# CMSP-PM1

# Installation and Operating Instructions





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# English (GB) Installation and operating instructions

Original installation and operating instructions.

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#### Warning



Prior to installation, read this document and the quick guide. Installation and operation must comply with local regulations and accepted codes of good practice.

#### Warning

The use of this product requires experience with and knowledge of the product.



Persons with reduced physical, sensory or mental capabilities must not use this product, unless they are under supervision or have b een instructed in the use of the product by a person responsible for their safety. Children must not use or play with this product.

#### 1. Symbols used in this document

## Warning

If these safety instructions are not observed, it may result in personal injury.

#### Warning



If these instructions are not observed, it may lead to electric shock with consequent risk of serious personal injury or death.

Caution

If these safety instructions are not observed, it may result in malfunction or damage to the equipment. Notes or instructions that make the job

easier and ensure safe operation.

Note

#### 2. System sizing



#### Warning

The system in which the CM Booster is incorporated must be designed for the maximum pump pressure.

Caution r

The default setting will cause the pump not to stop until it reaches its maximum pressure.

#### 3. Mechanical installation

#### Warning



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Before starting work on the CM Booster, make sure that the power supply has been switched off and that it cannot be accidentally switched on.

#### 4. Electrical installation

#### Warning



The electrical installation should be carried out by an authorised person in accordance with local regulations.

Check that the supply voltage and frequency correspond to the values stated on the nameplate.

#### Warning

Before making any connections in the unit, make sure that the power supply has been switched off and that it cannot be accidentally switched on.



The unit must be connected to an external mains switch with a contact gap of at least 3 mm in all poles.

As a precaution, the unit must be connected to a socket with earth connection.

We recommend to fit the permanent installation with an earth leakage circuit breaker (ELCB) with a tripping current < 30 mA.

#### 5. Startup



Do not start the pump until it has been filled with liquid.

#### 6. Alarms



If a dry-running alarm has been activated, find the cause before the pump is restarted in order to prevent damage to the pump.



# **Fault Finding**

### 7. Fault finding



#### Warning

Before starting work on the pump, make sure that the power supply has been switched off and that it cannot be accidentally switched on.

Fault		Cause		Remedy
1.	The green "Power on" indicator light is off.	a)	The fuses in the electric installation have burnt.	Replace the fuses. If the new fuses also burn, check the electric installation.
		b)	The earth leakage circuit breaker or the voltage-operated circuit breaker has tripped.	Cut in the circuit breaker.
		c)	No power supply.	Contact the power supply company.
		d)	The PM unit is defective.	Repair or replace the PM unit.
2.	The green "Pump on" indicator light is on, but the pump does not start.	a)	The power supply to the pump is disconnected after the PM unit.	Check the plug and cable connections, and check if the built-in circuit breaker of the pump is switched off.
		b)	The motor protection of the pump has tripped due to overload.	Check if the motor/pump is blocked.
		c)	The pump is defective.	Repair or replace the pump.
		d)	The PM unit is defective.	Repair or replace the PM unit.
3.	The pump does not start when water is consumed. The "Pump on" indicator light is off.	a)	Too big difference in height between the PM unit and the tapping point.	Adjust the installation, or select a PM unit with a higher start pressure.
		b)	The PM unit is defective.	Repair or replace the PM unit.
4.	Frequent starts/stops.	a)	Leakage in the pipework.	Check and repair the pipework.
		b)	Leaky non-return valve.	Clean or replace the non-return valve.
		c)	A valve close to the PM 1 outlet has been closed.	Open the valve.
5.	The pump does not stop.	a)	The pump cannot deliver the necessary discharge pressure.	Replace the pump.
		b)	A PM unit with too high start pressure is installed.	Select a PM unit with a lower start pressure.
		c)	The PM unit is defective.	Repair or replace the PM unit.
		d)	The non-return valve is stuck in open position.	Clean or replace the non-return valve.
6.	The red "Alarm" indicator light is permanently on.	a)	Dry running. The pump needs water.	Check the pipework.
		b)	The power supply to the pump is disconnected after the PM unit.	Check the plug and cable connections, and check if the built-in circuit breaker of the pump is switched off.
		c)	The motor protection of the pump has tripped due to overload.	Check if the motor/pump is blocked.
		d)	The pump is defective.	Repair or replace the pump.
		e)	The PM unit is defective.	Repair or replace the PM unit.
7.	The red "Alarm" indicator light is flashing.	a)	Cycling. A tap has not been closed entirely after use.	Check that all taps have been closed.

