

2. Sololift2 WC-1

Sololift2 WC-1 is a small, compact, ready-to-install automatic lifting station with integrated professional cutter system. It is suitable for pumping wastewater with faeces off places in private dwellings.

The unit is designed according to EN 12050-3.



Fig. 3 Sololift2 WC-1

TM05 0866 1711

Applications

Sololift2 WC-1 is suitable for pumping wastewater from a washbasin or a single toilet (with horizontal outlet according to EN 33/37) containing toilet paper and faeces.

Typical applications:

- Basement installations below sewer level.
- In connection with the renovation or modernisation of existing buildings where the location may be remote from the main soil pipe so that a natural slope cannot be established, for example attics.



Fig. 4 Example of application

TM05 0358 0911

Features and benefits

Robustness and operational reliability

- The powerful motor ensures optimum operational reliability, even when for instance feminine hygiene products are occasionally flushed down the toilet.

Easy installation and replacement

- Adjustable discharge and inlet connections ensure easy installation and replacement.

Easy maintenance and service

- The removable, compact pump-motor unit makes any service job a fast and clean matter.
- No need to disconnect discharge and inlet pipes or to remove the unit from behind the toilet.

Sizing guide

The unit is designed for flush volumes of 4, 6 and 9 litres. A 4-litre flush is recommended only if the amount of solids in the pumped liquid is small.

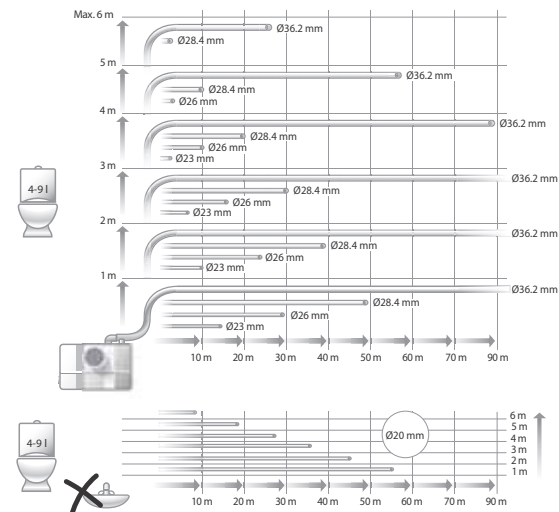


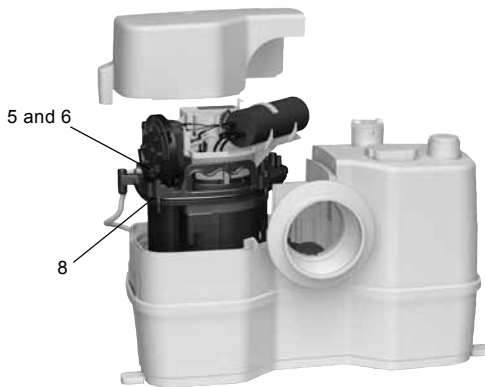
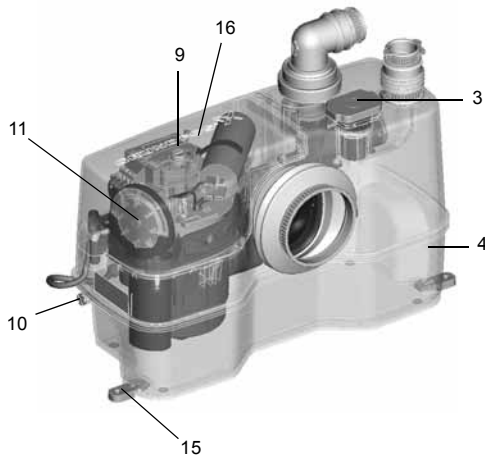
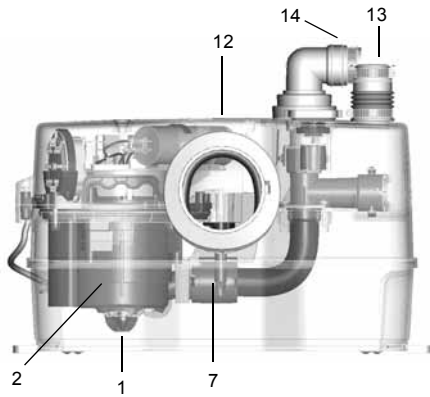
Fig. 5 Maximum lengths of vertical and horizontal discharge pipes

TM05 0360 0911

Figure 5 shows the maximum lengths of vertical and horizontal discharge pipes. The pipe length depends on the pipe diameter and is based on a flow velocity of 0.7 m/s. Four bends, a non-return valve and an isolating valve have already been taken into account.

