# Unilift AP12, AP35, AP50

Installation and operating instructions





Other languages

http://net.grundfos.com/qr/i/96011045



be think innovate

#### Original installation and operating instructions

These installation and operating instructions describe Grundfos Unilift AP12, AP35 and AP50.

Sections 1-5 give the information necessary to be able to unpack, install and start up the product in a safe way.

Sections 6-10 give important information about the product, as well as information on service, fault finding and disposal of the product.

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

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.

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

# 1. General information

# 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 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.



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.

# 2. Receiving the product

# WARNING

#### Falling objects

Death or serious personal injury

- Keep the product in a stable position during unpacking.
- Wear personal protective equipment.

#### 2.1 Inspecting the product

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

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

# 3. Installing the product

# CAUTION

#### Toxic material



Minor or moderate personal injury

- The product will be classified as contaminated if used for a liquid which is injurious to health or toxic.
- Wear personal protective equipment.



Installation must be carried out by specially trained persons and according to local regulations.



According to EN 60335-2-41/A2:2010, this product with 5 m of mains cable may be used only for indoor applications.

## 3.1 Location



Always have at least 3 m free cable above liquid level. This limits the installation depth to 7 m for pumps with 10 m cable and to 2 m for pumps with 5 m cable.

#### 3.1.1 Minimum space

The pit, basin or tank must be sized according to the relation between the water flow to the pit, basin or tank and the pump performance.

When the pump is installed in a permanent installation with a float switch, the minimum dimensions of the pit, basin or tank must be as shown in fig. 1 to ensure free movability of the float switch. The float switch is set to the minimum free cable length. See section 3.2.5 Adjusting the float switch cable length.

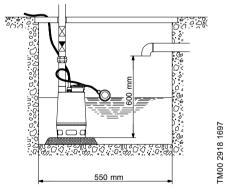


Fig. 1 Minimum pit dimensions when the float switch is set to the minimum free cable length

#### 3.2 Mechanical installation

#### DANGER

#### Electric shock

Death or serious personal injury

- Switch off the power supply before

- starting any work on the product.
- Make sure that the power supply cannot be accidentally switched on.

# CAUTION

#### Sharp element

Minor or moderate personal injury

- Wear personal protective equipment.

 Unilift AP35, AP50: Make sure that persons cannot come into contact with the pump impeller.



Do not install the pump hanging from the electric cable or the outlet pipe.

#### 3.2.1 Foundation

Place the pump on a plate or on bricks so that the inlet strainer is free of sludge, mud or similar materials. See fig. 2.

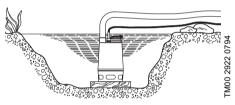


Fig. 2 Place the pump on a plate

#### 3.2.2 Lifting the pump



Do not pull or lift the product by the power cable.

Lift the pump using the pump handle. Do not lift the pump by the power cable or by the outlet pipe or hose.

If the pump is installed in a well or tank, lower and lift it by means of a wire or chain fastened to the pump handle.

#### 3.2.3 Positioning the pump

The pump can be used in vertical or horizontal position. The outlet must be the highest point of the pump. See fig. 3.

During operation, the inlet strainer must always be completely covered by the pumped liquid.

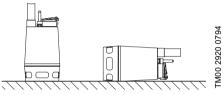


Fig. 3 Position of the pump

When the pipe or hose has been connected, place the pump in its operating position.

Position the pump so that the pump inlet will not be blocked or partly blocked by sludge, mud or similar materials.

In the case of permanent installation, the pit must be cleared of sludge, pebbles, etc. before the pump is installed.

#### 3.2.4 Pipe connection

For permanent installation, we recommend that you fit a union, a non-return valve and an isolating valve in the outlet pipe.

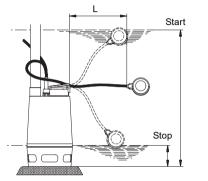
# English (GB)

#### 3.2.5 Adjusting the float switch cable length

For pumps supplied with a float switch, the difference in level between start and stop can be adjusted by changing the free cable length between the float switch and the pump handle.

- An increased free cable length will result in fewer starts and stops and a large difference in level.
- A reduced free cable length will result in more frequent starts and stops and a small difference in level.

The stop level must be above the pump inlet to prevent the pump from taking in air.



Fia. 4 Start and stop levels

The start and stop levels vary according to the cable lenath.

|              | Unilift AP start and stop levels       |              |                        |               |  |
|--------------|--|--------------|------------------------|---------------|--|
|              | Minimum cable<br>length (L):<br>100 mm |              | Maximu<br>lengt<br>250 | h (L):        |  |
| Pump<br>type | Start<br>[mm]                          | Stop<br>[mm] | Start<br>[mm]          | Stop*<br>[mm] |  |
| AP12.40      | 360                                    | 230          | 370                    | 100           |  |
| AP12.50      | 410                                    | 250          | 380                    | 110           |  |
| AP35         | 440                                    | 280          | 450                    | 155           |  |
| AP50         | 460                                    | 320          | 450                    | 190           |  |

Minimum stop level during continuous operation or when using an external controller.

