

# SCALA2

Installation and operating instructions





# SCALA2

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## English (GB)

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## English (GB) Installation and operating instructions

### Original installation and operating instructions

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## 1. General information



This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.

Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.



Read this document before you install the product. Installation and operation must comply with local regulations and accepted codes of good practice.



A blue or grey circle with a white graphical symbol indicates that an action must be taken.



A red or grey circle with a diagonal bar, possibly with a black graphical symbol, indicates that an action must not be taken or must be stopped.



If these instructions are not observed, it may result in malfunction or damage to the equipment.



Tips and advice that make the work easier.

### 1.1 Hazard statements

The symbols and hazard statements below may appear in Grundfos installation and operating instructions, safety instructions and service instructions.



#### **DANGER**

Indicates a hazardous situation which, if not avoided, will result in death or serious personal injury.



#### **WARNING**

Indicates a hazardous situation which, if not avoided, could result in death or serious personal injury.



#### **CAUTION**

Indicates a hazardous situation which, if not avoided, could result in minor or moderate personal injury.

The hazard statements are structured in the following way:



#### **SIGNAL WORD**

##### **Description of the hazard**

Consequence of ignoring the warning

- Action to avoid the hazard.

### 1.2 Notes

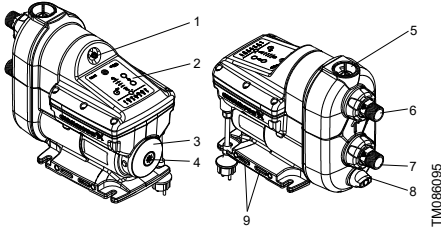
The symbols and notes below may appear in Grundfos installation and operating instructions, safety instructions and service instructions.



Observe these instructions for explosion-proof products.

## 2. Product introduction

### 2.1 Product description



TMD086095

Grundfos SCALA2 pump

Pos.	Description
1	Air valve for built-in pressure tank
2	Operating panel
3	Nameplate
4	Plug for access to pump shaft
5	Priming plug
6	Outlet opening
7	Inlet opening
8	Drain plug
9	Ventilation holes. They must not be flooded.

The inlet and outlet openings include flexible connections of  $\pm 5^\circ$ .

#### Related information

- [2.4.1 Nameplate](#)
- [5.3 Connecting the pipe system](#)
- [7.1 Priming the pump](#)
- [9.1 Menu overview, SCALA2](#)
- [12.1 Deblocking the pump](#)

### 2.2 Intended use



This pump has been evaluated for use with water only.

Only use SCALA2 pumps according to the specifications stated in these installation and operating instructions.

The pump is suitable for pressure boosting of fresh water in domestic water supply systems.

### 2.3 Pumped liquids

The pump is designed for pumping clean, thin, fresh water with a pH value between 4 and 9, a maximum chloride content of 300 ppm and free chlorine content below 1 ppm, for example:

- drinking or tap water
- rainwater
- groundwater
- river and lake water
- softened water.

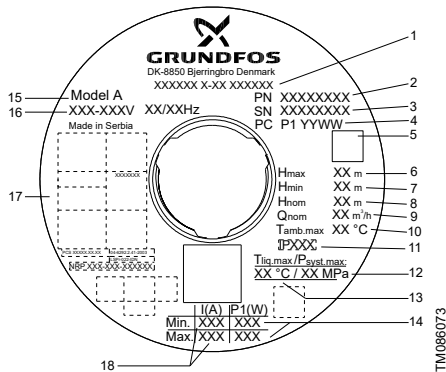


Sand and other impurities in the water can cause wear to the pump and pump blockage.

Install a filter on the inlet side or apply a floating strainer to protect the pump.

## 2.4 Identification

### 2.4.1 Nameplate



Example of nameplate

Pos.	Description
1	Type designation
2	Product number
3	Serial number
4	Production code (year and week)
5	Barcode
6	Max. head
7	Min. head
8	Rated head
9	Rated flow rate
10	Max. ambient temperature
11	Enclosure class
12	Max. operating pressure
13	Max. liquid temperature
14	Min. and max. rated power
15	Model
16	Voltage and frequency
17	Approvals
18	Min. and max. rated current

### 2.4.2 Type key

Example: SCALA2 3-45 A K C H D E

Code	Explanation	Designation
SCALA		Type range
2		
3		Rated flow rate [m <sup>3</sup> /h]
45		Max. head [m]
A	Standard	Material code
K	1 × 200-240 V, 50/60 Hz	
M	1 × 208-230 V, 60 Hz	
V	1 × 115 V, 60 Hz	Supply voltage
W	1 × 100-115 V, 50/60 Hz	
C	High-efficiency motor with frequency converter	Motor
A	Cable with plug, IEC type I, AS/NZS3112, 1.5 m	
B	Cable with plug, IEC type B, NEMA 5-15P, 6.5 ft	
C	Cable with plug, IEC type E&F, CEE7/7, 1.5 m	
D	Cable without plug, 1.5 m	
G	Cable with plug, IEC type G, BS1363, 1.5 m	
H	Cable with plug, IEC type I, IRAM 2073, 1.5 m	Mains cable and plug
J	Cable with plug, NEMA 6-15P, 6.5 ft	
K	Cable with plug, IEC type B, JIS C 8302, 1.5 m	
L	Cable with plug, IEC type L, CEI 23-16/VII, 2 m	
O	Cable with plug, IEC type O, TIS 166-2549, 1.5 m	
P	Cable with plug, IEC type D/M, IS 1293, 2 m	
D	Integrated frequency converter	Controller
E	R 1" composite material	
F	NPT 1" composite material	Thread

## 3. Receiving the product

### 3.1 Inspecting the product

Check that the product received is in accordance with the order.

Check that the voltage and frequency of the product match the voltage and frequency of the installation site.

#### Related information

##### [2.4.1 Nameplate](#)

### 3.2 Scope of delivery

The box contains the following items:

- 1 Grundfos SCALA2 pump
- 1 quick guide
- 1 safety instructions booklet
- 1 quick guide for locking pin (only for versions with locking pin).

## 4. Installation requirements

### 4.1 Location

The pump can be installed indoors or outdoors, but it must not be exposed to frost.

We recommend that you install the pump near a drain or in a drip tray connected to a drain in order to lead away possible condensation from cold surfaces.

The product must be installed in a well-ventilated room to avoid condensation.

The installation location must be protected from rain, humidity, condensation, direct sunlight and dust.

The relative air humidity must not exceed 95 %.



Install the pump in such a way that no undesirable collateral damage can arise due to leakage.

If the unlikely event of an internal leakage occurs, the liquid will be drained through the bottom of the pump.

#### 4.1.1 Minimum space

The pump requires a minimum space of 430 × 215 × 325 mm (17 × 8.5 × 12.8 inches).

Even though the pump does not require much space, we recommend that you leave enough space for service and maintenance access.

#### 4.1.2 Installation of the product in a frosty environment

Protect the product from freezing if it is to be installed outdoors where frost may occur.



## 4.2 System sizing

**!** Make sure that the system in which the pump is incorporated is designed for the maximum pump pressure.

The pump is factory-set to 3 bar (44 psi) outlet pressure which can be adjusted according to the system in which it is incorporated.

The tank precharge pressure is 1.8 bar (26 psi).

In case of suction lift of more than 6 metres (19.7 ft), the pipe resistance on the outlet side must be at least 2 metres water column or 3 psi at any given flow in order to obtain optimum operation.

### 4.2.1 Maximum system pressure

**!** Make sure that the system in which the pump is installed is designed for the maximum pump pressure.

**!** When using SCALA2 in installations with water heaters, you must use a non-return valve, pressure-relief valve or a thermal expansion tank between SCALA2 and the water heater. This prevents the backflow pressure from exceeding the 10 bar pressure limit the pump is designed for.

The maximum inlet pressure must not exceed 6 bar, and the maximum system pressure must not exceed 10 bar.

We recommend installing a pressure-relief valve to protect the pump so that the outlet pressure does not exceed the maximum system pressure.

## 5. Mechanical installation

**! DANGER**  
**Electric shock**  
Death or serious personal injury



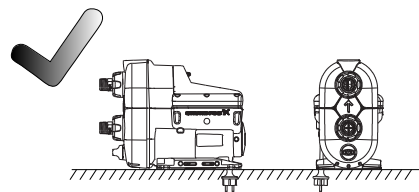
- Switch off the power supply before you start any work on the product. Make sure that the power supply cannot be switched on accidentally.

