

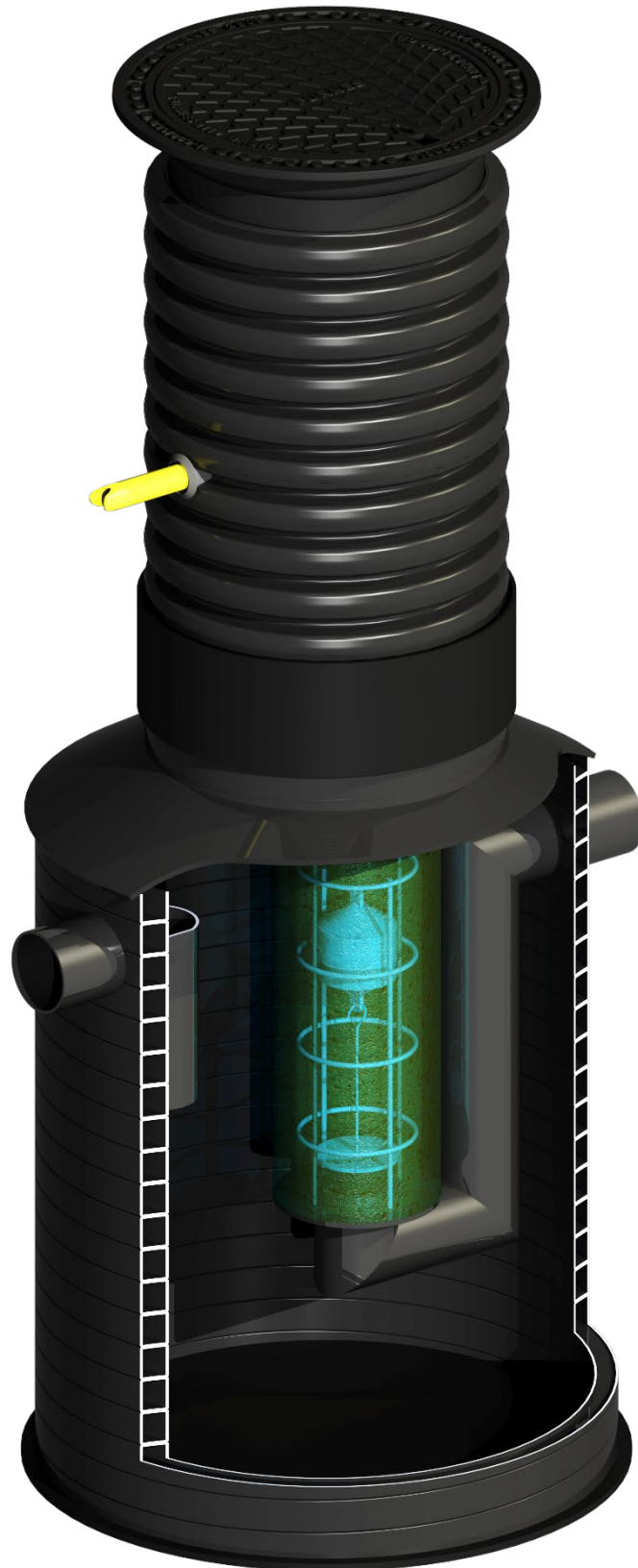
Uponor Oil Separator
Installation Manual

uponor



Installation manual Oil separator

Uponor



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1. INTRODUCTION

Any work related to transport, assembly, operation, and maintenance of devices may be performed by persons familiar with this Operation and Maintenance Manual. To ensure the full use of the separator and extend its service life, the operating conditions specified in the documentation must be followed. Comments, complaints, and defects during the warranty period should be reported to the supplier's address:

Uponor Infra Oy

Kouvolantie 365, 15550 Lahti, Finland

asiakaspalvelu@uponor.com

2. PURPOSE OF UPONOR OIL SEPARATORS

Uponor oil separators are designed to separate sedimenting mineral suspensions, oil and gasoline substances from rainwater, which cannot be discharged to the receiver, sewage system or local sewage treatment plants. Separators are used in the treatment of rainwater from the drainage of streets and car parks, in the treatment of technological sewage from machinery industry plants, gas stations, manual and automatic car washes, repair workshops, etc.

3. PRINCIPLE OF OPERATION

Uponor oil separators are flow devices. In a separator equipped with a settling tank, sedimentation of the mineral suspension of sand and mud takes place in the settling part. Gravity and the physical processes of adsorption and coalescence were used in the separation chamber. Oil particles build up on the surface of the cellular structures of the coalescing cartridge (adsorption), where they combine into larger and larger agglomerates (coalescence) and, because of gravity, migrate to the surface, creating an oil film. The separators are equipped with closing systems which, after collecting the maximum amount of light liquid, automatically close the separator outlet, thus preventing contamination of the receiver.

The contents of petroleum derivatives with the density of 0.85 [kg/dm³] and of general suspension in the outflow at the rated output: according to PN-EN 858-1:2005+A1:2007.

4. BASIC CONSTRUCTION

4.1 Tank

The oil separator tank is made of PE-HD polyethylene. Cylindrical part is a Weholite® pipe and bottom and top are produced of plate. It is designed for installation in the ground or for free-standing installation in a frost-free room, well or sewer. The devices are adapted for installation under communication routes.

4.2 Auto close

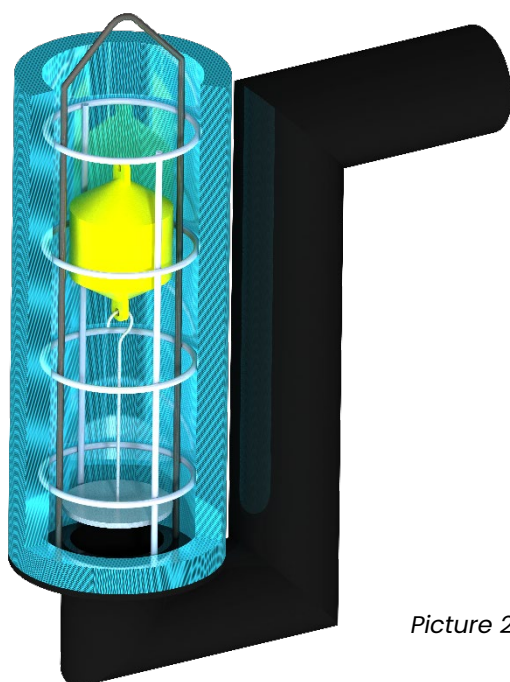
The separator is equipped with an auto-closure that works when the separator is border-filled with petroleum products. The valve, located on the guide profiles, is closed by a float, weighted to the density of $\zeta = 0.85$ [kg / dm³], which loses part of its buoyancy when immersed in a medium with a density lower than its tare threshold. As a result, when the light liquid layer on the surface reaches the limit thickness, the auto-closure valve completely cuts off the nominal flow through the separator from the part of the separation compartment, protecting the receiver against contamination.



Picture 1. Auto closing valve with float.

