

CATALOGUE WATER GUIDE

Pre-treatment and treatment of water

Oil separators - Grease separators - Sludge traps
Stormwater units - Dry-docks units



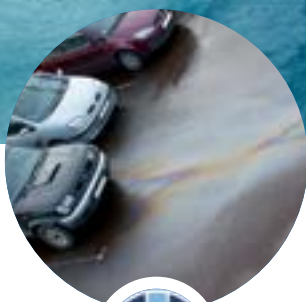
Oil
separators



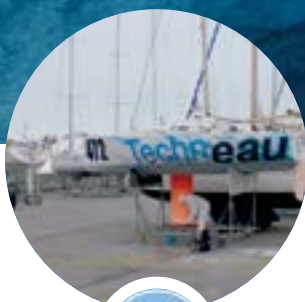
Grease and/or starch
separators



Sludge traps



Stormwater units



Dry-docks units



Progressive treatment
units

Our work and our missions

As a designer and manufacturer of water management and environment solutions, Techneau has shaped its expert profile through global solutions tailored to the actual needs of its clients: technically reliable and with innovative products.

We work in different areas:

- Pre-treatment & treatment
- Run-off water
- Pumping
- Hydraulic equipment
- Floor equipment
- Pumping station maintenance

Our production offices, workshops and factories are located in the city of Marigny-le-Lozon, Manche, Normandy (50).

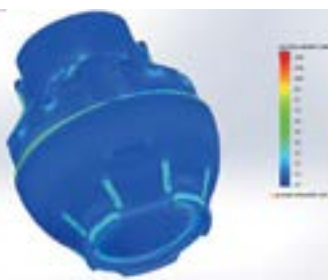


On an 8 hectare site based in Marigny (50), Techneau has consolidated all the skills needed to create, develop, produce and sell its products.

An in-house **RESEARCH & DEVELOPMENT** department to design the products of the future

For designing the products of the future, **10 employees in the design and R&D office** are responsible for evaluating your needs and anticipating the products of the future.

With more than **25,000 technical offers per year**, Techneau remains focus in its initial commitment: guaranteeing you a precise, personalised assessment within **24 to 48 hours**.



A **Techneau** centre of expertise

Since 1991, Techneau has constantly been innovating, by designing technical solutions for water treatment, water lifting and hydraulic regulation. Over the years, the company's activities have gradually expanded, including floor equipment and starting to distribute its full and wide range of products worldwide.

The opening of the export department **in 1996** has been the start of Techneau's international growth. With the creation of subsidiaries in the Czech Republic in 2000 and Spain in 2008, the company has been able to strengthen its position into the European market.

In 1998, Plasteau was created to manufacture polyethylene tanks by rotational moulding technology. The company soon became a specialist for water storage and rainwater management. Known all over Europe, Plasteau is an international specialist in rotomoulding, with its own machines able to produce up to 5 metres diameter tanks.

In 2001, Chaudreau became part of the group, broadening its product range to include the manufacture of steel and stainless steel tanks, as well as hydraulic equipment, stormwater and wastewater treatment plants. The company has an ability to offer tailor-made solutions in order to work upon request, and to meet the specific needs of each customer.

Techneau has always been fully committed to a rigorous quality procedure, obtaining several certifications, including ISO 9001, ISO 14001 and ISO 45001, as well as the CE marking. This attests to the compliance of its products with the most demanding standards.

Today, the group Gaeau Développement is recognized as an “expertise hub” in storm water management, with 170 employees working in three different companies. Located on an 8-hectare site, with 10,000 m² dedicated to offices and workshops, the company is constantly developing cutting edge innovations.

Sales department

Sectors	Sedentary sales department	Mobile sales department
Belgium, Luxembourg and Netherlands	(+33) 2 33 56 66 24	(+33) 3 24 75 24 24 77
France	(+33) 2 33 56 66 24	(+33) 6 77 59 62 96
Martinique, Guadeloupe, French Guiana, French Polynesia, New Caledonia, Reunion, Mayotte, Mauritius, Madagascar	(+33) 2 33 56 67 78	(+33) 6 08 43 41 53
Europa - Poland - Switzerland	(+33) 2 33 56 67 78	(+33) 6 84 78 68 26
Spain	(+33) 2 33 56 67 78	(+34) 651 44 52 31 - (+34) 645 36 86 10 - (+34) 672 18 18 77
Czech Republic / Slovakia	(+33) 2 33 56 67 78	(+420) 54 74 26 599
Africa / Middle East	(+33) 2 33 56 67 78	(+33) 6 77 59 62 96
Rest of the world	(+33) 2 33 56 67 78	(+33) 6 74 78 69 69



Storm water treatment

TECHNEAU, EXPERTISE IN MULTIPLE MATERIALS

Steel

A **large** and **extensive** range that is fully **adaptable**



Polyester

Developed for **corrosive soils** and **salt water environments**



Each material has its own installation limitations

The material of a steel, stainless steel, polyester or polyethylene unit will be defined depending on its installation limitations. Below is **our advice** when choosing a material depending on installation conditions.

Installation	Recommended material ¹			
	Polyethylene	Painted steel	Polyester	Stainless steel
Green Spaces	•		•	
Groundwater	• (2)	•	•	•
15 to 250 kN road	•		•	
400 kN road		•	•	
Above ground installation	• (2)	•	•	•
Installation in a salt water environment			•	•
Corrosive effluent pH < 3	•		•	•

(1) Techneau water pre-treatment and treatment units are made of:

- 100% recyclable rotomoulded polyethylene
- **fabricated steel**, S235JR with paint/interior/exterior epoxy resin/polyamide adduct-based bi-component coating,
- **polyester**, through orthogonal filament winding,
- 304 or 316L stainless steel.

(2) Contact our sales department.



Storm water treatment

INNOVATION FOR CLEAN WATER

Polyethylene

Solid structure offering the ideal **technical/price** ratio.



Stainless steel

Perfect for **corrosive effluent** from the **food** and **restaurant industries**.



Optional covers



Each material has its own benefits

Each material has its unique features that should be taken into consideration before making your choice:

Criteria	Recommended material*			
	Polyethylene	Painted steel	Polyester	Stainless steel
Handling	😊😊😊	😊😊	😊	😊😊
Storage	😊😊😊	😊	😊😊	😊😊😊
Ease of installation	😊😊😊	😊😊	😊😊😊	😊😊😊
Mechanical strength	😊😊	😊😊😊	😊😊😊	😊😊😊
Maintenance	😊😊😊	😊😊	😊😊😊	😊😊😊
Corrosion resistance	😊😊😊	😊😊	😊😊😊	😊😊😊
Availability	😊😊😊	😊😊😊	😊+	😊
Custom design		😊😊😊	😊😊😊	😊😊😊

😊😊😊 : perfectly suitable 😊😊 : suitable 😊 : not very suitable



Techneau since 1991,
design, manufacture, sale:
find all our skills at the same site in Normandy

Polyester workshop



Metal fabrication workshop



Sales department
to provide information
or help you with
your choices

Polyethylene workshop



Storage area



Adapted logistics and test area





Storm water pre-treatment and treatment

Oil separators or storm water treatment units: treatment challenges

Human activities generate different types of pollution and pollutants, which require effective equipment to successfully treat the storm water that comes into contact with them.

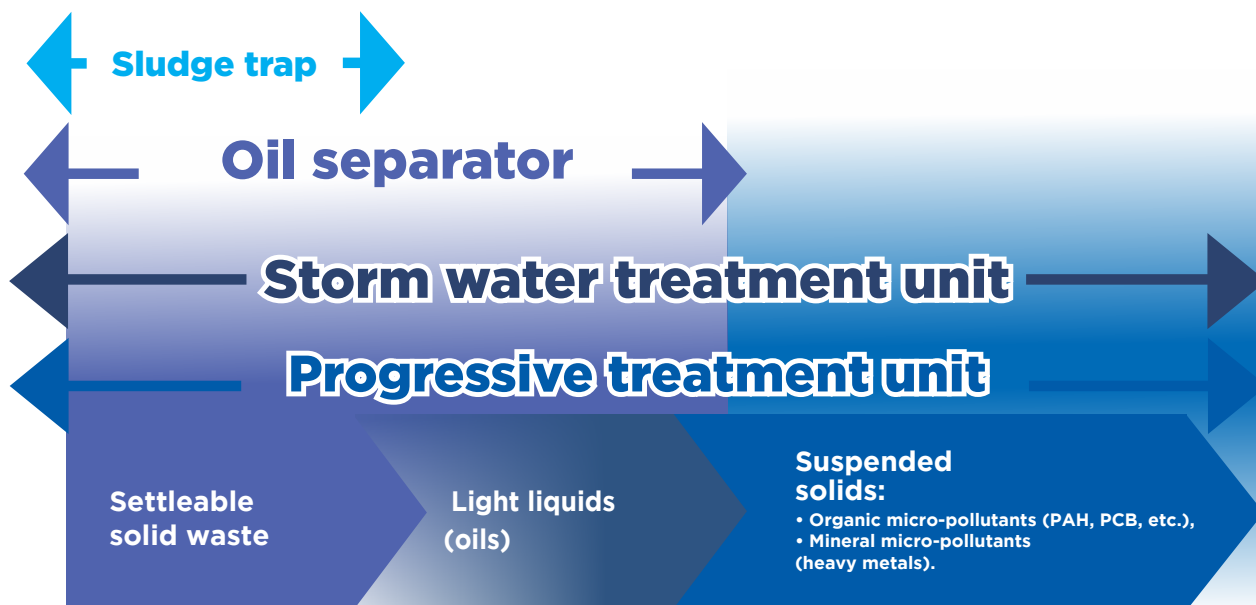
We have developed systems adapted to each treatment requirement, which are divided into three major groups:

Sludge **traps** and **oil separators**,

Storm water **treatment units** (*Techneau water treatment catalogue*),

Progressive **treatment units** (*Techneau water treatment catalogue*).

1 | Unit treatment ranges



2 | Uses

> Each situation has its own unit:

Pollutants	Range	Surface area	Sites
Light liquids & sludge	Sludge traps and oil separators	from 1 to 50,000 m²	Petrol station, washing area, covered car park, oil storage area, technical areas polluted with oils
Light liquids & Suspended solids	<i>Décant'eau</i>	from 400 to 3,000m²	Covered urban areas (car parks and roads), maritime
	Storm water treatment unit	from 3,100 to 50,000 m²	
	Progressive treatment unit	from 40 to 15,000m²	Industrial sites (high particle pollution) boat dry-docks units, scrap car storage areas
	dry-docks units treatment units	from 40 to 6,300 m²	Boat dry-docks units



Storm water treatment technical units with specific uses

Some site examples....



Steel tray separators at covered storage loading area on our Metal Fabrication site



200 l/s steel oil separators near the Toulouse bypass (64)

Urban & suburban networks...



600 l/s steel oil separators Iter (13) - COMSA



Chatarras Iruna steel oil separators (Spain)

Industrial sites



Polyester oil separator Réunion fishing dock (97).



135 l/s polyester separator - Kalary Vary bypass (Czech Republic)

Commercial areas



560 l/s polyester oil separator, Gran Canaria airport (Canary Islands)

Small business areas



300 l/s custom polyester separator for the Slovakian motorway network



Custom steel oil separator - Flamanville Nuclear Plant (50)



Oil separators

Standards	p 10-11
Declaration of Performance	p 12
How oil separators with sludge traps work	p 13
Selection guide	p 16-19
About partial or total treatment	p 20-21

Oil separators, size 1 to 35 l/s

Sludge trap & coalescing filter	p 22-23
Sludge trap, coalescing filter & bypass	p 24-25
Large sludge trap & coalescing filter	p 26-27
Coalescing filter	p 28-29
Coalescing filter and lifting tank	p 30-31
Sludge trap, coalescing filter and lifting tank	p 32-33
Lifting compartment pump kit	p 34
Acid neutralisation tank	p 35

Oil separators, size > 35 l/s

Sludge trap, coalescing filter	p 36-37
Sludge trap, coalescing filter, bypass	p 38-39



Oil separators

1 • Standards

The production of oil separators is driven by different standards, notably the european standard NF EN 858:

- **NF EN 858-1**

“Principles of product design, performance and testing, marking and quality control”.

- **NF EN 858-2**

“Separator systems for light liquids (e.g. oil and petrol)”

Part 2: “Selection of nominal size, installation, operation and maintenance.”

Diagram of a complete installation



1.1 • The volume of a sludge trap according to the standard

Definition taken from the standard NF EN 858-1:

“The sludge trap is where material settles, i.e. sludge, silt and grit. It can be constructed with the separator as a combined unit. The value chosen to calculate the size of the sludge trap can vary depending on standard NF EN 858-2. Below is taken from paragraph 4.4 and its table to define it:

Quantity of sludge expected for, for example:		Minimum sludge trap volume
None	- condensate	No sludge trap
Low	- treating wastewater containing a low defined amount of sludge; - all rainwater collection areas where there is a small amount of silt due to traffic or similar. For example, catch basins in oil storage areas and covered filling stations.	$\frac{100 \times NS}{f_d}$ ^{a)}
Average	- filling stations, hand car wash, part washing; - bus washing areas; - wastewater from garages, car parks; - power plants, machining plants.	$\frac{200 \times NS}{f_d}$ ^{b)}
High	- washing areas for construction vehicles or machinery, farming machinery; - lorry washing areas	$\frac{300 \times NS}{f_d}$ ^{b)}
	- automatic car washes, e.g. roll-over, drive thru.	$\frac{300 \times NS}{f_d}$ ^{c)}

a) Do not use for separators equal to or under NS10, except for covered car parks.

b) Minimum sludge trap volume = 600 l.

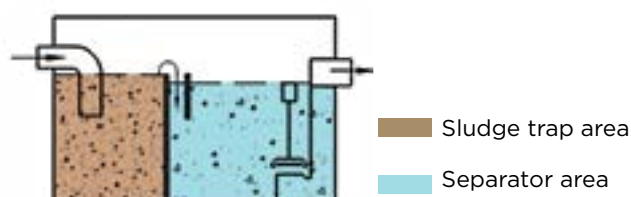
c) Minimum sludge trap volume = 5,000 l.

NS = Nominal Size = “number approximately equivalent to the maximum effluent flow in litres per second from the separator when tested in accordance with 8.3.3.” taken from the standard NF EN 858-1.

1.2 • The volume of a separator according to the standard:

Based solely on purification efficiency, standard NF EN 858-1 does not define a minimum volume for the separation chamber: “the separator is the part of the installation in which light liquid is separated from wastewater”.

Outline diagram of an oil separator with a sludge trap:



The automatic stopper prevents any accidental release of settled free oils to the downstream network.



Oil separators

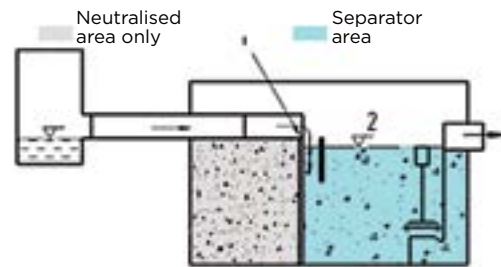
To check the efficiency of an oil separator, the manufacturer must test it at a **test area based on the description in paragraph 8.3.3 of the standard NF EN 858-1**.

It must also **neutralise the sludge trap volume** and proceed as per the diagram opposite.

The standard underlines the fact that the “design shall also ensure that any separated and retained light liquid is not disturbed”.

This is why only the volume of the separation chamber must be taken into account to classify the unit, i.e. discharge < 100 mg/l or 5 mg/l.

Outline diagram of a separator (with single separation chamber):



1.3 • The warning device according to the standard

Mandatory as per the standard NF EN 858-1 § 6.5.4: “Separator systems shall be provided with automatic warning devices...”

They can detect the level of oils and/or sludge in the separator. A visual and/or audible alarm triggers when the desired level is reached.

2 • Size calculation

2.1 • Calculating the size of a separator:

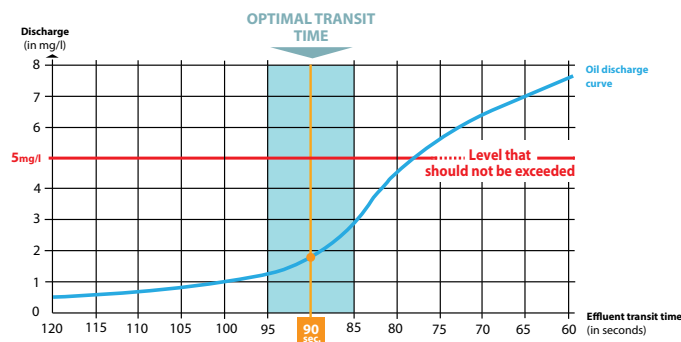
For single separation chamber units, the total useful volume of the unit will be at least:

Separator useful volume =

90
sec.

x NS

of the unit



2.2 • Calculating the size of a combined sludge trap & separator

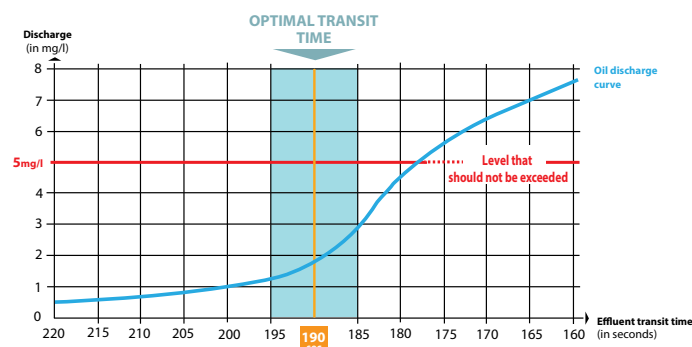
For this type of unit, the total useful volume will be at least:

Useful volume of separator combined with a sludge trap =

190
sec.

x NS

of the unit

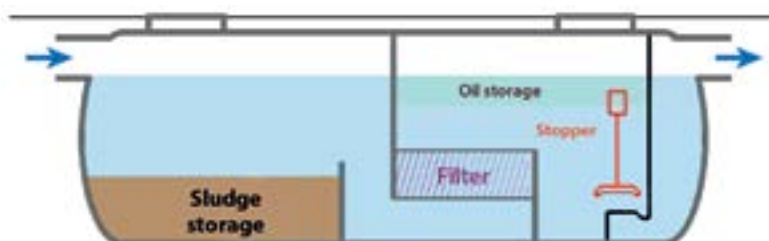




Oil separators

TECHNEAU recommends a “minimum useful volume” for optimal oil treatment and storage. For example, with a nominal size of 100 l/sec, the total minimum useful volume of the unit must be equal to:

$$100 \text{ l/s} \times 190 \text{ s} = 19,000 \text{ litres for a unit with a sludge trap.}$$



Below this value, the separator's effectiveness might be called into question, as the **risk of discharge is very high**.



3. The declaration of performance (D.O.P.)

Excerpt from standard NF EN858: “The manufacturer must be able to provide, on simple request, quality control documents... from arrival of raw materials through to the final product leaving the factory”.

With an **ISO 9001:2008 quality system in place**, Techneau is able to deliver CE marking compliance certificates.

Application of CE marking has been mandatory since 1 September 2006. It is governed by appendix ZA of standard NF EN 858-1/A1 dated February 2005. The D.O.P. has been mandatory since 1 July 2013. Each product must be accompanied by its D.O.P., which also includes CE marking. The certificate of compliance must include the following elements:

Product: light liquid (e.g. oils) separation systems included within the scope of this standard.

Intended usage: separating light liquids from wastewater to protect sanitation systems and surface water.

Essential characteristics	Requirement articles from this standard	Level and / or classes	Notes
Fire resistance	6.2.8	A.1 to F	-
Reaction to liquids	6.3.2	none	Yes / No
Efficacy	4, 6.3.1, 6.3.3 to 6.3.8, 6.5	Class I or II	Yes / No
Load capacity	6.4	From 1a to 1d	Yes / No
Durability	6.2	none	Yes / No

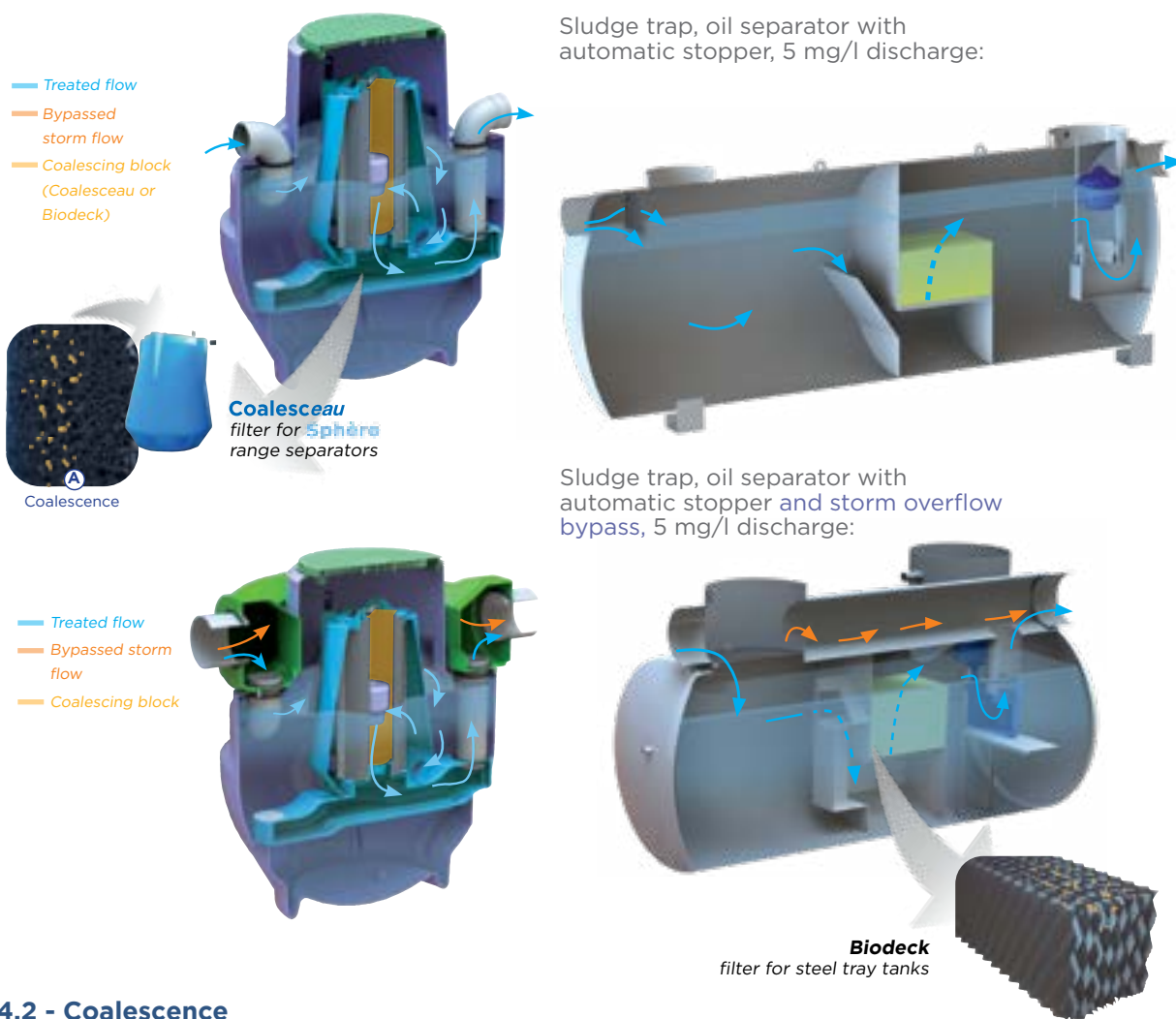


Oil separators

4. Operating principles

4.1 - Hydraulic flows

Outline diagrams of a standard water treatment unit:



4.2 - Coalescence

The turbulent flow brings fine suspended oil droplets together in the water and increases volume to encourage floating (see details [diagram A](#)).

4.3 - The automatic stopper

Positioned downstream from the light liquid separation chamber, it prevents any accidental discharge of settled free oils into the downstream network. It has a siphon bend combined with a float that is calibrated based on the density of the light liquids being trapped. It works as follows: The float sinks in oils but floats in water.



Phase 1



Phase 2



Phase 3



Oil separators

5 - Sphère Range: detail of main innovations



**A new
conical
stopper**

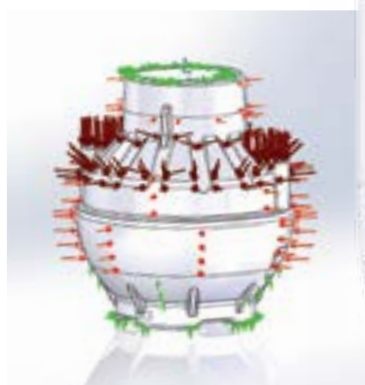


Easier access

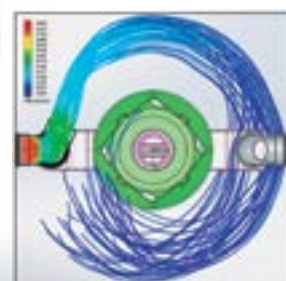
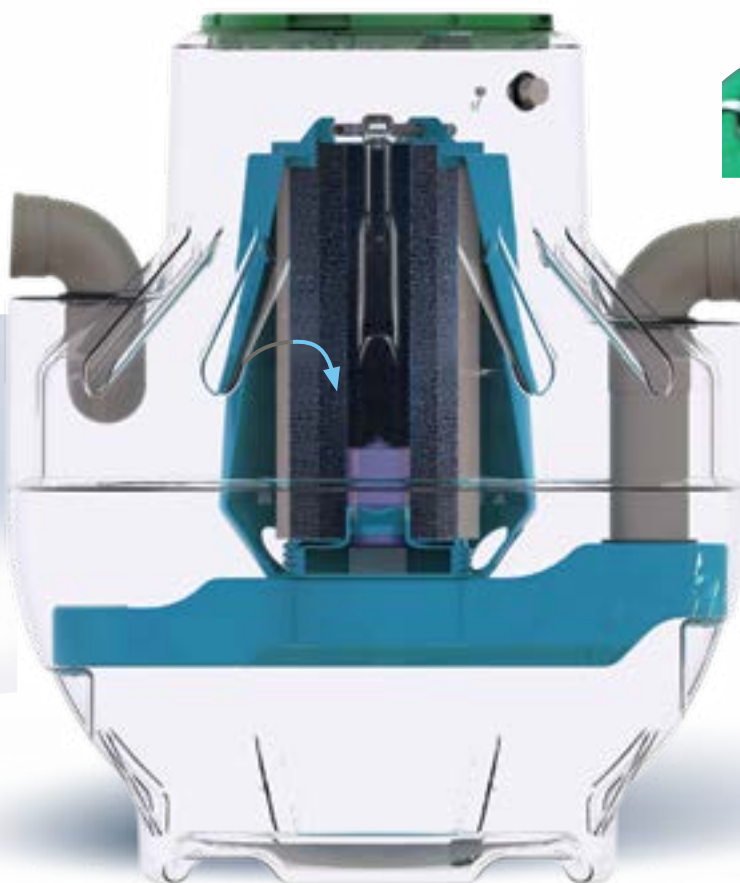
YH0506E model



**A lockable
cover**



A new tank design



**A new
approach to
internal flows**



**Or specific
Coalesceau**
depending on model

A new coalescing block



**A central
sludge
silo**



Oil separators

6 - Sphère Range: to avoid difficult installations conditions

The Sphère range was designed to adapt to different installation conditions encountered on site.

Type of tank	Installation in green space without concrete protection slab	
	underground water in contact with the unit	no underground water in contact with the unit
Standard model	IL: 1 m	IL: 1.50 m
Reinforced model	IL: 1.50 m	IL: 3 m

IL: inlet level



6.1 - Sphère Range: easier handling

The slots for forks at the bottom make it easier to load, unload and handle. Just one person is enough!



6.2 - Installation & maintenance: new improvement on the market

A cylindrical opening to use a standard extension in **polyethylene** or **concrete** (contact us).

The cover (supplied as standard) offers several benefits:

- avoids filling the unit with water during storage.
- protects all internal components during installation and backfilling.
- allows direct installation in the green space.

For installations in the presence of groundwater or hydromorphic ground, the tank has a central anchor to position the concrete ballast. This avoids complicated and dangerous anchoring at the bottom of an excavation.

A central sludge silo: aligned with the manhole, it makes visual inspections easier and allows complete cleaning from a single suction point.

Sphère range financial benefits:

- no load distribution slab in green spaces
- concrete ballast ring cheaper than a concrete slab at the bottom of the excavation with reinforcement and rebar for anchoring
- Up to 10 l/s = > 1 single manhole
- Reinforced model available & adjustable extensions available



Product benefits **3in1**

REMOVABLE MODULE
for oil separators

This 3in1 product, a true Techneau innovation, is completely removed from the tank to be inspected and cleaned with no risk of downstream discharge. The **Coalesceau** structure has been specifically studied to be self-supporting and resistant to cleaning with a pressure washer.



The system core is now completely independent from the tank shape.



1. sludge trap chamber
2. coalescing filter
3. automatic stopper

Coalesceau



Oil separators

1. The importance of the site when choosing a separator

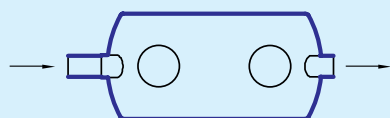
1.1 - Selection table

Site		Treatment	1.5 to 35 l/s models		36 to 500 l/s models		
			Polyethylene	Steel	Steel	Page	Polyester
Car park	covered: gravity-fed drainage downstream from the unit	100%	YH05 / EH05/ ADHF	YH05 / ADHF	U4	39	U6
	underground: lifting downstream from the unit	100%	EHR	YHR05	Contact our design office		
Fuel filling and distribution area		100%	YH05 / EH05/ ADHF	YH05 / ADHF	U4	39	U6
Washing area	light vehicles	100%	YH15 / EH15	YH15/ADHFG	U4	39	U6
	heavy vehicles	100%	YH16 / EH16	YH16/ADHFK	U4	39	U6
	construction vehicles	100%	YH17/ GDHF	YH17/ADHFM	U4	39	U6
Uncovered area		100%	YH05 / EH05/ ADHF	YH05/ADHF	U4	39	U6
		20%	YH10 / EH10/ ADHLF	YH10/ADHLF	Y1	41	W6

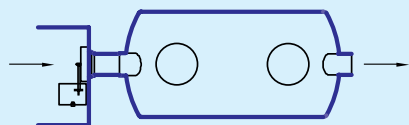
1.2 - The different configurations

100% treatment

Direct installation
on the network:

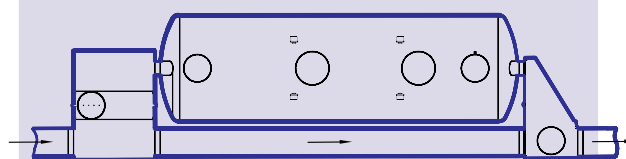


Installation after a storm basin,
with a flow rate regulator:

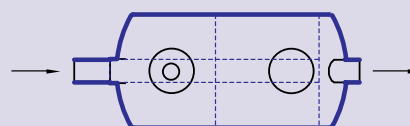


20% treatment

Installation as network bypass
with a flow rate regulation chamber:



Installation as network bypass
with the bypass integrated into the unit:





Oil separators

2. Which separator for covered parking areas? Selection table

Example with a sludge trap, oil separator with 5 mg/l discharge:



Surface in m ²	Number of spaces	Size in l/s	Covered car park		Underground car park	
			Gravity-fed drainage downstream from the unit		Lifting downstream from the unit	
			Polyethylene	Steel	Polyethylene	Steel
1 to 1000	1 to 30	3	YH0503E	YH0503A	YHR0503E /EHR0503C	YHR0503A
1001 to 3000	31 to 120	6	YH0506E	YH0506A	YHR0506E	YHR0506A
3001 to 4000	121 to 160	8	YH0508E	YH0508A	YHR0508E	YHR0508A
4001 to 5000	161 to 200	10	YH0510E	YH0510A	YHR0510E	YHR0510A
5001 to 8000	201 to 320	15	EH0515D	ADHF115AB	-	subject to study
8001 to 15000	321 to 600	20	EH0520D	ADHF120AB	-	subject to study



*Check if the total surface area includes external access ramps.
The size of the unit will then be calculated based on the highest flow rate of the two surfaces plus the fire network (outdoor or covered).*

Note that the pumps used for the lifting tank will be defined based on 4 criteria:
The flow rate, the lifting height, the length and diameter of the discharge pipe (refer to pages 33-35).

3. Which separator for fuel filling and/or distribution areas?

The size of oil separators with sludge traps is calculated based on the decree dated 15 April 2010. The nominal size of the unit is defined based on a flow rate of 45 l/h/m² for uncovered areas. A coefficient of 0.5 is applied for covered areas.



Selection table

Surface in m ²	Covered area			Uncovered area		
	Size (l/s)	Polyethylene	Steel	Size (l/s)	Polyethylene	Steel
1 to 245	1.5	YH0501E	YH0501A	3	YH0503E	YH0503A
246 to 480	3	YH0503E	YH0503A	6	YH0506E	YH0506A
481 to 640	4	YH0503E	YH0504A	8	YH0508E	YH0508A
641 to 800	5	YH0506E	YH0506A	10	YH0510E	YH0510A
801 to 1000	6	YH0506E	YH0506A	12	EH0515D	ADHF115AB
1001 to 1250	8	YH0508E	YH0508A	15	EH0515D	ADHF115AB
1251 to 1650	10	YH0510E	YH0510A	20	EH0520D	ADHF120AB



For a petrol station with a car park, 2 units will need to be installed (a total treatment unit for the fuel distribution area, and another partial treatment unit for the car park).

Note that partial treatment units are prohibited there.



Oil separators

4 - Which separator for washing areas?

Excerpt from the standard NF EN 858-2 dated August 2003:

"The sizing of light liquid separators shall be based on the nature and flow rate of the liquids to be treated."

The following elements should also be taken into consideration:

- the maximum flow rate of rainwater,
- the maximum flow rate of wastewater (e.g. industrial effluent),
- the density of the light liquid,
- the presence of substances that may hinder separation (e.g. detergents).

The size of the unit is determined using the following formula:

$$NS = (Q_r + (Q_s \times f_x)) \times f_d$$

NS is the separator's nominal size,

Q_r is the maximum rainwater flow rate in litres per second,

Q_s is the maximum wastewater flow rate in litres per second,

f_d is the density factor for the liquid in question (a factor of 1 will be used by default for a density up to 0.85. For values above this, please contact us),

f_x is the impediment factor in the presence of detergents (a factor of 2 must be used as per paragraph 4.3.2.1 of the standard NF EN 858-2).

The total wastewater flow rate is the sum of the flow rates based on the formula:

$$Q_s = Q_{s1} + Q_{SR} + Q_{s3} + \dots$$

Q_{s1}: flow rate from drawing taps,

Q_{s2}: flow rate from automatic car washes,

Q_{s3}: high pressure cleaning units,

... : any other flow rates.

Note that as per § 4.3.3. of standard NF EN858-2 "If a separator receives both rainwater and wastewater, e.g. in a car washing installation, and it is unlikely that the two maximum flow rates take place at the same time, the separator can be sized based on the highest flow rate", with the maximum flow rate of wastewater Q_s weighted by the impediment factor f_x (=2).

4.1 - Automatic car washes (roll-over, drive thru)

Wastewater from **low-pressure car washes** (with backflow of 20 bar maximum), where only vehicle bodywork and chassis are cleaned, only usually contains a small amount of light liquid. A **flow rate (Q_{s2}) of 2 l/s should be used per washing unit.**

If wastewater from high-pressure automatic car washes (with backflow exceeding 20 bar) and/or if the use of additional washing procedures leads to light liquids in the wastewater, each car wash should be given a wastewater flow rate value **Q_{SR}** of 2 l/s plus a wastewater flow rate value **Q_{s3}** of 1 l/s for each **high-pressure unit.**

Do not forget to weight the total wastewater flow rate Q_s (Q_{SR} + Q_{s3}) by the impediment value f_x (=2).

Moreover, it should be noted that in this configuration, the **sludge trap volume** (extraction gutter and oil separator with sludge trap) **must be at least 5 m³.**





Oil separators

4.2 - High-pressure washing units

Regardless of the use of the water from the high-pressure unit, we must consider a **Qs3 value of 2 l/s for the wastewater flow rate**. If there is more than one high-pressure unit, we must **add 1 l/s for each unit**.

If a **high-pressure unit is associated with an automatic car wash**, we must assign a **Qs3 value of 1 l/s to this unit**.

Do not forget to weight the total wastewater flow rate $Q_s (=Q_{SR} + Q_{s3})$ by the impediment value $f_x (=2)$.

The total sludge trap volume (extraction gutter and oil separator sludge trap) is 0.6 m³ minimum.



4.2.1 - Selection table

Vehicle type	Polyethylene		Steel	
	Reference	Size (l/s)	Reference	Size (l/s)
	YH1506E	6	YH1506A	6
	EH1508D	8	ADHFG210A	10
Heavy vehicles	YH1604E	4	YH1604A	4
	EH1606D	6	ADHFK306A	6
Construction vehicles	YH1703E	3	YH1703A	3
	GDHF510E	10	ADHFM506A	6





Oil separators

5 - Which separator for uncovered areas - total treatment?

The ten-year peak flow rate depends on the surface area to be treated and the local rainfall zone (**ZONE 1, 2 or 3**).
For surfaces < 10,000 m², the calculation method as per the standard NF EN 752-4 is as follows:

$$Q_{10} = Q_T = \blacktriangle \times I \times A$$

Q₁₀: Ten-year peak flow rate (litres/second)

Q_T: Treatment flow rate (litres/second)

▲: Run-off coefficient (depending on type of surface: 0.9 for concrete or asphalt)

I: Rainfall intensity (litres/second/hectare) based on 3 geographic areas (as ten-year flow rate):

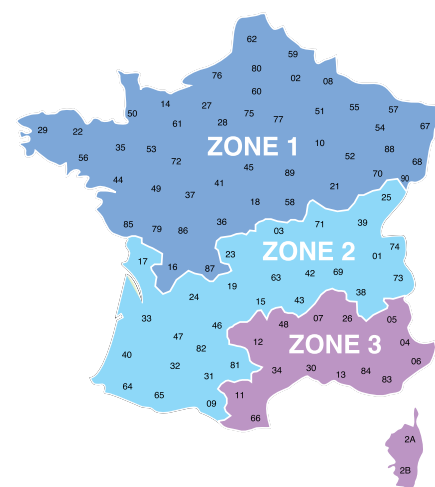
Example in France :

ZONE 1 (oceanic climate): 300 l/s/ha

ZONE 2 (continental climate): 400 l/s/ha

ZONE 3 (Mediterranean climate): 500 l/s/ha

A: Uncovered area (hectares)



Selection table for units without bypass

100 % treatment of the incoming flow

ZONE 1	ZONE 2	ZONE 3	Size (l/s)	Polyethylene	Steel	Polyester
< 56 m ²	< 42 m ²	< 34 m ²	1.5	YH0501E	YH0501A	-
< 112 m ²	< 84 m ²	< 67 m ²	3	YH0503E	YH0503A	-
< 223 m ²	< 167 m ²	< 134 m ²	6	YH0506E	YH0506A	-
< 297 m ²	< 223 m ²	< 178 m ²	8	YH0508E	YH0508A	-
< 371 m ²	< 278 m ²	< 223 m ²	10	YH0510E	YH0510A	-
< 556 m ²	< 417 m ²	< 334 m ²	15	EH0515D	ADHF115AB	-
< 741 m ²	< 556 m ²	< 445 m ²	20	EH0520D	ADHF120AB	U6ACA2P
< 926 m ²	< 695 m ²	< 556 m ²	25	ADHF125E	ADHF125AB	U6ACF2P
< 1,112 m ²	< 834 m ²	< 667 m ²	30	ADHF130E	ADHF130AB	U6ADA2P
< 1,297 m ²	< 973 m ²	< 778 m ²	35	-	ADHF135AB	U6ADF3P
< 1,482 m ²	< 1,112 m ²	< 889 m ²	40	-	U4AEA3A	U6AEA3P
< 1,667 m ²	< 1,250 m ²	< 1,000 m ²	45	-	U4AEF3A	U6AEF3P
< 1,852 m ²	< 1,389 m ²	< 1,112 m ²	50	-	U4AFA3A	U6AFA3P



Oil separators

6 - Which separator for uncovered areas - partial treatment?

