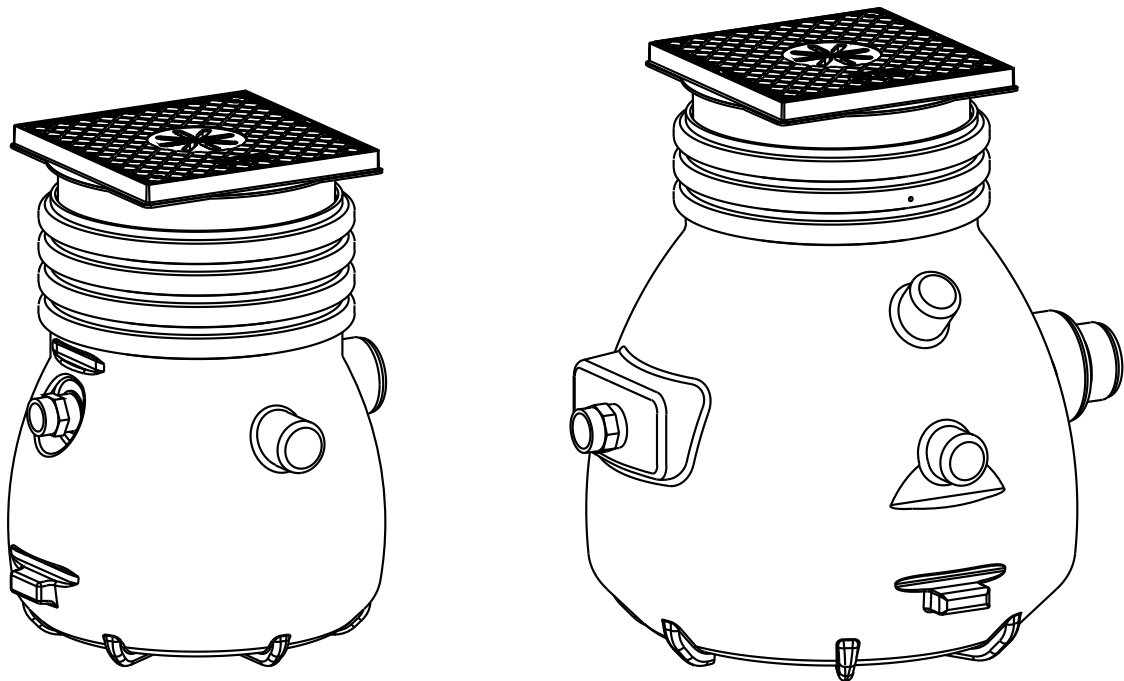

ABS lifting station Nirolift **ABS lifting station Sanisett**

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ABS lifting station Nirolift & Sanisett

Contents

1	General	3
1.1	Application areas	3
1.2	Installation example and dimensions.	3
1.3	Commentary on the legal regulations covering the use of lifting stations for the pumping of faecal free effluent.	5
1.4	Description	5
2	Safety	5
3	Transport	5
4	Set-up and Installation	6
4.1	Installation of the collection tank	6
4.2	Installation of the submersible pump	6
4.3	Opening of the collection tank inlet ports	7
4.4	Discharge line	7
4.5	Mounting of the upper fitting	7
4.6	Location of power supply cable and float switch	7
4.7	Level control	8
4.8	Installation of the control unit	8
5	Commissioning	8
6	Maintenance	9
6.1	Commentary on maintenance of lifting stations in accordance with EN 12056	9
6.2	General maintenance hints	9

1 General

1.1 Application areas

Synthetic-prefabricated, corrosion resistant sump for ABS submersible pumps designed as single pumping station for automatic pumping of wastewater and sewage in accordance with DIN/EN 12056 from locations and areas below the backwash level.



These lifting stations may not be used for the collection or pumping of flammable or corrosive liquids. Effluent containing grease, petrol, or oil should only be brought to the lifting station via a separation device.