# 4. Electrical connection

# DANGER

#### Electric shock



Death or serious personal injury

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

# DANGER

# Electric shock

Death or serious personal injury The installation must be fitted with a residual-current device (RCD) with a tripping current less than 30 mA.

# DANGER

#### Electric shock

Death or serious personal injury -



-M00 2924 1719

- Make sure that the power supply plug delivered with the product is in compliance with local regulations. The plug must have the same protective earth (PE) connection system as the
- power outlet. If not, use a suitable adapter if allowed by local regulations.

# DANGER

#### Electric shock

Death or serious personal injury



Power cables without a plug must be connected to a supply disconnecting device incorporated in the fixed wiring according to the local wiring rules.



All electrical connections must be carried out by a qualified person in accordance with local regulations.



Depending on local regulations, a pump with minimum 10 m of mains cable must be used if the pump is used as a portable pump for different applications.

Make sure that the product is suitable for the supply voltage and frequency available at the installation site. Voltage and frequency are marked on the pump nameplate.

The pump must be connected to an external main switch. If the pump is not installed close to the switch, the switch must be of a lockable type.

Three-phase pumps must be connected to an external motor-protective circuit breaker with differential release. The rated current of the motor-protective circuit breaker must correspond to the electrical data marked on the pump nameplate.

If a level switch is connected to a three-phase pump, the motor-protective circuit breaker must be magnetically operated.

Single-phase pumps incorporate thermal overload protection and require no additional motor protection.



If the motor is overloaded, it will stop automatically. When the motor has cooled to normal temperature, it restarts automatically.

# 4.1 Checking the direction of rotation

#### Three-phase pumps only

Check the direction of rotation every time the pump is connected to a new installation.

- 1. Position the pump so that you can observe the impeller.
- 2. Start the pump for a short period.
- 3. Observe the rotation of the impeller. The correct direction of rotation is indicated by an arrow on the inlet strainer (clockwise when seen from the bottom). If the impeller rotates in the wrong direction, reverse the direction of rotation by interchanging two of the phases to the motor.

If the pump is connected to a pipe system, check the direction of rotation in this way:

- 1. Start the pump and check the quantity of water or the pressure.
- 2. Stop the pump and interchange two of the phases to the motor.
- 3. Start the pump and check the quantity of water or the pressure.
- 4. Stop the pump.

Compare the results taken under points 1 and 3. The largest quantity of water indicates the correct direction of rotation.

# 5. Starting up the product

# DANGER



Death or serious personal injury

- Do not use the pump in swimming pools, garden ponds or similar places if there are people in the water.



The pump may be run briefly to check the direction of rotation without being submerged in the pumped liquid.

- 1. Before starting the pump, check that the inlet strainer is fitted to the pump and submerged in the pumped liquid.
- 2. Open the isolating valve, if fitted, and check the level switch setting.

# 6. Product introduction

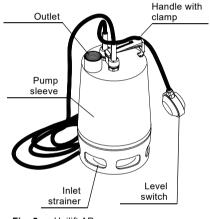


Fig. 5 Unilift AP

# English (GB)

# 6.1 Intended use

The Grundfos Unilift AP pump is a single-stage submersible pump designed for pumping wastewater.

The pump is capable of pumping water which contains a limited quantity of solids, however not stones and similar materials, without being blocked or damaged.

The pump is available for automatic as well as manual operation and can be installed in a permanent installation or used as a portable pump.

| Applications  | AP12 | AP35 | AP50 |
|---|------|------|------|
| Drainage of flooded cellars or buildings  | •    | •    | •    |
| Groundwater lowering  | •    | •    | •    |
| Pumping of water from drain water collecting pits   | •    | •    | •    |
| Pumping of water from surface<br>water pits with inflow from roof<br>gutters, shafts, tunnels, etc. | •    | •    | •    |
| Emptying and filling of swimming pools, ponds, pits, etc.   | •    | •    | •    |
| Pumping of fibre-containing<br>wastewater from laundries and<br>light industries                    |      | •    | •    |
| Pumping of domestic wastewater<br>from septic tanks and sludge<br>treating systems                  |      | •    | •    |
| Pumping of domestic wastewater<br>without discharge from water<br>closets                           |      | •    | •    |

Incorrect application of the pump, for example resulting in blocking of the pump, and wear are not covered by the warranty.

# 6.2 Pumped liquids

The pump is capable of pumping water containing a limited quantity of spherical particles. Pumping of spherical particles exceeding the maximum particle size for the pump may block or damage the pump. Maximum particle size: See section 9. *Technical data*.

The pump is not suitable for these liquids:

- sewage
- liquids containing long fibres
- flammable liquids (oil, petrol, etc.)
- aggressive liquids
- liquids containing solids exceeding the pump's recommended maximum particle size.