The ten-year peak flow rate depends on the surface area to be treated and the local rainfall zone (**ZONE 1, 2 or 3**).
For surfaces < 10,000 m², the calculation method as per the standard NF EN 752-4 is as follows:

$$Q_{10} = \blacktriangle \times I \times A$$

$$Q_T = 10\% Q_{10}$$

Q₁₀: Ten-year peak flow rate (litres/second)

Q_T: Treatment flow rate (litres/second)

▲: Run-off coefficient (depending on type of surface: 0.9 for concrete or asphalt)

I: Rainfall intensity (litres/second/hectare) based on 3 geographic areas (as ten-year flow rate):

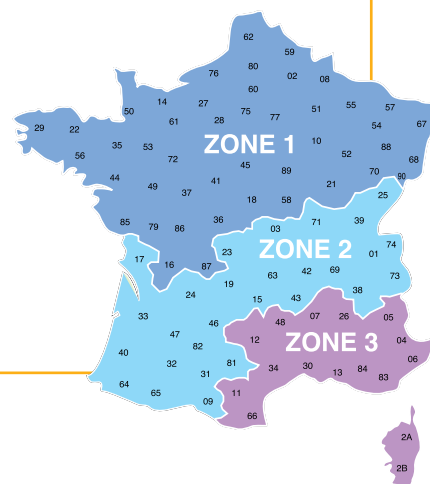
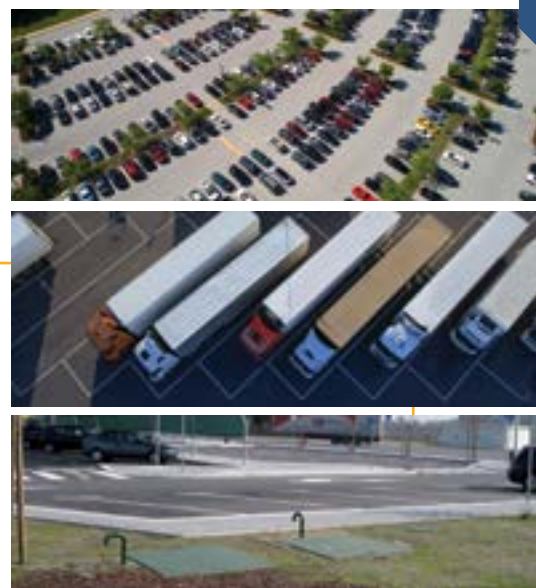
Example in France :

ZONE 1 (oceanic climate): 300 l/s/ha

ZONE 2 (continental climate): 400 l/s/ha

ZONE 3 (Mediterranean climate): 500 l/s/ha

A: Uncovered area (hectares)



Selection table for units with bypass

20% treatment of the incoming flow

ZONE 1	ZONE 2	ZONE 3	Size (l/s)	Polyethylene	Steel	Polyester
< 278 m ²	< 209 m ²	< 167 m ²	1.5	YH1001E	YH1001A	-
< 556 m ²	< 417 m ²	< 334 m ²	3	YH1003E	YH1003A	-
< 1,112 m ²	< 834 m ²	< 667 m ²	6	YH1006E	YH1006A	-
< 1,482 m ²	< 1,112 m ²	< 889 m ²	8	YH1008E	YH1008A	-
< 1,852 m ²	< 1,389 m ²	< 1,112 m ²	10	YH1010E	YH1010A	-
< 2,778 m ²	< 2,084 m ²	< 1,667 m ²	15	EH1015D	ADH1F115AB	-
< 3,704 m ²	< 2,778 m ²	< 2,223 m ²	20	EH1020D	ADH1F120AB	W6ACA3P
< 4,630 m ²	< 3,473 m ²	< 2,778 m ²	25	ADH1F125E	ADH1F125AB	W6ACF4P
< 5,556 m ²	< 4,167 m ²	< 3,334 m ²	30	ADH1F130E	ADH1F130AB	W6ADA4P
< 6,482 m ²	< 4,862 m ²	< 3,889 m ²	35	-	ADH1F135AB	W6ADF4P
< 7,408 m ²	< 5,556 m ²	< 4,445 m ²	40	-	Y1AEA4A	W6AEA4P
< 8,334 m ²	< 6,250 m ²	< 5,000 m ²	45	-	Y1AEF4A	W6AEF4P
< 9,260 m ²	< 6,945 m ²	< 5,556 m ²	50	-	Y1AFA5A	W6AFA5P



Oil separators

with sludge trap & coalescing filter

- 100% recyclable rotomoulded polyethylene tank with lifting rings and manhole(s).
- Vertical automatic stopper in polyethylene calibrated to 0.85.

Sphère range:

- PVC inlet and outlet.
- Light cover (pedestrian traffic) with locking screw.
- Conical partition.
- Fully removable coalescing filter.
- Available as reinforced model (depending on installation limitations).

Ellipse range:

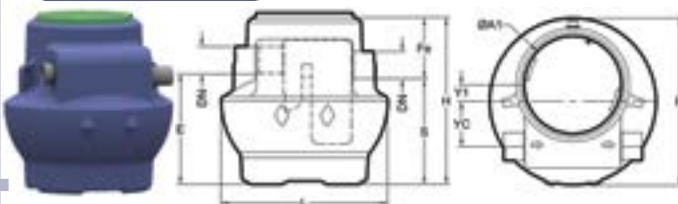
- Inlet and outlet with nitrile seals.
- Polyethylene partition with filter holder and removable coalescing filter.

Aronde range:

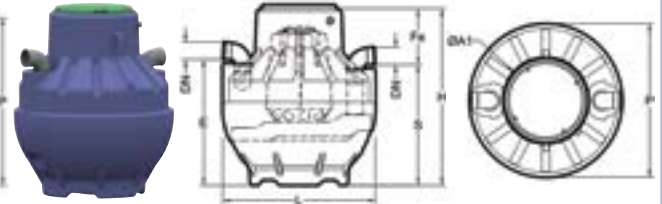
- PVC inlet and outlet.
- Polyethylene partition with filter holder and removable coalescing filter.

Sphère

Ref. YH0501E and YH0503E

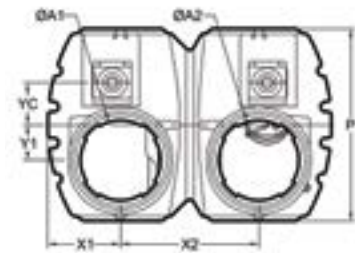
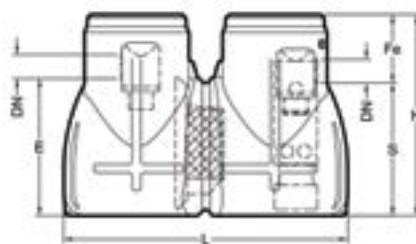


Ref. YH0506E, YH0508E and YH0510E



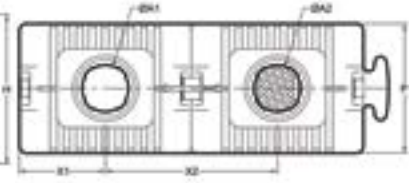
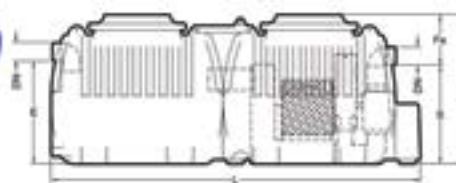
YH05 range	Size l/s	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Volume		ØA1	Y1	YC	“Fixed” extension option	“Adjustable” extension option
										Sludge trap	Separator					
YH0501E	1.5	1000	1000	1000	669	639	361	110	37	150	190	585	100	270	PLA13555G PLA13556G	-
YH0503E	3	1200	1200	1230	840	800	430	110	40	300	359	585	-	-	PLA13555G PLA13556G	-
YH0506E	6	1500	1500	1700	1200	1150	550	160	88	600	900	745	-	-	-	ETR47EF ETR65EF
YH0508E	8	1550	1550	1700	1200	1150	550	160	88	800	720	745	-	-	-	
YH0510E	10	1500	1500	1965	1450	1400	565	160	114	1000	940	745	-	-	-	

Ellipse



EH05 range	Size l/s	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Volume		ØA1	ØA2	1	X2	Y1	YC	“Adjustable” extension option
										sludge trap	Separator							
EH0515D	15	2400	1624	1700	1160	1120	580	200	229	1500	1730	745	745	615	1170	300	355	ETR47EF
EH0520D	20	2400	1624	2072	1532	1492	580	200	257	2000	2060	745	745	615	1170	300	355	ETR65EF

Aronde



ADHFE range	Size l/s	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Volume		ØA1	ØA2	X1	X2	“Adjustable” extension option
										sludge trap	Separator					
ADHF125E	25	4292	1500	1730	1200	1150	580	200	312	2500	3700	745	745	1000	2000	ETR47EF ETR65EF
ADHF130E	30	4300	1555	1730	1200	1150	580	200	317	3000	3200	745	745	1000	2000	

Options

1. Visual and audible alarm p. 70-71
2. Cylindrical polyethylene extension p.70

	Sphère	Ellipse	Aronde
1. Visual and audible alarm p. 70-71	X	X	X
2. Cylindrical polyethylene extension p.70	X	X	X

Dimensions are in millimetres, weights in kilograms, volumes in litres.



Oil separators

with sludge trap & coalescing filter

- Tank in fabricated steel with lifting rings.
- Epoxy bi-component coating.
- PVC inlet and outlet.
- Vertical automatic stopper in polyethylene calibrated to 0.85.

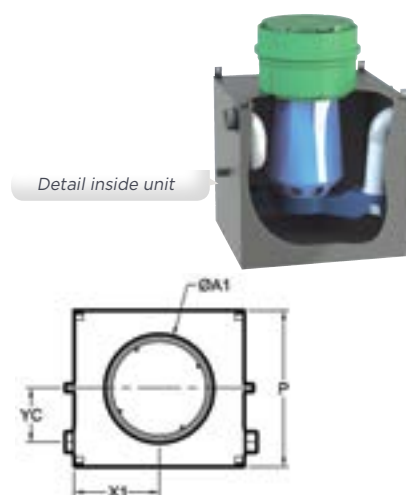
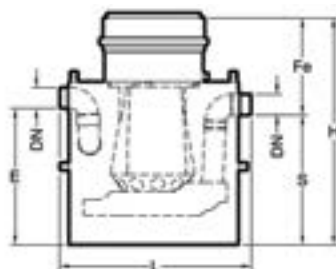
Hydrocube range:

- Light cover (pedestrian traffic) with locking screw.
- Conical partition.
- Fully removable coalescing filter.
- Available as reinforced model (depending on installation limitations).

HydroBac range:

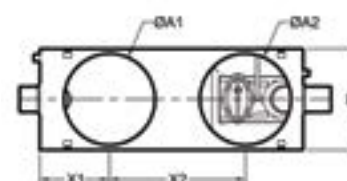
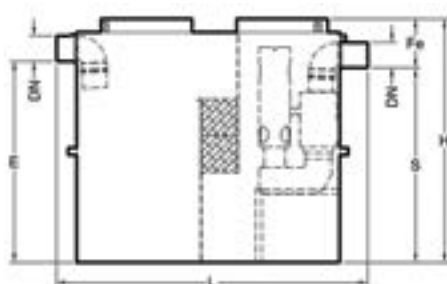
- Cylindrical manholes without cover.
- Removable coalescing filter.

HydroCube



YH05A range	Size l/s	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Volume		ØA1	X1	YC	"Fixed" extension option	"Adjustable" extension option
										sludge trap	Separator					
YH0501A	1.5	900	745	1200	660	630	570	110	110	150	200	585	373	253	PLA13555G	-
YH0503A	3	1125	995	1200	790	750	450	110	151	300	442	585	498	300	PLA13556G	-
YH0506A	6	1470	1200	1740	1050	1000	740	160	247	600	960	745	650	410	-	ETR47EF ETR65EF
YH0508A	8	1525	1200	1990	1270	1220	770	160	353	800	970	745	650	410	-	
YH0510A	10	1525	1200	1990	1270	1220	770	160	360	1000	1000	745	650	410	-	

HydroBac



ADHFAB range	Size l/s	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Volume		ØA1	ØA2	X1	X2
										sludge trap	Separator				
ADHF115AB	15	2285	830	2000	1660	1610	390	200	561	1500	1350	750	750	575	1120
ADHF120AB	20	3220	830	2000	1550	1500	500	200	664	2000	1800	750	750	1075	1350
ADHF125AB	25	2920	1200	1920	1470	1420	500	200	805	2500	2270	750	750	430	1770
ADHF130AB	30	3520	1200	1920	1470	1420	500	200	938	3000	2794	750	750	430	2220
ADHF135AB	35	4230	1200	2110	1470	1420	690	315	1180	3500	3316	750	950	480	2670

Options

	HydroCube	HydroBac
1. Visual and audible alarm p. 70-71	X	X
2. Cylindrical polyethylene extension p.70	X	

Dimensions are in millimetres, weights in kilograms, volumes in litres.



Oil separators

with sludge trap, coalescing filter & bypass

- 100% recyclable rotomoulded polyethylene tank with lifting rings and manhole(s).
- Vertical automatic stopper in polyethylene calibrated to 0.85.

- Inlet and outlet with nitrile seals (except YH1001E which has a PVC inlet and outlet).
- Inlet with overflow level and siphon partition to supply the bypass.

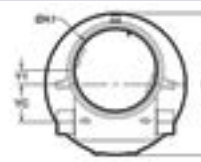
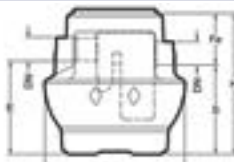
Sphère range:

- Light cover (pedestrian traffic) with locking screw.
- Conical partition.
- Fully removable coalescing filter.
- Available as reinforced model (depending on installation limitations).

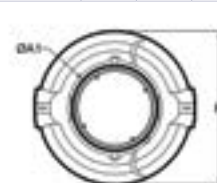
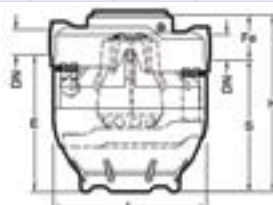
Ellipse and Aronde range:

- Polyethylene partition with filter holder and removable coalescing filter.

Sphère

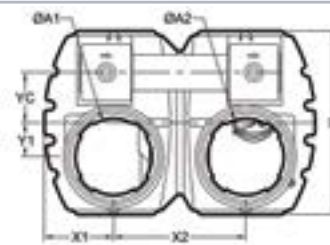
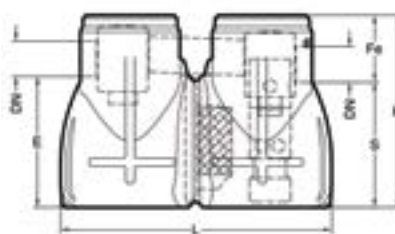


YH10 range	Size l/s	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Volume		ØA1	Y1	YC	"Fixed" extension option
										sludge trap	Separator				
YH1001E	1.5	1000	1000	1000	665	635	365	160	38	150	190	585	100	270	PLA13555G PLA13556G



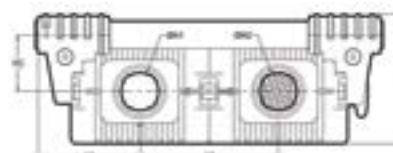
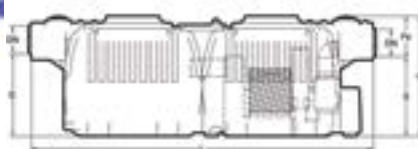
YH10 range	Size l/s	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Volume		ØA1	"Fixed" extension option	"Adjustable" extension option
										sludge trap	Separator			
YH1003E	3	1200	1200	1230	880	840	390	200	54	300	359	585	PLA13555G PLA13556G	-
YH1006E	6	1500	1500	1700	1330	1280	420	250	117	600	900	745	-	ETR47EF ETR65EF
YH1008E	8	1550	1550	1700	1260	1210	490	315	117	800	720	745	-	
YH1010E	10	1500	1500	1965	1500	1450	515	315	145	1000	940	745	-	

Ellipse



EH10 range	Size l/s	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Volume		ØA1	ØA2	X1	X2	Y1	YC	"Adjustable" extension option
										sludge trap	Separator							
EH1015D	15	2400	1624	1700	1190	1140	560	315	241	1500	1680	745	745	615	1170	300	355	ETR47EF
EH1020D	20	2400	1624	2072	1513	1463	609	400	278	2000	2040	745	745	615	1170	300	355	ETR65EF

Aronde



PVC vent

ADHLFE range	Size l/s	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Volume		ØA1	ØA2	X1	X2	YC	"Adjustable" extension option
										sludge trap	Separator						
ADHLF125E	25	4300	1555	1730	1080	980	750	400	336	2500	2700	745	745	1000	2000	555	ETR47EF
ADHLF130E	30	4960	1880	1730	1200	1150	580	400	356	3000	3200	745	745	1470	2000	815	ETR65EF

Options

1. Visual and audible alarm p. 70-71
2. Cylindrical polyethylene extension p.70

Sphère	Ellipse	Aronde
X	X	X
X	X	X

Dimensions are in millimetres, weights in kilograms, volumes in litres.



Oil separators

with sludge trap, coalescing filter & bypass

- Tank in fabricated steel with lifting rings.
- Epoxy resin/polyamide adduct-based bi-component coating.
- Inlet aerator.
- Steel inlet and outlet.
- Vertical automatic stopper in polyethylene calibrated to 0.85.
- Inlet with overflow level and siphon partition to supply the bypass.

Hydrocube range:

- Light cover (pedestrian traffic) with locking screw.
- Fully removable coalescing filter (CCF) conical partition module.
- Available as reinforced model (depending on installation limitations).

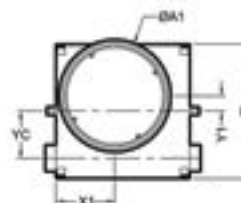
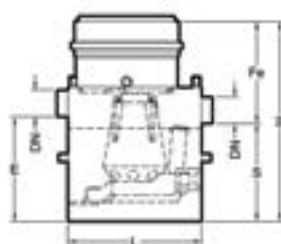
HydroBac range:

- Cylindrical manholes without cover. Removable coalescing filter.

HydroCube



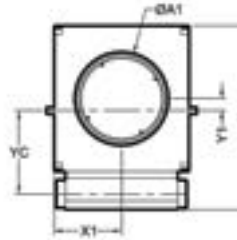
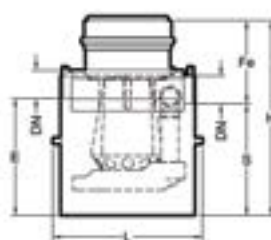
Ref. YH1003A



YH10A range	Size l/s	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Volume		ØA1	X1	Y1	YC	"Fixed" extension option	"Adjustable" extension option
										sludge trap	Separator						
YH1001A	1.5	915	745	1200	660	632	568	160	112	150	200	585	373	70	245	PLA13555G PLA13556G	-
YH1003A	3	1155	995	1485	780	730	755	200	165	300	432	745	438	115	348	-	ETR47EF ETR65EF

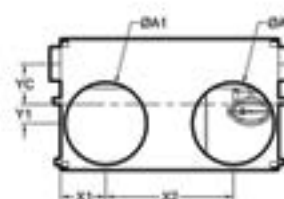
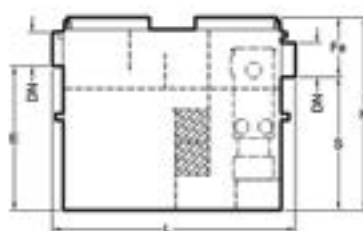


Ref. YH1006A



YH10A range	Size l/s	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Volume		ØA1	X1	Y1	YC	"Adjustable" extension option
										sludge trap	Separator					
YH1006A	6	1340	1640	1740	1050	1000	740	250	274	600	960	745	600	170	680	ETR47EF ETR65EF
YH1008A	8	1340	1660	1989	1270	1220	770	315	389	800	880	745	600	180	670	
YH1010A	10	1350	1660	1989	1270	1220	770	315	394	1000	900	745	600	180	670	

HydroBac



ADHLFAB range	Size l/s	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Volume		ØA1	ØA2	X1	X2	Y1	YC
										sludge trap	Separator						
ADHLF112AB	12	1930	1300	1650	1150	1050	600	315	580	1200	1120	750	750	400	900	200	480
ADHLF115AB	15	2230	1200	1760	1320	1220	540	315	665	1500	1430	750	750	415	1170	175	370
ADHLF120AB	20	2730	1250	1910	1320	1220	690	400	787	2000	1965	750	750	415	1670	200	395
ADHLF125AB	25	3030	1200	2110	1520	1420	690	400	880	2500	2270	750	750	395	2010	205	385
ADHLF130AB	30	3630	1200	2110	1520	1420	690	400	1030	3000	2790	750	750	395	2610	205	385
ADHLF135AB	35	4230	1250	2110	1520	1420	690	400	1217	3500	3310	750	950	415	3090	200	410

Options

1. Visual and audible alarm p. 70-71
2. Cylindrical polyethylene extension p.70

HydroCube	Hydrobac
X	X
X	

Dimensions are in millimetres, weights in kilograms, volumes in litres.



Oil separators

with large sludge trap & coalescing filter

- 100% recyclable rotomoulded polyethylene tank with lifting rings and manhole(s).
- Vertical automatic stopper in polyethylene calibrated to 0.85.

Sphère range:

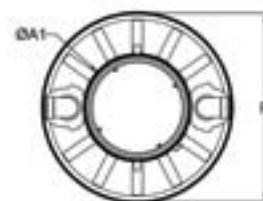
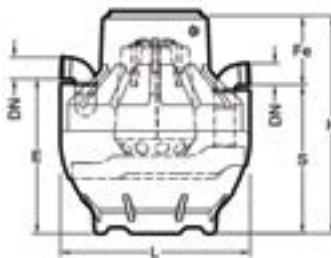
- PVC inlet and outlet.
- Light cover (pedestrian traffic) with locking screw.
- Conical partition.
- Fully removable coalescing filter.
- Available as reinforced model (depending on installation limitations).

Ellipse range:

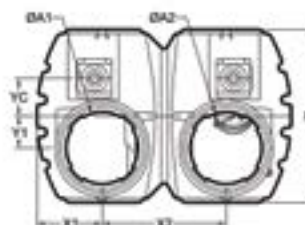
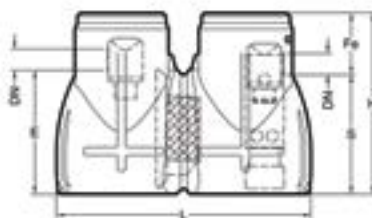
- Inlet and outlet with nitrile seals.
- Polyethylene partition with filter holder and removable coalescing filter.

Aronde range:

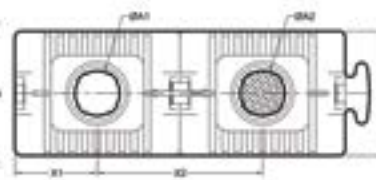
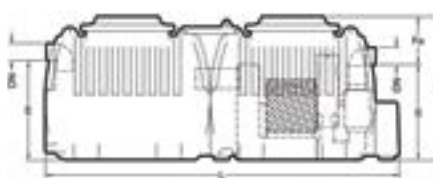
- PVC inlet and outlet.
- Polyethylene partition with filter holder and removable coalescing filter.

Washing area special for units whose size is 4 l/s or larger**Sphère**

YH15 YH16 YH17 range	Size l/s	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Volume		ØA1	“Fixed” extension option	“Adjustable” extension option
										sludge trap	Separator			
YH1502E	2	1200	1200	1230	840	800	430	110	40	400	259	585	PLA13555G PLA13556G	-
YH1703E	3	1500	1500	1700	1200	1150	550	110	86	1290	270	745	-	ETR47EF ETR65EF
YH1604E	4	1550	1550	1700	1200	1150	550	110	86	1200	360	745	-	
YH1506E	6	1500	1500	1965	1450	1400	565	160	114	1200	740	745	-	

Ellipse

EH15 EH16 range	Size l/s	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Volume		ØA1	ØA2	X1	X2	Y1	YC	“Adjustable” extension option
										sludge trap	Separator							
EH1606D	6	2400	1624	1700	1180	1140	560	160	229	1520	1740	745	745	615	1170	300	355	ETR47EF ETR65EF
EH1508D	8	2400	1624	2072	1552	1512	560	160	258	1900	2190	745	745	615	1170	300	355	

Aronde

AGDHF range	Size l/s	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Volume		ØA1	ØA2	X1	X2	“Adjustable” extension option
										sludge trap	Separator					
AGDHF510E	10	4292	1500	1730	1200	1150	580	160	296	5000	1200	745	745	1000	2000	ETR47EF ETR65EF

Options

1. Visual and audible alarm p. 70-71
2. Cylindrical polyethylene extension p.70

Sphère	Ellipse	Aronde
X	X	X
X	X	X

Dimensions are in millimetres, weights in kilograms, volumes in litres.



Oil separators

with large sludge trap & coalescing filter

- Tank in fabricated steel with lifting rings.
- Epoxy bi-component coating
- Inlet aerator.
- PVC inlet and outlet.
- Vertical automatic stopper in polyethylene calibrated to 0.85.

Hydrocube range:

- Light cover (pedestrian traffic) with locking screw.
- Fully removable coalescing filter (CCF) conical partition module.
- Available as reinforced model (depending on installation limitations).

HydroBac range:

- Cylindrical manholes without cover.
- Removable coalescing filter.

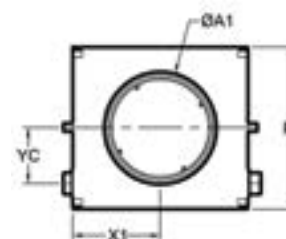
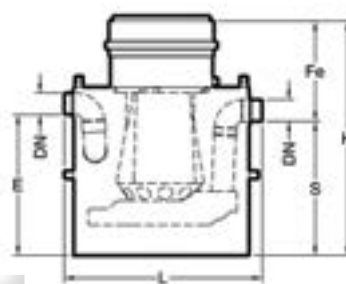
HydroCube



Ref. YH1502A



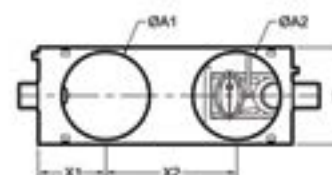
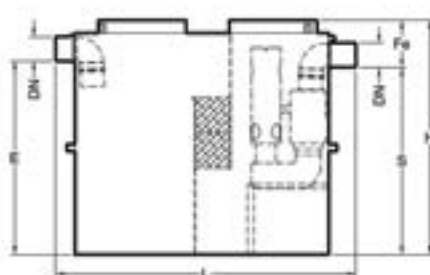
Detail inside unit



Washing area special for units whose size is 4 l/s or larger

YH15A YH16A YH17A range	Size l/s	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Volume		ØA1	X1	YC	“Fixed” extension option	“Adjustable” extension option
										sludge trap	Separator					
YH1502A	2	1125	995	1200	790	750	450	110	151	400	442	585	498	298	PLA13555G PLA13556G	-
YH1703A	3	1495	1200	1740	1050	1000	740	110	247	1200	270	745	650	410	-	ETR47EF ETR65EF
YH1604A	4	1495	1200	1740	1050	1000	740	110	247	1200	360	745	650	410	-	
YH1506A	6	1525	1200	1990	1270	1220	770	160	353	1200	800	745	650	410	-	

HydroBac



Washing area special

ADHFK ADHFM ADHFG range	Size l/s	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Volume		ØA1	ØA2	X1	X2
										sludge trap	Separator				
ADHFK306A	6	2150	830	1900	1550	1500	400	160	496	1800	690	580	580	325	1370
ADHFM506A	6	2650	830	2200	1850	1800	400	160	612	3000	480	580	580	825	1370
ADHFG210A	10	2450	1040	1900	1550	1500	400	160	454	2000	800	780	780	660	1200

Options

	HydroCube	Hydrobac
1. Visual and audible alarm p. 70-71	X	X
2. Cylindrical polyethylene extension p.70	X	

Dimensions are in millimetres, weights in kilograms, volumes in litres.



Oil separators

with coalescing filter

- 100% recyclable rotomoulded polyethylene tank with lifting rings and manhole(s).
- Vertical automatic stopper in polyethylene calibrated to 0.85.

Sphère range:

- PVC inlet and outlet.
- Light cover (pedestrian traffic) with locking screw.
- Conical partition.
- Fully removable coalescing filter.
- Available as reinforced model (depending on installation limitations).

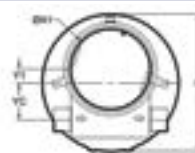
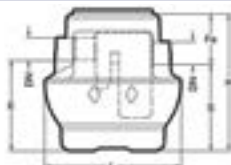
Ellipse range:

- Inlet and outlet with nitrile seals.
- Polyethylene partition with filter holder and removable coalescing filter.

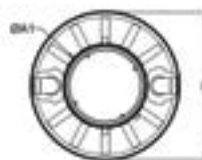
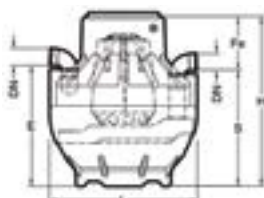
Aronde range:

- PVC inlet and outlet.
- Polyethylene partition with filter holder and removable coalescing filter.

Sphère

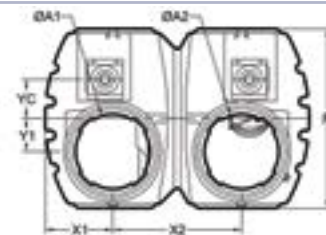
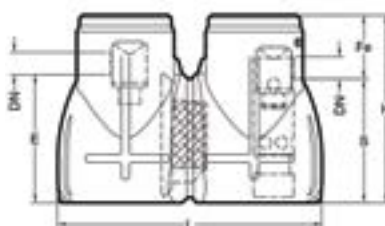


YH20 range	Size l/s	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Separator Volume	ØA1	Y1	YC	"Fixed" extension option
YH2003E	3	1000	1000	1000	670	640	360	110	37	340	585	100	270	PLA13555G PLA13556G

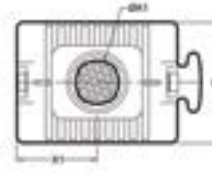
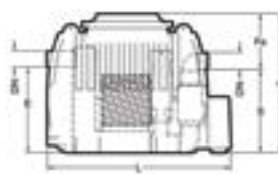


YH20 range	Size l/s	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Separator Volume	ØA1	"Adjustable" extension option		
YH2010E	10	1500	1500	1700	1200	1150	550	160	88	1520	745	ETR47EF	ETR65EF	

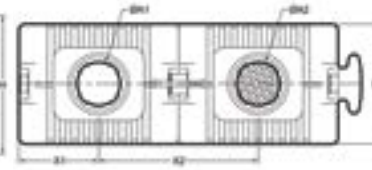
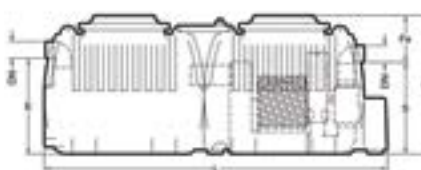
Ellipse



EH20 range	Size l/s	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Separator Volume	ØA1	ØA2	X1	X2	Y1	YC	"Adjustable" extension option	
EH2020D	20	2400	1624	1700	1160	1120	580	200	229	2900	745	745	615	1170	300	355	ETR47EF	ETR65EF



AHFE range	Size l/s	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Separator Volume	ØA1	X1	"Adjustable" extension option	
AHF130E	30	2295	1500	1730	1085	1065	665	200	187	3100	745	1000	ETR47EF	ETR65EF



AHFE range	Size l/s	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Separator Volume	ØA1	ØA2	X1	X2	"Adjustable" extension option	
AHF150E	50	4355	1500	1730	1055	1035	695	315	317	5700	745	745	1000	2000	ETR47EF ETR65EF	

options

1. Visual and audible alarm p. 70-71
2. Cylindrical polyethylene extension p.70

	Sphère	Ellipse	Aronde
1. Visual and audible alarm p. 70-71	X	X	X
2. Cylindrical polyethylene extension p.70	X	X	X

Dimensions are in millimetres, weights in kilograms, volumes in litres.



Oil separators

with coalescing filter

- Tank in fabricated steel with lifting rings.
- Epoxy bi-component coating.
- Inlet aerator.
- PVC inlet and outlet.

- Vertical automatic stopper in polyethylene calibrated to 0.85.

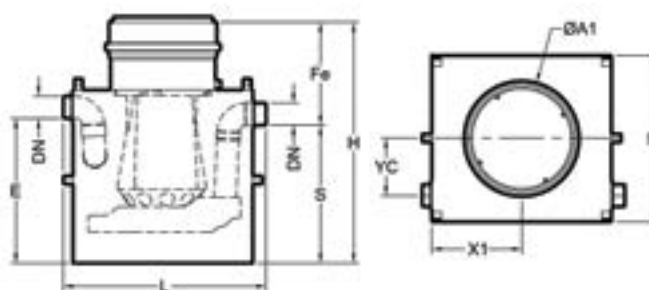
HydroCube range:

- Light cover (pedestrian traffic) with locking screw.
- Conical partition.
- Fully removable coalescing filter.
- Available as reinforced model (depending on installation limitations).

HydroBac range:

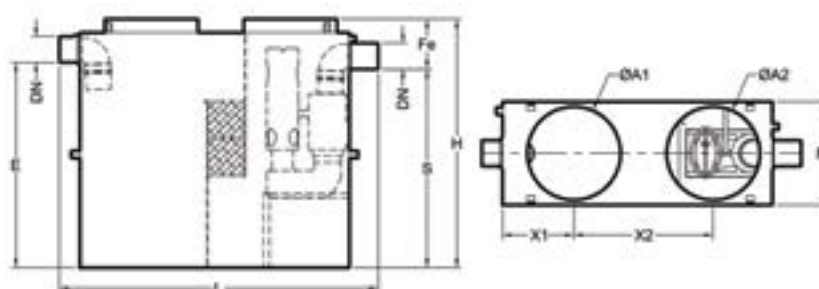
- Cylindrical manholes without cover.
- Removable coalescing filter.

HydroCube



YH20A range	Size l/s	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Separator Volume	ØA1	X1	YC	"Fixed" extension option	"Adjustable" extension option
YH2003A	3	900	745	1200	660	630	570	110	110	350	585	373	253	PLA13555G PLA13556G	-
YH2010A	10	1470	1200	1740	1050	1000	740	160	247	1560	745	650	410	-	ETR47EF ETR65EF

HydroBac



AHFA range	Size l/s	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Separator Volume	ØA1	ØA2	X1	X2
AHF120A	20	2140	830	1650	1200	1150	500	200	480	1910	750	750	450	1050

Options

	HydroCube	HydroBac
1. Visual and audible alarm p. 70-71	X	X
2. Cylindrical polyethylene extension p.70	X	

Dimensions are in millimetres, weights in kilograms, volumes in litres.



Oil separators

with coalescing filter and lifting tank

Use:

- 100% recyclable rotomoulded polyethylene tank with lifting rings and manhole(s).
- Vertical automatic stopper in polyethylene calibrated to 0.85.

Design:

- Ideal for treating run-off water requiring downstream lifting.
- Underground installation inside and outside the building.
- Underground car park special.
- Manufactured with reinforcements for improved mechanical strength.
- Ø110 inlet with nitrile seal.
- Polyethylene partition with filter holder and coalescing filter.

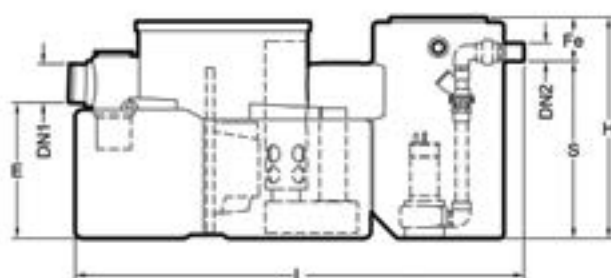
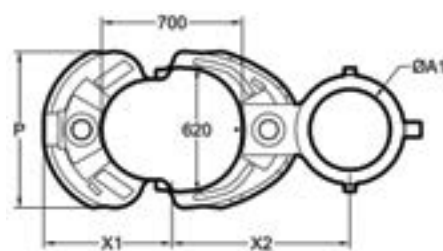
- 1 polyethylene built-in lifting tank.
- 1 non-slip polyethylene cover locked with stainless steel screws for safe pedestrian traffic.
- Ø50 female PVC vent bonding sleeve.
- DN63 PVC outlet sleeve.
- DN50 bonding cable gland.
- Handling straps for easy installation.

Interior equipment:

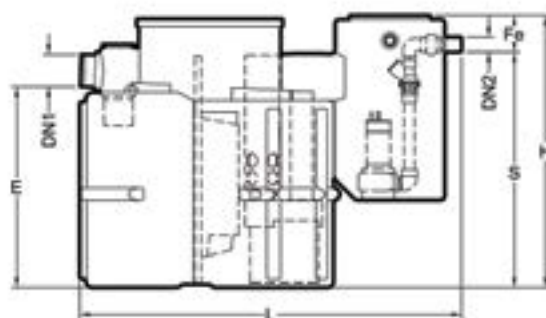
- 1 built-in lifting station.
- 1 x 230V submersed single-phase pump, Caprari DXV09M/G type, mounted with union fitting for quick removal.
- 1 DN40 PVC non-return ball valve

**Product benefits**

Compact and solid unit combining water lifting and treatment



EHR0501C model



EHR0503C model

EHR range	Size l/s	L	P	H	E	S	Fe	DN1 (PVC Ø)	DN2 (PVC Ø pressure)	Weight	Volume			ØA1	Y1	Y2	Pump type
											sludge trap	Separator	Lifting				
EHR0501C	1.5	1880	780	885	585	735	150	110	63	68	150	190	90	400	640	885	DXV09M/G
EHR0503C	3	1880	780	1315	1015	1165	150	110	63	85	300	350	90	400	640	885	DXV09M/G

Options

1. Visual and audible alarm p. 70-71

EHR

X

Dimensions are in millimetres, weights in kilograms, volumes in litres.



Oil separators

The pump

DXV 09/G-230

DESCRIPTION:

Voltage: single-phase 230V.

Speed: 2800 rpm.

Power: 0.9 kW.

Works with built-in level regulator.

Construction: Stainless steel and cast iron

Wheel: Open.

Seal with mechanical trim, silicon carbide

Max. grain size: 6 mm.

Weight: 19 kg.

Pump supplied with 10 metres of cable (H07RN-F).

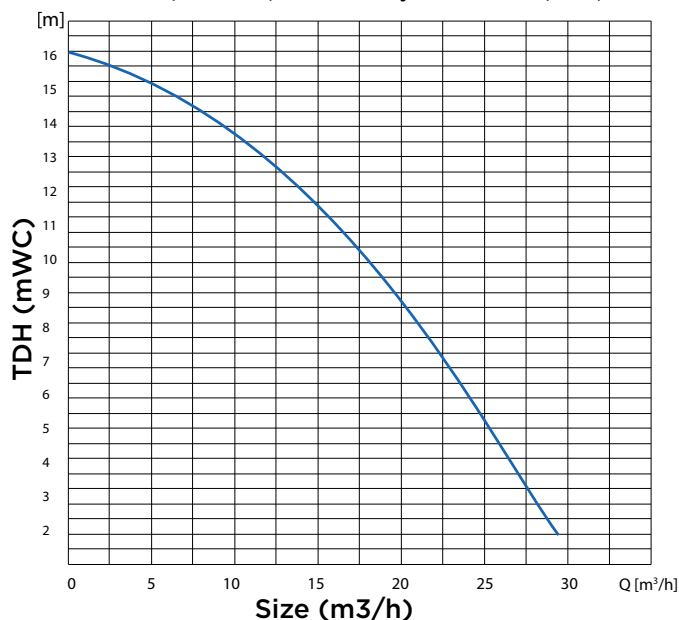
Thermal motor monitoring.

Power cable can be disconnected from the motor.