4.3 Coalescing insert

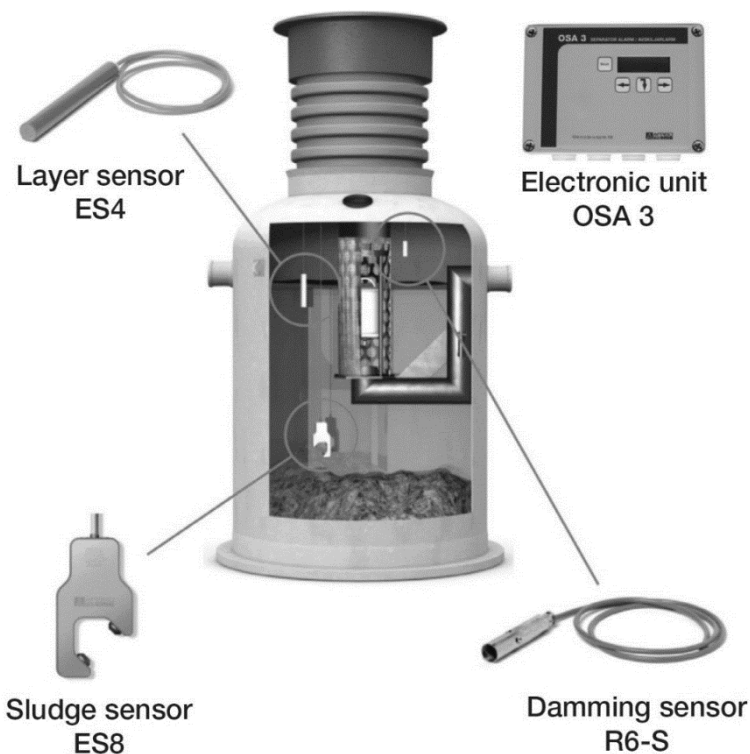
The phenomenon of coalescence is used in the process of separating light liquids. The polyurethane foam used in the device is resistant to oil and water. The calibrated size of cells and their open structure support the coalescence process. The roll-shaped coalescing insert is mounted on a supporting basket and additionally reinforced with bands that protect the insert from slipping.



Picture 2. Coalescing unit and outlet piping

4.4 Alarm system

Complete alarm systems are available for each purpose, sludge and oil storage and high level, depending on needs of customers.



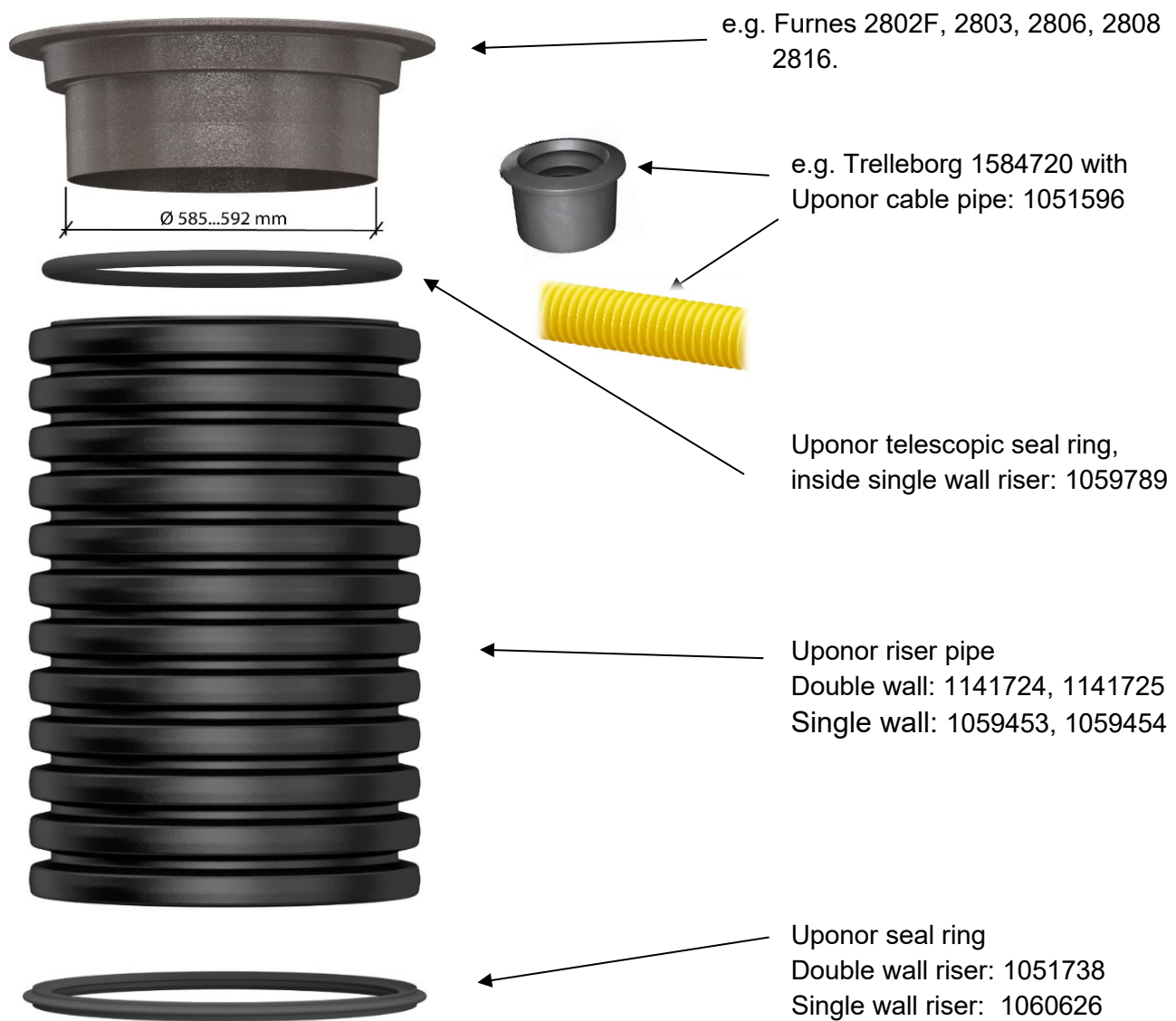
Picture 3. Afriso alarm systems

4.5 Riser system

Riser system consists of length adjustable (by cutting) riser pipe with seal rings and optionally connection for alarm sensors and cover system.

Alarm sensor connection includes a penetration seal 50/75 mm and cable pipe 50 mm. Similar products by other manufacturers or suppliers can be used as well.

Cover system, frames having skirt outer diameter ~585 to 592 mm can be used with riser and its seal ring. Cover shall be chosen according to frame and needs by local regulation (sealed cover, lockable etc.).



Picture 4. Uponor riser system

4.6 Sampling

Local regulations or circumstances may require monitoring of stormwater. In those cases, it is needed to install specific sampling chamber. Main requirements for sampling unit are the accessibility to sampling device, that is put down into chamber bottom to collect a sample from water and space for sampling device below the inlet/outlet level. Minimum diameter of chamber body is 315 mm and space below the inlet/outlet level approximately 300 mm. Inlet and outlet connection sizes according to separator connections.



Picture 5. Sampling chamber

5. DELIVERY AND TRANSPORT

5.1 Delivery control

The completely assembled separator is delivered to the construction site. The movable element of the separator, i.e., the automatic closing float and the coalescing insert with a basket, are assembled on site after installation, filling and filling the separator with water. During transport, it is forbidden to roll or pull the separator on the ground or drop the separator from the means of transport or the edge of the excavation to the place of installation. After unloading, check that the separator has not been damaged during transport and that the tank shell has not been damaged. A shield for UV protection of inner parts shall be on riser connection on top of the oil separator. If it's not on place, the inner must be investigated for possible UV caused discoloration or even destruction. A memorandum of service should be prepared about any damage or missing deliveries and the manufacturer should be notified prior to the installation of the tank.

6. ASSEMBLY OF THE SEPARATOR

6.1 Location and situation

Separators should be installed in the sewage system, in the places where water contaminated with petroleum substances originates and flows out. The inlet to the separator should be gravity; the necessary pumping station must be installed after the separator. The separator should be located in

such a way that the access of the equipment needed to remove the deposited impurities is ensured and that it is possible to perform maintenance and service activities.

