

## 4. Sololift2 CWC-3

Sololift2 CWC-3 is a slim, 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 and is specially designed for front-wall installations.



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Fig. 20 Sololift2 CWC-3

### Applications

Sololift2 CWC-3 is suitable for pumping wastewater from a single wall-hung toilet containing toilet paper and faeces, washbasin, cabinet shower and a bidet or urinal.

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.



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Fig. 21 Example of application

### 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

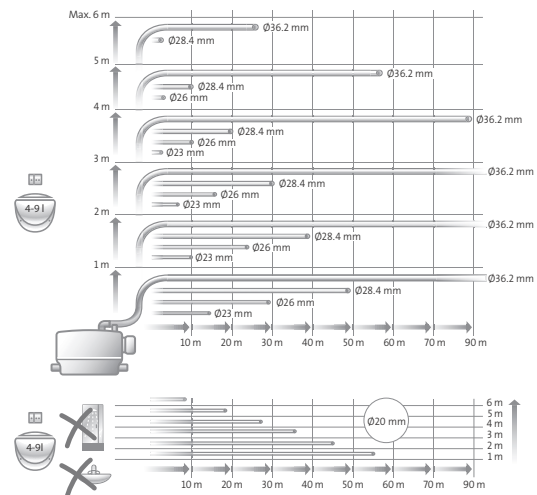
- Adjustable discharge and inlet connections ensure easy installation and replacement.

#### 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.



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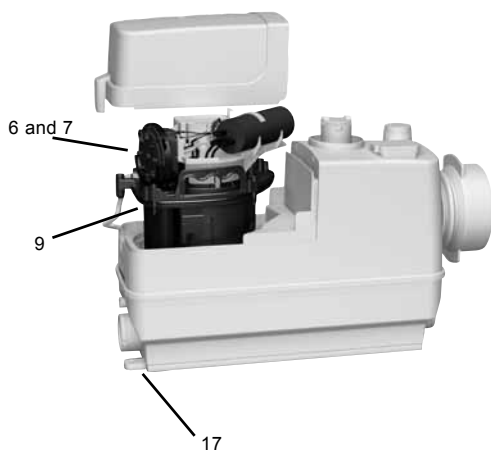
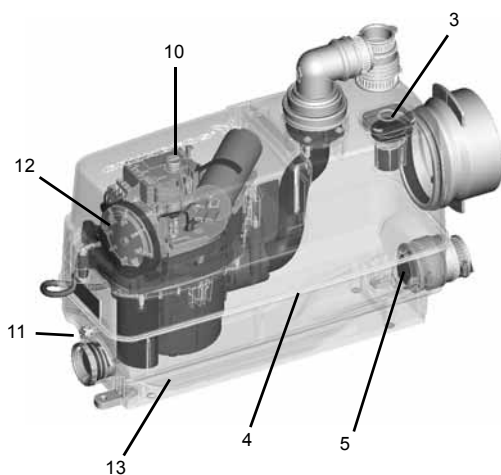
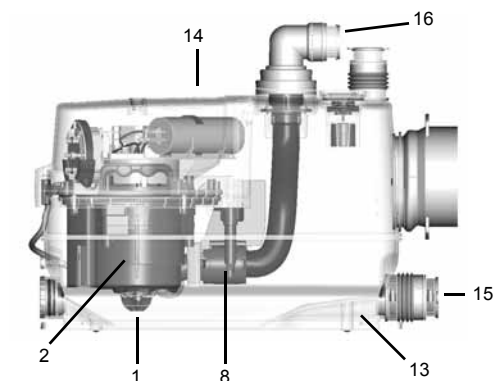
Fig. 22 Maximum lengths of vertical and horizontal discharge pipes

Figure 22 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 CWC-3

### Description



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#### Pos. Operational reliability

- |   |   |
|---|---|
| 1 | <b>Cutter</b><br>Professional cutter, which easily handles feminine hygiene products or similar, increases the reliability. Pump with self-venting valve for stable start.                                  |
| 2 | <b>Motor</b><br>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 | <b>Venting valve</b><br>Venting valve with carbon filter and overflow protection. Possibility of connecting a vent pipe, for example over roof.   |
| 4 | <b>Tank</b><br>Welded tank design which is pressure-tight up to 2.5 m water column.   |
| 5 | <b>Non-return flap valves</b><br>Non-return flap valves prevent back- and cross-flow to inlet pipes.  |

