

Flygt Compit 901

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1 Introduction and Safety

1.1 Introduction

Purpose of the manual

The purpose of this manual is to provide the necessary information for working with the unit. Read this manual carefully before starting work.

Read and keep the manual

Save this manual for future reference, and keep it readily available at the location of the unit.

Intended use



WARNING:

Operating, installing, or maintaining the unit in any way that is not covered in this manual could cause death, serious personal injury, or damage to the equipment and the surroundings. This includes any modification to the equipment or use of parts not provided by Xylem. If there is a question regarding the intended use of the equipment, please contact a Xylem representative before proceeding.

Other manuals

See also the safety requirements and information in the original manufacturer's manuals for any other equipment furnished separately for use in this system.

1.2 Safety terminology and symbols

About safety messages

It is extremely important that you read, understand, and follow the safety messages and regulations carefully before handling the product. They are published to help prevent these hazards:

- Personal accidents and health problems
- Damage to the product and its surroundings
- Product malfunction

Hazard levels

Hazard level	Indication
 DANGER:	A hazardous situation which, if not avoided, will result in death or serious injury
 WARNING:	A hazardous situation which, if not avoided, could result in death or serious injury
 CAUTION:	A hazardous situation which, if not avoided, could result in minor or moderate injury
NOTICE:	Notices are used when there is a risk of equipment damage or decreased performance, but not personal injury.

Special symbols

Some hazard categories have specific symbols, as shown in the following table.

Electrical hazard	Magnetic fields hazard
	
Electrical Hazard:	CAUTION:

1.3 User safety

All regulations, codes, and health and safety directives must be observed.

The site

- Observe lockout/tagout procedures before starting work on the product, such as transportation, installation, maintenance, or service.
- Pay attention to the risks presented by gas and vapors in the work area.
- Always be aware of the area surrounding the equipment, and any hazards posed by the site or nearby equipment.

Qualified personnel

This product must be installed, operated, and maintained by qualified personnel only.

Protective equipment and safety devices

- Use personal protective equipment as needed. Examples of personal protective equipment include, but are not limited to, hard hats, safety goggles, protective gloves and shoes, and breathing equipment.
- Make sure that all safety features on the product are functioning and in use at all times when the unit is being operated.

1.4 Special hazards

1.4.1 Confined spaces



DANGER: Inhalation Hazard

The chamber or tank where the equipment is installed should be treated as a confined space. Always follow the applicable safety laws, regulations and guidelines for confined spaces.

Never work alone in a confined space. Before entering the space, check that the following requirements are complied with:

- The atmosphere contains sufficient oxygen
- The atmosphere contains no explosive or toxic gases
- If there is a risk of insufficient oxygen or toxic or hazardous gases, then use an airline respirator or self-contained breathing apparatus.
- All energy sources are locked out and tagged out
- Adequate ventilation is in place
- There is a clear path of retreat
- Monitoring is in place for hazards which can develop after entering the confined space
- The applicable safety laws, regulations, and guidelines for confined spaces are understood and followed.

1.4.2 Biological hazards

The product is designed for use in liquids that can be hazardous to your health. Observe these rules when you work with the product:

- Make sure that all personnel who may come into contact with biological hazards are vaccinated against diseases to which they may be exposed.
- Observe strict personal cleanliness.



WARNING: Biological Hazard

Infection risk. Rinse the unit thoroughly with clean water before working on it.

1.4.3 Wash the skin and eyes

Follow these procedures for chemicals or hazardous fluids that have come into contact with your eyes or your skin:

Condition	Action
Chemicals or hazardous fluids in eyes	1. Hold your eyelids apart forcibly with your fingers. 2. Rinse the eyes with eyewash or running water for at least 15 minutes. 3. Seek medical attention.
Chemicals or hazardous fluids on skin	1. Remove contaminated clothing. 2. Wash the skin with soap and water for at least 1 minute. 3. Seek medical attention, if necessary.

1.5 Protecting the environment

Emissions and waste disposal

Observe the local regulations and codes regarding:

- Reporting of emissions to the appropriate authorities
- Sorting, recycling and disposal of solid or liquid waste
- Clean-up of spills

Exceptional sites



CAUTION: Radiation Hazard

Do NOT send the product to Xylem if it has been exposed to nuclear radiation, unless Xylem has been informed and appropriate actions have been agreed upon.

1.6 Spare parts



CAUTION:

Only use the manufacturer's original spare parts to replace any worn or faulty components. The use of unsuitable spare parts may cause malfunctions, damage, and injuries as well as void the warranty.

1.7 Warranty

For information about warranty, see the sales contract.

2 Transportation and Storage

2.1 Precautions



DANGER: Electrical Hazard

Before starting work on the unit, make sure that the unit and the control panel are isolated from the power supply and cannot be energized. This applies to the control circuit as well.



CAUTION:

The operator must be aware of safety precautions to prevent physical injury.

Tip risk if pallet straps are removed

If the straps securing the unit to its pallet have been removed, then the unit must be secured from tipping or falling.



CAUTION: Crush Hazard

Make sure that the unit cannot roll or fall over and injure people or damage property.

2.2 Position and fastening

Units with a concrete access cover are delivered in a vertical position, standing upside down on the delivery pallet. Regardless of the type of access cover, the unit must be stored in an upright position.

2.3 Examine the delivery

2.3.1 Examine the package

1. Examine the package for damaged or missing items upon delivery.
2. Record any damaged or missing items on the receipt and freight bill.
3. If anything is out of order, then file a claim with the shipping company.
If the product has been picked up at a distributor, make a claim directly to the distributor.

2.3.2 Examine the unit

1. Remove packing materials from the product.
Dispose of all packing materials in accordance with local regulations.
2. To determine whether any parts have been damaged or are missing, examine the product.
3. If applicable, unfasten the product by removing any screws, bolts, or straps.
Use care around nails and straps.
4. If there is any issue, then contact a sales representative.

2.4 Transportation guidelines

2.4.1 Lifting



Always inspect the lifting equipment and tackle before starting any work.

WARNING: Crush Hazard

- Always lift the unit by its designated lifting points.
 - Use suitable lifting equipment and ensure that the product is properly harnessed.
 - Wear personal protective equipment.
 - Stay clear of cables and suspended loads.
-

NOTICE:

Never lift the unit by its cables or hose.

Lifting equipment

Lifting equipment is always required when handling the unit. It must fulfill the following requirements:

- The minimum height (contact your local sales and service representative for information) between the lifting hook and the floor must be sufficient to lift the unit.
- The lifting equipment must be able to hoist the unit straight up and down, preferably without the need for resetting the lifting hook.
- The lifting equipment must be securely anchored and in good condition.
- The lifting equipment must support weight of the entire assembly and must only be used by authorized personnel.
- Two sets of lifting equipment must be used to lift the unit for repair work.
- The lifting equipment must not be oversized.



CAUTION: Crush Hazard

Over-dimensioned lifting equipment can lead to injury. A site-specific risk analysis must be done.

Separate handling of pump and unit

The unit and the pump are delivered separately. Never install a pump prior to lifting the unit.

Empty the unit before lifting

The unit must be emptied of liquid before lifting.

2.5 Remove from the pallet: Unit delivered right-side up

This section is applicable for units that are delivered with a plastic access cover. Units with a plastic access cover are delivered in a vertical position, standing right-side up on the delivery pallet.

1. Unload the unit from the truck and put it carefully on a rigid, horizontal surface.
2. Attach a sling to the lifting eye.

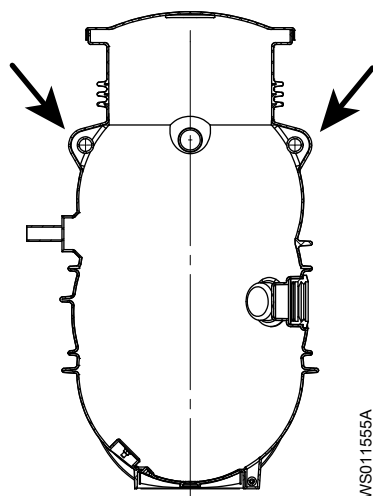


Figure 1: Lifting eyes

3. Connect the other end of the lifting strap to the lifting equipment.
4. Raise the lifting hook until the lifting sling is taut.
5. Cut the straps which secure the pump station to the pallet.
6. Lift the unit straight up.

The unit may jolt or sway near the end of the lifting operation.



WARNING: Crush Hazard

Always lift the unit by its designated lifting points.
Use suitable lifting equipment and ensure that the product is properly harnessed.
Wear personal protective equipment.
Stay clear of cables and suspended loads.

7. Lower the unit into position.



CAUTION: Crush Hazard

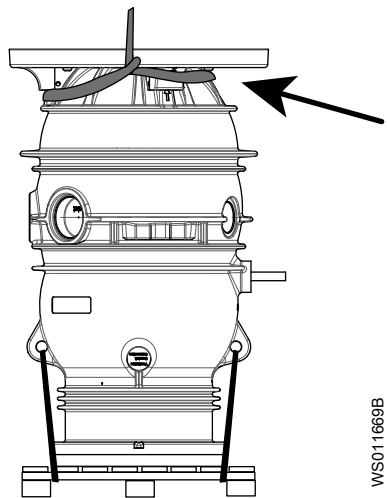
Make sure that the unit cannot roll or fall over and injure people or damage property.

2.6 Turn the unit to an upright position: Unit with anchoring ring (foot)

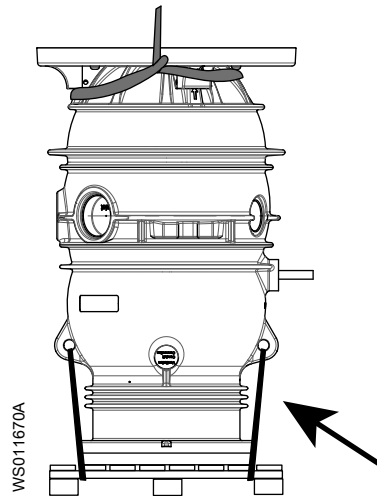
This section is applicable for pump units that are delivered with a concrete access cover. The unit is delivered with the foot attached.

Units with a concrete access cover are delivered in a vertical position, standing upside down on the delivery pallet.

1. Unload the unit from the truck and put it carefully on a rigid, horizontal surface.
2. Attach a sling around the foot.



3. Raise the lifting hook until the lifting sling is taut.
4. Cut the straps which secure the pump station to the pallet.



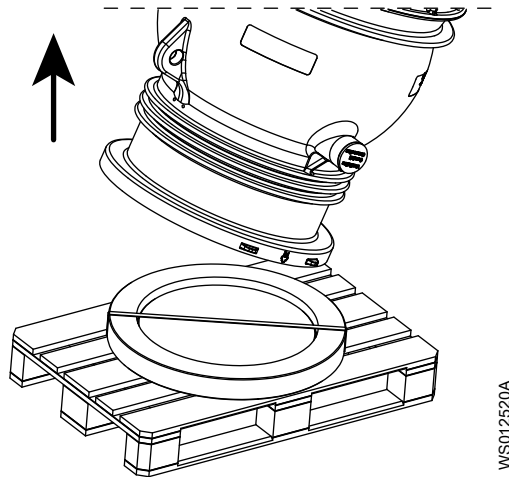
5. Lift the unit straight up.
The unit may jolt or sway near the end of the lifting operation.



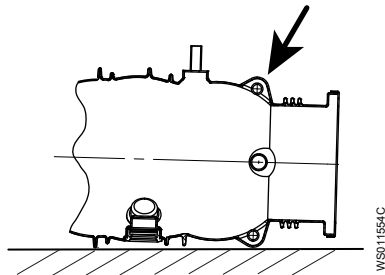
WARNING: Crush Hazard

Always lift the unit by its designated lifting points.
Use suitable lifting equipment and ensure that the product is properly harnessed.
Wear personal protective equipment.
Stay clear of cables and suspended loads.