Separators should be installed in accordance with the national regulations and standards specifying the conditions of explosion and fire safety, in particular:

- located in places where there will be no direct penetration of liquids that may create fire and explosion hazards, e.g., gasoline, solvents; the minimum distance of the separator from the hazard source is 8 m,
- grounded
- protected against overfilling, fire, heating to oil ignition temperature, mechanical damage, freezing of water.

When selecting the location for the reservoir, the soil and water conditions should be checked. It is necessary to determine methods of protection against flood and frost, method of ballasting or anchoring the reservoir at high groundwater level, the possibility of using the native soil as ballast and backfill, or the need to transport sand. Before starting the reservoir deposition, control measurements of the reservoir deposition level should be carried out, considering the target ground level after the completion of the leveling works.

6.2 Assembly and installation

Manhole covers to the separator should be placed above the ground level or above the point of introduction of industrial sewage to avoid uncontrolled outflow of oil from under the manhole in the event of the separator outlet closure. If an elevation is impossible, the separator must be equipped with a device indicating that the outlet is closed due to overfilling of the separator with oil substances.

6.3 Installation of a free-standing separator

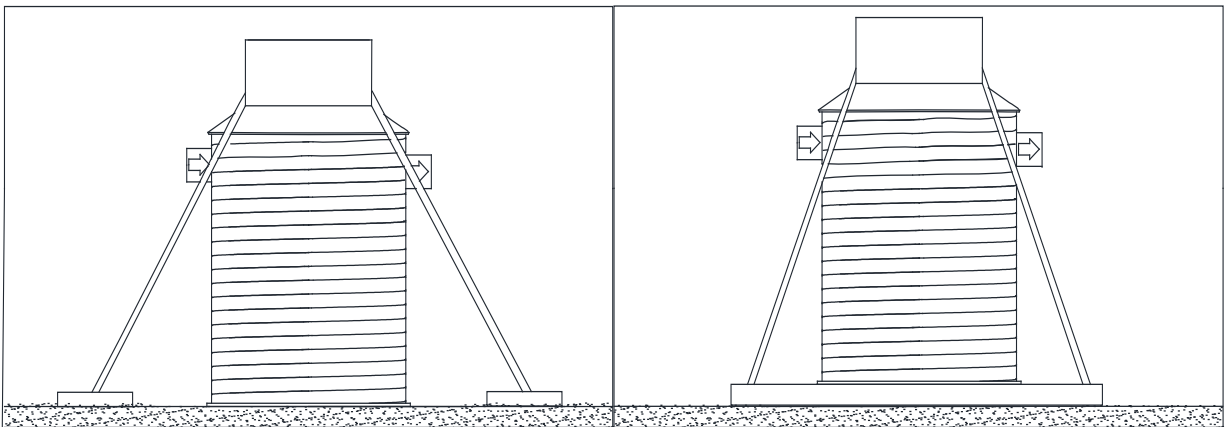
The separator is prepared to be placed in a free-standing, frost-free room. The separator should be placed on an even, stable, and leveled surface. The sewage inlet and outlet pipes should be attached to the separator in accordance with the arrows on the tank in a way that does not cause stresses and deformation of the stub pipes. The ventilation of the separator should be led outside the room. In the case of a free-standing installation, the separator must not be exposed to external mechanical effects that could damage the surface of the tank.

6.4 Underground installation of the separator

- When installing the separator underground, the inspection holes are adapted to the DN600 riser pipes. Note that the UV shield must be removed before riser adaption and on the same time it's preferred to remove the straps of coalescence unit and automatic closure.
- Details on the construction excavation should be presented in the design documentation (work organization plan) in accordance with the Regulation of the Minister of Infrastructure of February 6, 2003 (Dz. U. 2003, nr 47 poz. 401) on occupational health and safety during construction

works. Earthworks should be carried out in accordance with Chapter 10 of the above-mentioned regulation.

- The bottom and walls of the trench should be free of stones, bricks, debris, and other objects that may cause mechanical damage to the tank.
- If separator is placed in the area where high ground water level is present, prepare bottom of excavation according to possible anchoring arrangements. Smaller separators can be anchored with separate anchoring systems, but bigger tanks may require concrete foundation with anchoring eyes. (Picture 6.)



Picture 6. Anchoring methods

- Anchoring straps are wrapped around DN600 riser connection (Picture 6.). Number of anchoring plates must be chosen according to tank size/ buoyancy. Also, the size of concrete slab must be chosen to override the buoyancy and to have enough space for fixtures of proper number of straps. As a standard solution, steel reinforced concrete slab dimensions: thickness 150 mm x separator width+200mm X separator length+200 mm should be enough for both purposes. This still depends on site conditions and designer shall check and approve or update the solution and slab dimensions.

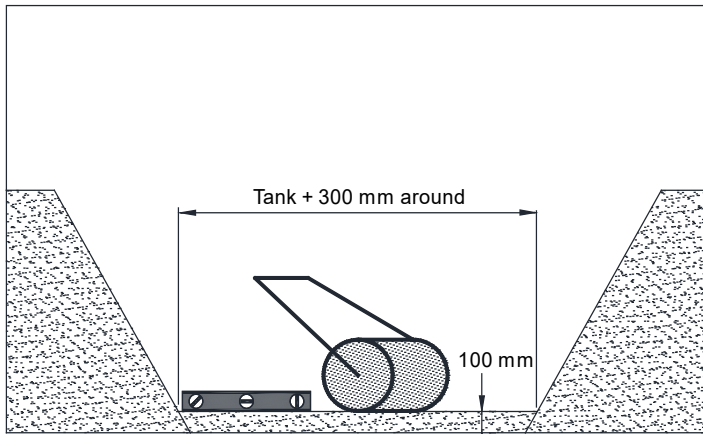


Picture 7. Uponor Anchoring system 1003563.

Underground installation of the separator should be carried out according to the following guidelines.

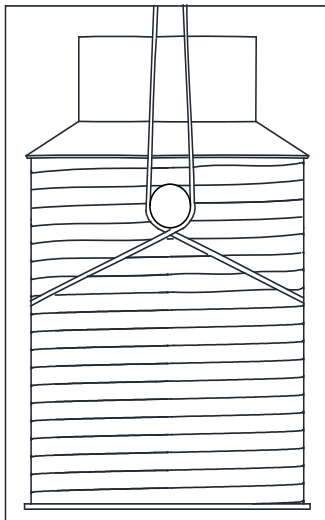
Note: When installing the separator in vehicle traffic area, the guideline after the chapter E is different regarding the backfill soil types and layers and possible solid vehicle load distribution slab.

Design an excavation according to separator dimensions, notifying the minimum needed space around the separator. In case of anchoring, take also into account the dimensions of anchoring equipment. Level and compact the bottom carefully. (Pictures 6. and 8.)



