ISEA Grease Interceptor Solutions
Technical Brochure

www.emea-international.aliaxis.com

we
make
life
flow

About ISEA

Welcome to the new **ISEA Grease Interceptor Technical Brochure,** your comprehensive guide to our range of innovative solutions for effective management of grease and oil contained in waste water, for domestic and industrial food applications.. As a leading provider of engineering solutions for over a decade, ISEA understands the importance of managing domestic, commercial, and industrial wastewater to protect the environment and meet regulatory requirements.

Our commitment to sustainability and quality is evident in our complete range of systems for the treatment and management of wastewater. Our solutions include grease separators, septic tanks, Imhoff tanks, activated sludge, and percolating filter treatment systems that can be installed in civil, industrial, and commercial buildings.

At Aliaxis, with our ISEA product portfolio, we pride ourselves on our expertise in wastewater treatment, particularly in the area of grease separators. Our solutions are designed to be highly efficient, with two types of installations available - above and underground - to meet the unique needs of our customers. Manufactured in Italy, the ISEA Grease Interceptors adhere to European Standards and feature CE markings.

This manual has been created to provide you with the main information you need to make informed decisions about selecting, installing, and maintaining ISEA Grease Interceptors. We are committed to providing total assistance, from the first approach to the problem up to the final solution, to ensure your complete satisfaction.

Thank you for choosing ISEA as your trusted partner in wastewater treatment solutions.

The Importance of Grease Management

What is a grease interceptor?

A grease interceptor is used for the pre-treatment of water coming from civil buildings (from kitchens, washing machines, washbasins, showers, etc.) or catering and food-processing businesses (hotels, restaurant, canteens etc.).

The build-up of fat, oil, grease (also known as FOG) and food residue deposits can cause several issues that include sewer blockage, corrosion and unpleasant odours. Ultimately this leads to disruption and higher operational costs.

FOG can also severely impair the processes used in waste treatment plants. As a result, it is necessary to remove the grease to limit the harmful consequences that might occur during treatment such as the aerobic biological process, anaerobic digestion, settling, or lifting.

Why is it important to have a grease interceptor?

Grease interceptors are important to safeguard:

1. Wastewater Pipe Systems

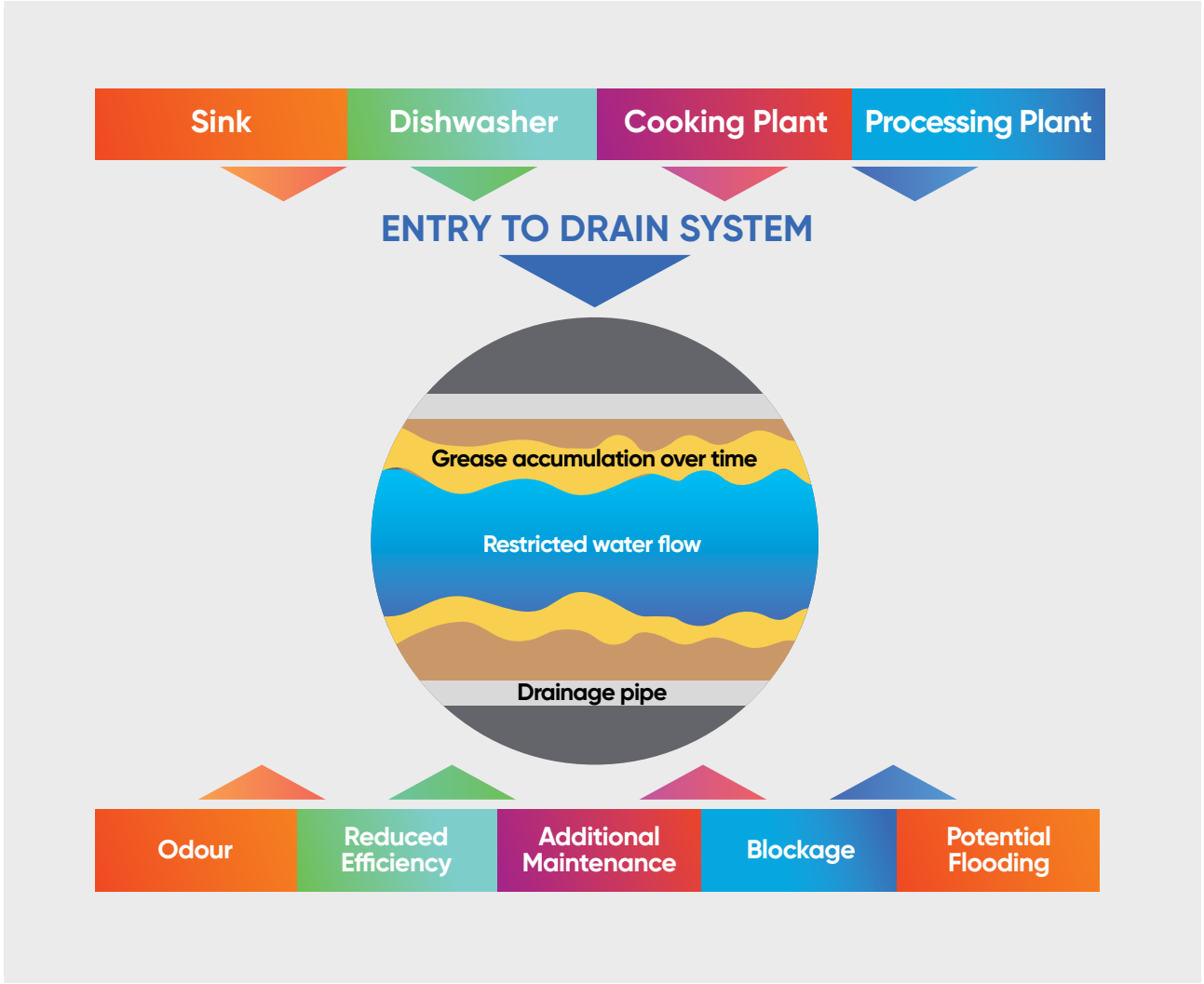
Fat, oil and grease (FOGs) can cause build-up, blockage and unpleasant odours leading to extensive damage, potential flooding and the operational costs of extra maintenance.

2. Wastewater Treatment Plants

Grease needs to be removed as it can have serious consequences during subsequent treatment processes at wastewater treatment plants.

3. The Environment

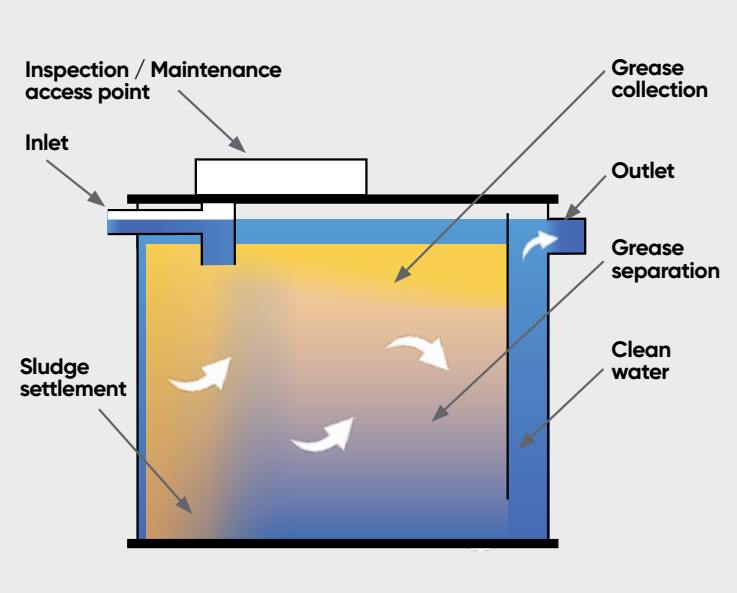
Grease interceptors prevent the environment being affected by contaminated water which is hard to break down. Public health regulations in many countries often make grease separators mandatory in certain settings.



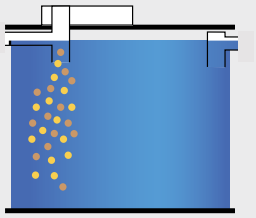
How does a grease interceptor work?

A grease interceptor works through the principle of gravity separation. It removes all of the substances which have a specific density inferior to wastewater. Materials such as water, grease and dirt particles (sludge) separate in the separator tank due to their different densities.

This means that fat, oil and grease (10-15% lighter in density than water) flow to the top of the separator. Meanwhile, the heavier sludge drops to the bottom of the separator. The clean treated greywater then exits the separator through a protected outlet.

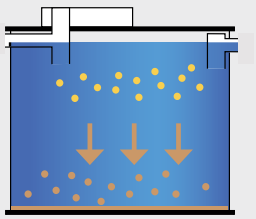


The Grease Interceptor Process



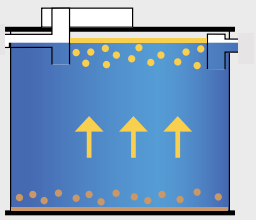
1 Entry of wastewater

Wastewater containing fat, oil, grease and food residue deposits enters the grease interceptor where it is controlled by a deflector plate. This helps reduce the flow rate so that the wastewater is given enough time to cool and separate into three layers.