# 6.3 Identification

#### 6.3.1 Nameplate

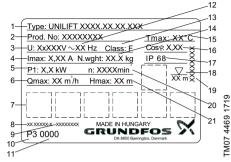


Fig. 6 Nameplate example

| Pos. | Description                           |
|------|---------------------------------------|
| 1    | Product type                          |
| 2    | Product number                        |
| 3    | Supply voltage [V]                    |
| 4    | Maximum current [A]                   |
| 5    | Power input [kW]                      |
| 6    | Maximum flow rate [m <sup>3</sup> /h] |
| 7    | Approvals                             |
| 8    | ID number for EN standards            |
| 9    | ID number for Safety Instruction      |
| 10   | Factory code                          |
| 11   | Production code (YYWW)                |
| 12   | Frequency [Hz]                        |
| 13   | Insulation class                      |
| 14   | Net weight [kg]                       |
| 15   | Maximum liquid temperature [°C]       |
| 16   | Cosinus phi                           |
| 17   | Enclosure class                       |
| 18   | Maximum installation depth [m]        |
| 19   | Nameplate layout                      |
| 20   | Speed [min <sup>-1</sup> ]            |
| 21   | Maximum head [m]                      |

#### 6.3.2 Type key

| Example                                    | Unilift AP    | 35 | в. | 50. | 08. | Α | 1 | ۷. |
|--|---------------|----|----|-----|-----|---|---|----|
| Type range                                 |               |    |    |     |     |   |   |    |
| Maximum sol                                | ids size [mm] | -  |    |     |     |   |   |    |
| Pump type:                                 |               |    | -  |     |     |   |   |    |
| [] = AP Pum                                | р             |    |    |     |     |   |   |    |
| B = AP Basi                                | C             |    |    |     |     |   |   |    |
| Nominal diameter of outlet port            |               |    |    |     |     |   |   |    |
| Power output, P <sub>2</sub> / 100 [W]     |               |    |    |     |     |   |   |    |
| Level control:                             |               |    |    |     |     |   |   |    |
| A = Automatic operation with float switch  |               |    |    |     |     |   |   |    |
| [] = Manual operation without float switch |               |    |    |     |     |   |   |    |
| Motor:                                     |               |    |    |     |     |   |   |    |
| 1 = Single-phase                           |               |    |    |     |     |   |   |    |
| 3 = Three-phase                            |               |    |    |     |     |   |   |    |
| Impeller:                                  |               |    |    |     |     |   |   |    |
| V = Vortex in                              | npeller       |    |    |     |     |   |   |    |

# 7. Servicing the product

# DANGER

#### Electric shock



Death or serious personal injury

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

# CAUTION



#### Sharp element

Minor or moderate personal injury

- Wear personal protective equipment.

# CAUTION

#### **Toxic material**

Minor or moderate personal injury



- The product will be classified as
- contaminated if it has been used for a liquid which is injurious to health or toxic.
- Wear personal protective equipment.

# CAUTION

#### **Biological hazard**

Minor or moderate personal injury

- Flush the product thoroughly with clean water and rinse the parts in water after dismantling.
- Wear personal protective equipment.



If the power cable or the level switch is damaged, it must be replaced by a service workshop authorised by Grundfos.

Service must be carried out by specially trained persons.



Furthermore, all rules and regulations covering safety, health and environment must be observed.

- If the pump has been used for liquids other than clean water, flush the pump thoroughly with clean water before carrying out maintenance and service.
- 2. Rinse the pump parts in water after dismantling.

# 7.1 Maintaining the product

Check the pump and replace the oil once a year. If the pump is used for pumping liquids containing abrasive particles or it is operating continuously, the pump must be checked at shorter intervals.

If the drained oil contains water or other impurities, we recommend that you replace the shaft seal.

## 7.2 Oil

In the case of long operating time or continuous operation, the oil must be replaced as follows:

| Liquid<br>temperature | The oil must be replaced after |
|-----------------------|--------------------------------|
| 20 °C                 | 4500 operating hours           |
| 40 °C                 | 3000 operating hours           |
| 55 °C                 | 1500 operating hours           |

The pump contains 78 ml non-poisonous oil.

Used oil must be disposed of in accordance with local regulations.

#### 7.3 Construction

The construction of the pump will appear from the table below and figures A, B and C at the end of these instructions.

| Pos. | Description            |
|------|------------------------|
| 6    | Pump housing           |
| 37a  | O-ring                 |
| 49   | Impeller               |
| 55   | Pump sleeve with motor |
| 66   | Washer                 |
| 67   | Lock nut               |
| 84   | Inlet strainer         |
| 105  | Shaft seal             |
| 182  | Level switch           |
| 188a | Screws                 |
| 193  | Screws                 |

#### 7.4 Service kits

| Service kit          | Part number |
|----------------------|-------------|
| Shaft seal, standard | 96429307    |
| Shaft seal, FKM      | 96429308    |
| Oil                  | 96010646    |

## 7.5 Contaminated pumps

#### CAUTION

#### **Biological hazard**

Minor or moderate personal injury

- Flush the product thoroughly with clean water and rinse the parts in water after dismantling.
- Wear personal protective equipment.

