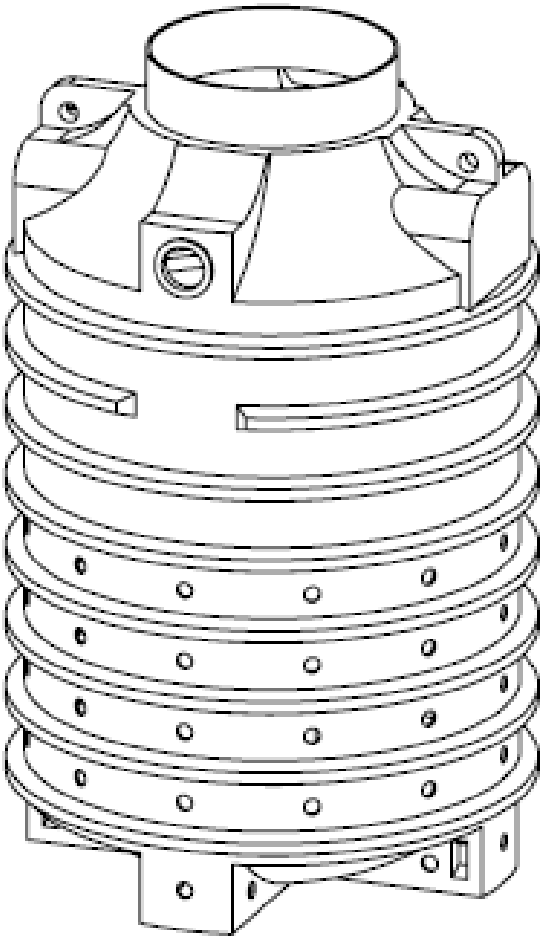
Installation instructions

Soakaway shafts 1000L / 1500L / 2000L

Version 06-2025



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WASSERSYSTEME

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1. Safety and labelling requirements

1.1 Safety

All work must be carried out in accordance with the relevant accident prevention regulations in accordance with DGUV V32
and with the appropriate safety equipment.
When entering the containers, a second person is required for safety reasons.
The systems must always be taken out of operation during work or maintenance and secured against unauthorised start-up.
The tank lid must be kept closed except when working inside the tank, otherwise there is a high risk of accident.
Nautilus Wassersysteme GmbH & co.KG offers a comprehensive range of accessories, all of which are compatible with each other and can be expanded into complete systems.
The use of other accessories may impair the functionality of the system and void any liability for resulting damage.

1.2 Labelling requirement

All pipes and taps for service water must be marked with the words 'Not drinking water'
in writing or pictorially (DIN 1988 Part 2, Section 3.3.2.) in order to prevent
accidental connection to the drinking water network, even after many years. Even with correct labelling,
confusion can still occur, e.g. by children. Therefore, all service water
taps must be installed with child-proof valves.

2. Overview of volume, dimensions, empty weights

Table 1: Overview of volume, dimensions, empty weights

Volume	Dimensions L x B x H	Empty weights
Clearo-Line 1.000 Litre **Ozeanis 1.000 Litre**	Ø 1310 x 1360 mm	ca. 48 kg
Clearo-Line 1.500 Litre **Ozeanis 1.500 Litre**	Ø 1310 x 1730 mm	ca. 68 kg
Clearo-Line 2.000 Litre **Ozeanis 2.000 Litre**	Ø 1310 x 2100 mm	ca. 95 kg

Weight specifications without equipment

3. General

3.1 About this instruction

Please read these instructions carefully and thoroughly before installing and commissioning the infiltration system. It is essential that you observe the points described. For any additional items purchased, you may find separate installation instructions in the transport packaging (depending on the product).

Please keep these instructions in a safe place so that you can refer to them in the future if necessary.

These instructions cannot cover all the special features and details of installing infiltration systems.

3.2 General information about soakaway shafts

The soakaway shafts are manufactured in a single piece (monolithic) from polyethylene plastic using a rotational sintering process, i.e. without weld seams or similar connections. The material is resistant to almost all chemicals, biologically harmless and food-safe.

The shaft is intended exclusively for underground installation. Above-ground filling is not permitted.

The shaft and its fixtures must be checked for damage. Any transport damage must be reported to the carrier in writing upon receipt of the goods.

Compliance with the information in these instructions is part of the warranty conditions. Failure to comply will void any warranty claims.

If covers and/or shaft extensions are used that were not purchased from the manufacturer, listed or defined, the warranty may be void under certain circumstances, as conformity may not be guaranteed or heights may be exceeded, etc.

3.3 Legal situation/official conditions

A permit is required to build a drainage shaft. This is because rainwater, which is the only purpose for which simple drainage shafts are intended, is considered wastewater under the Water Resources Act,

meaning that rainwater drainage counts as wastewater disposal. The regulations governing installation are not uniform across the country, so you should always check with the relevant authorities.