### 5.1 Positioning the product

Always mount the pump on the base plate in a horizontal position with a maximum inclination angle of  $\pm 5^\circ$ .

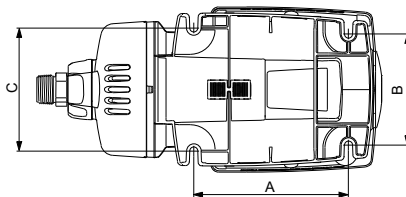
### 5.2 Foundation

Fasten the pump to a solid horizontal foundation by means of screws through the holes in the base plate. See the figures below.



TM086089

Horizontal foundation



TM063809

Base plate

Pos.	[mm (inch)]
A	181 (7.13)
B	130 (5.12)
C	144 (5.67)

### 5.3 Connecting the pipe system

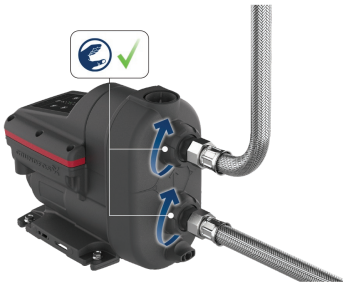


Make sure that the pump is not stressed by the pipe system.



Always loosen and tighten the union nuts on the inlet and outlet ports by hand. Damage to the inlet and outlet parts increases the risk of leakage.

1. Turn the union nuts by hand to loosen the inlet and outlet ports. See the figure below.



TM085691

2. Seal the pipe fittings with thread sealing tape.

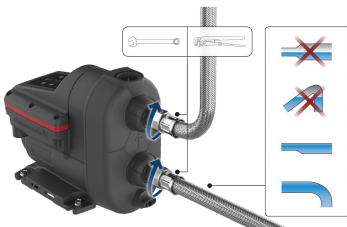


If the pipe is sealed with flat gaskets, do not use sealing tape.



Do not use packing yarn when installing the product.

3. Carefully screw the inlet and outlet connections to the pipe fittings using a pipe wrench or similar tool. Keep the union nut on the pipe fitting if you have removed it from the pump. The pump is equipped with flexible connections,  $\pm 5^\circ$ , to facilitate the connection of inlet and outlet pipes. See the figure below.



TM085690

4. Fasten the connections to the inlet and outlet. Hold the connection with one hand and tighten the union nut with the other hand.

### 5.4 Condensation

When SCALA2 is installed in a warm room and is pumping cold water, there is a risk of condensation forming on the pump and associated components.

We recommend that you place the product on a drip tray and install it in a room with a drain. This precaution is essential to prevent potential damage to the surroundings and to ensure safe and efficient operation of the product.

- **Drip tray:** Placing the product on a drip tray helps contain any minor leakages or spills that may occur during operation. This can prevent water from coming into contact with the floor, which could cause personal injury or damage to the product.
- **Room with a drain:** Installing the product in a room with a drain serves as an additional safety measure. In the event of a significant leakage or malfunction, the drain carries away excess water or liquids, reducing the risk of flooding or water damage.

## 5.5 How to reduce noise in the installation

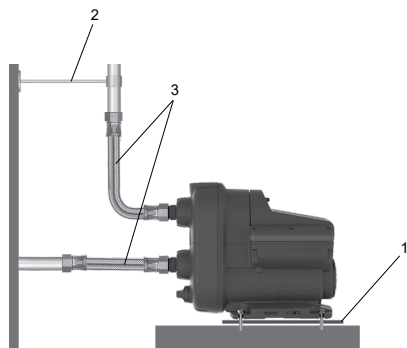


We recommend using flexible hoses and mounting the pump on a vibration-damping rubber pad.

Vibrations from the pump may be transferred to the surrounding structure and create noise in the 20-1000 Hz spectrum, also called the bass spectrum.

Correct installation using a vibration-damping rubber pad, flexible hoses and correctly placed pipe hangers for rigid pipes can reduce the noise experienced by up to 50 %.

Place pipe hangers for the rigid pipes close to the connection of the flexible hose.



TM064321

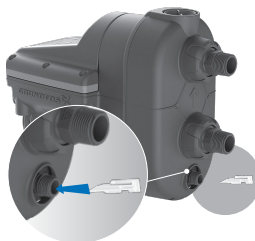
*How to reduce noise in the installation*

Pos.	Description
1	Rubber pad
2	Pipe hanger for rigid pipe
3	Flexible hose

## 5.6 Locking pin

The pump may produce a clicking noise if there is positive pressure at the inlet of the pump. In this case, you can mount a locking pin to avoid this noise. When a locking pin is mounted, the self-priming function is not applicable.

If the pump has a negative pressure at the inlet, removing the locking pin is necessary to enable the self-priming function.

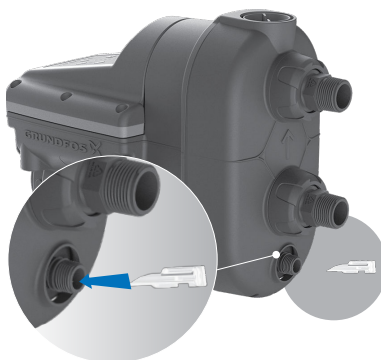


TM1040380

### 5.6.1 Mounting the locking pin

To mount the locking pin, proceed as follows:

1. Turn off the pump.
2. Close the inlet and outlet valves to the pump to avoid backflow.
3. Loosen and remove the drain plug.
4. Insert the locking pin.



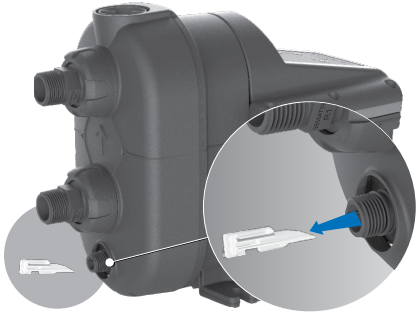
TM1040380

5. Mount and tighten the drain plug.
6. Open the inlet and outlet valves and turn on the pump.
7. If necessary, prime the pump.

### 5.6.2 Removing the locking pin

To remove the locking pin, proceed as follows:

1. Turn off the pump.
2. Close the inlet and outlet valves to the pump to avoid backflow.
3. Loosen and remove the drain plug.
4. Remove the locking pin with a small plier.



TM1040381

5. Mount and tighten the drain plug.
6. Open the inlet and outlet valves and turn on the pump.

### 5.7 Installation examples

Fittings, hoses and valves are not supplied with the pump.

We recommend to follow the installation examples in sections Mains water pressure boosting to Suction from freshwater tank.



All installations must be carried out in accordance with local regulations.

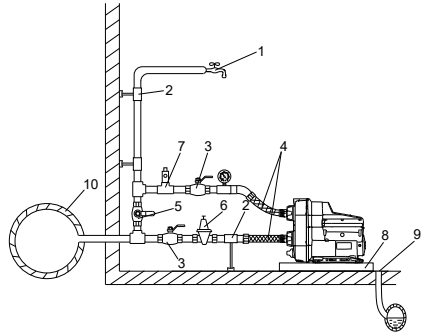
#### Related information

- [5.7.1 Mains water pressure boosting](#)
- [5.7.3 Suction from a well](#)
- [5.7.4 Suction from freshwater tank](#)
- [5.7.5 Inlet pipe length](#)

### 5.7.1 Mains water pressure boosting



In some countries, boosting from the city water mains is prohibited. Please follow local regulations regarding this application.



Mains water pressure boosting, SCALA2

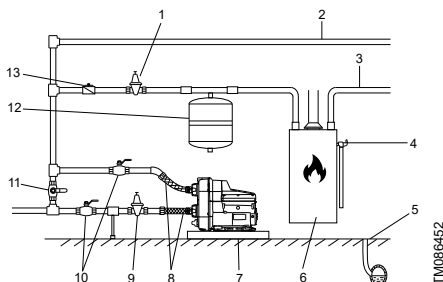
Pos.	Description
1	Highest tapping point
2	Pipe hangers and supports
3	Isolating valves
4	Flexible hoses
5	Bypass valve
6	Optional pressure-reducing valve on the inlet side if the pressure can exceed 10 bar (145 psi).
7	Optional pressure-relief valve on the outlet side if the pressure can exceed 10 bar (145 psi).
8	Drip tray. Install the pump on a small stand to prevent the ventilation holes from being flooded.
9	Drain to sewer
10	Mains water pipe

### 5.7.2 Thermal expansion

When using SCALA2 in installations with water heaters, you must use a non-return valve, pressure-relief valve or a thermal expansion tank between SCALA2 and the water heater. This prevents the backflow pressure from exceeding the 10 bar pressure limit the pump is designed for.