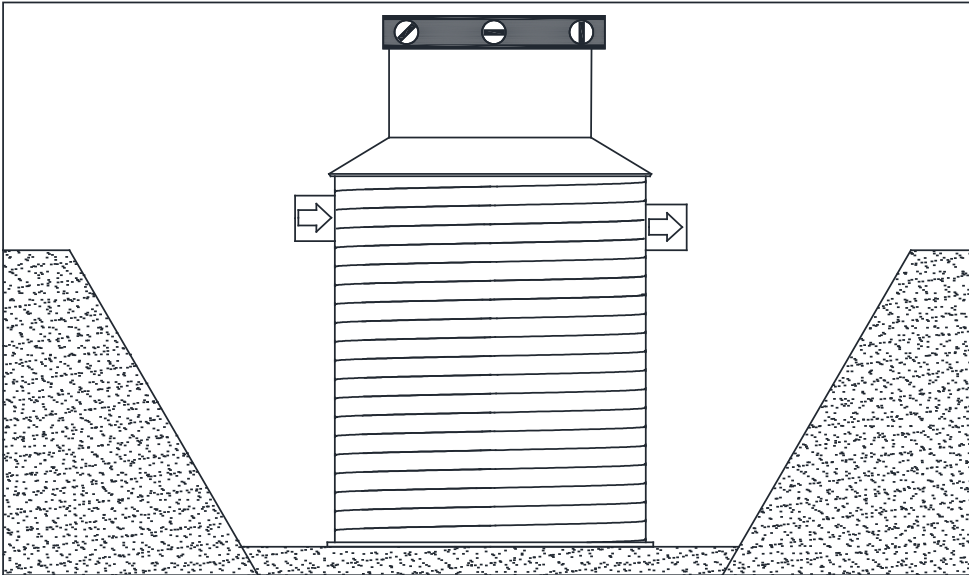
Picture 8. Excavation sizing

- A. Put the lifting straps around the tank so that these will be guided by inlet and outlet (Picture 9.), lift carefully and place the separator in the trench paying special attention to the proper flow direction of sewage according to the markings at the inlet/outlet pipes. Arrows and / or inscriptions on the separator indicate the correct direction of the water flow.



Picture 9. Lifting the separator

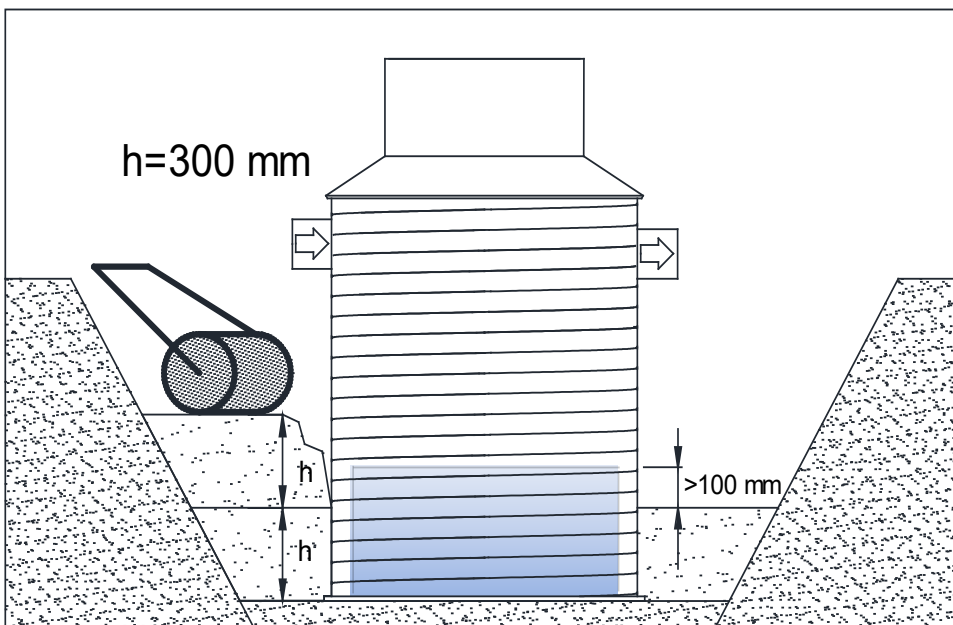
- B. Check the inlet connection is at the correct height. Level the separator (Picture 10.). The basis for the proper functioning of the separator is its proper leveling. If automatic closure and coalescence unit are still strapped inside the tank, you can remove the straps now, but at the latest when riser pipe is installed into its connector. If riser pipe has been installed already the unstrapping is difficult.



Picture 10. Leveling the separator

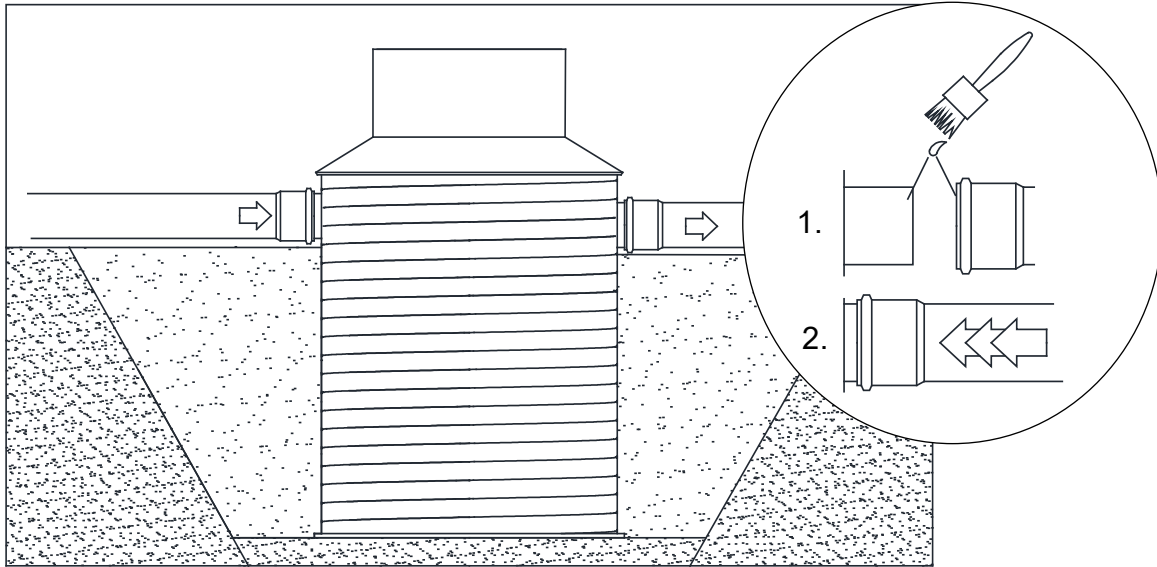
- C. Fill the separator with water through inspection opening to the level of approx. 1/3 of its wet volume (Picture 11.). Make a backfill around the tank to the water level in the tank, compacting it in layers every 30 cm. The backfill material should be fine sand etc. stone free material at the close of the tank to avoid any damage by solids.

If there is a risk of mixing of the backfill and the native soil, use a separating material, e.g., geotextile, foil, etc. In winter, make sure that the ballast and backfill do not contain lumps of snow and ice. The backfill width should not be less than 30 cm. The tank should be backfilled while the separator is being filled with water. When backfilling the tank, the water level in the tank should always be at least 10 cm higher than the backfill level.



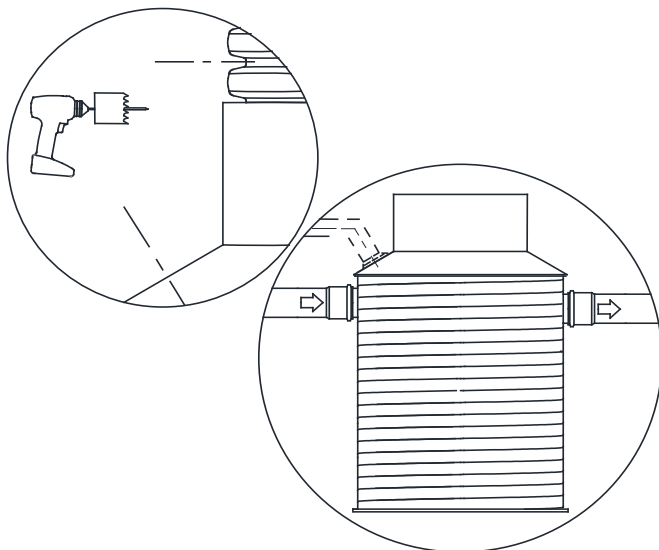
Picture 11. Backfilling the trench.

