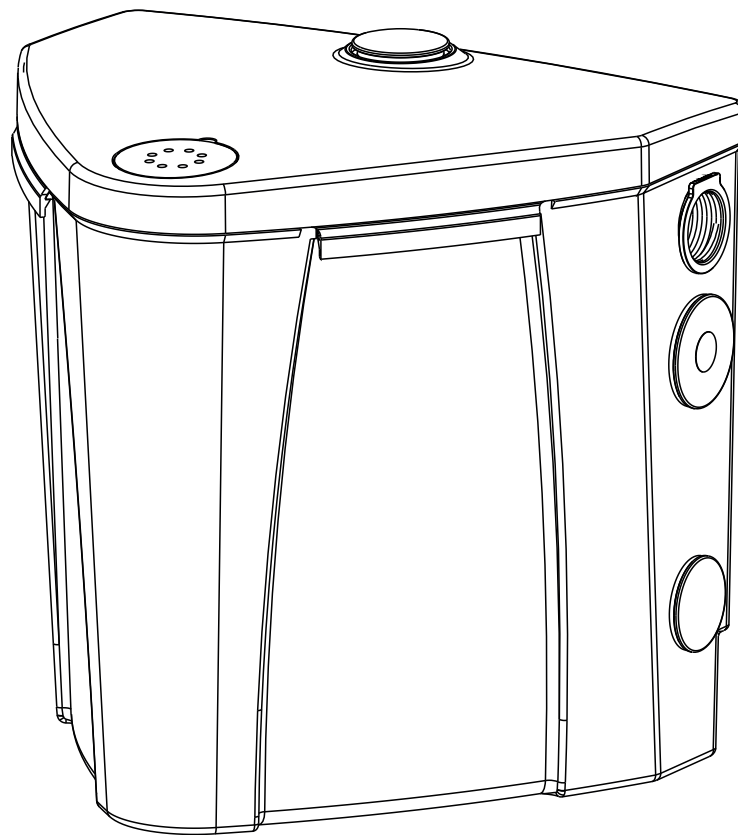

Lifting Station Type ABS Sanimax

1051-00



Lifting Station Type ABS Sanimax

R 202
R 202/C

MF 154
MF 154HW
MF 324

This manual is available to download from www.sulzer.com > Products & Services > Pumps and Systems.

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1 General

1.1 Application areas

ATTENTION *The maximum allowable temperature of the medium pumped:
Sanimax R 202 & R 202C, Sanimax MF 154 & 324 = 40 °C
Sanimax MF 154HW = 80 °C*

The Sanimax with Sulzer submersible pump has been designed for the dewatering of buildings below the sewer level. It is suitable for faecal-free effluent in accordance with EN 12056/DIN 1986-100.

The Sanimax is a compact wastewater lifting unit which can be installed under or beside the wastewater source at floor level.



In accordance with the regulations for effluent lifting stations, pumping of effluent containing faecal matter, or the pumping of flammable or explosive fluids, is not allowed with these lifting stations.

Examples of substances that should not be allowed into the tank:

- Aggressive fluids such as acids, lyes (caustic soda) or salts.
- Flammable liquids such as petrol, oil or phenols.
- Commercial and agricultural waste.
- Solid substances such as ash, rubbish, glass, sand, fibrous material, cardboard, paper towels, textiles, diapers, kitchen waste, coffee grounds, shredder waste.
- Liquid substances that can harden, such as bitumen, cement, lime, lime milk (whitewash), mortar, potato starch, grease (edible oils and fats), synthetic resin, synthetic resin emulsion, tar, paint residues.
- Cleaning agents, disinfectants.
- Abrasive material.

ATTENTION *As with all electrical devices, this product may fail due to operating errors, absence of mains voltage, or even a technical defect. Such a failure may result in medium or water escaping. If damage may occur due to the specific usage, measures are required to avoid such damage arising. In this respect, taking account of the conditions in question, particularly use of an off-grid alarm system, use of an emergency generator, and provision of an additional and appropriately connected second unit are to be considered.*

Sanimax R 202 & R 202C, Sanimax MF 154 & 324



This product is only suitable for removing clear and dirty water up to a water temperature of 40 °C or up to a maximum of 60 °C during short-term operation.

If the system is fed water from units such as washing machines, then the maximum water temperature could be exceeded if the device is not equipped with discharge cooling or if this is not switched on, e.g. in order to save energy.