When water is heated in a closed-loop system, its volume increases. A thermal expansion tank is most often used to absorb the additional volume created by this process. The small reservoir inside SCALA2 is built to prevent cycling and cannot compensate for thermal expansion.

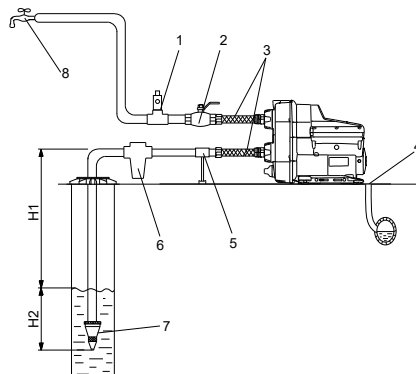
Always consult the applicable water heater manufacturer specifications as installations may vary.



Installation example

Pos.	Description
1	Pressure-relief valve (optional)
2	Cold water
3	Hot water
4	Temperature and pressure valve
5	Drain to sewer
6	Water heater
7	Drip tray. Install the pump on a small stand to prevent the ventilation holes from being flooded.
8	Flexible hoses
9	Optional pressure-reducing valve on the inlet side if the pressure can exceed 10 bar (145 psi).
10	Isolating valves
11	Bypass valve
12	Expansion tank
13	Non-return valve

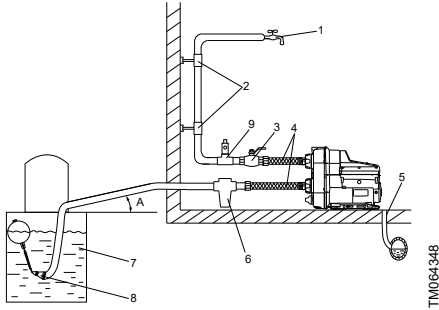
### 5.7.3 Suction from a well



Suction from a well

Pos.	Description
1	Optional pressure-relief valve on the outlet side if the pressure can exceed 10 bar (145 psi).
2	Isolating valve
3	Flexible hoses
4	Drain to sewer
5	Pipe support
	Inlet filter
6	If the water may contain sand, gravel or other debris, install a filter on the inlet side to protect the pump and installation.
7	Foot valve with strainer (recommended)
8	Highest tapping point
H1	Maximum suction lift is 8 m (26 ft).
H2	Inlet pipe must be submersed at least 0.5 m (1.64 ft).

### 5.7.4 Suction from freshwater tank



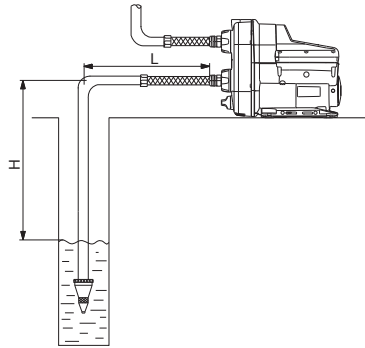
TM064348

Suction from freshwater tank

Pos.	Description
1	Highest tapping point
2	Pipe hangers
3	Isolating valve
4	Flexible hoses
5	Drain to sewer
6	Inlet filter. If the water may contain sand, gravel or other debris, please install a filter on the inlet side to protect the pump and installation.
7	Freshwater tank
8	Foot valve with strainer (recommended)
9	Optional pressure-relief valve on the outlet side if the pressure can exceed 10 bar (145 psi).
A	Minimum 1° inclination

### 5.7.5 Inlet pipe length

The overview below shows the different possible inlet pipe lengths, depending on the vertical pipe length. The overview is only intended as a guide.



TM064372

Inlet pipe length

DN 32		DN 40	
H	L	H	L
[m (ft)]	[m (ft)]	[m (ft)]	[m (ft)]
0 (0)	68 (223)	0 (0)	207 (679)
3 (10)	43 (141)	3 (10)	129 (423)
6 (20)	17 (56)	6 (20)	52 (171)
7 (23)	9 (30)	7 (23)	26 (85)
8 (26)	0 (0)	8 (26)	0 (0)

#### Preconditions:

Maximum flow velocity	1 l/s (16 gpm)
Inside roughness of pipes	0.01 mm (0.0004 inch)

Size	Inside pipe diameter [mm (inch)]	Pressure loss [mm (psi/ft)]
DN 32	28 (1.1)	0.117 (5/100)
DN 40	35.2 (1.4)	0.0387 (1.6/100)

## 6. Electrical connection



Carry out the electrical connection according to local regulations.  
Check that the supply voltage and frequency correspond to the values stated on the nameplate.

### **DANGER**

#### **Electric shock**

Death or serious personal injury



- Switch off the power supply before you start any work on the product. Make sure that the power supply cannot be switched on accidentally.

### **DANGER**

#### **Electric shock**

Death or serious personal injury



- The pump must be earthed.
- The pump is supplied with a grounding conductor and grounding-type attachment plug. To reduce the risk of electric shock, be certain that the pump is connected only to a properly grounded, grounding type receptacle (protective earthing).
- If national legislation requires a Residual Current Device (RCD), a Ground Fault Circuit Interrupter (GFCI), or equivalent in the electrical installation, this must be type B (according to UL/IEC 61800-5-1) or better, due to the nature of the constant DC leakage current.



If the power supply cable is damaged, it must be replaced by the manufacturer, his service agent or similarly qualified persons in order to avoid hazard.



We recommend that you fit the permanent installation with a residual-current circuit breaker (RCCB) with a tripping current less than 30 mA.

## 6.1 Motor protection

The pump incorporates current and temperature dependent motor protection.

## 6.2 Plug connection

### **DANGER**

#### **Electric shock**

Death or serious personal injury



- Check that the power plug delivered with the product is in compliance with local regulations.
- Make sure that the pump is connected only to a properly grounded, grounding-type receptacle (protective earthing).
- The protective earth of the power outlet must be connected to the protective earth of the pump. The plug must therefore have the same PE connection system as the power outlet. If not, use a suitable adapter.

## 6.3 Connection without plug



The electrical connection must be carried out by an authorised electrician in accordance with local regulations.

### **DANGER**

#### **Electric shock**

Death or serious personal injury



- The pump must be connected to an external main switch with a minimum contact gap of 3 mm (0.12 inch) in all poles.

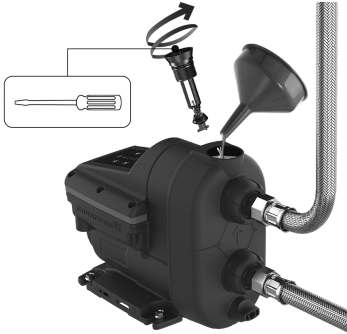
## 7. Starting up the product



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

### 7.1 Priming the pump

1. Unscrew the priming plug and pour minimum 1.7 litres (0.45 gallons) of water into the pump housing.



TM085892

2. Screw the priming plug on again.



TM085893



If the suction lift exceeds 6 m (20 ft), it may be necessary to prime the pump more than once.



Always tighten priming and drain plugs by hand.

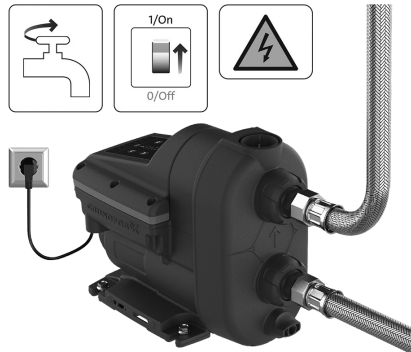
### Related information

[7.2 Starting the pump](#)

## 7.2 Starting the pump

1. Open a tap to prepare the pump for venting.
2. Insert the power plug into the socket or turn on the power supply and the pump will start.
3. When water flows without air, close the tap.
4. Open the highest tapping point in the installation, preferably a shower.
5. Adjust the pressure setpoint to the required pressure by means of the **Up** and **Down** buttons.
6. Close the tapping point.

Start-up has been completed.



TM085894

### Related information

[7.3 Pressure setting](#)



## 7.3 Pressure setting

The pump can be set to provide a water pressure between 1.5 to 5.5 bar (22 to 80 psi) at intervals of 0.5 bar (7 psi).