Construction features

Sololift2 WC-1



Description

Pos. Operational reliability

- | | |
|---|--|
| 1 | Cutter
Professional cutter, which easily handles feminine hygiene products or similar, increases the reliability. Pump with self-venting valve for stable start. |
| 2 | Motor
Powerful motor with special winding for high torque and motor protection by thermal switch with automatic restart. Three shaft seals and an additional V-ring ensure long operational life. |
| 3 | Venting valve
Venting valve with carbon filter and overflow protection. Possibility of connecting a vent pipe, for example over roof. |
| 4 | Tank
Welded tank design which is pressure-tight up to 2.5 m water column. |

TM05 0371 0911

Pos. Easy maintenance and service

- | | |
|----|--|
| 5 | Access to components
Design with dry motor for easy and clean service. |
| 6 | Compact block unit
Pump, motor and controller form a compact block unit which is easy to remove for service and replacement. No need to disconnect the Sololift2 tank and connected pipes when service is required. |
| 7 | Auto coupling
Self-adjusting auto coupling eases assembly. |
| 8 | Screws
All important screws are captive screws, which facilitates service work. |
| 9 | Anti-blocking
Manual anti-blocking function is accessible from outside with a screwdriver, i.e. no need to remove the cover. Remove a plug on top of the cover, insert the screwdriver, and turn the shaft. |
| 10 | Drain connection
Separate tank drain function is available by connecting a drain hose. |
| 11 | Pressure switch
Pressure switch control outside the tank, i.e. no moving parts and diaphragm in the wastewater. |

TM05 0371 0911

Pos. Easy installation and replacement

- | | |
|----|---|
| 12 | Dimensions
Very compact dimensions. The position of discharge and inlet connections ensures easy replacement of Sololift+ and similar units of other makes. No extra work on pipes required. |
| 13 | Inlet
Inlet connection at the top. |
| 14 | Discharge
A turnable 360° adapter incorporating a non-return valve enables vertical or horizontal discharge direction for easy replacement. |
| 15 | Feet for floor-mounting
Feet for floor-mounting are easy to install. |
| 16 | Alarm
Slot for an alarm device. Easy retrofitting just by pushing a small printed-circuit board with buzzer into the slot. No additional wires required. |

TM05 0496 1111

Visit the animation of Sololift2 features on www.grundfos.com or local Grundfos homepages.

Installation requirements

This section shows an installation example and describes the installation requirements. Installation is done quickly and easily by using flexible hose connectors with several adapter options for almost any pipe diameter.



Fig. 6 Example of installation

Note: The first part of the discharge pipe should always be vertical. All horizontal pipes must have a fall of minimum 1 % to the main soil pipe.

The measurements in fig. 7 must be observed.

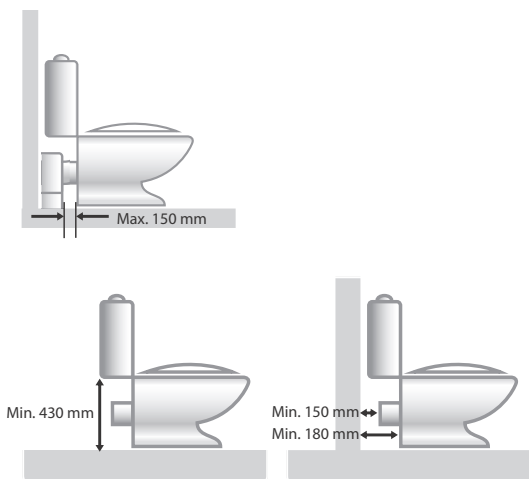


Fig. 7 Measurements to be observed

The Sololift2 WC-1 must be installed directly behind the toilet and in the same room according to EN 12050-3. When a connecting piece is required, the maximum distance to the toilet must not exceed 150 mm.