1.2 Installation example and dimensions.

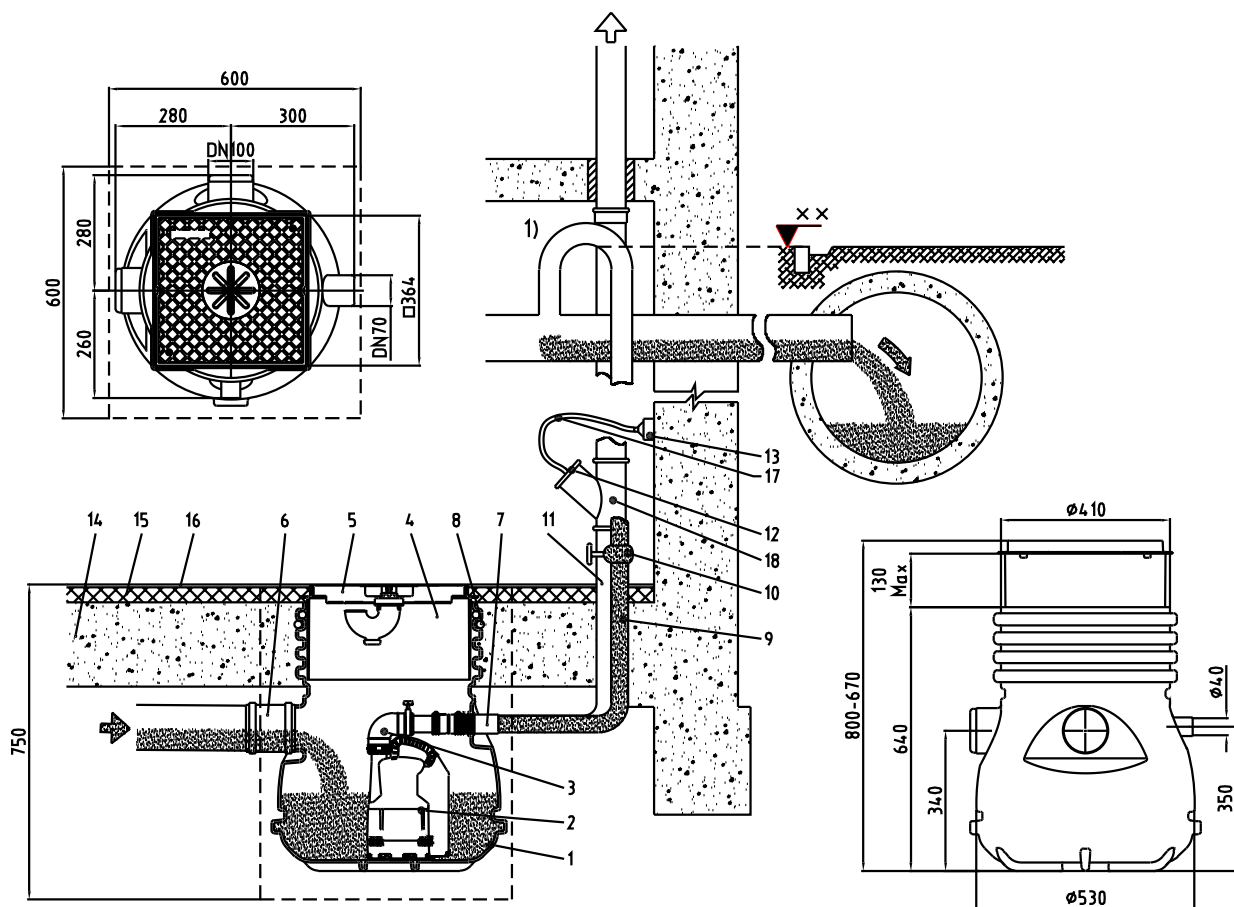


Figure 1 Nirolift installation example and dimensions

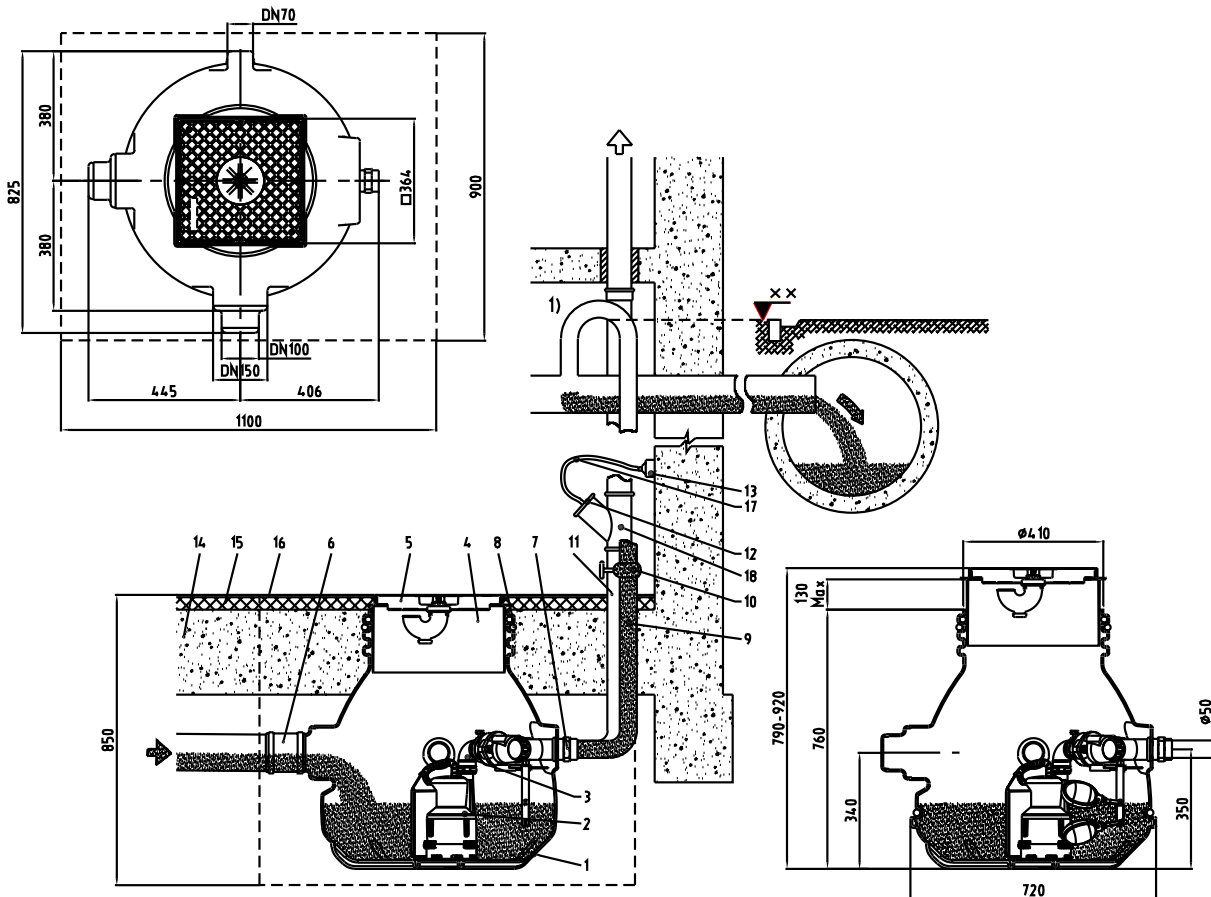


Figure 2 Sanisett installation example and dimensions

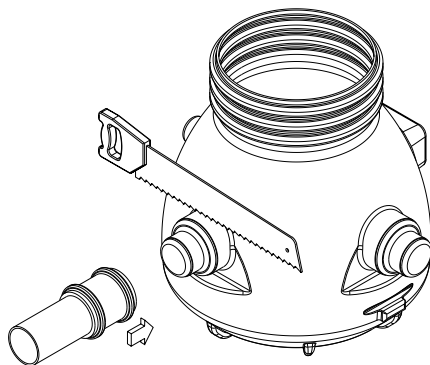


Figure 3 Opening connection ports

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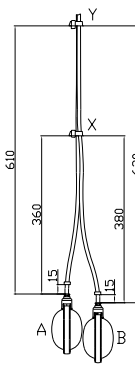


