	Schuko	98563727
<b>CMBE 10, 1 x 200-240 V, 50/60 Hz</b>							
CMBE 10-54	D	•				US	98382208
CMBE 10-54	D	•				Schuko	98382202
CMBE 10-54	D	•				none	98382190
CMBE 10-54	D	•				AU	98382204
CMBE 10-54	D	•				UK	98382206
CMBE 10-54	D	•			•	Schuko	98563731

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