2 Trapping the sludge

Substances such as sludge, with a higher density than water, sink to the bottom and are collected in a sludge trap.



3 Collecting the fat, oil and grease (FOG)

Fat, oil and grease have a lower density than water. They rise to the top and form a grease layer that is retained between the inlet and outlet. 'Grey' wastewater can then exit the separator.

Choosing a grease interceptor

ISEA engineering solutions offers different pre-treatment solutions adapted to various applications and capacities. To choose an appropriate grease separator, consider the following:

What sort of wastewater?

It's important to consider what will be going through the separator. Our expert teams will be able to advise you on which grease interceptor suits your needs.

What size of grease interceptor?

There are various methods which can assist in deciding the optimal grease separator size. Criteria include commercial or domestic application and considerations such as per kitchen equipment and outlet malls, per quantity of meals etc (BS EN 1825-1:2004). ISEA offers a comprehensive range of grease interceptors, and our experts will be able to assist you.

What type of grease interceptor?

A below-ground grease interceptor can prove most effective for certain applications. These units require some initial groundwork, and the ISEA grease separator range offers several choices.

Other grease separators can be conveniently installed into tight spaces (e.g., under the sink) to manage the pre-treatment of wastewater from domestic kitchens.

BUILDING TYPES	KITCHEN REQUIREMENTS	AUTOMATIC	STATIC
Hotels	200 – 1,000 meals / day	Self Clean 4.000	Deg. Family 1.600 - Deg. Public 6.000
Restaurants	50 – 200 meals / day	Self Clean 2.000	Deg. Family 400 - Deg. Family 1.600
Healthcare Facilities	500 – 2,000 meals / day	Self Clean 6.000	Deg. Top 4.000 - Deg Public 12.500
Office & School Canteens	200 – 500 meals / day	Self Clean 3.000	Deg. Family 1.600 - Deg. Top 4.000
Residential	10 – 50 meals / day	Self Clean 1.500	Deg. Family 250 - Deg. Family 1.600

ISEA Above Ground Grease Interceptors

Above ground grease interceptors offer a practical and efficient solution for many wastewater treatment applications. Their easy accessibility, cost-effectiveness, and flexibility make them an excellent choice for businesses looking for a reliable and efficient wastewater treatment system.

Due to their design, they require less excavation and installation work, reducing both installation and maintenance costs. Above ground grease interceptors are highly flexible and can be easily relocated if necessary.

ISEA Above Ground Grease Interceptors solutions:

- Under Sink Grease Trap
- Automatic Grease Interceptor "Self Clean"

Automatic Grease Interceptor "Self Clean"

One-piece polyethylene Automatic Grease Interceptor, size 2-10 l./sec., with screw-on cover both for central inspection and removing grease and floating material, and for removing sand and inert matter.

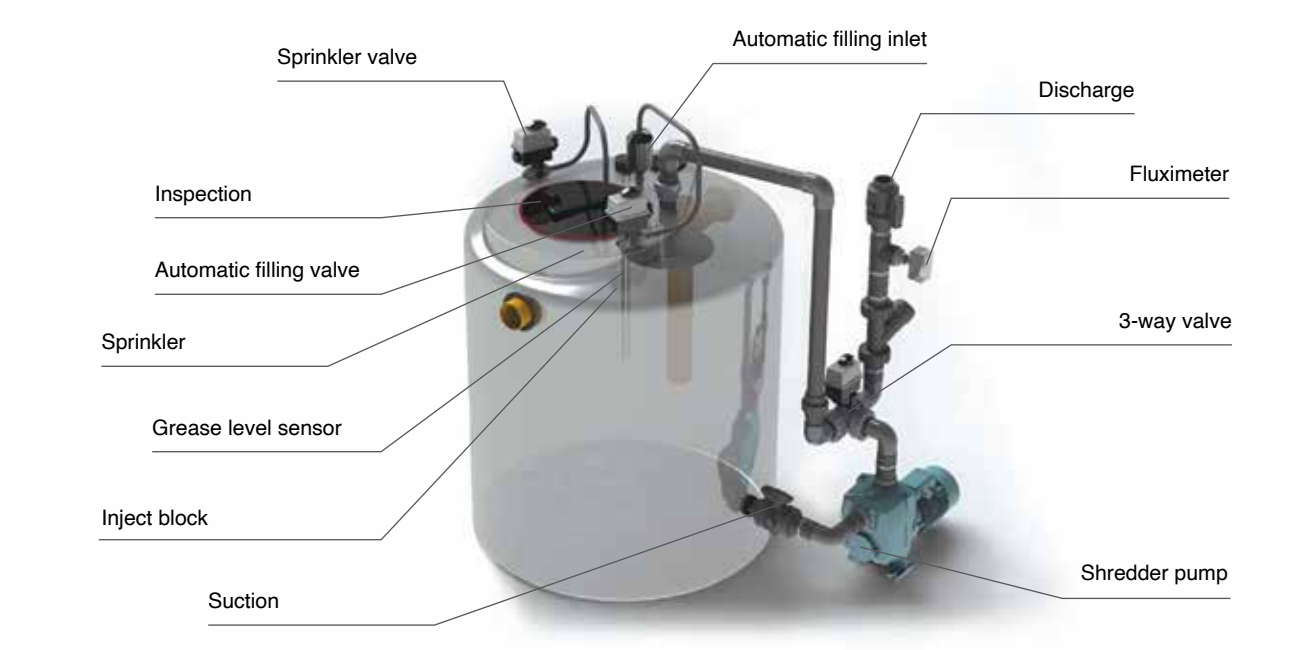
Cleaning frequency: 4 weeks.

Featuring PVC, PE or PP inlet pipe section; PVC, PE or PP treated water outlet pipe section with external neoprene seal, outlet tee fitting and inspection cap.

For application on kitchen and canteen drain lines.

ISEA Grease Trap Family is produced with recyclable material.

Material: PE with PVC, PE or PP inlet & outlet pipe section
Size: 2 – 10 L/sec.
Capacity: 1,500 - 6,000 L
Compliance with standard: CE - UNI EN 1825



Four models designed for specific usage:

Elite Option

Fully automated system, cleaning operations take place automatically. The system is equipped with control logic and can be interfaced with external BMS systems.

→ Suitable for very high needs in terms of complete management and maintenance, without direct intervention of operators. Example hotel and restaurants chains.

→ Higher pressure cleaning system can be customized upon request / optional.

Plus Option

Automatic alarm, washing and filling system. The emptying operation must be performed by a vacuum - truck.

→ Recommended for catering applications, particularly in settings with maintenance services available for equipment emptying and cleaning. Additionally, the equipment is designed to support remote sensor integration..

Pro Option

Basic system, which provides automatic filling and grease alarm signaling. Washing, emptying, are completely manual.

→ The system is designed to offer a first level of automation, remaining the responsibility of the customer for maintenance operations. Suitable for the most qualified residential type

Base Option

Only static grease interceptor, all operations are performed by the operator at regular verification intervals.

→ Only supply of the static grease interceptor, management completely charged to the customer. More suitable for residential contexts with low separation rates.

Components Options	Elite	Plus	Pro	Base
Tank PE black color	√	√	√	√
Clean water filling valve	√	√	√	
Water filling hose with space	√	√	√	
Control panel with BMS output	√	√		
Three-way valve	√			
Washing sprinkler	√	√		
Shredder and feeding pump	√			
Management software	√	√		

Item	Code	Size (l/sec)	Capacity (l)	Weight (kg)	D (cm)	H (cm)	H_i (cm)	H_o (cm)	$Ø_i$ e $Ø_o$ (mm)
SELF CLEAN 1.500	NS	2	1.500	110	120	140	115	108	100
SELF CLEAN 2.000	NS	3	2.000	130	120	195	173	166	125
SELF CLEAN 3.000	NS	5	3.000	150	147	200	165	158	125
SELF CLEAN 4.000	NS	7	4.000	180	147	245	182	210	160
SELF CLEAN 6.000	NS	10	6.000	210	210	220	182	165	160

Under Sink Grease Trap

Polyethylene Grease Trap, single-block, to be installed in tight spaces, e.g. under the sink, to limit the polluting load when channeled to either a public sewer or a private treatment plant.

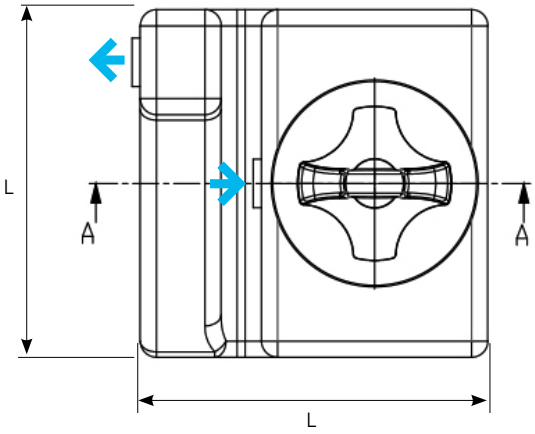
Designed to obtain an efficient grease separation and a good hydraulic flow, it is suitable to be used when the installation of a standard grease trap underground is not possible.