This may cause damage to the pump or the pumping system. In such case Sulzer will not accept any guarantee or warranty claim.

If necessary, contact the manufacturer of the device or devices provided for connection (e.g. washing machines) to obtain information on how to switch on discharge cooling. If not possible then we recommend installation of the Sanimax MF 154HW model (see below).

Our systems are checked in accordance with EN 12050 LGA and conform to the current standards.

Also note that the maximum inlet temperature to the public sewer system is 35 °C and that you must ensure that the water is cooled accordingly.

Sanimax MF 154HW

Sanimax MF 154HW is designed for the pumping of high temperature liquids up to a maximum of 80 °C.



All inflow and discharge pipework to the unit must be temperature resistant accordingly and is the responsibility of the customer.

1.2 Nameplate

We recommend that you record the data from the nameplate on the pump in the form below, and maintain it as a source of reference for the ordering of spare parts, repeat orders and general queries.

Always state the pump type, item number and serial number in the field “Nr/SN” in all communications

SULZER		CE	xx/xxxx	IP 68
Typ		Nr		
Nr		SN		
U	V	Ph	A	Hz
P1		kW		
Qmax	m ³ /h	Hmax	1/min	
DIN EN12050-2		▽ m		
Sulzer Pump Solutions Ireland Ltd. Wexford, Ireland www.sulzer.com				
Made in Ireland				

Legend

Type	Pump type	
Nr	Item number	
SN	Serial number	
xx/xxxx	Production date (Week/Year)	
U	Rated voltage	V
	Rated current	A
Hz	Frequency	Hz
P1	Rated input power	kW
1/min	Speed	r/min
Qmax	Max. flow	m ³ /h
Hmax	Max. head	m
▽	Max. submersible depth	m

1052-02

Figure 1: Nameplate

1.3 Summary of the legal regulations covering the use of lifting stations for the pumping of faecal-free effluent.

Automatically operated lifting units are prescribed if:

- the water level in the odour lock lies below the sewer backwash level.
- rainwater gullies from areas below the sewer backwash level are present.

The sewer backwash level is the maximum possible water level in the public sewer network. Information on this can be obtained from your Local Authority. If the backwash level has not been fixed by the Local Authority, then the surface level of the roadway at the connection point is taken to be the level.

If the effluent does not give rise to foul odours, then a water-tight connection tank fitted with a lid is acceptable.

ATTENTION! *The Regulations of DIN 1986 as well as your own local by-laws should be observed.*

2 Safety

The general and specific health and safety guidelines are described in detail in the “Safety Instructions for Sulzer Products Type ABS” booklet. If anything is not clear or you have any questions as to safety make certain to contact the manufacturer Sulzer.

This unit can be used by children aged 8 years and above, and persons with reduced physical, sensory, or mental capabilities, or lack of experience and knowledge, when they have been given supervision or instruction concerning the safe use of the device and understand the hazards involved. Children must not play with the appliance. Cleaning and user maintenance should not be performed by children without supervision.

3 Transport

ATTENTION! The lifting unit should not be thrown or dropped during transport.



The Sanimax unit should not be lifted by the cable!



All relevant safety regulations as well as good general technical practice must be complied with.

4 Description

- Five optional connections for inflow line or cable already prepared for installation, as well as two discharge connections for PVC pipe.
- Hose connection nozzle $\frac{3}{4}$ ".
- Odour-tight cover containing vent with odour filter and overflow protection.
- Non-return valve fitted as standard.
A supplementary checkvalve is required above 5 m head (MF 154HW = 3 m).