D. Connect the sewage supply and drainage pipes (Picture 12.). Align the sewage pipe axially to the Inlet / Outlet of the device, lubricate the gasket of the pipe socket and the outer surface of the spigot with a pipe lubricant, slowly push the socket onto the spigot to the depth specified by the pipe manufacturer, move the pipe in different directions to make the gasket align. If it is necessary to connect the separator to a sewage system made of other types than smooth pipes, adapters should be used. In case of shallow embedment of pipes, they should be properly insulated against freezing.



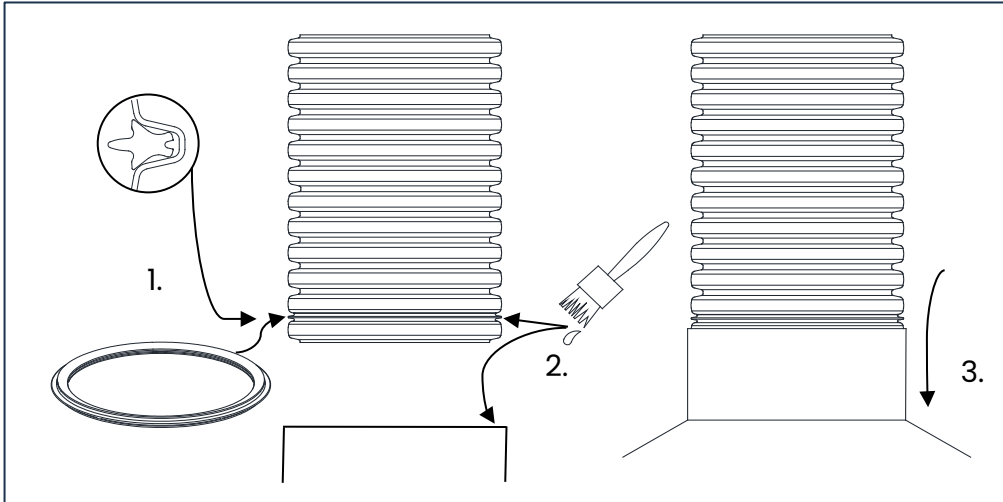
Picture 12. Connecting sewer line.

E. In some cases, it is required to ventilate oil separators due to hydrocarbon gases. In those cases, drill a hole onto top cone OR riser pipe and use properly sized ventilation pipe and penetration seal (Picture 13.). Most common ventilation lines used are DN110 and DN160.



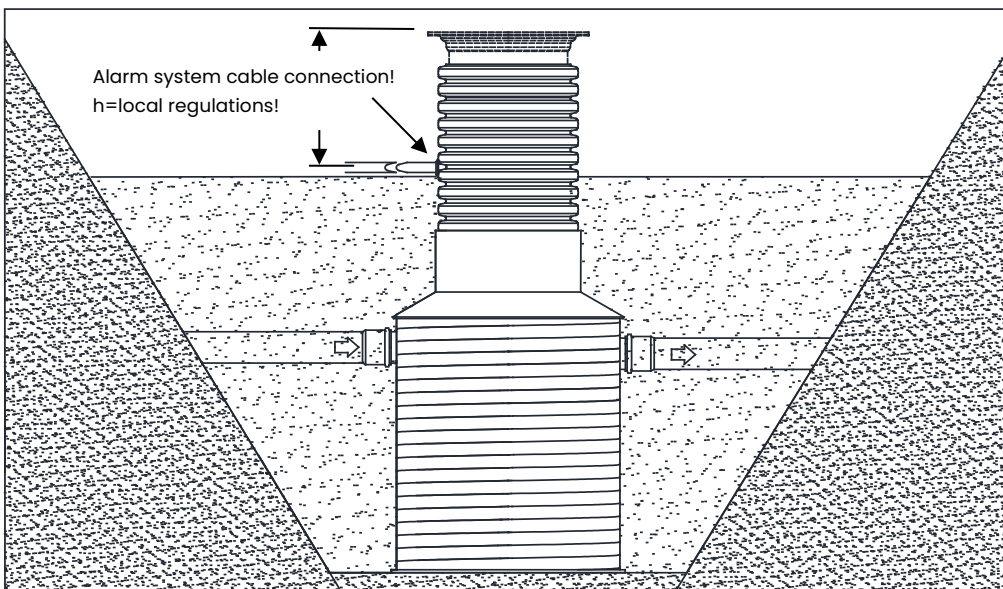
Picture 13. Drilling the possible ventilation connection.

F. Remove the UV shield from riser connector and release the straps of automatic closure and coalescence unit, if not yet done. Later it will be difficult due to possibly high and narrow riser pipe. Install the riser seal into groove according to Picture 14. Make sure the single lip is outwards. Lubricate the rubber seal after the installation, lubricate also inner surface of riser connector. Push the riser into connector.



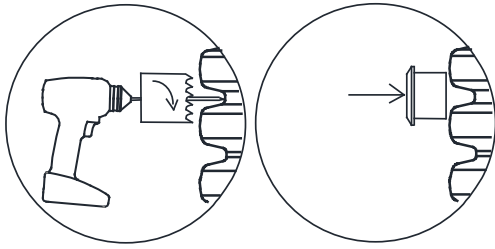
Picture 14. Installing the riser pipe.

G. Continue backfilling up to level of alarm sensor connection (height depended on local regulations, Picture 15.) with original layer thickness 300 mm, don't compact directly above the pipeline and separator tank, keep distance of 200 mm at a minimum.



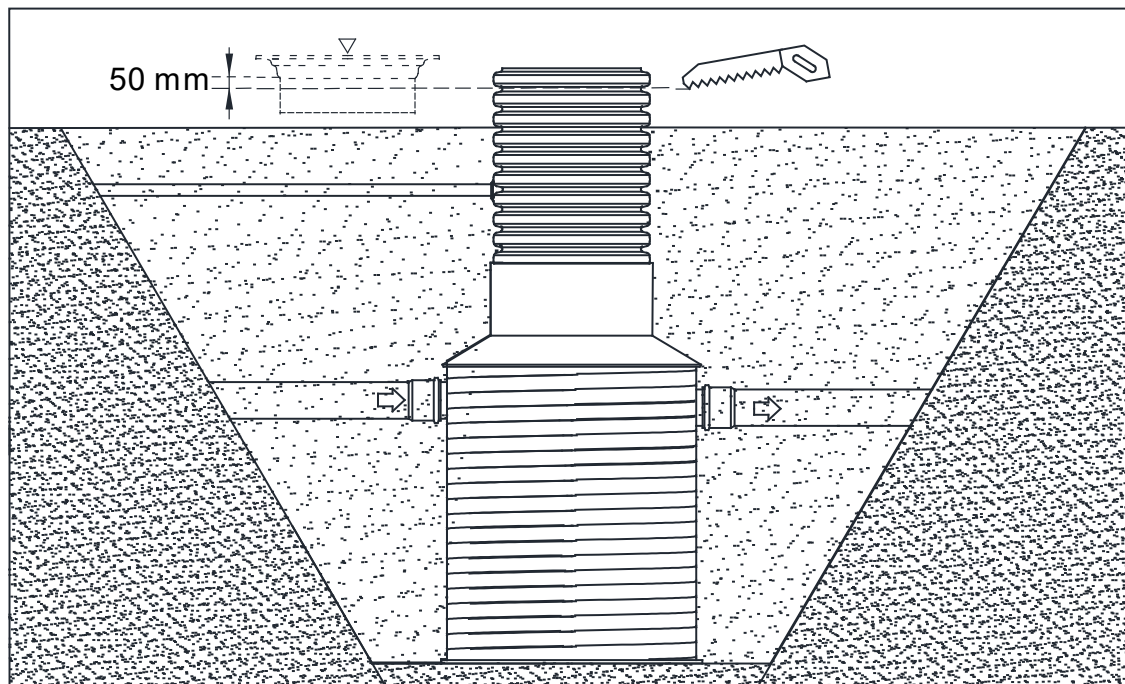
Picture 15. Alarm system connection

H. Drill a hole with 75 mm hole saw (Picture 16.) for rubber seal 50/75 mm. Push a rubber seal into hole, lubricate the seal, and install a cable pipe through the seal. Push the pipe inside approximately 50 mm to ease the bracketing of sensor cables and installation of possible gas-tight connection.