# 8. Fault finding the product

#### DANGER

# Electric shock

Death or serious personal injury

- Switch off the power supply before

- starting any work on the product.
- Make sure that the power supply cannot be accidentally switched on.

# CAUTION

# Sharp element

Minor or moderate personal injury - Wear personal protective equipment.

# CAUTION

#### Toxic material



-

Minor or moderate personal injury

- The product will be classified as contaminated if it has been used for a liquid which is injurious to health or toxic.
- Wear personal protective equipment.

| Fault |   | Cause |  | Remedy  |  |
|-------|---|-------|--|---|--|
| 1.    | The motor does not  | a)    | No power supply.   | Connect the power supply.   |  |
|       | start.  | b)    | The pump was stopped by the level switch.  | Adjust or replace the level switch.   |  |
|       |   | c)    | The fuses have blown.  | Replace the fuses.  |  |
|       |   | d)    | The motor protection or thermal relay has tripped.                                   | Wait until the motor protection trips in again or reset the relay.                  |  |
|       |   | e)    | The impeller is blocked by impurities.   | Clean the impeller.   |  |
|       |   | f)    | Short circuit in the cable or motor.   | Replace the defective part.   |  |
| 2.    | The motor protection<br>or thermal relay trips<br>after a short time of | a)    | The liquid temperature is too high.  | Use another pump type. Contact<br>your local Grundfos supplier or<br>sales support. |  |
|       | operation.  | b)    | The impeller is blocked or partly blocked by impurities.                             | Clean the pump.   |  |
|       |   | c)    | Phase failure.   | Call an electrician.  |  |
|       |   | d)    | Too low voltage.   | Call an electrician.  |  |
|       |   | e)    | The overload setting of the motor-<br>protective circuit breaker is too low.         | Adjust the setting.   |  |
|       |   | f)    | Incorrect direction of rotation. See section 4.1 Checking the direction of rotation. | Reverse the direction of rotation.  |  |
| 3.    | The pump runs   | a)    | The pump is partly blocked by impurities.  | Clean the pump.   |  |
|       | constantly or gives<br>too little water.                                | b)    | The outlet pipe or valve is partly blocked by impurities.                            | Clean the outlet pipe or valve.   |  |
|       |   | c)    | The impeller is not properly fixed to the shaft.                                     | Tighten the impeller.   |  |
|       |   | d)    | Incorrect direction of rotation. See section 4.1 Checking the direction of rotation. | Reverse the direction of rotation.  |  |
|       |   | e)    | Incorrect setting of the level switch.   | Adjust the level switch.  |  |
|       |   | f)    | The pump is too small for the application.   | Replace the pump.   |  |
|       |   | g)    | The impeller is worn.  | Replace the impeller.   |  |

| Fault |                                      | Ca | use   | Remedy  |  |
|-------|--------------------------------------|----|---|---|--|
| 4.    | The pump runs but<br>gives no water. | a) | The pump is blocked by impurities.  | Clean the pump.   |  |
|       |                                      | b) | The outlet pipe or valve is blocked by impurities.  | Clean the outlet pipe or valve.   |  |
|       |                                      | c) | The impeller is not properly fixed to the shaft.  | Tighten the impeller.   |  |
|       |                                      | d) | There is air in the pump.   | Vent the pump and the outlet pipe.  |  |
|       |                                      | e) | The liquid level is too low. The inlet<br>strainer is not completely submerged in<br>the pumped liquid. | Submerge the pump in the liquid<br>or adjust the level switch.                            |  |
|       |                                      | f) | Pumps with float switch: The float switch does not move freely.   | Adjust the float switch. See<br>section 3.2.5 Adjusting the float<br>switch cable length. |  |

# 9. Technical data

#### 9.1 Storage temperature

Down to -30 °C.

#### 9.2 Operating conditions

| Minimum liquid<br>temperature | 0°C  |  |  |  |
|-------------------------------|--|--|--|--|
| Maximum liquid<br>temperature | Max. liquid temperature:<br>+55 °C, continuously.<br>For Unilift AP 12, AP 35 and<br>AP 50 without float switch,<br>where the media cannot<br>touch the cable and the<br>plug: up to + 70 °C every<br>30 min. for time periods<br>below 3 min. |  |  |  |
| Installation depth            | Maximum 10 m below liquid<br>level   |  |  |  |
| pH value                      | 4-10   |  |  |  |
| Density                       | Maximum 1100 kg/m <sup>3</sup>   |  |  |  |
| Viscosity                     | Maximum 10 mm <sup>2</sup> /s  |  |  |  |
| Maximum particle<br>size      | Max. spherical diameter:<br>Unilift AP12: 12 mm<br>Unilift AP35: 35 mm<br>Unilift AP50: 50 mm  |  |  |  |
| Technical data                | See the pump nameplate.  |  |  |  |

!