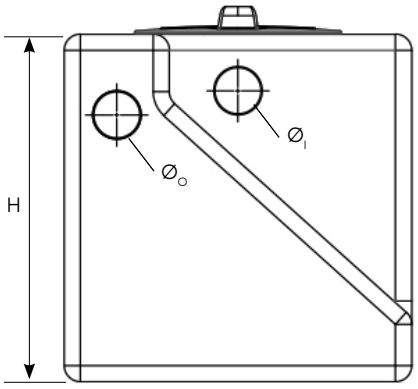
The Grease Trap is equipped with a threaded cover for full inspection and easy removal of grease and other floating materials.

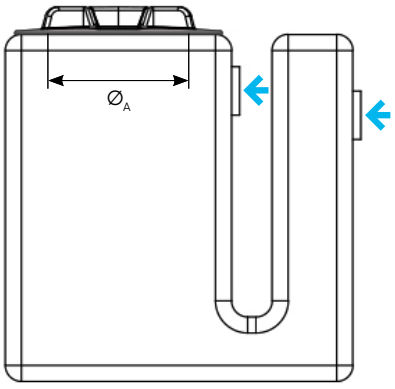
For Pre-treatment of wastewater from kitchens

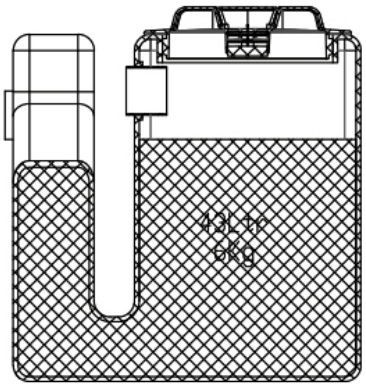
ISEA Under Sink Family Grease Trap is produced with recyclable material.

Material: PE with PVC, PE or PP inlet & outlet pipe section
Size: 0.1 L/sec
Capacity: 48 L.
Compliance with standard: CE - UNI EN 1825









Item	Code	Size (l/s)	Capacity (l)	LxL (cm)	H (cm)	Ø$_I$ - Ø$_O$ (mm)	Ø$_A$ (cm)
DEG.FAMILY 50	IS00510	0,1	48	43x43	43	40/50	16,5

ISEA Below Ground Grease Interceptors

Introducing ISEA underground grease interceptor - an effective and efficient solution for the treatment of wastewater. With the increasing demand for environmentally friendly and cost-effective solutions, self-cleaning grease interceptors are becoming an increasingly popular choice for businesses of all sizes.

Self-cleaning underground grease interceptors are designed to automatically remove and separate fats, oils, and greases from wastewater, minimizing the need for manual cleaning and maintenance. This not only saves time and labor costs but also ensures that the separator is functioning at peak efficiency, reducing the risk of clogs and backups.

These systems are typically more discreet and require less space than above ground interceptors, making them ideal for locations with limited space.

ISEA Underground Ground Grease Interceptors solution

- Family Grease Interceptor
- Public Grease Interceptor
- Public Grease Trap

Family Grease Interceptor

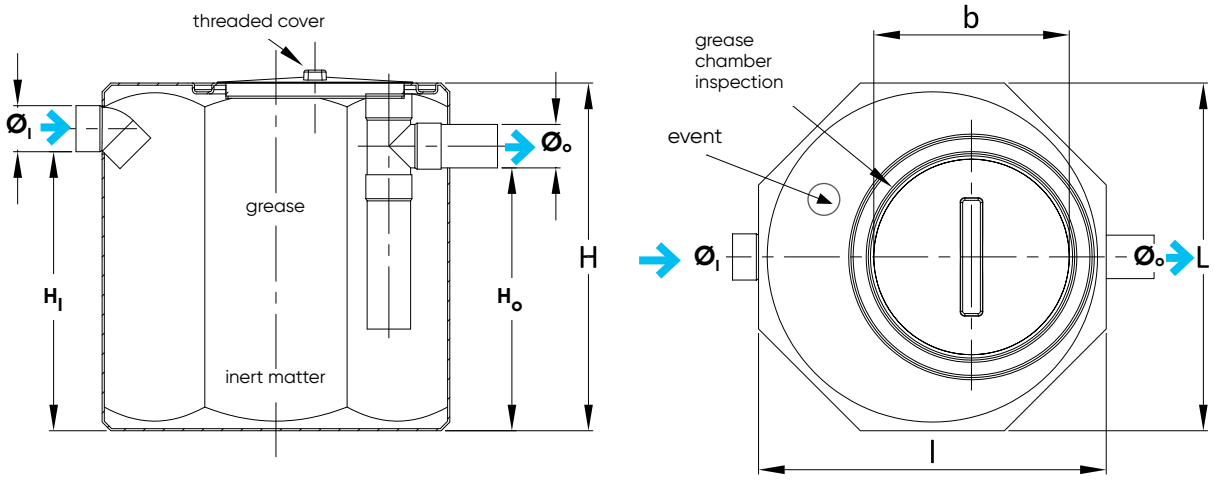
One-piece polyethylene Grease Trap Family, size 50 to 100, with screw-on cover for central and lateral inspection, removing grease, floating material, sand and inert matter.

Featuring PVC, PE or PP inlet pipe section, PVC, PE or PP treated water outlet pipe section with external neoprene seal, outlet T fitting (or 90° elbow fitting) and inspection cap.

For application on kitchen and canteen drain lines.

ISEA Grease Trap Family is produced with recyclable material.

Material: PE with PVC, PE or PP inlet & outlet pipe section
Size: 1 – 8 L/sec
Capacity: 285 - 4,035 L.
Compliance with standard: CE - UNI EN 1825



Item	Code	Size (l/sec)	Meals per day	Capacity (l)	D (cm)	H (cm)	H_I (cm)	H_o (cm)	$Ø_I$ e $Ø_o$ (mm)	b (cm)
DEG. FAMILY 400	IS05111	1	50	285	80	80	63	56	100	40
DEG. FAMILY 800	IS05112	1	100	475	80	120	103	96	100	40
DEG. FAMILY 1200	IS05113	3	150	1.038	120	120	102	95	100	30
DEG. FAMILY 1600	IS05114	4	200	1.549	120	160	142	135	125	30
DEG. TOP 2000	IS05115	5	300	1.884	120	200	180	173	140	30
DEG. TOP 3000	IS05116	6	400	2.560	160	160	138	132	140	40
DEG. TOP 4000	IS05117	7	500	3.273	160	200	176	169	160	40
DEG. TOP 5000	IS05118	8	600	4.035	160	240	215	208	160	40

Public Grease Interceptor

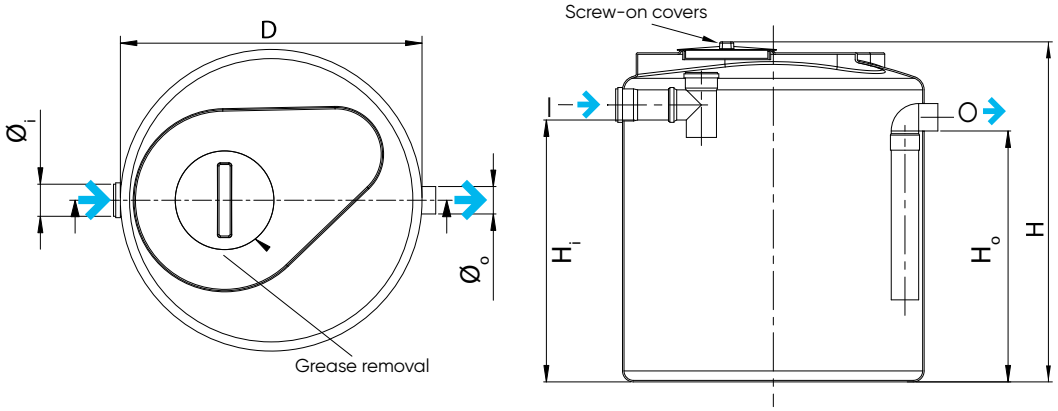
One-piece polyethylene Grease Trap Public, size 10-14 l./sec., with screw-on cover both for central inspection and removing grease and floating material, and for removing sand and inert matter.

Featuring PVC, PE or PP inlet pipe section; PVC, PE or PP treated water outlet pipe section with external neoprene seal, outlet tee fitting and inspection cap,

For application on kitchen and canteen drain lines.

Produced with recyclable material.