Make sure that the concrete cover stays on the pallet.



6. Put the unit on the ground in a horizontal position.
7. Attach a sling to the lifting eye.



8. Lift the unit.
9. Put the unit on the pallet in an upright position.



CAUTION: Crush Hazard

Make sure that the unit cannot roll or fall over and injure people or damage property.

2.7 Turn the unit to an upright position: Unit without anchoring ring (foot)

This section is applicable for pump units that are delivered with a concrete access cover. The unit is delivered without the foot.

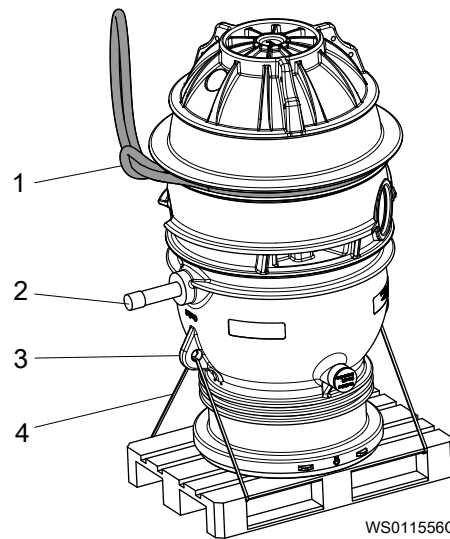
Units with a concrete access cover are delivered in a vertical position, standing upside down on the delivery pallet.



WARNING: Crush Hazard

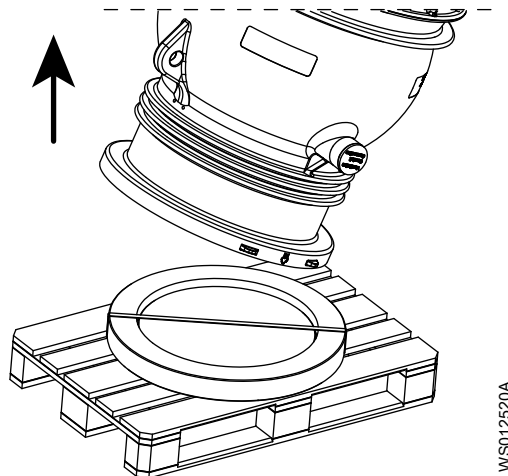
Always lift the unit by its designated lifting points.
Use suitable lifting equipment and ensure that the product is properly harnessed.
Wear personal protective equipment.
Stay clear of cables and suspended loads.

1. Unload the unit from the truck and put it carefully on a rigid, horizontal surface.
2. Fit a lifting sling around the pump station as shown in the following figure.
Arrange the lifting sling so that the pump station outlet will face upwards when the pump station is lifted.



1. Lifting sling
2. Pump station outlet
3. Pump station lifting eye
4. Strap securing pump station to pallet

3. Raise the lifting hook until the lifting sling is taut.
 4. Cut the straps which secure the pump station to the pallet.
 5. Lift the unit straight up.
- The unit may jolt or sway near the end of the lifting operation.
Make sure that the concrete cover stays on the pallet.



6. Put the unit on the ground in a horizontal position.
7. Attach a sling to the lifting eye.

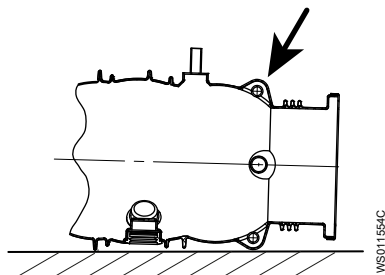


Figure 2: Lifting eye. Generic Compit 901 is shown.

8. Lift the unit.
9. Put the unit on the pallet in an upright position.



CAUTION: Crush Hazard

Make sure that the unit cannot roll or fall over and injure people or damage property.

2.8 Long-term storage

Long-term storage outdoors must not exceed four months. Make sure that the unit is covered with a tarpaulin or similar.

3 Product Description

3.1 Products included

This document includes the following products:

Product denomination	Installation type	Installation type description
Compit 901H	H	Stationary wet installation suspended from the discharge pipe. The quick connection joint has an integrated non-return valve.
Compit 901P	P	Semipermanent wet well installation. The pump is installed between guide-bars on a discharge connection.

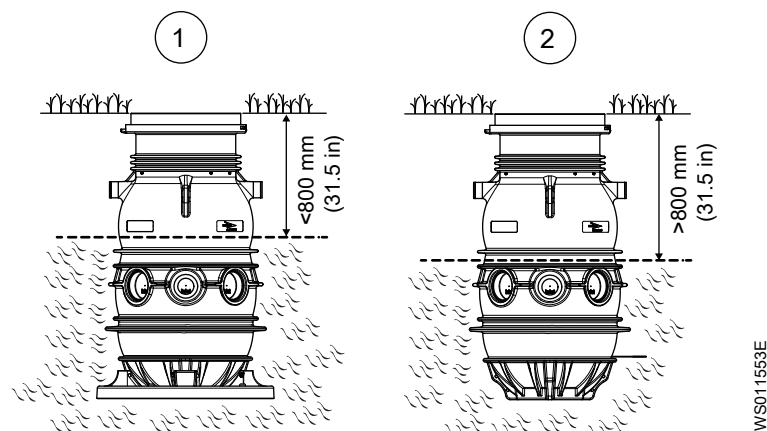
3.2 Design

The pump station unit is delivered pre-assembled for the installation of pipes, from the house and to the force main, and for the connection of the power supply. It can function, for example, as a wastewater collection tank for a single house with a connection to natural infiltration, or in a branched pressure sewer system.

Pump station with anchoring ring (foot)

The unit is designed to prevent it from being forced up in normal types of ground. Depending on the subsoil water table, an anchoring ring can be needed.

3.2.1 Anchoring ring (foot)

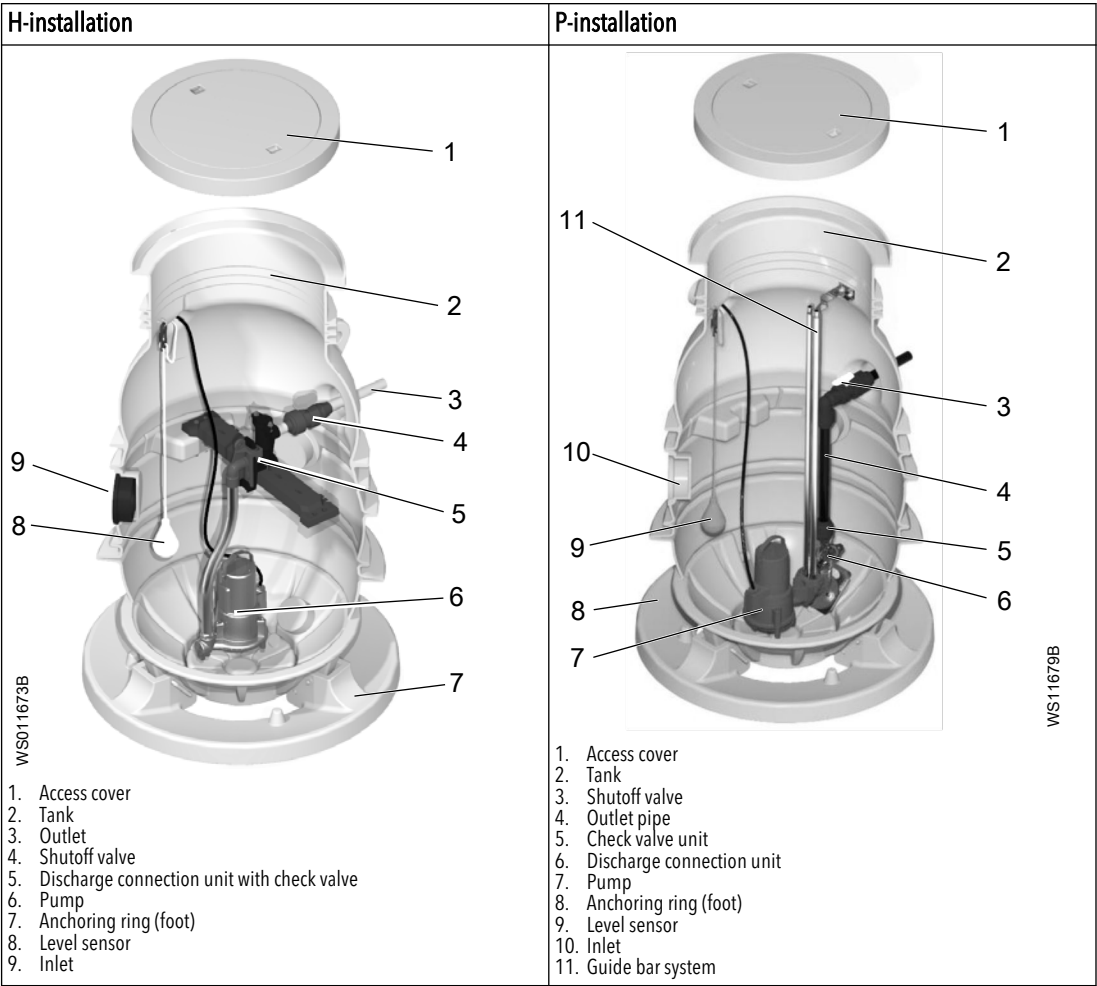


1. A foot is needed when the ground water table is high.
2. If the ground water table is lower than 800 mm (31.5 in) below the surface, then the foot is not needed.

3.2.2 Parts

Items included in the pumping station	Items that are ordered separately, or provided locally
• Tank • Access cover PE, Class A, Class B • Internal pipes and valves • Anchoring ring (foot) • Operating handle with chain for shutoff valve	• Access cover Class D This cover is constructed on site • Pump • Elbow pipe, if needed for the pump • Discharge connection • Level sensor • Control panel

The following figures show examples of H- and P-installations.



3.2.3 Intended use

The product is intended for use in sewer applications.

3.2.4 Application limits

For pump limitations, read the Installation, Operation, and Maintenance manual for the pump.

The unit must be installed underground, outside of the building.

Data	Description
Media temperature	Maximum 60°C (140°F)
pH of the pumped media	5.5 - 8
Other	For other applications, contact the local sales and service representative for information.