4.1 Design of the lifting unit

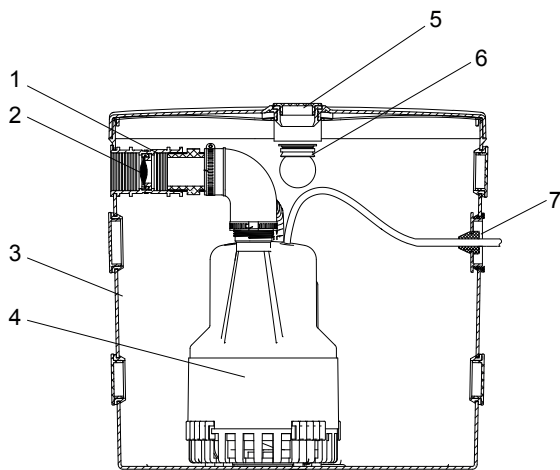


Figure 2: Sanimax R202 & R202/C

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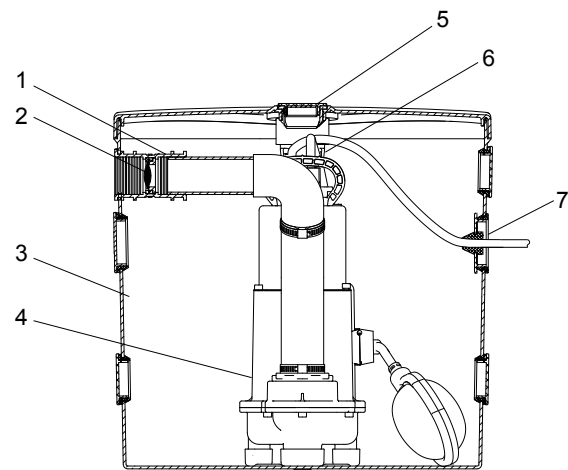


Figure 3: Sanimax MF

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- | | |
|--------------------------------------|---|
| 1 Discharge line | 5 Vertical inflow in tank cover |
| 2 Non-return valve | 6 Tank venting with integral odour filter and overflow protection |
| 3 Synthetic tank (triangular shape) | 7 Sealed cable entry |
| 4 Wastewater pump with level control | |

Supplied as standard:

Sanimax R202 & R202/C

- Washing machine connection adapter
- Hose clamps
- Discharge line connection adapter with non-return valve fitted
- Rubber elbow
- PVC discharge pipe

Sanimax MF

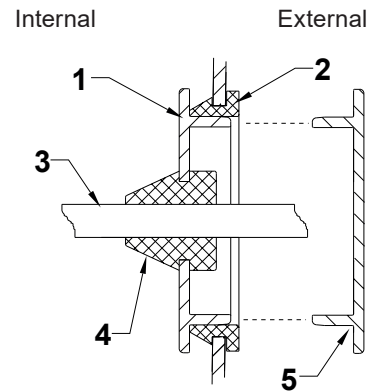
- Washing machine connection adapter
- Hose clamps
- Discharge line connection adapter with non-return valve fitted
- Flexible discharge pipe
- PVC discharge pipe with elbow
(stainless steel when fitted with MF 154HW pump)

5 Installation

NOTE: *EN, DIN, and VDE regulations should be observed*

5.1 Cable inlet

- Remove cable ties and select tank opening.
- Remove external stopper (5) from the tank opening while leaving the tank seal (2) in place.
- Feed cable (3), with cable stopper (1) and cable seal (4), to the outside of the tank.
- Lubricate tank seal.
- Insert cable stopper fully into seal.
- Tie up the residual cable in the tank with the aid of a cable tie and place securely between pump and tank wall at the opposite side to the level control system. The cable should not hinder the movement of the float.



1055-01

Figure 4: Cable inlet

- (1) Cable stopper (2) Tank seal (3) Cable
(4) Cable seal (5) External stopper

5.2 Discharge Line

As shown in the installation example below, the discharge line outer diameter 40 mm should be brought above the backwash loop (180° bend) and then allowed to flow by gravity into the collection sewer or channel (regulations EN 12056 and DIN 1986/100).

The discharge line should be laid so that it is not affected by frost.