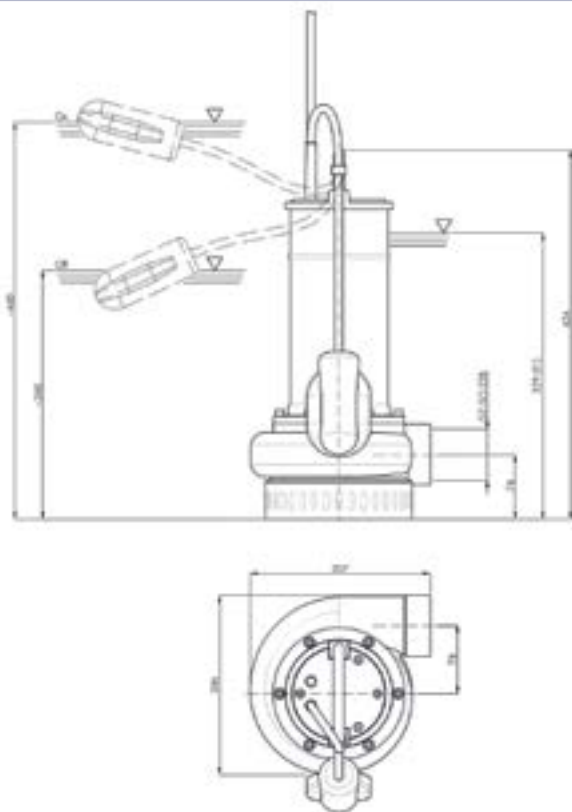


Pump curve

with size (flow rate) and total dynamic head (TDH):



Installation of the EHR separator





Oil separators

with sludge trap, coalescing filter and lifting compartment

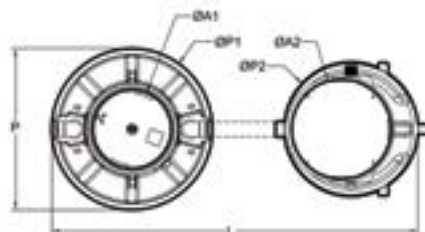
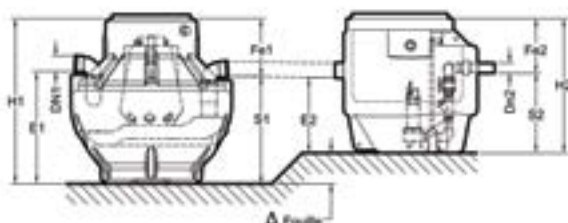
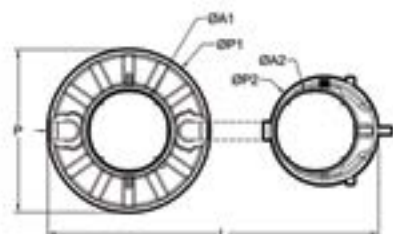
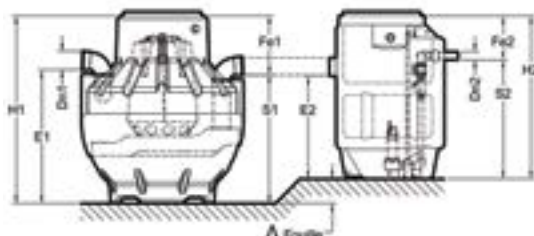
- 100% recyclable rotomoulded polyethylene tank with lifting rings and manhole.
- Vertical automatic stopper in polyethylene calibrated to 0.85.
- PVC inlet and outlet.
- Conical partition
- Fully removable coalescing filter.

Lifting tank:

- 100% recyclable rotomoulded polyethylene tank with manhole.
- Volume under water level: 400l.
- Female PVC inlet bonding sleeve for PVC tube.
- 2"1/2 PVC outlet tube.
- Ø 76/90 TPC cable gland sheath.

- Female PVC cable gland for Ø50 external PVC tube.
- 500 mm long PVC tube to connect the oil separator to the lifting tank.

- Available as reinforced model (depending on installation limitations).

**YHR0503E model****YHR0506E / 0508E / 0510E models**

Oil separator

YHRE range	Size l/s	P1	H1	E1	S1	Fe1	DN1 (PVC Ø)	Weight	Volume		ØA1	“Fixed” extension option	“Adjustable” extension option
									sludge trap	Separator			
YHR0503E	3	1200	1230	840	800	430	110	40	300	360	585	PLA13555G PLA13556G	-
YHR0506E	6	1500	1700	1200	1150	550	160	88	600	900	745	-	ETR47EF ETR65EF
YHR0508E	8	1550	1700	1200	1150	550	160	88	800	720	745	-	
YHR0510E	10	1550	1965	1450	1400	565	160	114	1000	940	745	-	

Lifting tank

YHRE range	Size l/s	D2	H2	E2	S2	Fe2	DN2 (PVC Ø pressure)	Weight*	Volume under water level	ØA2	“Adjustable” extension option
YHR0503E	3	1000	1000	560	650	350	75	30	400	745	ETR47EF ETR65EF
YHR0506E	6	1000	1500	915	1100	400	75	55	400	745	
YHR0508E	8	1000	1500	915	1100	400	75	55	400	745	
YHR0510E	10	1000	1500	915	1100	400	75	55	400	745	

Treatment unit

YHRE range	Size l/s	P	L	Δ Excavation
YHR0503E	3	1230	2800	230
YHR0506E	6	1500	3400	200
YHR0508E	8	1550	3450	200
YHR0510E	10	1550	3450	465

Options

1. Visual and audible alarm p. 70-71
2. Cylindrical polyethylene extension p.70
3. Kit with 1 or 2 pumps p. 56

Sphère**X****X****X**

Dimensions are in millimetres, weights in kilograms, volumes in litres.



Oil separators

with sludge trap, coalescing filter and lifting compartment

- Tank in fabricated steel with lifting rings.
- Epoxy resin/polyamide adduct-based bi-component coating.
- Inlet aerator.
- PVC inlet and outlet.
- Vertical automatic stopper in polyethylene calibrated to 0.85.
- Conical partition - fully removable coalescing filter.
- Cable tap and vent DN50.
- Built-in lifting tank (optional pump kit).
- 2 1/2" steel threaded coil tank outlet discharge.
- 3-piece tapped/female D75 union bonding connection supplied with the tank.

Sludge trap compartment, automatic stopper and coalescing filter



1 First manhole

Lifting compartment

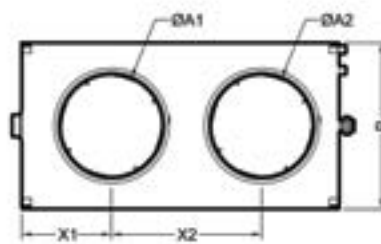
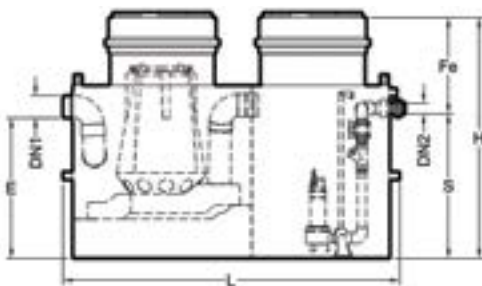


2 Second manhole

The different compartments:



Ref. YHR0506A



Commissioning:
ref. IN4005

YHRA range	Size l/s	L	P	H	E	S	Fe	DN1 (PVC Ø)	DN2 (Threading)	Weight	Volume			ØA1	ØA2	X1	X2	"Adjustable" extension option
											sludge trap	Separator	Lifting					
YHR0501A	1.5	2160	900	1490	660	800	690	110	2 1/2"	275	150	200	622	745	745	370	1100	ETR47EF ETR65EF
YHR0503A	3	2170	995	1490	790	800	690	110	2 1/2"	296	300	442	700	745	745	500	980	
YHR0506A	6	2480	1200	1740	1020	1050	690	160	2 1/2"	462	600	960	1080	745	745	650	1090	
YHR0508A	8	2480	1200	1990	1270	1300	690	160	2 1/2"	628	800	970	1250	745	745	650	1090	
YHR0510A	10	2500	1200	1990	1270	1300	690	160	2 1/2"	628	1000	1000	1250	745	745	650	1090	

Options

1. Visual and audible alarm p. 70-71
2. Cylindrical polyethylene extension p.70
3. Kit with 1 or 2 pumps p. 56

Hydrobac

X

X

X

Dimensions are in millimetres, weights in kilograms, volumes in litres.



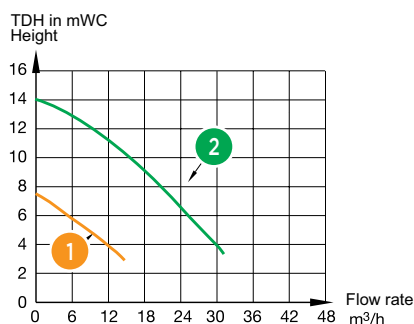
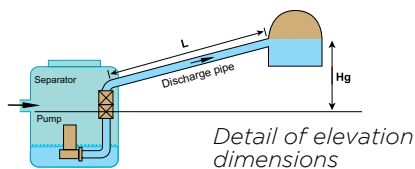
Oil separators



Lifting compartment pump kits

1 or 2 pumps, choose your "lifting kit" depending on:

a lifting height (Hg)



b nominal size of the unit

Kit principle:

Specially tailored to ref. YHRA and YHRE separators.

The kit is chosen based on the flow rate and Total Dynamic Head (=Geometric height + pressure loss).

Composition:

- 1 or 2 submersible pump(s) on plastic bracket.
- Pressure PVC pipes with connections.
- 1 or 2 ball check valves.
- 1 or 3 level regulators with counterweight.
- 1 control cabinet for kits with 2 pumps.



Lifting compartment ref. Kit KP26P (option)

a Choice depending on lifting height (Hg)

Kit Ref.	Pump type(s)	Plastic foot bracket(s)	No. of pumps	Regulation	DN2 Discharge	Power kW	Voltage V	Current A	Interior discharge pipes	Curve number
KP11P	Feka 600	yes	1	regulated by float switches	2"1/2	0.55	230	4.3	40	1
KP21P		yes	2	regulated by float switches + 1 alarm float	2"1/2	0.55	230	4.3	40	
KP16P	Feka 1200 automatic	yes	1	regulated by float switches	2"1/2	1.2	230	8.6	50	2
KP26P	Feka 1200	yes	2	regulated by float switches + 1 alarm float	2"1/2	1.2	230	8.6	50	

► Other configurations are available - Contact us

b Choice depending on nominal size of the unit

YHRA/E range	KP11P pump kit	KP21P pump kit	KP16P pump kit	KP26P pump kit
YHR0501A	•	•		
YHR0503A/E	•	•		
YHR0506A/E		•	•	
YHR0508A/E			•	•
YHR0510A/E				•




BSR-type control cabinet.

Responsible for automatic operation and protecting the lifting pumps. Allows automatic reversal on each start-up, and simultaneous running of 2 pumps on the level of the 3rd float. It has "circuit breaker on" lights per pump and "voltage present" lights.



Acid neutralisation tank

- 100% recyclable rotomoulded polyethylene tank with lifting rings and manhole(s).
- Polyethylene inlet and outlet
- Light cover (pedestrian traffic) with locking screw.
- 1 acid neutralisation column with removable basket(s).
- Operation: neutralises sulphuric acid before discharge into the network.
- The unit is particularly suited to treating wastewater from battery maintenance or storage premises or chemistry rooms.
- It has a tank with one to three marble filter baskets (depending on reference). The acid is neutralised when it comes into contact with these filters.




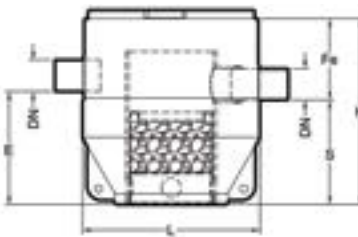
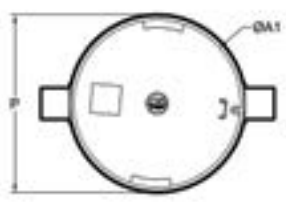
OPTION

Fixed cover extension (not telescopic), 2 heights available:


200 mm, 6 kg PLA13555G

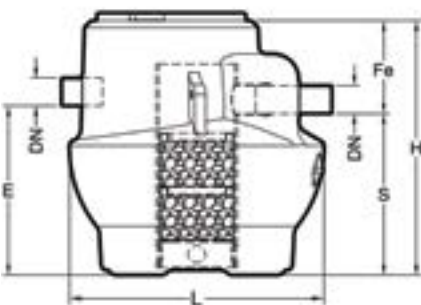
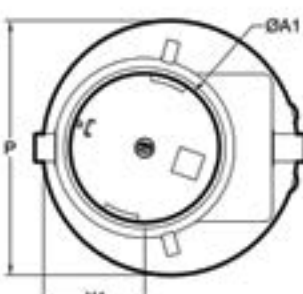
400 mm, 8 kg PLA13556G







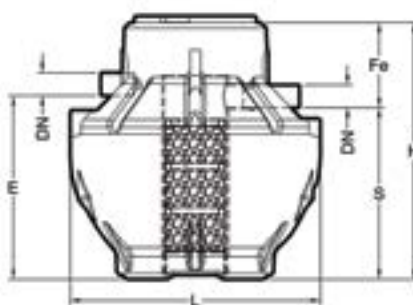
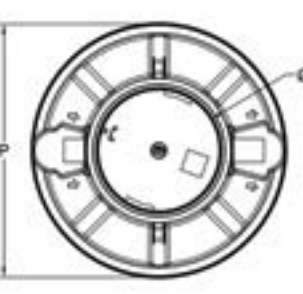
YNE range	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Useful volume	ØA1	"Fixed" extension option
YN00E	625	625	680	400	370	310	110	31	110	585	PLA13555G PLA13556G



YNE range	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Useful volume	ØA1	X1	"Fixed" extension option
YN01E	1000	1000	1000	670	640	360	110	70	340	585	400	PLA13555G PLA13556G



YNE range	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Useful volume	ØA1	"Fixed" extension option
YN02E	1200	1200	1230	880	825	405	110	98	660	585	PLA13555G PLA13556G

* Weight with marble gravel

Options

1. non-telescopic cylindrical polyethylene extension p. 70

YNE

X

Dimensions are in millimetres, weights in kilograms, volumes in litres.



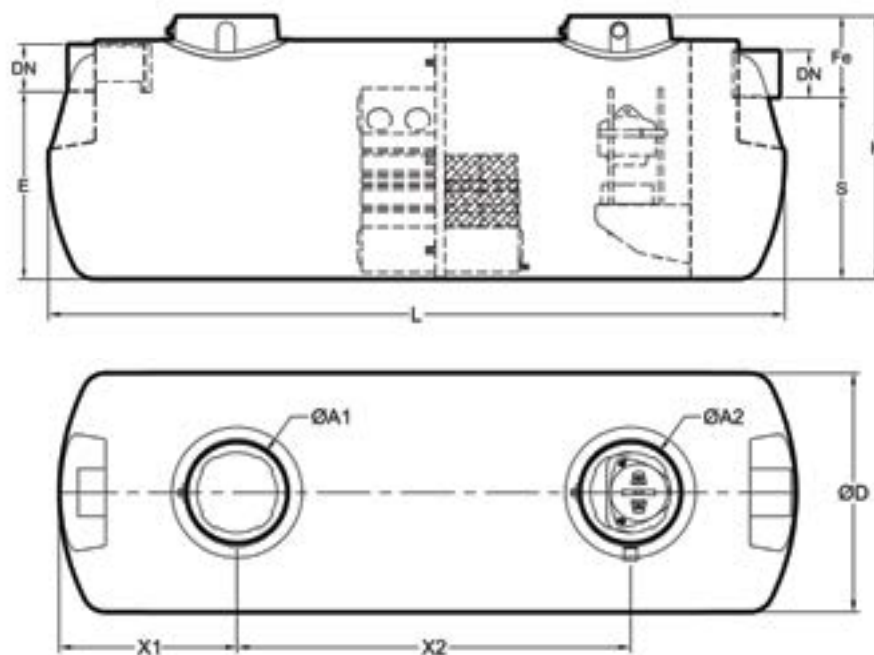
Cylindrical separators

with sludge trap and coalescing filter

- Polyester tank made with filament winding.
- Automatic stopper in polyethylene calibrated to 0.85 outlet (other calibration on request)
- Removable coalescing filter.
- Cylindrical manholes without cover.



Extension as option



U6

U6 range	Size l/s	L	ØD	H	E	S	Fe	DN (PVC Ø)	Weight	Volume		ØA1	ØA2	X1	X2	"Adjustable" extension option
										sludge trap	Separator					
U6ADA2P	30	3554	1600	1816	1350	1300	516	200	421	3000	2700	790	790	1150	1254	ETR47EF ETR65EF
U6ADF3P	35	4499	1600	1816	1240	1190	626	315	509	3500	3150	790	790	1150	2199	
U6AEA3P	40	5093	1600	1816	1240	1190	626	315	556	4000	3600	790	790	1150	2792	
U6AEF3P	45	5686	1600	1816	1240	1190	626	315	605	4500	4050	790	790	1150	3386	
U6AFA3P	50	6280	1600	1816	1240	1190	626	315	659	5000	4500	790	790	1150	3980	

For larger sizes, please contact our design office.

Options

1. Visual and audible alarm p. 70-71
2. Cylindrical polyethylene extension p.70
3. Anchoring straps p. 72
4. Speed chassis p. 72

U6

X

X

X

X

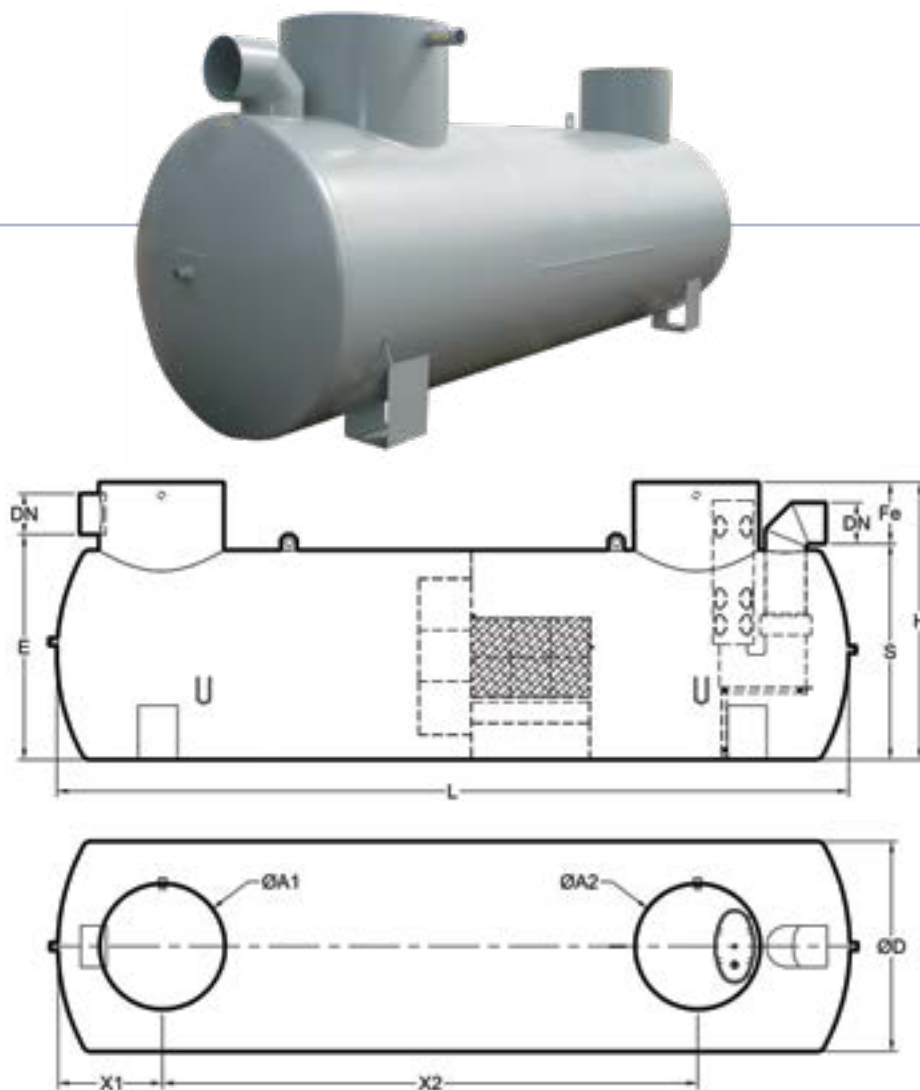
Dimensions are in millimetres, weights in kilograms, volumes in litres.



Cylindrical separators

with sludge trap and coalescing filter

- Tank in S235JR fabricated steel with lifting rings and anchoring bracket.
- Epoxy resin-based bi-component coating.
- Cylindrical manholes without covers.
- Automatic stopper in polyethylene calibrated to 0.85 outlet (other calibration on request)
- Removable coalescing filter.



U4 range	Size l/s	L	ØD	H	E	S	Fe	DN (PVC Ø)	Weight	Volume		ØA1	ØA2	X1	X2
										Sludge trap	Separator				
U4ADA2A	30	3547	1600	2000	1703	1653	347	200	726	3000	2700	750	750	698	1902
U4ADF3A	35	4047	1600	2120	1723	1653	467	315	841	3500	3150	750	950	698	2187
U4AEA3A	40	4047	1600	2120	1723	1653	467	315	841	4000	3600	750	950	698	2187
U4AEF3A	45	4547	1600	2120	1723	1653	467	315	900	4500	4050	750	950	698	2687
U4AFA3A	50	5047	1600	2120	1723	1653	467	315	988	5000	4500	750	950	698	3187

For larger sizes, please contact our design office.

Options

1. Visual and audible alarm p. 70-71
2. anchoring tensioners p. 72
3. Speed chassis p. 72

U4

X

X

X

Dimensions are in millimetres, weights in kilograms, volumes in litres.



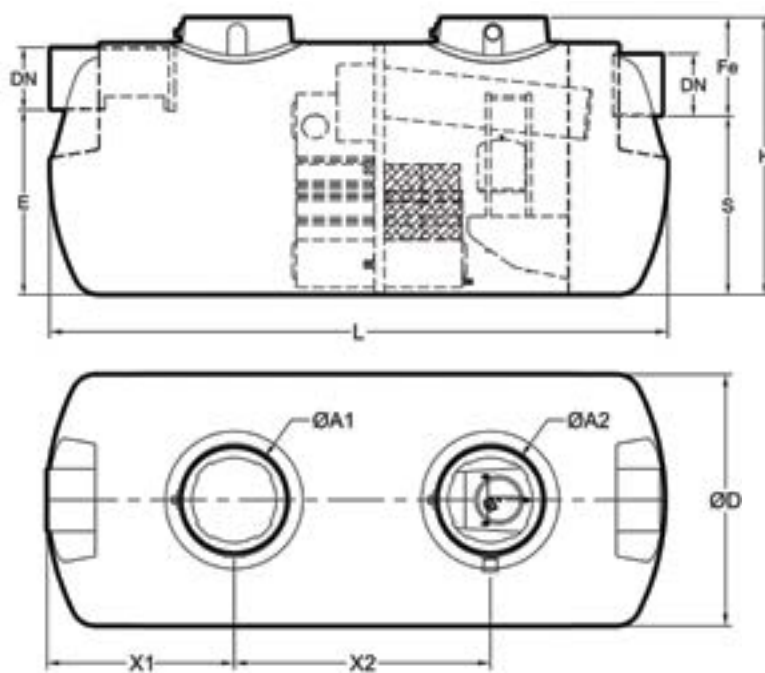
Cylindrical separators

with sludge trap, coalescing filter & bypass

- Polyester tank made with filament winding.
- Automatic stopper in polyethylene calibrated to 0.85 outlet (other calibration on request)
- Removable coalescing filter.
- Cylindrical manholes without cover.



Extension as option



W6

W6 range	Size l/s	L	ØD	H	E	S	Fe	DN (PVC Ø)	Weight	Volume		ØA1	ØA2	X1	X2	"Adjustable" extension option
										sludge trap	Separator					
W6ADA4P	30	4105	1600	1816	1150	1100	716	400	549	3000	2700	790	790	1150	1805	ETR47EF ETR65EF
W6ADF4P	35	4742	1600	1816	1150	1100	716	400	607	3500	3150	790	790	1150	2442	
W6AEA4P	40	5380	1600	1816	1150	1100	716	400	667	4000	3600	790	790	1150	3080	
W6AEF4P	45	6017	1600	1816	1150	1100	716	400	727	4500	4050	790	790	1150	3717	
W6AFA5P	50	7206	1600	1816	1080	1030	786	500	812	5000	4500	790	790	1150	4906	

For larger sizes, please contact our design office.

Options

1. Visual and audible alarm p. 70-71
2. Cylindrical polyethylene extension p.70
3. Anchoring straps p. 72
4. Speed chassis p. 72

W6

X

X

X

X

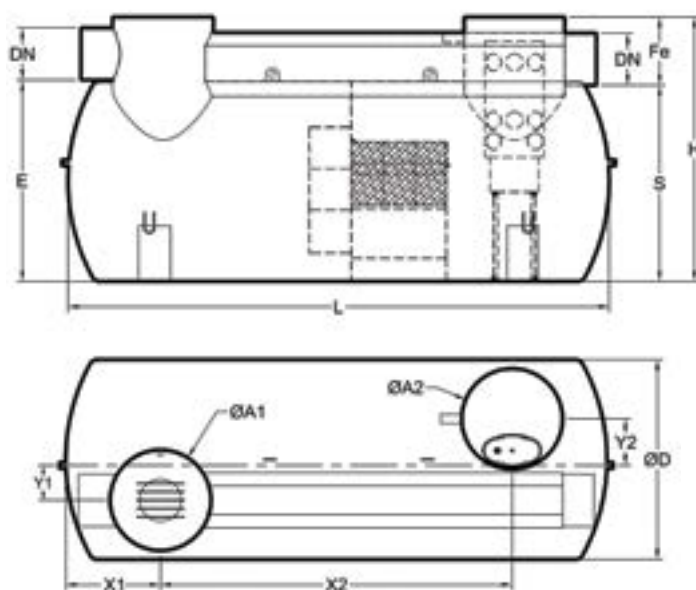
Dimensions are in millimetres, weights in kilograms, volumes in litres.



Cylindrical separators

with sludge trap, coalescing filter & bypass

- Tank in S235JR fabricated steel with lifting rings and anchoring bracket.
- Epoxy resin-based bi-component coating.
- Automatic stopper in polyethylene calibrated to 0.85 outlet (other calibration on request)
- Railings.
- Removable coalescing filter.
- Cylindrical manholes without cover.



Y1 range	Size l/s	L	ØD	H	E	S	Fe	DN (PVC Ø)	Weight	Volume		ØA1	ØA2	X1	X2	Y1	Y2
										sludge trap	Separator						
Y1ADA4A	30	3047	1600	2200	1623	1573	627	400	810	3000	2700	850	850	801	1444	337	337
Y1ADF4A	35	3547	1600	2200	1623	1573	627	400	917	3500	3150	850	850	801	1944	337	337
Y1AEA4A	40	4047	1600	2200	1623	1573	627	400	990	4000	3600	850	850	801	2444	337	337
Y1AEF4A	45	4547	1600	2200	1623	1573	627	400	1063	4500	4050	850	850	801	2944	337	337
Y1AFA5A	50	3645	1900	2510	1913	1863	647	500	1128	5000	4500	950	950	900	1844	387	387

For larger sizes, please contact our design office.

Options

1. Visual and audible alarm p. 70-71
2. anchoring tensioners p. 72
3. Speed chassis p. 72

Y1

X

X

X

Dimensions are in millimetres, weights in kilograms, volumes in litres.



Grease and/or starch separators

Grease or grease and starch separators:

- **Treatment challenges** p 42
- **Regulations**..... p 43
- **Which product?** p 44-45

Grease separators with:

- **polyethylene sludge trap**..... p 46-47
- **stainless steel sludge trap** p 48
- **polyethylene sludge trap + drain column** p 49-50
- **stainless steel sludge trap + drain column**..... p 51
- **without polyethylene sludge trap**..... p 52-53

Grease and starch separators with:

- **polyethylene sludge trap** p 54
- **polyethylene sludge trap + drain column**..... p 55

Starch separators:

- **with or without polyethylene drain column**..... p 56-57

Grease collector:

- **Polyethylene under sink** p 58
- **Stainless steel dishwashing sink special**..... p 59

Grease separators:

- **Stainless steel above ground installation special** p 58
- **Polyethylene above ground installation special**..... p 60-61



Grease and starch separators treatment challenges

1. Introduction

Wastewater from food preparation contains animal or plant-based grease and oil. This leads to significant build-ups in pipes. These build-ups disrupt wastewater treatment plants and networks.

They cause high collector maintenance costs for local authorities.

So grease build-ups cause:

- **clogging and/or blocking of pipes** (this can account for 30 to 50% of call-outs),
- **grease treatment problems at treatment plants, leading to increased costs:** grease is difficult to biodegrade and causes an additional chemical oxygen demand (COD). Therefore the water treatment basin must be further ventilated, leading to additional operating costs,
- **foul odours** accompanied by **toxic gases and pipe corrosion:** the grease build-up in pipes creates areas conducive to fermentation and the emission of toxic gases, including hydrogen sulphide,
- **disruption of aquatic flora and fauna:** grease released into nature causes additional consumption of dissolved oxygen in watercourses, disrupting the flora and fauna and contributing to the development of some filamentous algae.

The installation of a grease separator allows solid waste and grease to be trapped at the source, and avoids any harm to water and public sanitation systems.

A study conducted by CNIDEP in 2007 highlighted that “for butchers, caterers, restaurants and takeaway companies, 95% of grease in manufacturing effluent is from 4 processes:

- Cooking in water (54%), refrigeration (4%), washing dishes by hand (30%) and the dishwasher (7%).

2. Regulations

Article L 13 31 10 of the new public health code states that:

“any release of wastewater other than domestic wastewater into public sewers must be previously authorised by the local authorities that own the pipes carrying this water before reaching the natural environment”.

Sanitation regulations and departmental sanitary rules must indicate rules for managing waste grease, i.e. the installation of a pre-treatment system. We also note that an increasing amount of cities are imposing it in their municipal regulations.





Grease and starch separators regulations

2.1 - Standards

The production of grease separators is governed by different standards, notably French regulation NF EN 1825-1, supplemented by NF P 16-500-1/CN and NF EN 1825-2. Units are also subject to CE marking, whose terms are defined in appendix ZA.

The D.O.P. has been mandatory since 1 July 2013. Each product must be accompanied by its D.O.P. which also includes CE marking:

2.2 - Determining nominal size (for $NS \geq 2$)

A - the sludge trap

The sludge trap volume, in litres, must be **at least** **100 x NS**

B - the separation chamber

Nominal size NS	Minimum grease separation area surface m ²	Minimum grease separation area volume m ³	Minimum grease storage area volume m ³
NS	0.25 x NS	0.24 x NS	0.04 x NS

The volume of the separation chamber can also be calculated as follows:

$$\text{Useful volume (litres)} = 240 \times NS$$

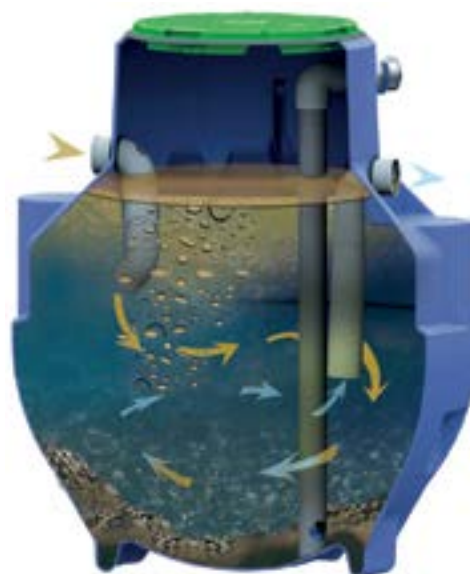
3. Hydraulic flow

Wastewater from food industries and/or restaurants contain grease that, when accumulated, has a pH between 1 and 3. This grease releases acidity that damages epoxy-type organic coatings.

So Techneau has chosen corrosion-proof materials to produce its grease separators.

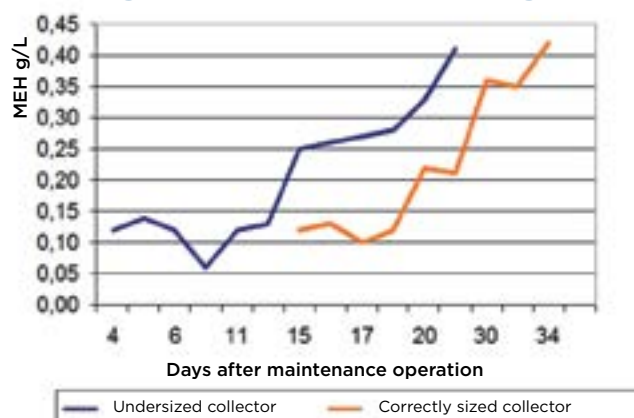
Depending on site limitations, the grease separator will be manufactured either in:

rotomoulded polyethylene OR polyester OR stainless steel (304L or 316L stainless steel version).



4. The dimensions

Changes to unit outlet discharge



The chosen size of a grease and starch separator is crucial.

An undersized unit will have discharges exceeding 250 mg/l after just 16 days of operation.



Grease separators with sludge trap: which size?

2.1 - Calculation method as per NF EN1825-2

For the size of grease separators with sludge trap and grease and starch separators, the calculation method as per the NF EN 1825-2 standard is the following:

$$NS = \text{No. of meals} \times V \text{ meals} \times fd \times ft \times fr \times \frac{fq}{(3600 \times \text{daily running time})}$$

fd : Density Factor; ft : Temperature Factor; fr : Detergent Factor; fq : Peak Factor.

2.2 - Key factors as per NF EN1825-2

Factors	Restaurant			Hospital	Professional cooking establishment	Canteen (without preparation)
	1 service	2 services	Hotel restaurant			
Daily running time (h)	8	16	16	16	24	8
Temperature Factor (1: T°C < 60°C) (ft)	1	1	1	1	1	1
Detergent factor / 1.3: detergent presence (fr)	1.3	1.3	1.3	1.5	1.3	1.3
Peak factor (fq)	8.5	8.5	5	13	22	20
Base V / meals (litres)	50	50	100	20	10	5

Notes: ft considered = 1 (T°C < 60°C); if T°C > 60°C, multiply NS by 1.3; for the same number of meals, the nominal size is inversely proportional to the daily activity time.

2.3 - Selection table for grease separators with sludge trap

Restaurant ⁽²⁾			Hospi- tal	Professional cooking establishment	Canteen (without preparation)	Specific industrial uses	NS	Grease separator with sludge trap			
Number of meals								Polyethylene		Stainless steel	
1 service	2 services	Hotel restaurant	No. of meals/day			No drain column		With drain column	No drain column	With drain column	
≤ 52	≤ 104	≤ 89	≤ 148	≤ 101	≤ 222	Contact us	1	YG0500E	YG1000E	BDG01I	BDGA01I
≤ 78	≤ 156	≤ 133	≤ 222	≤ 151	≤ 332		1.5	YG0501E	YG1001E	BDG02I	BDGA02I
≤ 104	≤ 209	≤ 177	≤ 295	≤ 201	≤ 443		2	YG0502E HG0502E	YG1002E HG1002E	BDG02I	BDGA02I
≤ 156	≤ 313	≤ 266	≤ 443	≤ 302	≤ 665		3	YG0503E	YG1003E	BDG03I	BDGA03I
≤ 209	≤ 417	≤ 354	≤ 591	≤ 403	≤ 886		4	YG0504E HG0504E	YG1004E HG1004E	BDG04I	BDGA04I
≤ 261	≤ 521	≤ 443	≤ 738	≤ 503	≤ 1108		5	YG0505E	YG1005E	BDG06I	BDGA06I
≤ 313	≤ 626	≤ 532	≤ 886	≤ 604	≤ 1329		6	YG0506E	YG1006E	BDG06I	BDGA06I
≤ 417	≤ 834	≤ 709	≤ 1182	≤ 806	≤ 1772		8	EG0508C	EG1008C	BDG08I	BDGA08I
≤ 521	≤ 1043	≤ 886	≤ 1477	≤ 1007	≤ 2215		10	EG0510C	EG1010C	BDG10I	BDGA10I
≤ 626	≤ 1251	≤ 1063	≤ 1772	≤ 1208	≤ 2658		12	EG0512C	EG1012C	-	-
≤ 782	≤ 1564	≤ 1329	≤ 2215	≤ 1510	≤ 3323		15	-	-	BDG15I	BDGA15I
≤ 834	≤ 1668	≤ 1418	≤ 2363	≤ 1611	≤ 3545		16	-	-	For uses other than restaurant or community kitchens, please contact our design	
≤ 1043	≤ 2085	≤ 1772	≤ 2954	≤ 2014	≤ 4431		20	DG20E	DGA20E		
≤ 1564	≤ 3128	≤ 2658	≤ 4431	≤ 3021	≤ 6646		30	DG30E	DGA30E		
≤ 2085	≤ 4170	≤ 3545	≤ 5908	≤ 4028	≤ 8862		40	DG40E	DGA40E		

For uses other than restaurant or community kitchens, please contact our design office.



Grease separators and/or starch separators: which size?

2.4 - Selection table for grease and starch separators

Restaurant ⁽¹⁾			Hospital	Professional cooking establish- ment	Specific industrial use	NS	Grease and starch separator with sludge trap			
Number of meals							Polyethylene		Stainless steel	
1 service	2 services	Hotel restaurant					No. of meals/day		No drain column	With drain column
≤ 52	≤ 104	≤ 89	≤ 148	≤ 101	Contact us	1	YG2000E	YG2500E	BDG01I + OSF010	BDGA01I + OSF010
≤ 78	≤ 156	≤ 133	≤ 222	≤ 151		1.5	-	-	BDG02I + OSF010	BDGA02I + OSF010
≤ 104	≤ 209	≤ 177	≤ 295	≤ 201		2	YG2002E	YG2502E	BDG03I + OSF010	BDGA03I + OSF010
≤ 156	≤ 313	≤ 266	≤ 443	≤ 302		3	YG2003E	YG2503E	BDG04I + OSF010	BDGA04I + OSF010
≤ 261	≤ 521	≤ 443	≤ 38	≤ 503		5	YG2005E	YG2505E	BDG06I + OSF010	BDGA06I + OSF010
≤ 313	≤ 626	≤ 532	≤ 886	≤ 604		6	EG2006C	EG2506C	-	-
≤ 365	≤ 730	≤ 620	≤ 1034	≤ 705		7	EG2007C	EG2507C	BDG08I + OSF010	BDGA08I + OSF010
≤ 417	≤ 834	≤ 709	≤ 1182	≤ 806		8	EG2008C	EG2508C	BDG10I + OSF010	BDGA10I + OSF010
≤ 521	≤ 1043	≤ 886	≤ 1477	≤ 1007		10	EG2010C	EG2510C	BDG15I + OSF010	BDGA15I + OSF010
≤ 782	≤ 1564	≤ 1329	≤ 2215	≤ 1510		15	GF15E	GFA15E	-	-

(1) For a **restaurant**, there are 2 possibilities: 1 or 2 services per day.

3. Selection table for starch separators

The choice of starch separator depends on the number of meals served or the amount of potatoes passing through the peeler per day.

Number of meals per day	Weight of potatoes per day	Size	Starch separator	
			No drain column	With drain column
≤ 400	80 kg	1	YG3000E	YG3500E
≤ 1000	200 kg	2	YG3002E	YG3502E
≤ 2500	500 kg	3	YG3003E	YG3503E
≤ 3000	600 kg	4	YG3004E	YG3504E
≤ 6000	1200 kg	5	EG3005C	EG3505C
≤ 7500	1500 kg	6	EG3006C	EG3506C

4. Selection table for grease collector

The choice of grease collector depends on the number of meals per service and number of sinks connected.

Number of meals per service	Number of sinks connected	Grease collector	
		Stainless steel version	Polyethylene version
1 to 30	1	MiniGR040	GMIE
31 to 45	1 to 2	MiniGR050	
46 to 60	1 to 2	MiniGR060	-
61 to 80	1 to 3	MiniGR080	-
81 to 100	1 to 3	MiniGR100	-



Grease separators with sludge trap

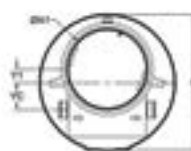
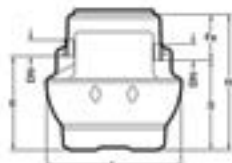
- Tank in recyclable rotomoulded polyethylene.
- Inlet and outlet in PVC or seals in nitrile.
- Sludge trap to retrieve heavy materials.

- 2 light covers (for pedestrian traffic), 1/4-turn closure, stainless steel screws, with seal (except the Sphère range).

Sphère range:

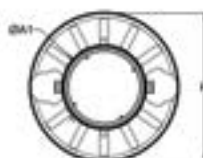
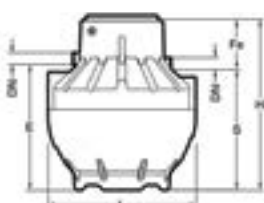
- Available as reinforced model (depending on installation limitations).
- Light cover (pedestrian traffic) with seal, stainless steel screws.