3.2.5 Dimensions

Drawings

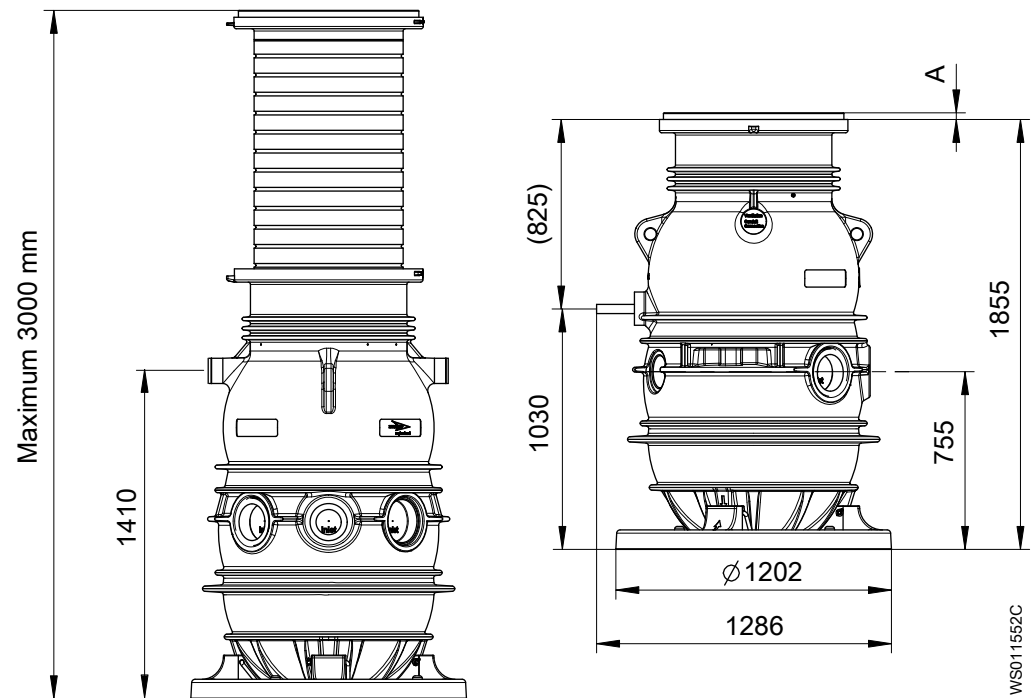


Figure 3: Dimensional drawing. Unit: mm

Access Cover	Dimension A, mm
Plastic	72
Class A	33
Class B	78

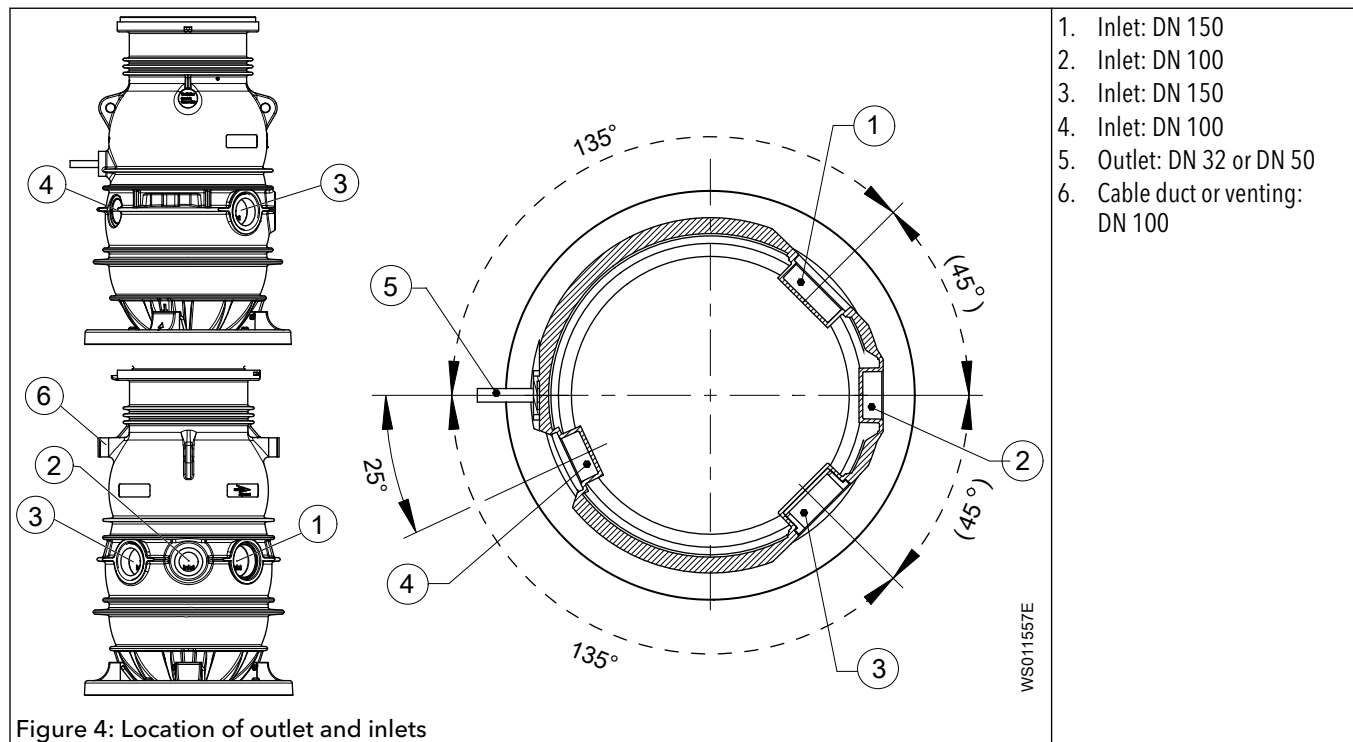


Figure 4: Location of outlet and inlets

3.2.6 Weight

For pump weights, see the dimensional drawing of the pump.

A complete preassembled pumping station for two pump including anchoring ring, Class B cover, and the longest extension, can weigh up to 277 kg (611 lb). This weight does not include the pumps.

Table 1: Main unit

Type	Discharge connection Material	Number of pumps The pump is not included	Discharge connection	Weight, kg (lb)
901 H	PPA	1	DN32	105 (231)
901 H	Cast iron	1	DN50	115 (254)
901 H	Cast iron	2	DN50	129 (284)
901 P	Cast iron	1	DN32	108 (238)
901 P	Cast iron	1	DN50	109 (240)

Table 2: Other items

Item	Description	Material	Weight, kg (lb)
Anchoring ring (foot)	-	PE	16 (35)
Cover	Class A	Concrete and steel	78 (172)
Cover	Class B	Concrete and steel	107 (236)
Cover	Plastic	PE	5 (11)
Extension	750 mm (29.5 in)	PE	14 (31)
Extension	1400 mm (55.1 in)	PE	25 (55)

Maximum allowed pump weight

55 kg

3.2.7 Materials

The unit is rotomoulded polyethylene, PE.

3.2.8 External loads

- The maximum load rating for the plastic access cover is 1 kg/cm² but no heavier than 120 kg (264.6 lb).
- A concrete access cover Class A is applicable for any location where it is subjected only to loads from pedestrians or pedal cyclists.
- A concrete access cover Class B is applicable for pedestrian areas, car parks, or car parking decks.
- A concrete access cover Class D is applicable for carriage ways of roads, hard shoulders, and parking areas for all types of road vehicles.

NOTICE:

Only pump stations which are designed for Class D can be used in Class D environments.

3.2.9 Pumping station identification

At delivery, the color of the outlet end cap shows what type of station it is.

End cap color	Installation	Number of pumps	Discharge connection characteristics
Yellow	H	One pump	Cast iron parts
Transparent	H	Two pumps	Cast iron parts
Red	H	One pump	High performance polyamide (HPPA) parts
Green	P	One pump	DN32

End cap color	Installation	Number of pumps	Discharge connection characteristics
Gray	P	One pump	DN50

3.3 Pump versions

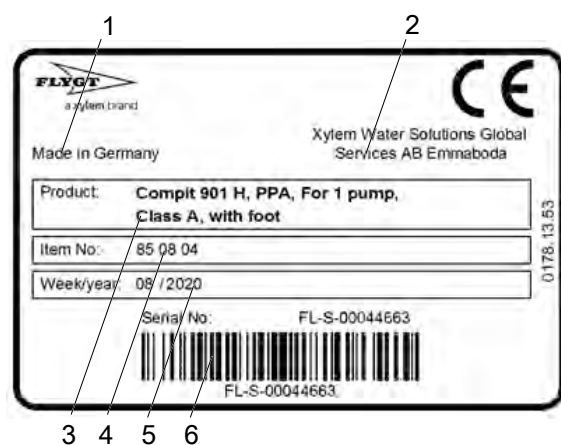
Depending on the type of unit, different pumps can be used.

For more information, please contact your local sales and service representative.

3.4 Monitoring equipment

Several pump protection and monitoring functions are available as options depending on the version of equipment. For more information, please contact your local sales and service representative.

3.5 The data plate



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1. Country of origin
2. Manufacturer
3. Product
4. Product number
5. Production week and year
6. Serial number

4 Installation

4.1 Precautions

Before starting work, make sure that the safety instructions in the chapter [Introduction and Safety](#) on page 3 have been read and understood.



DANGER: Inhalation Hazard

The chamber or tank where the equipment is installed should be treated as a confined space. Always follow the applicable safety laws, regulations and guidelines for confined spaces.



WARNING: Electrical Hazard

Risk of electrical shock or burn. A certified electrician must supervise all electrical work. Comply with all local codes and regulations.



WARNING: Fall Hazard

Check that suitable barriers for the work area are in place.

Tip risk if pallet straps are removed

If the straps securing the unit to its pallet have been removed, then the unit must be secured from tipping or falling.



CAUTION: Crush Hazard

Make sure that the unit cannot roll or fall over and injure people or damage property.

Sewage station tank ventilation

Vent the tank of a sewage station in accordance with local plumbing codes.

Class D environments

NOTICE:

Only pump stations which are designed for Class D can be used in Class D environments.

4.1.1 Underground utilities

Before starting excavation work, determine whether any utility installations such as sewer, telephone, fuel, electric, or water lines, may be encountered. Utility companies and owners must be contacted to locate utility installations.

When the excavation operations approach the estimated location of the underground installation, the exact location must be determined by safe and acceptable means.

While the excavation is open, any underground installation must be protected, supported or removed as necessary to safeguard employees.

4.1.2 Excavations

Before entering trenches, pits or other excavations, the following conditions must be met:

- The applicable safety laws, regulations, and guidelines for excavations are understood and followed.
- Be aware that site conditions can change rapidly, for example due to heavy rain, rapid thaw, vibrations or other factors.

- Do not work in an excavation or trench unless it is properly protected against collapse. Examples of protection systems are shown in the following figures.

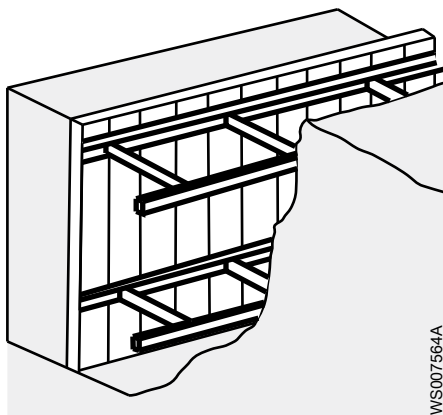


Figure 5: Bracing and shoring

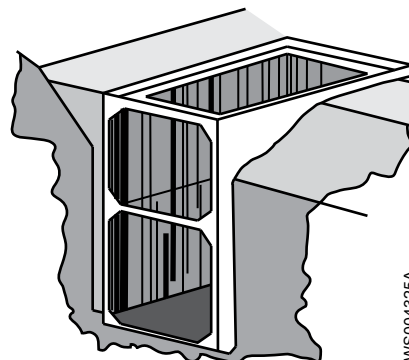


Figure 6: Shield box

- Regularly check the walls of an excavation or trench for cracks, bulges and spalling. Check the shoring for signs of distress, especially after a rainstorm.
- Do not work in an excavation that is filled or partially filled with water. Remove personnel from the excavation during a rainstorm, and inspect the excavation carefully before re-entry.
- Do not store excavated material and equipment along the edge of the trench or excavation. Do not drive or park vehicles along the edge of an excavation.

4.1.3 Inspect the work area before permit-required hot work



WARNING: Explosion/Fire Hazard

Before starting any permit-required hot work such as welding, gas cutting, grinding, or using electrical handtools, do the following: 1. Check the explosion risk. 2. Provide sufficient ventilation.

4.2 Installing the unit

- The contractor is responsible for ensuring that the installation follows the local regulations and EN 976-2:1997.
- The unit must be installed underground, outside of the building.
- Dimensions in installation figures must be regarded as minimum dimensions.