Figure 4 Sanisett float switch installation

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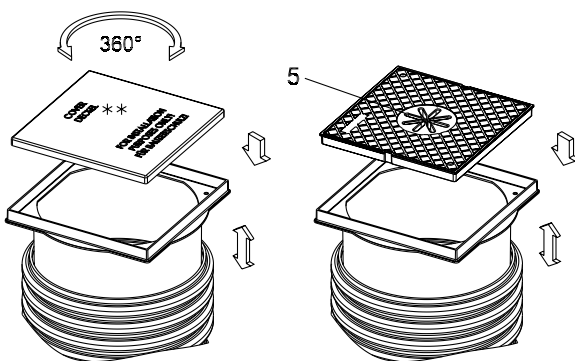


Figure 5 Mounting of upper fitting

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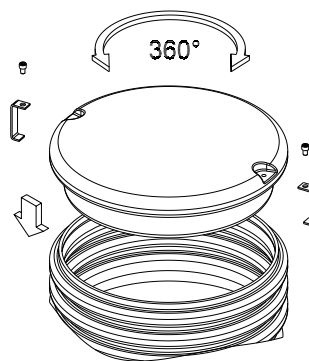


Figure 6 Sanisett above ground lid

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1.3 Commentary on the legal regulations covering the use of lifting stations for the pumping of faecal free effluent.

Automatically operated lifting stations are prescribed if:

- the water level in the odour lock of the effluent source lies below the sewer backwash level.
- rainwater gullies are present where the upper edge of the inlet grid lies below the sewer backwash level.

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.

The regulations also require that all waste-water which can cause offensive odours must be collected in closed, odour-tight, and free-standing collection tanks.

The collection tanks must be vented by vent pipes which are brought above roof level.

ATTENTION *The regulations of DIN 1986/100 EN 12050 and 12056 should be observed!*

1.4 Description

The waste-water lifting stations of the Nirolift/Sanisett consist of a synthetic collection tank which is waterproof in according with DIN/EN 12050-2, together with a cover plate with odour preventing filter and lockable floor inlet.

The Sanisett is also supplied with a junction piece for the discharge line and a bracket for the level control.

The collection tank is supplied as standard with a number of closed off inlet ports. The inlet ports DN 100 Nirolift and DN 100/150 Sanisett can be opened as required (See Figure 3).

The waste water entering via the inlet ports is collected in the collection tank. When a preset liquid level is reached then the Nirolift/Sanisett with one submersible pump is started up either by means of the float switch fitted to the pump itself, or connected into the control panel, and is switched off again when the tank is emptied.

NOTE *In the case of twin units installed in accordance with DIN/EN 12056, one submersible pump must be capable of pumping all the effluent. The second pump is only a stand-by unit.*

2 Safety

The general and specific health and safety hints are described in detail in the separate booklet Safety Hints. If anything is not clear or you have any questions as to safety make certain to contact the manufacturer ABS.

3 Transport



During transport the unit should not be dropped or thrown.