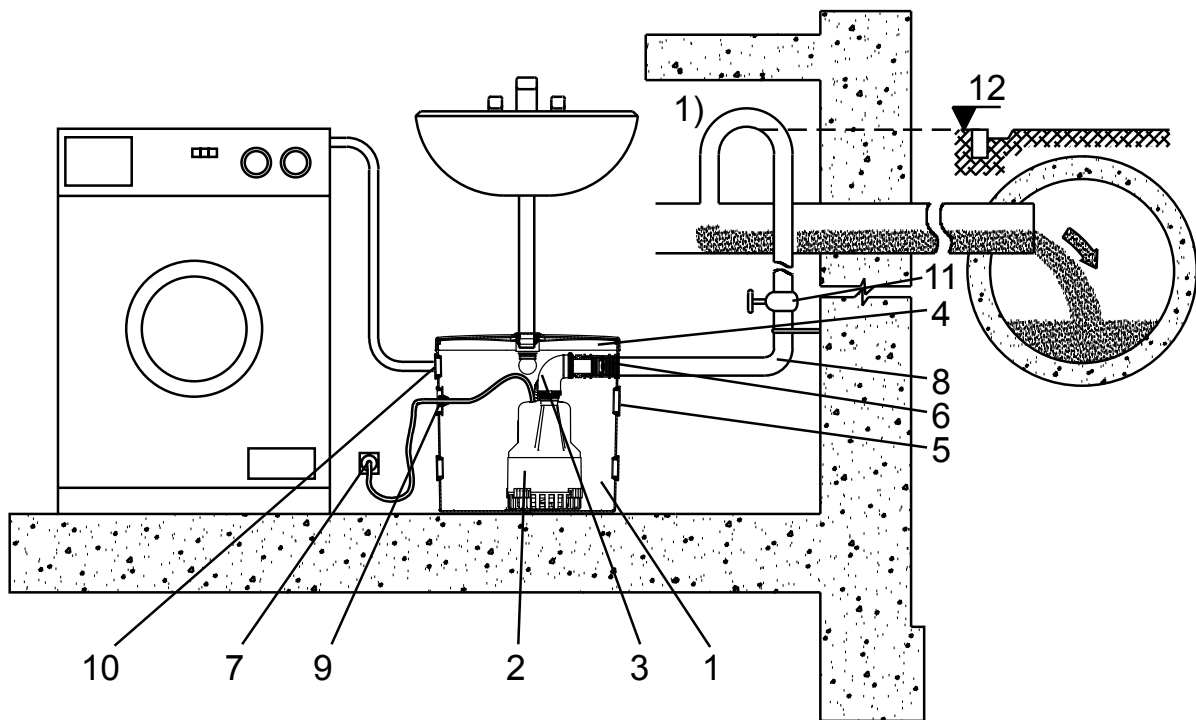
The discharge line should not be connected to a downpipe. No other discharge lines or inflows should be connected to the discharge line.

Select a suitable tank port for the discharge line and remove the plug. If necessary, rotate the rubber bend to suit. The discharge line inside the tank should be inserted (at least 30 mm) into the rubber bend. Tighten the hose clamps thoroughly.

All other tank openings can be used in a similar manner.

The non-return valve fitted into the rubber discharge line connection adapter, must be installed in such a manner that the non-return valve opens in the flow direction. Ensure that the flap is orientated so that the hinge is at the highest point.

5.3 Installation example Sanimax R202 and R202/C



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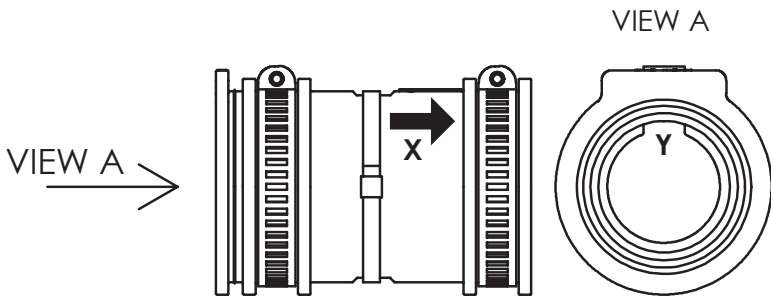
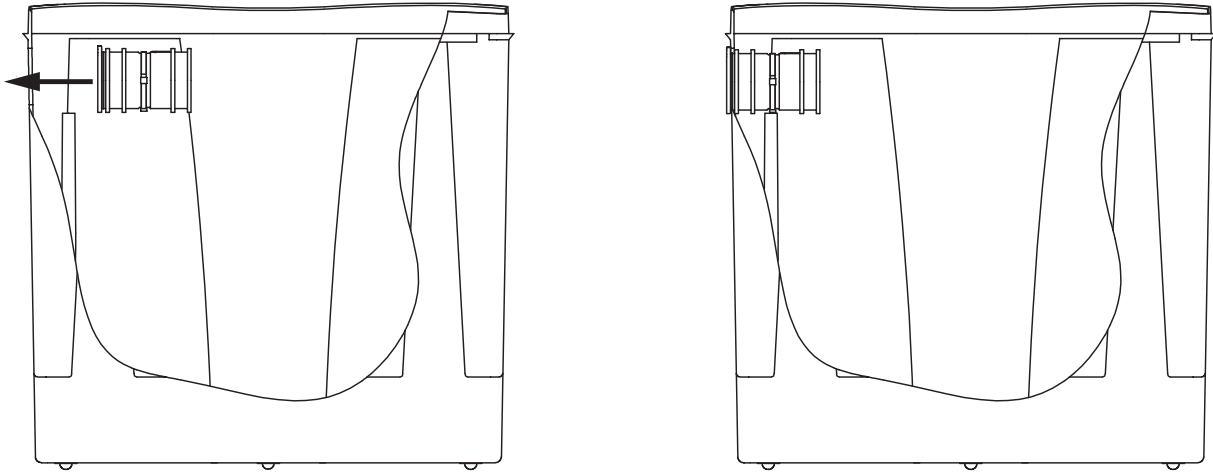
Figure 5: Installation example