A drainage shaft is also only possible if the property is not located in a water protection area or a spring catchment area, or if there is a risk of contamination. In addition, the groundwater level must not be too high, otherwise the necessary filtering effect of the soil through which the water has to seep will be lost. Information about the groundwater level can be obtained from the city or district authorities or from local well builders.
When manufacturing and installing rainwater harvesting systems, relevant regulations such as DIN 1989, DIN 1986, DIN 18196, ENV 1046, DIN 4124 and ATV-DVWK A127 must be observed. The systems from Nautilus Wassersysteme GmbH & Co. KG and these instructions are based on the content of these regulations.

3.4 General structural requirements

When selecting the installation site, care must be taken to ensure that no adverse effects and/or damage to adjacent structures are to be expected from seepage water.

For more details, see point 4.

3.5 Responsibility

The manufacturer is not liable for damage caused by:

- Incorrect location selection
- Installation and compaction errors
- Groundwater, stratum water and stagnant water
- Misuse

We reserve the right to apply a tolerance of +/- 3% to all dimensions and content specifications contained in our catalogues, installation instructions and other documentation. Depending on the equipment, the usable volume of underground tanks may be up to 10% less than the nominal volume. Errors and changes to individual products are reserved in the context of technical development.

4. Location selection and location conditions

4.1 Soil conditions

The soil must be sufficiently permeable.

This capability is indicated by the kf value, as soils have different grain sizes and water seeps away at different rates.

Soil surveys can be consulted for this purpose. Information on suitability can also be obtained from the city, district or local well builders.

4.2 Location in relation to buildings and drinking water wells

The tanks must not be built over and cannot bear any loads from buildings or foundations. The distance to buildings should be at least 3–3.5 metres.

Figure 1.

The distance to drinking water wells should be 40–60 metres.

This is a guideline that may vary depending on local conditions.

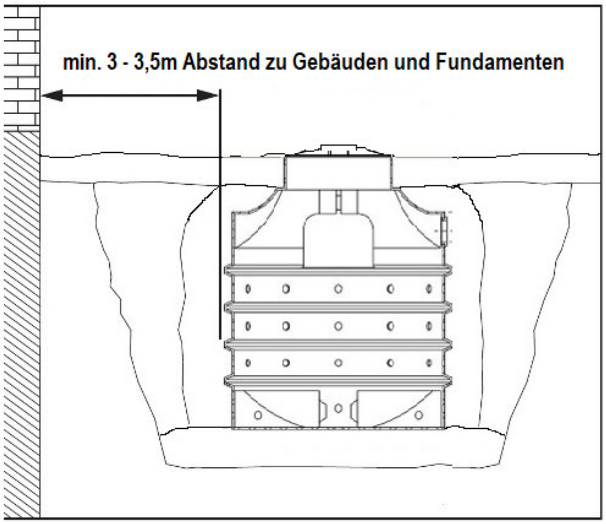


Abb. 1.