4 Set-up and Installation

Installation and dimensions (mm) of the Nirolift/Sanisett (Figure 1-6)

1 Synthetic tank	12 Cable inlet, odour-tight
2 Waste-water pump Robusta (not supplied with tank must be ordered separately)	13 Socket
3 Bend (Accessory)	14 Concrete
4 Upper fitting (adjustable 360°)	15 Screed
5 Cover plate with floor run-off and odour lock (only suitable for foot traffic).	16 Floor tiles
6 Two inlet ports DN 100 (Nirolift) 100/150 (Sanisett)	17 Motor connection cable
7 Discharge line for connection P.V.C pipe 40 mm (Nirolift), 50 mm (Sanisett)	18 Branch pipe (T-piece)
8 Seal to finished floor	1) Anti-siphon loop
9 Discharge line.	--- Approximate excavation dimensions
10 Shut-off valve (Accessory)	* Cable ties
11 Vent/cable pipe DN 70, lead to above roof level	** Installation cover (on completion replaced by Pos. 5)

4.1 Installation of the collection tank

Set the collection tank on a bed of sand in the prepared opening of dimensions approximately 600x600x750mm Nirolift and 1100x900x850 mm Sanisett in a frost free area and ensure that it is horizontal in all directions.

Place the tank in such a manner that the vent openings are in line with the chosen pipe directions.

If for reasons of the progress of construction work it is impossible to install the venting and pressure pipes before pouring of the concrete one has to use a polystyrene core between the tank and the intended wall to allow an assembly of the pipes later.

NOTE *During concreting, the collection tank should be prevented from floating upwards and should also be closed off with the plastic cover. This will avoid the danger that the edge of the tank could be pressed inwards.*

If there is a danger of pressure arising due to ground water, then the concrete surround of the collection tank must be laid at the same time as the cellar floor, and should be closed off tightly on all sides (including under the tank). The pipes must also be laid in the concrete.

If there is no danger of ground water pressure then a gravel bed and cementing in of the upper portion of the collection tank is adequate

4.2 Installation of the submersible pump

The Nirolift has been designed for fitting of submersible pumps from the Robusta, Coronada or MF 054-334 series.

The Sanisett has been designed for fitting of submersible pumps from the Robusta, Coronada or MF or Piranha 08/09 series.

A suitable installation Kit should be chosen depending on the type of pump selected.

NOTE *The connection or junction piece is already fitted in the Nirolift or Sanisett collection tank.*

The fitting of the submersible pumps is given in the leaflet supplied with the installation kit.

4.3 Opening of the collection tank inlet ports

Only open inlet ports that are to be used. Only saw off as little as possible so that as much neck as possible is left for the plug connection. (Note the notch on the port neck).
File down sharp edge inside and outside.

4.4 Discharge line

The discharge line must be installed in compliance with the relevant regulations.
DIN 1986/100 and EN 12056 applies in particular to the following:

- The discharge line should be fitted with a backwash loop (180° bend) located above the backwash level and should then flow by gravity into the collection line or sewer.
- The discharge line should not be connected to a down pipe.
- No other inflows or discharge lines should be connected to this discharge line.

ATTENTION *The discharge line should be installed so that it is not affected by frost.*

The vent line is connected by means of a push-on sleeve to the vertical outlet at the top of the collection tank. It should be of constant cross-section (min. DN 70) and should have a continuous rise to above roof level.

4.5 Mounting of the upper fitting

1. Insert the white plastic installation cover into the frame of the upper fitting. The cover is only suitable for foot traffic (See Figure 5).
2. Adjust the upper fitting in the tank opening until the edge of the rim is level with the finished floor. The rim should also be parallel with the wall or floor tiles.
3. When installation is complete remove the installation cover and insert the cover with siphon into the frame. This cover is only suitable for foot traffic.

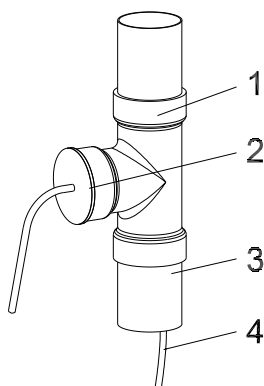
Height adjustments up to 130 mm is possible by pushing in or pushing out the upper fitting. It is possible to increase the depth at which the collection tank is installed by the use of one sump extension piece. These extend the sump by 150 mm.