4.2.1 Prepare the site

- Check that the following requirements are complied with:
 - The excavation method of the pit must be adapted to the current soil conditions. Considerations include slope stability and possible water drainage.
 - Complicated soil conditions must be investigated by a geotechnical engineer.
 - The unit must not be installed in mud or peat.
 - Drains and sewers that are connected to the unit must be constructed and tested according to EN 1610.
- If the unit is installed in filled material of stony material, silt and clay, or in organic soil, attach a separating layer of geotextile to the pit walls and bottom before backfilling and compaction.
The geotextile prevents any material transportation from the backfill material into the soil.

- Refer to EN 976-2:1987 for demands on the quality of geotextile and installation method.
- Excavate to 300 mm (1 ft) below the planned installation level. Make the pit at least 2 m (6.6 ft) wider than the tank.

4.2.2 Prepare the pit base

- Check that the pit bottom is even before preparing the base.
- Check that the base is flat, evenly compacted, and horizontally leveled before installing the unit.
- Prepare a pit base with crushed material.

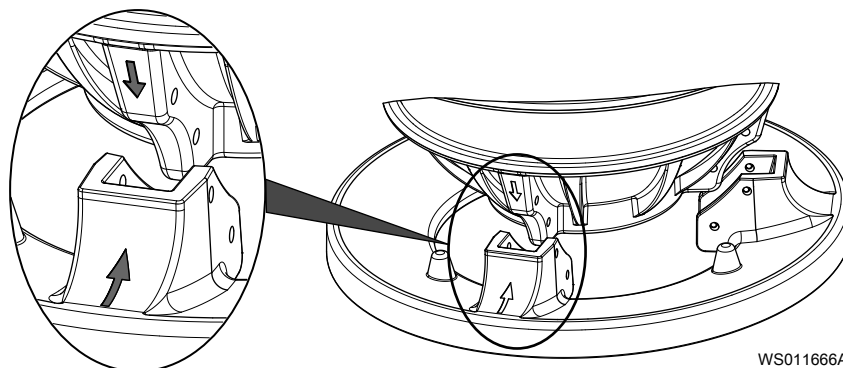
Pit base thickness	0.3 m
Grain size	2 - 36 mm

4.2.3 Attach the anchoring ring (foot)

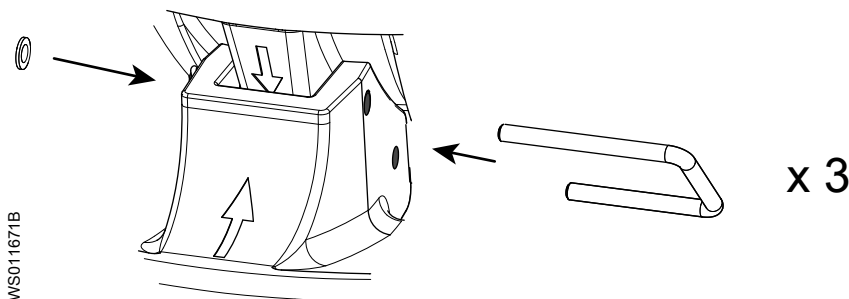
Follow these instructions when the pump station and the foot have been delivered separately. The foot must be fitted on the pump station before the pump station is lowered into position.

The foot is needed when the ground water table is high. For more information, see [Anchoring ring \(foot\)](#) on page 13.

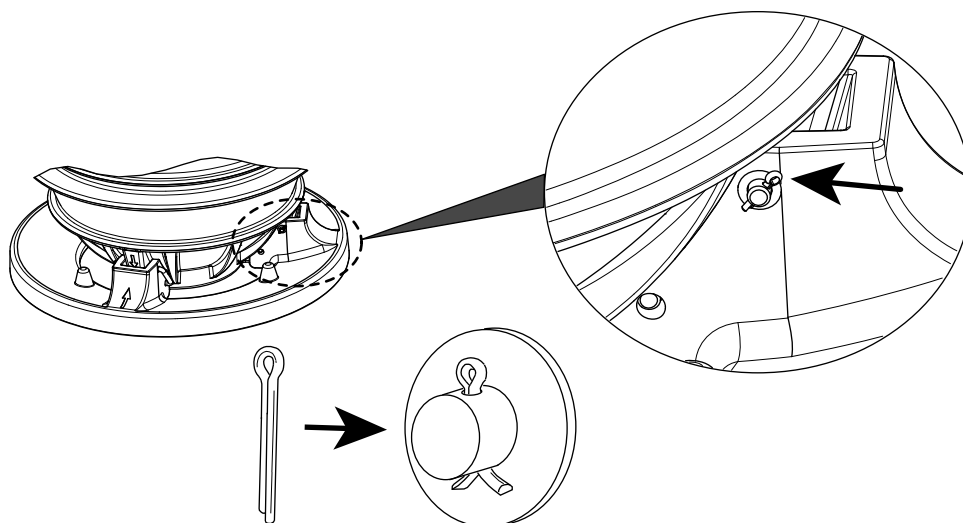
1. Set the foot on a flat and level surface.
2. Align the arrow on the foot with the arrow at the bottom of the pump station.



3. Lower the pump station onto the foot.
4. Insert the U-shaped bolt through the two holes and fit the washer.



5. Lock the bolt with the pin.



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4.2.4 Install the unit

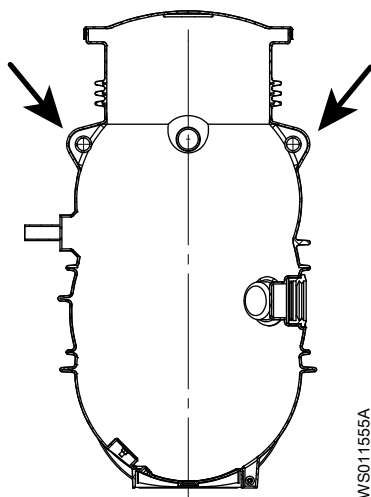
The unit must be right-side up at the start of this procedure.

1. Before installing the unit, visually check that the tank and the internal pipework are undamaged.
2. Lift the unit on to the pit base in a vertical position and align it.

NOTICE:

Never lift the unit with a pump inside it.

Use both lifting eyes when lifting the unit.

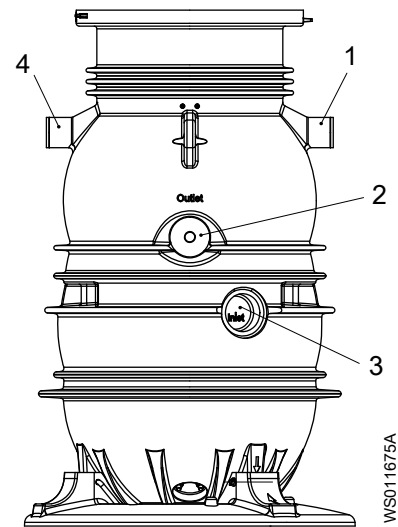


WS011555A

Figure 7: Lifting eyes

3. Check that the unit is in level.

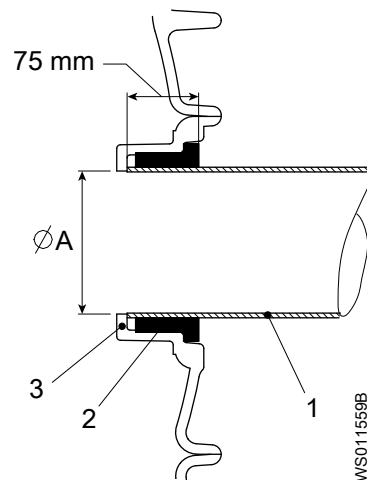
4.2.5 Connect the external piping



- 1. Cable entry pipe or ventilation pipe
- 2. Outlet
- 3. Inlet: 1 of 4 is shown.
- 4. Cable entry pipe or ventilation pipe

Not included:

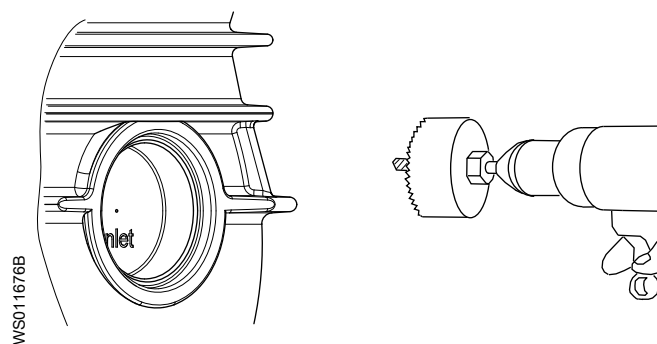
- Compression fitting for outlet pipe
1. Install the inlet pipe:
- a) Choose where to install the inlet pipe.
There are four inlet connection alternatives. The choice depends on the installation type and the site design. See [Dimensions](#) on page 15.
 - b) Make a mark on the pipe, 75 mm (2.95 in) from the pipe end.
 - c) Use the figure and table to calculate the drilled hole dimensions.



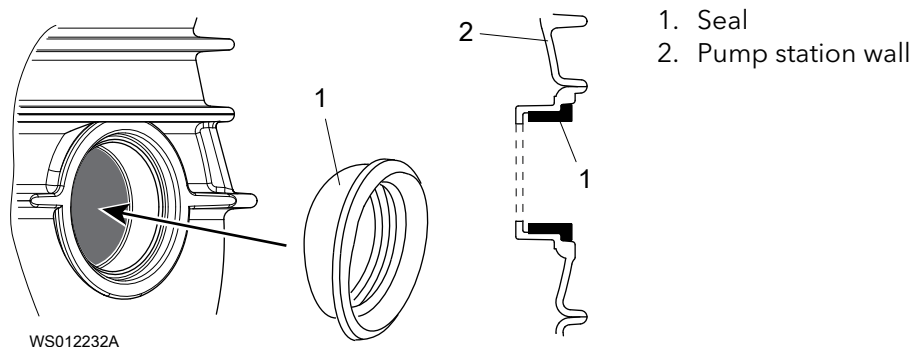
- 1. Inlet pipe
- 2. Inlet pipe seal
- 3. Pump station wall
- A: Drilled hole

Inlet pipe diameter, mm	Drilled hole, diameter A	
	Minimum, mm	Maximum, mm
110	102	108
160	152	158

- d) Drill at the center of the selected inlet.
Use a hole saw which is applicable for cutting plastic.



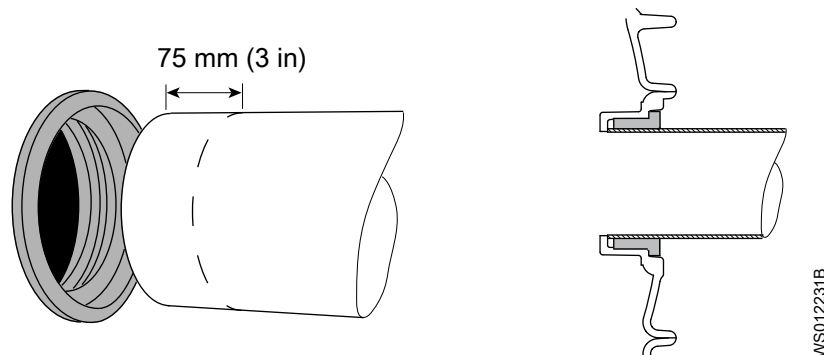
e) Press the seal into the hole.



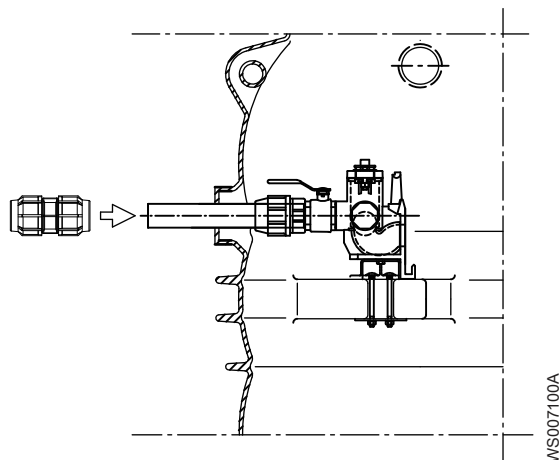
f) Chamfer the edge of the pipe and lubricate it.

g) Push the end of the pipe into the seal, so that the pipe end is flush with the inner wall.