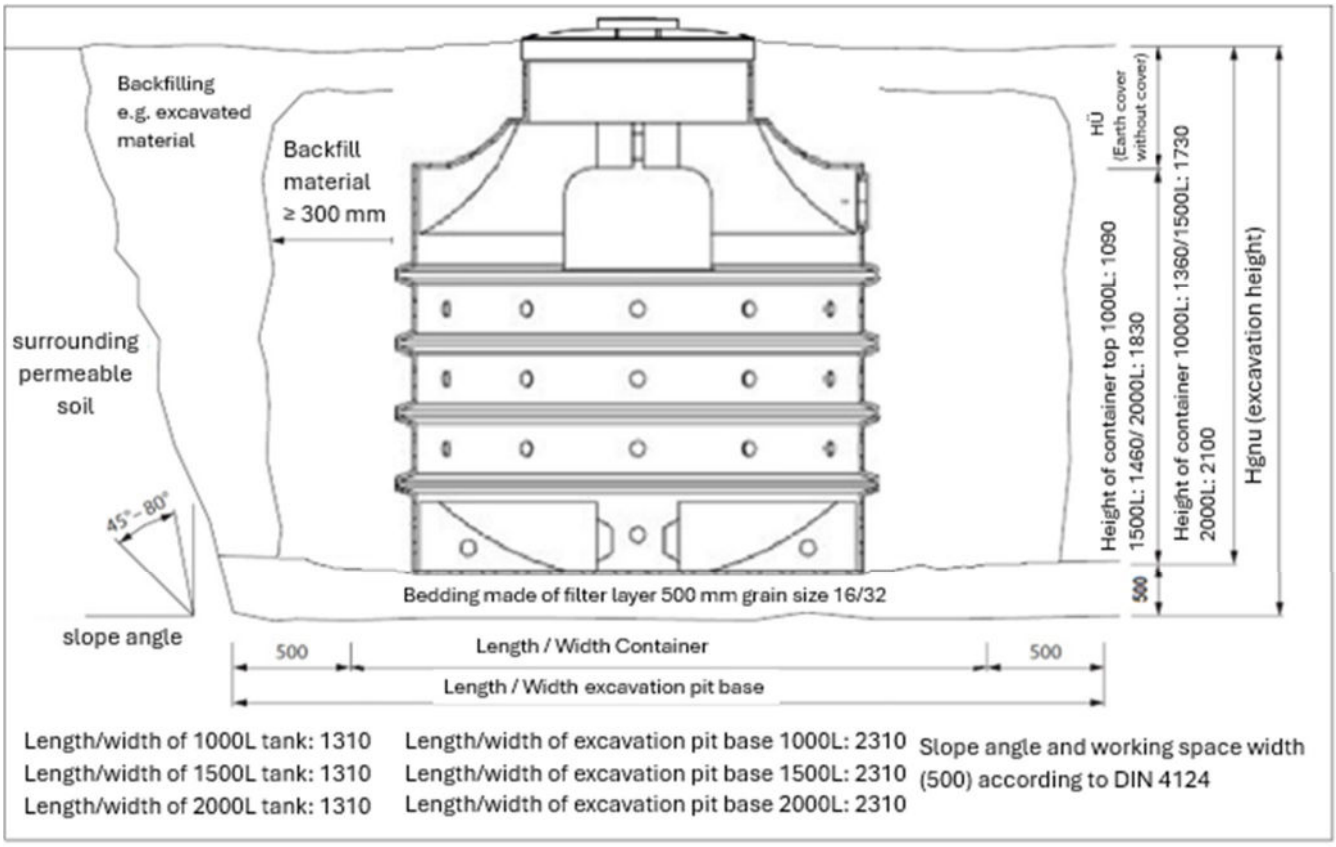
4.3 Excavation pit

The depth of the excavation pit is determined by the size of the shaft, existing pipes and the maximum permissible soil cover of 1.5 metres above the shaft.
In the case of drainage shafts, the lower edge of the shaft must be at least 1.5 metres above the maximum groundwater level.

Table 2: Earth cover *based on the top of the container without dome (==> see Figure 2 on page 5)

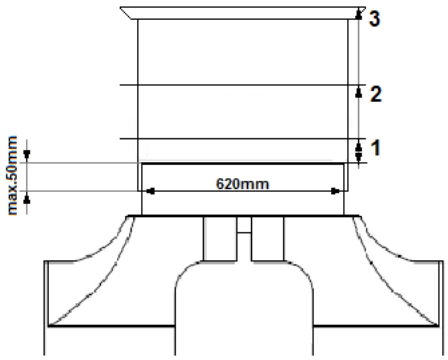
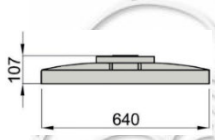
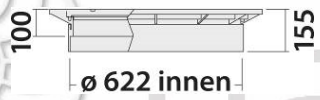
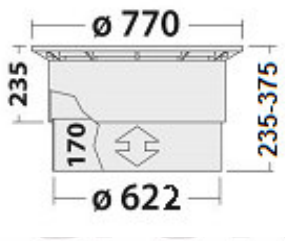
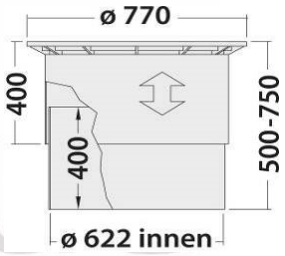
Earth coverage (Hü)*			
Cover	Shaft 1000 L	Shaft 1500 L	Shaft 2000 L
Basic coverage	**270 mm**	**270 mm**	**270 mm**
PE cover	**375 mm**	**375 mm**	**375 mm**
Telescopic segment	**455 - 595 mm**	**455 - 595 mm**	**455 - 595 mm**
Telescopic dome	**720 - 970 mm**	**720 - 970 mm**	**720 - 970 mm**
maximum Soil coverage	**1500 mm**	**1500 mm**	**1500 mm**

Figure 2: Installation sizes



Production-related dimensional tolerances may occur in both the drainage shaft and the tank covers. If two products are combined that are within the upper tolerance range, it may be necessary to remove material on site. This can be done by carefully chamfering the tank dome or the respective

