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SFA

SANIFOS®

SANIFOS® 1000 TWIN GR
SANIFOS® 1000 TWIN ZFS
SANIFOS® 1000 SINGLE ZFS



Packaged Pumping Station
Operating instructions

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1. SAFETY

WARNING

Installation and servicing must be done by the relevant qualified person(s).

ELECTRICAL CONNECTIONS:

The electrical installation must be done by a qualified electrician. The device's power supply must be connected to ground (class I) and protected by a high sensitivity differential circuit breaker (30 mA). Devices without plugs must be connected to a main switch on the power supply which disconnects all poles (contact separation distance of at least 3 mm). The connection must be used exclusively to provide the power to the product. If the power cord is damaged, to prevent possible danger, it must be replaced or repaired by a qualified electrician.

These operating instructions contain basic instructions which have to be observed during setup, operation and maintenance. For this reason, these operating instructions must be read before installation and commissioning by the installation technician as well as the user, and must be permanently available at the location of the device. Not only do general safety instructions have to be observed, but all the safety instructions mentioned.

1.1 Labelling of safety notices



Danger

This symbol indicates general hazards, which can lead to death or serious injury, if not avoided.



Warning

This term defines a hazard which could cause a risk to the machine and its operation, if it is not taken into account



Dangerous area

This symbol characterises hazards that could lead to death or



Dangerous voltage

This symbol characterises dangers associated with the voltage and provides information on voltage protection.



Property damage

This symbol, in combination with the keyword **ATTENTION**, characterises dangers to the machine and its proper operation.

Instructions attached directly to the machine and its components, such as rotation arrow, marks for specific connections, must be observed and kept in fully legible condition.

1.2 Installer / operator

Prior to operation, maintenance, inspection or installation these instructions must be read and understood in full. The installer/operator must also ensure these instructions are available on-site at all times.

1.3 Hazards caused by non-observation of safety instructions

Not observing the safety instructions may endanger persons and may have consequences for the immediate environment and the pump station. Not observing these safety instructions will result in the loss of all claims for damages.

In detail, not observing these safety instructions may cause the following hazards, for example:

- Malfunction and damage of the machine/system
- Danger to persons caused by electrical, mechanical and chemical effects
- Damage to the environment and danger to personnel caused by leakage of wastewater

Along with these operating instructions, existing national and local regulations as well as potential in-company work, operating and safety instructions applying to the user/site must be observed.

1.4 Safety instructions for user/operator

- Hot or cold machine parts could become a hazard, these parts must not be handled by the user
- Touch protection for moving parts (e.g. coupling) must not be removed from the machine whilst in operation/without being isolated.
- Leakage (of the tank seal, for example) of hazardous materials (e.g. corrosive, toxic, hot) must be rectified immediately so no danger is caused to persons and the environment. Legal regulations must be observed in this regard.
- Hazards caused by electricity (ie. exposed electrical components during servicing) must be safeguarded against (eg. isolation of the product and any necessary PPE alongside any additional regulations that apply).

1.5 Safety instructions for maintenance, inspection and installation work

The user has to make sure that all maintenance, inspection and installation work is carried out by authorised and qualified personnel only, who have read the operating instructions.

Work on the machine may be carried out only when the unit is isolated and made safe to do so. Pumps or pump assemblies, which convey media hazardous to health, must be handled with caution and PPE is to be used where necessary. After works are completed all safety and protection devices have to be fitted again and/or have to be made functional again.

Before restart, the points listed in the chapter on initial commissioning should be observed.

1.6 Unauthorised modification and spare parts usage

Modifications or changes to the machine shall be permissible only after consultation with the manufacturer. Original spare parts and accessories authorised by the manufacturer serve to ensure safety and longevity of the product.

The use of other parts may result in the loss of liability for the consequences that may occur unless advised otherwise by the manufacturer.

1.7 Incorrect operating modes

The operational safety of the machine supplied is ensured only when used as intended according to Section 2 - *General aspects* of the operating instructions. The performance limits indicated in the data sheet must by no means be exceeded.

2. GENERAL ASPECTS

2.1 Liability

If operating instructions are not followed - in particular the safety instructions - and unauthorised modifications are made to the product (eg. the installation of non-original spare parts) warranty claims may be void. The manufacturer assumes no liability for any damage resulting from this.