Check that the 75 mm (2.95 in) mark is in line with the edge of the seal.



2. Connect a compression fitting to the outlet pipe of the unit.
The compression fitting is ordered separately.



3. Install the cable entry pipe.
 - a) Choose where to install the cable entry pipe.
There are two cable entry connection alternatives. The choice depends on the installation type and the site design.
 - b) Cut off the closed end.
 - c) Connect the cable entry pipe.
4. If a ventilation pipe is required, then connect it to the unit.
 - a) Identify where to install the ventilation pipe.
Use the outlet opposite to the cable entry pipe.
 - b) Cut off the closed end.
 - c) Connect the ventilation pipe.
 - d) Cover the end of the pipe, so that dirt and gravel do not get in it during the backfill stage.

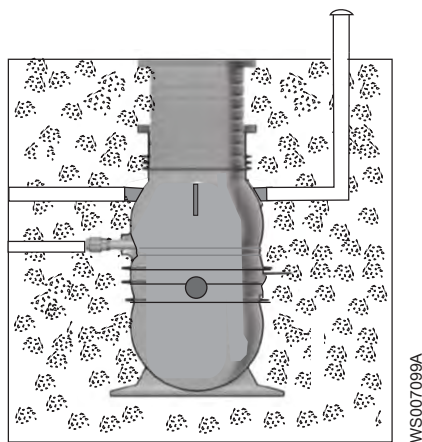
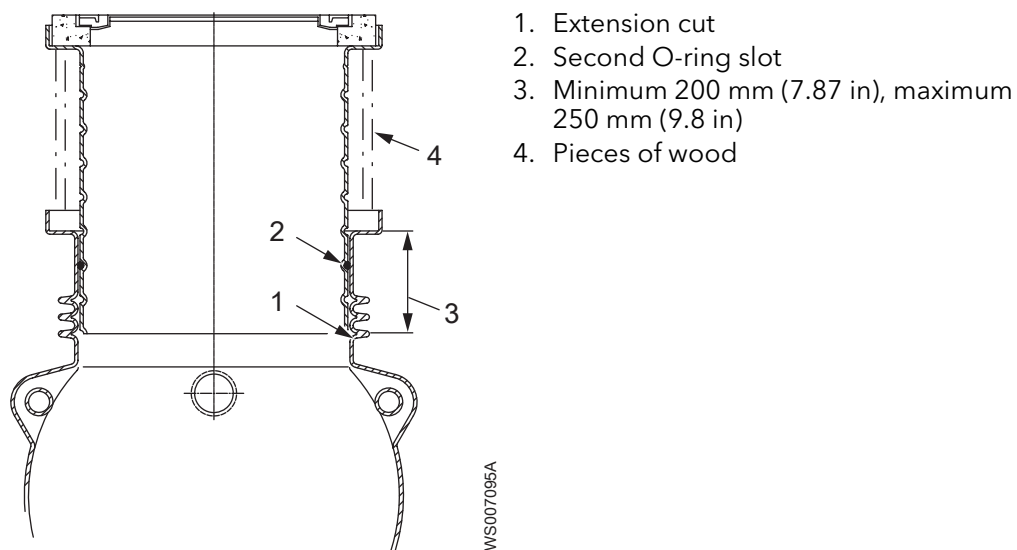
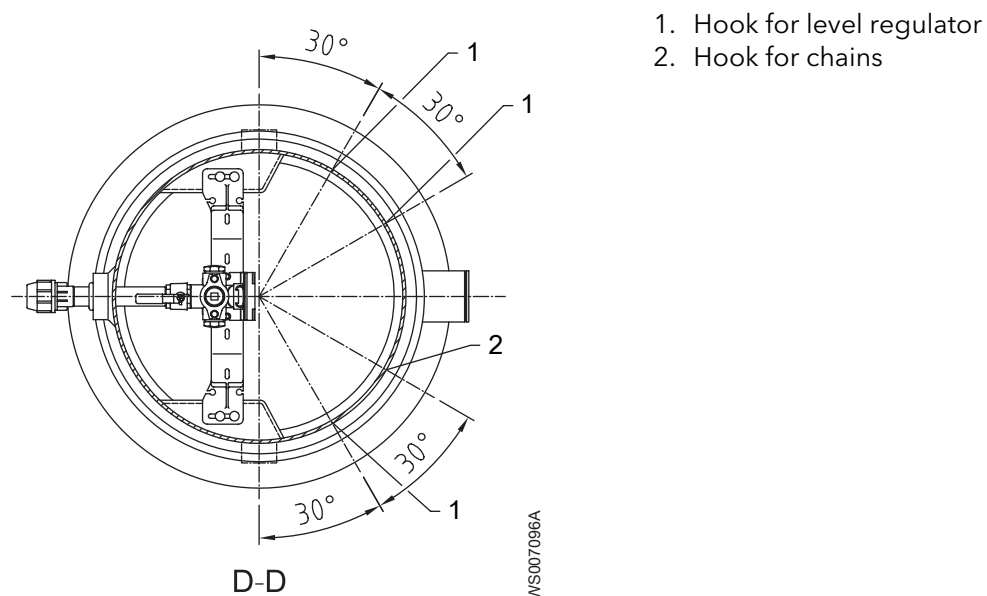


Figure 8: Ventilation pipe. Generic pump station is shown.

4.2.6 Install the extension: H-installation



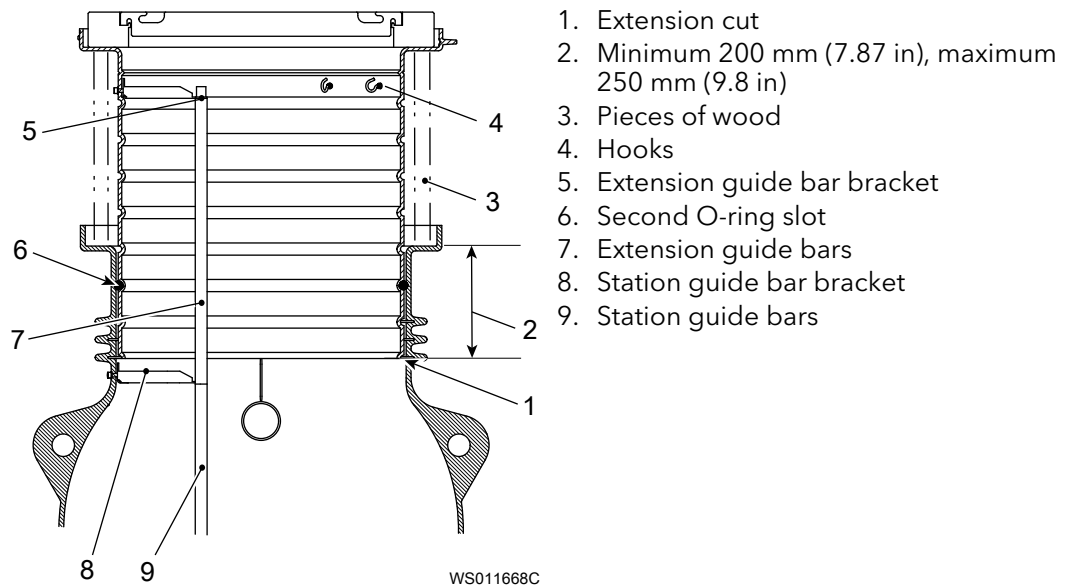
1. Adjust the length of the extension by cutting an O-ring slot.
2. Position the O-ring in the second O-ring slot.
Put soap water or grease on the O-ring before the extension is assembled.
3. Assemble the extension.
The figure shows the angular position of hooks on the extension.



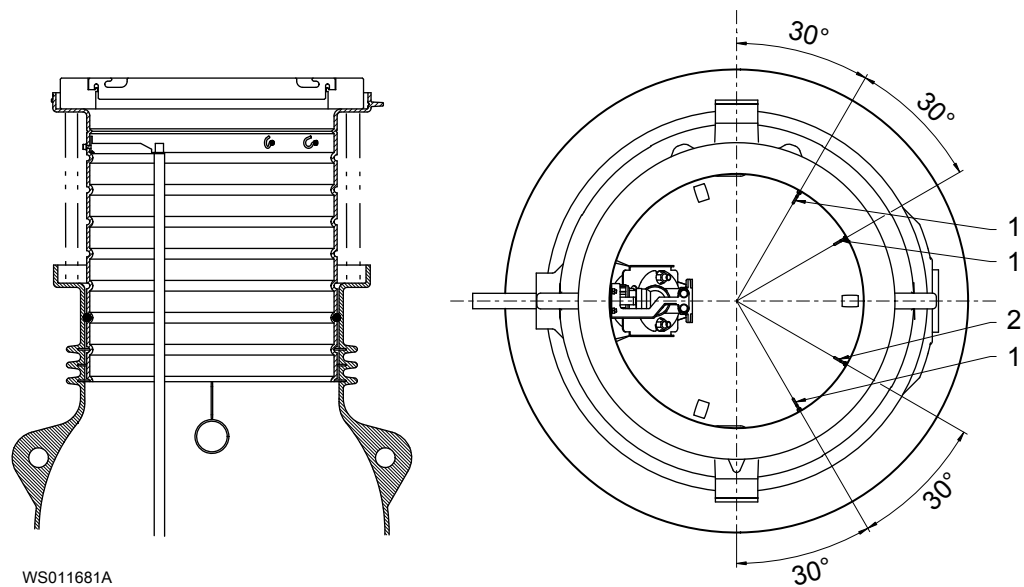
4. Position the pieces of wood.
The wood pieces prevent the extension from moving during backfilling.

4.2.7 Install the extension: P-installation

Use a cutting device to adjust the length of the extension and extension guide bars.



1. Adjust the length of the extension by cutting an O-ring slot.
2. Put the O-ring in the second O-ring slot.
 Put soap water or grease on the O-ring before the extension is assembled.
3. Install the extension guide bars:
 - a) Cut the extension guide bars to the correct length.
 - b) Put the extension guide bars on top of the station guide bar bracket.
4. Assemble the extension:
 - a) Lower the extension over the extension guide bars.
 Make sure that the extension guide bar bracket is aligned with the extension guide bars.
 - b) Fit the extension guide bars into the extension guide bar bracket.
 - c) The figure shows the angular position of the hooks in the extension.



1. Hook for level regulator
2. Hook for chains

5. Put the pieces of wood in position.
 The wood prevents the extension from moving during backfilling.

4.2.8 Make the electrical connections

Before making the electrical connections, read the Installation, Operation, and Maintenance manual for the control panel carefully.

1. Check that the following requirements are complied with:
 - The fuse in the power supply system must agree with the maximum permissible fuse rating.
 - The main voltage and frequency must agree with the specifications on the pump data plate.
 - When connecting inside the unit, remember that the environment is damp. Make sure that suitable electrical protection is chosen accordingly.
 - Do not allow the ends of the cable to be submerged in water. The water can be sucked into the cable by capillary action.
 - Appropriate support grips must be used for the cables inside the unit.
 - Silicon-filled butt connectors must be used. Do not use terminal blocks as they can easily cause a short-circuit.
2. Install the level sensors.
See [Installing the level sensors](#) on page 27.
3. Install the control panel.
See [Install the control panel](#) on page 28.