ATTENTION *A maximum of 1 sump extension piece may be fitted.*

4.6 Location of power supply cable and float switch

The connection cable for the pump is fed through the cable pipe and brought into the room where the power supply is located by means of a branch pipe (T-piece). The connection cable is fed through the slot in the cable inlet and the cable inlet itself is pushed firmly into the branch pipe.

NOTE *In the case of twin units the connection cables for the float switches should be laid in a similar manner to the pump power cable.*



1. Branch pipe (T-piece)
2. Cable inlet
3. Vent line
4. Motor connection cable

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Figure 7 Cable inlet

4.7 Level control

The float switches required for the twin unit Sanisett should be fitted into the collection tank at the correct level setting. (See Figure 4)

NOTE *Press the float switch cable into the plastic swivel in the holding bracket at distance of 15 mm between the float switch housing and swivel. The Float must point away from the wall.*

When float switches are installed, the Robusta pump(s) should be set to "Hand" operation

The connection lines for the float switches should be connected in accordance with their designation Level 1 / Level 2 to the control panel in accordance with the circuit diagram by a qualified person.

4.8 Installation of the control unit

ATTENTION *The control unit should be fitted above possible flood level in a well ventilated room and in an easily accessible position. Protection Class of the control unit IP 54.*

The control unit should be secured at all fixing points. The fixing holes are accessible after unscrewing the lower housing cover.

ATTENTION *Do not drill through the housing of the control unit itself.*

NOTE *A number of different control box models exist. Please check the wiring diagram/ instruction manual in the control box.*

5 Commissioning



The safety hints in the previous sections must be observed!

Before commissioning the unit should be checked and a functional test carried out. Particular attention should be paid to the following:

- Have the electrical connections been carried out in accordance with regulations?
- Is the motor overload switch correctly set?
- Have the power and control circuit cables been correctly fitted?
- Was the sump cleaned out?
- Have the inflow and outflows of the pump station been cleaned and checked?
- Is the direction of rotation correct - even if run via an emergency generator?
- Are the level controls functioning correctly?
- Are the required gates valves (where fitted) open?
- Do the non-return valves (where fitted) function easily?

ATTENTION *Before commissioning the collection tank should be cleaned of any large particles and filled with water. After commissioning the lifting unit is normally operated with the selector switch in position "Auto".*

6 Maintenance



Before commencing any maintenance work the unit should be completely disconnected from the mains by a qualified person and care should be taken that it cannot be inadvertently switched back on.



When carrying out any repair or maintenance work, the safety regulations covering work in enclosed areas of sewage installations as well as good general technical practices should be followed.

NOTE *The maintenance hints given here are not designed for “do-it-yourself” repairs as special technical knowledge is required.*

NOTE *A maintenance contract with our works service department will guarantee you the best technical service under all circumstances.*

6.1 Commentary on maintenance of lifting stations in accordance with EN 12056

It is recommended that the lifting station be inspected monthly and its function checked.

In accordance with EN regulations, the lifting station should be maintained by a qualified person at the following intervals:

- in commercial premises - every three months.
- in apartment blocks - every six months.
- in a single family home - once a year.

In addition we recommend that a maintenance contract be taken out with a qualified company.

6.2 General maintenance hints

ABS submersible pumps are reliable quality products each being subjected to careful final inspection. Lubricated-for-life ball bearings together with monitoring devices ensure optimum pump reliability provided that the pump has been connected and operated in accordance with the operating instructions.

Should, nevertheless, a malfunction occur, do not improvise but ask your ABS customer service department for assistance.

This applies particularly if the unit is continually switched off by the current overload in the control panel, by the thermal sensors of the thermo-control system or by the seal monitoring system (DI).

Regular inspection and care is recommended to ensure a long service life.

NOTE *The ABS service organisation would be pleased to advise you on any applications you may have and to assist you in solving your pumping problems.*

NOTE *The ABS warranty conditions are only valid provided that any repair work has been carried out in ABS approved workshop and where original ABS spare parts have been used.*



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