Picture 16. Drilling a hole for alarm cable connection

- I. Continue backfilling close to level of manhole cover. Measure a correct level for cover and cut the riser pipe so that there will be a 50 mm distance between the top of the riser pipe and surface/edge of frame towards the riser pipe top (Picture 17.). In case you are installing single wall riser pipe, mount the telescopic seal ring inside the riser, into 1st groove of riser and lift the frame and cover on place. In case of double wall riser pipe, just lift the frame on place. Later, when final pavements etc. surface work is done, frame shall be lifted of the riser pipe at a distance of 50 mm.



Picture 17. Adjusting the final height of riser pipe.

- J. For installing the alarm system, follow the instructions by system manufacturer and Uponor specific sensor data according to Table 1.

Note: Separator must be filled up to outlet level with water when setting up the alarm systems. If sensors are not in water (except damming sensor), system will inform error.

Afriso manuals:

- SWE: OSA3_Manual_230828
- EN: OSA3_Manual_ENG_230214
- DK: OSA3_Manual_(Dansk)_230516
- FI: OSA3_Manual_(Finsk)_230915
- NO: OSA3_Manual_(Norsk)_231002

Attach the Oil level, sludge, and damming sensors separately or all as package (with cable ties etc.) according to Table 1. Easiest as installation point of view is to set up a package: Damming sensor first, then oil sensor (OS-PE-3-0,3 >)1300-850 = 450 mm beneath the damming sensor and sludge sensor (OS-PE-3-0,3 >)1300-299 ≈ 1000 mm beneath the damming sensor. When putting the package down into separator it's only one measurement needed to take. Hang or screw the sensors or – package next to cable pipe or close to cover. Remember to leave sensor cables long enough to allow the sensors to be lifted out from separator for possible sensor adjustments and before maintenance operations.

Separator model	Sludge sensor height [mm]	Oil sensor height [mm]	Damming sensor height [mm]
OS-PE-3-0,3	299	850	1 300
OS-PE-3-0,66	420	1100	1 550
OS-PE-6-0,6	382	1020	1 470
OS-PE-6-1,2	531	1320	1 770
OS-PE-6-2,5	622	1520	1 970
OS-PE-10-1	442	1150	1 600
OS-PE-10-2	650	1580	2 030
OS-PE-10-3	746	1780	2 230
OS-PE-15-1,5	487	1380	1 910
OS-PE-15-3	746	1910	2 440
OS-PE-20-2	650	1680	2 210
OS-PE-20-4	637	1700	2 230
OS-PE-30-3	746	2040	2 660
OS-PE-30-6	955	2490	3 110
OS-PE-40-4	637	2050	2 775
OS-PE-50-5	796	2260	2 945
OS-PE-60-6,1	971	2720	3 445
Sensor height from bottom of the tank!			

Table 1. Sensor heights

Note:

- The foundation and assembly of the separator requires constant supervision by persons with appropriate, due to the nature of the works, construction qualifications for execution. Secure the edges of the trench against loosening, drain the trench and protect its slopes against water, construct platforms and steps for communication during the construction site.

- Secure the trench against falling into it and mark it so that it is visible during the day and at night.
- Questions or doubts regarding the installation of the separation system should be reported to the Technical Department of Navotech Inżynieria Środowiska Sp. z o.o.
- The manufacturer is not responsible for damage and leaks caused by improper assembly. Before installation, check that the tank has not been damaged during improper transport or unloading.

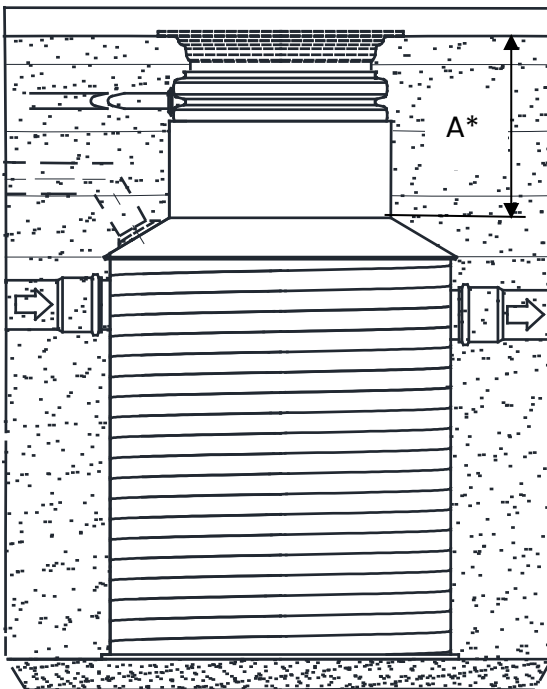
6.5 Underground installation and load bearing capacity

Uponor Oil separators can be installed in areas up to load class EN124: D400. In a load bearing capacity point of view there is a standard way to do safe installation.

1. Separator is installed into ground deep enough and gravel layer is used to distribute the loads by pedestrian and vehicle traffic. Minimum total thickness of backfill layers above the separator (meaning the Dimension A) are in a Table 2 and clarification for A in a Picture 18.

Load class	Test load	Traffic group description	Tank OD 900-1350 [A]	Tank OD 1580-1790 [A]	Tank OD 2250 [A]
D	400 kN	Areas where cars and lorries have access, including carriageways, hard shoulders, and pedestrian areas.	600 mm	800 mm	1000 mm
C	250 kN	Car parks, forecourts, industrial sites and areas with slow moving traffic.	450 mm	650 mm	850 mm
B	125 kN	Car parks and pedestrian areas where only occasional vehicular access is likely.	350 mm	550 mm	750 mm
A	15 kN	Only pedestrian have access	350 mm	450 mm	650 mm

Table 2. Load classes and minimum installation depths.



Picture 18. Dimension A

2. If site situation does not allow the minimum installation depth, and dimension A will be less than

in Table 2, option is to prepare a steel reinforced concrete slab above the separator. Landscaping designer must take all aspects of the site into account and define the structure and dimensions of load distribution slab.

7. SERVICE AND OPERATION

7.1 General rules

All separator works and inspections should be carried out in accordance with applicable health and safety regulations as for works on sewage networks.

Any damage to the separator's structure or working units should be immediately reported to the Manufacturer.

Removal of impurities from the separator, transport as well as neutralization of separation products must be carried out by authorized companies having the appropriate license to perform such services. The user is required to keep waste management documents.

Increasing the efficiency of the separator's operation is possible only with its reliable operation. This means the need for periodic inspection and cleaning of the device. This frequency will depend mainly on the specifics of the separator load. Supplementary recommendations and regulations may result from the building permit and operating permit.