2.2 Technical data

SANIFOS® - installations for single or twin pump systems
Pumps with a pressure outlet of 40-50mm and a performance of up to approx. 2.2kW

Tank	
Storage volume	approx 400 l
Switching volume	at least 150 l
Ventilation / cable conduit	2 x PVC DN 100
Depth of connection	1175 mm (axis of pipe) from lower edge of shaft bottom
Maximum media temperature	55°C for ZFS models, 70°C for GR model

Component

Materials

Tank

HDPE

Coupling system

Cast iron/SS

Shut-off/Check valve

CPVC/Rubber

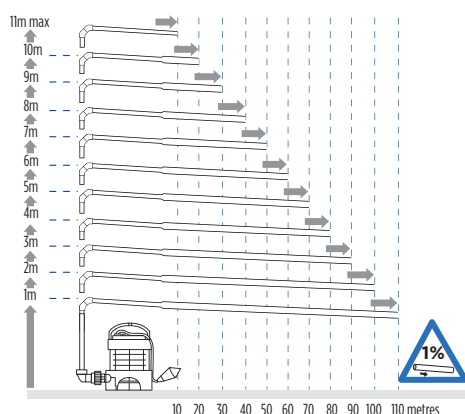
Hydraulic Assembly

CPVC

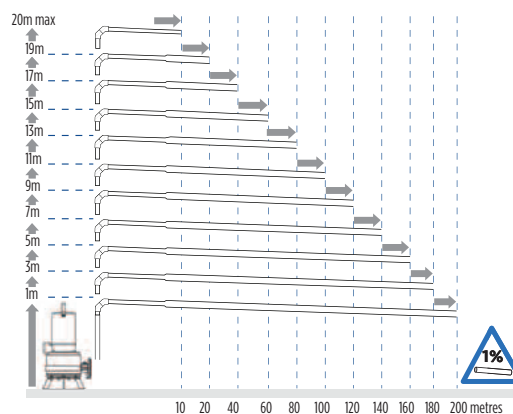
Motor

PP+SS (GR) or GG25+SS (ZFS)

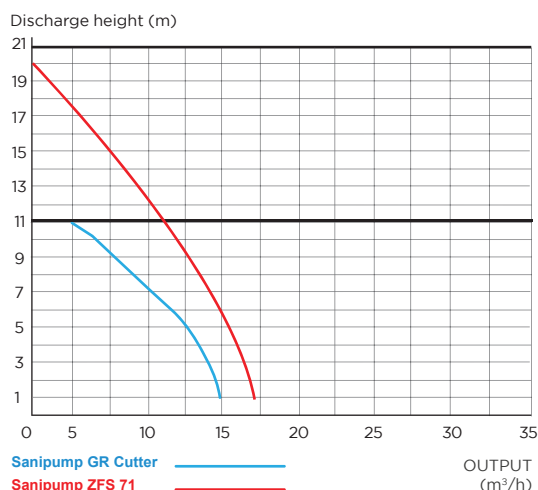
GR PUMPS



ZFS PUMPS



FLOW RATE PERFORMANCE CHART



2.3 Field of application

The SANIFOS® range of pumping stations serve to dispose of (collecting and conveying) domestic and commercial greywater and blackwater, typically when draining from fixtures below the sewer invert level.

2.4 Scope of delivery

The packaged pumping station SANIFOS® basis is delivered complete with:

- Guide rail and coupling system (twin pump versions)
- shut-off valve(s) DN 50
- check valve(s) DN 50
- complete internal hydraulic assembly with screw connections
- submersible pump(s) DN 40/50 (see separate operating instructions)
- float switches
- control/alarm panel
- threaded Class A access cover
- 316SS lifting chains + fittings
- IP68 Cable connectors

3. TRANSPORT AND STORAGE

3.1 Transport

The packaged pumping stations from the series SANIFOS® must not be thrown or dropped. Moreover, they shall be kept upright during transportation.

3.2 Storage

For best practice storage or intermediate warehousing, it is suggested to keep the system in a cool, dark, dry and frost-proof place. The system should be kept in an upright position.

4. DESCRIPTION

4.1 General description

The pumping station is pre-fitted with hydraulic assembly including non-return & isolation valves. For ease of installation, only the incoming waste/drain line, rising main, venting line, level control and power supply need to be connected.

4.2 Design and functionality

Twin motor models come complete with guide rail coupling system pre-mounted, to which the pump is engaged prior to commissioning. The pump can be lifted out of the tank via the lifting chain without loosening screw connections in the shaft. Depending on the size of the pump, lifting gear might be necessary to lift it out. This way, maintenance and repair work on the pump is possible outside the tank. In order to prevent backflow of the water column being in the pressure line at the ball check valve during maintenance and repairing work, a shut-off valve is mounted before the check valve in the pressure line.