Always have at least 3 m free cable above liquid level. This limits the installation depth to 7 m for pumps with 10 m cable and to 2 m for pumps with 5 m cable.

#### 9.3 Sound pressure level

The sound pressure level of the pump is lower than the limiting values stated in the EC Council Directive 2006/42/EC relating to machinery.

# 10. Disposing of the product

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.

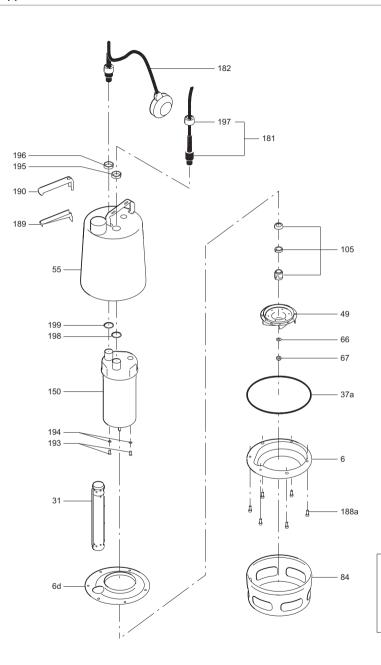


The crossed-out wheelie bin symbol on a product means that it must be disposed of separately from household waste. When a product marked with this symbol reaches its end of life, take it to a collection point designated by the local

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.

Appendix





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#### **GRUNDFOS WARRANTY - AUSTRALIA AND NEW ZEALAND**

#### Free from manufacturing defects

 The relevant Grundfos entity, as specified below, warrants that from the date of purchase and for the period related to the specific product purchased (Warranty Period) the products purchased (Equipment) by you (the Customer) in the relevant country will, with normal use, be free from manufacturing defects and material defects (Warranty), subject to the terms set out herein.

FOR EQUIPMENT PURCHASED IN AUSTRALIA: : This Warranty is provided by Grundfos Pumps Pty Ltd (ACN 007920765) of 515 South Road Regency Park SA 5010 PH: (08) 8461 4611 Email: <u>contact-au@grundfos.com</u> (Grundfos Australia)

**FOR EQUIPMENT PURCHASED IN NEW ZEALAND**: This Warranty is provided by Grundfos Pumps NZ Limited (Company number 108507) of 17 Beatrice Tinsley Crescent, Albany, North Shore City, 0632 PH: (09) 41532540 Email: contact-nz@grundfos.com (**Grundfos NZ**).

(In this Warranty references to "**Grundfos**" shall mean either Grundfos Australia or Grundfos NZ, as applicable)

2. The relevant **Warranty Period** varies between different items of Equipment and can be confirmed by your Equipment supplier or by contacting the relevant Grundfos entity at the above address.

#### Non Transferable

3. This Warranty is non- transferable and only applies to the first person to purchase and to use or install the Equipment.

#### Conditions

- 4. The Customer must provide the original proof or purchase for the Equipment.
- This Warranty only applies where a defect has arisen, wholly or substantially, as a result of faulty manufacture, parts or workmanship and where such defect appears during the Warranty Period.
- 6. The Warranty does not apply in the following circumstances:
  - a. where the damage arises due to normal wear and tear;
  - where the Equipment was not installed in accordance with Grundfos' installation and operating instructions for the Equipment;
  - c. where the Customer failed to specify a site condition or specification at the time of ordering the Equipment, which subsequently affects the operation of the Equipment;
  - d. where damage results because the Equipment is installed to operate at a duty point other than what has been specified at the time of ordering;
  - the Equipment has been stored by the Customer prior to installation and operation and such period of storage is not in accordance with the requirements set out in the Equipment's operation and installation manual;
  - f. where the Customer attempts to repair the Equipment;
  - g. where damage is caused by abuse, mishandling or failure to follow operating instructions;
  - where the servicing or modification of the Equipment was conducted by someone other than by Grundfos or its authorised service agent; or
  - i. where damage occurs during shipping or other transit.
- 7. This Warranty does not cover:
  - a. repair of Equipment polluted by poisonous media or other liquids injurious to the environment;
  - b. the cost of disassembly, assembly and installation; or
  - c. the Equipment where protection devices have been installed but have not been used or monitored.

#### Excluded products

- 8. This Warranty does not apply to Equipment that Grundfos imports that is not manufactured by Grundfos (or one of its related companies). However:
  - a. **FOR EQUIPMENT PURCHASED IN AUSTRALIA**: The Customer is entitled to the benefit of the warranty provided by the overseas manufacturer of that Equipment (if any), and any rights the Customer may have under the Australian Consumer Law (**ACL**).
  - b. FOR EQUIPMENT PURCHASED IN NEW ZEALAND: The Customer is entitled to the benefit of the warranty provided by the overseas manufacturer of that Equipment (if any), and any rights the Customer may have under the Consumer Guarantees Act 1993 (CGA) that have not otherwise been lawfully excluded.