Domestic wastewater, washing liquids and mineral oils in the form of a permanent emulsion may not be introduced into the separators. Wastewater introduced into the separation system may contain mineral oils whose specific gravity is lower than the specific gravity of water.

When using separators in car washes, it should be remembered that the used separation system is not used for cleaning, separating stable oil-water emulsions. When using separators on car washes it is recommended to:

- maximum water temperature up to 40 °C
- using high-pressure aggregates only to flush cleaning agents without mixing detergents with water
- when using washing aggregates, pressure washers on the lance do not exceed 20-30 bar
- use of environmentally friendly cleaning, care and maintenance agents in the washing cycle (eg ASF)

By following these guidelines, you can effectively reduce the amount of oil-water emulsions that you create.

7.2 Putting into operation

Before putting into service, the separation system should be filled with water to the bottom of the discharge pipe. The separator, after filling with water, should be equipped with an automatic closing float and a coalescing insert with a basket. Check that the float (self-closing) has not cut off the drain from the

separator. Correctly, the float should protrude approx. 20 mm above the water surface. Before putting into operation, the separator and its parts should be cleaned of soil, sand, mortar, or other contaminants. The entire separation system, after tight connection of the inlet / outlet pipes, priming the separator and mounting a float with a coalescing cartridge, is ready to work without the need for commissioning. The above condition should be recorded in the separator service and operation card and in the device acceptance protocol. Before putting the device into operation, remove the black clamps from the basket and the float.

7.3 Starting the device

During the first start-up and after each emptying of the separator, perform the following steps:

- A) check the completeness of the equipment and the correct assembly of the separator units
- B) clean the device from solid contaminants such as debris, stones, sludge, leaves, etc.
- C) clean the coalescing insert outside the separator, above the inspection opening of the sedimentation tank.
- D) clean the seat of the self-closing valve with running water under pressure.
- E) fill the separator with clean water up to the overflow at the outlet F.
- F) clean the auto-closing float and after pouring the separator with water, put it in the valve seat.
- G) close the hatches and secure against opening.

A special check of the flow should be performed in the initial period of the separator's commissioning, after connecting a new, not flushed sewage system, in the case of construction works being carried out in the catchment area (from where the sewage is discharged).

7.4 Inspections in operation

It is recommended to carry out maintenance activities according to the table below. For the optimal setting of service activities, each user is obliged to keep a book of operation and service of the separator, in which all maintenance and service works will be recorded.

The following maintenance and service schedule for the MAKO separation system is recommended:

FREQUENCY	ACTIVITY	OBSERVATION	SERVICE ACTIVITY	DETAILED INSTRUCTION
every two weeks	verifying float position	float slightly under water	- controlling the oil level in the chamber - checking the float cleanness	section 8.1
	checking the coalescing filter cartridge cleanness	the difference in the free surface of water in front of and behind the filter is 5 cm	- cleaning the filter	section 8.4

monthly	controlling the level of sludge in the settling tank and floating parts	the thickness of the sediment layer at the bottom does not exceed 50% of the admissible	- removing the sediment by a licensed company	section 8.2
	oil level control	the thickness of the oil layer is greater than 80% of the maximum thickness	- removing the oil by a licensed company	section 8.3
quarterly	coalescing filter cartridge control	- the filter soiled - mechanical damage to the filter	- cleaning the filter - replacing the filter with a new one	section 8.4
every six months	technical check-up of the device component parts	defects permanent sediment	- renovation or replacement with new parts	section 8.5
every five years	general cleaning of the system		made by the manufacturer of the device / licensed plant	section 8.6

The above activities may be provided as part of the manufacturer's maintenance services. The frequency of servicing may be increased or reduced depending on the local conditions of loading the separator with mineral suspension and petroleum derivatives.

8. LIST OF SERVICE ACTIVITIES

8.1 Automatic closing at the outlet (float)

The float is in the lead from the rods mounted on the box connected to the drain. To control the float:

- open a cast iron hatch or cover,
- check the draft of the float. Correctly, the float should protrude approx. 20 mm above the water surface. Complete immersion of the float may indicate excessive contamination of the float, resulting leakage or accumulation of petroleum substances on the surface. Too high position of the float's ball above the water surface indicates its poor tariffication

If checking the amount of light liquid excludes the possibility of flooding the float, for this reason, the following service activities should be performed (in the absence of sewage inflow):

- remove the float
- wash the entire element with a stream of water
- check for possible damage
- install the float in the guide (only with the separator filled). Mechanical damage qualifies the float for replacement.

All works related to removing, cleaning, and checking the technical condition of the auto-closing should be carried out outside the separator.

8.2 Control of the amount of impurities in the settling tank

After opening the manhole from the inlet side, please:

- check the amount of solid impurities
- remove large solid impurities in the form of leaves, sacks, polystyrene, etc.
- Measure the amount of sedimentation contaminants. Record the top level of the sludge. Then measure the bottom of the tank. Record the level. The difference in levels determines the height of the sludge in the chamber. If it is found that the sludge is filled with sludge above 50% of the permissible thickness according to the technical data sheet, the sediment must be removed by a licensed plant.

Excessive amount of suspended solids accumulating in the separator (in the separation compartment) proves that the settling tank upstream of the separator works poorly.

8.3 Oil quantity control

The oil separated in the separation and coalescence process in the form of an oil film accumulates on the surface. Measure the amount of oil when the device is idle (no sewage flow). Measure the thickness of the oil layer. When the oil layer thickness is greater than 80% of the permissible thickness specified in the technical data sheet of the device or if there is a highly contaminated water-oil mixture in the entire volume of the separator, the entire system should be cleaned.

8.4 Coalescing insert control

To check the condition of the coalescing cartridge it is necessary to:

- open the inspection hatch,
- check the water level inside and outside the cartridge during the inflow of sewage to the separation system. The difference in levels greater than 5 cm during the operation of the separator indicates the need to clean the coalescing insert,
- remove the coalescing insert with the carrying basket,
- clean the insert from contamination under running water above the open manhole of the sedimentation tank,
- check the condition of the insert in terms of mechanical damage, in the event of damage or heavily contaminated insert, replace the coalescing insert with a new one,
- insert the coalescing insert into the separator and place it carefully on the guide.

8.5 Technical condition control

Check the device assemblies for mechanical damage, quality of the coating and fastenings, and completion of elements. Remove any damage.

8.6 General cleaning

To ensure the proper functioning of the separator and long-term durability of the components, periodic cleaning of the device should be carried out. Separation products are removed using a suction pump and a slurry tanker. To do this, you need to:

- remove and clean the coalescing insert,
- pump off the surface oil film,
- pump out the water layer,
- clean the tank under pressure,
- pump out the resulting leachate,
- install a coalescing cartridge,
- fill the separator with water up to the outlet overflow.

Removal of impurities from the separator, transport and disposal of the separation products must be carried out by authorized companies with an appropriate license for this type of service.

9. DISPOSAL OF SEPARATED SUBSTANCES

All removed contaminants should be taken to landfills or to catchment points after prior consultation and location by the appropriate territorial sanitary authorities and institutions related to environmental protection.

Waste accumulated in separators and settling tanks in the form of oily sands and oils, were classified as hazardous waste.

Both transport and disposal of separation products must be carried out by authorized companies. The user is required to keep waste management documents.