#### Pos. Easy maintenance and service

- |    |   |
|----|---|
| 6  | <b>Access to components</b><br>Design with dry motor for easy and clean service.  |
| 7  | <b>Compact block unit</b><br>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. |
| 8  | <b>Auto coupling</b><br>Self-adjusting auto coupling eases assembly.  |
| 9  | <b>Screws</b><br>All important screws are captive screws, which facilitates service work.   |
| 10 | <b>Anti-blocking</b><br>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.         |
| 11 | <b>Drain connection</b><br>Separate tank drain function is available by connecting a drain hose.  |
| 12 | <b>Pressure switch</b><br>Pressure switch control outside the tank, i.e. no moving parts and diaphragm in the wastewater.   |
| 13 | <b>Bottom</b><br>Bottom design with strong chamfer to prevent sedimentation in corners.   |

#### Pos. Easy installation and replacement

- |    |  |
|----|--|
| 14 | <b>Slim design</b><br>Slim design for front-wall installation with a wall-hung toilet.   |
| 15 | <b>Inlet</b><br>Eccentric, height-adjustable connectors for side inlets, i.e. in addition to the inlet at the top of the tank. |
| 16 | <b>Discharge</b><br>Horizontal 360° turnable discharge incorporating a non-return valve.                                       |
| 17 | <b>Feet for floor-mounting</b><br>Feet for floor-mounting are easy to install.   |

Visit the animation of Sololift2 features on [www.grundfos.com](http://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.

The start/stop levels are made for the modern flat shower trays.

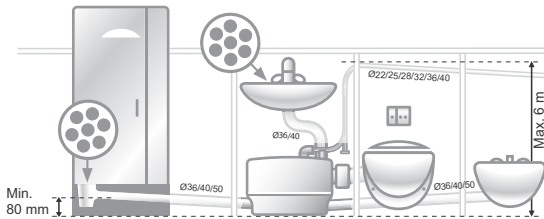


Fig. 23 Example of installation

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

The measurements in fig. 24 must be observed.

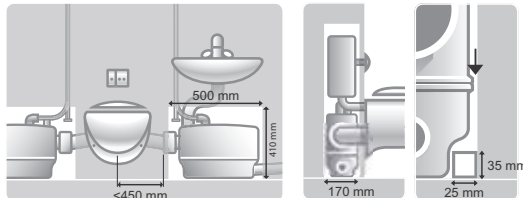


Fig. 24 Measurements to be observed

The Sololift2 CWC-3 must be installed as close as possible ( $< 450\text{ mm}$ ) to the wall-hung toilet in a front-wall installation or similar according to EN 12050-3.

Observe the minimum width of front wall and tile frame sizes in fig. 24 to ensure that the unit is accessible for service.

## Connections

The turnable  $360^\circ$  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 <sup>1)</sup>	Ø40	Ø50
Discharge	•	•	•	•	(•)	•	-
Inlet at the top	-	-	-	-	(•)	•	-
Inlet from side <sup>2)</sup>	-	-	-	-	(•)	•	•

<sup>1)</sup> Two adapters included for UK version. Also available as accessories.

<sup>2)</sup> One connector is included. Further connectors available as accessories.

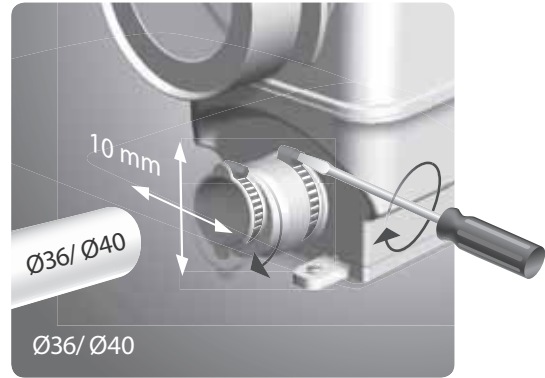


Fig. 25 Height and side alignment possible when using  $\text{Ø}36/40$  inlet pipes

## Product numbers

Product	Plug	Sales region	Prod. no.
Sololift2 CWC-3	Schuko	Europe	97775316
	Schuko	Russia	97775321
	AUS	Australia	97775326
	No plug	UK	97775331

## 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 CWC-3.	97772315
Replacement hose	Flexible PVC hose with two clamps and an adapter to the discharge of the Sololift2. Dimensions: • Length: 500 mm. • Inner diameter: $\text{Ø}32$ . • Outer diameter: $\text{Ø}38$ .	97772316
Adapter kit, inlet	Kit, second inlet $\text{Ø}50/40/40$	97775335
Adapter ring, $\text{Ø}36$	Kit, adapter $\text{Ø}36$ UK	97775336
	Suitable for discharge and inlet connections. <b>Note:</b> The adapter is included in the UK version.	