Sphère



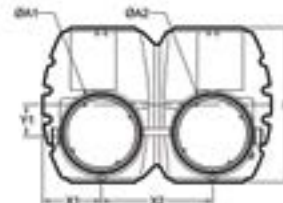
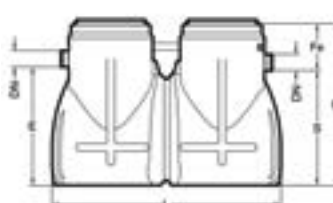
YG05E range	Nominal size	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Volume		ØA1	X1	YC	“Fixed” extension option
										sludge trap	separator				
YG0500E	1	1000	1000	1000	698	668	332	110	27	100	240	620	100	270	PLA13555G PLA13556G

*fixed extension (non-telescopic)



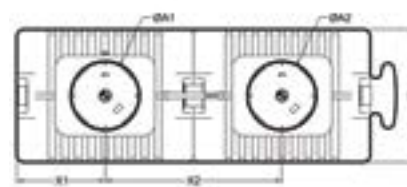
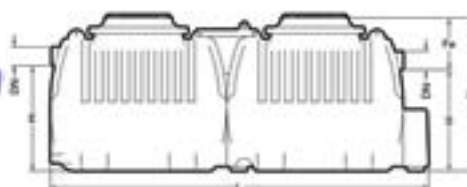
YG05E range	Nominal size	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Volume		ØA1	“Fixed” extension option	“Adjustable” extension option
										sludge trap	separator			
YG0501E	1.5	1200	1200	1230	880	830	400	110	37	150	510	620	PLA13555G	-
YG0502E	2	1250	1250	1230	930	880	350	110	37	200	490	620	PLA13556G	-
YG0503E	3	1200	1200	1540	1240	1190	350	110	52	300	730	620	-	-
YG0504E	4	1500	1500	1700	1275	1225	475	110	69	400	1100	770	-	ETR47EF
YG0505E	5	1550	1550	1700	1475	1425	275	160	72	500	1200	770	-	ETR65EF
YG0506E	6	1500	1500	1965	1705	1655	310	160	95	600	1440	770	-	-

Ellipse



EG05 range	Nominal size	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Volume		ØA1	ØA2	X1	X2	Y1	“Adjustable” extension option
										sludge trap	separator						
EG0508C	8	2400	1624	1700	1250	1210	490	160	232	800	2460	770	770	615	1170	300	ETR47EF
EG0510C	10	2400	1624	2072	1622	1582	490	160	254	1000	3090	770	770	615	1170	300	ETR65EF
EG0512C	12	2450	1700	2072	1532	1492	580	200	264	1200	2890	770	770	615	1170	300	-

Aronde



DGE range	Nominal size	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Volume		ØA1	ØA2	X1	X2	“Adjustable” extension option
										sludge trap	separator					
DG20E	20	4292	1500	1730	1140	1070	660	200	318	2000	4800	770	770	1000	2000	ETR47EF ETR65EF

options

1. Visual and audible grease alarm p. 70-71
2. Cylindrical polyethylene extension p.70

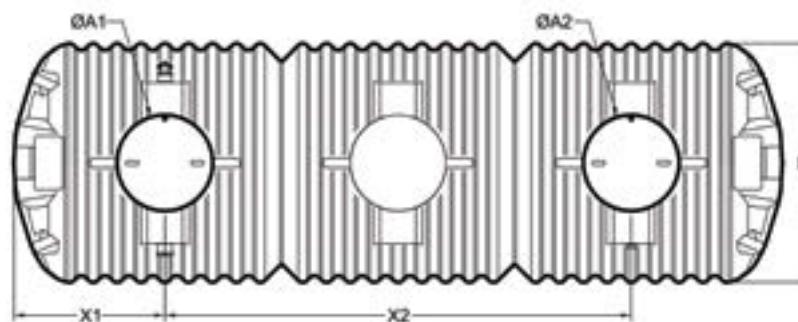
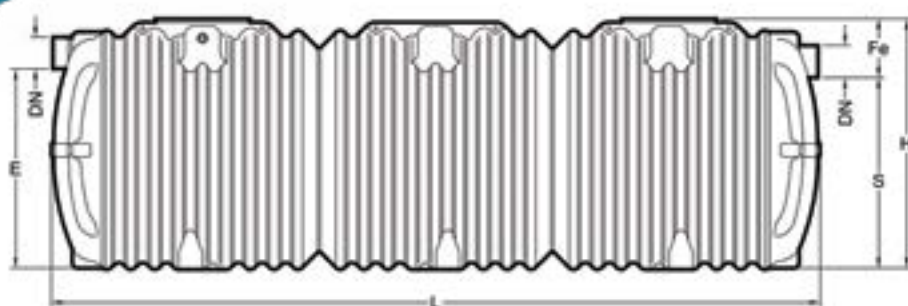
Sphère	Ellipse	Aronde
X	X	X
X	X	X

Dimensions are in millimetres, weights in kilograms, volumes in litres.



Grease separators with sludge trap

- Tank in recyclable rotomoulded polyethylene.
- Operation: traps sludge and grease in cooking water and avoids pipes becoming clogged up.
- Sludge trap to retrieve heavy materials.
- Inlet and outlet in PVC or seals in nitrile.
- 2 light covers (for pedestrian traffic), 1/4-turn closure, stainless steel screws, with seal.



DGE range	Nominal size	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Volume		ØA1	ØA2	X1	X2	"Adjustable" extension option
										sludge trap	separator					
DG30E	30	4364	1943	2010	1640	1570	440	250	476	3000	7200	770	770	1230	1900	ETR47EF
DG40E	40	6265	1943	2010	1640	1570	440	250	665	4000	10040	770	770	1230	3800	ETR65EF

Options

1. Visual and audible grease alarm p. 70-71
2. Cylindrical polyethylene extension p.70

DG

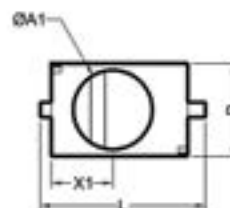
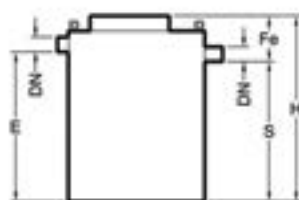
X

X



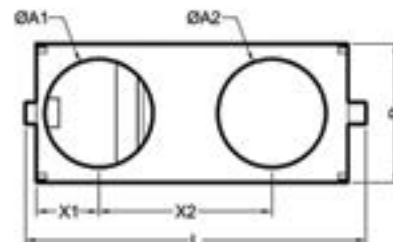
Grease separators with sludge trap

- Tank made of 304L stainless steel.
- Operation: traps grease and sludge in the wastewater of restaurants, community kitchens or the food industry.
- Sludge trap to retrieve heavy materials.
- 1 or 2 manholes depending on model, for installation under cast iron grate, 600 or 800 mm diameter.



BDGI range	Nominal size	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Volume		ØA1	X1
										sludge trap	separator		
BDG01I	1	1210	680	850	590	520	330	110	110	100	240	580	400
BDG02I	2	1210	680	1360	1100	1030	330	110	161	200	480	580	450

BDG



BDGI range	Nominal size	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Volume		ØA1	ØA2	X1	X2
										sludge trap	separator				
BDG03I	3	1690	680	1360	1100	1030	330	110	202	300	720	580	580	350	780
BDG04I	4	1690	750	1570	1310	1240	330	110	315	400	960	580	580	350	780
BDG06I	6	2190	1000	1450	1120	1050	400	160	420	600	1440	780	780	450	1080
BDG08I	8	2190	1000	1810	1480	1410	400	160	510	800	1920	780	780	450	1080
BDG10I	10	2190	1200	1910	1530	1460	450	200	305	1000	2400	780	780	450	1080
BDG15I	15	2360	1480	2110	1730	1660	450	200	780	1500	3600	780	780	500	1150

Dimensions are in millimetres, weights in kilograms, volumes in litres.

Options

1. Visual and audible grease alarm p. 70-71
2. 304L stainless steel cover, p. 70

BDG

X

X



Grease separators with sludge trap & drain column

- Tank in recyclable rotomoulded polyethylene.
- Inlet and outlet in PVC or seals in nitrile.
- Sludge trap to retrieve heavy materials.
- DN80 drain columns with symmetrical connection.


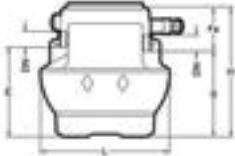
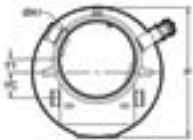

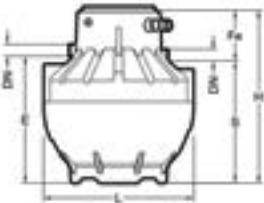
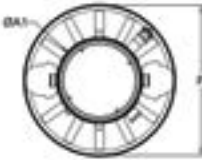
- 2 light covers (for pedestrian traffic), 1/4-turn closure, stainless steel screws, with seal (except the Sphère range).

Sphère range:

- Available as reinforced model (depending on installation limitations).
- Light cover (for pedestrian traffic), stainless steel screws, with seal.



Sphère

															
YG10E range	Nominal size	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Volume		ØA1	X1	YC	“Fixed” extension option
										sludge trap	separator				
YG1000E	1	1000	1000	1000	698	668	332	110	33	100	240	620	100	270	PLA13555G PLA13556G
*fixed extension (non-telescopic)															
															
YG10E range	Nominal size	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Volume		ØA1	“Fixed” extension option	“Adjustable” extension option	
										sludge trap	separator				
YG1001E	1.5	1200	1200	1230	880	830	400	110	43	150	510	620	PLA13555G PLA13556G	-	
YG1002E	2	1250	1250	1230	930	880	350	110	53	200	490	620		-	
YG1003E	3	1200	1200	1540	1240	1190	350	110	59	300	730	620		-	
YG1004E	4	1500	1500	1700	1275	1225	475	110	76	400	1100	770	-	ETR47EF ETR65EF	
YG1005E	5	1550	1550	1700	1475	1425	275	160	79	500	1200	770	-		
YG1006E	6	1500	1500	1965	1705	1655	310	160	102	600	1440	770	-		

Ellipse

EG10 range	Nominal size	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Volume		ØA1	ØA2	X1	X2	Y1	"Adjustable" extension option
										sludge trap	separator						
EG1008C	8	2400	1624	1700	1250	1210	490	160	237	800	2460	770	770	615	1170	300	ETR47EF
EG1010C	10	2400	1624	2072	1622	1582	490	160	259	1000	3090	770	770	615	1170	300	ETR65EF
EG1012C	12	2450	1700	2072	1532	1492	580	200	269	1200	2890	770	770	615	1170	300	-

Aronde

DGAE range	Nominal size	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Volume		ØA1	ØA2	X1	X2	"Adjustable" extension option
										sludge trap	separator					
DGA20E	20	4292	1500	1730	1140	1070	660	200	318	2000	4800	770	770	1000	2000	ETR47EF ETR65EF

Options

	Sphère	Ellipse	Aronde
1. Visual and audible grease alarm p. 70-71	X	X	X
2. Cylindrical polyethylene extension p.70	X	X	X

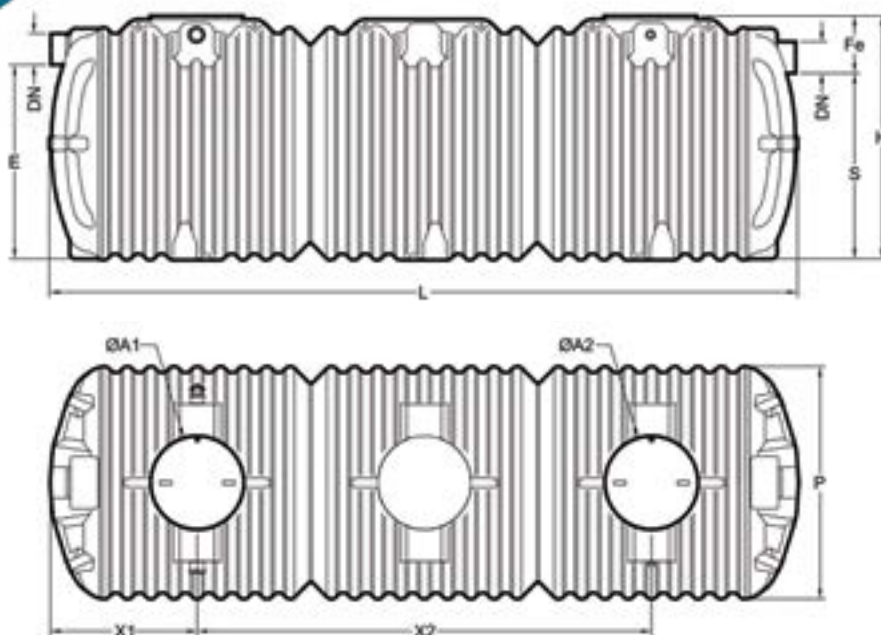
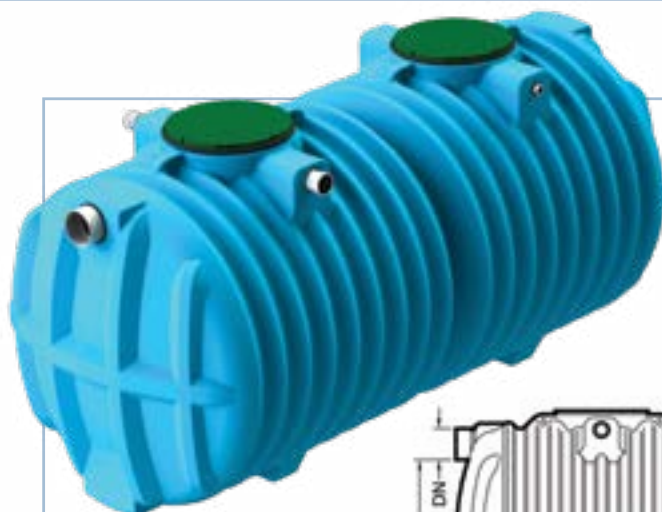
Dimensions are in millimetres, weights in kilograms, volumes in litres.



Grease separators

with sludge trap & drain column

- Tank in recyclable rotomoulded polyethylene
- Operation: traps sludge and grease in cooking water and avoids pipes becoming clogged up.
- Sludge trap to retrieve heavy materials.
- Grease inlet and outlet in PVC or seals in nitrile.
- 2 light covers (for pedestrian traffic), 1/4-turn closure, stainless steel screws, with seal.
- DN80 PVC drain column with symmetrical connection.
- DN110 PVC vent.



DGA range	Nominal size	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Volume		ØA1	ØA2	X1	X2	"Adjustable" extension option
										sludge trap	Separator					
DGA30E	30	4364	1943	2010	1640	1570	440	250	482	3000	7200	770	770	1230	1900	ETR47EF
DGA40E	40	6265	1943	2010	1640	1570	440	250	671	4000	10040	770	770	1230	3800	ETR65EF

Options

1. Visual and audible grease alarm p. 70-71
2. Cover extension p.70

DGA

X

X

Dimensions are in millimetres, weights in kilograms, volumes in litres.

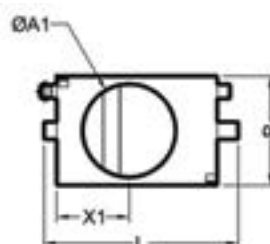
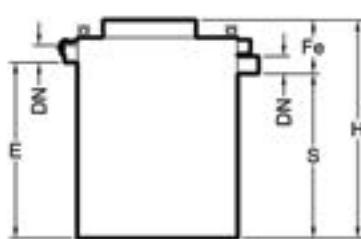


Grease separators with sludge trap & drain column

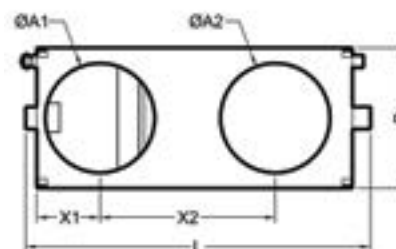
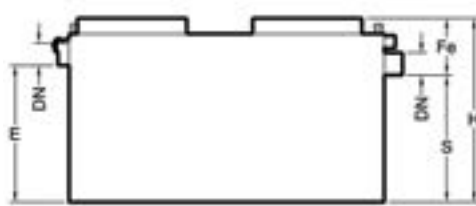
- Tank made of 304L stainless steel.
- Operation: traps grease and sludge in the wastewater of restaurants, community kitchens or the food industry.
- Sludge trap to retrieve heavy materials.
- 1 or 2 manholes depending on model, for installation under cast iron grate, 600 or 800 mm diameter.
- ø80 stainless steel drain columns with symmetrical connection.
- DN100 stainless steel vent.



Grease and/or
starch separators



BDGA range	Nominal size	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Volume		ØA1	X1
										sludge trap	separator		
BDGA01I	1	1260	640	890	640	570	320	110	107	100	240	580	525
BDGA02I	2	1510	680	1190	940	870	320	110	160	200	480	580	650
BDGA03I	3	1310	880	1510	1260	1190	320	110	193	300	720	580	550



BDGA range	Nominal size	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Volume		ØA1	ØA2	X1	X2
										sludge trap	Separator				
BDGA04I	4	1690	1000	1410	1160	1090	320	110	316	400	960	580	580	350	780
BDGA06I	6	2190	1000	1610	1280	1210	400	160	432	600	1440	780	780	450	1080
BDGA08I	8	2190	1000	1960	1630	1560	400	160	503	800	1920	780	780	450	1080
BDGA10I	10	2960	1250	1610	1230	1160	450	200	640	1000	2400	780	780	600	1550
BDGA15I	15	2590	1600	2070	1680	1620	450	200	791	1500	3600	780	780	600	1180

Options

1. Visual and audible grease alarm p. 70-71
2. Stainless steel cover, p. 73

BDGA

X

X

Dimensions are in millimetres, weights in kilograms, volumes in litres.



Grease separators

without sludge trap

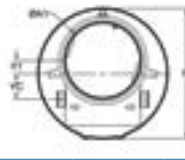
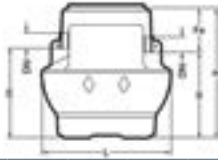
- Tank in recyclable rotomoulded polyethylene.
- Inlet and outlet in PVC or seals in nitrile.

- 2 light covers (for pedestrian traffic), 1/4-turn closure, stainless steel screws, with seal (except the Sphère range).

Sphère range:

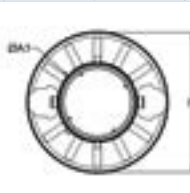
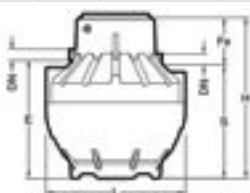
- Available as reinforced model (depending on installation limitations).
- Light cover (for pedestrian traffic), stainless steel screws, with seal.

Sphère



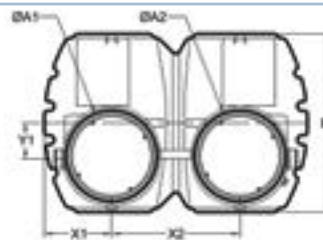
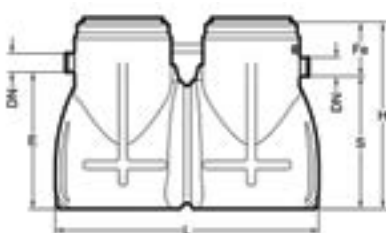
YG15E range	Nominal size	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Separator Volume	ØA1	X1	YC	"Fixed" extension option
YG1501E	1	1000	1000	1000	698	668	332	110	27	340	620	100	270	PLA13555G PLA13556G

*fixed extension (non-telescopic)



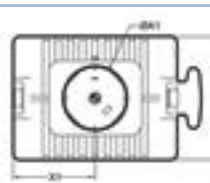
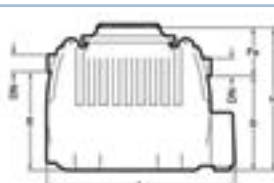
YG15E range	Nominal size	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Separator Volume	ØA1	"Fixed" extension option	"Adjustable" extension option
YG1503E	3	1200	1200	1230	930	880	350	110	37	720	620	PLA13555G	-
YG1504E	4	1200	1200	1540	1240	1190	350	110	52	1030	620	PLA13556G	-
YG1506E	6	1500	1500	1700	1275	1225	475	160	71	1500	770	-	ETR47EF
YG1508E	8	1500	1500	1965	1705	1655	310	160	95	2040	770	-	ETR65EF

Ellipse

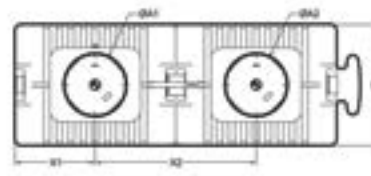
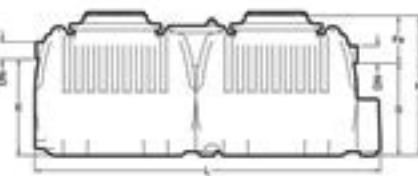


EG15 range	Nominal size	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Separator Volume	ØA1	ØA2	X1	X2	Y1	"Adjustable" extension option
EG1512C	12	2400	1624	1700	1160	1120	580	200	224	3360	770	770	615	1170	300	ETR47EF
EG1516C	16	2450	1700	2072	1532	1492	580	200	243	4060	770	770	615	1170	300	ETR65EF

Aronde



GE range	Nominal size	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Separator Volume	ØA1	X1	"Adjustable" extension option
G14E	14	2292	1500	1730	1140	1070	660	160	166	3400	770	1000	ETR47EF ETR65EF



GE range	Nominal size	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Separator Volume	ØA1	ØA2	X1	X2	"Adjustable" extension option
G28E	28	4292	1500	1730	1140	1070	660	200	318	6800	770	770	1000	2000	ETR47EF ETR65EF

options

1. Visual and audible grease alarm p. 70-71
2. Cylindrical polyethylene extension p.70

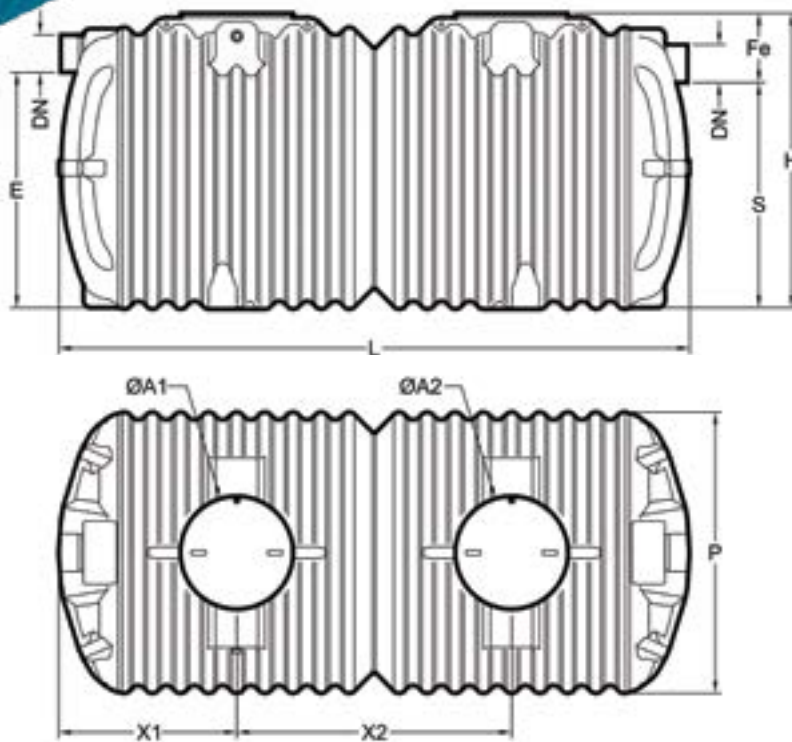
	Sphère	Ellipse	Aronde
1. Visual and audible grease alarm p. 70-71	X	X	X
2. Cylindrical polyethylene extension p.70	X	X	X

Dimensions are in millimetres, weights in kilograms, volumes in litres.



Grease separators without sludge trap

- Tank in recyclable rotomoulded polyethylene.
- Operation: traps sludge and grease in cooking water and avoids pipes becoming clogged up.
- Grease inlet and outlet in PVC or seals in nitrile.
- 2 light covers (for pedestrian traffic), 1/4-turn closure, stainless steel screws, with seal.
- DN110 PVC vent.



GE range	Nominal size	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Separator Volume	ØA1	ØA2	X1	X2	"Adjustable" extension option
G40E	40	4364	1943	2010	1640	1570	440	200	482	10200	770	770	1230	1900	ETR47EF ETR65EF

Options

	GE
1. Cylindrical polyethylene extension p.70	X
2. Visual and audible grease alarm p. 70-71	X

Dimensions are in millimetres, weights in kilograms, volumes in litres.



Grease and starch separators with sludge trap

- Tank in recyclable rotomoulded polyethylene.
- DN1 grease inlet and outlet in PVC or seals in nitrile.

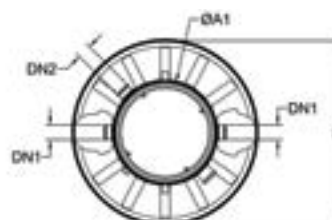
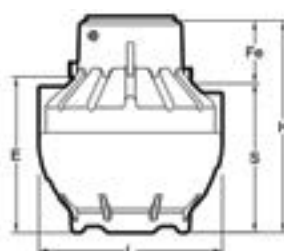
- DN2 PVC sleeve for starch inlet.
- 15/21 brass spray nozzle for foam drawdown.

- 2 light covers (for pedestrian traffic), 1/4-turn closure, stainless steel screws, with seal (except the Sphère range).

Sphère range:

- Available as reinforced model (depending on installation limitations).
- Light cover (for pedestrian traffic), stainless steel screws, with seal.

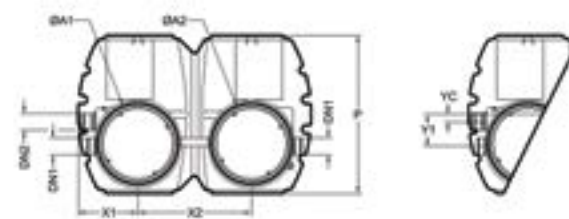
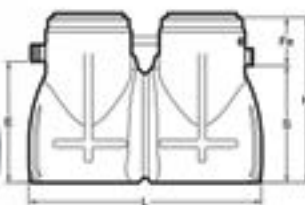
Sphère



YG20E range	Nominal size	L	P	H	E	S	Fe	DN1 (PVC Ø)	DN2 (PVC Ø)	Weight	Volume		ØA1	"Fixed" extension option	"Adjustable" extension option
											sludge trap	separator			
YG2000E	1	1200	1200	1230	930	880	350	110	110	37	100	560	620	PLA13555G	-
YG2002E	2	1200	1200	1540	1240	1190	350	110	110	53	200	830	620	PLA13556G	-
YG2003E	3	1500	1500	1700	1275	1225	475	110	110	70	300	1200	770	-	ETR47EF
YG2005E	5	1500	1500	1965	1705	1655	310	160	110	95	500	1540	770	-	ETR65EF

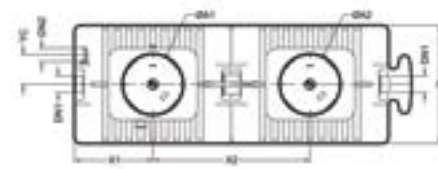
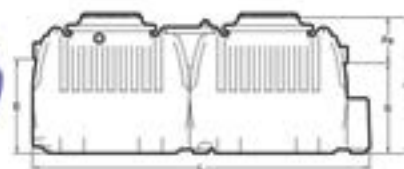
*fixed extension (non-telescopic)

Ellipse



EG20 range	Nominal size	L	P	H	E	S	Fe	DN1 (PVC Ø)	DN2 (PVC Ø)	Weight	Volume		ØA1	ØA2	X1	X2	Y1	YC	"Adjustable" extension option
											sludge trap	separator							
EG2006C	6	2400	1624	1700	1250	1210	490	160	160	225	600	2660	770	770	615	1170	300	75	ETR47EF ETR65EF
EG2007C	7	2450	1700	1700	1250	1210	490	160	160	235	700	2600	770	770	615	1170	300	75	
EG2008C	8	2400	1624	2072	1622	1582	490	160	160	244	800	3290	770	770	615	1170	300	75	
EG2010C	10	2450	1700	2072	1622	1582	490	160	160	254	1000	3120	770	770	615	1170	300	75	

Aronde



GFE range	Nominal size	L	P	H	E	S	Fe	DN1 (PVC Ø)	DN2 (PVC Ø)	Weight	Volume		ØA1	ØA2	X1	X2	YC	"Adjustable" extension option
											sludge trap	separator						
GF15E	15	4292	1500	1730	1140	1070	660	200	160	319	1500	5300	770	770	1000	2000	375	ETR47EF ETR65EF

Options

1. Visual and audible grease alarm p. 70-71
2. Cylindrical polyethylene extension p.70
3. Solenoid valve p. 73

Sphère	Ellipse	Aronde
X	X	X
X	X	X
X	X	X

Dimensions are in millimetres, weights in kilograms, volumes in litres.



Grease and starch separators with sludge trap & drain column

- Tank in recyclable rotomoulded polyethylene.
- DN1 grease inlet and outlet in PVC or seals in nitrile.

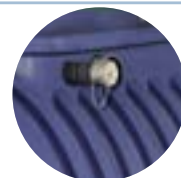
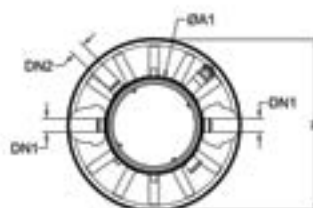
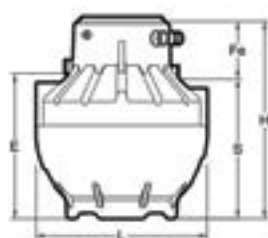
- DN2 PVC sleeve for starch inlet.
- 15/21 brass spray nozzle for foam drawdown.
- 2 light covers (for pedestrian traffic), 1/4-turn closure, stainless steel

- screws, with seal (except the Sphère range).
- Ø80 drain columns with symmetrical connection.

Sphère range:

- Available as reinforced model (depending on installation limitations).
- Light cover (for pedestrian traffic), stainless steel screws, with seal.

Sphère

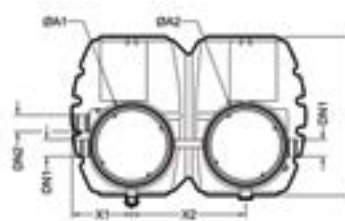
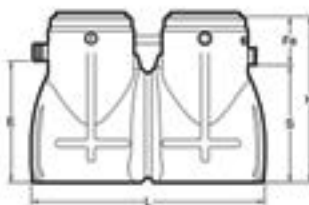


Detail of drain column

YG25E range	Nominal size	L	P	H	E	S	Fe	DN1 (PVC Ø)	DN2 (PVC Ø)	Weight	Volume		ØA1	"Fixed" extension option	"Adjustable" extension option
											sludge trap	separator			
YG2500E	1	1200	1200	1230	930	880	350	110	110	44	100	560	620	PLA13555G	-
YG2502E	2	1200	1200	1540	1240	1190	350	110	110	60	200	830	620	PLA13556G	-
YG2503E	3	1500	1500	1700	1275	1225	475	110	110	77	300	1200	770	-	ETR47EF
YG2505E	5	1500	1500	1965	1705	1655	310	160	110	103	500	1540	770	-	ETR65EF

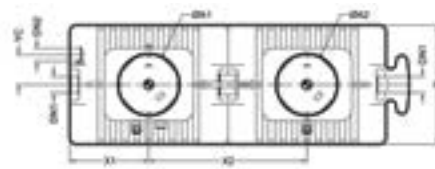
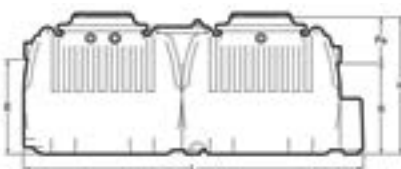
*fixed extension (non-telescopic)

Ellipse



EG25 range	Nominal size	L	P	H	E	S	Fe	DN1 (PVC Ø)	DN2 (PVC Ø)	Weight	Volume		ØA1	ØA2	X1	X2	Y1	YC	"Adjustable" extension option
											sludge trap	separator							
EG2506C	6	2400	1624	1700	1250	1210	490	160	160	239	600	2660	770	770	615	1170	300	75	ETR47EF ETR65EF
EG2507C	7	2450	1700	1700	1250	1210	490	160	160	249	700	2600	770	770	615	1170	300	75	
EG2508C	8	2400	1624	2072	1622	1582	490	160	160	261	800	3290	770	770	615	1170	300	75	
EG2510C	10	2450	1700	2072	1622	1582	490	160	160	271	1000	3120	770	770	615	1170	300	75	

Aronde



GFAE range	Nominal size	L	P	H	E	S	Fe	DN1 (PVC Ø)	DN2 (PVC Ø)	Weight	Volume		ØA1	ØA2	X1	X2	YC	"Adjustable" extension option
											sludge trap	separator						
GFA15E	15	4292	1500	1730	1140	1070	660	200	160	319	1500	5300	770	770	1000	2000	375	ETR47EF ETR65EF

Options

1. Visual and audible grease alarm p. 70-71
2. Cylindrical polyethylene extension p.70
3. Solenoid valve p. 73

Sphère	Ellipse	Aronde
X	X	X
X	X	X
X	X	X

Dimensions are in millimetres, weights in kilograms, volumes in litres.



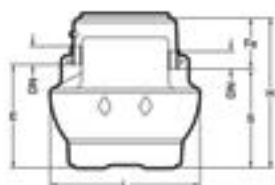
Starch separators

without drain column

- Tank in recyclable rotomoulded polyethylene.
- Inlet and outlet in PVC or seals in nitrile.
- 15/21 brass spray nozzle for foam drawdown.
- 2 light covers (for pedestrian traffic), 1/4-turn closure, stainless steel screws, with seal (except the Sphère range).

Sphère range:

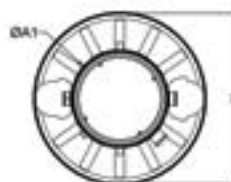
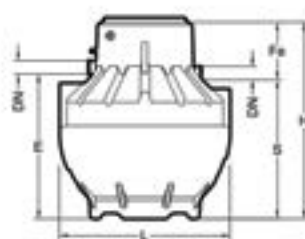
- Available as reinforced model (depending on installation limitations).
- Light cover (for pedestrian traffic), stainless steel screws, with seal.



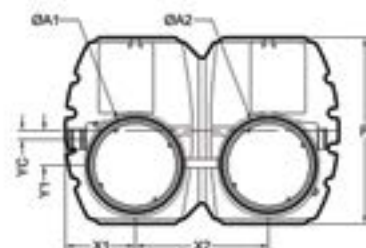
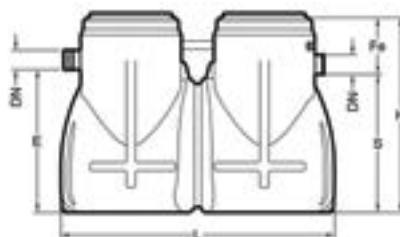
Detail of spray nozzle inside separator

YG30E range	Nominal size	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Separator Volume	ØA1	X1	YC	"Fixed" extension option
YG3000E	1	1000	1000	1000	700	670	330	110	27	340	620	100	270	PLA13555G PLA13556G

*fixed extension (non-telescopic)



YG30E range	Nominal size	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Separator Volume	ØA1	"Fixed" extension option	"Adjustable" extension option
YG3002E	2	1200	1200	1230	930	880	350	110	37	660	620	PLA13555G PLA13556G	-
YG3003E	3	1500	1500	1700	1275	1225	475	110	69	1500	770	-	ETR47EF ETR65EF
YG3004E	4	1500	1500	1965	1705	1655	310	160	93	2040	770	-	



EG30 range	Nominal size	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Separator Volume	ØA1	ØA2	X1	X2	Y1	YC	"Adjustable" extension option
EG3005C	5	2400	1620	1700	1250	1210	490	160	220	3000	770	770	615	1170	300	75	ETR47EF ETR65EF
EG3006C	6	2400	1624	1700	1250	1210	490	160	220	3260	770	770	615	1170	300	75	
EG3008C	8	2450	1700	1700	1250	1210	490	160	230	3300	770	770	615	1170	300	75	
EG3010C	10	2400	1624	2072	1622	1582	490	160	239	4090	770	770	615	1170	300	75	

Options

	Sphère	Ellipse
1. Visual and audible grease alarm p. 70-71	X	X
2. Cylindrical polyethylene extension p.70	X	X
3. Solenoid valve p. 73	X	X

Dimensions are in millimetres, weights in kilograms, volumes in litres.



Starch separators with drain column

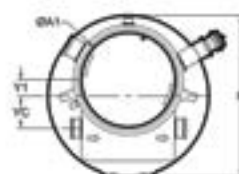
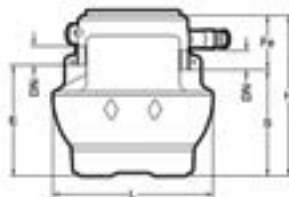
- Tank in recyclable rotomoulded polyethylene.
- Inlet and outlet in PVC or seals in nitrile.
- 15/21 brass spray nozzle for foam drawdown.
- 2 light covers (for pedestrian traffic), 1/4-turn closure, stainless steel screws, with seal (except the Sphère range).
- DN80 drain column with symmetrical connection.
- DN110 PVC vent.

Sphère range:

- Available as reinforced model (depending on installation limitations).
- Light cover (for pedestrian traffic), stainless steel screws, with seal.

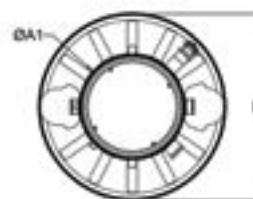
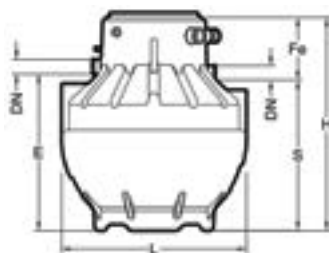


Detail of spray nozzle inside separator

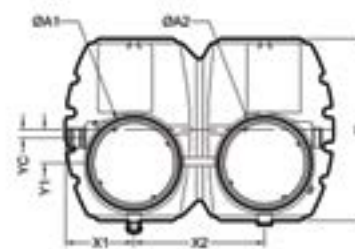
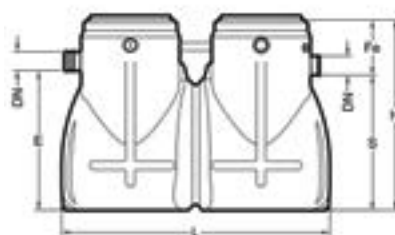


YG35E range	Nominal size	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Separator Volume	ØA1	X1	YC	"Fixed" extension option
YG3500E	1	1000	1000	1000	700	670	330	110	33	340	620	100	270	PLA13555G PLA13556G

*fixed extension (non-telescopic)



YG35E range	Nominal size	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Separator Volume	ØA1	"Fixed" extension option	"Adjustable" extension option
YG3502E	2	1200	1200	1230	930	880	350	110	43	660	620	PLA13555G PLA13556G	-
YG3503E	3	1500	1500	1700	1275	1225	475	110	76	1500	770	-	ETR47EF
YG3504E	4	1500	1500	1965	1705	1655	310	160	101	2040	770	-	ETR65EF



EG35 range	Nominal size	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Separator Volume	ØA1	ØA2	X1	X2	Y1	YC	"Adjustable" extension option
EG3505C	5	2400	1620	1700	1250	1210	490	160	220	3000	770	770	615	1170	300	75	ETR47EF ETR65EF
EG3506C	6	2400	1624	1700	1250	1210	490	160	220	3260	770	770	615	1170	300	75	
EG3508C	8	2450	1700	1700	1250	1210	490	160	230	3300	770	770	615	1170	300	75	
EG3510C	10	2400	1624	2072	1622	1582	490	160	239	4090	770	770	615	1170	300	75	

Options

	Sphère	Ellipse
1. Visual and audible grease alarm p. 70-71	X	X
2. Cylindrical polyethylene extension p.70	X	X
3. Solenoid valve p. 73	X	X

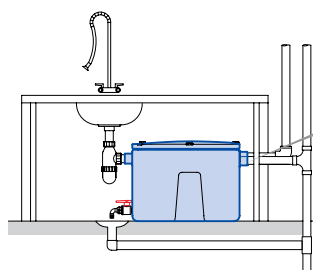
Dimensions are in millimetres, weights in kilograms, volumes in litres.



Grease collector

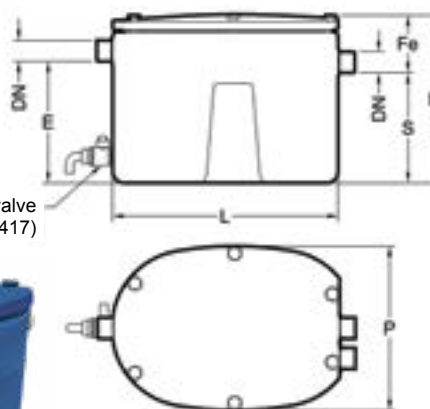
Connection under sink

- Tank in 100% recyclable rotomoulded polyethylene with lifting rings.
- Inlet and outlet sleeve in PVC or seals in nitrile.
- Polyethylene cover with 6 screws on an O-ring for a perfect seal.



To help with cleaning,
raise the unit

PVC valve
(Option/Ref: 11417)



Restaurant
dishwashing
sink special

- Useful volume = **55 litres**
- Max. admissible flow rate = **0.15 l/s.**
- Weight = **10 kg**

Maintenance: it must be daily depending on the pollutant load sent to the unit.

GME range	Nominal size l/s	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Separator Volume
GM1E	0.15	600	435	450	325	295	155	50	10	55

Dimensions are in millimetres, weights in kilograms, volumes in litres.