5. INSTALLATION

5.1 Excavation

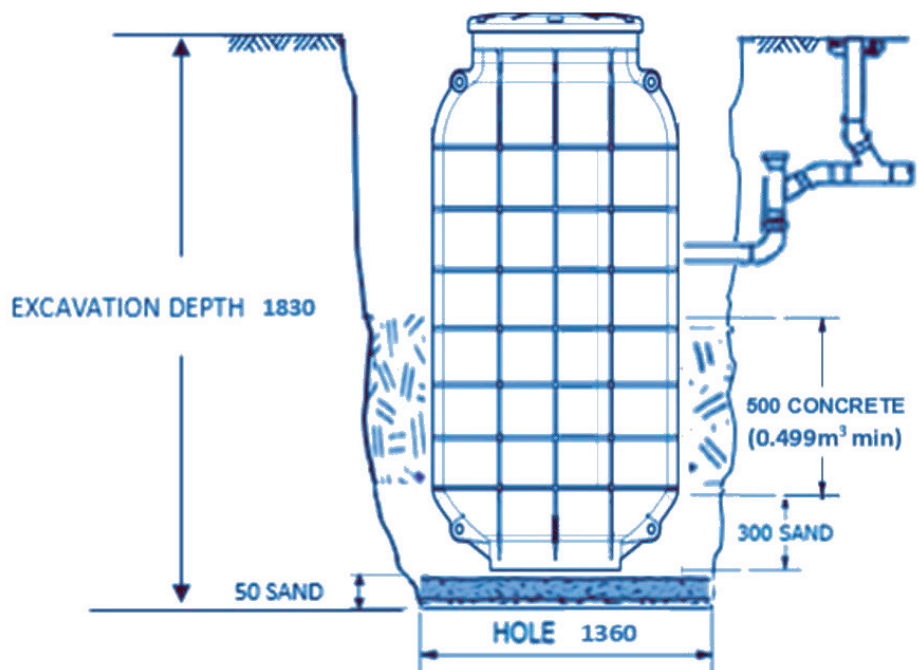
The correct excavation, concrete ballast & backfill is essential to stop potential hydrostatic uplift along with lateral ground load deformation of the in-ground pump chamber. Hydrostatic uplift is a term used for the action of subsurface water applying pressure to the underside of the tank, whilst lateral load deformation can be caused by lateral ground movement forces pushing against the walls of the chamber/tank.

Note: Make sure chamber is half filled with water whilst completing ballast till commissioning.

WARNINGS

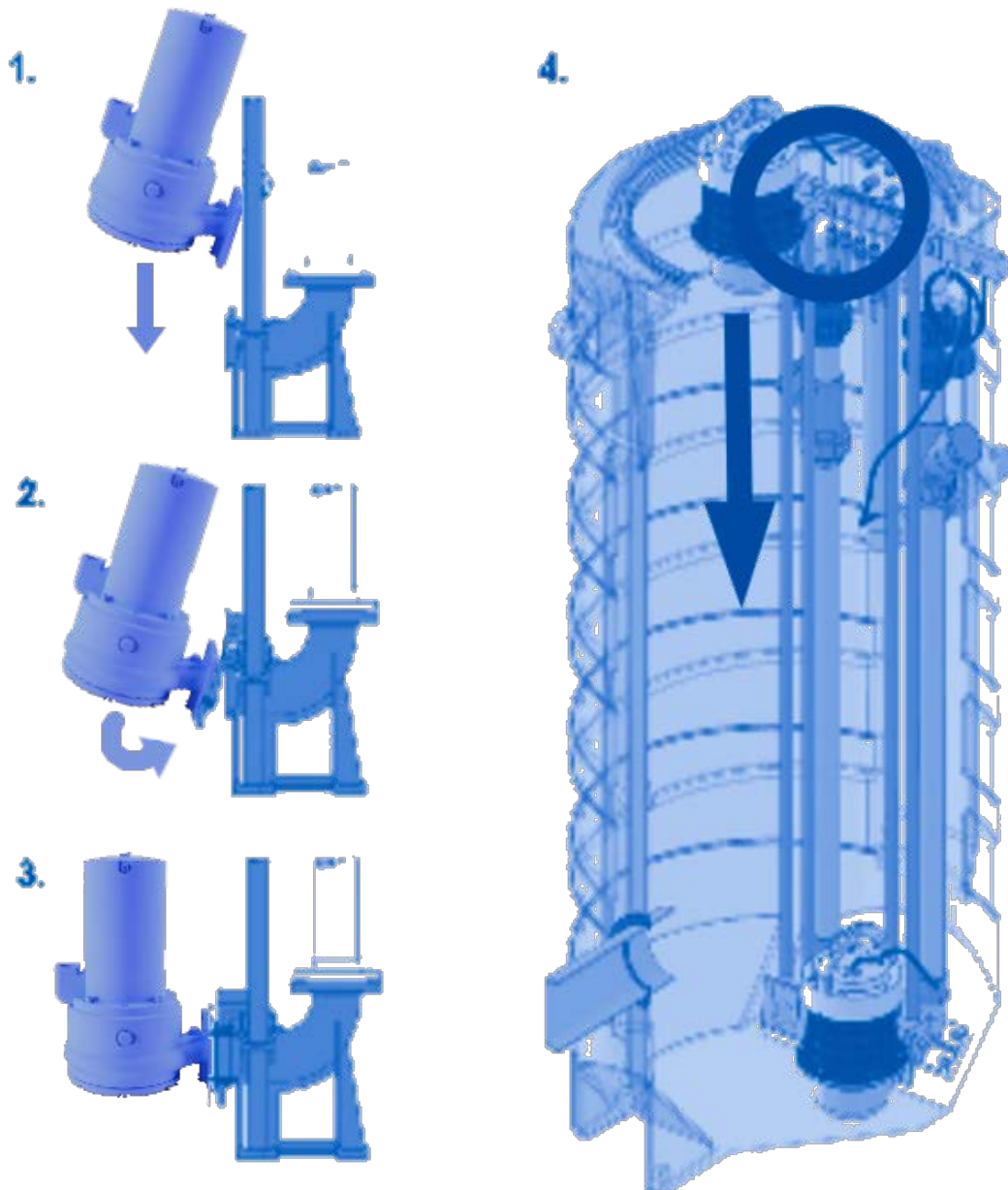
Safe work method and correct shoring procedures must be followed in all excavation works excavon works