4.2.9 Installing the level sensors

NOTICE:

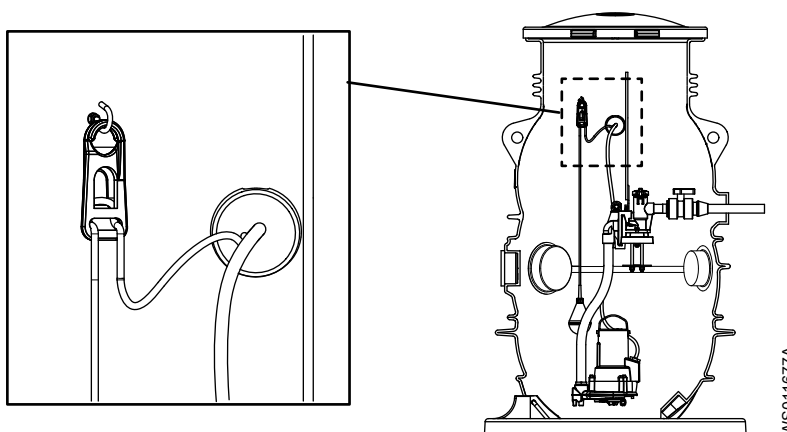
It is essential to ensure the proper functioning of level regulators in the unit.

Install the ENM-10

Make sure that there are two ENM-10 level sensors available for start and alarm.

Before installing the level sensor, read the level sensor manual carefully.

1. Hang the level sensors on the cable holder inside the tank.
Use applicable support grips.



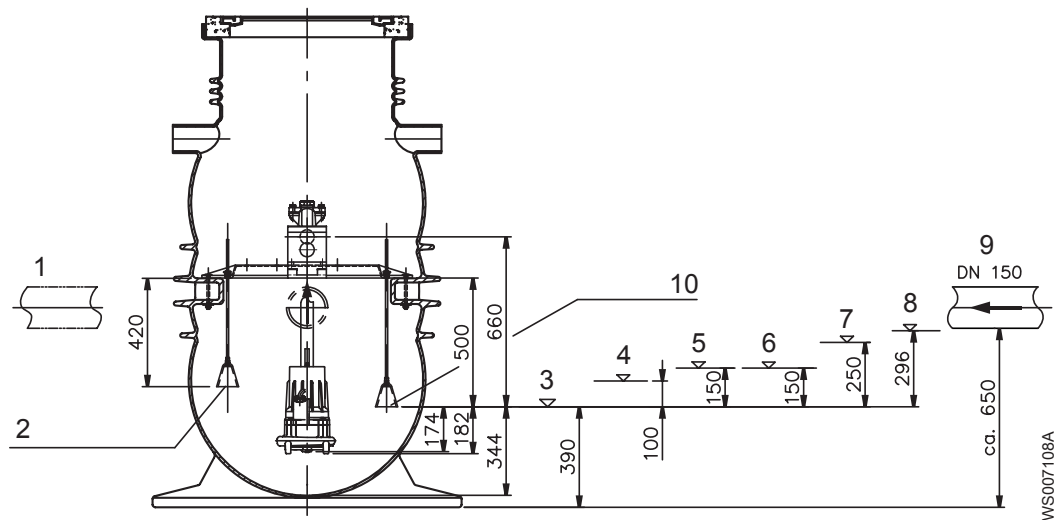
2. Adjust the start sensor so that it is level with the lifting handle of the pump.
3. Install the alarm sensor half a meter higher than the start sensor.

NOTICE:

It is essential to ensure the proper functioning of level regulators in the unit.

Install the open bell

1. Read the open bell manual.
2. Put the open bell at the correct level. See the following figure.



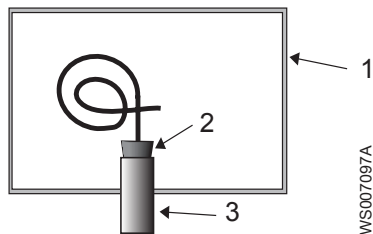
1. Inlet pipe
2. Option: open bell, high water
3. Open bell, bottom level
4. Pump off
5. Pump on
6. Alarm off
7. Alarm on
8. Bottom level pipe sleeve
9. Inlet pipe by building contractor
10. Open bell, open system

NOTICE:

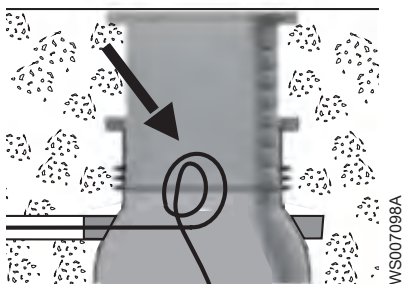
It is essential to ensure the proper functioning of level regulators in the unit.

4.2.10 Install the control panel

1. Install the control panel at the unit.
This makes it easy to operate during service and inspection.
2. Install the cable entry seal in the control panel.



1. Control panel
 2. Seal, ordered separately
 3. Pipe for cable
3. Run the cables through the cable entry to the start and control panel.
The pump motor cable must be long enough to enable removal of the pump from the unit.
 4. Connect the leads.
See the wiring diagram supplied with the control panel.
 5. Put the pump motor cable in a curved shape with a large radius and shorten the cable.
If the cable is too long, then there is a risk that it can be pulled into the pump.



6. Tighten the cable glands and close the connection box securely to ensure IP67 degree of protection.
For IP68 protection against condensation, then fill the connection box with two component curing gel fluid.
7. Install and connect the main supply cable to the control panel.
See the wiring diagram supplied with the control panel.

4.2.11 Equipotential bonding

Equipotential bonding is not needed according to EN 60079-4 section 6.3.

4.2.12 Insulate the unit

If the unit is exposed to temperatures below 0° C, then the unit must be insulated.

- Install a horizontal 70 mm thick cellular plastic ground insulation about 300 mm below the surface of the ground.

Condition	Action
Fine-grained soils, such as clay, silt, and sand with grain size below 2.0 mm	Extend the ground insulation at least 0.9 m around the unit
Coarse-grained soils, such as gravel and stone with grain size above 2.0 mm	Extend the ground insulation at least 1.8 m around the unit

- Mount the plastic pipe and install the unit insulation.





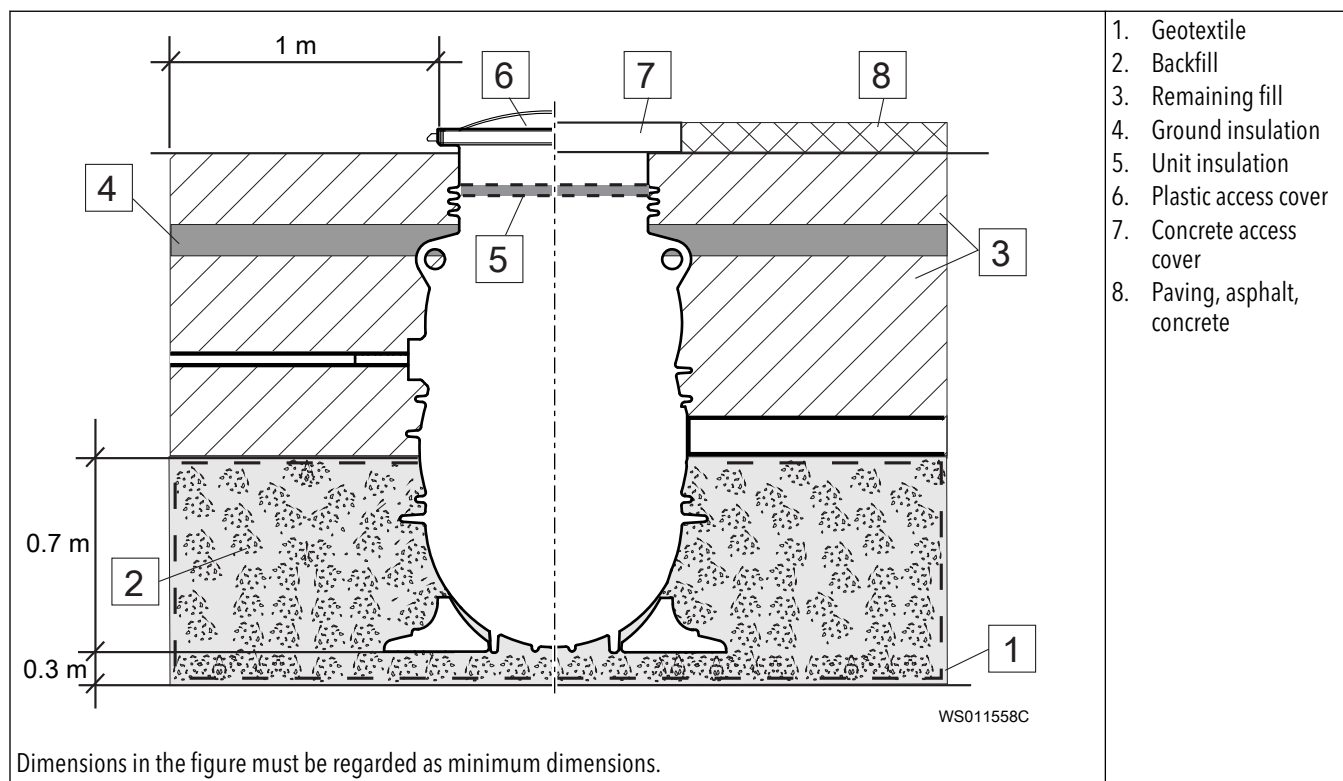
- If the unit is idle during winter, then do one of the following:
 - Make sure that both the access cover and the surrounding ground are insulated. Install a box insulated with cellular plastic.
 - Arrange supplementary heat from a thermostatically controlled radiator or an immersion heater.

4.2.13 Backfill

Compaction of the backfill must be thoroughly done to make sure that the surrounding material provides support to the structure of the unit.

NOTICE:

Do not allow soil or gravel to get inside the unit.



1. Check that the following requirements are fulfilled:

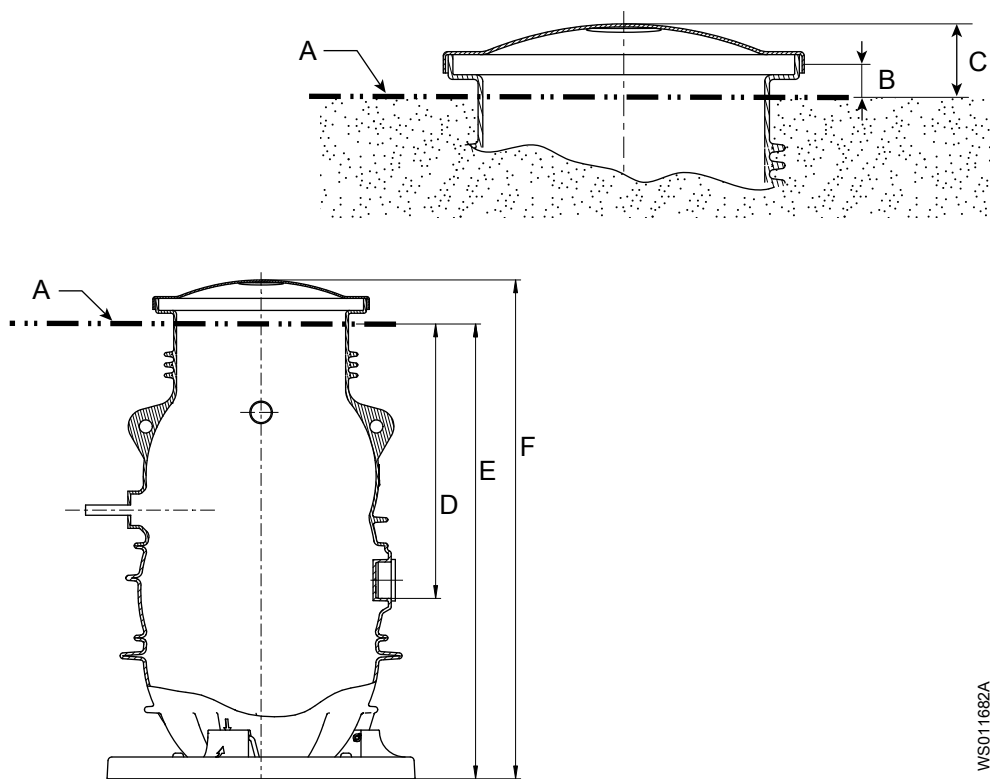
- The unit must be level after backfilling.
 - Backfilling must be correctly made around inlet pipes, outlet pipes, and the unit bottom.
 - The pipe work and the electrical connections must be protected and supported during backfilling so that no load is applied to them by the compaction operation.
 - The backfill must not contain any contamination, such as snow or ice of significant importance.
 - Backfilling is done with crushed material, grain size 2-36 mm (0.08-1.42 in).
 - The remaining fill must not contain stones larger than 50 mm (1.97 in).
2. Execute filling and compaction layer by layer around the unit, up the unit wall and up the pit wall.