Options

1. 1/4-turn PVC valve p.73

Wastewater

Stainless steel

Nominal size 2



Grease separators

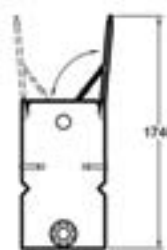
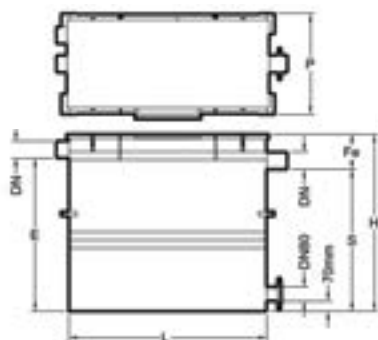
above ground installation special

- Completely **stainless steel** unit: corrosion-proof.
- Rotating flange in lower part** DN080 for connection to the drain column (not included).
- Overall width** 660 mm to pass easily through doors.
- Wide opening at 90° from the cover** for easy unit maintenance
- Bracket** held in open position for more safety
- Reversible cover.**
- DN100 stainless steel **vent.**



Ref. EDGS02I

above ground installation
Basement or cellar, restaurants, community kitchens



Selection table

EDGSI range	Nominal size l/s	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Separator Volume	Canteen	Restaurant	
												1 service/day	2 services/day
EDGS02I	2	1250	660	1120	970	900	214	110	158	735	≤ 450	≤ 110	≤ 220

Dimensions are in millimetres, weights in kilograms, volumes in litres.



Grease collector

Kitchen dishwashing sink special

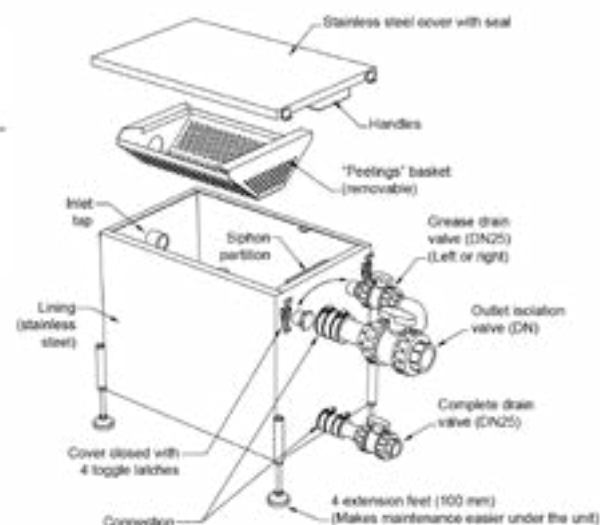
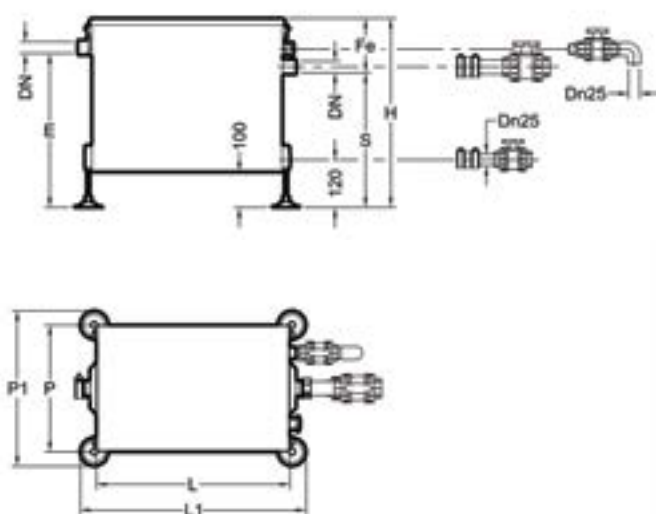
The Mini GR-type grease collector traps grease and solid waste in wastewater from kitchen dishwashing sinks.

- 304L stainless steel tank.
- Cover with seal.
- Handle.
- Removable "peelings" basket.
- Toggle latch closing.
- Extension feet.
- Connection sleeves.
- DN25 grease drain valve.
- DN32 or 50 outlet isolation valve depending on model.
- DN25 complete drain valve.



Grease and/or
starch separators

Mini GR



MiniGR range	L	L1	P	P1	H	E	S	Fe	DN (PVC Ø)	Weight	Separator Volume
MiniGR040	480	550	350	420	484	385	330	154	40	26	39
MiniGR060	540	610	350	420	534	435	380	154	40	29	53
MiniGR080	640	710	350	420	574	453	400	174	63	36	67
MiniGR100	730	800	350	420	594	473	420	174	63	40	82

Dimensions are in millimetres, weights in kilograms, volumes in litres.

Maintenance: it must be daily depending on the pollutant load sent to the unit. To help retrieve surface oils, a drain valve is supplied with the unit.

Benefits...

- Small size for easy installation under the sink.
- Easy cleaning under the unit thanks to 4 extension feet; guaranteed hygiene.
- The drain valves allow quick and easy maintenance.





Grease separators

above ground installation special

- Tank in 100% recyclable rotomoulded polyethylene with lifting rings
- Inlet and outlet in DN110 PVC.
- Sludge trap to retrieve heavy materials.
- Light cover in polyethylene with seal, stainless steel screws.

Operation:

Traps grease and sludge in the wastewater of restaurants and community kitchens.

Benefits:

Specially designed to be installed in a raised position.
Overall width under 800 mm: can fit through a standard door.
Makes it easier to install in an existing basement.

Product benefits

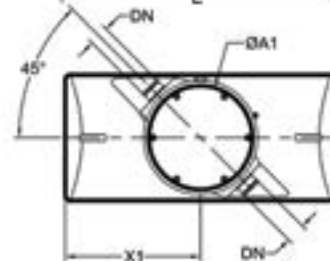
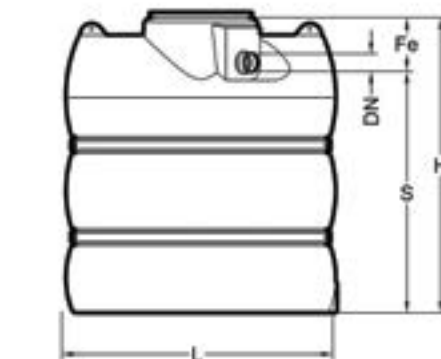
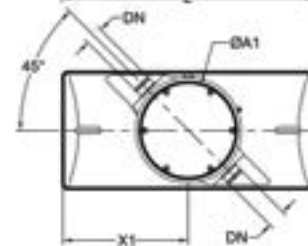
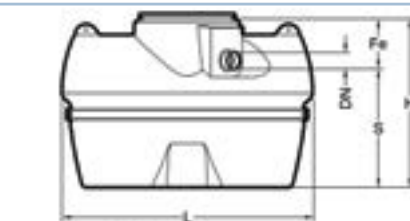
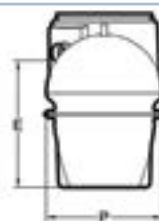
Fits through the door!
> 80 cm <



Size 2



Size 4



HG05E range	Nominal size l/s	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Volume		ØA1	X1
										sludge trap	Separator		
HG0502E	2	1620	773	1089	814	764	325	110	62	200	480	620	810
HG0504E	4	1628	773	1770	1495	1445	325	110	116	400	1200	620	814

Options

1. Visual and audible grease alarm p. 70-71

HG0502E	HG0504E
X	X

Dimensions are in millimetres, weights in kilograms, volumes in litres.



Grease separators

above ground installation special

- Tank in 100% recyclable rotomoulded polyethylene with lifting rings.
- Inlet and outlet in DN110 PVC.
- Sludge trap to retrieve heavy materials.
- Light cover (for pedestrian traffic) in polyethylene with seal, stainless steel screws.
- DN80 PVC drain column with symmetrical connection.
- DN110 PVC vent.

Operation:

Traps grease and sludge in the wastewater of restaurants and community kitchens.

Benefits:

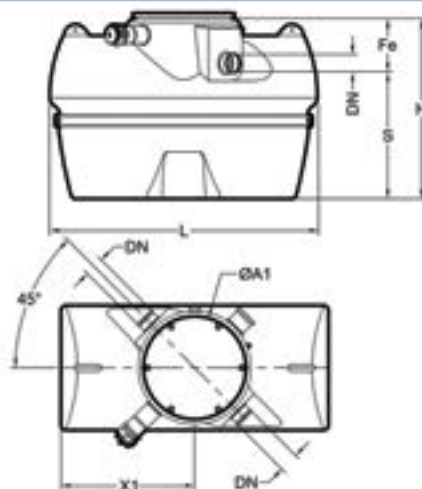
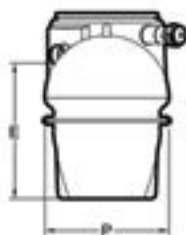
Specially designed to be installed in a raised position.
Overall width under 800 mm: can fit through a standard door. Makes it easier to install in an existing basement.

Product benefits

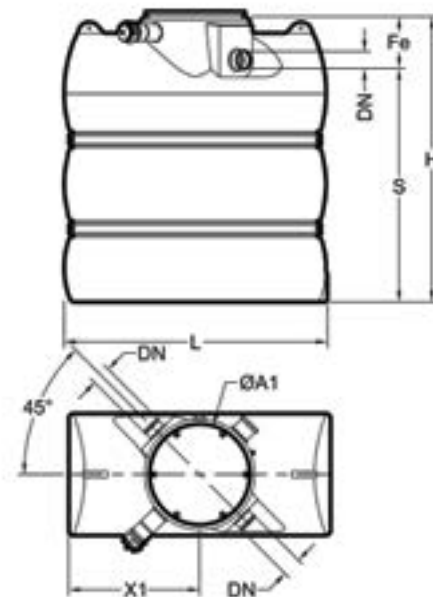
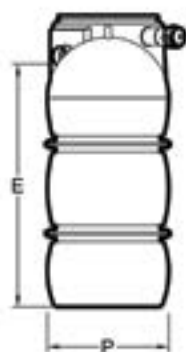
Fits through the door!
> 80 cm <



Size 2



Size 4



HG10E range	Nominal size l/s	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Volume		ØA1	X1
										sludge trap	Separator		
HG1002E	2	1620	773	1089	814	764	325	110	71	200	480	620	810
HG1004E	4	1628	773	1770	1495	1445	325	110	123	400	1200	620	814

1. Visual and audible grease alarm p. 70-71

HG1004E	HG1002E
X	X

Dimensions are in millimetres, weights in kilograms, volumes in litres.



Sludge traps

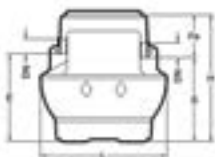
Sludge traps

from 340 to 5700 l/s in polyethylene ————— p 64
10, 15 or 20,000 l/s in polyethylene ————— p 65

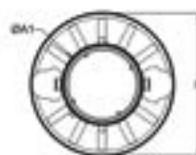
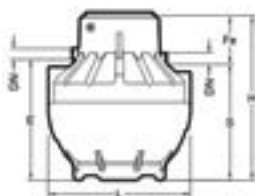


Sludge traps

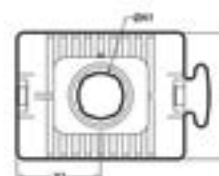
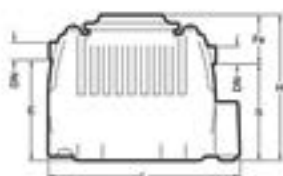
- Tank in recyclable rotomoulded polyethylene with lifting and anchoring rings.
- Operation: traps heavy materials.
- Inlet with nitrile seal.
- PVC outlet sleeve.
- Polyethylene manhole (AD range only).
- Sphère range:** composite cover.



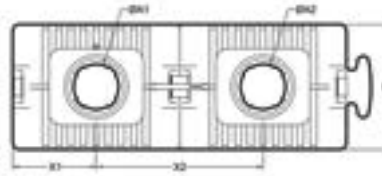
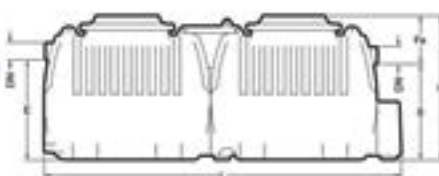
YDE range	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Sludge trap volume	ØA1	X1	YC	"Fixed" extension option
YD0340E	1000	1000	1000	670	640	360	110	23	340	585	100	270	PLA13555G PLA13556G



YDE range	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Sludge trap volume	ØA1	"Fixed" extension option	"Adjustable" extension option
YD0660E	1200	1200	1230	840	800	430	110	33	660	585	PLA13555G	-
YD1000E	1200	1200	1540	1150	1110	430	110	49	1000	585	PLA13556G	-
YD1500E	1500	1500	1700	1220	1170	530	110	68	1500	745	-	ETR47EF
YD1900E	1500	1500	1965	1486	1436	529	160	92	1900	745	-	ETR65EF



ADE range	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Sludge trap volume	ØA1	X1	"Adjustable" extension option
AD3000/200E	2292	1500	1730	1200	1180	550	200	140	3000	745	1000	ETR47EF
AD2850/300E	2292	1500	1730	1085	1035	695	315	145	2850	745	1000	ETR65EF



ADE range	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Sludge trap volume	ØA1	ØA2	X1	X2	"Adjustable" extension option
AD6000/200E	4292	1500	1730	1200	1150	580	200	280	6000	745	745	1000	2000	ETR47EF
AD5700/300E	4292	1500	1730	1085	1035	695	315	290	5700	745	745	1000	2000	ETR65EF

options

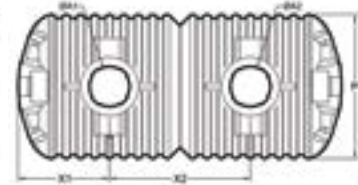
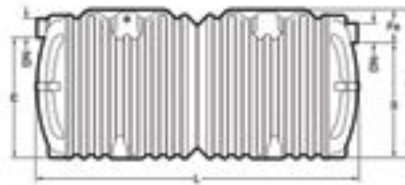
	Sphère	Aronde
1. Visual and audible alarm p. 70-71	X	X
2. Cylindrical polyethylene extension p.70	X	X

Dimensions are in millimetres, weights in kilograms, volumes in litres.

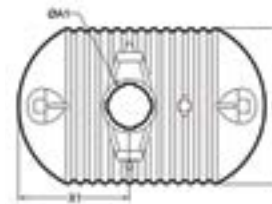
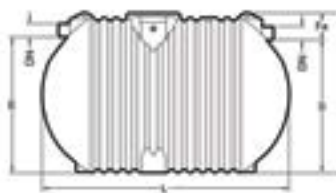


Sludge traps

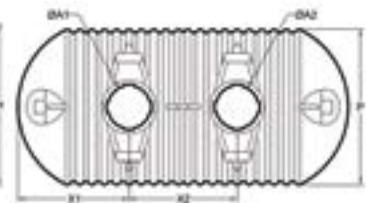
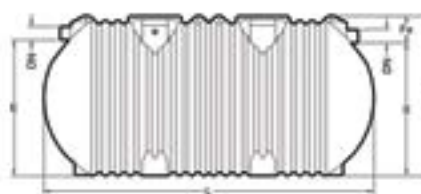
- Tank in 100% recyclable rotomoulded polyethylene.
- Sludge trap to retrieve heavy materials.
- Polyethylene manholes.
- Operation: traps heavy materials.
- Grease inlet and outlet in PVC or seals in nitrile.



ADE range	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Sludge trap volume	ØA1	ØA2	X1	X2	"Adjustable" extension option
AD10000E	4364	1943	2010	1685	1635	375	200	435	10000	790	790	1230	1900	ETR47EF ETR65EF



ADE range	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Sludge trap volume	ØA1	X1	"Adjustable" extension option
AD13000E	3889	2448	2515	2150	2100	415	200	475	13200	790	1750	ETR47EF ETR65EF



ADE range	L	P	H	E	S	Fe	DN (PVC Ø)	Weight	Sludge trap volume	ØA1	ØA2	X1	X2	"Adjustable" extension option
AD18000E	5204	2448	2515	2150	2100	415	200	651	18700	790	790	1750	1703	ETR47EF ETR65EF

Options

1. Visual and audible alarm p. 70-71
2. Cylindrical polyethylene extension p.70

ADE

X

X

Dimensions are in millimetres, weights in kilograms, volumes in litres.



Run-off water treatment



Storm water treatment units

Overview and manufacturing _____ p 68-69

Storm water treatment units
what size depending on the surface area? _ p 70

Vertical storm water treatment units
without bypass _____ p 71

Vertical storm water treatment units
with bypass _____ p 72

Horizontal storm water treatment units
without bypass _____ p 73



1 Overview

1.1 Scope

TECHNEAU has developed a range of storm water treatment units dedicated to uncovered car parks (vehicles) and the road sector (roads and motorways), where pollution is mainly caused by suspended solids to which most (80%) pollutants are fixed. These structures can also intercept chronic and accidental pollution caused by light liquids.

1.2. The sanitation scheme

The most common sanitation scheme involves treating storm water at a fraction of the peak flow rate:

- by using a control chamber with calibrated threshold, ensuring a controlled flow to the storm water treatment unit.
- downstream from a storm basin with a controlled flow rate upstream.

1.3. The dimensions

1.3.1. Nominal size

Depending on the location, intensities below 16 mm/h represent 75 to 95% of cumulative rainfall.

In a steady-state flow, rainfall intensity of 16 mm/h associated with a waterproofing coefficient of 90% produces an associated run-off rate of 40 L/s/ha, the value chosen as the treatment rate of a storm water treatment unit.

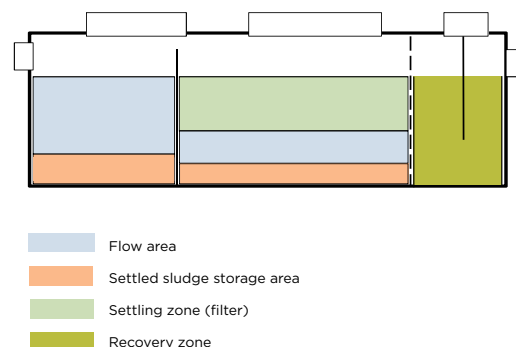
This threshold of 40 L/s/ha can treat:

- run-off water from flushing (characterised by low flow rates and high concentrations at the start of rainfall),
- the vast majority (75 to 95%) of run-off water depending on region.

Considering the characteristics of pollution from urban sealed surfaces, the hydraulic head (or Hazen speed) of a storm water treatment unit is fixed at 2 m/h.

1.3.2. Storage volumes

Several hydraulic dimension criteria have been identified and defined, guaranteeing optimum treatment quality, notably: flow area, storage area, settling zone, recovery zone.



1.4. Accessibility

We focus on large accesses with the following requirements:

- access to all compartments, in accordance with the standard NF EN 476.
- excellent accessibility to the lamellar zone allowing easy cleaning of the lamellar device, with a minimum shaft cross-section of 0.5 m² and a total minimum opening surface of 0.25 m² per linear metre of lamellar blocks.

1.5. Structural stability and coating

Structural stability and requirements on materials and coating will comply with standard requirements defined in the standards NF EN 858-1 and P16-454-1/CN.



Storm water treatment units

Technical charter and manufacturing

Storm water

Polyester

Steel

2. Manufacturing



TECHNEAU storm water treatment units are manufactured in S235JR fabricated steel (standard NF EN 10025) with an external and internal epoxy bi-component coating, or in polyester.

2.1. Common equipment

From 2 to 5 cylindrical primers for easier maintenance.

A high capacity **grit trap** ($2 \text{ m}^3/\text{ha}$) to trap as many floating and heavy materials as possible.

A screen to trap floating materials. Its mesh is smaller than the hydraulic diameter of the downstream tube bundle.

A *Alvéreau*® tube bundle in recycled PVC, angled at 60° and removable, has been developed by Techneau for this purpose. Its 35 mm hydraulic diameter limits clogging and ensures optimal efficacy.

A high-capacity **sludge tank** ($3 \text{ m}^3/\text{ha}$).

A tilting blade system distributing the hydraulic flow uniformly across the entire filter.

Effluent recovery channels (drained in the absence of water flow).

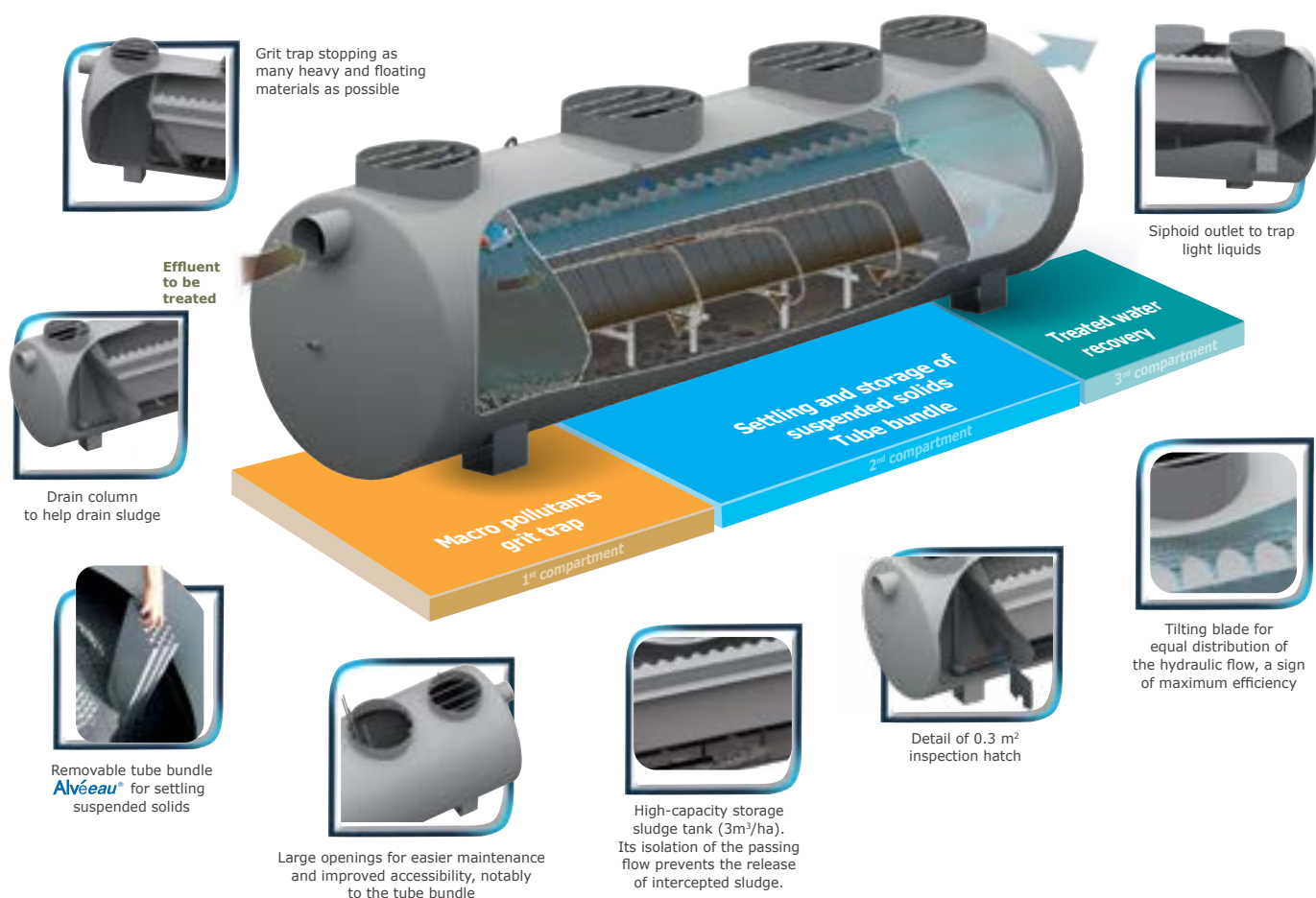
2.2. Equipment specific to horizontal models

A 0.3 m^2 hatch to inspect the sludge tank under the filter.

One or several DN100 sludge drain columns on NH horizontal units.

3. Hydraulic flow

Techneau storm water treatment units have 3 successive compartments:





Storm water treatment units

Different installations, what size depending on the surface area?

Storm water

Polyester

Steel

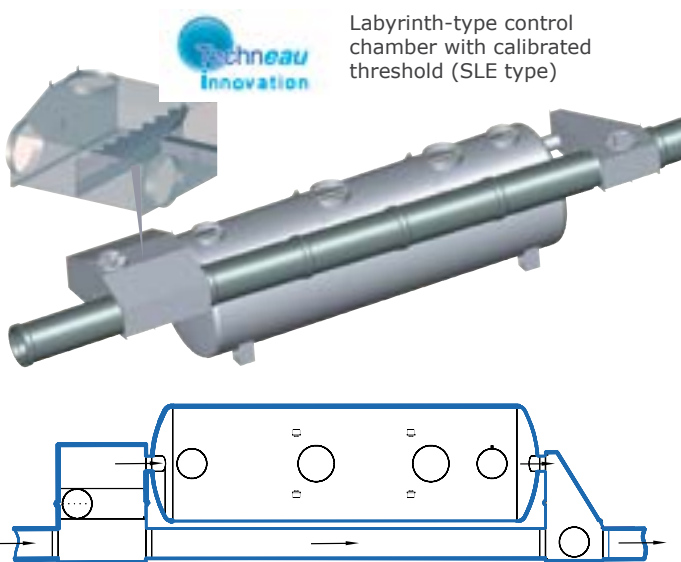
4. Different installations

4.1. Main network bypass installation.

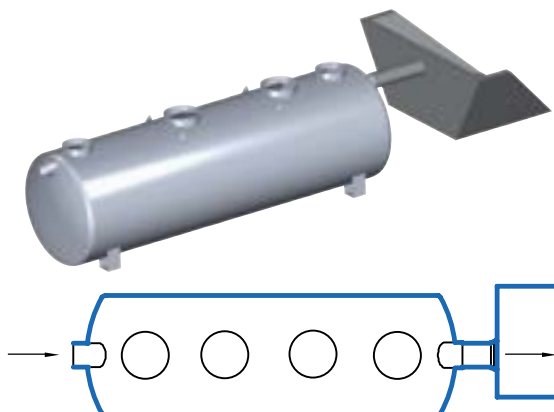
Upstream, installation of a **control chamber with calibrated threshold** to:

- Control and analyse rainfall events.
- Control the flow regardless of the return period in question.
- Secure the treatment structure during maintenance operations.
- Reduce floor space taken up thanks to a very compact design.

This regulation device, a real Techneau innovation, has patent no. FR3013745.

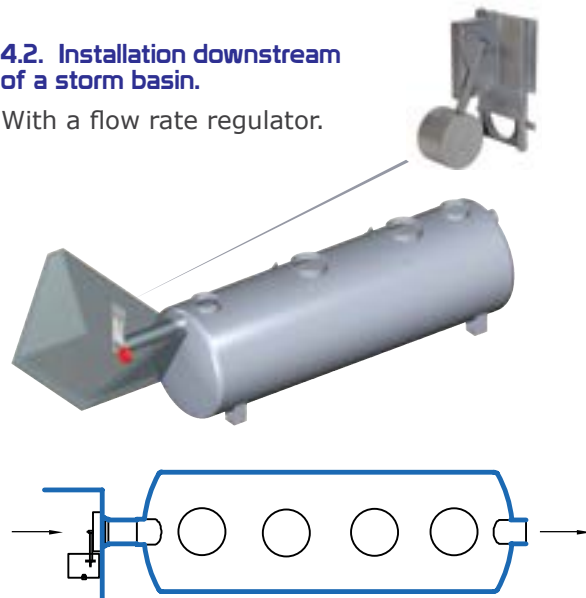


4.1.2 Installation upstream of a storm basin.



4.2. Installation downstream of a storm basin.

With a flow rate regulator.



5. The size of a treatment unit depends on the surface area to be treated.

Recovery sealed surfaces up to 5 ha.

	Surface area in m ²	Bypass	
		built-in	external
Décanteur	400	NVB004EA	NV004EA
	800	NVB008EA	NV008EA
	1200	NVB012EA	NV012EA
	1600	NVB016EA	NV016EA
	2000	NVB020EA	NV020EA
Storm water treatment unit	3000	NVB030EA	NV030EA
			NH030EA
	4000		NH040EA
	5000		NH050EA
	6000		NH060EA
	7000		NH070EA
	9000		NH090EA
	10000		NH100EA
	50000		NH500EA



storm water treatment unit

vertical without bypass / from 0.04 to 0.3 ha

Storm water

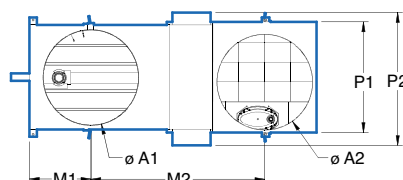
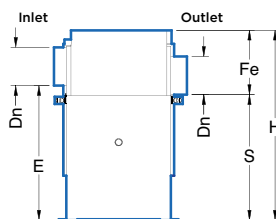
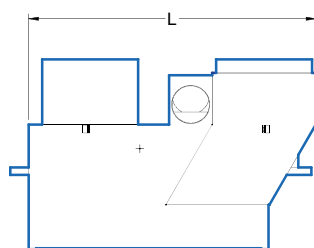
Steel

CH 2 m/h
Sizes 0.04 to 0.3 ha

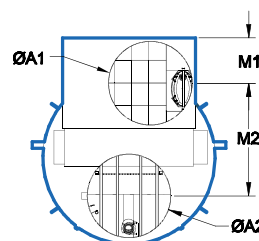
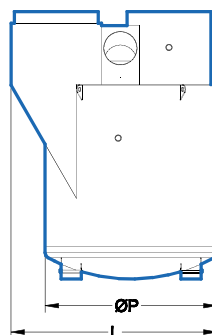
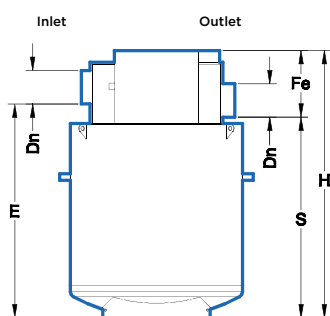
- Tank in S235JR fabricated steel with lifting rings.
- Epoxy resin/polyamine adduct-based bi-component coating.
- **Alvéreau**® tube bundle
- 2 cylindrical primers without cover.
- Reduction of suspended solids and associated pollutants (heavy metals, COD, oils and PAH) > 75%.

OPTIONS

- Visual and audible alarm see p. 90-91
- Drain column see p. 94
- Automatic shutter see p. 94
- Fall protection grid(s) see p. 93



NV range ref.	P1	P2	L	Dn	E	S	Fe	H	M1	M2	Ø A1	Ø A2	Weight	Storage volume			Useful volume	Total volume
														Sand	Sludge	Light liquids		
NV004EA	685	880	1875	100	1073	1006	434	1448	320	1239	580	580	266	80	236	293	1308	1542
NV008EA	900	1080	2335	150	1098	1014	530	1544	500	1414	780	780	384	160	355	497	2223	2729
NV012EA	1260	1430	2135	150	1119	1014	580	1594	400	1313	780	780	464	240	403	630	2887	3441
NV016EA	1260	1430	2241	150	1642	1514		2094	500	1320	780	780	563	320	954	630	3719	4273



NV range ref.	Ø P	L	Dn	E	S	Fe	H	M1	M2	Ø A1	Ø A2	Weight	Storage volume			Useful volume	Total volume
													Sand	Sludge	Light liquids		
NV020EA	1600	1916	200	1993	1847	630	2487	421	1047	780	780	659	400	730	603	3734	4336
NV030EA	1900	2282	200	2025	1872	630	2512	630	1256	780	950	745	600	950	851	5336	5938

For larger sizes, please contact our design office.
Sizes are in hectares, dimensions in mm and weights in kg.



Storm water treatment unit

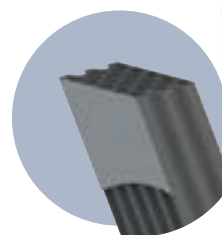
vertical with bypass / from 0.04 to 0.3 ha

CH 2 m/h
Sizes 0.04 to 0.3 ha

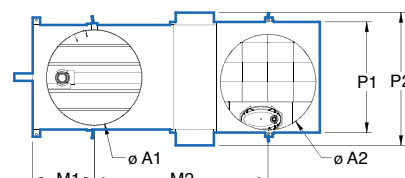
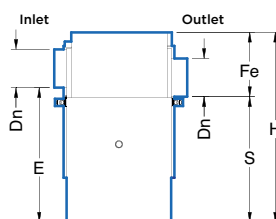
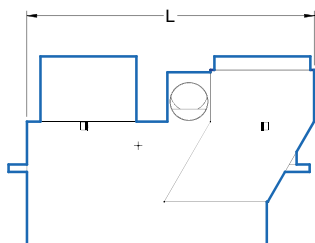
- Tank in S235JR fabricated steel with lifting rings.
- Epoxy resin/polyamine adduct-based bi-component coating.
- Exclusive tube bundle **Alvéaeu**
- 2 cylindrical primers without cover.
- Built-in bypass
- Reduction of **suspended solids** and associated pollutants (heavy metals, COD, oils and PAH) > **75%**.

OPTIONS

- Visual and audible alarm for oils and/or sludge see p. 90-91
- Drain column see p. 94
- Automatic shutter see p. 94
- Fall protection grid(s) see p. 93

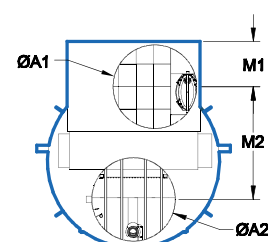
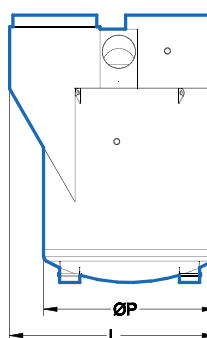
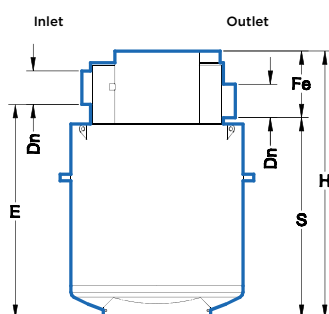


Alvéaeu® tube bundle in PVC angled at 60° to settle suspended solids 35 mm hydraulic diameter.



NVB

NVB range ref.	P1	P2	L	Dn	E	S	Fe	H	M1	M2	Ø A1	Ø A2	Weight	Storage volume			Useful volume	Total volume
														Sand	Sludge	Light liquids		
NVB004EA	685	880	1875	200	1073	1015	434	1448	320	1239	580	580	273	80	236	293	1307	1541
NVB008EA	900	1080	2335	300	1090	1017	530	1544	500	1414	780	780	394	160	355	497	2207	2721
NVB012EA	1260	1430	2135	300	1111	1020	580	1594	400	1313	780	780	474	240	403	630	2867	3429
NVB016EA	1260	1430	2241	300	1634	1525	580	2094	500	1320	780	780	575	320	954	630	3698	4260



NVB range ref.	ØP	L	Dn	E	S	Fe	H	M1	M2	Ø A1	Ø A2	Weight	Storage volume			Useful volume	Total volume
													Sand	Sludge	Light liquids		
NVB020EA	1600	1916	300	1993	1870	630	2487	421	1047	780	780	589	400	730	603	3734	4336
NVB030EA	1900	2282	300	2023	1887	630	2512	630	1256	780	950	755	600	950	851	5336	5938

For larger sizes, please contact our design office.
Sizes are in hectares, dimensions in mm and weights in kg.



Storm water treatment unit

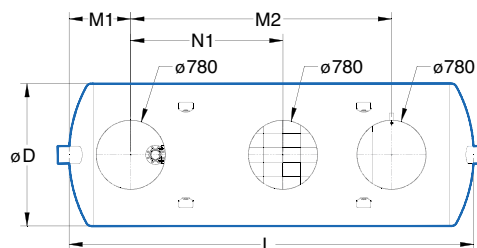
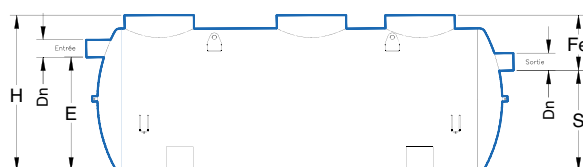
horizontal without bypass / from 0.3 to 1 ha

CH 2 m/h
Sizes 0.3 to 1 ha

- Tank in S235JR fabricated steel with lifting rings.
- Epoxy resin/polyamine adduct-based bi-component coating.
- Exclusive tube bundle **Alvééau**
- DN100 drain column.
- 2 m/h hydraulic head.
- Up to 4 cylindrical primers without cover.
- Reduction of suspended solids and associated pollutants (heavy metals, COD, oils and PAH) > 75%.
- Polyester construction: contact us

OPTIONS

- Visual and audible alarm for oils and/or sludge [see p. 90,91](#)
- Fall protection grid(s) [see p. 93](#)
- Speed chassis [see p. 92](#)

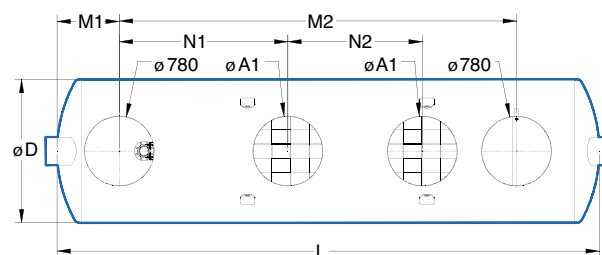
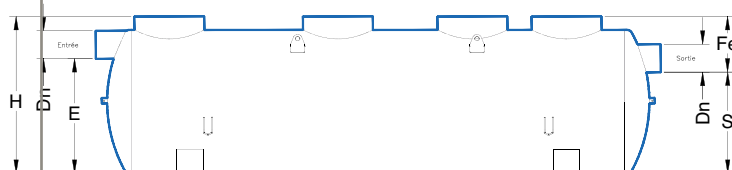


Alvééau® tube bundle in PVC angled at 60° to settle suspended solids 35 mm hydraulic diameter.

Storm water treatment units

NH

NH range ref.	Ø D	L	Dn	E	S	Fe	H	M1	M2	N1	Weight	Storage volume			Useful volume	Total volume
												Sand	Sludge	Light liquids		
NH030EA	1600	4547	200	1235	1105	645	1750	693	2930	1710	976	1005	1067	751	6291	8539



NH range ref.	Ø D	L	Dn	E	S	Fe	H	M1	M2	N1	N2	Ø A1	Weight	Storage volume			Useful volume	Total volume
														Sand	Sludge	Light liquids		
NH040EA	1600	5047	200	1235	1105	645	1750	693	3430	1110	1100	780	1080	1005	1265	805	7031	9544
NH050EA	1600	5547	200	1235	1105	645	1750	693	3930	1360	1350	780	1188	1005	1561	722	7772	10550
NH060EA	1600	6047	315	1206	1105	645	1750	693	4530	1880	1500	780	1302	1206	1858	640	8513	11555
NH070EA	1600	7047	315	1206	1105	645	1750	693	5430	2180	2000	780	1476	1407	2155	787	9994	13566
NH090EA	1900	6145	315	1506	1336	714	2050	823	4450	1800	1500	950	1989	1843	2899	778	12452	16572
NH100EA	1900	6645	315	1506	1336	714	2050	823	4950	1900	1800	950	2136	2056	3199	853	13517	17990

For larger sizes, please contact our design office.
Sizes are in hectares, dimensions in mm and weights in kg.

For larger surface areas,
please contact our design office.



Run-off water treatment



Progressive treatment unit

Overview	p 76
Size calculation method	p 76
Operation and benefits	p 77
Unit models	p 78 - 81



1 - Overview

The Progressive Treatment Unit (DTP) was specially designed and studied to treat run-off water from surface areas where the pollution is potentially high and continuous.

As an example:

- Scrap car storage areas before or after breaking.
- Sorting and storage centres for materials pending recovery.
- Technical areas and/or industrial sites with a specific activity (e.g. steel mill).

During a rainfall event, leached pollutants (from materials stored and exposed to rainfall) will generally combine with suspended solids also carried by run-off water.

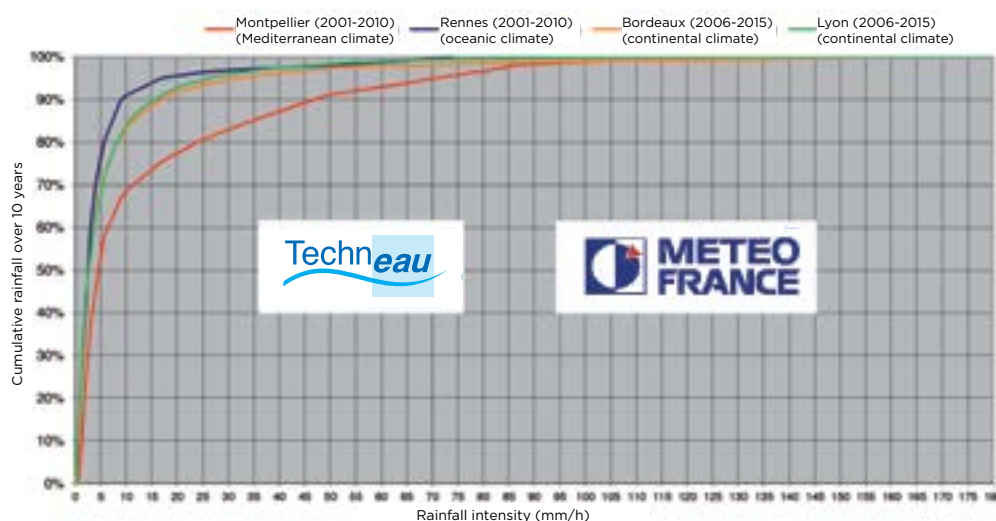
These pollutants - which are abundant in these types of storage area - will cause a flow of particle pollution throughout this rainfall event.