- | | | | |
|---|---|----|-------------------------------------|
| 1 | Synthetic tank | 7 | Earthed socket |
| 2 | Wastewater pump Robusta 202 with TS level control system. | 8 | Discharge line 40 mm |
| 3 | Bend | 9 | Sealed cable entry |
| 4 | Cover with integral odour lock | 10 | Hose connection for washing machine |
| 5 | Variable inlet possibilities. Pipes Ø 40/50 mm. | 11 | Shut-off valve (accessory) |
| 6 | Discharge line connection with seal and non-return valve. | 12 | Backwash loop |

1) Install backwash loop so that the lower edge is above the backwash level.

5.4 Connecting MF pump to discharge line

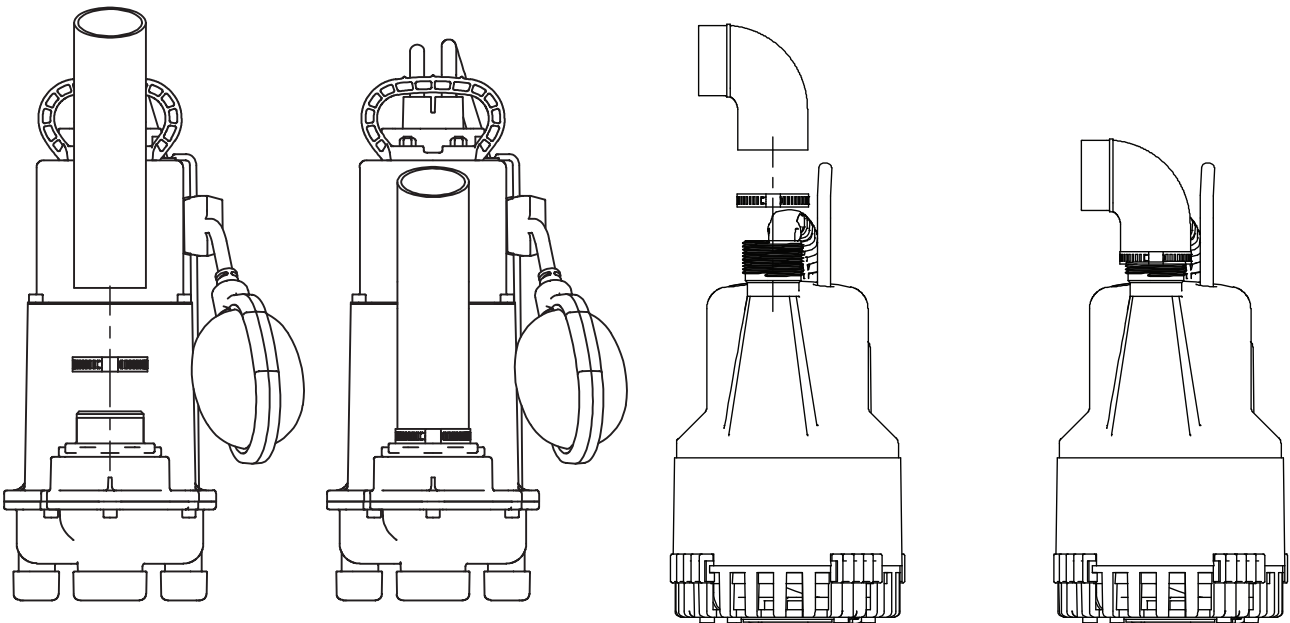
STEP 1: Push checkvalve through wall of tank.