The factory setting is 3 bar (44 psi).



We recommend you to use the default pressure of 3.0 bar (44 psi) which will suit most applications.



The difference between the positive inlet pressure and outlet pressure must not exceed 3.5 bar (51 psi).

Example: If the inlet pressure is 0.5 bar (7 psi), the maximum outlet pressure is 4 bar (58 psi).



If you set the pressure too high, this might cause the pump to operate for up to three minutes after the tap is turned off. The maximum setpoint is 4 bar (58 psi).



You can achieve more energy efficient operation and prolong the life of the pump by making sure that the tank precharge pressure is optimised to 70 % of the setpoint of the pump. See the table below for recommended optimal tank precharge pressure.

### Optimal tank precharge pressure

Setpoint [bar (psi)]	Optimal tank precharge pressure setting [bar (psi)]
5.5 (80)	3.9 (57) <sup>1)</sup>
5 (73)	3.5 (51) <sup>1)</sup>
4.5 (65)	3.2 (46) <sup>1)</sup>
4 (58)	2.8 (4.1) <sup>1)</sup>
3.5 (51)	2.5 (36)
3 (44)	2.1 (30)
2.5 (36)	1.8 (26)
2 (29)	1.4 (20)
1.5 (22)	1.1 (16)

<sup>1)</sup> Only with positive inlet pressure. The factory precharge pressure is 1.8 bar.

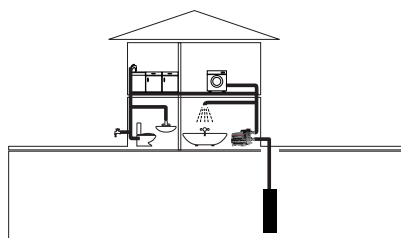
### Related information

#### [4.2 System sizing](#)

### 7.3.1 Boosting from a well or a tank

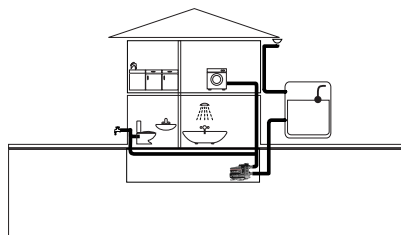
If you are boosting from a well or a tank, make sure not to set the pressure setpoint too high. The difference between the inlet pressure and outlet pressure must not exceed 3.5 bar (51 psi).

Maximum setpoint	[bar (psi)]
Well application	3.0 (44)
Tank below ground level	3.5 (51)
Tank above ground level	4.0 (58)



TM070075

Boosting from a well

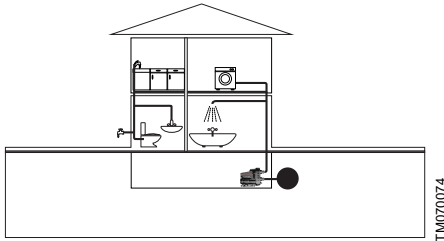


TM070076

Boosting from a tank

### 7.3.2 Boosting from the mains

The pressure settings 4, 4.5, 5.0 and 5.5 bar (58, 65, 73 and 80 psi) require a positive inlet pressure, and these settings must only be used when boosting from the water mains.



*Boosting from the mains*

### 7.3.3 Self-learning setpoint

If the pump cannot reach the user-defined pressure setpoint, the self-learning function will automatically lower the setpoint.

#### Related information

[10.3.2 Self-learning function](#)

### 7.4 Shaft seal run-in

The shaft seal faces are lubricated by the pumped liquid. A slight leakage from the shaft seal of up to 10 ml per day or 8 to 10 drops per hour may occur.

When the pump is started up for the first time, or when the shaft seal has been replaced, a certain run-in period is required before the leakage is reduced to an acceptable level. The time required for this depends on the operating conditions, that is, every time the operating conditions change, a new run-in period will be started.

Under normal conditions, the leaking liquid will evaporate. As a result, no leakage will be detected.

If the unlikely event of an internal leakage occurs, the liquid will be drained through the bottom of the pump. Install the pump in such a way that no undesirable collateral damage can arise.

## 8. Handling and storing the product

### 8.1 Handling the product



Take care not to drop the pump as it may break.

### 8.2 Storing the product

If the pump is to be stored for a period of time, for example during the winter, drain it and store it indoors in a dry location.

Temperature range during storing must be  $-40$  to  $+70$  °C ( $-40$  to  $+158$  °F).

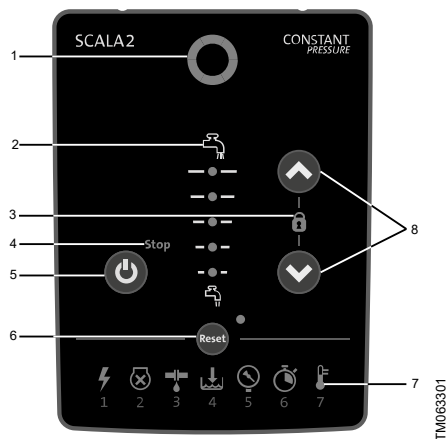
Maximum relative humidity during storing	95 % RH
--	---------

#### Related information

[12. Starting up the product after standstill](#)

## 9. Control functions

### 9.1 Menu overview, SCALA2



TM063301

SCALA2 operating panel

Pos.	Description
1	<b>Grundfos Eye</b>
2	<b>Pressure indicator:</b> This indicator light shows the required outlet pressure.
3	<b>Lock:</b> When this symbol is lit, it indicates that the operating panel is locked.
4	<b>Stop:</b> When this symbol is lit, it indicates that the pump has been stopped manually.
5	<b>On/off:</b> This button turns the pump on and off.
6	<b>Reset:</b> This button resets alarms.
7	<b>Fault indicator lights:</b> An indicator light will be lit to indicate a fault.
8	<b>Up:</b> This button increases the outlet pressure. <b>Down:</b> This button decreases the outlet pressure.

#### Related information

[9.1.2 Indicator lights for SCALA2](#)

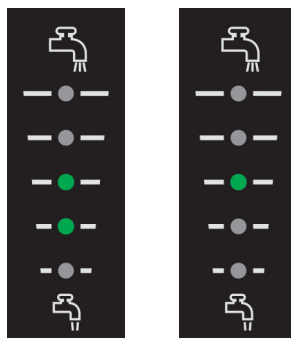
[9.1.1 Pressure indicator, SCALA2](#)

#### 9.1.1 Pressure indicator, SCALA2

The pressure indicator shows the required outlet pressure from 1.5 to 5.5 bars (22 to 80 psi) in 0.5 bar (7.5 psi) intervals.

The illustration below shows a pump set to 3 bar (44 psi) indicated by two green lights, and a pump set to 3.5 bar (51 psi) indicated by one green light.

Flashing green lights indicate that the pump has automatically lowered the pressure.



TM064345

SCALA2 outlet pressure indication

	BAR	PSI	Water column [m]	kPa	MPa
	5.5	80	55	550	0.55
	5.0	73	50	500	0.50
	4.5	65	45	450	0.45
	4.0	58	40	400	0.40
	3.5	51	35	350	0.35
	3.0	44	30	300	0.30
	2.5	36	25	250	0.25
	2.0	30	20	200	0.20
	1.5	22	15	150	0.15
















TM064187

Pressure indication table

#### Related information

[7.3.3 Self-learning setpoint](#)

### 9.1.2 Indicator lights for SCALA2

Indications	Description
	Operating indications
	The operating panel is locked.
	Power supply failure
	1
	2
	3
	Leakage in the installation after the pump
	4
	Dry running or water shortage <sup>2)</sup>
	5
	The maximum pressure has been exceeded or the setpoint cannot be reached.
	6
	The maximum runtime has been exceeded.
	7
	The temperature is outside the range.

2) For fault number 4, dry running, the pump must be reset manually.

For fault number 1, 2, 3, 5, 6 and 7, the pump resets whenever the cause has disappeared or been remedied. You can always reset the pump manually.

### Related information

[10.3.3 Auto reset](#)

## 10. Setting the product

The pump will remember the controller settings even if it is turned off.

### 10.1 Setting the outlet pressure

Adjust the outlet pressure by pressing the **Up** and **Down** buttons.

### 10.2 Locking and unlocking the operating panel

The operating panel can be locked, which means that the buttons do not function and no settings can be changed accidentally.