#### Warranty is additional to statutory consumer rights

- This Warranty is in addition to and does not exclude, restrict or modify in any way any non-excludable statutory rights the Customer may have, including any rights the Customer may have under the ACL or the CGA (as applicable).
- 10. FOR EQUIPMENT PURCHASED IN AUSTRALIA: Grundfos Australia provides the following advice to all Customers who are consumers as defined by the ACL and to whom the ACL applies, as required by the ACL:

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

11. **FOR EQUIPMENT PURCHASED IN NEW ZEALAND**: Grundfos NZ provides the following advice to all Customers who are consumers as defined by the CGA and to whom the CGA applies:

Unless the provisions of the CGA have been lawfully excluded, the guarantees and the remedies for failure to comply with those guarantees as set out in the CGA shall apply. Such remedies include the repair or replacement of the Equipment or, where the failure is of a substantial character, the rejection of the Equipment or compensation for the reduction in value of the Equipment. In addition to these remedies, you are also entitled to compensation for reasonably foreseeable loss or damage resulting from the failure.

#### How to claim

- 12. Instructions for making a Warranty claim:
  - a. The Customer must inform Grundfos as soon as any Warranty claim arises. The Customer must contact Grundfos:
    - i. in writing, by notice sent to:

FOR EQUIPMENT PURCHASED IN AUSTRALIA: Grundfos Pumps Pty Ltd 515 South Road, Regency Park, South Australia, 5010;

FOR EQUIPMENT PURCHASED IN NEW ZEALAND: Grundfos Pumps New Zealand Ltd 17 Beatrice Tinsley Crescent, Albany, North Shore City, 0632; or

ii. by returning the item to the place of purchase and requesting them to complete the required documentation (a Goods Return Advise or a Field Warranty Claim Form) and send it to Grundfos.

The Customer must provide Grundfos with a description of the problem encountered with the h Equipment, the Equipment model number, serial number, and date of purchase. Most importantly, the Customer must provide Grundfos the original proof of purchase. The Customer will bear the cost of notifying Grundfos of the Warranty claim.

#### What Grundfos will do

- If Grundfos is informed of any claim within the Warranty Period and that claim is within the terms of 13 this Warranty. Grundfos will make arrangements for the service, repair or replacement of the Equipment, at the sole discretion and cost of Grundfos. The Customer will bear the cost of freight and insurance to transport any products to Grundfos, or to the place of purchase (as applicable). Grundfos will bear the cost of freight for the return and dispatch of the repaired or replaced Equipment if the claim is accepted under this Warranty.
- 14. If a Warranty claim is not accepted, Grundfos will inform the Customer in writing that the Warranty claim was not accepted and the reasons for non-acceptance. The Customer will bear the cost of any freight for the return and dispatch of the Equipment, and the cost of any repairs undertaken by Grundfos if requested by the Customer to do so.

#### Warranty Periods

Unless otherwise stated below, all Grundfos product comes as standard with a 2 Year Warranty.

#### 1 Year Warranty

- Start Controllers
- Grundfos Ultra 6"-12" Ultra
- Ultra 4" Motor TX & GX
- DIS
- DIT

- Wellmaster Accessories
- Dosing accessories • DSB
- - DIA • UV

DSA

DSS

- 3 Year Warranty Grundfos SP 4"
- CRI

OCD

VGA

Grundfos SP w/MP204 6"-12"

#### 5 Year Warranty

- Pressure Tanks
- Wellmaster Flexible Rising Main CRN
- 10 Year Warranty
  - Fixed Solar Array
- 25 Year Linear Performance Warranty
  - Solar Modules

#### Argentina

Bombas GRUNDFOS de Argentina S.A. Ruta Panamericana km. 37.500 Centro Industrial Garin 1619 Garín Pcia. de B.A. Phone: +54-3327 414 444 Telefax: +54-3327 45 3190

#### Australia

GRUNDFOS Pumps Pty. Ltd. P.O. Box 2040 Regency Park South Australia 5942 Phone: +61-8-8461-4611 Telefax: +61-8-8340 0155

#### Austria

GRUNDFOS Pumpen Vertrieb Ges.m.b.H. Grundfosstraße 2 A-5082 Grödig/Salzburg Tel.: +43-6246-883-0 Telefax: +43-6246-883-30

#### Belgium

N.V. GRUNDFOS Bellux S.A. Boomsesteenweg 81-83 B-2630 Aartselaar Tél.: +32-3-870 7300 Télécopie: +32-3-870 7301

#### Belarus

Представительство ГРУНДФОС в Минске 220125, Минск ул. Шафарнянская, 11, оф. 56, БЦ «Порт» Тел.: + 7 (375 17) 286 39 72/73 Факс: +7 (375 17) 286 39 71 Е-mail: minsk@grundfos.com

