Sololift2 WC-1, WC-3

Installation and operating instructions

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GRUNDFOS

English (US) Installation and operating instructions

Original installation and operating instructions.

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Warning

Prior to installation, read these installation and operating instructions. Installation and operation must comply with national, state, and local regulations and accepted codes of good practice.

Warning

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

1. Limited warranty

Products manufactured by GRUNDFOS PUMPS CORPORATION (Grundfos) are warranted to the original user only to be free of defects in material and workmanship for a period of 24 months from date of installation, but not more than 30 months from date of manufacture. Grundfos' liability under this warranty shall be limited to repairing or replacing at Grundfos' option, without charge, FOB Grundfos' factory or authorized service station, any product of Grundfos' manufacture. Grundfos will not be liable for any costs of removal, installation, transportation, or any other charges which may arise in connection with a warranty claim. Products which are sold but not manufactured by Grundfos are subject to the warranty provided by the manufacturer of said products and not by Grundfos' warranty. Grundfos will not be liable for damage or wear to products caused by abnormal operating conditions, accident, abuse, misuse, unauthorized alteration or repair, or if the product was not installed in accordance with Grundfos' printed installation and operating instructions.

To obtain service under this warranty, the defective product must be returned to the distributor or dealer of Grundfos' products from which it was purchased together with proof of purchase and installation date, failure date, and supporting installation data. Unless otherwise provided, the distributor or dealer will contact Grundfos or an authorized service station for instructions.

Any defective product to be returned to Grundfos or a service station must be sent freight prepaid; documentation supporting the warranty claim and/or a Return Material Authorization must be included if so instructed.

GRUNDFOS WILL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES, LOSSES, OR EXPENSES ARISING FROM INSTALLATION, USE, OR ANY OTHER CAUSES. THERE ARE NO EXPRESS OR IMPLIED WARRANTIES, INCLUDING MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, WHICH EXTEND BEYOND THOSE WARRANTIES DESCRIBED OR REFERRED TO ABOVE.

Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages and some jurisdictions do not allow limit actions on how long implied warranties may last. Therefore, the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from jurisdiction to jurisdiction.

2. Symbols used in this document

Warning

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

Caution

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

Note

Notes or instructions that make the job easier and ensure safe operation.

3. General description

The Sololift2 WC-1 and WC-3 are small, compact automatic lifting stations suitable for pumping domestic wastewater and sewage off places in private dwellings where wastewater cannot be led directly to the sewer by means of a natural downward slope.

Caution

If away for a long period (e.g. holidays) we recommend that you turn off the water supply to the toilet served by the Sololift2 unit.

Note

This is a domestic unit.

Toilets connected to this unit can be used like any normal toilet, and require minimum maintenance. The unit will operate automatically as soon as the required level of water enters the tank.

Caution

Only the disposal of toilet paper, fecal matter and waste water will be covered by warranty. Any damage due to foreign bodies such as cotton, condoms, sanitary towels, wet wipes, food, hair, metal, wood or plastic objects, will not be covered by warranty. Solvents, acids and other chemicals can also cause damage to the unit, and will invalidate the warranty.

4. Applications

The product is only suitable for pumping wastewater from a cabinet shower, bidet and/or washbasin as well as sewage from a toilet.

Note

Not for public and heavy commercial or industrial use; only for a limited number of users.

Installation with direct connection to toilet and in the same room as sanitary appliances.

A second toilet must be available above the backflow level.

The product must be fastened to the floor to prevent uplift and turning.

5. Pumped liquids

Domestic wastewater and sewage containing toilet paper and feces.

Ordinary liquids for cleaning of the appliances connected. pH value: 4-10.

Caution

The product must not pump harsh chemicals or solvents. See the Quick Guide.

The product is designed for flush volumes of 1, 1.5, and 2.3 gallons (4, 6 and 9 liters). A 1 gal. (4-liter) flush is permissible only if the amount of solids in the pumped liquid is small.

6. Installation

Caution ***Do not pull or lift the product by the power supply cable.***

The product must be accessible for maintenance and repair.

The product must be placed in a frost-free room to prevent the pumped liquid from freezing.

Make sure that all external pipework is adequately insulated.

Note ***The discharge pipe must be made of rigid material, such as such as rigid PVC with solvent-welded joints, or copper.***

To prevent the transmission of vibrations to buildings, make sure that the pipework is thoroughly fixed and that fittings cannot move and are not in contact with building parts.

An alarm device for acoustic alarm in case of malfunction or high level in the tank is available as an accessory (noise level 75 dB(A)). Grundfos product number: 97772315.