All of this run-off water must be treated, avoiding configurations including a bypass (pipe to remove storm water without treating it).

2 - Size calculation method

The charts below present French rainfall analyses used to calculate the size of the range.

“Rainfall intensity/cumulative rainfall” profiles in metropolitan France:



note: These measurements are from automatic stations taking a measurement every 6 minutes.

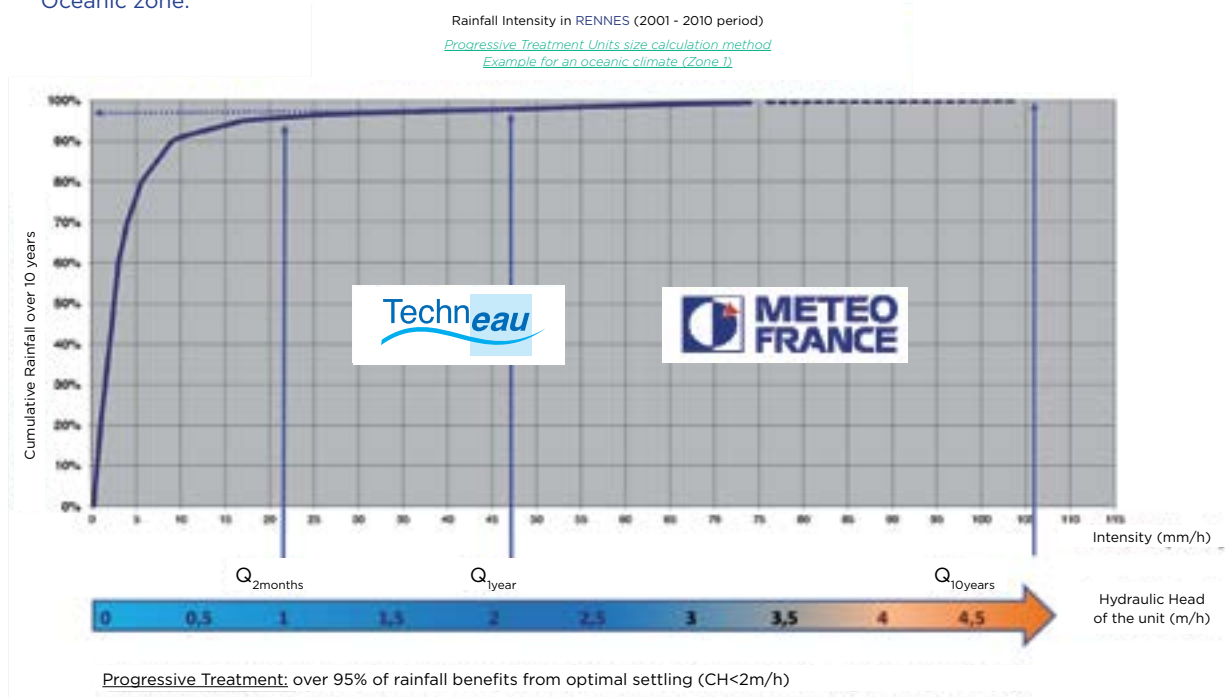
Analysis of rainfall intensity in France reveals that 95% of cumulative rainfall is produced with low to moderate intensity (flow rates \leq Q1year).

Progressive treatment units are tailored to treat flow rates \leq Q1year with an optimum hydraulic head varying from 0 to 2 m/h.

Exceptional flow rates (5% of cumulative rainfall) undergo less thorough but significant treatment, with a hydraulic head from 2 to 4.5 m/h.



Oceanic zone:



3 - Operating principle

- Floating materials trapped in the 1st compartment (screen in intermediate chamber).
- Optimised hydraulic functioning of the storm water treatment unit compartment:
 - An overflow channel providing uniform hydraulic distribution across the entire filter.
 - A sludge storage tank, isolated from the circulating flow, prevents the release of settled sludge.
- An automatic shutter in the event of a significant overflow of light liquids (oils).
- Gravity-fed system (no energy supplied).
- No consumable to be replaced regularly, an optimal tube bundle diameter striking a balance between less frequent maintenance and a measured unit size:
 - Simple to operate with lower costs.
- Significant storage capacity (>10m³/ha) for sand and sludge:
 - Autonomy allowing infrequent draining.
- Multiple manholes (3 to 5 depending on product) and drain columns:
 - Easier and safe maintenance.

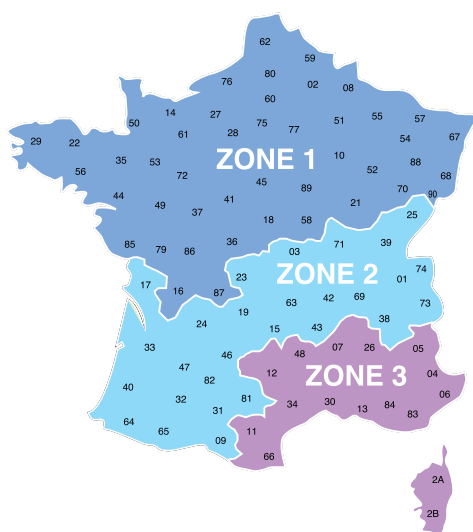
4 - The benefits of this unit:

- Simplified installation without storm overflow hatch and without bypass.
- More than 80% reduction in annual pollution flow linked to suspended solids.
- No raw water is released in the receiving environment without having been treated.

On this type of sealed surface, pollutants (floating, heavy metals, COD, oils, sand, suspended solids, etc.) can be found in large quantities, much higher than a standard road.

By trapping the floating materials, suspended solids and light liquids discharged accidentally, a progressive treatment unit can effectively treat this run-off water and allow for its release or infiltration in the receiving environment.

As the size of units is calculated based on the site and pollutant load, please contact our Design Office for an appropriate size calculation.



The size of a DTP or DTPV-type Progressive Treatment Unit is determined based on local rainfall and geographic zone.

The ten-year peak flow rate calculation formula is as follows:

$$Q_{10} = \psi \times I \times A$$

With:

Q₁₀: Ten-year peak flow rate
(litres/second)

ψ: Run-off coefficient
(depending on type of surface: 0.9 for concrete or asphalt)

I: Rainfall intensity
(litres/second/hectare) based on 3 geographic zones (as ten-year flow rate):

Example in France :

ZONE 1 (oceanic climate): 300 l/s/ha

ZONE 2 (continental climate): 400 l/s/ha

ZONE 3 (Mediterranean climate): 500 l/s/ha

A: Uncovered area (hectares)

The table below allows us to select the correct unit depending on the surface to cover and the geographic zone.

ZONE 1	ZONE 2	ZONE 3	Nominal treatment flow rate	Peak flow rate	DTPV/DTP range ref.
Q ₁₀ = 300 l/s/ha	Q ₁₀ = 400 l/s/ha	Q ₁₀ = 500 l/s/ha	Q 1year	Q ₁₀	
< 539 m ²	< 404 m ²	< 323 m ²	6 l/s	14 l/s	DTPVAAG2A
< 673 m ²	< 505 m ²	< 404 m ²	8 l/s	18 l/s	DTPVAAI2A
< 1010 m ²	< 758 m ²	< 606 m ²	15 l/s	28 l/s	DTPVABC3A
< 1684 m ²	< 1263 m ²	< 1010 m ²	20 l/s	45 l/s	DTPACA3A
< 2104 m ²	< 1578 m ²	< 1263 m ²	25 l/s	57 l/s	DTPACF3A
< 2525 m ²	< 1894 m ²	< 1515 m ²	30 l/s	68 l/s	DTPADA3A
< 2946 m ²	< 2210 m ²	< 1768 m ²	35 l/s	80 l/s	DTPADF3A
< 3788 m ²	< 2841 m ²	< 2273 m ²	45 l/s	102 l/s	DTPAEF4A
< 4630 m ²	< 3472 m ²	< 2778 m ²	55 l/s	125 l/s	DTPAFF4A
< 5471 m ²	< 4104 m ²	< 3283 m ²	65 l/s	148 l/s	DTPAFF4A
< 6313 m ²	< 4735 m ²	< 3788 m ²	75 l/s	170 l/s	DTPAHF4A

For larger sizes, please contact our design office.
Sizes are in hectares, dimensions in mm and weights in kg.



Progressive treatment unit

Run-off water

Steel

CH progressive
2 m/h for Q=1 year
Sizes 0.03 to 0.6 ha



- **Tank** in S235JR fabricated steel with lifting rings.
- **Epoxy resin/polyamine adduct-based bi-component** coating.
- **Exclusive tube bundle** *Alvééau*
- **DN80** drain column.
- **2 m/h** hydraulic head.
- **Automatic shutter** calibrated to 0.85.

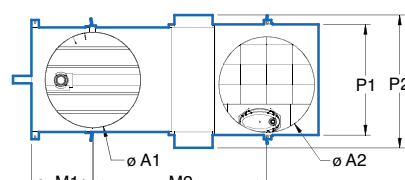
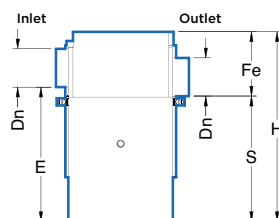
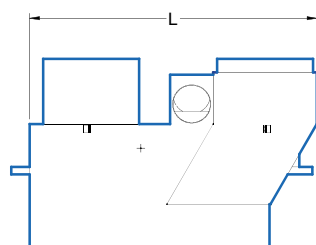
- **2 cylindrical primers** without cover.
- **Reduction of suspended solids** and associated pollutants (heavy metals, COD, oils and PAH) **> 75%**.
- **Polyester construction:** contact us



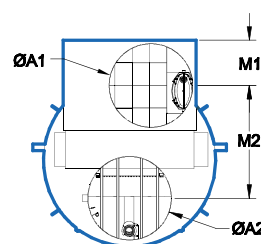
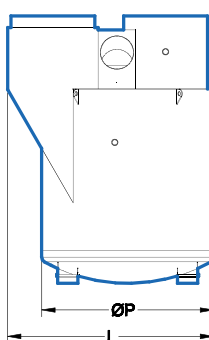
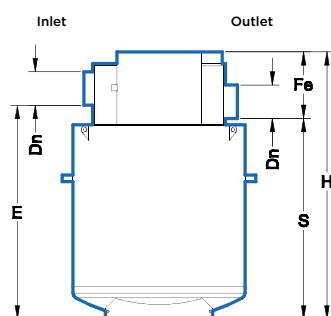
Alvééau® tube bundle in PVC angled at 60° to settle suspended solids 35 mm hydraulic diameter.

OPTIONS

- **Visual and audible alarm** for oils and/or sludge [see p. 90-91](#)
- **Fall protection grid(s)** [see p. 93](#)
- **Speed chassis** [see p. 92](#)



DTP range ref.	P1	P2	L	Dn	E	S	Fe	H	M1	M2	ø A1	ø A2	Weight	Storage volume			Useful volume	Total volume
														Sand	Sludge	Light liquids		
DTPVAAG2A	1260	1430	2241	200	1634	1525	580	2094	500	1320	780	780	575	320	954	630	3690	4273



DTP range ref.	øP	L	Dn	E	S	Fe	H	M1	M2	ø A1	ø A2	Weight	Storage volume			Useful volume	Total volume
													Sand	Sludge	Light liquids		
DTPVAI2A	1600	1916	200	1993	1870	630	2487	421	1047	780	780	589	400	730	603	3760	4336
DTPVABC3A	1900	2282	300	2023	1887	630	2512	630	1256	780	950	755	600	950	851	5350	5938

For larger sizes, please contact our design office.
Sizes are in hectares, dimensions in mm and weights in kg.

For larger surface areas, please contact our design office.



Progressive treatment unit

Run-off water

Steel

CH progressive
2 m/h for Q=1 year
Sizes 0.03 to 0.6 ha

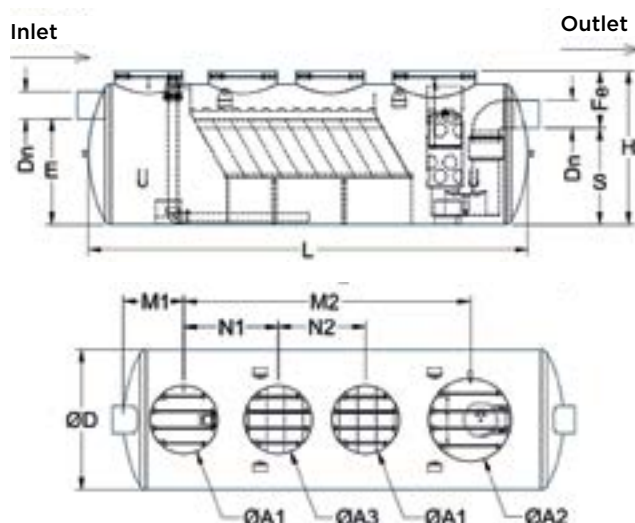


- Tank in S235JR fabricated steel with lifting rings.
- Epoxy resin/polyamine adduct-based bi-component coating.
- Exclusive tube bundle *Alvéreau*
- DN100 drain column.
- 2 m/h hydraulic head.
- Automatic shutter calibrated to 0.85.

- Up to 4 cylindrical primers without cover.
- Reduction of suspended solids and associated pollutants (heavy metals, COD, oils and PAH) > 75%.
- Polyester construction: contact us



Alvéreau * tube bundle in PVC angled at 60° to settle suspended solids 35 mm hydraulic diameter.

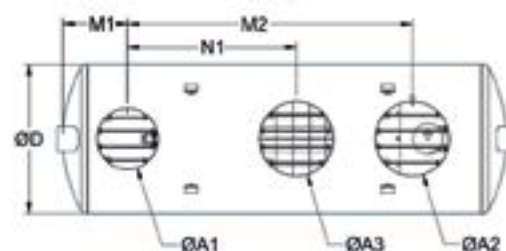
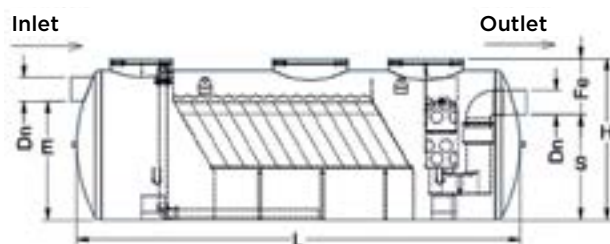


OPTIONS

- Visual and audible alarm for oils and/or sludge [see p. 90-91](#)
- Fall protection grid(s) [see p. 93](#)
- Speed chassis [see p. 92](#)

references	Storage volumes			Volumes	
	Sand	Sludge	Light liquids	Useful	Total
DTPACA3A	990	1300	500	8670	12740
DTPADF3A	1839	2172	780	13700	18167

references	Ø D	L	Dn	E	S	Fe	H	A1	A2	A3	M1	M2	N1	N2	Weight
DTPACA3A	1600	6047	300	1205	1105	645	1750	780	780	950	693	4230	1280	1600	1256 kg
DTPADF3A	1900	6645	300	1506	1336	714	2050	780	950	950	1093	4355	1380	1600	2043 kg



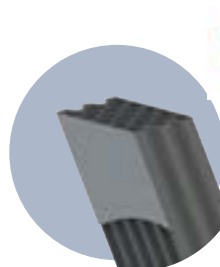
references	Ø D	L	Dn	E	S	Fe	H	A1	A2	A3	M1	M2	N1	N2	Weight
DTPACF3A	1900	5645	300	1506	1336	714	2050	780	950	950	823	3625	2150		1763 kg
DTPADA3A	1900	6145	300	1506	1336	714	2050	780	950	950	943	4005	2630		1899 kg

For larger sizes, please contact our design office.
 Sizes are in hectares, dimensions in mm, weights in kg and volumes in litres.

references	Storage volumes			Volumes	
	Sand	Sludge	Light liquids	Useful	Total
DTPACF3A	1449	1629	780	11560	15331
DTPADA3A	1626	1901	780	12630	16749



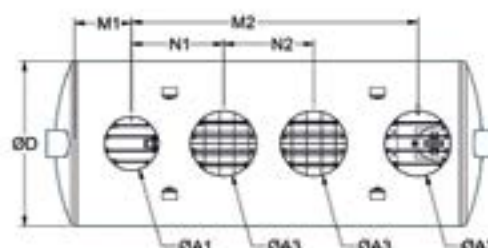
- **Tank** in S235JR fabricated steel with lifting rings.
- **Epoxy resin/polyamine adduct-based bi-component** coating.
- **Exclusive** tube bundle *Alvééau*
- **DN100** drain column.
- **2 m/h** hydraulic head.
- **Automatic shutter calibrated** to 0.85.
- **Up to 4 cylindrical primers** without cover.
- **Reduction** of **suspended solids** and associated pollutants (heavy metals, COD, oils and PAH) **> 75%**.
- **Polyester construction**: contact us



Alvééau® tube bundle in PVC angled at 60° to settle suspended solids 35 mm hydraulic diameter.

OPTIONS

- **Visual and audible alarm** for oils and/or sludge [see p. 90-91](#)
- **Fall protection grid(s)** [see p. 93](#)
- **Speed chassis** [see p. 92](#)



DTP

Progressive
Treatment

references	Storage volumes			Volumes	
	Sand	Sludge	Light liquids	Useful	Total
DTPAEF4A	3065	2702	1130	19970	26708
DTPAFF4A	3630	3326	1130	23350	31232
DTPAGF4A	4196	3949	1130	25030	33494
DTPAHF4A	4739	4573	1130	28400	38018

references	Ø D	L	Dn	E	S	Fe	H	A1	A2	A3	M1	M2	N1	N2	Weight
DTPAEF4A	2400	6160	400	1875	1675	875	2550	780	950	950	1100	4130	1330	1300	3141 kg
DTPAFF4A	2400	7160	400	1875	1675	875	2550	780	950	950	1245	5035	1635	1800	3552 kg
DTPAGF4A	2400	7660	400	1875	1675	875	2550	780	950	950	1450	5280	1730	1800	3812 kg
DTPAHF4A	2400	8660	400	1875	1675	875	2550	780	950	950	1740	5990	2640	1800	4219 kg

For larger sizes, please contact our design office.
Sizes are in hectares, dimensions in mm, weights in kg and volumes in litres.



Run-off water treatment



Treatment units for dry-docks units

Regulations _____ p 84

Operation and manufacturing _____ p 85

Size of our units and installation _____ p 86

Treatment units for boat dry-docks units from 6 to 75 l/s _____ p 87



1 - Regulations

Other than the Water Act (dated 3 January 1992) applicable to dry-docks units, section 6 of the Environment Code and its article L 216-6 applies, according to which:

"The act of discarding, discharging or releasing into surface water, underground water or seawater within territorial waters, directly or indirectly, one of the substances whose action or reactions cause, even temporarily, harmful effects to health or damage to flora and fauna or significant modifications to the normal water supply or restricted use of bathing areas is punishable by two years in prison and a €75,000 fine".

In addition, the Maritime Ports Code, via articles R 322-1 and R 353-4 of book III of the Maritime Ports Code (Decree no. 93-726 of 29 March 1993), indicate:

"No one may cause harm to ports or harbours, whether in terms of depth, cleanliness or facilities". "Failure to respect the places provided for waste disposal is a punishable offence".

Finally, it is important to note that sediment from port dragging cannot be discharged into the sea if contaminated by heavy metals. It must be retreated on land.

Techneau has developed a treatment unit for dry-docks units (UTC) which traps macro pollutants and micro pollutants in run-off water. Many options are available, and optimal results have been obtained, as proven by the analyses below:

Example of UTC with a hydraulic head of 2 m/h and installed in the Granville careening area (50):

	Pollutant load concentration		Overall performance
	Input (mg/l)	Output (mg/l)	
SS	620	9	98.53
BOD5	100	8.8	91.20
COD	480	53.2	88.92

	Heavy metals		Overall performance
	Input (mg/l)	Output (mg/l)	
SS	16.63	0.59	96.43
BOD5	0.85	< 0.25	> 70
COD	5.11	0.54	89.50

Analyses conducted by the Manche Departmental Analysis Laboratory.

2 - Uses

The UTC was developed to treat effluent from dry-docks units and boat storage platforms.

This effluent (run-off water + process water) is characterised by the presence of dust and toxic pollutants from boat maintenance operations (cleaning, sanding, painting, draining, etc.).



3 - Operating principle

These pollutants, found in large quantities, are mainly linked to Suspended Solids (SS).

By trapping accidentally released SS and light liquids, the UTC contributes to port water quality.

Specific size calculation from a rainfall data study with French data:

- 95% of ten-year run-off volume is treated with a Hydraulic Head (CH) ≤ 2 m/h
- Exceptional overflows (5% of run-off is accepted by the unit). Treatment is completed with Hydraulic Head ≤ 4.5 m/h.
- **Over 80% reduction in pollutant load linked to SS.**
- Simplified installation without storm overflow hatch or bypass.
- **Zero release of raw (untreated) water in the receiving environment.**

Optimised hydraulic operation thanks to the overflow channel providing uniform distribution of the flow across the entire filter.



4 - Manufacturing

Treatment Units for dry-docks units (UTC) include:

- fibreglass-reinforced polyester lining made by filament winding and contact moulding allowing high mechanical strength,
- an automatic shutter in the event of a significant discharge of light liquids (oils) avoiding any release to the receiving environment,
- anti-corrosion materials suited to a salt water environment,
- significant sand and sludge storage capacity ($> 10 \text{ m}^3/\text{ha}$) allowing less frequent draining,
- an AlvéEau tube bundle in recycled PVC, angled at 60° and removable, specially designed by Techneau,
- 3 to 4 manholes (depending on product) for easy access,
- a sludge drain column for simplified maintenance.

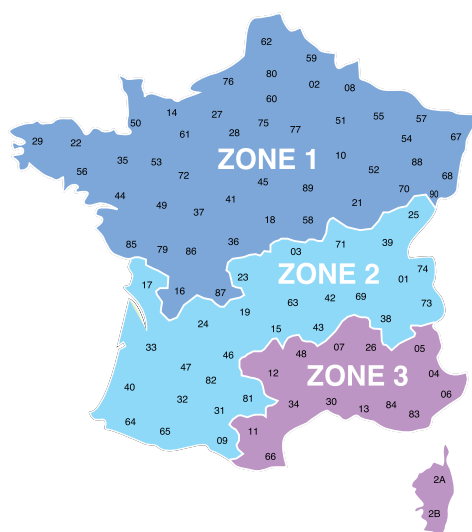


Treatment of dry-docks units
Size of our units and installation

Waste water

Polyester

CH progressive
2 m/h for Q=1 year
Size 6 to 75 l/s



5-benefits

Gravity-fed system and suited even to exceptional rainfall events:
maximum autonomy.

No "consumable" to replace regularly: **reduced operating costs.**

6 - installation

The UTC can be buried deep underground or in a submersible zone.

7 - determining size

The size of the unit is determined based on local rainfall and geographic zone.

$$Q_{10} = \psi \times I \times A$$

Q₁₀: Ten-year peak flow rate
(litres/second)

Q_r: Treatment flow rate (litres/second)

ψ: Run-off coefficient
(depending on type of surface: 0.9 for concrete or asphalt)

I: Rainfall intensity
(litres/second/hectare) based on 3 geographic zones (as ten-year flow rate):

Example in France :

ZONE 1 (oceanic climate): 300 l/s/ha

ZONE 2 (continental climate): 400 l/s/ha

ZONE 3 (Mediterranean climate): 500 l/s/ha

A: Uncovered area (hectares)

We will choose the unit type in the table below depending on the surface area of the careening area and the geographic zone (3 pre-defined zones, see map opposite).

Unit selection table

ZONE 1	ZONE 2	ZONE 3	UTC range ref.
Q10 = 300 l/s/ha	Q10 = 400 l/s/ha	Q10 = 500 l/s/ha	
< 539 m ²	< 404 m ²	< 323 m ²	UTC2AAG2P
< 842 m ²	< 631 m ²	< 505 m ²	UTC2ABA2P
< 1263 m ²	< 947 m ²	< 758 m ²	UTC2ABF3P
< 1684 m ²	< 1263 m ²	< 1010 m ²	UTC2ACA3P
< 2104 m ²	< 1578 m ²	< 1263 m ²	UTC2ACF3P
< 2525 m ²	< 1894 m ²	< 1515 m ²	UTC2ADA3P
< 2946 m ²	< 2210 m ²	< 1768 m ²	UTC2ADF3P
< 3367 m ²	< 2525 m ²	< 2020 m ²	UTC2AEA3P
< 3788 m ²	< 2841 m ²	< 2273 m ²	UTC2AEF4P
< 4630 m ²	< 3472 m ²	< 2778 m ²	UTC2AFF4P
< 5471 m ²	< 4104 m ²	< 3283 m ²	UTC2AGF4P
< 6313 m ²	< 4735 m ²	< 3788 m ²	UTC2AHF4P



Treatment unit

for boat dry-docks units

Waste water

Polyester

CH progressive
2 m/h for Q=1 year
Size 6 to 75 l/s

- Fibreglass-reinforced polyester tanks. Filament winding design.
- Coating **perfectly suited to treat very aggressive water.**
- Internal or external installation. **Can withstand being submerged in sea water.**
- PVC and stainless steel internal components.

- **Surface to be treated** up to 6,300 m² (depending on geographic zone).
- **Drain column.**
- **Tube bundle.**
- **Automatic shutter** calibrated to 0.85

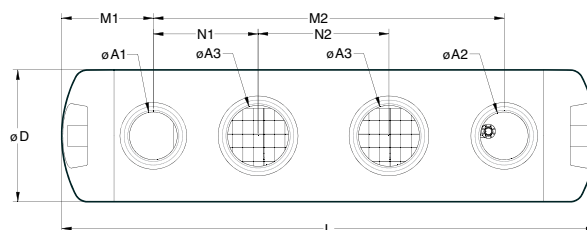
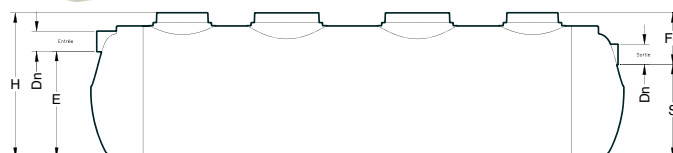
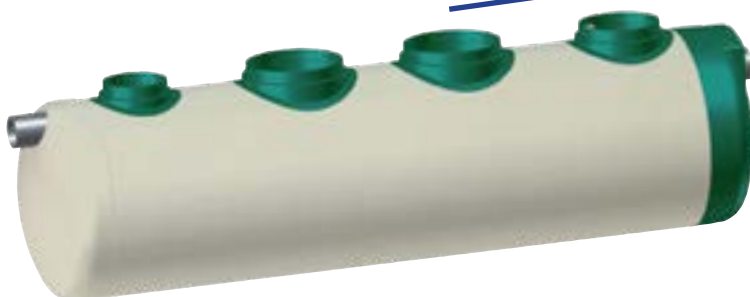
15-YEAR WARRANTY
RUST-PROOF
HIGH MECHANICAL
STRENGTH

OPTIONS

- Polyethylene extensions [see p. 90](#)
- Visual & audible alarm [see p. 90-91](#)
- Anchor straps [see p. 92](#)
- Speed chassis [see p. 92](#)



Alvéole® tube bundle in PVC angled at 60° to settle suspended solids 35 mm hydraulic diameter.



Size characteristics

UTC range ref.	ø D	H	L	E	S	Dn	øA1	øA2	øA3	M1	M2	N1	N2	Weight	Number of manholes
UTC2AAG2P	1600	1816	4700	1217	1117	200	730	730	730	1200	2300	1150	-	548	3
UTC2ABA2P	1600	1816	4870	1217	1117	200	730	730	730	1200	2470	1235	-	609	3
UTC2ABF3P	1600	1816	5830	1217	1117	315	730	730	730	1200	3430	1150	1150	745	4
UTC2ACA3P	1600	1816	6474	1217	1117	315	730	730	730	1200	4074	1358	1358	830	4
UTC2ACF3P	2000	2216	6430	1627	1427	315	730	930	930	1400	3530	1765	-	996	3
UTC2ADA3P	2000	2216	7074	1627	1427	315	730	930	930	1400	4174	1390	1390	1113	4
UTC2ADF3P	2000	2216	7714	1627	1427	315	730	930	930	1400	4814	1605	1605	1228	4
UTC2AEA3P	2000	2216	8038	1627	1427	315	730	930	930	1400	5138	1713	1713	1287	4
UTC2AEF4P	2400	2640	7170	1980	1730	400	730	930	1130	1335	4315	2215	-	1950	3
UTC2AFF4P	2400	2640	7814	1980	1730	400	730	930	1130	1335	4959	2509	-	2175	3
UTC2AGF4P	2400	2640	8458	1980	1730	400	730	930	1130	1335	5603	1798	2015	2347	4
UTC2AHF4P	2400	2640	9102	1980	1730	400	730	930	1130	1335	6147	2002	2050	2780	4

Hydraulic characteristics

UTC range ref.	Nominal treatment flow rate	Accepted peak flow rate	Sand storage vol.	Sludge trap compartment		SS settling compartment		light liquids storage	Useful vol.	Total vol.
	Q 1year (l/s)	Q 10 (l/s)		Hydraulic Head m/h	litres	Hydraulic Head m/h	litres			
UTC2AAG2P	6	14	1608	1.9	4.4	347	500	6595	8847	
UTC2ABA2P	10	23	1608	1.9	4.4	578	500	6865	9209	
UTC2ABF3P	15	34	1608	1.8	4.1	1059	500	8313	11151	
UTC2ACA3P	20	45	1608	1.9	4.4	1290	500	9278	12446	
UTC2ACF3P	25	57	2991	2.0	4.4	1517	800	14235	18648	
UTC2ADA3P	30	68	2991	1.9	4.3	1836	800	15779	20672	
UTC2ADF3P	35	80	2991	1.8	4.1	2155	800	17324	22695	
UTC2AEA3P	40	91	2991	1.9	4.4	2315	800	18096	23706	
UTC2AEF4P	45	102	4252	1.9	4.4	2501	1200	23357	30265	
UTC2AFF4P	55	125	4252	2.0	4.4	2922	1200	25605	33178	
UTC2AGF4P	65	148	4252	2.0	4.5	3343	1200	27854	36092	
UTC2AHF4P	75	170	4252	2.0	4.5	3764	1200	30695	39774	

For larger sizes, please contact our design office.

Dimensions are in millimetres, weights in kilograms, volumes in litres.



Options

Extensions	p 90
Alarms and transmission	p 90-91
Unit anchoring	p 92
Additional options	p 93-94



Options for:

- oil separators
- grease and/or starch separators.

1 - Extension



Principle of the telescopic extension

Telescopic extension

The lower part is embedded in the upper part, making it easier to adjust the height

Reminder

To define the number and type of extension, refer to the separator product file.

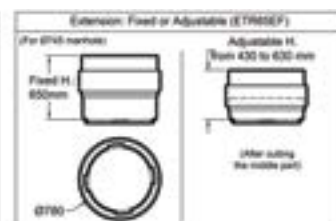
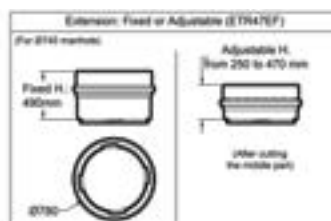
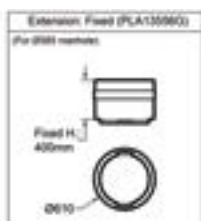


References	A (mm)	B (mm)	Weight (kg)	Adjustable	Fixed	Fall protection grate ref. GI06701
ETR47EF	490	780	10.5 kg	•		•
ETR65EF	650	780	18 kg	•		•
PLA13555G	200	610	4 kg		•	
PLA13556G	400	610	6 kg		•	

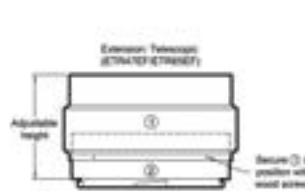
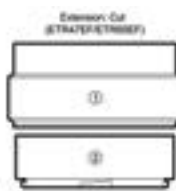
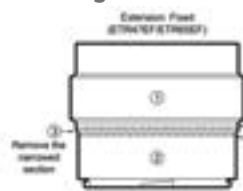


From the second stacked extension, a concrete slab is required. Ideally, the installation should be as shallow as possible to make maintenance easier and avoid ground overload on the tank.

Diagrams



Adjustable extension diagrams:



2 - Visual and audible alarms

Oil alarm - battery-powered



ATEX-certified intrinsic security alarm comprising an IP67 PVC cabinet and a probe with a motion sensor. Length of oil probe cable: 10 m length - Section: 2 x 1.5 mm
Powered by 6 alkaline batteries.
Used to signal an oil level, maintenance deadline (0, 3, 6 or 12 months), low battery level, overfill (see RM10EX option).

RM10EX option : ATEX level regulator to detect a high level.



Ref.
AH01

Oil alarm - 230V power supply



ATEX-certified intrinsic security alarm comprising an IP65 polycarbonate cabinet and a conductivity probe. Length of probe cable: 10 m - Section: 2 x 0.75 mm

Supplied with cable junction.



Ref.
AH

Sludge alarm - 230V power supply



ATEX-certified intrinsic security alarm comprising an IP65 polycarbonate cabinet and an ultrasound probe. Supplied with 10 metres of 3 x 0.5 mm shielded cable.

Supplied with cable junction.



Ref.
AB010

Oil and sludge alarm - 230V power supply



ATEX-certified intrinsic security alarm comprising an IP65 polycarbonate cabinet, a conductivity probe for oil and an ultrasound probe for sludge.

Supplied with 5 metres of cable.

Sludge probe cable section: 3 x 0.5 mm

Oil cable section: 2 x 0.75 mm shielded

Supplied with 2 cable junctions.



Ref.
AHB

Information from Techneau

Mandatory as per the standard NF EN 858-1 § 6.5.4
"Separator systems shall be provided with automatic warning devices..." They can detect the level of oils in the separator. A visual and/or audible alarm triggers when the desired level is reached.



Options for:

- oil separators
- grease and/or starch separators.

Autonomous transmitters

Techneau offers to supplement the alarm with an autonomous transmitter to tell you when the desired threshold is reached.



Autonomous transmitter with a SIM card

Autonomous transmitter using Orange's GSM, GPRS or 3G networks. It allows preset SMS to be sent to pre-recorded mobile numbers (up to 4 different numbers). Activation from dry switch in all our alarm cabinets. Included: SIM card with GSM plan for 5 years (activated when first SMS sent).



Ref.

TEL010



Autonomous transmitter without a SIM card

Autonomous transmitter using Orange's GSM, GPRS or 3G networks. It allows preset SMS to be sent to pre-recorded mobile numbers (up to 4 different numbers).

Activation from dry switch in all our alarm cabinets.



Ref.

TEL020



Options for:

- grease and/or starch separators.

3 - Grease alarm

Grease alarm - 230V power supply

Sound and visual 230V alarm for grease separator to signal a grease level in the separator before saturation. It also detects when it has not been refilled with water (possible after draining operations).

Equipped with an IP65 control cabinet and an IP68 capacitive probe with a 10 metre cable.

Grease probe cable section: 2 x 0.75 mm

Supplied with cable junction.



Ref.

AG

Information from Techneau

Mandatory as per the standard NF EN 858-1 § 6.5.4 "Separator systems shall be provided with automatic warning devices..." They can detect the level of oils in the separator. A visual and/or audible alarm triggers when the desired level is reached.



Options for unit anchoring



Rot-proof polyester strap

for the EHR range.

It is connected to the ballast slab with a rebar (not supplied).

Polyethylene oil separators

Relevant Ellipse units		Ref.
EHR0501D	EHR0503D	SA107



Anchoring device with polyester strap and tensioner diameters ≤ 1600

2 rot-proof polyester straps with dichromate steel hooks and a galvanised turnbuckle for final tensioning of the device. *Can be used to anchor a tank up to 1600 mm diameter.*

The tensioner must be connected and bolted to the ballast slab with a rebar (not supplied).

The quantity will be defined depending on the unit model: **contact us**.

Ref.

SA1216



Galvanised steel turnbuckle only

Used to connect a U4, Y1 or NH type steel tank to a ballast slab.

Fastened to each tank anchoring bracket, it is connected and bolted to the ballast slab by a rebar (not supplied).

Tank model

Ref.

Steel tank
diam. 1600 mm

12243T

Steel tank
diam. > 1900 mm

15126T

The quantity will be defined depending on the unit model: **contact us**.

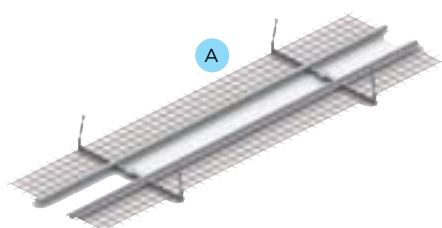
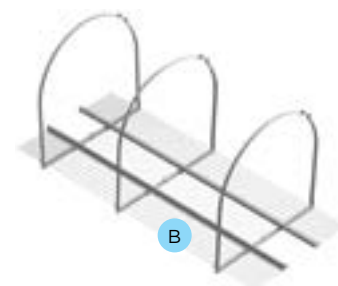


Chassis speed - Polyester or steel units

Used to connect a cylindrical tank to a lower apron (ballasting slab) by pouring the concrete directly onto the assembly.

For steel units, it is fastened via galvanised tensioners on each tank anchoring bracket. The unit is connected and bolted to the ballast slab with a rebar (not supplied). The assembly (excluding mesh) is protected with an anti-rust coating.

For polyester units, stainless steel anchoring straps connect the assembly to the ballast slab.



Tank model

Models

Horizontal cylindrical
tank in steel

A

CSTG_

Horizontal cylindrical
tank in polyester

B

CSCI_



**very importante in the presence of
groundwater (see installation chapter)**



Additional options



Adapter sleeve

In nitrile for oils. It is used to connect the unit inlet and/or outlet depending on the type of pipe.

Other diameters: **contact us**.

Ref.	min. ext. ø	min. ext. ø	Width	Weight
TSC115	100	115	100	0.6
TSC175	150	175	120	1.0
TSC225	200	225	150	1.7



Solenoid valve for starch

230 V power supply.

Membrane solenoid valve, normally closed indirect control. Technical properties: 2-way, brass body, EPDM membrane -30° +120°. IP65 protection with connector.

Ref.

EV1521



Polyethylene 1/4-turn valve for mini grease separator

Made from PVC.

Ref.

11417



Starch inlet for stainless steel separator

100 mm diameter stainless steel inlet for BDG_I or BDGA_I type stainless steel grease separator.

Supplied with spray nozzle.

Ref.

OSF010



Stainless steel sealed cover for manhole

Made from stainless steel, diameter 580 mm or 780 mm.

Toggle latch closure on seal.

Ref.	Cover diameter	Weight
CV0580AEI	580 mm	7
CV0780AEI	780 mm	12



Fall protection grate with separate bars, horizontal and vertical storm water treatment unit special

For worker safety, a fall protection grate with separate bars in stainless steel can be added to NV, NVB and NH storm water treatment unit manholes.

Ref.	Manhole diameter
ON1505	580 mm
ON1510	780 mm
ON1515	950 mm

Fall protection grate with separate bars

on concrete extension

Contact us



Additional options for steel units



Automatic stopper for vertical storm water treatment units

Made from polyethylene. Calibrated to oil density, the option is used to stop any oil release towards the network, in the event of an accidental leak or oil storage above the storm water treatment unit's capacity.

Treated flow DN	Ref.
for NV or NVB DN 100	FLO100E
for NV or NVB DN 160 or DN 200	FLO200E



Drain column for vertical storm water treatment units

Made from DN80 PVC. Equipped with a symmetrical connection, it makes the maintenance of vertical units easier.

Unit type	Ref.
for NV or NVB Size 4, 8, 12 and 16	ON1005
for NV or NVB Size 20 and 30	ON1010



Steel unit cathode protection

Used to protect a steel tank electrically from its immediate surroundings if the coating is scraped or it is electrically modified.

Principle of sacrificial anodes:

- internal cathode protection (provided by magnesium anodes).
- external cathode protection (provided by pre-backfilled sacrificial anodes connected to the unit using a supplied 6 mm² link cable)

These protection devices are to be distributed in a uniform manner along the length of the tank. *Contact us for the required quantity depending on the unit.*

Name	Ref.
Internal sacrificial anode	A02M
External sacrificial anode	A05MP



Optional: an external anode control box can be installed to check the efficacy of anodes and cathodes, considering the electrochemical limitations of the surrounding terrain.