Minimum thickness of backfill around the unit	0.7 m (2.3 ft)
Layer thickness	0.15 m (6 in)

- a) Start the compaction on the first layer by driving a light, vibrating machine around the unit.
Cover the whole surface.
- b) When the first pass is completed, then start the second pass.
- c) When all the passes for a layer are completed, then fill the next layer.
- d) Repeat the compaction procedure until all layers have been compacted.
3. Do the remaining fill before the groundwater surface is allowed to rise above the crushed material.

4.2.14 Installing the access cover

Install a plastic access cover



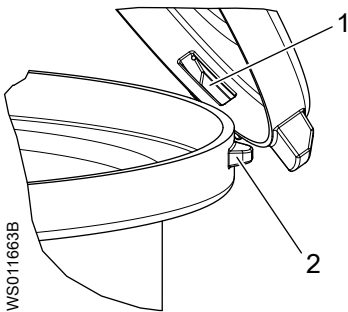
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Table 3: Dimensions

Item		Millimeter	Inch
A	Ground level	–	–

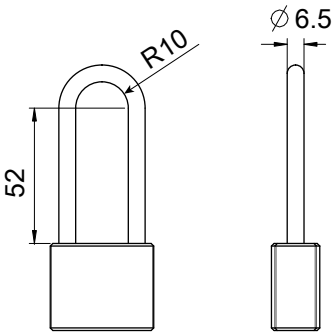
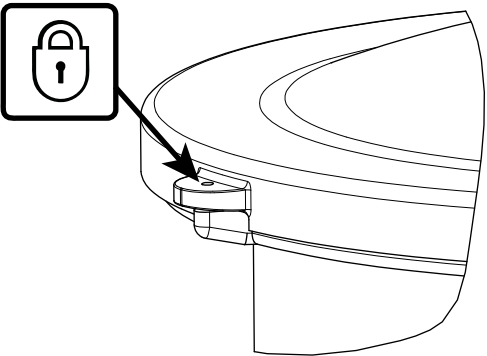
Item		Millimeter	Inch
B		74	2.9
C	Minimum distance above ground	172	6.8
D		1069	42.1
E		1755	69.1
F		1927	75.9

1. Install the access cover.
The two recessed notches in the cover fit over the tabs on the pump station.



1. Recessed notch in cover
2. Tab on pump station

2. Lock the unit access cover.
Use a padlock.



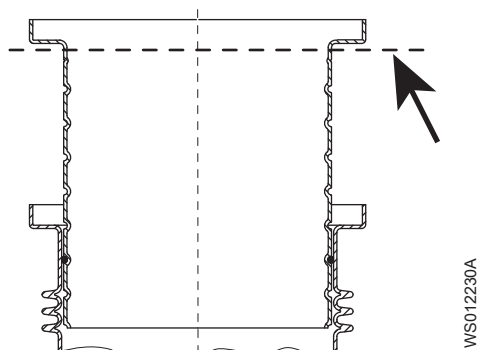
Install a class A or class B concrete cover

1. Position and fix the cover frame in the center of the unit opening.
2. Install the access cover.

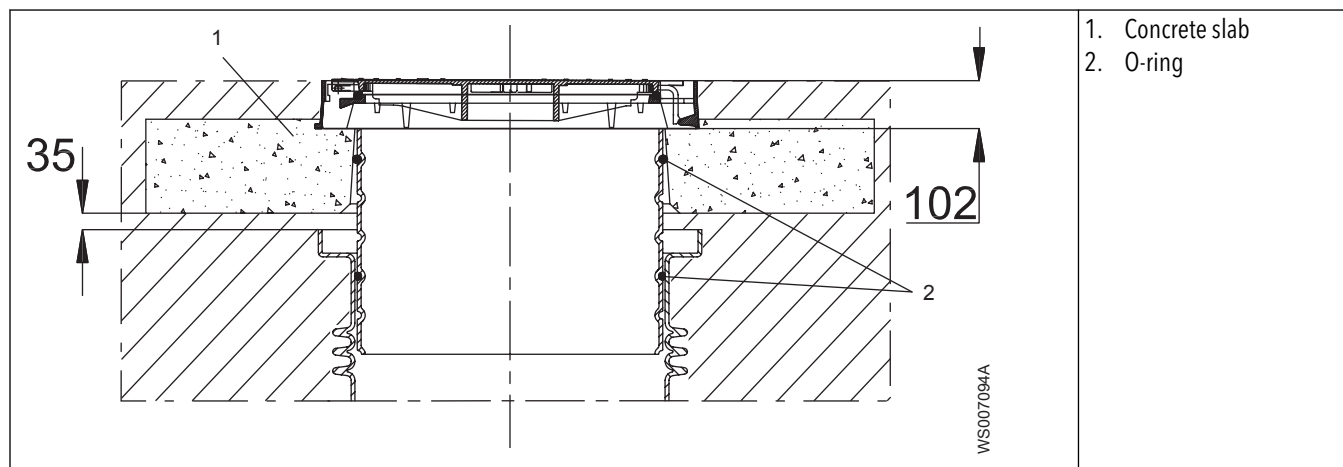
Install a Class D cover

NOTICE:
Only pump stations which are designed for Class D can be used in Class D environments.

- The following applies for Class D:
- The design of the concrete slab is the responsibility of the local consultant or contractor.
 - The extension must be used with the Class D cover.
 - The tank for Class D is blue.
1. Cut off the top of the extension. The arrow in the following figure shows the location of the cut.



2. Install the Class D cover. See the following figure.



4.3 Installing the pump

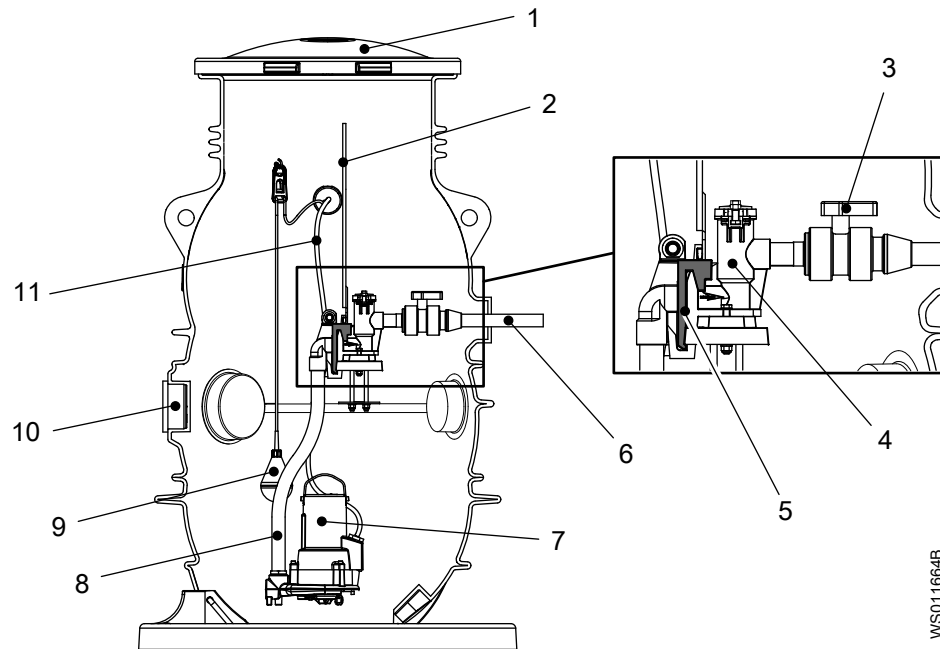
Before installing the pump, read the Installation, Operation, and Maintenance manual for the pump.

Make sure that the impeller rotates in the correct direction before installing the pump.

NOTICE:

Do not allow soil or gravel to get inside the unit.

4.3.1 Install with H-installation



1. Access cover
2. Guiding device
3. Shutoff valve
4. Check valve
5. Sliding bracket
6. Outlet pipe
7. Pump
8. Pump outlet pipe
9. Level sensor
10. Inlet
11. Pump cable

The pressure connection unit consists of a pipe with thread protector, a 90 degree bend, and a sliding bracket.

1. Remove the thread protector from the pressure connection unit pipe.
2. Apply some thread sealant and screw the pressure connection unit into the pressure side of the pump.

Make sure that the pump and the sliding bracket are aligned.



3. Attach a chain with shackle to the sliding bracket part of the pressure connection unit.
4. Install the pump:
 - a) Open the access cover.
 - b) Lower the pump into the unit.

Use an elastic guiding device that is connected to the discharge connection with check valve.



c) Keep the pump away from the discharge connection with the check valve.



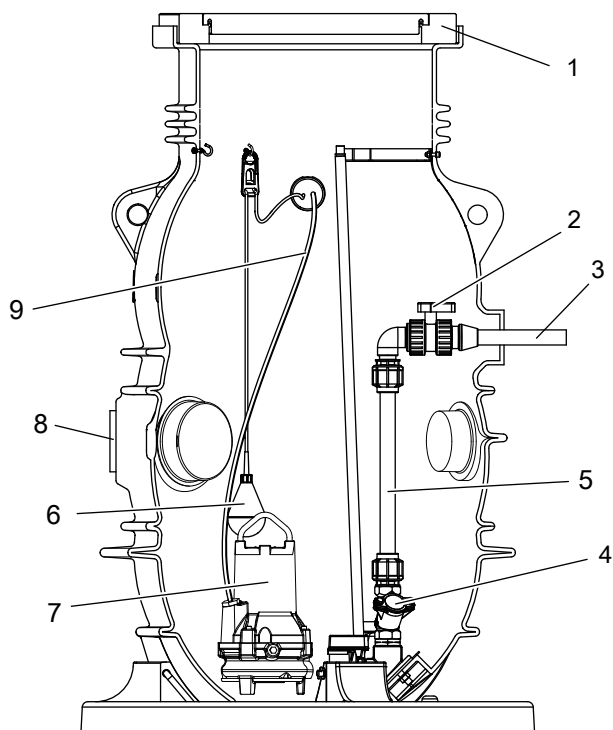
d) Stop lowering when the sliding bracket engages the discharge connection with the check valve.