4.4 Efficiency of the covers

Tabelle 3 Efficiency of the covers			
Slip lid (for rainwater only) **35.0000.0029**	1. PE cover with a load capacity of up to 200 kg **95.0050.0070**	**2**. PE telescopic segment with a load capacity of up to 1500 kg **95.0050.0074**	**3**. PE telescopic dome with a load capacity of up to 1500 kg **95.0050.0072**
Effective height = H d			Soakaway shafts
	1 	2 	3 
H d= 105mm		**H d max. = 325mm** **H d min. = 185mm**	**H d max. = 700mm** **H d min. = 450mm**
Description of the covers			
No child safety lock **Not accessible** **Only for rainwater harvesting**	**Accessible** **Child safety lock**	The effective height can be varied between 185 and 325 mm thanks to the infinitely variable height adjustment. The effective height can be reduced further by shortening the segment parts. **Child safety lock**	The effective height can be varied between 450 and 700 mm thanks to the infinitely variable height adjustment. The effective height can be reduced further by shortening the segment parts. **Child safety lock**

4.5 Traffic areas

Soakaway shafts are intended exclusively for construction outside traffic areas.

4.6 Special installation situation

Building structures, existing pipes, groundwater flows, etc. must be taken into account in such a way that impairments and hazards are ruled out.

5. Installation of a soakaway shaft

The volume of the excavation pit is determined by the size of the shaft, the amount of water to be drained and the distance to the aquifer.

Excavate the pit down to the permeable soil layers.
Do not penetrate the groundwater-protecting cover layer!

Fill the pit base with permeable material 16–45 mm grain size of 500 mm.

Insert the drainage shaft into the excavation pit.
Fill the shaft from the inside with permeable gravel for fixation (300 mm).

Surround the shaft from the outside with the backfill material up to at least the highest water outlet point

The backfill in the shaft can now be carried out parallel to the external backfill

To prevent soil from washing into the drainage area, cover the gravel with a geotextile (non-woven fabric). See Fig. 3.

The remaining backfill, except for the inlet pipes (sand), can now be filled with topsoil.
Please ensure that the inlet pipes are free of tension.

A baffle plate is now placed on the gravel layer in the drainage shaft to ensure optimal distribution of the water to be drained.
Baffle plate in the form of concrete 20 x 20 cm or larger.

It is recommended to line the entire excavation pit with geotextile to prevent roots from growing into it.

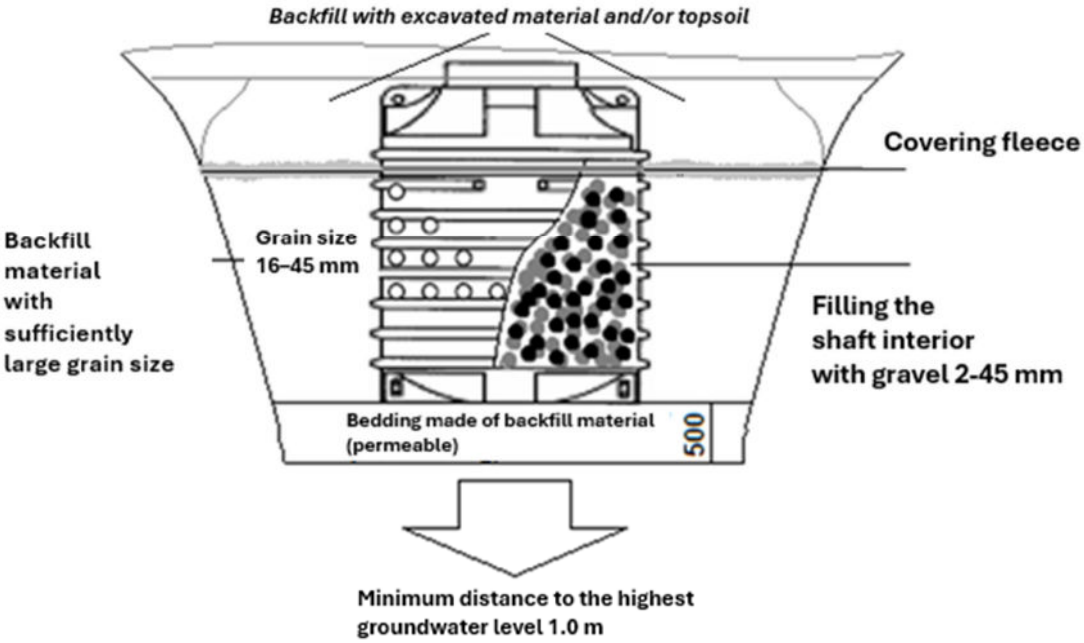


Figure 3 Installation of soakaway shaft

6. Maintenance and cleaning

Regular inspection and maintenance ensure increased functional reliability and service life for your drainage shaft. The shaft and drainage gravel should be cleaned at regular intervals. The frequency of maintenance intervals depends on local conditions and is at the discretion of the operator.

The following applies to plastic covers:

If necessary, clean the sand trap channel and screw bushings, grease the screws and bushings. Check the cover regularly to ensure it is secure and child-proof!