Name	Model
Control cabinet	CCPC_



Appendix A: Installation

Installation principles for water treatment units:

Polyethylene unit Ellipse, Aronde, Sphère type	p 96-98
Polyethylene grease separator HG type	p 99
Polyethylene unit EHR type	p 100-101
Polyethylene unit Sphère type	p 102-104
Steel unit Hydrocube type	p 105-107
Steel unit Hydrobac type	p 108
Cylindrical unit vertical STEEL	p 109-110
Cylindrical unit horizontal POLYETHYLENE	p 111-113
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GM1E type grease collector	p 117
Stainless steel MiniGR type grease collector	p 118
Polyethylene grease and starch separator Sphère type	p 119
Oil separator questionnaire	p 120
Grease separator questionnaire	p 121



Installation of water treatment units

Polyethylene unit ARONDE & ELLIPSE type [Appendix A-I]



INSTALLATION SHEET

IN052-F



The reference guide remains
the one supplied with the unit

Handling:

Before handling, pump the wastewater in each compartment.

Polyethylene tanks are vulnerable to the impact of forklift truck forks, proceed with caution.
Do not push the unit by using the fork against the tank.

The unit should be handled using suitable lifting machinery.

For units with a lifting strap, **use all of the unit's lifting straps at the same time.**

Once suspended, the unit should be guided using ropes.

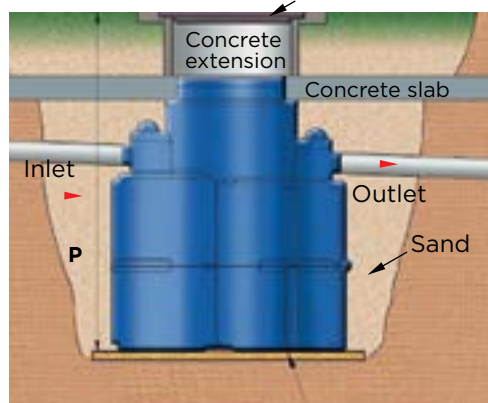
Receipt and storage:

- Visually inspect the body of the unit to make sure there is no damage.
If there are any defects, note reservations on the transport company's initialled slip
- Place the unit somewhere it is protected from impacts, and secure it. Do not allow rain to penetrate the unit.

Setup:

- Never fill the unit with water above ground.** If a filling seal check is required, do not fill until after step 5 of this guide. Then compare changes to the level 12 hours after filling with water.
- Do not use compacting equipment** to stabilise the unit's backfill.
- Do not rest the concrete element directly on the unit,** create an adapted base slab.
- Always place the unit on a bed of sand.**

Cast iron cover + frame sealed in concrete



5 to 10 cm bed of sand

Mechanical Strength:

- The unit's temperature should not exceed **30 °C** at any time.
- The cover manhole (BCE option) does not replace a cover.
- The unit is designed to resist backfilling static loads corresponding to the following depth limits:

ELLIPSE range: $P < 2.5m$; ARONDE range: $P < 2m$
(P dimension based in diagram opposite)

- Beyond the depths above, **a distribution slab must be created** (see stage 11) **to support the edges of the excavation.** *The structural dimensions of this slab will be calculated by a Civil Engineering design office.*
- If there is **vehicle traffic**, the **protection slab** is crucial regardless of depth.
- The presence of **specific dynamic loads** can sometimes require **peripheral reinforcement** in addition to the distribution slab (*see your Civil Engineering design office*)



Installation of water treatment units

Polyethylene unit ARONDE & ELLIPSE type [Appendix A-I - cont & end]



INSTALLATION SHEET

IN052F

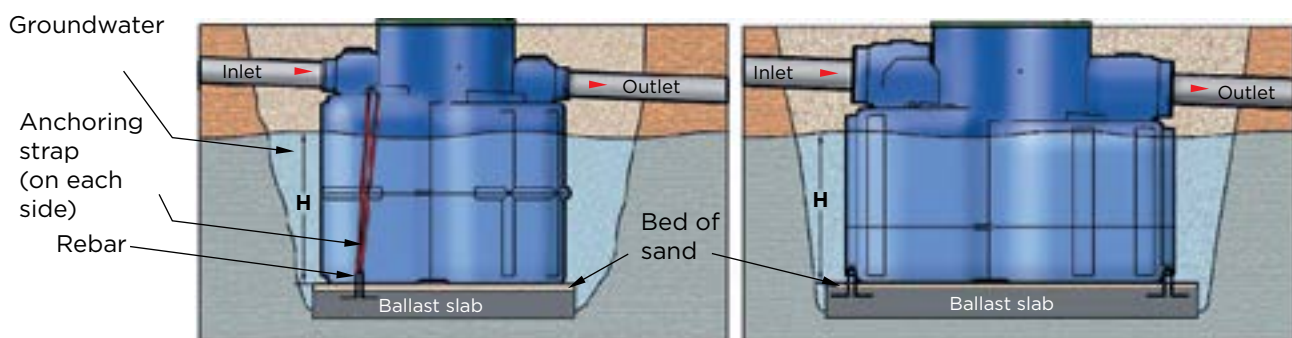


The reference guide remains the one supplied with the unit



The **ARONDE** range **cannot be installed in the presence of groundwater**.

Be aware of the presence of groundwater, hydromorphic ground or a layer of impermeable soil (rocky or clay). Any risk of excavation flooding makes steps 1 and 4 **crucial**. For the Ellipse range, the maximum groundwater level H is 750 mm if the cover (not extended) is at the ground level. If the unit is deeper, contact our design office to determine the limit dimension H.



Note about grease or starch separators:

These units are likely to cause bad odours. It is crucial that the inlet and outlet pipes are correctly ventilated.

Underground unit installation procedure:

- 1 - Stabilise the bottom of the excavation and ensure it is horizontal. If the unit needs to be anchored (see § "Mechanical strength"), create a concrete apron at the bottom of the excavation and include rebars. The weight of the concrete will be calculated to offset the buoyant force when the unit is empty.
- 2 - Create a 100 mm bed of sand on the bottom of the stabilised excavation.
- 3 - Position the unit after removing any protection.
- 4 - Anchor the unit using anchoring straps (optional). If the unit has one, use the fastening brackets provided for this purpose (see previous diagram).
- 5 - Backfill the unit with sand in layers of 300 mm maximum. Fill the unit at the same time to balance the water level with the backfill level.
 - Stabilise by spraying between each layer.
 - Take care with enclosed spaces
 - Continue to the pipe level.
- 6 - Connect the unit inlet, outlet and vent. Sleeves are provided for the PVC tube
- 7 - Connect the alarms, use sheaths to pass through cables.
- 8 - If needed, raise the float of the stopper when the final water level is reached and stable.
- 9 - Backfill with 10-14 gravel until the unit's manhole level is reached.
- 10 - Stabilise the backfilled area by spraying it.
- 11 - If required (see § "Mechanical Strength"): Cut the cap manhole (BCE) at the level of the groove with a knife. Create the load distribution slab.
- 12 - Fit any extensions and adjust them to the level of the finished ground.
- 13 - Backfill using the natural terrain.



Installation of water treatment units

Polyethylene unit ARONDE & ELLIPSE type

[Appendix A-I - cont & end]



INSTALLATION SHEET

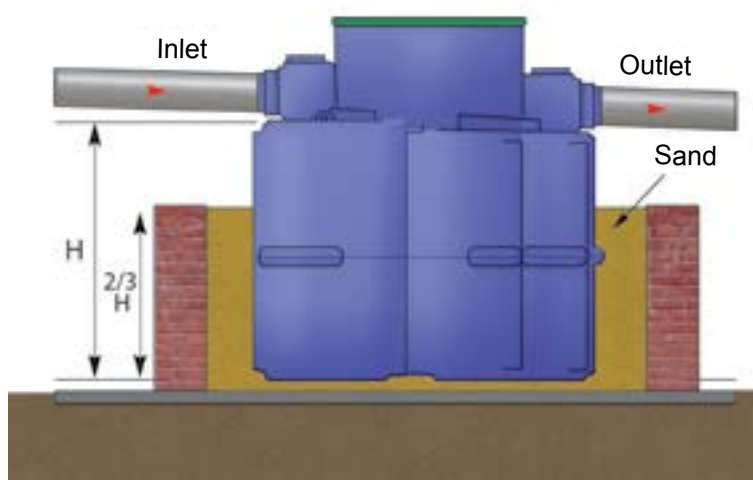
IN052F



The reference guide remains the one supplied with the unit

Raised unit installation procedure:

Note : The following references do not need a low retaining wall: EH0501, EH1001, EH2003, EH2501, EH3001, EH4003, ED0340, ED0480, EG0500, EG0501, EG1000, EG1001, EG2000, EG2500, EG3000, EG1501, EG1502.



- 1 - Ensure the ground is stable, flat and horizontal. If not, create a concrete apron.
- 2 - Create a walled enclosure whose dimensions match the diagram description below.
Keep a gap of 200 mm minimum between the tank and wall.
- 3 - Create a 100 mm bed of sand.
- 4 - Position the unit on the bed of sand after removing the protection.
- 5 - Backfill the lower part of the unit with sand in layers of 300 mm maximum.
 - Fill the unit at the same time to balance the water level with the backfill level.
 - Equalise and stabilise the backfill by spraying between each layer.
 - Take care with enclosed spaces.
 - Continue to the height of $\frac{2}{3} H$.
- 6 - Connect the unit's inlet, outlet and any vents (crucial for units with a drain column). Sleeves are provided for the PVC tube.
- 7 - Connect the alarms.
- 8 - Finish filling the unit with water.
For an oil separator, raise the stopper float if applicable when the service water level is stable.



Installation of water treatment units

Grease separator POLYETHYLENE HG type [Appendix A-II]

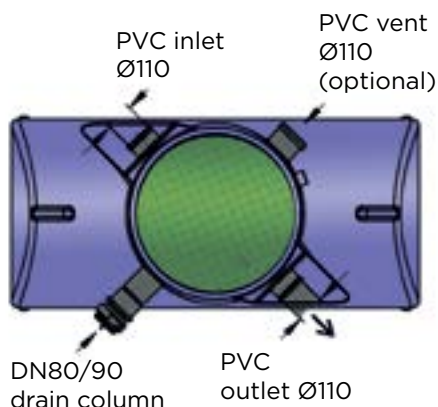


INSTALLATION SHEET

IN0508-A



The reference guide remains the one supplied with the unit



Stable,
smooth and
horizontal ground
Tolerance = 5 mm
e.g. concrete apron

Receipt and storage:

- Visually inspect the body of the unit to make sure there is no damage.
If there are any defects, note reservations on the transport company's initialled slip
- Place the unit somewhere it is protected from impacts. Do not allow rain to penetrate the unit.

Handling:

- When handling, pump the wastewater.
- Polyethylene tanks are vulnerable to the impact of forklift truck forks. Do not push the unit by using the fork against the tank.
- For units with a lifting strap, use all of the unit's lifting straps at the same time.
- Once suspended, the unit should be guided.

Basic precautions:

- The unit's temperature should never exceed **30 °C** at any time.
- Grease separators are likely to cause bad odours. It is crucial to **ventilate the pipework upstream and downstream** pursuant to EN 1825-2.



Installation of water treatment units

Polyethylene unit EHR type [Appendix A-III]

Always respect notice IN052 on receipt of the unit.



INSTALLATION SHEET

IN062-A



The reference guide remains the one supplied with the unit

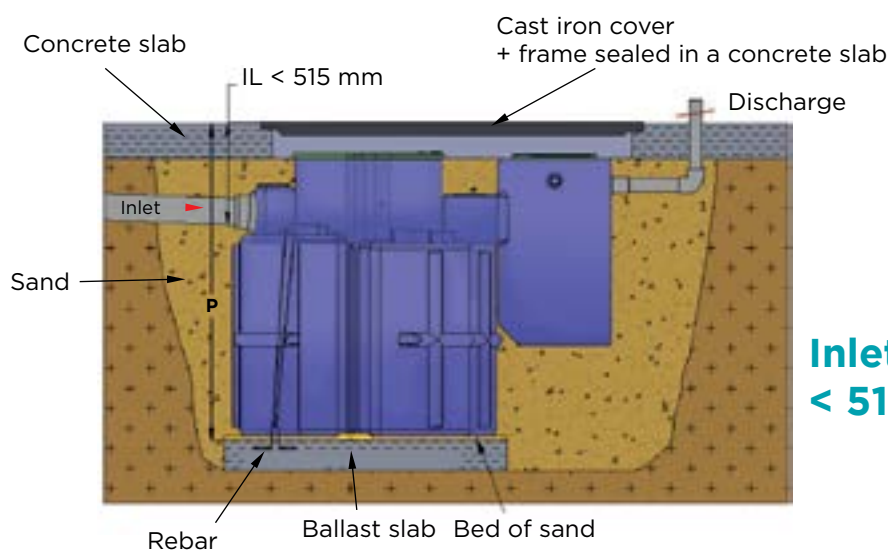
Electrical Installation

Electrical installation must include:

- Pump protection against excess current,
- Differential protection at start of the line.

Additional precautions for underground installation:

- 1 - Do not install the EHR separators in a raised position.
 - 2 - EHR0503C: the space located under the lifting compartment must be backfilled with care to support it perfectly.
 - 3 - Provide the connection:
 - DN50 PVC vent connection,
 - cable gland using a DN50 sheath.
 - 4 - The discharge must be created using pressure PVC.
 - 5 - The cover must allow access to the separator compartment and lifting compartment.
- If there is vehicle traffic:
- 6 a - Inlet Level < 515 mm: provide a surface concrete slab
 - 6 b - Inlet Level ≥ 515 mm: provide a supporting concrete slab on the edges of the excavation and supporting vertical loads.



**Inlet level (IL)
< 515 mm**



Installation of water treatment units

Polyethylene unit EHR type [Appendix A-III - cont & end]

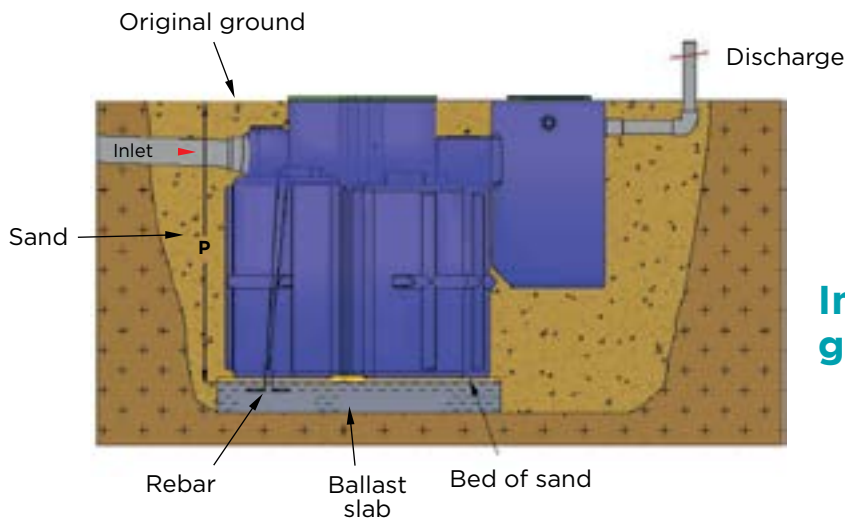


INSTALLATION SHEET

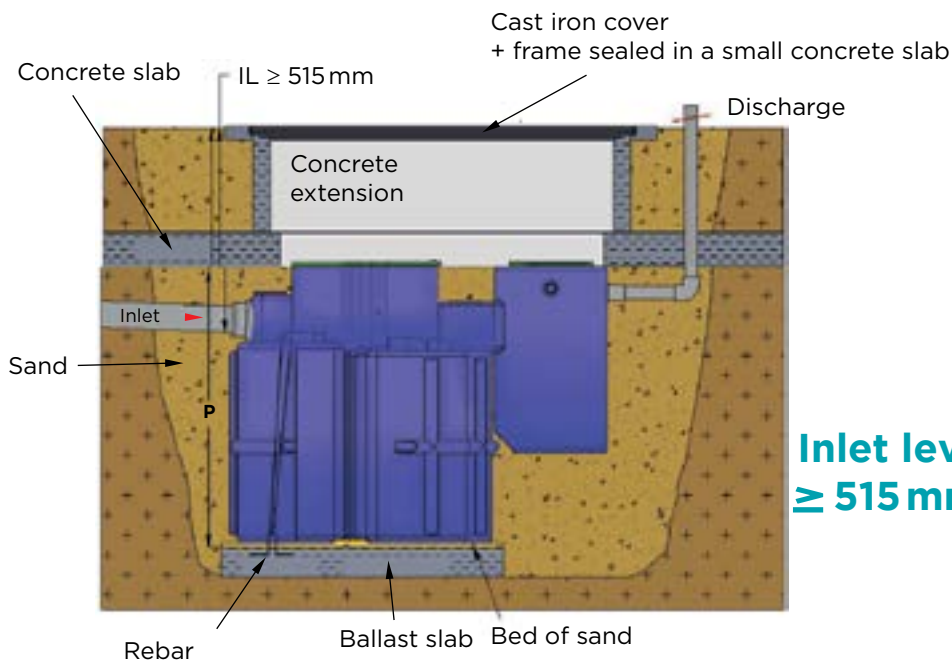
IN062-A



The reference guide remains the one supplied with the unit



**Installation under
green space**



**Inlet level (IL)
 \geq 515 mm**



Installation of water treatment units

Polyethylene unit SPHÈRE type [Appendix A-IV]



INSTALLATION SHEET

IN056-G



The reference guide remains
the one supplied with the unit

Unloading and storage:

- Visually inspect the body of the unit to make sure there is no damage.
If there are any defects, note reservations on the transport company's initialled slip
- Position the unit somewhere it is protected from impacts. Do not allow rain to penetrate the unit.

Handling:

Before handling, pump the wastewater in each compartment.

- Polyethylene tanks are vulnerable to the impact of forklift truck forks. Do not push the unit by using the fork against the tank. The base of the unit includes dedicated slots for forks.
- The unit should be handled using suitable lifting machinery.
- For units with a lifting strap, use all of the unit's lifting straps **at the same time**.
- Once suspended, the unit should be guided using ropes.

Basic precautions:

- Always place the unit on a bed of sand or gravel ($\varnothing < 15\text{mm}$).**
- Do not use compacting equipment** near the unit. Use self-compacting backfill material.
- Do not place the concrete element directly on the unit**, create an adapted and "floating" base slab (There should be no load transfer between the concrete and unit).
- The unit's temperature should never exceed **30 °C** at any time.
- If exposed to dynamic loads (e.g. **vehicle traffic**), the **protection slab** is mandatory regardless of depth. **This slab must be floating** and supporting the edges of the excavation. *The structural dimensions of this slab will be calculated by a Civil Engineering design office.*
- The presence of **specific dynamic loads** can sometimes require **peripheral reinforcement** in addition to the protection slab. (Contact your Civil Engineering design office).
- If installed under roads, **the plastic cover must be removed** and replaced with an adapted cover.
- Be aware of the presence of **groundwater**, **hydromorphic ground** or a **layer of impermeable soil** (rocky or clay) which can **retain surface water**. Any risk of excavation flooding makes steps 5 and/or 11 crucial. Check the soil study to evaluate the risk of water in contact with the unit. The sites <http://www.inondationsnappes.fr> and www.argiles.fr help assess this risk).
- The unit supports static loads (backfilling and hydrostatic thrust) associated with the following limits:

Range SPHÈRE	Risk of groundwater in contact with the unit (see § basic precautions above)		No risk of groundwater in contact with the unit
	Fe (max water level depth/NS)	N (max groundwater level)	Fe (max water level depth/NS)
Standard model	1 m	$N \leq \text{Fe unit}$	1.5 m
Reinforced model	1.5 m	$N \leq \text{Original ground}$	3 m

Beyond the depths above, a protection slab is mandatory.

The unit should not be exposed to residual pressure exceeding the pressure associated with the limits above.



Installation of water treatment units

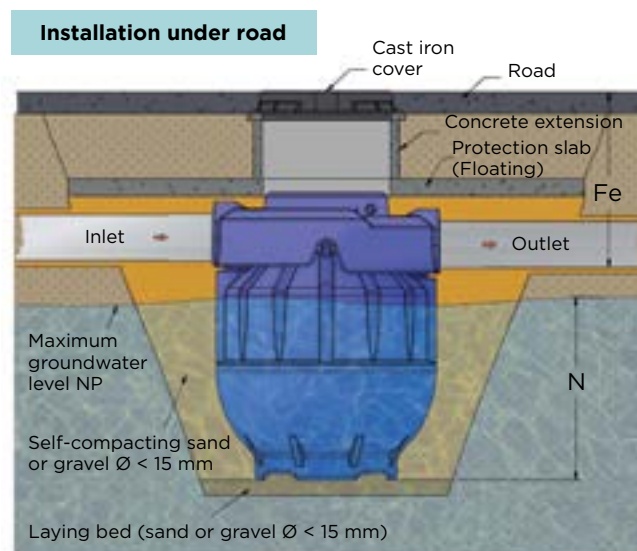
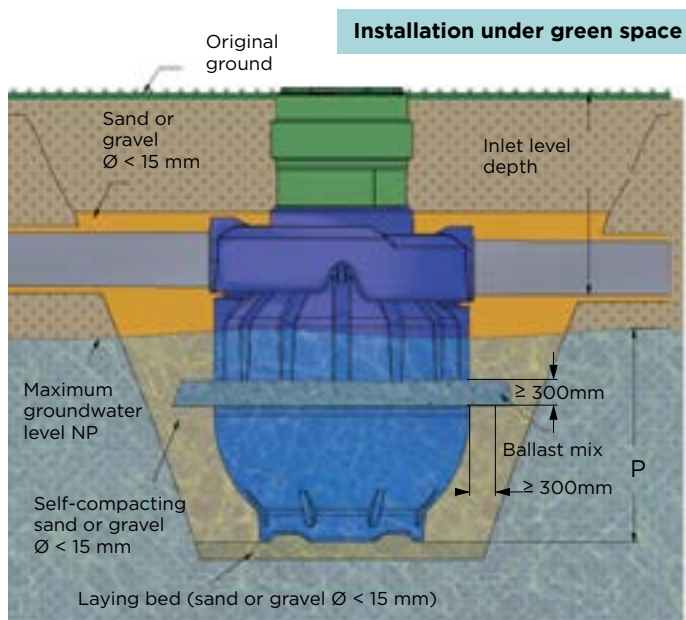
Polyethylene unit SPHÈRE type [Appendix A-IV - cont]



INSTALLATION SHEET
IN056-G



The reference guide remains
the one supplied with the unit



Underground unit installation procedure:

- 1 - Stabilise the bottom of the excavation and ensure it is horizontal.
- 2 - Create a 100 mm bed of sand or gravel ($\varnothing < 15\text{mm}$) on the bottom of the stabilised excavation
- 3 - Position the unit after removing any protection, check it is horizontal.
- 4 - Add 200 litres of clean water in the unit to stabilise it before backfilling around the tank with gravel ($\varnothing < 15\text{mm}$) in layers of 300 mm max.

- **Fill the unit at the same time to balance the water level with the backfill level.**

- ensure that the backfill is stable between each layer.
- take care with enclosed spaces
- backfill the entire spherical base.

5 - If the unit needs to be anchored (see § "Mechanical Strength"), pour a ring of concrete around the strap at mid-height of the tank with a minimum section of 300x300 mm (see diagram).

The weight of the concrete will be calculated to offset the buoyant force when the unit is empty.

6 - Connect the unit's inlet, outlet and any vents (crucial for units with a drain column). *Sleeves are provided for the PVC tube.*

Note : regarding grease and/or starch separators: these units are likely to create bad odours. It is crucial to **ventilate the pipework upstream and downstream** pursuant to EN 1825-2.

7 - Connect the alarms, use sheaths to pass through cables.

8 - If needed, raise the float of the stopper when the final water level is reached and stable.

9 - Backfill with gravel ($\varnothing < 15\text{mm}$) until the pipes are covered.

10 - Ensure the backfill is stable.

11 - If necessary, (see § "Basic precautions"): create a protection slab.

The protection slab can also act as ballast. (Step 5 becomes optional if there is a protection slab).

12 - Fit any extensions and adjust them to the level of the finished ground.

If there is a concrete extension, create a "floating" base slab (see § "basic precautions") and remove the plastic cover.

13- Backfill above the pipes using gravel or the surrounding backfill.



Installation of water treatment units

Polyethylene unit SPHÈRE type [Appendix A-IV - cont & end]



INSTALLATION SHEET

IN056-G



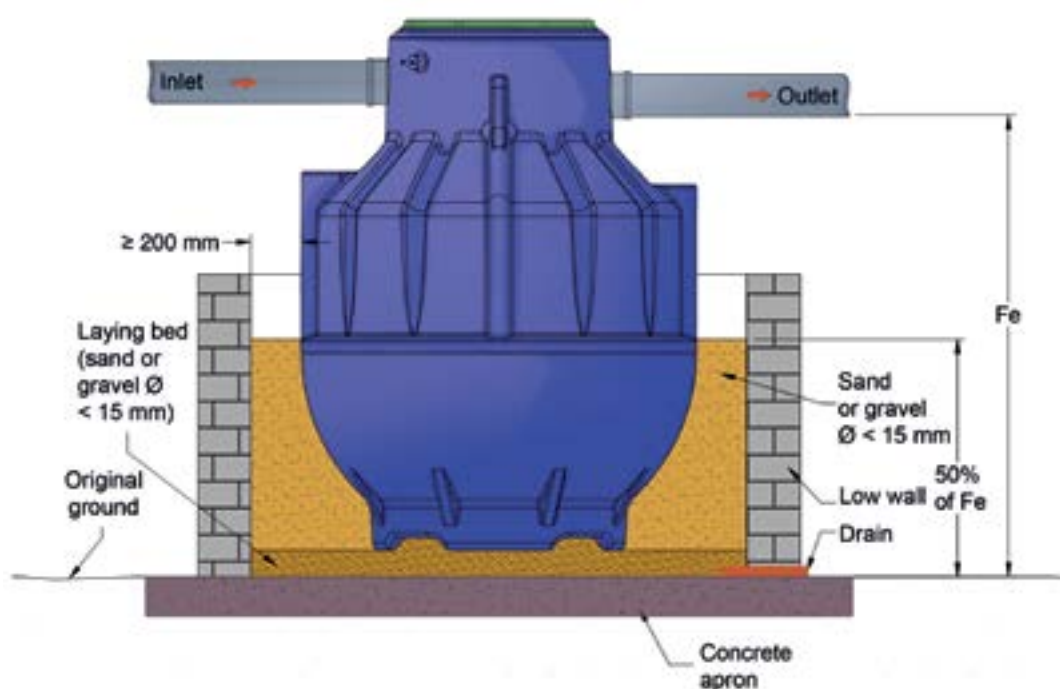
The reference guide remains
the one supplied with the unit

Above ground installation procedure:

Note : Steps 2 and 5 are optional for the following references:

YH0501E ; YH1001E ; YH2003E ; YH0503E ; YH1003E ; YH1502E ; YG0500E ; YG1501E ; YG3000E ; YG3500E ;
YG0501E ; YG1000E ; YG1001E ; YG2000E ; YG2500E ; YG3002E ; YG3502E ; YG0502E ; YG1002E ; YG1503E ;
YD0340E and YD0660E ;
as well as the references YH****RE and YG****RE (reinforced green tanks).

- 1 - Ensure the ground is stable, flat and horizontal. If not, create a concrete apron.
- 2 - Create a walled and drained enclosure whose dimensions match the diagram description opposite.
Keep a gap of 200 mm minimum between the tank and wall.
- 3 - Create a bed of sand or gravel ($\varnothing < 15\text{mm}$) that is 100 mm thick.
- 4 - Position the unit after removing any protection, check it is horizontal.
- 5 - Backfill the lower part of the unit with gravel ($\varnothing < 15\text{mm}$) in layers of 300 mm maximum.
 - Fill the unit at the same time to balance the water level with the backfill level.
 - Equalise and stabilise the backfill by spraying between each layer.
 - Take care with enclosed spaces.
 - Continue to a height of 50% of the unit's water level.
- 6 - Connect the unit's inlet, outlet and any vents (crucial for units with a drain column).
Sleeves are provided for the PVC tube.
- 7 - Connect the alarms.
- 8 - Finish filling the unit with water.
- 9 - For an oil separator, raise the stopper float if applicable until the inner water level is stable.
An overflow alarm is recommended to report unit clogging and avoid overflow.





Installation of water treatment units

HYDROCUBE type steel unit [Appendix A-V]



INSTALLATION SHEET

IN057-D



The reference guide remains the one supplied with the unit

Unloading and storage:

- Visually inspect the unit to make sure there is no damage, particularly to its coating.
If there are any defects, note reservations on the transport company's initialled slip
- Place the unit somewhere it is protected from impacts. Do not allow rain to penetrate the unit.

Handling:

Before handling, pump the wastewater in each compartment.

- The coating of steel tanks is vulnerable to shocks and impacts.
- The unit should be handled using suitable lifting machinery.
- Use all unit lifting rings at the same time. Once suspended, the unit should be guided using ropes.

Basic precautions:

- Always place the unit on a bed of sand or gravel ($\varnothing < 15\text{mm}$).
- Do not use compacting equipment to stabilise the unit's backfill. Use self-compacting gravel.
- Do not place a concrete element directly on the unit, create an adapted and "floating" base slab (There should be no load transfer between the concrete and unit).
- The unit's temperature should never exceed 60°C at any time.
- If exposed to dynamic loads (e.g. vehicle traffic), the protection slab is mandatory regardless of depth. This slab must be floating and supporting the edges of the excavation.
- The structural dimensions of this slab will be calculated by a Civil Engineering design office.*
- The presence of specific dynamic loads can sometimes require peripheral reinforcement in addition to the protection slab. *(Contact your Civil Engineering design office).*
- If installed under roads, the plastic cover must be removed and replaced with an adapted cover.
- Be aware of the presence of groundwater, hydromorphic ground or a layer of impermeable soil (rocky or clay) which can retain surface water. Any risk of excavation flooding makes steps 10 and/or 11 crucial. Check the soil study to evaluate the risk of water in contact with the unit.
- (The site <http://www.georisques.fr> helps assess this risk)*
- The unit supports static loads (backfilling and hydrostatic thrust) associated with the following limits:

Range HYDROCUBE	Risk of groundwater in contact with the unit (see § basic precautions above)		No risk of groundwater in contact with the unit
	Fe (max water level depth/NS)	N (max groundwater level)	Fe (max water level depth/NS)
ADH... AHF... BDG...	1 m	$N \leq \text{Fe unit}$	1.5 m
YH...A (standard)			
YH...RA (reinforced)	1.5 m	$N \leq \text{Original ground}$	3 m

Beyond the depths above, a protection slab is mandatory.

The unit should not be exposed to residual pressure exceeding the pressure associated with the limits above.



Installation of water treatment units

HYDROCUBE type steel unit [Appendix A-V cont]

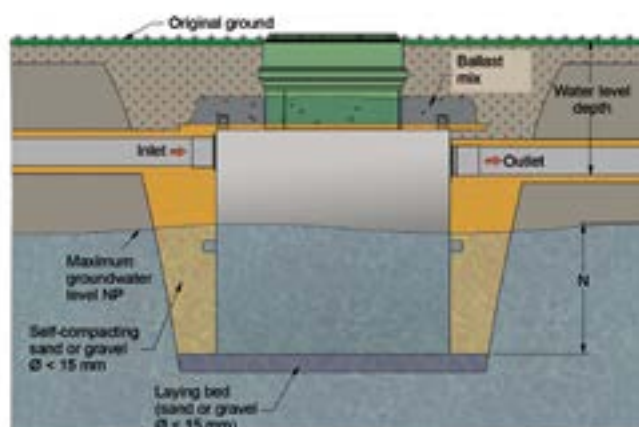


INSTALLATION SHEET
IN057-D

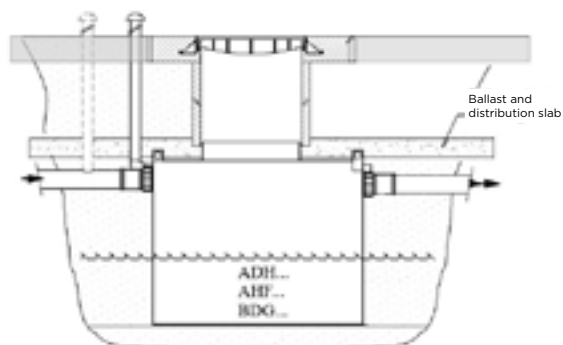
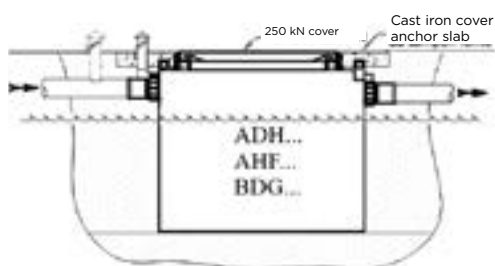
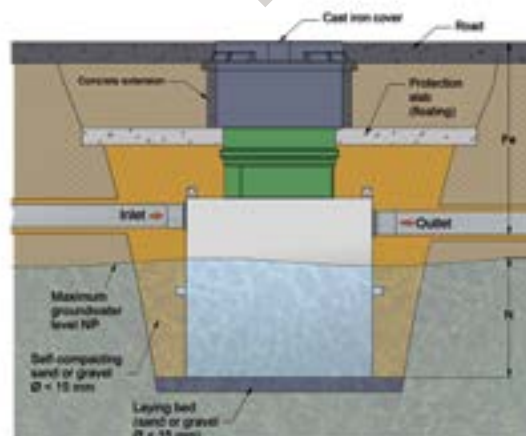


The reference guide remains
the one supplied with the unit

Installation under green spaces



Installation under roads



Hydrocube underground unit installation procedure:

- 1 - Stabilise the bottom of the excavation and ensure it is horizontal.
- 2 - Create a 100mm bed of sand or gravel ($\varnothing < 15\text{mm}$) on the bottom of the stabilised excavation.
- 3 - Position the unit after removing any protection, check it is horizontal.
- 4 - Add 200 litres of clean water in the unit to stabilise it before backfilling around the tank with gravel ($\varnothing < 15\text{mm}$) in layers of 300mm max.
 - Fill the unit at the same time to balance the water level with the backfill level.
 - ensure that the backfill is stable between each layer.
 - Take care with enclosed spaces.

Note: it is recommended to surround the unit with geotextile to prevent the risk of damaging the coating during installation.

- 5 - Connect the unit's inlet, outlet and any vents (crucial for units with a drain column). *Sleeves are provided for the PVC tube.*
- 6 - Connect the alarms, use sheaths to pass through cables.
- 7 - If needed, raise the float of the stopper when the final water level is reached and stable.
- 8 - Backfill with gravel ($\varnothing < 15\text{mm}$) until the pipes are covered
- 9 - Ensure the backfill is stable.
- 10 - If the unit needs to be anchored (see § "Mechanical Strength"), create a concrete mix around the unit manhole. *The weight of the concrete will be calculated to offset the buoyant force when the unit is empty.*



Installation of water treatment units

HYDROCUBE type steel unit [Appendix A-V cont & end]



INSTALLATION SHEET
IN057-D



The reference guide remains
the one supplied with the unit

- 11** - If necessary, (see § "Basic precautions"): create a protection slab.

The protection slab can also act as ballast. (Step 10 becomes optional if there is a protection slab).

- 12** - Fit any extensions and adjust them to the level of the finished ground.

If there is a concrete extension, create a "floating" base slab (see § "basic precautions") and remove the plastic cover.

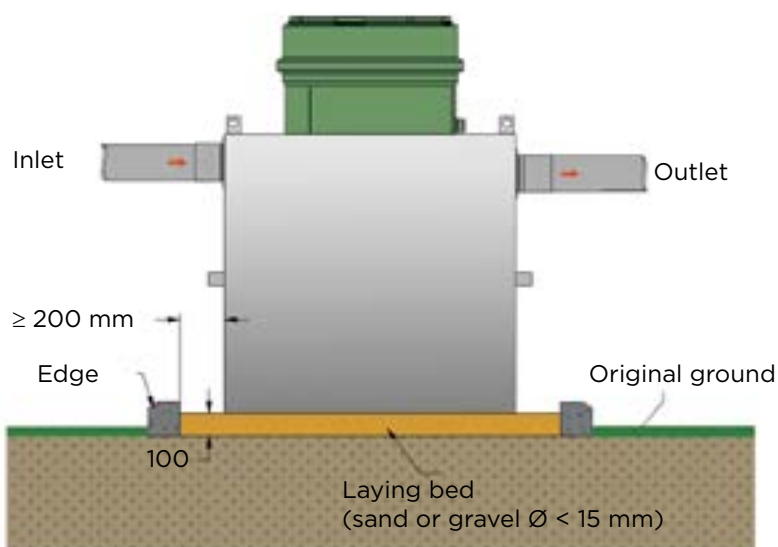
- 13** - Backfill above the pipes using gravel or the surrounding backfill.

Hydrocube raised unit installation procedure:

- 1** - Ensure the ground is stable, flat and horizontal. If not, create a concrete apron.
- 2** - Create a peripheral edge to frame and retain the bed of sand (at the horizontal dimension of the unit + 200 mm, height 100 mm).
- 3** - Create a bed of sand or gravel ($\varnothing < 15$ mm) that is 100 mm thick.
- 4** - Position the unit after removing any protection, check it is horizontal.
- 5** - Connect the unit inlet and outlet. *Sleeves are provided for the PVC tube.*
- 6** - Connect any alarms.
- 7** - Finish filling the unit with water.
- 8** - Raise the stopper float if applicable until the inner water level is stable.

An overfill alarm is recommended to report unit clogging and avoid overflow.

Above ground installation





Installation of water treatment units

HYDROBAC type steel unit

[Appendix A-VI]



INSTALLATION SHEET

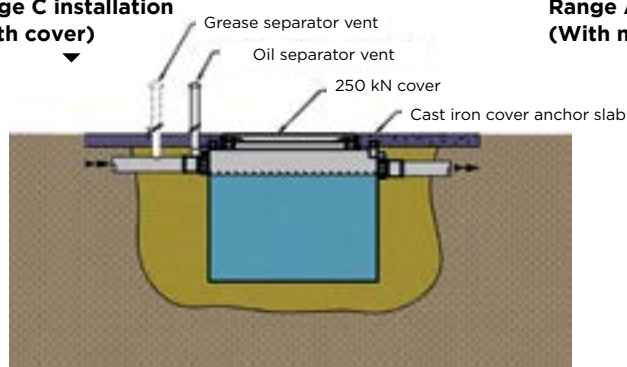
IN057-D



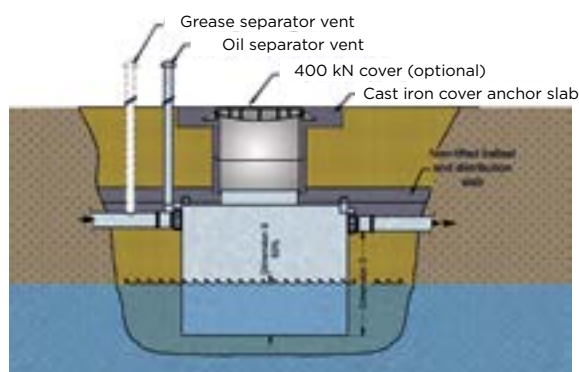
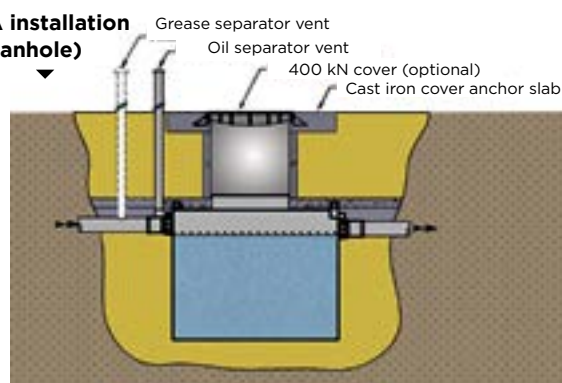
The reference guide remains the one supplied with the unit

- 1 - Position the unit horizontally on a stabilised base (sand or lean concrete).
- 2 - Connect the pipework inlet and outlet, use our TSC adapter sleeves.
- 3 - Connect the vent in the event of underground installation, pass through an ICT63 sheath for the alarm cable (optional).
- 4 - Fit the extension if applicable, adjust the height depending on the ground (C range).
- 5 - Fill the unit with clean water.
- 6 - For oil separators, raise the float and release it when the water level is stabilised.
- 7 - Backfill with sand.
- 8 - **Installation under green space:** the base of the unit cannot be at a depth > 2.5m compared to the original ground. Below this, use a protection slab.
- 9 - **Installation under pavements and car parks:** separator with 250 kN cast iron cover (C range). Frames should be secured in a concrete slab supporting the edges of the excavation (see diagram below).
- 10 - **Installation under road:** separator with manhole (A range), a concrete slab will always be created before raising the unit with a concrete manhole, provide 400 kN covers (see diagram below).
In the presence of groundwater: separator with manhole, create a non-lifted ballast and distribution slab above the unit - only if the water level does not exceed 50% of the outlet water level (dimension S, see diagram opposite).
- 11 - Check that the float is on the surface.
- 12 - **Above ground installation :** oil separator, the outlet pipework must be ventilated, provide an overfill alert system. Grease separator, only use sealed light covers (see diagram opposite).