#### Bosnia and Herzegovina

GRUNDFOS Sarajevo Zmaja od Bosne 7-7A, BH-71000 Sarajevo Phone: +387 33 592 480 Telefax: +387 33 590 465 www.ba.grundfos.com e-mail: grundfos@bih.net.ba

#### Brazil

BOMBAS GRUNDFOS DO BRASIL Av. Humberto de Alencar Castelo Branco, 630 CEP 09850 - 300 São Bernardo do Campo - SP Phone: +55-11 4393 5533 Telefax: +55-11 4343 5015

#### Bulgaria

Grundfos Bulgaria EOOD Slatina District Iztochna Tangenta street no. 100 BG - 1592 Sofia Tel. +359 2 49 22 200 Fax. +359 2 49 22 201 email: bulgaria@grundfos.bg

#### Canada

GRUNDFOS Canada Inc. 2941 Brighton Road Oakville, Ontario L6H 6C9 Phone: +1-905 829 9533 Telefax: +1-905 829 9512

#### China

GRUNDFOS Pumps (Shanghai) Co. Ltd. 10F The Hub, No. 33 Suhong Road Minhang District Shanghai 201106 PRC Phone: +86 21 612 252 22 Telefax: +86 21 612 253 33

#### COLOMBIA

GRUNDFOS Colombia S.A.S. Km 1.5 via Siberia-Cota Conj. Potrero Chico, Parque Empresarial Arcos de Cota Bod. 1A. Cota, Cundinamarca Phone: +57(1)-2913444 Telefax: +57(1)-8764586

#### Croatia

GRUNDFOS CROATIA d.o.o. Buzinski prilaz 38, Buzin HR-10010 Zagreb Phone: +385 1 6595 400 Telefax: +385 1 6595 499 www.hr.grundfos.com

#### **GRUNDFOS Sales Czechia and**

**Slovakia s.r.o.** Čajkovského 21 779 00 Olomouc Phone: +420-585-716 111

#### Denmark

GRUNDFOS DK A/S Martin Bachs Vej 3 DK-8850 Bjerringbro Tlf.: +45-87 50 50 50 Telefax: +45-87 50 51 51 E-mail: info\_GDK@grundfos.com www.grundfos.com/DK

#### Estonia

GRUNDFOS Pumps Eesti OÜ Peterburi tee 92G 11415 Tallinn Tel: + 372 606 1690 Fax: + 372 606 1691

#### Finland

OY GRUNDFOS Pumput AB Trukkikuja 1 FI-01360 Vantaa Phone: +358-(0) 207 889 500

#### France

Pompes GRUNDFOS Distribution S.A. Parc d'Activités de Chesnes 57, rue de Malacombe F-38290 St. Quentin Fallavier (Lyon) Tél.: +33-4 74 82 15 15 Télécopie: +33-4 74 94 10 51

#### Germany

GRUNDFÖS GMBH Schlüterstr. 33 40699 Erkrath Tel: +49-(0) 211 929 69-0 Telefax: +49-(0) 211 929 69-3799 e-mail: infoservice@grundfos.de Service in Deutschland: e-mail: kundendienst@grundfos.de

#### Greece

GRUNDFOS Hellas A.E.B.E. 20th km. Athinon-Markopoulou Av. P.O. Box 71 GR-19002 Peania Phone: +0030-210-66 83 400 Telefax: +0030-210-66 46 273

#### Hong Kong

GRUNDFOS Pumps (Hong Kong) Ltd. Unit 1, Ground floor Siu Wai Industrial Centre 29-33 Wing Hong Street & 68 King Lam Street, Cheung Sha Wan Kowloon Phone: +852-27861706 / 27861741 Telefax: +852-27858664

#### Hungary

GRUNDFOS Hungária Kft. Tópark u. 8 H-2045 Törökbálint, Phone: +36-23 511 110 Telefax: +36-23 511 111

#### India

GRUNDFOS Pumps India Private Limited 118 Old Mahabalipuram Road Thoraipakkam Chennai 600 096 Phone: +91-44 2496 6800

#### Indonesia

PT. GRUNDFOS POMPA Graha Intirub Lt. 2 & 3 Jln. Cililitan Besar No.454. Makasar, Jakarta Timur ID-Jakarta 13650 Phone: +62 21-469-51900 Telefax: +62 21-460 6910 / 460 6901

#### Ireland

GRUNDFOS (Ireland) Ltd. Unit A, Merrywell Business Park Ballymount Road Lower Dublin 12 Phone: +353-1-4089 800 Telefax: +353-1-4089 830

#### Italy

GRUNDFOS Pompe Italia S.r.I. Via Gran Sasso 4 I-20060 Truccazzano (Milano) Tel.: +39-02-95838112 Telefax: +39-02-95309290 / 95838461

#### Japan

GRUNDFOS Pumps K.K. 1-2-3, Shin-Miyakoda, Kita-ku, Hamamatsu 431-2103 Japan Phone: +81 53 428 4760 Telefax: +81 53 428 5005