#### How to lock the operating panel

1. Hold down the **Up** and **Down** buttons simultaneously for 3 seconds.
2. The operating panel is locked when the **Lock** symbol lights up.

#### How to unlock the operating panel

1. Hold down the **Up** and **Down** buttons simultaneously for 3 seconds.
2. The operating panel is unlocked when the **Lock** symbol turns off.

## 10.3 Expert settings, SCALA2



Expert settings are for installers only.

The expert settings allow the installer to toggle between the following functions:

- self-learning
- auto reset
- micro-leakage detection
- maximum continuous operating time.

### 10.3.1 Accessing the expert settings

Proceed as follows:

1. Hold down the **Reset** button for 5 seconds.
2. The fault indicator light 1 will start flashing to indicate that the expert settings are active.

The pressure indicator now acts as menu for the expert settings. A flashing green diode is the cursor. Move the cursor using the **Up** and **Down** buttons, and toggle the setting on or off using the **Reset** button. The LED for each setting lights up when the setting is active.



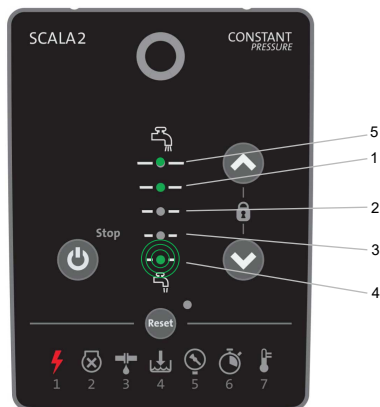
Move cursor up.



Move cursor down.



Toggle settings.



TM064346

Overview of menu for expert settings

Pos.	Description
1	Auto reset
2	Micro-leakage detection
3	Maximum continuous operating time
4	Exit expert settings
5	Self-learning

### 10.3.2 Self-learning function

The factory setting for this function is on.

#### On

If the pump cannot reach the user-defined pressure setpoint, the self-learning function automatically adjusts the setpoint. This process may take up to 5 minutes.

The pump lowers the setpoint to either 4.5, 3.5 or 2.5 bar (65, 51 or 36 psi).

The self-learned setpoint is indicated on the operating panel by one flashing green light.

After every 24 hours, the pump automatically attempts to revert to the original user-defined setpoint. If this is not possible, the pump again returns to the self-learned setpoint. The pump continues to operate with the self-learning setpoint until the user-defined setpoint can be reached.

Example:

The user-defined pressure is set to 5 bar (72 psi), indicated by constant green lights on the pressure indicator panel.

The pump is unable to reach this pressure due to negative pressure on the inlet side.

The self-learning function automatically adjusts the setpoint to 3.5 bar (51 psi), indicated by one flashing green light on the pressure indicator panel.

After 24 hours, the pump automatically tries to adjust the setpoint back to 5 bar (72 psi).



User-defined setpoint (left) and self-learned setpoint (right)

#### How to reset the self-learned setpoint

1. You can manually reset the settings by pressing any button on the operating panel. The pump immediately tries to reach the original setpoint.
2. If the pump keeps reducing the setpoint due to self-learning, we recommend to reduce the setpoint manually on the operating panel.

#### Off

If you set the self-learning function to off and the pump is unable to reach the desired setpoint, the pump shows alarm 5.

### 10.3.3 Auto reset

The factory setting for this function is on.

#### On

This function allows the pump to automatically check if the operating conditions are back to normal. If the operating conditions are back to normal, the alarm indication will be reset automatically.

The auto reset function works in the following way:

Indication	Action
Water shortage	The pump will attempt eight restarts at five-minute intervals. If not successful, this cycle will be repeated after 24 hours.
Dry running (pump not primed)	Prime the pump and reset it manually.
All other indications	The pump will attempt three restarts within the first 60 seconds, then eight restart attempts at five-minute intervals. If not successful, this cycle will be repeated after 24 hours.

#### Off

All alarms must be reset manually by means of the **Reset** button.

#### Related information

[9.1.2 Indicator lights for SCALA2](#)

### 10.3.4 Micro-leakage detection

The factory setting for this function is off.

This function monitors the starts and stops of the pump.

#### Off

If the pump starts 40 times in a fixed pattern, there will be an alarm. The pump remains in operation as normal.

#### On

If the pump starts and stops in a fixed pattern, there is a leakage in the installation after the pump, and the pump stops and shows alarm 3.



Leakage in the installation after the pump

### 10.3.5 Maximum continuous operating time

The factory setting for this function is off.

This function is a timer that can turn off the pump if it runs continuously for 30 minutes.

#### Off

If the pump exceeds the running time of 30 minutes, the pump will run depending on the flow.

#### On

If the pump exceeds the running time of 30 minutes, the pump will stop after 30 minutes of continuous operation, and it will show alarm 6. This alarm will always need to be reset manually.



Maximum runtime exceeded

## 10.4 Resetting to factory settings

The pump can be reset to factory setting by pressing the **Down** and **Reset** buttons simultaneously for 5 seconds.

## 11. Servicing the product

### ⚠ DANGER

#### Electric shock

Death or serious personal injury



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

## 11.1 Maintaining the product

### 11.1.1 Pressure tank

To ensure optimal performance and long pump life, check the precharge pressure in the built-in pressure tank once a year and adjust to correct value, if required. To adjust the precharge pressure, do the following:

1. Stop the pump by pressing the **Stop** button. Observe that the LED turns yellow.
2. Open a tap to allow the water to run out in order to release all pressure from the system. The tap must remain open until the tank precharge pressure has been adjusted.
3. Without using tools, remove the cap from the pressure tank valve.
4. Adjust the precharge pressure in the tank to 70 % of the setpoint value.
5. Return the cap to the pressure tank valve. Make sure the cap is fully tight.
6. Start the pump again.
7. Close the tap.

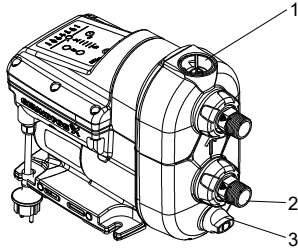
Scan the QR code below for more information on precharging the pressure tank.



<http://net.grundfos.com/qri/92887983>

### 11.1.2 Cleaning the inlet and outlet valves

Check and clean the inlet and outlet valves once a year or as needed.



SCALA2 pump

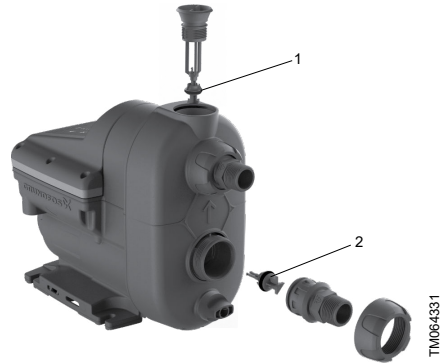
#### To remove the inlet valve, follow the steps below:

1. Turn off the power supply and disconnect the power plug.
2. Shut off the water source.
3. Open a tap to release the pressure in the pipe system.
4. Close the isolating valves and/or drain the pipes.
5. Gradually open and remove the priming plug. See the figure above (1).
6. Remove the drain plug and drain the pump. See the figure above (3).
7. Unscrew the union nut holding the inlet connection. See the figure above (2). Depending on the installation type, it may be necessary to remove the pipes from both the inlet and outlet connections.
8. Pull out the inlet connection.
9. Pull out the inlet valve.
10. Clean the inlet valve with warm water and a soft brush.
11. Assemble the components in reverse order.

#### To remove the outlet valve, follow the steps below:

1. Turn off the power supply and disconnect the power plug.
2. Shut off the water source.
3. Open a tap to release the pressure in the pipe system.
4. Close the isolating valves and/or drain the pipes.
5. Gradually open and remove the priming plug. See the figure above (1). The plug and valve are one unit.

6. Clean the valve with warm water and a soft brush.
7. Assemble the components in reverse order.



Outlet and inlet valves

Pos.	Description
1	Outlet valve
2	Inlet valve

### 11.2 Customer service information

For further information on service parts, see Grundfos Product Center on [www.product-selection.grundfos.com](http://www.product-selection.grundfos.com).

### 11.3 Service kits

For further information on service kits, see Grundfos Product Center at [www.product-selection.grundfos.com](http://www.product-selection.grundfos.com).



## 12. Starting up the product after standstill

1. Check that the pump is not blocked.
2. If the pump has been drained, it must be filled with liquid before startup.
3. Start up the pump.
4. The pump will remember the controller settings even if it is turned off.