Observe the minimum height and distances in fig. 7 to ensure that the unit is accessible for service.

Connections



Fig. 8 Horizontal or vertical discharge

The turnable 360 ° discharge adapter can be fitted horizontally or vertically. The adapter incorporates a non-return valve.

The discharge and inlet connections can be adapted to the following pipe diameters:

Connection	Outer diameter						
	Ø22	Ø25	Ø28	Ø32	Ø36 ¹⁾	Ø40	Ø50
Discharge	•	•	•	•	(•)	•	-
Inlet at the top	-	-	-	•	(•)	•	-

¹⁾ Two adapters included for UK version. Also available as accessories.

Product numbers

Product	Plug	Sales region	Prod. no.
Sololift2 WC-1	Schuko	Europe	97775314
	Schuko	Russia	97775319
	AUS	Australia	97775324
	No plug	UK	97775329

Accessories

Product	Description	Prod. no.
Alarm device	Acoustic alarm in case of malfunction. Printed-circuit board to be pushed into an internal slot in Sololift2 WC-1.	97772315
Replacement hose	Flexible PVC hose with two clamps and an adapter to the discharge of the Sololift2. Dimensions: • Length: 500 mm. • Inner diameter: Ø32. • Outer diameter: Ø38.	97772316
Drain hose	Flexible PVC hose with two clamps and a plug. Applicable when the tank of the Sololift2 is to be drained for service. Dimensions: • Length: 500 mm. • Inner diameter: Ø12. • Outer diameter: Ø14.4.	97789093
Adapter ring, Ø36	Kit, adapter Ø36 UK Suitable for discharge and inlet connections. Note: The adapter is included in the UK version.	97775336

Technical data

Mechanical data

Net weight	7.3 kg
Tank volume	9.0 litres
Flexible discharge elbow	Ø22/25/28/32/36/40
Toilet connection	Toilet with horizontal outlet according to EN 33 or EN 37. The toilet must use at least 4 litres per flush.
Dimensions of possible inlet	1 x Ø32/36/40
Start and stop levels	Start: 72 mm above floor level Stop: 52 mm above floor level
pH value of the pumped liquid	4 to 10
Maximum liquid temperature	50 °C
Ambient temperature	+5 °C to +35 °C
Duty class	S3-50 % - 1 min. (30 sec. on; 30 sec. off)

Electrical data

Supply voltage	1 x 220-240 V - 10 %/+ 6 %, 50 Hz
Power consumption, P1	Max. 620 W
Rated current	3.0 A
Power factor, cos φ	0.87/0.92
Speed	2800 min ⁻¹
Enclosure class	IP44
Insulation class	F
Connecting cable	1.2 m, 0.75 mm ² (H05VV-F-3G)