#### Korea

GRUNDFOS Pumps Korea Ltd. 6th Floor, Aju Building 679-5 Yeoksam-dong, Kangnam-ku, 135-916 Seoul, Korea Phone: +82-2-5317 600 Telefax: +82-2-5633 725

#### Latvia

SIA GRUNDFOS Pumps Latvia Deglava biznesa centrs Augusta Deglava ielä 60, LV-1035, Rīga, Tālr.: + 371 714 9640, 7 149 641 Fakss: + 371 914 9646

#### Lithuania

GRUNDFOS Pumps UAB Smolensko g. 6 LT-03201 Vilnius Tel: + 370 52 395 430 Fax: + 370 52 395 431

# **Brundfos companies**

#### Malaysia

GRUNDFOS Pumps Sdn. Bhd. 7 Jalan Peguam U1/25 Glenmarie Industrial Park 40150 Shah Alam Selangor Phone: +60-3-5569 2922 Telefax: +60-3-5569 2866

#### Mexico

Bombas GRUNDFOS de México S.A. de C.V. Boulevard TLC No. 15 Parque Industrial Stiva Aeropuerto Apodaca, N.L. 66600 Phone: +52-81-8144 4000 Telefax: +52-81-8144 4010

#### Netherlands

GRUNDFOS Netherlands Veluwezoom 35 1326 AE Almere Postbus 22015 1302 CA ALMERE Tel.: +31-88-478 6336 Telefax: +31-88-478 6332 E-mail: info\_gnl@grundfos.com

#### New Zealand

GRUNDFOS Pumps NZ Ltd. 17 Beatrice Tinsley Crescent North Harbour Industrial Estate Albany, Auckland Phone: +64-9-415 3240 Telefax: +64-9-415 3250

#### Norway

GRUNDFOS Pumper A/S Strømsveien 344 Postboks 235, Leirdal N-1011 Oslo Tlf.: +47-22 90 47 00 Telefax: +47-22 32 21 50

#### Poland

GRUNDFOS Pompy Sp. z o.o. ul. Klonowa 23 Baranowo k. Poznania PL-62-081 Przeźmierowo Tel: (+48-61) 650 13 00 Fax: (+48-61) 650 13 50

#### Portugal

Bombas GRUNDFOS Portugal, S.A. Rua Calvet de Magalhães, 241 Apartado 1079 P-2770-153 Paço de Arcos Tel.: +351-21-440 76 90 Telefax: +351-21-440 76 90

#### Romania

GRUNDFOS Pompe România SRL Bd. Biruintei, nr 103 Pantelimon county Ilfov Phone: +40 21 200 4100 Telefax: +40 21 200 4101 E-mail: romania@grundfos.ro

#### Russia

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#### Serbia

Grundfos Srbija d.o.o. Omladinskih brigada 90b 11070 Novi Beograd Phone: +381 11 2258 740 Telefax: +381 11 2281 769 www.rs.grundfos.com

#### Singapore

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#### Slovakia

GRUNDFOS s.r.o. Prievozská 4D 821 09 BRATISLAVA Phona: +421 2 5020 1426 sk.grundfos.com

#### Slovenia

GRUNDFOS LJUBLJANA, d.o.o. Leskoškova 9e, 1122 Ljubljana Phone: +386 (0) 1 568 06 10 Telefax: +386 (0)1 568 06 19 E-mail: tehnika-si@grundfos.com

#### South Africa

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#### Spain

Bombas GRUNDFOS España S.A. Camino de la Fuentecilla, s/n E-28110 Algete (Madrid) Tel.: +34-91-848 8800 Telefax: +34-91-628 0465

#### Sweden

GRUNDFOS AB Box 333 (Lunnagårdsgatan 6) 431 24 Mölndal Tel.: +46 31 332 23 000 Telefax: +46 31 331 94 60

#### Switzerland

GRUNDFOS Pumpen AG Bruggacherstrasse 10 CH-8117 Fällanden/ZH Tel.: +41-44-806 8111 Telefax: +41-44-806 8115

#### Taiwan

GRUNDFOS Pumps (Taiwan) Ltd. 7 Floor, 219 Min-Chuan Road Taichung, Taiwan, R.O.C. Phone: +886-4-2305 0868 Telefax: +886-4-2305 0878

#### Thailand

GRUNDFOS (Thailand) Ltd. 92 Chaloem Phrakiat Rama 9 Road, Dokmai, Pravej, Bangkok 10250 Phone: +66-2-725 8999 Telefax: +66-2-725 8998

#### Turkey

GRUNDFOS POMPA San. ve Tic. Ltd. Sti. Gebze Organize Sanayi Bölgesi Ihsan dede Caddesi, 2. yol 200. Sokak No. 204 41490 Gebze/ Kocaeli Phone: +90 - 262-679 7979 Telefax: +90 - 262-679 7905 E-mail: satis@grundfos.com

#### Ukraine

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#### **United Arab Emirates**

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#### U.S.A.

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#### Uzbekistan

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