10. HEALTH AND SAFETY REGULATIONS FOR SEPARATOR OPERATION

- Regulation of the Minister of Infrastructure of November 6, 2008 Dz.U. nr 201 on technical conditions to be met by buildings and their location throughout the scope of the Regulation, in particular: section II chapter 2. Access and commute division II chapter 7. Non-drainage tanks for solid waste division IV chapter 2. Sewage and rainwater sewage system
- Regulation of the Minister of Economy of December 20, 2002 Dz.U. nr 1 together with a list of minimum explosion risk zones for technological equipment of fuel bases, gas stations and LPG,
- Regulation of the Minister of Spatial Planning and Construction of 1/10/1993 regarding occupational health and safety in sewage treatment plants.
- The device's inspection and maintenance work should be carried out in accordance with health and safety principles. Attention should be paid to:

- effective ventilation of the device before starting work,
- work can only be carried out in the presence of a minimum of two people, equipped with appropriate security equipment.

WARNING!

Within the device smoking or holding an open flame is strictly prohibited - danger of explosion.

10.1 Preparation for maintenance and operational work

Before opening a manhole on a sidewalk or road, you must first mark and secure the area from each side. Standard marking – red warning flag in the daytime, possibly additional warning light. When opening the manhole, make sure that the instruments used are not made of sparking materials.

It is strictly prohibited to:

- defrosting the manhole with an open flame
- smoking when opening the separator or inside it.

All maintenance and operation work on the inspection holes should be carried out after securing the hole against falling in. For safety reasons it is important that the interior of the separators is sufficiently illuminated. A warning triangle or “road works” sign should be placed on the road (if the separator is in lane).

Note:

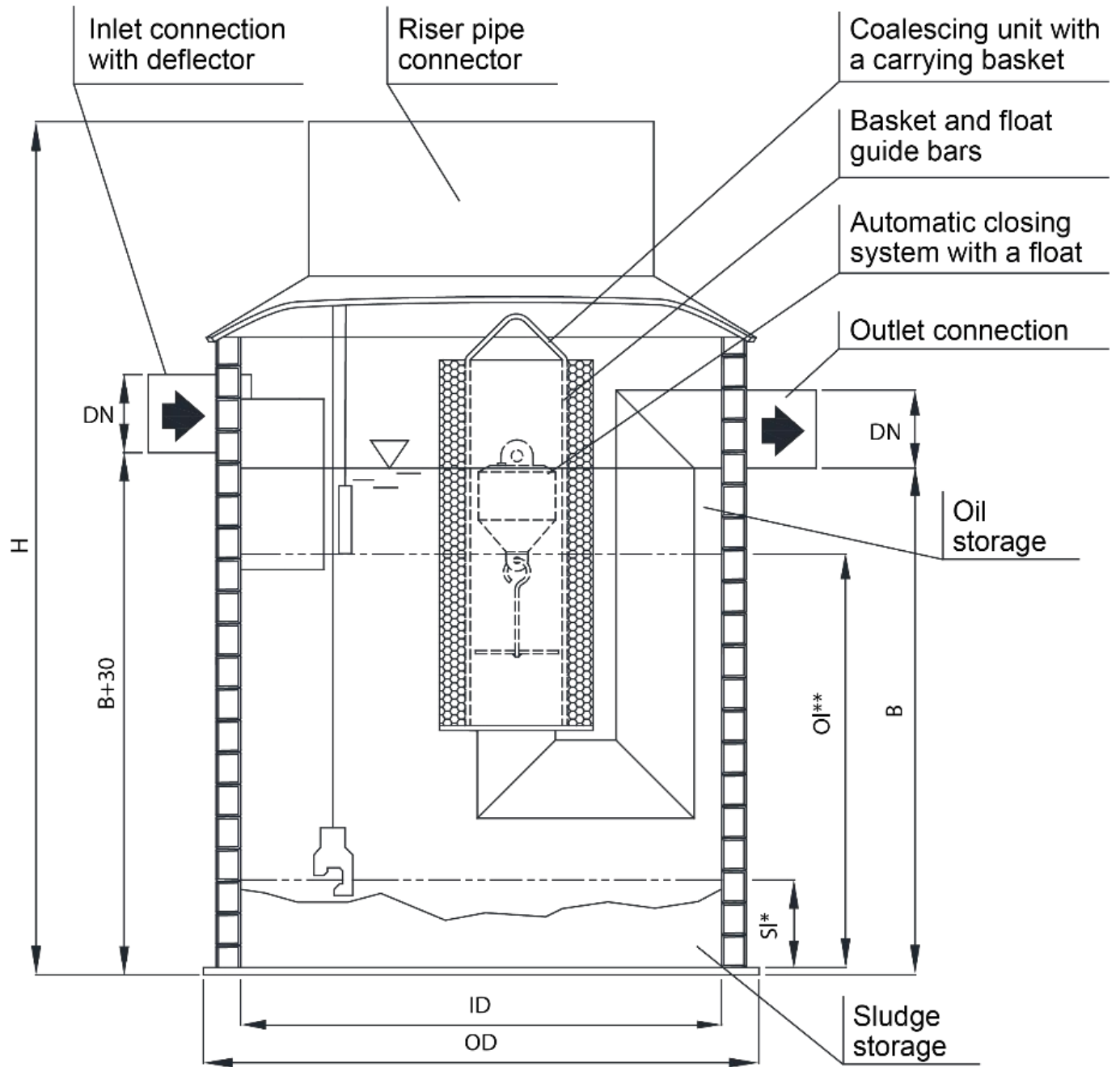
The contractor carrying out the construction and the user of the devices are obliged to comply with the health and safety regulations on their own regarding all details that are not covered in the documentation.

10.2 Completion of work

At the end or in the event of a predicted break in work, the entire work area must be ordered in such a way that there is no danger to human health and life.

11. ATTACHMENTS

11.1 Explanatory drawing





DECLARATION OF PERFORMANCE

No. CPR-20-OIL-1201

1. Unique identification code of the product-type:

Oil separator-PE

2. Type, batch or serial number or any other element allowing identification of the construction product as required under Article 11(4):

OIL SEPARATOR-PE NS3-NS60

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

The device is intended for the separation of first class light liquids. Intended for the purification of rainwater, among others from urban catchment systems, industrial plants rainwater networks, in road drainage systems, parking lots and manoeuvring areas.

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

Uponor Infra SP. ZO. O, PL-01-217 Warszawa, Poland

5. Where applicable, name and contact address of the authorised representative whose mandate covers the tasks specified in Article 12(2):

Uponor Infra Oy, FIN-15561 Nastola, Finland
Uponor Infra AB, SE-51381 Fristad, Sweden
Uponor Infra A/S, DK-4450 Jyderup, Denmark
Uponor Infra AS, N-0195 Oslo, Norway
Uponor Infra AS, 13811 Tallinn, Estonia
Uponor Latvia SIA, LV-1045 Riga, Latvia
Uponor Infra SP. ZO. O, PL-01-217 Warszawa, Poland

6. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

System 4

7. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

EN 858-1
Instytutu Techniki Budowlanej, BN 1488
ul. Filtrów 1


00-611 Warszawa

Performed: reaction to fire testing of product under system
3 and issued: Classification report no. LZP01-01776/23/Z00NZP

8. In case of the declaration of performance concerning a construction product for which a European Technical Assessment has been issued:

n/a

9. Declared performance

 23		
Essential characteristics	Performance	Harmonized technical specification
Reaction to fire	E	PN-EN 13501-1:2019-02
Liquid tightness	Pass	EN 858-1:2005
Effectiveness	Pass	EN 858-1:2005
Load bearing capacity	Pass	EN 858-1:2005
Durability	Pass	EN 858-1:2005

10. The performance of the product identified in point 1 and 2 is in conformity with the declared performance in point 9. This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4.

Signed for and on behalf of the manufacturer by:

Fristad, Sweden 07.09.2023
Uponor Infra AB



Rickard Granath
Solution Manager, ISS

Moving > Water

uponor

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