The following excavation dimensions along with ballast and backfill procedures must be followed must be followed to maintain warranty of the pump chamber/tank.



5.2 Motor Installation

- 1) Attach the chain to the pump and connect to the top of the tank using the hook provided
- 2) Slide the pump(s) onto, and down the guide bars to the bottom of the tank where the pump will seat on the foot coupling



5.3 Electrical Connection

ATTENTION



NOTE

SANIFOS® 1000 Twin GR floats and motors must be connected to the SMART controller via the IP68 waterproof terminal connectors provided for this model only. It is imperative that you respect the colours of the cables when making the connections. (See page 7)

After motor installation has been completed wiring of floats and motors back to controller should be finalized in preparation for commissioning. If Sanifos ZFS Twin & ZFS Single require cable extensions correct cable connection and sealing via heat shrink or resin filled jointing is crucial.

Preparing the terminal blocks (Sanifos 1000 Twin GR only)

TH391
2 POLES

①

②

Screw terminals (THB)

Piercing terminals version (THP)

③

④

Quick-fixing special tool

ADAPTER HOLE
Ø 9.0 mm

Ø 7.9 + 9.0 mm

Ø 9.0 + 12.0 mm

Ø 6.0 + 7.0 mm

No unisheathing

1 TH400
5

2

TH200
5 POLES

Ø 8.0 + 11.0 mm

Ø 11.0 + 17.0 mm

3

TH200 5 POLES

L=30mm

L=8mm

③.1

③.2

③.3

④

④.1

④.2

⑤

⑤.1

⑤.2

Ø 29 Nm 2.5

6

7

Ø 29 Nm 4.0

6. COMMISSIONING

Before commissioning, all connections must be checked again for correct installation and watertightness. The shut-off valve must be open.

See relevant motor and controller manuals for full commissioning information.

7. MAINTENANCE / SERVICING

For help finding the relevant service-person please contact SFA Australia directly.

Maintenance includes regular visual inspection of the complete system. Water should be run into the tank using a connected fixture and the pumping process should be checked.

Check for correct cycling of the pump(s) and that all hydraulic fittings are functioning as intended.

Note - in twin pump models, to be functioning correctly, the pumps should alternate cycling with each activation of the unit. After maintenance has been carried out, the maintenance interval indicator on the controller should be reset. Maintenance should only ever be carried out by qualified individuals.

8. WARRANTY & CONTACT INFORMATION

8.1 General Warranty information

Warranty only provides coverage of issues caused by material or manufacturing defects of the inground pump station.

The warranty excludes all damage attributable to improper use, wear and tear or incorrect installation. We do not assume any liability for consequential damages which occur due to a failure of the device. In case of a suspected product fault, contact SFA Australia or your supplier.

The pump, controller and internal assembly is covered under a 2 year warranty, assuming the warranty conditions are met.

The tank is covered under a 15 year warranty (per AS1546) assuming the warranty conditions are met. Damage to the tank/other components due to incorrect ballast configuration will not be covered.

8.2 Warranty Conditions

This warranty will apply only under all of the following conditions:

- The item has been installed by a licensed plumber
- All relevant electrical connections and safeties have been installed by a qualified electrician
- Failure is due to a fault in the manufacture of the product
- Proof of purchase (including the date of purchase) is provided
- The installation of the product is in accordance with the instructions provided and all relevant standards
- No use of this product for disposal of any foreign bodies* or products such as solvents, paints, caustic soda or acids
- *No use of this product for disposal of feminine hygiene products, wet wipes or paper hand towels in the system.

See Saniflo SFA Australia website for full warranty terms and conditions.

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