Material: PE with PVC, PE or PP inlet & outlet pipe section
Size: 10 – 14 L/sec.
Capacity: 6,096 - 8,350 L
Compliance with standard: CE - UNI EN 1825



Item	Code	Size (l/sec)	Meals per day	Capacity (l)	IxL or D (cm)	H (cm)	H$_I$ (cm)	H$_o$ (cm)	Ø$_1$ e Ø$_o$ (mm)	b (cm)
DEG. PUBLIC 6000	IS00416	10	1.000	6.096	215	220	173	168	160	60
DEG. PUBLIC 8000	IS00417	12	1.100	7.693	215	275	217	212	160	60
DEG. PUBLIC 10000	IS00418	14	1.400	8.350	215	310	250	243	200	60

Public Grease Trap

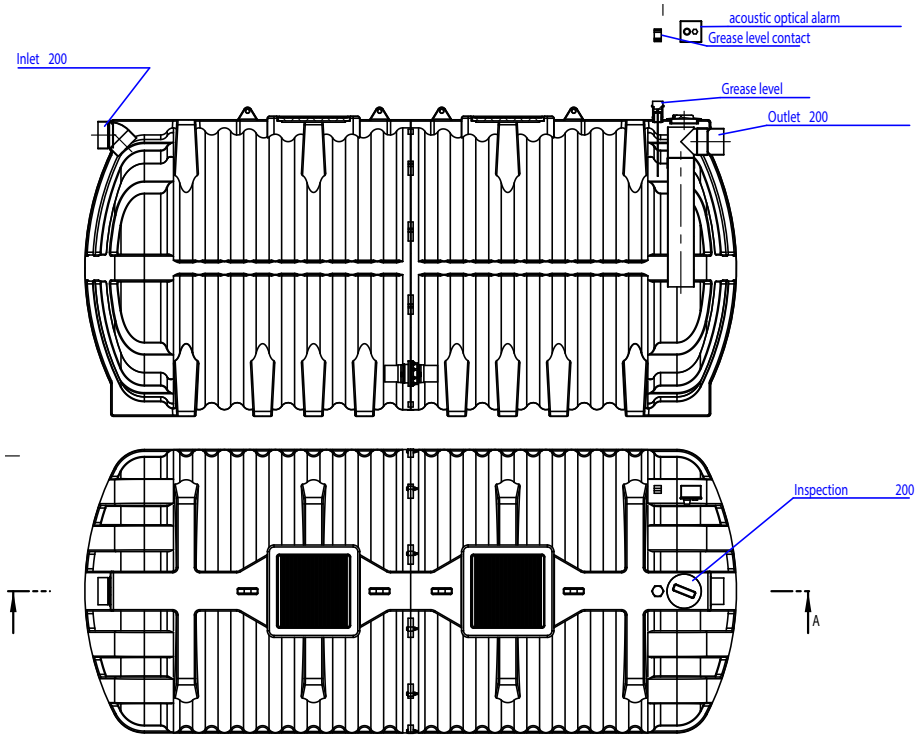
One-piece polyethylene Public Grease Trap, size 15-40,l./sec., with screw-on cover both for central inspection and removing grease and floating material, and for removing sand and inert matter.

Featuring PVC, PE or PP inlet pipe section; PVC, PE or PP treated water outlet pipe section with external neoprene seal, outlet tee fitting and inspection cap.

For application on kitchen and canteen drain lines.

Produced with recyclable material.

Material: PE with PVC, PE or PP inlet & outlet pipe section
Size: 15 – 40 L/sec
Capacity: 12,500 - 26,000 L
Compliance with standard: CE - UNI EN 1825



Item	Code	Size (l/sec)	Capacity (l)	W (cm)	L	H (cm)	H_i (cm)	H_o (cm)	$Ø_1$ e $Ø_o$ (mm)
DEG. PUBLIC 12500	NS	15-18	12.500	215	347	228	190	185	200
DEG. PUBLIC 16000	NS	19-25	16.000	215	494	228	190	185	40
DEG. PUBLIC 21000	NS	26-31	21.000	215	646	228	188	183	30
DEG. PUBLIC 26000	NS	32-40	26.000	215	750	228	182	176	30

ISEA Lifting Stations

In some cases, the destination for the wastewater may be at a higher elevation and at a distance from the drainage point. In such situations, lifting stations can be utilized to transport the wastewater to the final destination.

A grease interceptor lifting station typically consists of a suitable sized chamber with one or more motor-driven pumps. The pumps are used to lift the wastewater containing FOG and other solids, including screened sewage, raw sewage, or used water, along with rainwater or urban runoff, to a higher elevation. The pumps are controlled by level sensor switches and/or control panels, depending on the model, to ensure efficient operation.

In addition to transporting wastewater to a higher elevation, grease interceptor lifting stations can also be used to regulate the rate at which the influent enters wastewater treatment plants. This ensures a constant flow of wastewater, which is essential for effective treatment.

Depending on specific design requirements, grease interceptor lifting stations can be used in conjunction with wastewater treatment plants in various ways. Overall, grease interceptor lifting stations play a critical role in ensuring the proper functioning of wastewater systems, particularly in areas with challenging terrain or topography.

PRATICA Lifting Stations

One-piece polyethylene **Pratica lift station** is equipped with a central cover for inspection and maintenance of pumps. The pumps, which are either single or in pairs, are designed for freestanding wet well installation and are made from a synthetic material, cast iron or stainless steel.

The ball valve and non-return valve are installed on the delivery line; level regulators complete the list of accessories.

Pipes, fittings and valves are made from PVC.

The control box does not come as standard issue with the unit.

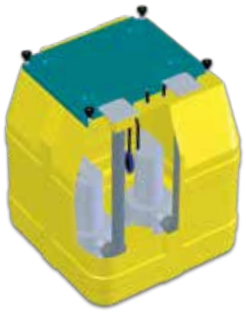
Models with volume of 1000 liters and more are supported with electrical cases to adjust the pumps work.

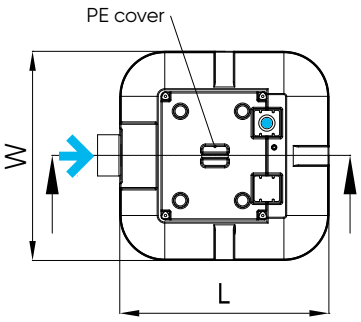
For lifting surface water and sewage generated by civil and industrial facilities.

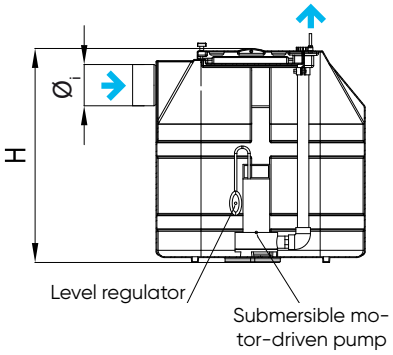
ISEA Grease Trap Family is produced with recyclable material.

Flow rates: up to 36 m3/h
Heads: up to 10.5 m
Capacity: 250 – 1,000 L.
Compliance with standard: EN 12050-2

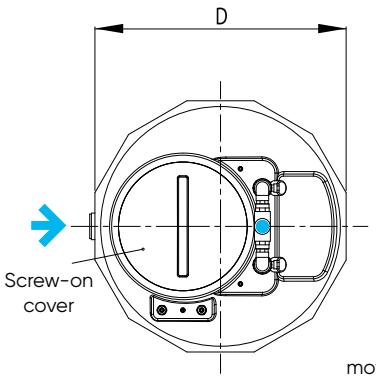
Type 250 - 500

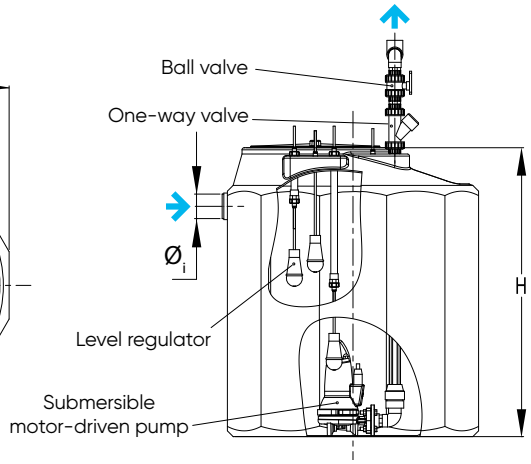






Type 1000





Item	Code	Capacity (l)	WxL or D (cm)	H (cm)	Ø$_i$ (mm)	Pump delivery (")	Height H (m)	Flow rate Q (m³/h)	Electrical Power 1 pump (kW)	Voltage (V)
Type 250 A1	IS04300	250	66x66	75	100	1 ½	0-7	0-10	0,38	220
Type 250 A2	IS04301	250	66x66	75	100	1 ½	0-7	0-20	0,38	220
Type 500 A1	IS04302	500	86x86	85	100	1 ½	0-7	0-10	0,38	220
Type 500 A2	IS04303	500	86x86	85	100	1 ½	0-7	0-20	0,38	220
Type 1000 A1	IS04304	1.000	120	140	100	1 ½	0-7	0-10	0,38	220
Type1000 A2	IS04305	1.000	120	140	100	1 ½	0-7	0-20	0,38	220

A1 indicates that the station is equipped with a single-motor-driven pump. A2 indicates that the station is equipped with two motor-driven pumps. Only the models Type 1000 come provided with a control box

PRATICA ROTO
Lifting Stations

One-piece polyethylene **Pratica Roto** lift station is equipped with a central cover for inspection and maintenance of pumps.

The pumps, which are either single or in pairs, are designed for freestanding wet well installation and are made from a synthetic material, cast iron or stainless steel.

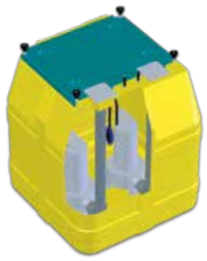
The ball valve and non-return valve are installed on the delivery line; level regulators complete the list of accessories. Pipes, fittings and valves are made from PVC.