Direction arrow (X) should point away from tank.

Ensure flap is orientated so that hinge (Y) is at the highest point.

STEP 2: Attach flexible pipe to MF pump, or elbow if Robusta pump, and tighten clamp.

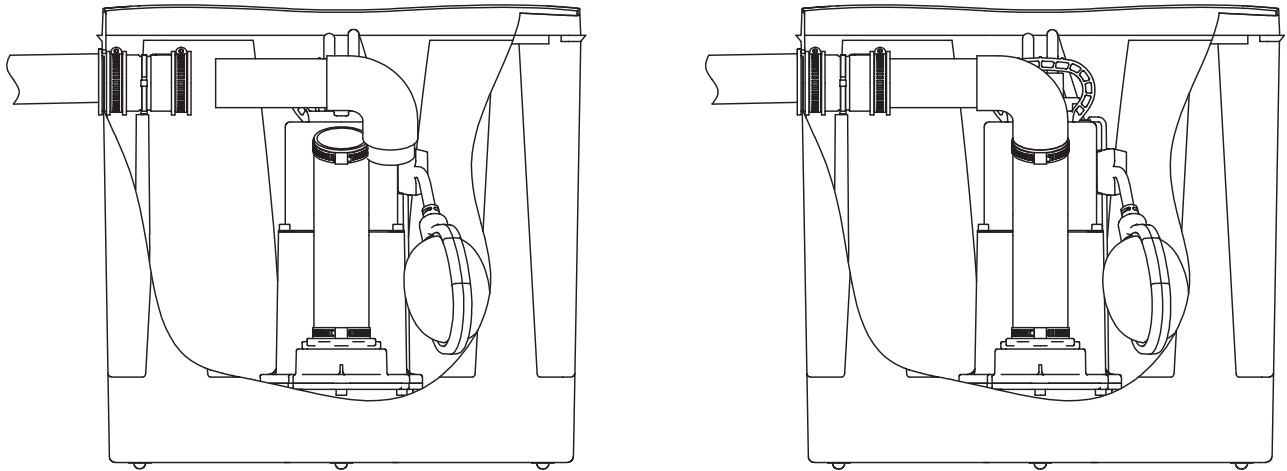


MF

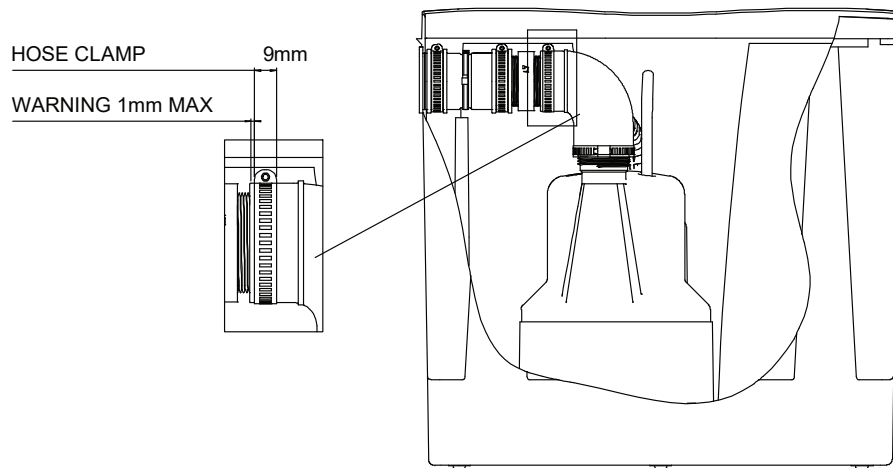
Robusta

STEP 3:

MF: Fix PVC pipe assembly between flexible pipe and checkvalve, and tighten clamps.



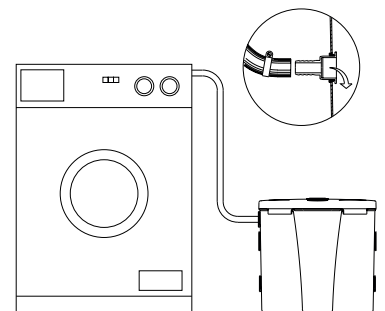
Robusta: Fix 1 1/4" double male nipple between elbow and check valve and tighten clamps



5.5 Washing machine connection

The washing machine nozzle should be installed together with seal from the inside and pushed into the washing machine hose.