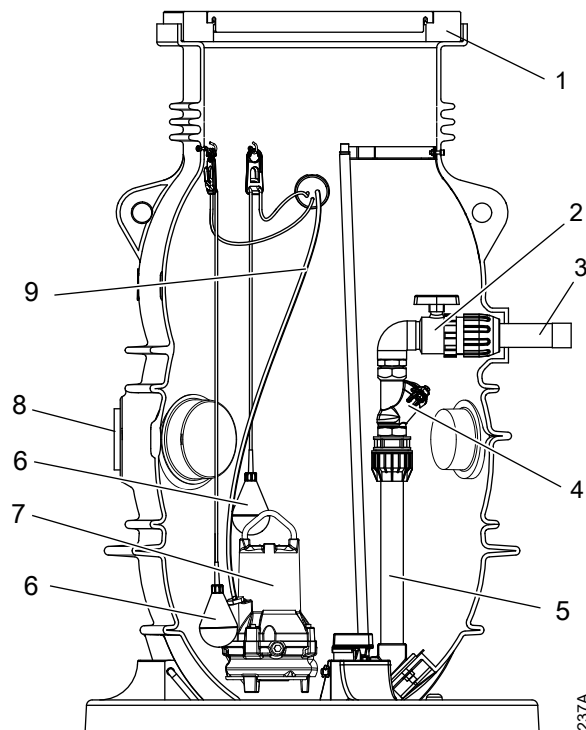
5. Fasten the chain and motor cable on the hooks.
6. Install the level sensors. See [Installing the level sensors](#) on page 27.
7. Close and lock the access cover before leaving the unit.

4.3.2 Install with P-installation

This figure shows an example of a DN32 and a DN50 P-installation.



DN32



DN50

WS012237A

1. Access cover
2. Shutoff valve
3. Outlet pipe
4. Check valve
5. Pump outlet pipe
6. Level sensor
7. Pump
8. Inlet
9. Pump cable

1. Open the access cover.
2. Install the pump.
Use the guide bars and keep the pump away from the shutoff valve.
3. Secure the chain and motor cable on the hooks.
4. Connect the motor cable to the plug contact.
5. Install the level sensors. See [Installing the level sensors](#) on page 27.
6. Close and lock the access cover before leaving the unit.

5 Operation

5.1 Precautions

Before taking the unit into operation, check the following:

- All recommended safety devices are installed.
- The cable and cable entry have not been damaged.
- All debris and waste material has been removed.

NOTICE:

Never operate the pump with the discharge line blocked, or the discharge valve closed.



WARNING: Crush Hazard

Risk of automatic restart.

Precautions when opening the cover

Follow these precautions when opening the cover:

- Do not stand directly over the cover to open it. Stand to the side. Wait at least five minutes after opening, to let any fumes disperse, before approaching the hole.
- Never work alone.

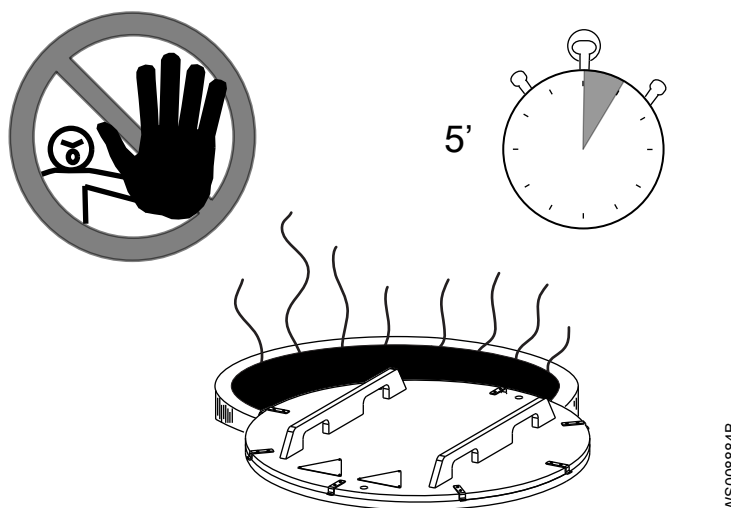


Figure 9: Waiting five minutes after opening, to let fumes disperse

5.2 Before commissioning

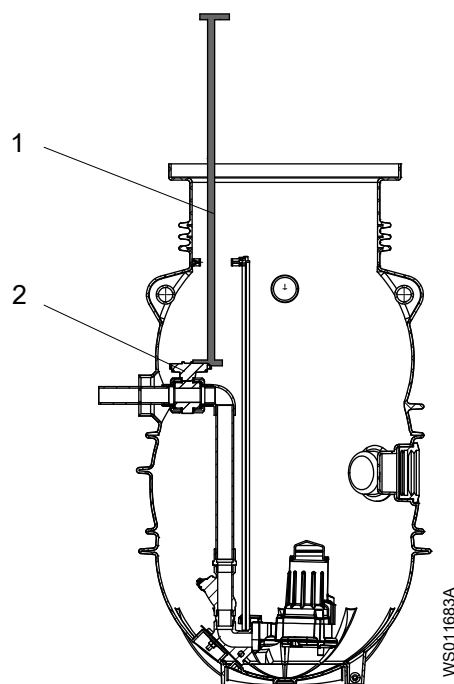
- Check that all electrical connections have been made. See [Make the electrical connections](#) on page 27.
- Make sure that there is no debris in the unit.

5.3 Open and close the shutoff valve

Before opening the cover, make sure that the safety instructions in the section [Precautions when opening the cover](#) on page 37 have been read and understood.

This section applies to the following:

- H-installations
 - P-installations
1. Fit the extended key over the shutoff valve handle.
 2. Use the extended key to open and close the shutoff valve.



1. Extended key
2. Shutoff valve handle

3. Always close and lock the access cover before leaving the unit.

5.4 Start the pump

Follow the instructions in the Installation, Operation, and Maintenance manual for the pump and the control panel.

1. Open the shutoff valve.
Use the extended handle.
2. Switch on the main power supply.
3. Check that the unit is emptied from water:
 - a) Fill the tank with water up to the start level.
 - b) Check that the pump stops within 4 minutes.
 - c) Repeat five times to make sure that the level sensors are working properly.
4. Check that the pump and pipe assembly are fixed and watertight.
5. Pull the high-level alarm level sensor, hold it in a horizontal position and verify that the pump starts.
The alarm is activated if everything is right.
6. Always close and lock the access cover before leaving the unit.

6 Maintenance

6.1 Precautions

Before starting work, make sure that the safety instructions in the chapter [Introduction and Safety](#) on page 3 have been read and understood.



DANGER: Inhalation Hazard

Before entering the work area, make sure that the atmosphere contains sufficient oxygen and no toxic gases.



DANGER: Explosion/Fire Hazard

Special rules apply to installations in explosive or flammable atmospheres. Do not install the product or any auxiliary equipment in an explosive zone unless it is rated explosion-proof or intrinsically-safe. If the product is rated explosion-proof or intrinsically-safe, then see the specific explosion-proof information in the safety chapter before taking any further actions.



DANGER: Electrical Hazard

Before starting work on the unit, make sure that the unit and the control panel are isolated from the power supply and cannot be energized. This applies to the control circuit as well.



WARNING: Biological Hazard

Infection risk. Rinse the unit thoroughly with clean water before working on it.



WARNING: Fall Hazard

Check that suitable barriers for the work area are in place.



CAUTION: Crush Hazard

Make sure that the unit cannot roll or fall over and injure people or damage property.



CAUTION: Thermal Hazard

Allow surfaces to cool before starting work, or wear heat-protective clothing.

Pump manual

The safety information in the Installation, Operation and Maintenance manual for the pump must be followed at all times.

Ground continuity verification

A ground (earth) continuity test must always be performed after service.

6.1.1 Inspect the work area before permit-required hot work



WARNING: Explosion/Fire Hazard

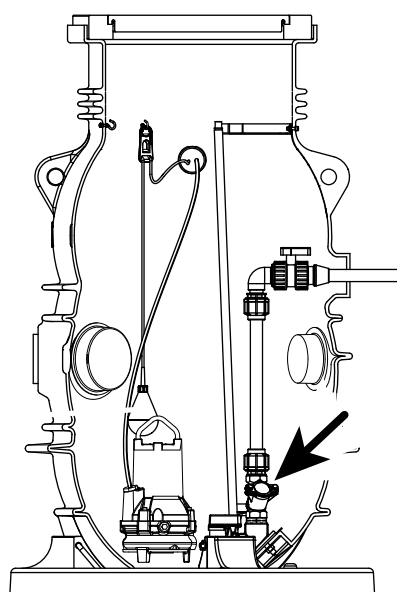
Before starting any permit-required hot work such as welding, gas cutting, grinding, or using electrical handtools, do the following: 1. Check the explosion risk. 2. Provide sufficient ventilation.

6.2 Maintenance guidelines

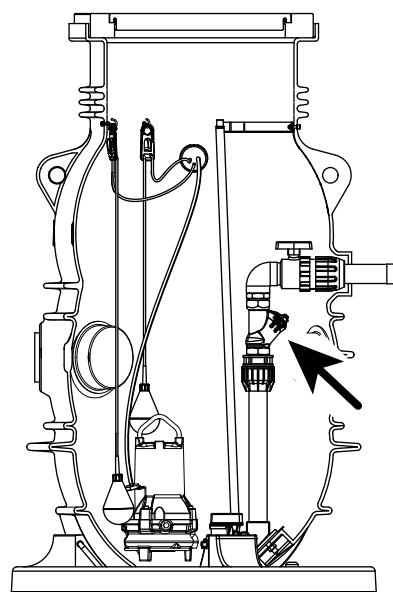
- A yearly inspection and cleaning of level regulators is recommended.
- Make sure that the inside of the tank, valves, and pipes are kept as clean as possible.
- Always close and lock the access cover before leaving the unit.

6.3 Replace the check valve

If the check valve must be replaced, then contact an authorized service representative.



DN32



DN50

WS011665C

The pump station is a confined space. Do not enter it. For more information on confined spaces, see [Confined spaces](#) on page 4.

7 Declaration of Conformity

7.1 Declaration of Conformity

Xylem Water Solutions Global Services AB Emmaboda hereby certifies that Flygt Compit 901 pump station with an incorporated Xylem pump has been manufactured in accordance with the COUNCIL'S DIRECTIVE concerning convergence of the legislation of Member States with regard to Machinery 2006/42/EC, EMC 2014/30/EU, Low Voltage 2014/35/EU. Marked with serial number.

The product has been manufactured in accordance with the following harmonized standards and technical specifications:

- EN ISO 12100:2010, EN 809+A1:2009
- Applicable parts of EN 60335-2-41, EN 60204, EN 60034
- Applicable parts of EN 61000-6-1:2007, EN 61000-6-2:2005, EN 61000-6-3:2007, EN 61000-6-4:2007

Name and contact address of the authorized representative:

AU Xylem Water Solutions Austria GmbH, Stockerau, Austria, Tel. +43 2 266 604
 BE Xylem Water Solutions Belgium BVBA, Zaventem, Belgium, Tel. +32-2-7209010
 DK Xylem Water Solutions Danmark ApS, Glostrup, Denmark, Tel. +45-43200900
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 ES Xylem Water Solutions España Madrid, Spain, Tel. +34 91 329 78 99
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Title Product Line Manager	Name Henrik Jacobsson	Company name Xylem Water Solutions Global Services AB, S-174 87 SUNDBYBERG, SWEDEN
Signature 	Function Authorised person to compile the technical file and empowered to draw up the declaration on behalf of the manufacturer.	Date 2020-03-01

Xylem |'zīləm|

- 1) The tissue in plants that brings water upward from the roots;
- 2) a leading global water technology company.

We're a global team unified in a common purpose: creating advanced technology solutions to the world's water challenges. Developing new technologies that will improve the way water is used, conserved, and re-used in the future is central to our work. Our products and services move, treat, analyze, monitor and return water to the environment, in public utility, industrial, residential and commercial building services settings. Xylem also provides a leading portfolio of smart metering, network technologies and advanced analytics solutions for water, electric and gas utilities. In more than 150 countries, we have strong, long-standing relationships with customers who know us for our powerful combination of leading product brands and applications expertise with a strong focus on developing comprehensive, sustainable solutions.

For more information on how Xylem can help you, go to www.xylem.com



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[www.xylemwatersolutions.com/
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and more information

The original instruction is in English. All non-English
instructions are translations of the original instruction.

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