### Related information

[7. Starting up the product](#)

[7.1 Priming the pump](#)

[12.1 Deblocking the pump](#)

### 12.1 Deblocking the pump

#### **DANGER**

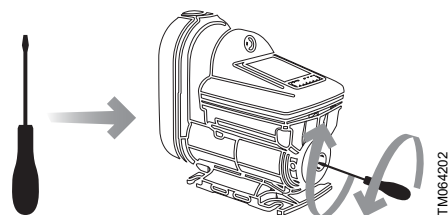
#### **Electric shock**

Death or serious personal injury



- Switch off the power supply before you start any work on the product. Make sure that the power supply cannot be switched on accidentally.

The end cover incorporates a plug which can be removed by means of a suitable tool. This makes it possible to deblock the pump shaft if it has seized up as a result of inactivity.



*Deblocking the pump*

## 13. Taking the product out of operation

If the pump is taken out of operation for a period of time, for example during the winter, it must be disconnected from the power supply and placed in a dry location.

Proceed as follows:

1. Stop the pump by means of the **On/off** button.
2. Disconnect the power supply.
3. Open a tap to release the pressure in the pipe system.
4. Close the isolating valves and/or drain the pipes.
5. Gradually loosen the priming plug to release the pressure in the pump.
6. Remove the drain plug to drain the pump. See the figure below.
7. We recommend storing the pump indoors in a dry location. Due to humidity, the disconnected pump must not be left outside for a longer period of time.



*Draining the pump*

TM064-203

## 14. Fault finding

### DANGER






#### Electric shock

Death or serious personal injury



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

### 14.1 Grundfos Eye operating indications

Grundfos Eye	Indication	Description
	TM053827 No lights are on.	<b>Power off</b> The pump is not running.
	TM053829 Two opposite green indicator lights running in the direction of rotation of the pump.	<b>Power on</b> The pump is running.
	TM053806 Two opposite green indicator lights are permanently on.	<b>Power on</b> The pump is not running.
	TM053839 Two opposite red indicator lights are flashing simultaneously.	<b>Alarm</b> The pump has stopped.
	TM1040615 Two opposite red indicator lights are flashing three to five times and in between two opposite green indicator lights are flashing one time.	<b>Alarm</b> The pump has stopped. Contact Grundfos.

### 14.2 Fault resetting

You can reset a fault indication in one of the following ways:

- When you have eliminated the fault cause, reset the pump manually by pressing the **Reset** button. The pump will then revert to normal duty.
- If the fault disappears by itself, the pump will attempt to reset automatically and the fault indication will disappear if automatic reset is successful and provided that you have enabled the auto reset function in the service menu.

### 14.3 The pump is not running

#### Grundfos Eye:

No lights are on.



Cause	Remedy
Power supply failure.	<ol style="list-style-type: none"> <li>1. Switch on the power supply.</li> <li>2. Check the cables and cable connections for defects and loose connections.</li> <li>3. Check for blown fuses in the electrical installation.</li> </ol>

### 14.4 The pump is not running, and indicator light 1 is on

#### Grundfos Eye:

Two opposite green indicator lights are permanently on.



Indicator light 1 is on, indicating power supply failure.



Cause	Remedy
The power supply is out of prescribed voltage range.	<ol style="list-style-type: none"> <li>1. Check the power supply and the pump nameplate.</li> <li>2. Reestablish the power supply within the prescribed voltage range.</li> </ol>

### 14.5 The pump is not running, and indicator light 2 is on

#### Grundfos Eye:

Two opposite red indicator lights are flashing simultaneously.



Indicator light 2 is on, indicating that the pump is blocked, for instance the shaft seal has seized up.



Cause	Remedy
The pump is blocked by impurities.	<ol style="list-style-type: none"> <li>1. Check that the pump is not blocked.</li> <li>2. If the pump has been drained, it must be filled with liquid before startup.</li> <li>3. Start up the pump.</li> <li>4. The pump will remember the controller settings even if it is turned off. Contact Grundfos Service if the problem persists.</li> </ol>
The shaft seal has seized up.	<ol style="list-style-type: none"> <li>1. Check that the pump is not blocked.</li> <li>2. If the pump has been drained, it must be filled with liquid before startup.</li> <li>3. Start up the pump.</li> <li>4. The pump will remember the controller settings even if it is turned off. Contact Grundfos Service if the problem persists.</li> </ol>

### 14.6 The pump is not running, and indicator light 4 is on

#### Grundfos Eye:

Two opposite green indicator lights are permanently on.



Indicator light 4 is on, indicating dry running or water shortage.



Cause	Remedy
Dry running.	<ul style="list-style-type: none"> <li>Check the water source, and prime the pump.</li> </ul>

### 14.7 The pump is not running, and indicator light 3 is on

#### Grundfos Eye:

Two opposite red indicator lights are flashing simultaneously.



Indicator light 3 is on, indicating leakage in the installation after the pump.



Cause	Remedy
The internal valve is defective or blocked in completely or partly open position.	<ul style="list-style-type: none"> <li>Clean, repair or replace the internal valve.</li> </ul>

### 14.8 The pump is not running, and indicator light 6 is on

#### Grundfos Eye:

Two opposite green indicator lights are permanently on.



Indicator light 6 is on, indicating that the maximum runtime has been exceeded.



Cause	Remedy
The maximum runtime has been exceeded.	<ul style="list-style-type: none"> <li>Check the installation for leakage and reset the alarm.</li> </ul>

### 14.9 The pump is running, and indicator light 3 is on

#### Grundfos Eye:

Two opposite green indicator lights are rotating.



Indicator light 3 is on, indicating leakage in the installation after the pump.



Cause	Remedy
Leakage from the pipe system, or the external non-return valve is not properly closed due to impurities.	<ul style="list-style-type: none"> <li>Check and repair the pipe system, or clean, repair or replace the external non-return valve.</li> </ul>
Small continuous consumption.	<ul style="list-style-type: none"> <li>Check the taps and reconsider the usage pattern (for example, ice machines and water evaporators for air-conditioning).</li> </ul>

## 14.10 The pump is running, and indicator light 7 is on

### Grundfos Eye:

Two opposite green indicator lights are rotating.



Indicator light 7 is on, indicating that the temperature is outside the range.



Cause	Remedy
The temperature of the pump and water is below 3 °C.	<ul style="list-style-type: none"> <li>Consider protecting the pump and the installation against frost.</li> </ul>

## 14.11 Insufficient pump performance

### Grundfos Eye:

Two opposite green indicator lights are rotating.



Cause	Remedy
The pump inlet pressure is too low.	<ul style="list-style-type: none"> <li>Check the inlet conditions of the pump.</li> </ul>
The pump is undersized.	<ul style="list-style-type: none"> <li>Replace the pump with a bigger pump.</li> </ul>
The inlet pipe, the inlet strainer or the pump is partly blocked by impurities.	<ul style="list-style-type: none"> <li>Clean the inlet pipe or the pump.</li> </ul>
There is a leakage in the inlet pipe.	<ul style="list-style-type: none"> <li>Repair the inlet pipe.</li> </ul>
There is air in the inlet pipe or the pump.	<ul style="list-style-type: none"> <li>Prime the inlet pipe and the pump.</li> <li>Check the inlet conditions of the pump.</li> </ul>
The required outlet pressure is too low for the installation.	<ul style="list-style-type: none"> <li>Increase the pressure setting (arrow up).</li> </ul>

## 14.12 Insufficient pump performance, and indicator light 7 is on

### Grundfos Eye:

Two opposite green indicator lights are rotating.



Indicator light 7 is on, indicating that the temperature is outside the range.



Cause	Remedy
The maximum temperature has been exceeded, and the pump is running at reduced performance.	<ul style="list-style-type: none"> <li>Check the cooling conditions. Protect the pump against direct sunlight or any nearby heat sources.</li> </ul>

### 14.13 System overpressure, and indicator light 5 is on

#### Grundfos Eye:

Two opposite green indicator lights are rotating.



Indicator light 5 is on, indicating that the maximum pressure has been exceeded or the setpoint cannot be reached.