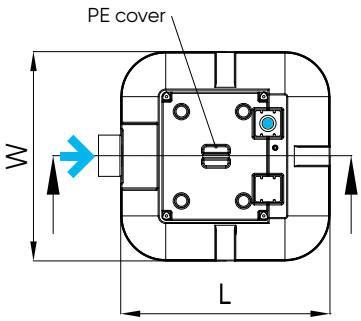
The control box does not come as standard issue with the unit. Models with volume of 1000 liters and more are supported with electrical cases to adjust the pumps work.

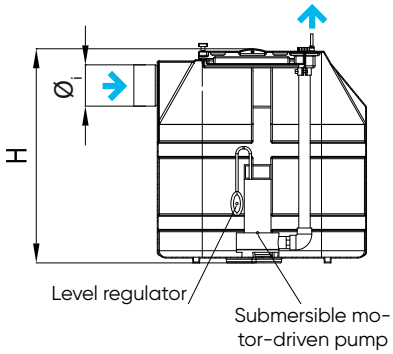
For lifting black water and sewage.

Flow rates: up to 14 m3/h
Heads: 2 – 20 m
Capacity: 250 – 1,000 L.
Compliance with standard: EN 12050-2

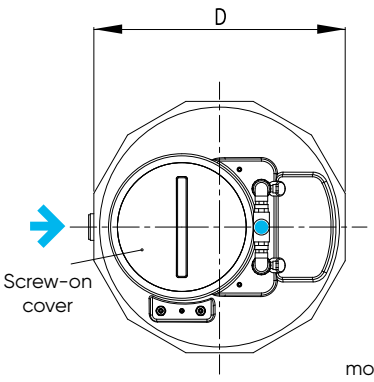
Type 250 - 500

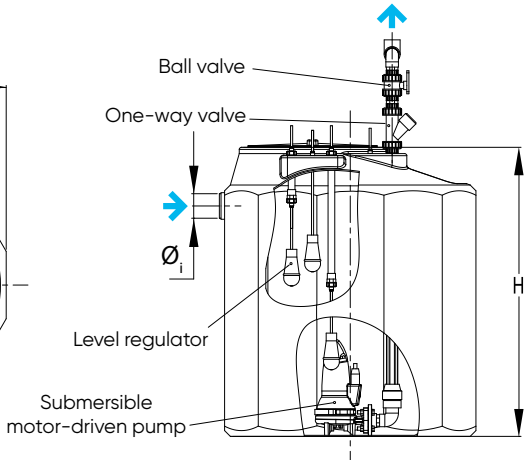






Type 1000





Item	Code	Capacity (l)	Users (E.I.)	WxL or D (cm)	H (cm)	Ø i (mm)	Pump delivery (")	Height H (m)	Flow rate Q (m³/h)	Electrical Power 1 pump (kW)	Voltage (V)
Type 250 R1	IS04320	250	5	66x66	75	100	1 ½	2-20	0-7	1,4	220
Type 250 R2	IS04321	250	10	66x66	75	100	1 ½	2-20	0-14	1,4	220
Type 500 R1	IS04322	500	15	86x86	85	100	1 ½	2-20	0-7	1,4	220
Type 500 R2	IS04323	500	20	86x86	85	100	1 ½	2-20	0-14	1,4	220
Type 1000 R1	IS04221	1.000	30	120	140	100	1 ½	2-20	0-7	1,4	220
Type 1000 R2	IS04222	1.000	50	120	140	100	1 ½	2-20	0-14	1,4	220

R1 indicates that the station is equipped with a single-motor-driven pump. R2 indicates that the station is equipped with two motor-driven pumps. Only the models Type 1000 come provided with a control box

PRATICA PUBLIC
Lifting Stations

One-piece polyethylene **Pratica Public lift station** is equipped with a central cover for inspection and maintenance of pumps.

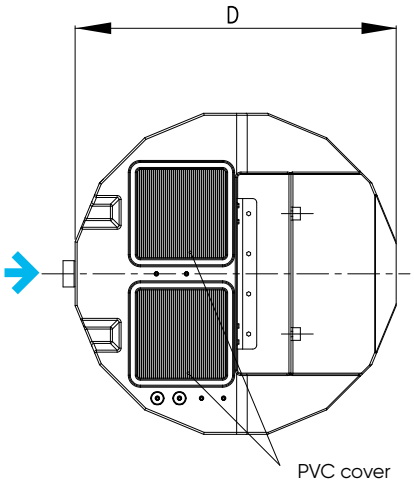
The pumps, which are either single or in pairs, are designed for freestanding wet well installation and are made from a synthetic material, cast iron or stainless steel.

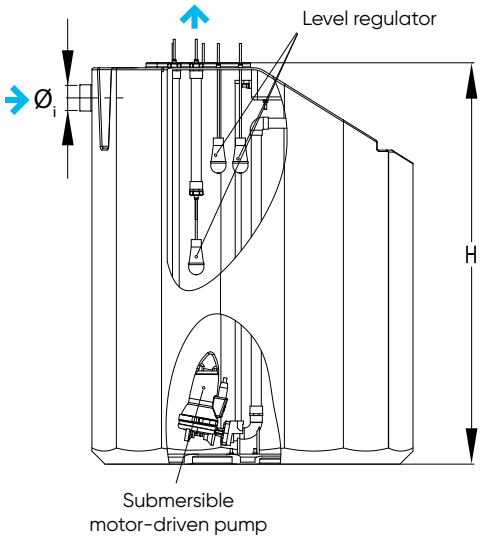
The ball valve and non-return valve are installed on the delivery line; level regulators complete the list of accessories. Pipes, fittings and valves are made from PVC.

The control box does not come as standard issue with the unit. Models with volume of 1000 liters and more are supported with electrical cases to adjust the pumps.

For lifting surface water and sewage with high flow rates.

Flow rates: up to 54 m3/h
Heads: 2 – 24 m
Capacity: 3,000 – 5,000 L.
Compliance with standard: EN 12050-2





Item	Code	Capacity (l)	D (cm)	H (cm)	Ø$_i$ (mm)	Pump delivery (")	Height H (m)	Flow rate Q (m³/h)	Electrical Power 1 pump (kW)	Voltage (V)
3000 B2	IS04600	3.000	160	200	200	2	2 - 15	0 - 42	1,1	380
3000 E2	IS04601	3.000	160	200	200	2	2 - 11	0 - 36	1,1	380
3000 R2	IS04602	3.000	160	200	200	1½	9 - 24	0 - 32	2,3	380
4000 B2	IS04603	4.000	160	240	200	2	3 - 18	0 - 48	1,5	380
4000 E2	IS04604	4.000	160	240	200	2	2 - 13	0 - 42	1,5	380
4000 R2	IS04605	4.000	160	240	200	1½	9 - 24	0 - 32	2,3	380
5000 B2	IS04606	5.000	160	280	200	2	5 - 20	0 - 54	2,2	380
5000 E2	IS04607	5.000	160	280	200	2	3 - 17	0 - 48	2,2	380
5000 R2	IS04608	5.000	160	280	200	1½	9 - 24	0 - 32	2,3	380

ISEA Below Ground Grease Interceptors – Installation & Maintenance Guide

In this comprehensive guide, we will walk you through the proper procedures for installing and maintaining ISEA grease interceptors to ensure they operate at peak performance and remain in compliance with local regulations.

Whether you are a commercial kitchen owner or a facilities manager, this guide will provide you with the knowledge and tools necessary to keep your grease separators functioning optimally and avoid costly repairs and downtime.

As a trusted partner in your commercial kitchen or facility management, we understand the value of preventing costly repairs and downtime. That's why we have crafted this guide to empower you with the expertise needed to keep your grease separators in compliance and functioning at their best.

Family Grease Interceptor Installation Guide

Pit

Dig a suitably sized pit. Line the bottom of the pit with a 10 cm thick layer of sand or other aggregate with a particle size ranging from 0 to 5 mm.

Dampen the sand and level the surface on which the Grease Trap Family will sit.

Connections

Connect the outlet of Grease Trap Family with downstream system elements using a relevant PVC/HDPE pipe. Connect the inlet with suitable piping.

Filling

Fill the Grease Trap Family with water in order to start the biological process properly.

Backfilling and finishing

Backfill around the sides with damp sand or other aggregate with a particle size ranging from 0 to 5 mm. If necessary, build a 5 cm layer on the top of the pit using light cement or produce a concrete slab at least 25 cm thick in case of vehicular traffic. Produced with recyclable material.

Maintenance

Make sure that installation is carried out as prescribed in a professional manner. Check at regular intervals to make sure no coarse matter is blocking the wastewater inlet or treated water outlet through the openings in the top fitted with screw on covers.

At regular intervals, open the screw- on cover to make sure that settled sand is not blocking the outlet pipe.

At least once a month, make sure that the grease level does not rise above the base of the outlet pipe. Remove floating grease regularly, calling a specialized company.

Optional

Grease level alarm system.

Public Grease Interceptor Installation Guide

Pit

Dig a suitably sized pit. Line the bottom of the pit with a 10 cm thick layer of sand or other aggregate with a particle size ranging from 0 to 5 mm.

Dampen the sand and level the surface on which the Grease Trap Public will sit.

Connections

Connect the outlet of the Grease Trap Public Interceptor with downstream system elements using a relevant PVC/HDPE pipe.

Connect the wastewater pipes to the Grease Trap Public Interceptor's inlet using suitable fittings to start the treatment process.

Filling

Fill the Grease Trap Public Interceptor with water in order to start the biological process properly.