ATTENTION! *Clamp the washing machine hose with a hose clamp.*

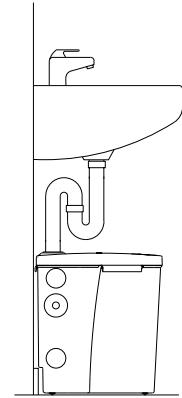


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Figure 6: Washing machine connection

5.6 Hand wash basin connection

For hand wash basin connection, remove the plug in the cover and push the S-bend tube downward into the unit. Connect the S-bend to the hand wash basin. Do not fully tighten the plastic nuts. Determine the tube length (allow approximately 20 mm of the tube to enter the unit), cut to size and carry out final assembly.



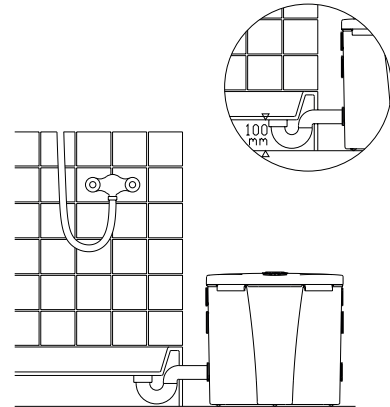
1058-00

Figure 7: Hand wash basin connection

5.7 Shower connection (only used with Sanimax R202 & R202/C)

When connecting a shower, one of the lower tank ports should be used.

The height difference between the floor of the shower and the floor of the tank of the lifting unit should be to EN/DIN in accordance with the illustration. In the case of a greater distance between the Sanimax R202 & R202/C and the shower basin, it is necessary to make an addition to allow for the recommended fall for gravity flow. The shower basin must then be located at a higher level.



1059-00

Figure 8: Shower connection

Before closing the tank lid, carry out a test run. This is done by allowing water to flow into the tank and observing the functioning of the pump switching heights.

Sanimax R202 & R202/C: ON = 85 mm; OFF = 55 mm approx.

Sanimax MF: ON = 225 mm; OFF = 50 mm approx.

In order to ensure that it is correctly sealed, the tank cover, with the pipe inlet to the back, is placed in position and pressed until all four moulded securing clips are fully engaged.

6 Electrical connection



Before operating, have a qualified person check that all required electrical protective measures are present. Earthing, neutral line, earth leakage circuit breakers, etc. must correspond to the regulations of your local Electricity Supply Provider and must function perfectly.

ATTENTION! *Cross-section and voltage drop of the power line must correspond with the local Electricity Supply Board regulations.*

ATTENTION! *Check that the voltage on the nameplate of the pump is the same as the mains voltage.*

The unit is fitted with a float switch, which automatically switches on and off the pump at the pre-set switching heights.



The earthed socket should, depending on type fitted, be installed at the prescribed distance from the lifting station and water source.

7 Maintenance



Before carrying out any maintenance work on the unit, all power lines should be disconnected from the mains, and care should be taken that the unit cannot be inadvertently switched back on.



To avoid danger if the power cable is damaged, it must be replaced by the manufacturer or its service agent or a similarly qualified person.



Servicing must only be carried out by qualified personnel.

ATTENTION! *The maintenance hints given here have not been provided for DIY repair work as special technical knowledge is required.*

The Sulzer warranty is only valid if original Sulzer spare parts have been used for all repair work.

7.1 General maintenance hints

Sulzer lifting units are reliable products of proven quality and are subject to careful testing before leaving the factory. Lubricated-for-life ball bearings together with monitoring devices ensure optimum reliability of the pump, provided that installation and usage is in accordance with our operating instructions.

Should a problem arise, do not improvise but ask your Sulzer Service Centre for assistance.

In order to ensure a long running life, regular checks and care are recommended.

The Sulzer Service Organisation will be glad to advise you on any special applications you have, and is always ready to assist you with your pumping problems.

7.2 Cleaning the lifting unit

The lifting unit should be cleaned at least once a year.

If the unit is lightly soiled, it should be rinsed out a number of times with clean water.

If the unit is heavily soiled, then it is necessary to remove the submersible pump for cleaning.

ATTENTION! *This work should only be carried out by a Sulzer Service Centre or Contract Workshop.*

A maintenance contract with one of our factory authorised Service Centres will ensure the best possible professional maintenance for all events.