Cause	Remedy
The setpoint is set too high. The difference between the outlet pressure and the inlet pressure must not exceed 3.5 bar, 0.35 MPa (51 psi).	<ul style="list-style-type: none"> <li>Reduce the pressure to a new setpoint (maximum 3.5 bar, 0.35 MPa (51 psi) + positive inlet pressure). Example: If the inlet pressure is 0.5 bar, 0.05 MPa (7 psi), the maximum outlet pressure is 4 bar, 0.4 MPa (58 psi).</li> </ul>
The maximum pressure has been exceeded, the inlet pressure is higher than 6 bar, 0.6 MPa (87 psi).	<ul style="list-style-type: none"> <li>Check the inlet conditions.</li> </ul>
The maximum pressure has been exceeded. Equipment elsewhere in the system causes a high pressure at the pump, for example water heater or defective safety equipment.	<ul style="list-style-type: none"> <li>Check the installation.</li> </ul>

### 14.14 After a reset, the pump runs briefly, and indicator light 4 is on

#### Grundfos Eye:

Two opposite green indicator lights are rotating.



Indicator light 4 is on, indicating dry running or water shortage.



Cause	Remedy
Dry running or water shortage.	<ul style="list-style-type: none"> <li>Check the water source, and prime the pump.</li> </ul>
The inlet pipe is blocked by impurities.	<ul style="list-style-type: none"> <li>Clean the inlet pipe.</li> </ul>
The foot or internal valve is blocked in closed position.	<ul style="list-style-type: none"> <li>Clean, repair or replace the foot or internal valve.</li> </ul>
There is a leakage in the inlet pipe.	<ul style="list-style-type: none"> <li>Repair the inlet pipe.</li> </ul>
Air in the inlet pipe or the pump.	<ul style="list-style-type: none"> <li>Prime the inlet pipe and the pump. Check the inlet conditions of the pump.</li> </ul>

### 14.15 After resetting, the pump immediately restarts, and indicator light 3 is on

#### Grundfos Eye:

Two opposite green indicator lights are rotating.



Indicator light 3 is on, indicating leakage in the installation after the pump.



Cause	Remedy
The internal valve is defective or blocked in completely or partly open position.	<ul style="list-style-type: none"> <li>Clean, repair or replace the internal valve.</li> </ul>
The tank precharge pressure is not correct.	<ul style="list-style-type: none"> <li>Adjust the tank precharge pressure to 70 % of the required outlet pressure.</li> </ul>

## 15. Technical data

### 15.1 Operating conditions

Temperature	[°C (°F)]
Max. ambient temperature	
1 × 208-230 V, 60 Hz:	45 (113)
1 × 115 V, 60 Hz:	45 (113)
1 × 200-240 V, 50/60 Hz:	55 (131)
Max. liquid temperature	45 (113)

Pressure	[bar (psi)]	[MPa]
Max. system pressure	10 (145)	1
Max. inlet pressure	6 (87)	0.6

#### Other operating data

Max. head	45 m (147 ft)
IP rating	X4D (outdoor installation)
Pumped liquid	Clean water
Noise level	< 44 dB(A) <sup>3)</sup>

<sup>3)</sup> 44 dB(A) is measured in a typical application at duty point Q = 1 m<sup>3</sup>/h and H = 19 m in accordance with ISO 3745.

### 15.2 Mechanical data

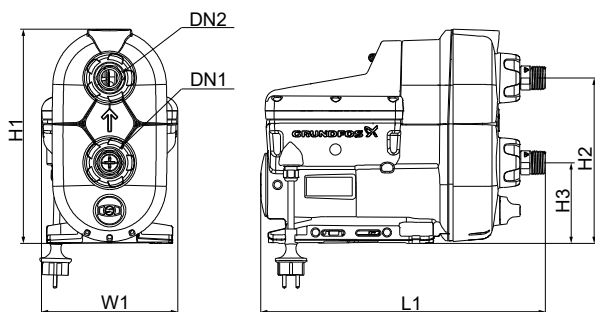
Pipe connections are R 1" or NPT 1".

### 15.3 Electrical data

Supply voltage [V]	Frequency [Hz]	I <sub>max.</sub> [A]	P <sub>1</sub> [W]	Stand-by power [W]
1 × 200-240	50/60	2.8	550	2
				2
				2
				2
1 × 208-230	60	2.8	550	2
1 × 115	60	4.9	550	2

Supply voltage [V]	Frequency [Hz]	Plug
1 × 200-240	50/60	Schuko
		Schuko EAC
		Schuko SNI
		AUS
		UK
		ARG
		Chile
		Thailand
		India
		None
		No plug CN
		No plug AR1
		No plug AR2
		1 × 208-230
1 × 115	60	IEC, type B, NEMA 5-15P
		Japan
		None

## 15.4 Dimensions and weights



Dimensions of SCALA2

	H1	H2	H3	L1	W1	DN1	DN2	Weight
	[mm]	[mm]	[mm]	[mm]	[mm]			[kg]
	[inch]	[inch]	[inch]	[inch]	[inch]			[lb]
SCALA2	302	234	114	403	193	R 1	R 1	10
	11.9	9.2	4.5	15.9	7.6	NPT 1"	NPT 1"	22

TM086088



## 16. Disposing of the product

This product has been designed with focus on the disposal and recycling of materials. The following disposal values apply to all variants of Grundfos SCALA2 pumps:

- minimum 85 % for recycling
- maximum 10 % for incineration
- maximum 5 % for depositing.

Values are percent of total weight.

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

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



The crossed-out wheeled bin symbol on a product means that it must be disposed of separately from household waste. When a product marked with this symbol reaches its end of life, take it to a collection point designated by the local waste disposal authorities. The separate collection and recycling of such products will help protect the environment and human health.

See also end-of-life information at [www.grundfos.com/product-recycling](http://www.grundfos.com/product-recycling).

## 17. Document quality feedback

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## Limited consumer warranty

### 1. Limited consumer warranty

This Limited Warranty is provided for Consumer Products sold in the United States only and applies to Consumer Transactions as defined in and applicable under the Magnusson-Moss Warranty Act and any other applicable Federal and/or State laws. In case of non-Consumer Products, please refer to Grundfos' warranty terms defined in clause 10 of Grundfos US Terms and Conditions of Sale of Product and Services available at <https://www.grundfos.com/legal/grundfos-customer-terms/usa-grundfos-general-terms-for-sales-of-products-and-services>

**This Limited Warranty gives you specific legal rights, and you may also have other rights which vary from State to State.**

New products manufactured by Grundfos are warranted to the original purchaser only and are to be free from defects in design, material and workmanship under normal use and service for no greater than a period of thirty (30) months from the date of manufacture which is set forth on the product's nameplate and on the product's packaging or the minimum period required by the applicable State law. For New Jersey, the applicable period is one year from the date of purchase.

The warranty period for replacement products, parts and components expires thirty (30) months from the original date of manufacture of the product originally purchased, unless a longer period is required under the applicable State law. For New Jersey, the warranty period for replacement products, parts and components expires one year from the original date of purchase of the product, not the date of replacement.

Products sold by Grundfos that are manufactured by others are not covered by this warranty.

**Note that when purchasing a Grundfos product online, it is important to check the date of manufacture and the duration of the warranty with the seller as the product might no longer be covered under this Limited Warranty.**

**When a product is subject to this Limited Warranty a purchaser should contact the seller from which it purchased the product to make a claim.**

If the seller of a product is no longer in business, the purchaser should contact a Grundfos Authorized Service Partner, which can be found at [www.grundfos.com/us](http://www.grundfos.com/us) under > Support > Contact Service.

As part of making a claim, a purchaser shall return a defective product at the purchaser's cost, to the extent allowed by applicable law, along with proof of purchase and an explanation of the defect, date the defect occurred and circumstances surrounding the defect. For New Jersey there is no prohibition on returning a defective product at a purchaser's cost. If Grundfos is required by applicable State law to pay for the cost of shipment under applicable State law, then a purchaser should contact a Grundfos Authorized Service Partner to arrange for shipment. A purchaser also needs to promptly respond to Grundfos as to any inquiries regarding a warranty claim.

**Grundfos' liability under this Limited Warranty to purchaser is limited to the repair or replacement of a product (at Grundfos' decision) that is the sole and exclusive remedy for purchaser to the extent permissible by applicable law.** For New Jersey this limitation is permissible.

This warranty does not cover the following: ordinary wear and tear; use of a product for applications for which it is not intended; use of a product in an unsuitable environment; modifications, alterations or repair undertaken by anyone not acting with Grundfos' written authorization; failure to follow Grundfos' instructions, operations manuals, any other guidelines or good industry practice; use of faulty or inadequate ancillary equipment in combination with a product; application of spare or replacement parts not provided or authorized by Grundfos; accidental or intentional damage or misuse of a product.