Backfilling and finishing

Backfill around the sides with damp sand or other aggregate with a particle size ranging from 0 to 5 mm.

If necessary, build a 5 cm layer on the top of the pit using light cement or produce a concrete slab at least 25 cm thick in case of vehicular traffic.

Maintenance

Make sure that installation is carried out as prescribed in a professional manner. Check at regular intervals to make sure no coarse matter is blocking the wastewater inlet or treated water outlet through the openings in the top fitted with screw on covers.

At regular intervals, open the screw-on cover to make sure that settled sand is not blocking the outlet pipe. At least once a month, make sure that the grease level does not rise above the base of the outlet pipe. Remove floating grease regularly, calling a specialized company.

To improve the unit's treatment efficiency and reduce the amount of maintenance required, a dose of grease digesting bacterial solution can be added inside.

Optional

Grease level alarm system.

Public Grease Trap Installation Guide

Pit

Dig a suitably sized pit. Line the bottom of the pit with a 10 cm thick layer of sand or other aggregate with a particle size ranging from 0 to 5 mm.

Dampen the sand and level the surface on which the Grease Trap Public will sit.

Connections

Connect the outlet of the Public Grease Trap with downstream system elements using a relevant PVC/ HDPE pipe.

Connect the wastewater pipes to the Public Grease Trap inlet using suitable fittings to start the treatment process.

Filling

Fill the Public Grease Trap with water in order to start the biological process properly.

Backfilling and finishing

Backfill around the sides with damp sand or other aggregate with a particle size ranging from 0 to 5 mm.

If necessary, build a 5 cm layer on the top of the pit using light cement or produce a concrete slab at least 25 cm thick in case of vehicular traffic.

Maintenance

Make sure that installation is carried out as prescribed in a professional manner. Check at regular intervals to make sure no coarse matter is blocking the wastewater inlet or treated water outlet through the openings in the top fitted with screw on covers.

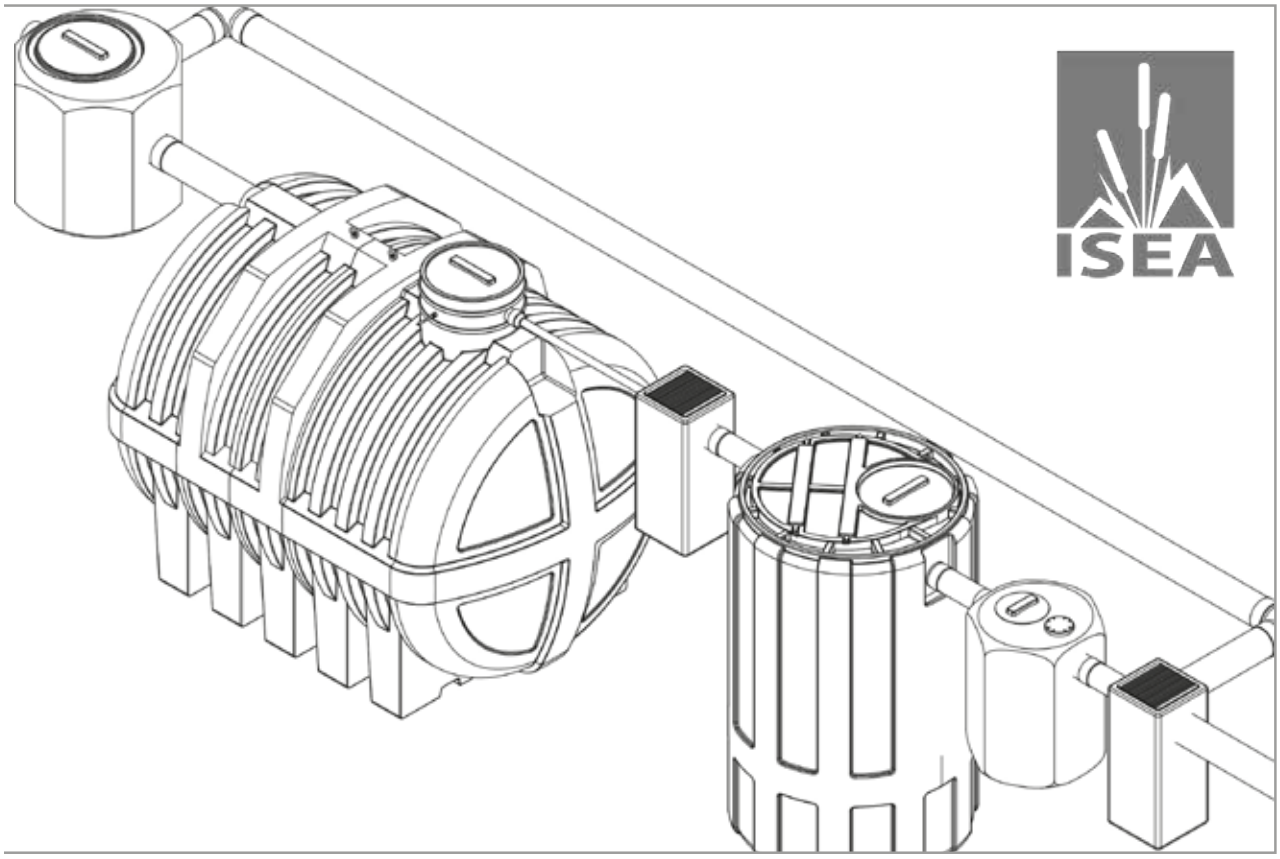
At regular intervals, open the screw-on cover to make sure that settled sand is not blocking the outlet pipe. At least once a month, make sure that the grease level does not rise above the base of the outlet pipe. Remove floating grease regularly, calling a specialized company.

To improve the unit's treatment efficiency and reduce the amount of maintenance required, a dose of grease digesting bacterial solution can be added inside..

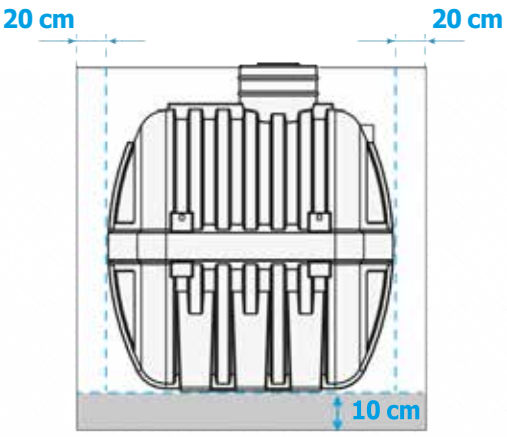
Optional

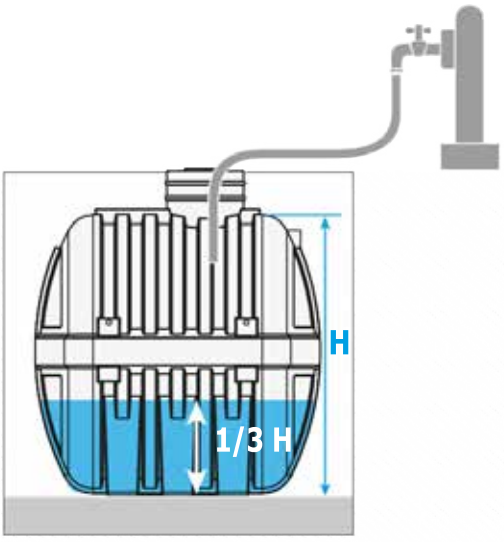
Grease level alarm system.

ISEA Installation Procedure



Laying advice





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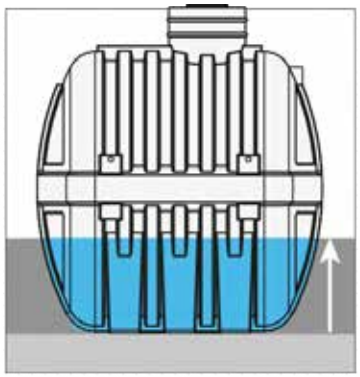
Laying advice



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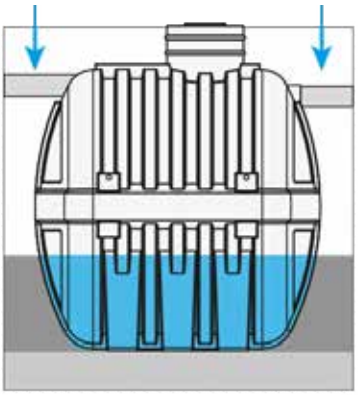

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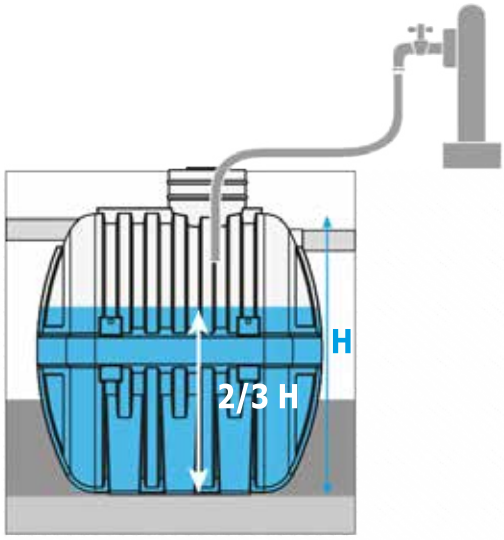