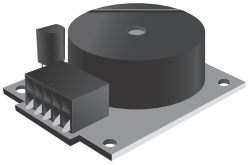

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Fig. 1 Alarm device

Extension pipes between the toilet and Sololift2 lifting station must not be longer than 5.9 in. (150 mm) due to the increased risk of clogging.

7. Electrical connection

Make sure that the product is suitable for the power supply voltage and frequency available at the installation site.

The electrical connection must be carried out in accordance with local regulations.

Warning

The product must be grounded.

The installation must include an ELCB (Earth Leakage Circuit Breaker) for protection against ground fault currents. This will ensure protection when using a Schuko plug or another plug with grounding pin.

The product must be connected to a power supply switch with a minimum contact gap of 0.118 in. (3 mm) in all poles.

In case of overtemperature, a thermal switch cuts out the motor and cuts it in automatically when it has cooled sufficiently.

The required electrical connection is 115 V.

115 V

8. Service

Warning

The product must only be serviced by trained service personnel.

If the power supply cable is damaged, it must replaced by the manufacturer, the manufacturer's service partner or a similarly qualified person.

To ensure safe and reliable operation, always use original spare parts from Grundfos.

For service kits, see www.grundfos.us > Grundfos Product Center.

Note ***The product must be thoroughly cleaned before it is returned for service. Otherwise the warranty will be void.***

8.1 Service documentation

Service documentation is available at www.grundfos.us > Grundfos Product Center.

If you have any questions, please contact the nearest Grundfos company or service workshop.

8.2 Maintenance

The Sololift2 lifting station does not require any special maintenance, but we recommend that you check operation and pipe connections at least once a year.

Change the carbon filter once a year. See section *8.4 Service instructions*.

8.3 Adjustment of run time

The default setting ensures proper operation in most pipework. If the pipework is particularly long or short, it may be necessary to adjust the run time.

For information about adjusting the run time, see Grundfos Service Instruction 97920624. (See duty data in section *9. Technical data* on page 6.)

8.4 Service instructions

Thanks to the product design, service is easy in case of malfunction or blocked pump.

Digits in the following sections refer to the pictures in the Appendix at the end of this booklet.

Warning

Before carrying out any service work, remove the fuse, pull out the plug, or switch off the power supply. Make sure that the power supply cannot be accidentally switched on.

All rotating parts must have stopped moving.

The product must only be serviced by trained service personnel.

Impeller/grinder stuck

1.1 Disconnect the power supply.

1.2 Unscrew the plug in the cover.

1.3 Insert a screwdriver (min. 4.33 in. (110 mm)) through the plug hole and into the slot of the shaft end.
Turn the shaft right and left to free the impeller/grinder from dirt.

1.4 Fit the plug, and switch on the power supply to check if the impeller/grinder can rotate freely.

Operation by means of a power drill

2.1 If the product cannot be operated by electrical power, disconnect the power supply and empty the toilet and tank by means of a power drill.

Pressure switch pipe blocked

Note ***The pressure switch unit can be removed separately.***

3.1 If the water level in the tank is above the motor flange, disconnect the power supply and drain the tank by means of the drain hose (accessory).

3.2 Unscrew the cover.

3.3 Pull out the complete pressure switch.

3.4 Check and clean the pressure switch pipe.

Caution ***Make sure that the little tube in the top of the pipe did not become blocked when you cleaned the pipe!***

Note ***Lubricate the sealing area of the pressure switch for easier fitting.***

Foreign body in tank

If the water level in the tank is above the motor flange, disconnect the power supply and drain the tank by means of the drain hose (accessory).

Unscrew the cover. See Appendix 3.2.

4.1 Remove the four screws of the motor flange.

4.2 Lift the motor flange to reduce the compression of the O-ring. Insert a screwdriver into the notch underneath the power supply cable and press it down.

4.3 Lift out the complete motor-pump unit by the handles.

Note ***Lift the unit vertically before tilting it!***

4.4 Check and clean the tank and impeller/ grinder.

Warning
Beware of the sharp edges on the grinder.
Wear protective gloves.

Carbon filter

Replace the carbon filter once a year to ensure sufficient filter function.

Note ***Instead of using a carbon filter, the Sololift2 can also be vented through a venting pipe. In this case a venting valve is needed. Grundfos product number: 98059587.***

9. Technical data

Power supply voltage

115 V, 60 Hz.

Power consumption

Max. 750 W.

Power factor

Cos φ 0.87 / 0.92.

Speed

3450 rpm.

Rated current

6.8 A.

Insulation class

F.

Noise level

< 70 dB(A) to 12050-2.

Flow rate

Max. 38 gpm (142 l/min).

System pressure

Max. pump head: 26.2 ft (8.0 m).

Max. system head: 19.7 ft (6.0 m).