## Technical data

### Mechanical data

Net weight	7.1 kg
Tank volume	9.0 litres
Flexible discharge elbow	∅22/25/28/32/36/40
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 ∅32/36/40 from the top 2 x ∅36/40/50 in the side
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 <sup>-1</sup>
Enclosure class	IP44
Insulation class	F
Connecting cable	1.2 m, 0.75 mm <sup>2</sup> (H05VV-F-3G)

### Dimensions

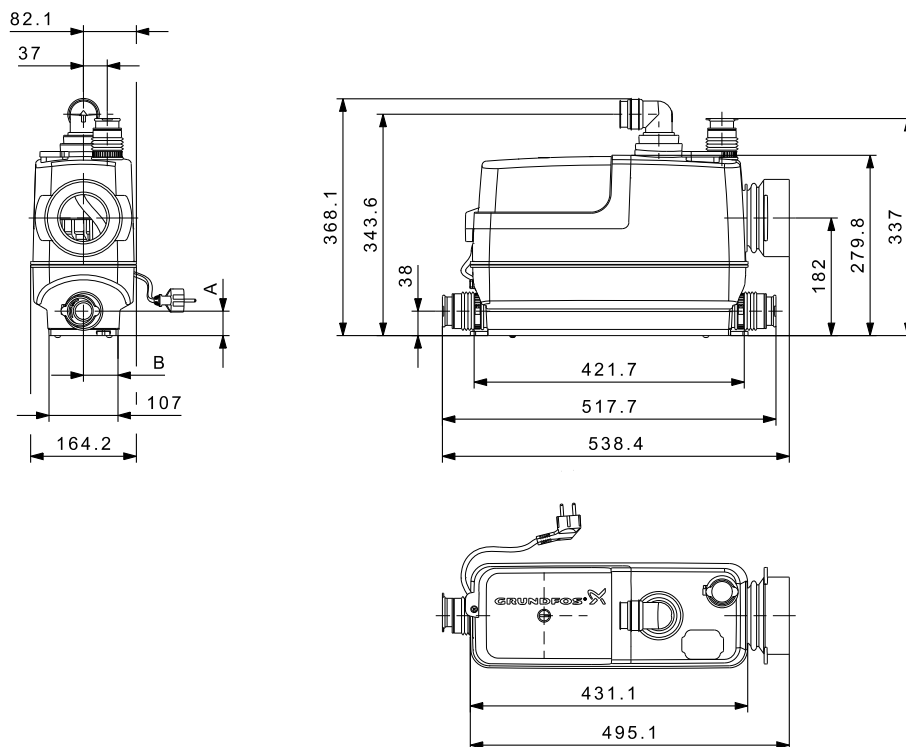


Fig. 27 Dimensional drawings, Sololift2 CWC-3

Pipe diameter	Type	A [mm]		B [mm]	
		Min.	Max.	Min.	Max.
∅36/40	Eccentric	32	42	49	59
∅50	Centric	37		54	

### Performance

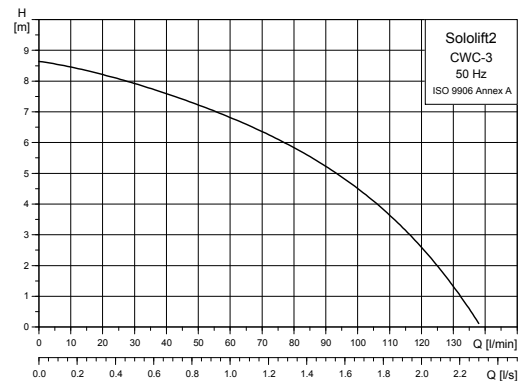


Fig. 26 Performance curves, Sololift2 CWC-3

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## 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 CWC-3 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).
- Two additional side inlet connections. One connector with clamps is included (2 x  $\varnothing 36$  inserts for discharge and inlet are included in the UK version).
- Two side inlet connections with integrated backflow flap valves.
- 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 19.
- 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).
- Drain hose with clamps and plug.