The time period for making a claim under the implied warranty of merchantability and implied warranty of fitness are limited to the same time period as provided by this warranty to the extent permissible by applicable law. For residents of New Jersey, this limitation is permissible, but note that some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

**Grundfos shall not be liable for any incidental and consequential damages in connection with a product to the extent permissible by applicable law.** For residents of New Jersey, this limitation is permissible, but note that some states do not allow limitations of incidental or consequential damages, so the above limitation may not apply to you.

## 2. Garantía limitada del consumidor

Esta garantía limitada se proporciona únicamente para los productos de consumo vendidos en los Estados Unidos y es aplicable a las transacciones de consumo tal y como se define en y resulta aplicable en virtud de la ley de Garantías Magnusson-Moss y cualquier otra legislación federal y/o estatal aplicable. Para el caso de productos que no sean de consumo, consulte los términos de la garantía de Grundfos definidos en la cláusula 10 de los términos y condiciones de venta de productos y servicios de Grundfos para los EE. UU., disponibles en <https://www.grundfos.com/legal/grundfos-customer-terms/usa-grundfos-general-terms-for-sales-of-products-and-services>.

**Esta garantía limitada le confiere derechos legales específicos. Puede que también tenga otros derechos en virtud de su jurisdicción estatal.**

Se garantiza únicamente al comprador original que los productos fabricados por Grundfos estarán libres de defectos de diseño, materiales y mano de obra en condiciones normales de uso y servicio durante un periodo no mayor a treinta (30) meses a partir de la fecha de fabricación que figura en la placa de datos del producto y en el empaque del mismo o el periodo mínimo exigido por la legislación estatal aplicable. Para Nueva Jersey, el periodo aplicable es de un año a partir de la fecha de compra.

El periodo de garantía para los productos, partes y componentes de repuesto vence a los treinta (30) meses contados a partir de la fecha de fabricación original del producto adquirido en primer lugar, a menos que la legislación estatal aplicable exija un periodo más largo. Para Nueva Jersey, el periodo de garantía de los productos, partes y componentes de repuesto vence un año contado a partir de la fecha original de compra del producto, no de la fecha de sustitución.

Los productos vendidos por Grundfos que sean producidos por otros fabricantes no están cubiertos por esta garantía.

**Tenga en cuenta que, al comprar un producto Grundfos en línea, es importante revisar la fecha de fabricación y la duración de la garantía con el vendedor, ya que es posible que el producto ya no esté cubierto por esta garantía limitada.**

**Cuando un producto esté sujeto a esta garantía limitada, el comprador deberá ponerse en contacto con el vendedor al que haya comprado el producto para presentar una reclamación.**

Si el vendedor de un producto ya no está en el negocio, el comprador debe ponerse en contacto con socio de servicio autorizado por Grundfos, que puede encontrar en la dirección [www.grundfos.com/us](http://www.grundfos.com/us), en la sección "Support" > "Contact Service".

Como parte de la presentación de una reclamación, el comprador deberá devolver el producto descompuesto a su costa, en la medida en la que lo permita la legislación aplicable, junto con el comprobante de compra y una explicación del defecto, la fecha en que este se haya producido y las circunstancias en torno al defecto. En Nueva Jersey no existe ninguna prohibición de devolver un producto descompuesto a costa del comprador. Si la legislación estatal aplicable obliga a Grundfos a hacerse cargo de los gastos de envío, el comprador deberá ponerse en contacto con un servicio técnico autorizado por Grundfos para organizar el envío. El comprador también debe responder con prontitud a Grundfos cualquier consulta relacionada con una reclamación de garantía.

**La responsabilidad de Grundfos hacia el comprador en virtud de esta garantía limitada se limita a la reparación o sustitución de un producto (a decisión de Grundfos), que es el único y exclusivo remedio para el comprador en la medida permitida por la legislación aplicable.** Para Nueva Jersey, esta limitación resulta permisible.

Esta garantía no cubre lo siguiente: el desgaste ordinario; el uso de un producto para aplicaciones para las que no está diseñado; el uso de un producto en un entorno inadecuado; las modificaciones, alteraciones o reparaciones realizadas por cualquier persona que no actúe con la autorización por escrito de Grundfos; el incumplimiento de las instrucciones, manuales de operación, cualquier otro lineamiento o las buenas prácticas industriales de Grundfos; el uso de equipos auxiliares descompuestos o inadecuados en combinación con un producto; el uso de repuestos o partes de sustitución no proporcionados ni autorizados por Grundfos; el daño accidental o deliberado o el uso indebido de un producto.

El periodo para presentar una reclamación en virtud de la garantía implícita de comerciabilidad y la garantía implícita de idoneidad se limita al mismo periodo previsto por esta garantía en la medida permitida por la legislación aplicable. Para los residentes de Nueva Jersey, esta limitación resulta permisible, si bien se debe tener en cuenta que algunos estados no permiten limitaciones en cuanto a la duración de una garantía implícita, por lo que la limitación anterior puede no resultar aplicable en su caso.

**Grundfos no será responsable de ningún daño indirecto o consecuente en relación con un producto en la medida en la que lo permita la legislación aplicable.** Para los residentes de Nueva Jersey, esta limitación resulta permisible, si bien debe tenerse en cuenta que algunos estados no permiten limitaciones en cuanto a daños indirectos o consecuentes, por lo que la limitación anterior puede no resultar aplicable en su caso.

### 3. Garantie limitée

Les produits fabriqués par Grundfos Pumps Corporation (Grundfos) sont garantis, uniquement pour l'utilisateur initial, exempts de défauts de matériaux et de fabrication pour une période de 24 mois à compter de la date d'installation, mais au plus 30 mois à compter de la date de fabrication. Dans le cadre de cette garantie, la responsabilité de Grundfos se limite à la réparation ou au remplacement, à la convenance de Grundfos, sans frais, F.O.B. à l'usine Grundfos ou à un atelier de maintenance autorisé, de tout produit de fabrication Grundfos. Grundfos n'assume aucune responsabilité quant aux frais de dépose, d'installation, de transport ou à toute autre charge pouvant survenir en relation avec une déclaration de sinistre. Les produits vendus mais non fabriqués par Grundfos sont couverts par la garantie fournie par le fabricant des dits produits et non par la garantie de Grundfos. Grundfos n'est responsable ni des dommages ni de l'usure des produits causés par des conditions d'exploitation anormales, un accident, un abus, une mauvaise utilisation, une altération ou une réparation non autorisée, ou par une installation du produit non conforme aux notices d'installation et de fonctionnement imprimées de Grundfos et aux codes de bonnes pratiques communément acceptés. La garantie ne couvre pas l'usure normale. Pour bénéficier de la garantie, il faut renvoyer le produit défectueux au distributeur ou au revendeur de produits Grundfos chez qui il a été acheté, accompagné de la preuve d'achat, de la date d'installation, de la date du dysfonctionnement ainsi que des données concernant l'installation. Sauf disposition contraire, le distributeur ou le revendeur contactera Grundfos ou un atelier de maintenance autorisé, pour obtenir des instructions. Tout produit défectueux renvoyé à Grundfos ou à un atelier de maintenance doit être expédié port payé; la documentation relative à la déclaration de demande de garantie et à une autorisation de retour de matériel éventuelle doit être jointe, si elle est demandée. Grundfos n'assume aucune responsabilité en cas de dommages indirects ou consécutifs, de pertes ou de dépenses résultant de l'installation, de l'utilisation ou de toute autre cause. Il n'existe aucune garantie, explicite ni implicite, y compris la qualité marchande ou l'adéquation pour un usage particulier, en dehors des garanties décrites ou mentionnées ci-dessus. Certaines juridictions n'autorisent pas l'exclusion ou la limitation des dommages indirects ou consécutifs, et certaines juridictions ne permettent pas de limiter la durée des garanties implicites. Il se peut donc que les limitations ou exclusions mentionnées ci-dessus ne soient pas applicables dans votre cas. Cette garantie vous donne des droits légaux spécifiques. Il se peut que vous ayez également d'autres droits qui varient d'une juridiction à l'autre. Les produits qui sont réparés ou remplacés par Grundfos ou par atelier de maintenance autorisé, en vertu des dispositions de ces conditions de garantie limitée, continueront à être couverts par la garantie Grundfos uniquement pendant le reste de la période de garantie initialement fixée à la date d'achat d'origine.

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