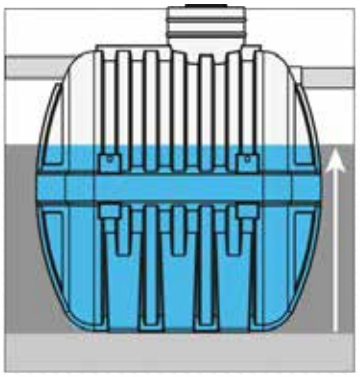

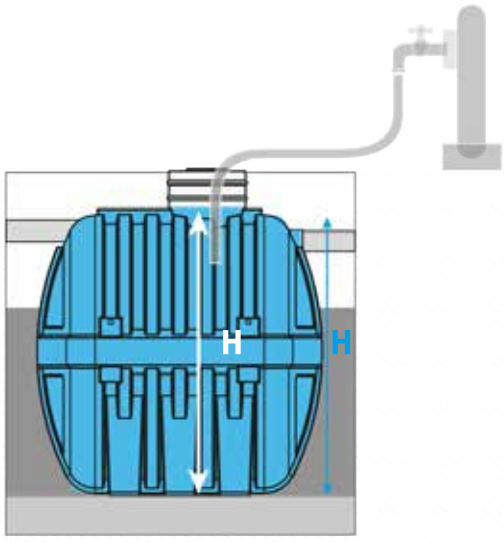

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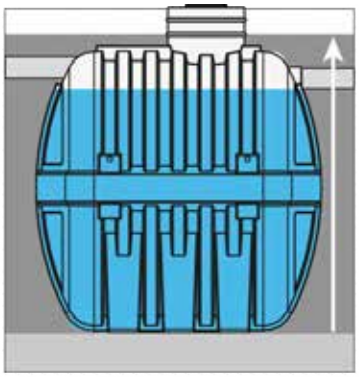

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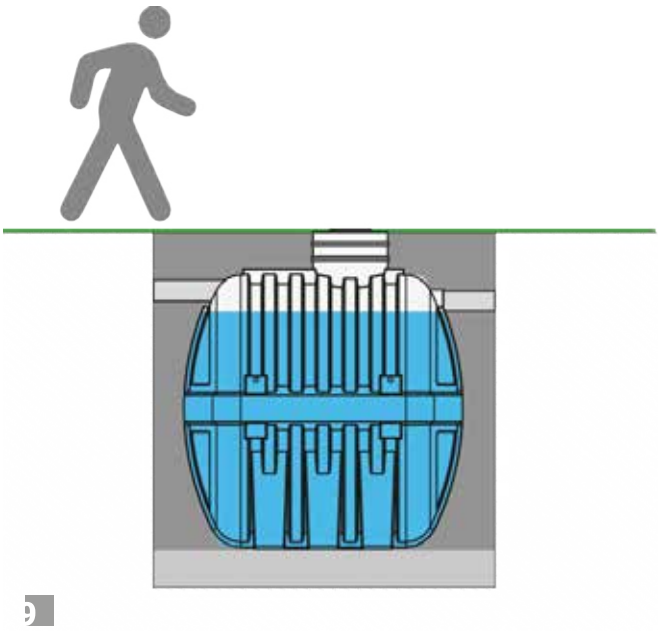

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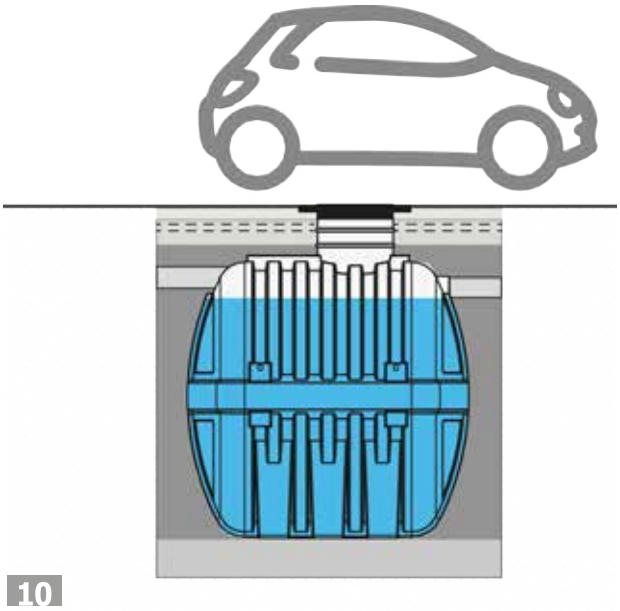

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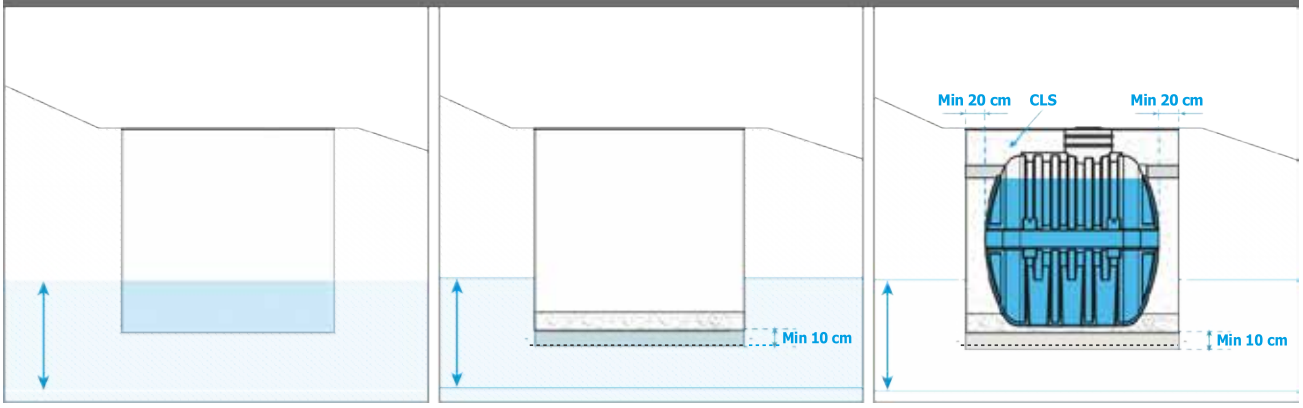
ATTENTION! GROUNDWATER PRESENCE



Waste Water Treatment Tanks Laying Advice

Underground installation procedure

Grease Interceptors	FAMILY, TOP, PC, PLUS, PUBLIC
Oil Separators	Oil Separator HT, OTTO-PE, Oil Separator HT Plus)
Imhoff Tanks	BIO HT, BIO PC
Percolating Filters	ANAPACKAGE, PACKAGE

1 Before proceeding with the underground installation procedure, check the integrity of the tanks. Carry out the excavation of dimensions equal to the external dimensions of the tanks increased by 20 cm. Prepare a laying surface, with a layer of damp sand constipated or other inert of size from 0 to 5 mm, with a thickness of 10 cm. Level the support surface before placing the tanks. Place the tankss in the center of the excavation taking care that there remains a space around at least 20 cm (before carrying out any lifting operation check that there is no water in the tanks and that the lifting medium is adequate to the weight of the tanks).

2- 3 Fill the tanks up to a level equal to 1/3 of their height and proceed to a first phase of backfilling with damped sand, until they reach the water level.

4 Make the necessary level to the tanks and connect the inlet and outlet pipes, taking care to obtain the correct slopes of the same.

5-6-7-8 Proceed to the gradual (2/3 – 3/3) filling, with water, of the tanks and parallel to the flank with sand until you reach the water level, trying to distribute the material as much as possible, and then proceed to the flank up to the top of the tanks. Place the inspection well (when required and not supplied by Isea) downstream of the products for connection to the final receptor and for the control of wastewater. Finish the top of the products according to the type of surface finish provided, following the instructions contained in the paragraphs "Foot Traffic Areas" and "Vehicular Traffic Areas".

9 Foot Traffic Areas(no loads bearing on the surface)

Before proceeding to close the excavation, place the inspection wells at the lids and hydraulic equipment and check the tightness of the tanks.

If the difference in height between the roof of the building and the surface of the ground is less than 20 cm, standardize the surface of the excavation with that of the surrounding soil using vegetable soil. If the difference in height is between 20 and 50 cm, prepare an agglomerate of expanded clay and concrete, well amalgamated and moistened in order to obtain a compact dough, and spread a layer directly over the product for a thickness of about 5 cm. Next, even the surface of the excavation with that of the surrounding soil using vegetable soil.

If the difference in height to be filled between the roof of the tank is greater than 50 cm, make a load-bearing reinforced CLS slab, sized according to the loads derived from the application (the width must be equal to at least that of the excavation increased by 50 cm laterally).

10 Vehicular Traffic Areas (loads bearing on the surface)

Before proceeding to close the excavation, place the inspection wells at the lids and hydraulic equipment and check the tightness of the tanks.

To obtain the driveability of the tanks, it is necessary to make slabs with different characteristics depending on the depth of burial, however with dimensions equal to at least those of the excavation increased by about 50 cm laterally.