Dimensions

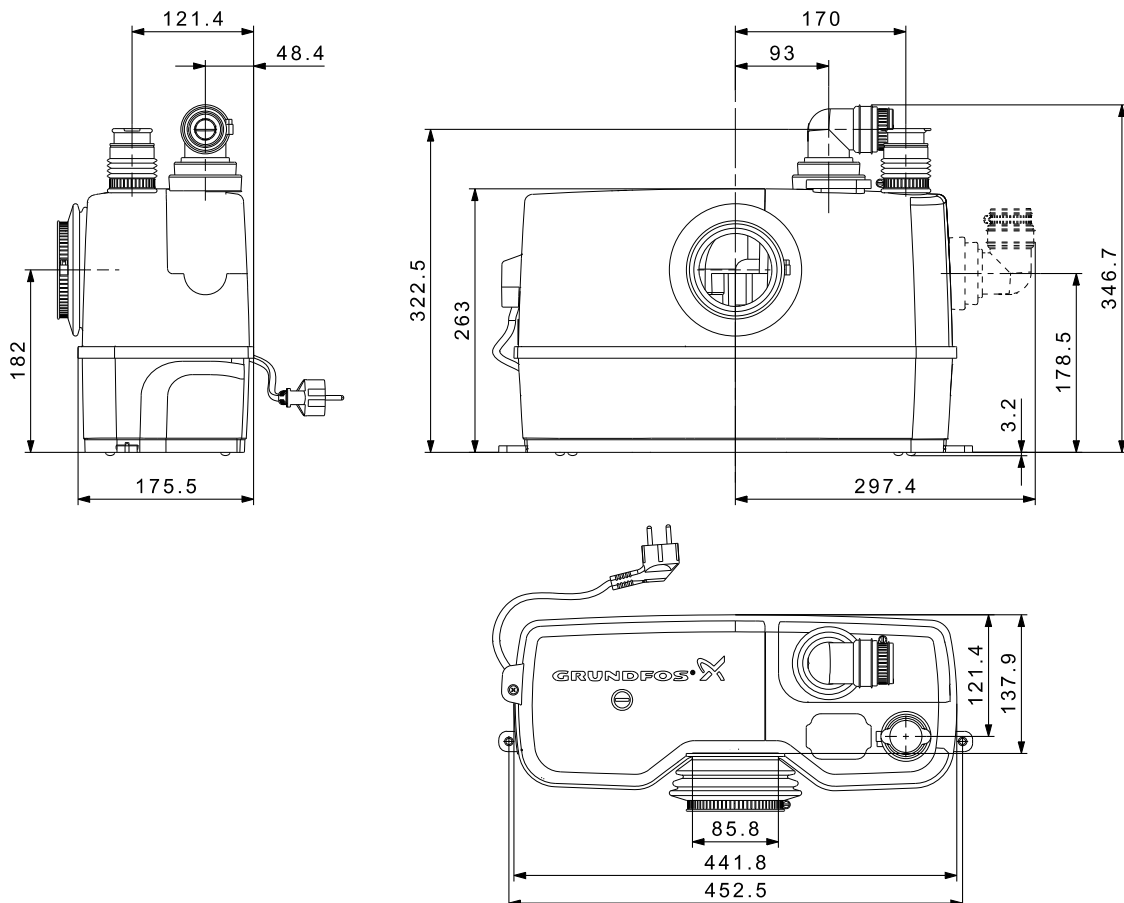


Fig. 10 Dimensional drawings, Sololift2 WC-1

Performance

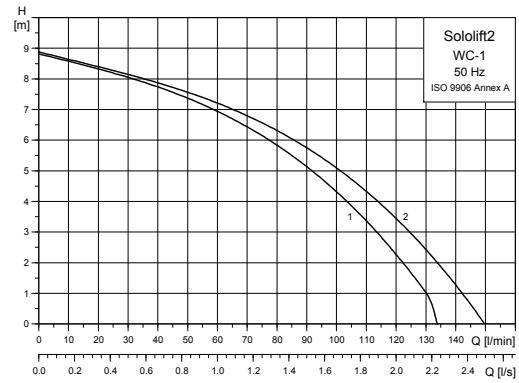


Fig. 9 Performance curves, Sololift2 WC-1

Legend

Pos.	Description
1	Horizontal outlet
2	Vertical outlet

TM04 9877 0211

TM04 9914 0311

Marking and approvals

Description

The Sololift2 units are CE-marked and have obtained the following approvals:

- VDE
- EMV
- TÜV/LGA
- GOST (AR56).

Marking



Approvals



Design and scope of delivery

The Sololift2 WC-1 is supplied with a tank made of wastewater-resistant composite with inspection cover.

Features:

- DN 100 connecting piece with flexible hose to the toilet.
- Additional inlet connecting piece at the top for pipes of $\varnothing 32$ and $\varnothing 40$ ($\varnothing 36$ for UK version).
- Venting valve with carbon filter, overflow protection and integrated adapter for a $\varnothing 20$ vent pipe.
- Inner pipework with auto coupling to the pump-motor unit.
- One pump-motor unit fixed to the tank with four captive screws. The pump discharge to the inner pipework of the tank is fixed to the auto coupling from the inner pipework of the tank.
- 1.2 m cable and plug. See *Technical data*, page 8.
- Flexible adapter hose for inlet pipes of $\varnothing 32$ and $\varnothing 40$ ($\varnothing 36$ for UK version).
- Feet for floor-mounting including screws and expansion anchors.
- Non-return valve.
- Discharge adapters from $\varnothing 22$ to $\varnothing 40$ (plus $\varnothing 36$ for UK version).