Note ***The system pressure should not exceed 19.7 ft (6 m) head to guarantee a sufficient drain of the connected sanitary appliances.***

Power supply cable

Power supply cable length 4.9 ft (1.5 m).

90 ° angle plug (115 V).

Net weight

16.1 lb (7.3 kg).

Start and stop levels

Start: 2.8 in. (72 mm) above bottom.

Stop: 2.1 in. (52 mm) above bottom.

Liquid temperature

Max. 122 °F (50 °C).

Ambient temperature

41 °F to 95 °F (5 °C to 35 °C).

Duty

S3 - 50 % - 1 min. (30 sec. on; 30 sec. off).

Marking

Approvals

C US
MEETS UPC

10. Fault finding

Warning
Remove the fuse, pull out the plug, or switch off the power supply.
Make sure that the power supply cannot be accidentally switched on.
All rotating parts must have stopped moving.
The product must only be serviced by trained service personnel.

See also section *8.4 Service instructions*.

Fault	Cause	Remedy
1. Motor does not start when the level in the tank reaches the start level.	a) Power supply failure.	Reestablish the power supply.
	b) Fuse blown. If new fuse blows at once, either cable or motor is faulty.	Replace the fuse. Measure the amp draw across the power supply cable and motor leads. If cable or motor is defective, replace the defective parts.
	c) Impeller/grinder stuck. Thermal switch tripped.	Free the impeller/grinder, and wait until the motor is cooled down and the thermal switch has reset.
	d) Pressure switch pipe blocked.	Remove the pressure switch and clean the pipe.
2. Motor hums but does not operate.	a) Impeller/grinder stuck.	Free the impeller/grinder and check that it can rotate freely.
	b) Motor or capacitor defective.	Replace the motor or capacitor.
	c) Control board defective.	Replace the control board.
3. Motor runs continuously or at irregular intervals.	a) Water leaking from inlet into tank.	Check for leaking appliances.
	b) Water leaking back into tank from discharge pipe.	Check the non-return flap.
	c) Pressure switch defective.	Replace the pressure switch unit.
4. Motor runs but does not evacuate water.	a) Pump or tank blocked.	Remove blockage.
	b) Air lock in pump or vent hole in pump housing blocked.	Check operation of vent valve in the tank. Check that the carbon filter is not wet. Check that the vent hole in the pump housing is not blocked.
	c) Discharge port or pipe blocked.	Remove blockage. Check the non-return flap.
5. The Sololift2 lifting station evacuates slowly.	a) Discharge pipe is too long or has an excessive number of bends.	Increase discharge pipe size. Change pipework to reduce number of bends. Change bends to soft bends.
	b) The pump housing is leaky.	Replace the pump housing (service part).
	c) Hydraulics or grinder blocked.	Check and clean the hydraulics and grinder.
6. Rattling noise from the Sololift2 lifting station, but water is evacuated.	a) Foreign body hitting the impeller/grinder.	Remove the foreign body.
7. Odor from the tank.	a) Carbon filter contaminated.	Replace the carbon filter.

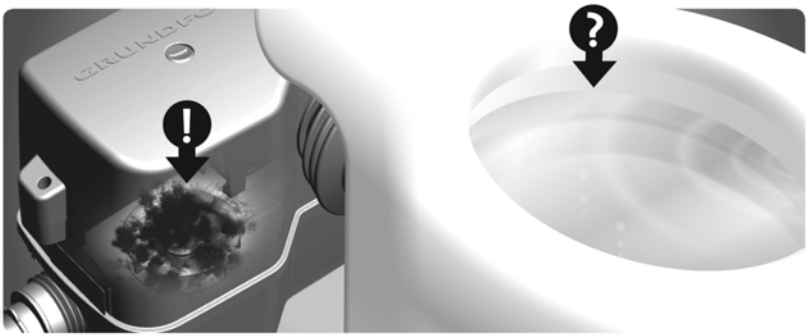
Fault	Cause	Remedy
8. Water from shower or another appliance connected to the lower inlets drains off slowly. Backflow from the Sololift2 lifting station.	a) Non-return flap in inlet stuck, does not open or does not close sufficiently.	Check the non-return flap.
	b) Hydraulics or grinder blocked.	Check and clean the hydraulics and grinder.
	c) The start level has changed.	Check and clean the pressure switch pipe.
	d) Inlet pipe diameter is too small.	Use a pipe with a larger diameter.

11. Disposal

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.

Subject to alterations.