Fau	Fault		JSE	Remedy
8.	The pump performance is unstable.	a)	Pump inlet pressure too low.	Check the inlet conditions of the pump.
		b)	Suction pipe is partly blocked by impurities.	Remove and clean the suction pipe.
		c)	Leakage in suction pipe.	Remove and repair the suction pipe.
		d)	Air in suction pipe or pump.	Vent the suction pipe/pump. Check the inlet conditions of the pump.
9.	The pump runs backwards when switched off.	a)	Leakage in suction pipe.	Remove and repair the suction pipe.
		b)	Foot or non-return valve defective.	Remove and clean, repair or replace the valve.
		c)	The foot valve is stuck in completely or partly open position.	Remove and clean, repair or replace the valve.
Sel	f-priming pumps only:			
10.	The pump performance is unstable and the pump is noisy.	a)	The differential pressure across the pump is too low.	Close the tap gradually until the discharge pressure is stable and the noise has ceased.
11.	When startup is attempted, the pump will start, but delivers no pressure or flow.	a)	Liquid column above non-return valve in discharge pipe prevents the pump from self-priming.	Empty the discharge pipe. Make sure that the non-return valve does not hold back liquid in the discharge pipe. Repeat the startup procedure.
		b)	Suction pipe draws in air.	Make sure that the suction pipe is airtight from pump to liquid level. Repeat the startup procedure.
12.	The pump runs, but does not deliver the rated flow.	a)	The internal valve did not close.	Close the tap gradually until the pressure or flow suddenly increases. Then open the tap gradually until the required flow is reached.
13.	The pump performance is unstable.	a)	Pump inlet pressure too low.	Check the inlet conditions of the pump.
		b)	Suction pipe is partly blocked by impurities.	Remove and clean the suction pipe.
		c)	Leakage in suction pipe.	Remove and repair the suction pipe.
		d)	Air in suction pipe or pump.	Vent the suction pipe/pump. Check the inlet conditions of the pump.
14.	The pump runs backwards when switched off.	a)	Leakage in suction pipe.	Remove and repair the suction pipe.
		b)	Foot or non-return valve defective.	Remove and clean, repair or replace the valve.
		c)	The foot valve is stuck in completely or partly open position.	Remove and clean, repair or replace the valve.
Sel	f-priming pumps only:			
15.	The pump performance is unstable and the pump is noisy.	a)	The differential pressure across the pump is too low.	Close the tap gradually until the discharge pressure is stable and the noise has ceased.
16.	. When startup is attempted, the pump will start, but delivers no pressure or flow.	a)	Liquid column above non-return valve in discharge pipe prevents the pump from self-priming.	Empty the discharge pipe. Make sure that the non-return valve does not hold back liquid in the discharge pipe. Repeat the startup procedure.
		b)	Suction pipe draws in air.	Make sure that the suction pipe is airtight from pump to liquid level. Repeat the startup procedure.

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Fault	Cause	Remedy
17. The pump runs, but does not deliver the rated flow.	a) The internal valve did not close.	pressure or flow suddenly increases. Then open the tap gradually until the required flow is reached.

#### 8. Disposal

This product or parts of it must be disposed of in an environmentally sound way:

- 1. Use the public or privat e waste collection service.
- 2. If this is not possible, contact the nearest Grundfos company or service workshop.

Subject to alterations.













# **PROPER WAY TO INSTALL GRUNDFOS DOMESTIC WATER PUMP**



\* We reserve the right to decline warranty claim if the above installation is not followed.

\* Direct suction from main is prohibited.

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