If the difference in height is less than 50 cm, make a CLS slab with a minimum thickness of at least 25 cm, taking care to interpose 2 sheets of electro-welded mesh (diameter 6 mm) before casting. Make a first casting of about 5 cm, wait for the material to consolidate, proceed to the next casting (it is still necessary to check the loads on the slab and size it accordingly).

If the difference in height is greater than 50 cm, make a bearing slab sized according to the loads derived from the application.

Equip the cockpit with a driveway manhole cover, taking care not to place the driveway manhole cover on the tower of the building until the CLS casting has been consolidated.

Attention

In the presence of GROUNDWATER in the excavation, in a sloping area and near a slope it is essential to make the slab and the clshing insole with PERFECT HYDRAULIC SEAL by:

- Realization of a CLS slab of sufficient thickness to support the weight of the products filled with water (minimum 10 cm).
- Preparation of a laying surface, with a layer of moist constipated sand or other inert of size from 0 to 5 mm, 10 cm thick and smaller than the CLS slab (dump the sand and level the support surface before placing the tanks).
- Gradual (1/3 - 2/3 - 3/3) filling with water of the artifacts and at the same time flanking with CLS until it reaches the water level, trying to distribute the material as much as possible, and then flanking up to the top of the tanks.

Connections

If several tanks need to be connected to each other, it is essential to use flexible pipes, at least twice the nominal diameter of the fitting, or to use an elastic joint. Avoid installing tanks near heat sources. Before proceeding to the burial of the tanks, make sure that the tanks are intact and complete in all their parts. It is recommended to follow the instructions on how to bury.

Maintenance

For the correct operation of each system, it is necessary to scrupulously follow the instructions in the technical sheet of the use and maintenance manual or on the technical information handbook. Always contact primary companies able to provide professional services. Provide for the introduction of water into the products immediately after each purge operation. Periodically check that there are no occlusions, even partial, of the inlet and outlet pipes.

Assistance

For any clarifications regarding the methods of installation and management of the systems, contact our Technical Department by calling 0039.349.28.11.621 indicating your data and telephone number or send an email to the addresses:

infotecnico.redi@aliaxis.com
rtarenzi@aliaxis.com

ISEA Above Ground Grease Interceptors – Installation & Maintenance Guide

Automatic Grease Interceptor "Self Clean" Installation Guide

Location

The Automatic Grease Interceptor of the "Self Clean" range must be installed in a ventilated room near the kitchen drainpipe.

It is essential to provide a free space of about 1 meter around the Automatic Grease Interceptor to be able to carry out the necessary maintenance operations.

On the top of the Automatic Grease Interceptor there is a PVC fitting that must be connected to a ventilation pipe diam.100 mm. which must rise to the highest point of the building, creating a chimney effect that sends up the bad smell that forms inside the Automatic Grease Interceptor, preventing it from leaking into the installation room.

"Self Clean" is also equipped with a lid with anti-odor gasket.

Connections

Connect the outlet of the Automatic Grease Interceptor with downstream system elements using a relevant PVC/HDPE pipe.

Connect the wastewater pipes to the Automatic Grease Interceptor inlet, using suitable fittings to start the treatment process.

Connect the external power line and all the electromechanical equipment of the automatic degreaser to the electrical control panel.

Connect the water pipe to the supply solenoid valve of the cleaning sprinkler installed inside the automatic degreaser and to the filling solenoid valve of clean water.

Filling

Fill the Automatic Grease Interceptor with clean water in order to activate the floating material buoyancy process.

At the end of the emptying and cleaning operations, the software inserted in the control PLC will automatically fill it with clean water, by activating the solenoid valve connected to the aqueduct network.

Maintenance

Make sure that installation is carried out as prescribed in a professional manner. Check at regular intervals to make sure no coarse matter is blocking the wastewater inlet or treated water outlet through the openings in the top fitted with screw on covers.

At regular intervals, open the screw-on cover to make sure that settled sand is not blocking the outlet pipe. When the highest-level grease alarm probe sends the signal to the control panel, contact an authorized company to carry out the cleaning operations of the Automatic Grease Interceptor.

Suspend the discharge of wastewater from the kitchen. Connect the suction hose of the vacuum truck to the delivery pipe of the shredder pump. Activate the power button on the electrical panel to start the automatic emptying and cleaning system of the Automatic Grease Interceptor.

Once the operations are finished, it is possible to restart the discharge of wastewater from the kitchen.

Sequence of Automatic Cleaning Operations

1. After positioning the grease interceptor and making the electrical and hydraulic connections, the electrical panel turns on, which is inside a PLC equipped with software that automatically manages all operations. The first operation is to fill the grease interceptor with clean water by opening the 1-way solenoid valve connected to the aqueduct network. A level signal inserted in the grease interceptor warns when it is totally full of clean water by sending a signal to close the solenoid valve.

2. The discharge of water from the kitchen begins, and a layer of grease accumulates on the grease interceptor's surface.

3. When the layer of grease becomes very high, a probe placed inside the grease interceptor sends an alarm signal to the electrical panel that the PLC transmits to a visual lamp and simultaneously with the BMS system, and to the PLC to the plant control room. In this case, the supervisor calls the vacuum truck to clean the grease interceptor.

4. When the vacuum truck is connected to the drainage pipe flange, the supervisor turns off the alarm signal, and automatically the external pump begins to empty the grease interceptor, pumping the wastewater into the drainage pipe connected to the flange of the vacuum – truck.

5. By opening the 3-way valve in a timed way, a part of this wastewater contained in the grease interceptor is sent back inside to break the layer of surface grease that has formed and thus avoid possible clogging of the pump. When no more water is inside the grease interceptor, a flow meter installed downstream of the pump no longer receives water signals, and the PLC stops the pump.

6. After a few seconds, the software activates the opening of a second automatic 1-way valve that sends clean water under pressure to a sprinkler placed near the inspection cover at the top of the grease interceptor to make a 360° rain cleaning of all the grease-encrusted walls for few minutes.

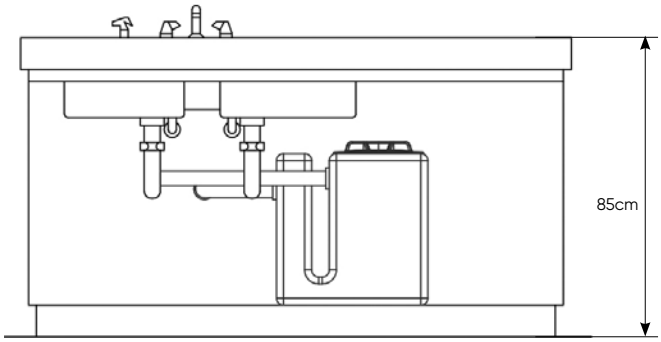
7. At the end of this time interval, the process of emptying the pump starts again and sucks the liquid until the outgoing flow meter signals the absence of water inside the degreaser, thus stopping the pump again. (The cleaning operation of the walls is carried out for 2 consecutive times.)

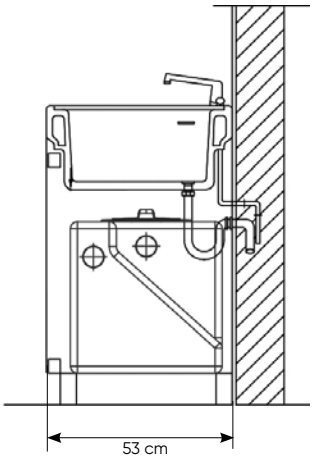
8. At the end of phase 7, the supervisor warns the vacuum truck that the cleaning operations are finished and subsequently restarts the whole process starting from phase 1.

Under Sink Grease Trap Installation guide

Maintenance

HOW TO INSTALL EXAMPLE



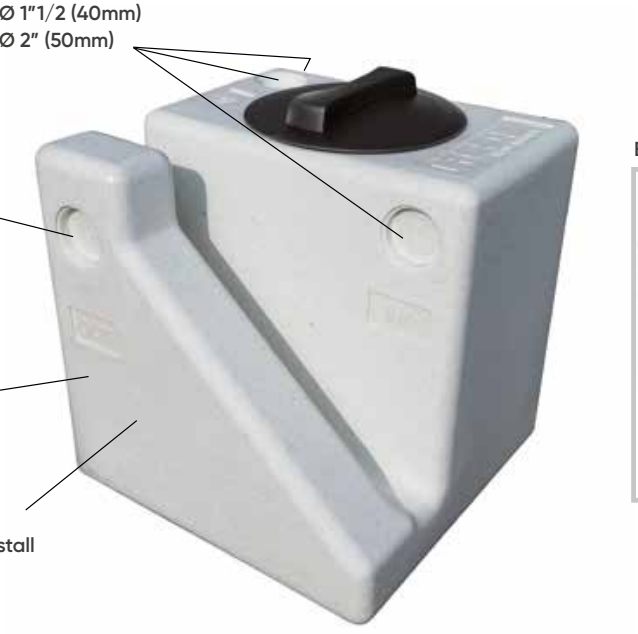


Provided with a set of seals for multiple diameter connections, 3 x inlet:
Ø 1"1/4 (32mm)
Ø 1"1/2 (40mm)
Ø 2" (50mm)

1 x OUT (outlet)

New compact design

Easy to install



Easy cleaning access

Notes

Notes

www.emea-international.aliaxis.com

aliaxis