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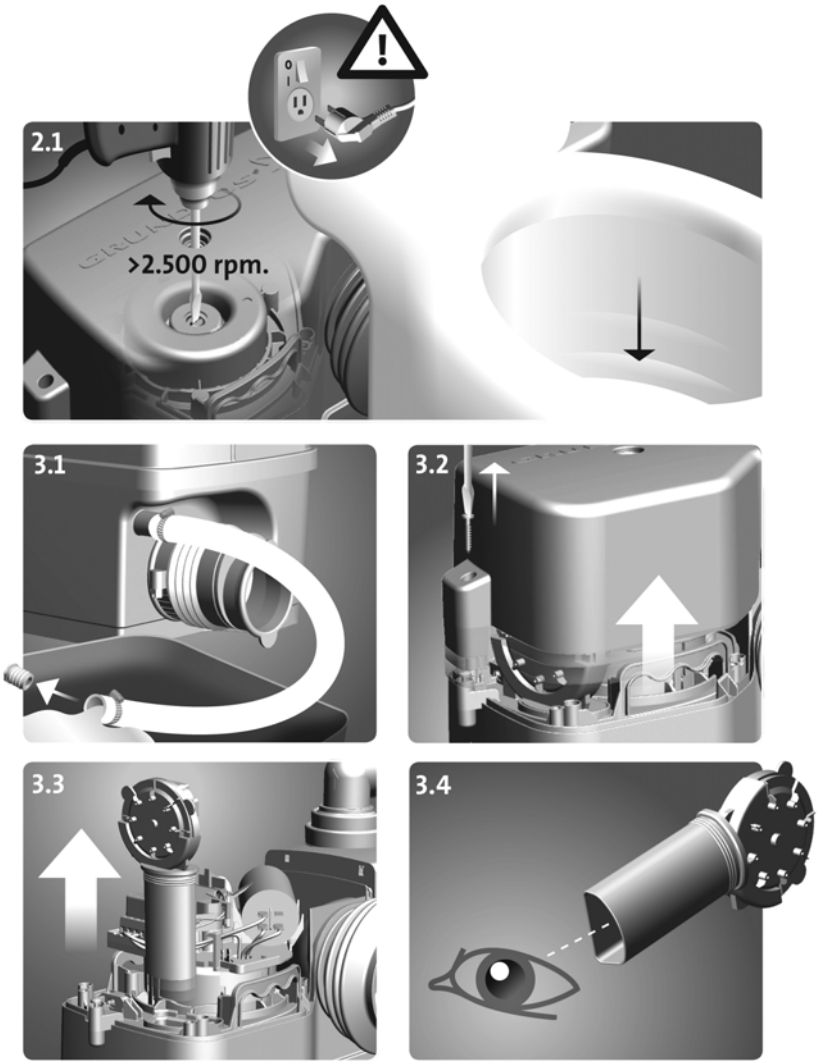
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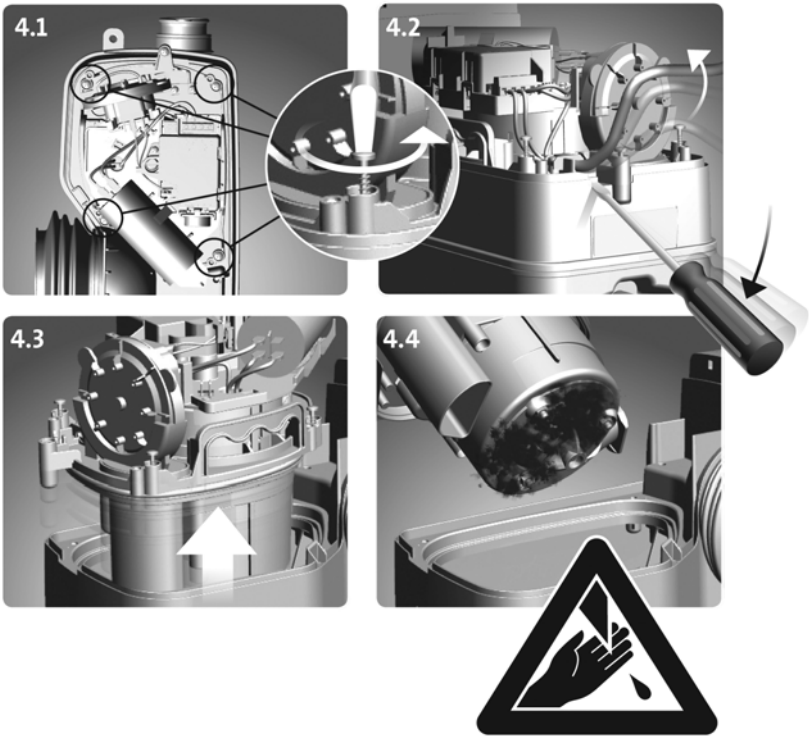
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