Range C installation
(With cover)

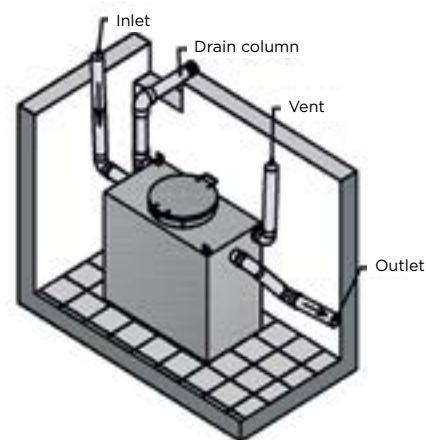


Range A installation
(With manhole)



Above ground
installation

◀ Installation of range A
in the presence of
groundwater.



Note : specific case of starch separators or separators with drain column :

Starch separator: the spray nozzle must be connected to the network and linked to peeler operation (15/21 solenoid valve ref.: EV1521).

Separator with drain column: the drain column must be extended to the original ground or ground floor.



Installation of water treatment units

Steel vertical cylindrical unit [Appendix A-VII]



INSTALLATION SHEET

IN055-B



The reference guide remains the one supplied with the unit

Unloading and storage:

Visually inspect the unit to make sure there is no damage, particularly to its coating.

If there are any defects, note reservations on the transport company's initialled slip

Position the unit somewhere it is protected from impacts. Do not allow rain to penetrate the unit.

Handling:

Before handling, pump the wastewater in each compartment.

- The coating of steel tanks is vulnerable to shocks and impacts.
- The unit should be handled using suitable lifting machinery.
- Use all unit lifting rings at the same time.
- Once suspended, the unit should be guided using ropes.

Basic precautions:

- **Do not use compacting equipment** to stabilise the unit's backfill. Use self-compacting gravel.
- **Do not place a concrete element directly on the unit**, create an adapted and "floating" base slab (No load transfer must be possible between the concrete and unit).
- The unit's temperature should never exceed 60°C at any time.
- If exposed to dynamic loads (e.g. vehicle traffic), the protection slab is mandatory regardless of depth. This slab must be floating and supporting the edges of the excavation. **The structural dimensions of this slab will be calculated by a Civil Engineering design office.**
- The presence of **specific dynamic loads** can sometimes require **peripheral reinforcement** in addition to the protection slab. (Contact your Civil Engineering design office).
- Be aware of the presence of **groundwater, hydromorphic ground** or a **layer of impermeable soil** (rocky or clay) **which can retain surface water**. Any risk of excavation flooding makes steps 3 and/or 10 crucial. Check the soil study to evaluate the risk of water in contact with the unit. (The sites <http://www.inondationsnappes.fr> and www.argiles.fr help assess this risk)
- The unit supports static loads (backfilling and hydrostatic thrust) associated with the following limits:

Fe (max water level depth/NS)	N (max groundwater level)
1 m	$N \leq \text{Fe unit}$

- Beyond the depths above, a **protection slab is mandatory** (See #10).

The unit should not be exposed to residual pressure exceeding the pressure associated with the limits above.



Installation of water treatment units

Steel vertical cylindrical unit [Appendix A-VII cont and end]



INSTALLATION SHEET

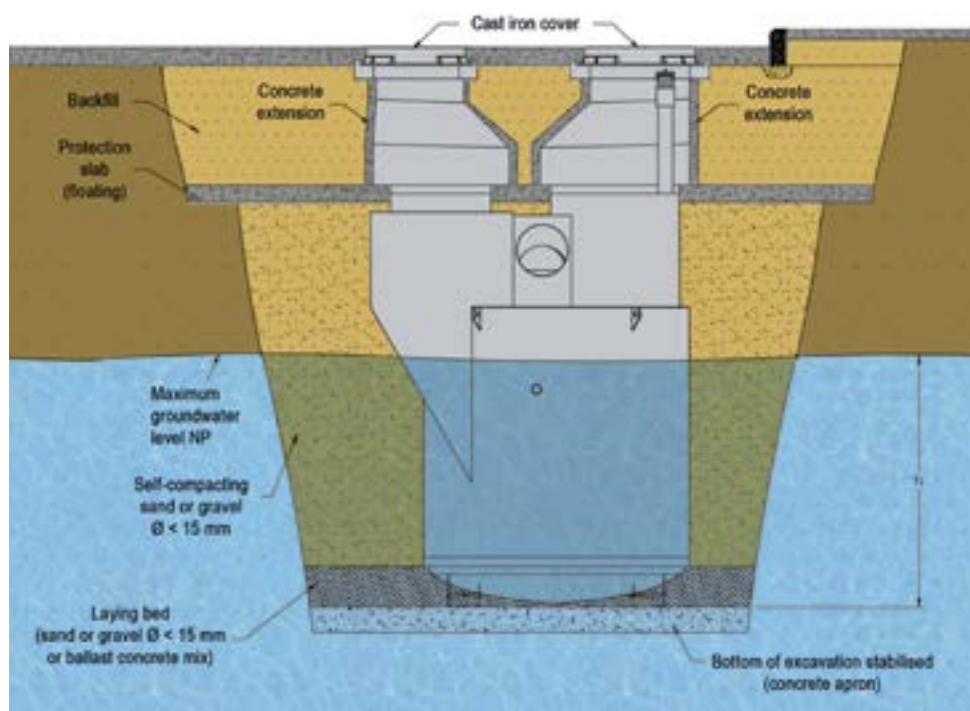
IN055-B



The reference guide remains the one supplied with the unit

Underground unit installation procedure:

- 1 - Stabilise the bottom of the excavation and ensure it is flat and horizontal.
- 2 - Position the unit on the bed of sand **after removing any transport cradles** and protection.
- 3 - If the unit needs to be ballasted (see § "Mechanical Strength"), pour concrete around the lower part of the unit. The weight of the concrete will be calculated to offset the buoyant force when the unit is empty.
- 4 - Backfill the unit with sand and/or gravel ($\varnothing < 15$ mm) in layers of 300 mm maximum.
 - Stabilise by spraying between each layer.
 - Take care with enclosed spaces
- 5 - Connect the unit inlet and outlet and any vents. Sleeves are provided for the PVC tube.
- 6 - Connect the alarms, use sheaths to pass through cables.
- 7 - Backfill with gravel $\varnothing < 15$ mm until the inlet and outlet pipes are covered, continuing to fill the unit with clean water.
- 8 - Finish filling the unit with water. Raise the stopper float if applicable until the inner water level is stable.
- 9 - Stabilise the backfilled area by spraying it.
- 10 - If required (see § "Mechanical Strength"): Create the load distribution slab. NB: this slab could also ballast the unit.
- 11 - Fit any extensions and adjust them to the level of the finished ground.
- 12 - Backfill using the natural terrain.





Installation of water treatment units

Underground POLYETHYLENE horizontal cylindrical unit

[Appendix A-VIII]



INSTALLATION SHEET

IN060-1i



The reference guide remains
the one supplied with the unit

UNLOADING AND STORAGE

- > Visually inspect the body of the unit to make sure there is no damage.
If there are any defects, note reservations on the transport company's slip
- > Position the unit somewhere it is protected from impacts, and secure it.

HANDLING:

Before handling, **check there is no water at all** inside the tank.
Tanks are vulnerable to the impact of forklift truck forks, excessive friction and impacts.
Use **suitable machinery. Proceed with caution and smoothly.** The suspended unit should be guided using ropes.

BASIC PRECAUTIONS:

- > Prioritise a location not exposed to rolling loads, and allowing a reduced unit installation depth to make ongoing maintenance easier. Keep a distance from tree roots.
- > Outside a traffic road, prioritise a light and adjustable PE extension (option) to keep the original cover.
- > Near to construction, do not install the tank in an area with mechanical stress from foundations (see DTU 13.11 & 13.12).
- > Do not use compacting equipment to stabilise the unit's backfill. Use self-compacting gravel Ø15 mm.
- > During the site phase, mark out the tank area to prohibit vehicle traffic and material storage.
- > Tanks are designed to resist maximum installation depths (dimension G) in the table on page 2. Beyond this, a protective structure (see #8 of the procedure) is required. It must sit against stable excavation edges and its structural dimensions must be calculated by a Civil Engineering design office (The unit must not be exposed to residual pressure exceeding static loads equivalent to the limits (see table page 2).
- > Ensure that no load transfer is possible through direct contact of the concrete against the unit (floating installation).
- > If exposed to additional static loads (embankments, piles of different materials, high gradient, concrete extension, etc.) or dynamic loads (vehicle traffic, etc.) a protective structure is also required, regardless of depth.
- > If installed under roads, the plastic cover must be removed. (Provide an adapted cover)
- > At the tank location, assess the risk of groundwater (hydromorphic ground). The presence of water can be linked to rising groundwater, or low permeability of the surrounding soil which, limiting rainfall infiltration, causes accumulation in the excavation around the tank (permeability coeff. $K < 10^{-5}$ cm/s. rocks, clay, loam, etc.) See the soil study. Failing this, the site <http://www.georisques.gouv.fr> also helps to assess whether there is groundwater.
- > The maximum submersion level (dimension N) associated with your model is indicated on page 2. Select a model with a submersion capacity adapted to the installation configuration. If unsure, do not install the tank and contact us.
- > Evaluate the tank's ballast requirements. The weight of the concrete must offset the buoyant force when the unit is empty.
- > The diagrams on page 2 describe ballasting solutions.
- > In addition to their low permeability (see above), clay soils cause high stress linked to the clay shrink/swell phenomenon. In the event of medium to high exposure (see <https://www.georisques.gouv.fr>), add 200 kg of cement per m^3 of gravel during tank backfilling.
- > Maximum inner temperature: 30 °C for polyethylene, 50 °C for polyester and painted steel, 90 °C for stainless steel.
- > Drain the tank if there is a risk that the contents might freeze.
- > Installation & filling above ground with conditions or impossible depending on model. Contact us for verification and adapted procedure.

UNDERGROUND TANK INSTALLATION PROCEDURE

- 1 - Stabilise the bottom of the excavation. Ensure it is horizontal. If necessary (see above), create a ballast concrete apron including anchoring bars.
- 2 - Create a laying bed (gravel Ø < 15 mm) that is 100mm thick.
- 3 - Put the tank in place, after removing any cradles or the transport pallet.
- 4 - If there is groundwater, and depending on the model (see page 2): **Secure the anchorage rings** in the bottom part to the concrete apron. Or, **insert the anchoring frame** (optional) in the concrete. Or, **strap (belt) the tank** to the apron, without pre-stressing.
- 5 - Add a volume of **clean water** VEc in the tank to stabilise it:
For a tank volume $V \leq 8 m^3$, fill the tank **to at least 50 %** clean water: $VEc \geq V_{\text{tank}}/2$
For a tank volume $V \geq 10 m^3$, **do not exceed 20%** of the tank's useful volume: $VEc \leq V_{\text{tank}}/5$
This step does not apply to regulation tanks with an outlet at the bottom of the tank, nor chemical effluent retention tanks (empty).
At the same time, **backfill** the tank with self-compacting gravel Ø < 15 mm, **in layers ≤ 200 mm thick**
Attention: if exposed to the clay shrink/swell phenomenon, add 200 kg of cement per m^3 of gravel.
Take care with enclosed spaces at the bottom to ensure a perfect base for the tank.
Continue to at least 50% of the tank height, depending on the model, create a mix of peripheral ballast concrete (see diagram page 2).
- 6 - Beyond this level, continue backfilling using self-compacting gravel Ø < 15 mm.
Excluding clay soil, the use of surrounding soil is tolerated, provided that it does not contain rocks Ø > 15 mm
- 7 - Connect the tank (Ø standard PVC), as well as the any vents (depending on the model).
- 8 - If necessary (see § "Precautions"), create the protective (and/or ballasting) concrete structure.
- 9 - Before surface backfilling, fit and adjust the potential extension. Use gravel Ø < 15 mm around the extension and/or cover. *Stop slightly back from the cover to avoid gravel falling into the tank when open.*



Installation of water treatment units

Underground POLYETHYLENE horizontal cylindrical unit

[Appendix A-VIII cont]



INSTALLATION SHEET

IN060-3J

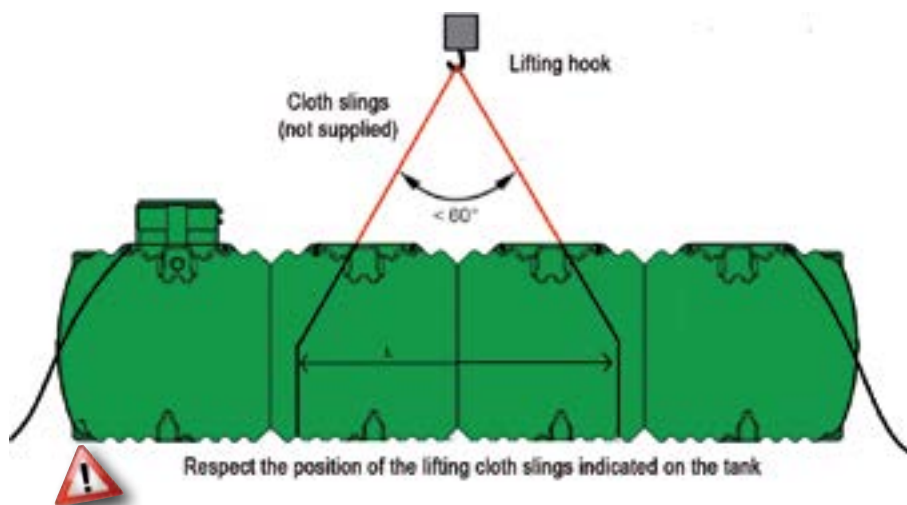


The reference guide remains
the one supplied with the unit

- > Tank delivered without straps or lifting rings.
- > Use cloth lifting straps in the indicated positions (yellow labels on the tank).
Keep a slinging angle < 60°.
- > Use suitable lifting machinery.
- > Proceed smoothly when lifting and moving the tank.
- > After unloading, place the tank on flat and even ground.

Tank model		Anchoring/Ballasting				Lifting
		CSSA frame or SA1824 straps.				
Ext. Ø	Volume	Qty	Position			Dist. between Slings
m	m³		(m)	A (m)	B (m)	
Ø 1.94	10	4	0.85	1.35	0.55	/
	15	4	0.85	1.9	1.35	3.0
	20	4	0.85	1.9	3.25	4.0
Ø 2.45	14	3	0.9	0.7	/	1.6
	20	4	0.9	1.35	0.7	2.3
	25			1.55		1.51
	30			1.8		2.29
	35	5	1.3	1.55		2.63
	40			2		3.60
	45	6	0.9	1.8		3.99
	50			2		4.03
	55	8	1.3	1.55		4.81
	60			1.8		4.81
	65	10	0.9	1.5		7.68
	70			1.65		7.68
	75			1.8		8.65

Schematic diagrams cannot be used as an installation plan





Installation of water treatment units

Underground POLYETHYLENE horizontal cylindrical unit

[Appendix A-VIII cont & end]



INSTALLATION SHEET

IN060-3J



The reference guide remains
the one supplied with the unit

Tank model	Example	Level N Groundwater submersion		At the tank's upper generator:	
				Depth G	⇔ Acceptable Vertical Pressure P_{v.adm}
Version ET..... (Standard)	A	N < 1.0 m	Do not install the tank if submersion risks exceeding the indicated limit N	G ≤ 0.65 m	⇔ Beyond: protective structure P_{v.adm} ≤ 12 kN/m²
Version ETX..... (reinforced)	B	N < 1.0 m		G ≤ 1.0 m	⇔ Beyond: protective structure P_{v.adm} ≤ 18 kN/m²
	C	1.0 < N < 2.0 m		Upper ballast slab	⇔ P_{v.adm} ≤ 12kN/m²

> In the presence of additional surface loads, the dimensions of the protective structure must be calculated to respect the acceptable vertical pressure on the tank's upper generator.

> In the event of significant submersion (example C), create a concrete slab above the tank to ballast it and, if needed, protect it against additional surface loads

Above ground installation of these tanks requires an adapted procedure. Contact us

> If a sealing check is required, do not fill until completing step 5 of the underground installation procedure (see General Instructions, page 1). Then compare changes to the level 12 hours after filling with water

<div><div>Example A & Example B</div><div>no additional surface load</div></div>	
<div><div>Example C + Example A & B adaptation</div><div>> if dimension G is exceeded (Deep installation) > and/or in the presence of additional surface loads</div></div>	



Installation of water treatment units

POLYESTER or STEEL horizontal cylindrical unit

[Appendix A-IX]



INSTALLATION SHEET

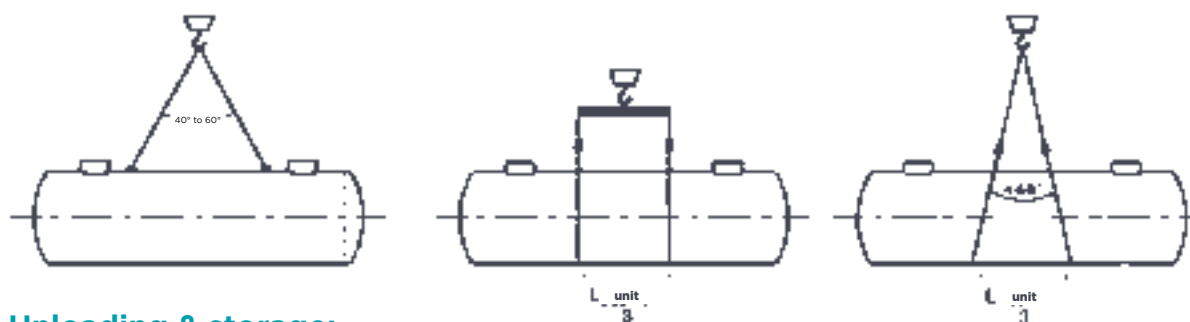
IN501-A



The reference guide remains
the one supplied with the unit

Handling:

- Before handling, check there is no water in each compartment.
- The unit should be handled using suitable lifting machinery.
- If available, use the lifting rings provided on the unit; in the absence of lifting rings, respect the lifting diagrams below. Only use cloth straps, **steel cables are PROHIBITED**.
- Once suspended, the unit should be guided using ropes.



Unloading & storage:

- Visually inspect the body of the unit to make sure there is no damage.
- If there are any defects, note reservations on the transport company's initialled slip
- Place the unit somewhere it is protected from impacts, and secure it. Do not allow rainfall to enter (the unit must be empty during handling).

Basic precautions:

- To understand your unit's installation limit conditions (backfilling height, groundwater level), refer to its data sheet or contact us.
- **Never fill the unit with water when not supported (raised).** In the event of a filling sealing check, do not fill until completing step 5 of the underground installation procedure or by following the aboveground installation procedure. Then compare changes to the level 12 hours after filling with water
- **Do not use compacting equipment** to stabilise the backfill around the tank, just spraying.
- In the event of exposure to **additional static loads** (embankment, significant gradient, deep, etc.), contact us to reinforce the tank (or protect it, where appropriate). In the event of dynamic loads (vehicle traffic, etc.). A **protection slab** must be created.
- In the event of **vehicle traffic**, the use of concrete extensions and cast iron covers is possible provided that they sit on suitable distribution slabs separated from the tank with a 500 mm layer of sand/gravel.
- The structural dimensions of the slabs will be calculated by a competent design office.
- Water saturation (even partial) of the excavation by groundwater or surface water run-off might require tank ballasting (see **Speed Chassis Option** or anchoring to the concrete apron).
- If unsure, refer to the installation standards **NF P16-442**, **NF 976-2** or contact **TECHNEAU**.



Installation of water treatment units

POLYESTER or STEEL horizontal cylindrical unit

[Appendix A-IX cont]



INSTALLATION SHEET

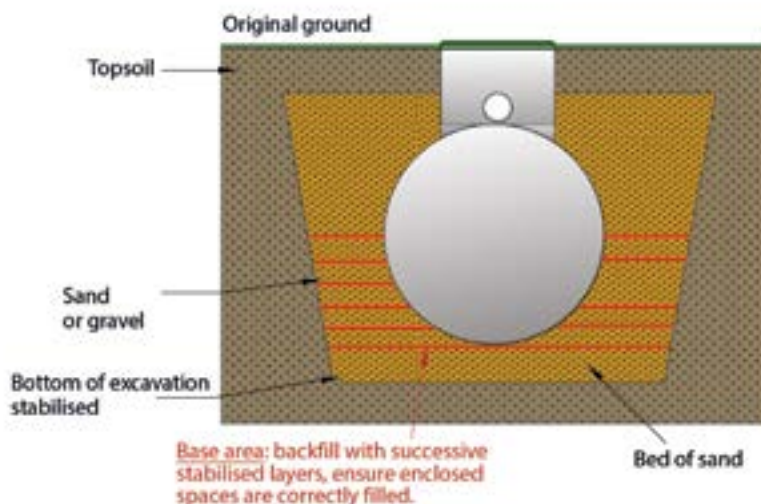
IN501-A



The reference guide remains the one supplied with the unit

Underground installation procedure:

- 1 - Stabilise the bottom of the excavation and ensure it is horizontal. If the unit needs to be anchored (see § "Precautions"), create a concrete apron at the bottom of the excavation and include anchoring rebars. The weight of the concrete will be calculated to offset the buoyant force when the unit is empty.
- 2 - On the stabilised bottom of the excavation, create a 100 mm bed of sand.
- 3 - Position the unit on the bed of sand after removing any transport cradles and protection.
- 4 - Adjust the straps/belts or anchoring tensioners (optional) without pre-stressing the tank. If there is no anchoring, fill the unit with clean water (20% of total capacity) to stabilise it.
- 5 - Backfill the lower part of the unit with sand and/or gravel 10-14 in layers of 300 mm maximum. Stabilise by spraying between each layer (**Mechanical compacting is not allowed**). Take care with enclosed spaces at the bottom to ensure a perfect base. Continue to 50% of the tank height.
- 6 - Connect the inlet and outlet. Sleeves are provided for the PVC tube.
- 7 - Backfill with 10-14 sand or gravel until the outlet pipe is covered.
- 8 - Stabilise the backfilled area by spraying it.
- 9 - If necessary, (see § "Basic precautions"): create a protection slab.
- 10 - Fit any extensions and adjust them to the level of the finished ground.
- 11 - Backfill using the natural terrain.





Installation of water treatment units

POLYESTER or STEEL horizontal cylindrical unit

[Appendix A-IX cont & end]

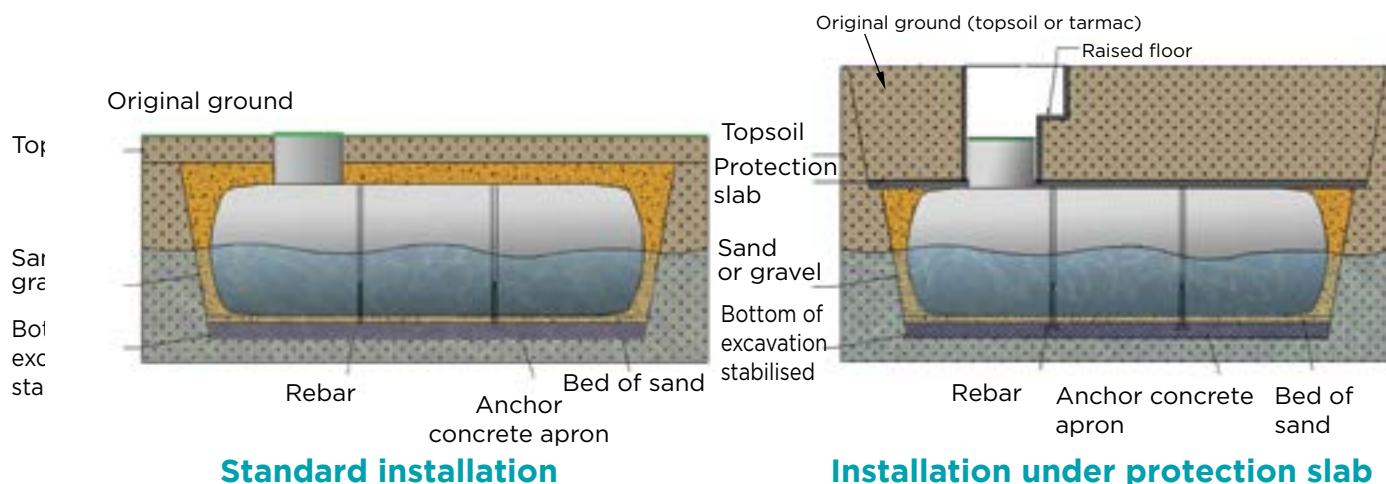


INSTALLATION SHEET

IN501-A



The reference guide remains
the one supplied with the unit



Standard installation

Installation under protection slab

Above ground installation procedure:

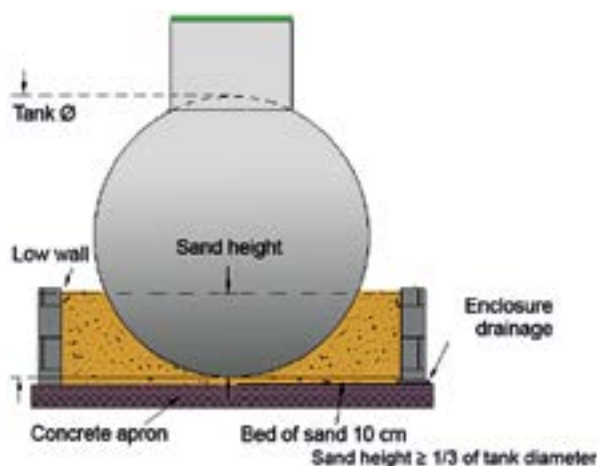
> Example n° 1: With TECHNEAU specific cradles:

- 1 - The ground must be stable, horizontal, free of stones and bumps. Create a clean concrete apron if needed.
- 2 - Position the unit on the specific metal cradles (supplied optionally).

Respect the position of the cradles described in the associated data sheet.

> Example n° 2: Without TECHNEAU specific cradles:

- 1 - The ground must be stable, horizontal, free of stones and bumps. Create a clean concrete apron if needed.
- 2 - Create a walled enclosure whose dimensions can accommodate the tank, keeping a gap of 30 cm to be able to backfill all around it. This walled enclosure will be used to backfill the unit to at least 1/3 of its height. Provide a drain so this walled enclosure cannot retain run-off water.
- 3 - Create a 10 cm bed of sand.
- 4 - Position the tank on the bed of sand after removing any transport cradles.
- 5 - Fill the tank to 20% of its capacity to stabilise it.
- 6 - Backfill the base of the tank using 10-14 gravel or sand, taking care with the enclosed spaces in the lower part. If using sand to backfill, compact it with spraying.
- 7 - The backfill height must reach **at least 1/3 of the unit's diameter**.



Above ground
installation



Installation of water treatment units

POLYETHYLENE GM1E grease collector [Appendix A-X]

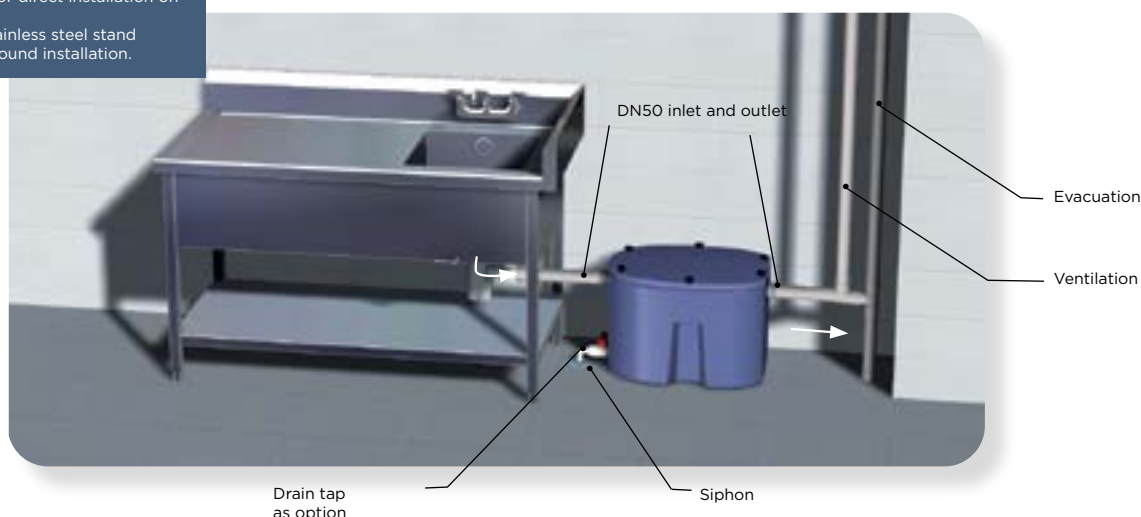


The reference guide remains
the one supplied with the unit

Warning

To respect hygiene rules, ensure you:

- seal the surrounding edge with a silicon seal for direct installation on the ground.
- provide a stainless steel stand for above ground installation.



Installation procedure:

- 1 - The GM1E is a grease separator for a kitchen dishwashing sink. It must be installed outside meal preparation areas.
- 2 - The GM1E is studied to receive water from a single standard dishwashing sink.
- 3 - Install the GM1E near the sink, the pipe gradients must be greater than or equal to 2 cm/m. Respect the connection DN: DN50.
- 4 - The removal pipe must be as straight as possible (to avoid pressure losses).
- 5 - Connect the vent.
- 6 - Raise the GM1E on a stand to make cleaning easier.
- 7 - Fill the unit with water.

Maintenance procedure (excluding service periods):

- 1 - Complete weekly maintenance: remove the cover, then skim off the layer of grease on the surface. Replace the cover.
- 2 - Complete monthly maintenance:
 - Remove the cover (then connect the drain valve using a pipe*).
 - Skim off the layer of grease on the surface.
 - Drain the contents of the GM1E (in the ground siphon using the drain valve*).
 - Remove the reducer at the unit inlet (it is held in place with a screw).
 - Clean the reducer with hot water, then replace it (close the drain tap*).
 - Refill the GM1E with water to the top, replace the cover (remove the drain valve pipe*).

*If drain tap option.



Installation of water treatment units

Mini GR stainless steel grease collector [Appendix A-XI]



The reference guide remains
the one supplied with the unit

Warning

To respect hygiene rules, ensure you:

- seal the surrounding edge with a silicon seal for direct installation on the ground.
- provide a stainless steel stand for above ground installation.



Installation procedure:

- 1 - The MINIGR is a grease collector for a kitchen sink.
It must be installed outside meal preparation areas.
- 2 - The MINIGR is designed to receive water from one or several standard dishwashing sinks.
- 3 - Install the MINIGR near the sink, the pipe gradients must be 2 cm/m. Respect the connection DN.
- 4 - The removal pipe must be as straight as possible (to avoid pressure losses). Connect the vent.
- 5 - Fill the unit with water.

Maintenance procedure (see page 97)



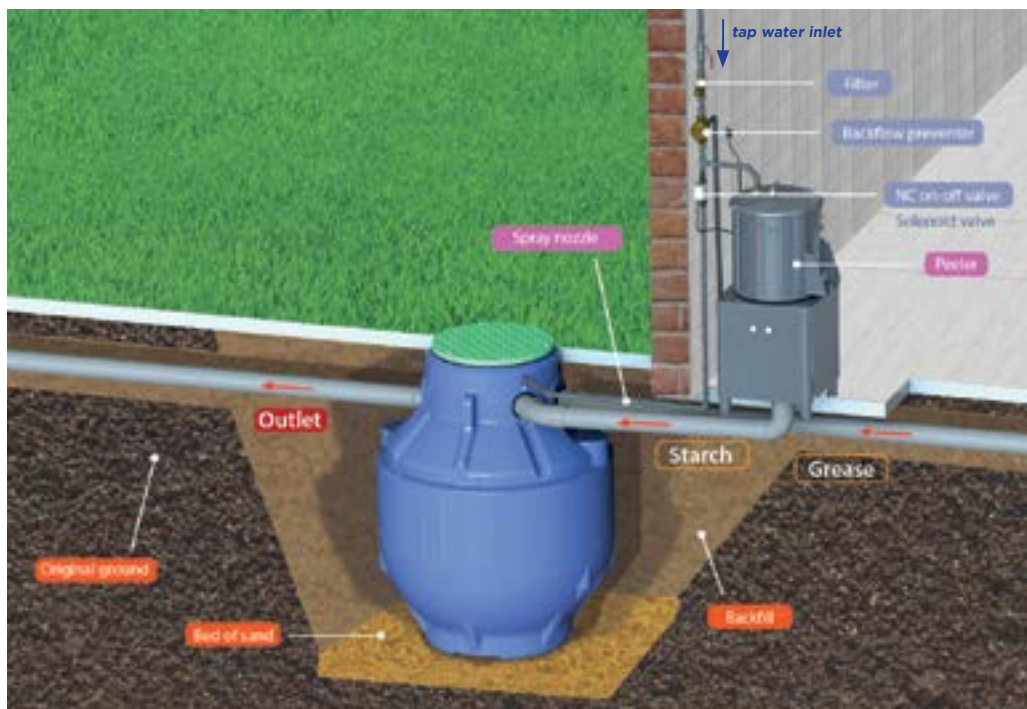
Installation of water treatment units

Grease and starch separator POLYETHYLENE SPHÈRE type

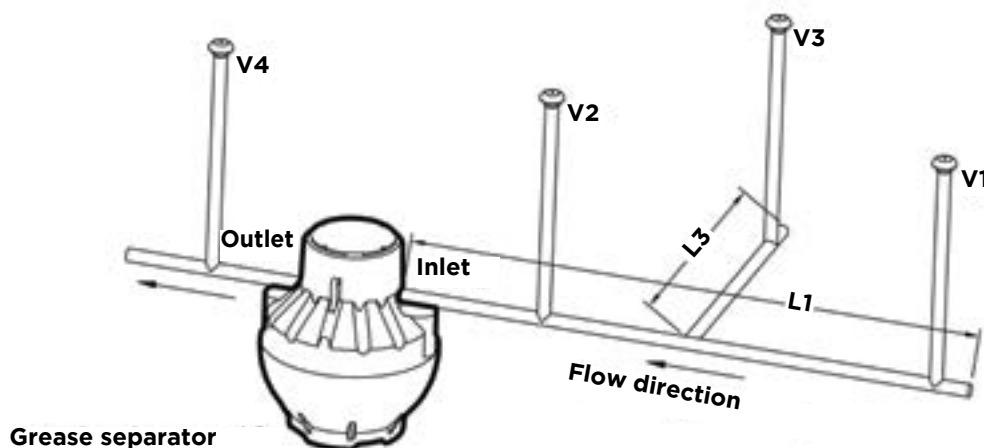
[Appendix A-XII]

Connection principle:

 The reference guide remains the one supplied with the unit



Grease separator ventilation diagram (according to NF EN 1825-2)



According to EN1825-2, the grease separator vents must be connected as follows:

Pipe upstream from grease separator:

If $L1 \leq 10$ m, connect vent V1 on the roof.

If $L1 > 10$ m, connect vents V1 and V2 on the roof. The V2 tap will be as close as possible to the grease separator.

The branches of the main pipe ≥ 5 m ($L3$) must be ventilated on the roof (V3).

Pipe downstream from grease separator:

The separator's downstream pipe must be connected on the roof (V4).

For optimal ventilation, Techneau recommends fitting vents with a minimum diameter of 100 mm.



Questionnaire

Oil separator

Complete and send to us at info@techneau.com

Reference :

Town/City :

Country :

Booklet 70
Standard
NF P 16-442

Site technical parameters:

Size/dimensions

Required size: l/s calculation depending on surface area: m²

Required inlet and outlet DN: mm

Dimensions:

Bypass prohibited:

☐ fuel distribution area

☐ washing area:

- roll-over (⚠ 5 m³ sludge trap)

- high-pressure cleaner (⚠ large sludge trap)

☐ underground or covered car park: m²

☐ basin outlet after flow regulator

Bypass authorised:

Waterproof surface area: m²

Installation limitations:

☐ Under road (distribution slab mandatory)

☐ Under green space (installation without distribution slab depending on range)

☐ "Green space" PE cover

☐ Cast iron cover

Mechanical strength installation category:

Inlet Level depth

☐ 0.8 m to 1 m

☐ 1 m to 1.5 m

☐ over 1.5 m

Do you want an extension calculation ☐ yes ☐ no

Presence of groundwater (provide ballast slab)

☐ Groundwater

☐ Hydromorphic ground (clay soil)

Range requested in technical specifications:

☐ Polyethylene

☐ Steel

☐ Polyester

☐ Variant possible

Installation categories

Category		Installation	Backfill height Hs (m)	Usage conditions
Category 1	a	-	$0 \leq H_s \leq 0.50$	- With groundwater that could reach the soil surface - No vehicle traffic
	b	-	$0 \leq H_s \leq 1.00$	
	c	-	$0 \leq H_s \leq 1.50$	
	d	-	$0 \leq H_s \leq 0.50$	- Without groundwater - No vehicle traffic
	e	-	$0 \leq H_s \leq 1.00$	
	f	-	$0 \leq H_s \leq 1.50$	



Questionnaire

Grease separator

Complete and send to us at info@techneau.com

Reference :

Town/City :

Country :

Site references:

☐ Tender ☐ Project ☐ Study - Reference :

Department:

Study data:

- Calculation parameters

Installation site:

- ☐ Canteen
☐ Restaurant
☐ Hospital
☐ Hotel

Number of meals/day:

Number of services:

- ☐ 1 Service (8 hours)
☐ 2 Services (16 hours)

Grease density:

- ☐ < 0.94
☐ > 0.94

Effluent temperature:

- ☐ < 0.60 °C
☐ > 0.60 °C

Detergent used:

- ☐ Never
☐ Occasionally
☐ Hospitals



Appendix B: Maintenance

Water pre-treatment and treatment units:

Oil separators _____ p 123-124

Greaseor grease and/or starch separators _____ p 125-127



Maintenance* of oil separators.

*Prior safety reminder for all unit maintenance operations (all ranges included)

The operator must wear any **Personal Protective Equipment** required for maintenance operations and have all accreditations required for this work.



Preparation

Secure and **mark out** the working area, e.g. using cones

Open the upstream and downstream manhole covers and the oil separator covers.

Let them **ventilate** for 15 minutes minimum before starting cleaning.

Check if there is any harmful gas using a suitable sensor.



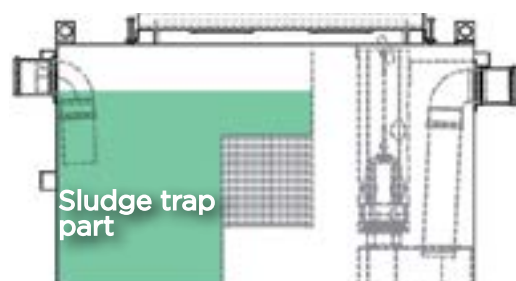
The sludge trap compartment

Techneau recommends draining this compartment at least twice a year.

It is the first unit settling compartment **(1)** (upstream from the coalescing filter) and mainly contains sludge and heavy metals. Its maximum storage capacity is 2/3 of its useful volume.



Cross-section of an oil separator



View of sludge trap chamber



Resuspend settled sludge before pumping.





Maintenance* of oil separators.

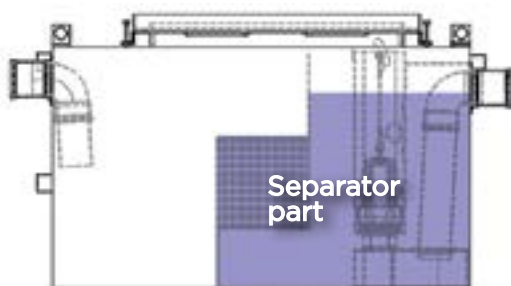
Oil separator compartment

It is the unit's second settling compartment. It has an **automatic stopper coalescing filter**.

It mainly traps light liquids - *0.85 density as standard*.

The drain frequencies depend on the polluting load sent to the unit. In the absence of an accidental leak, drain annually.

Cross-section of an oil separator



Softly and gradually mix the surface of the unit until water appears under the oil.

NB: this method allows you to see the thickness of the oil.

If > 8 cm, pumping is required.

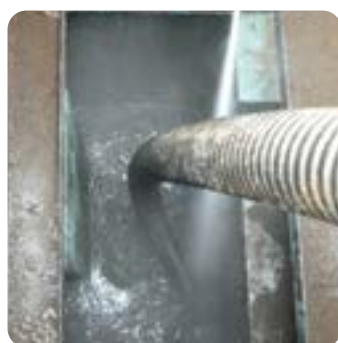
Empty the separator using a vacuum truck.

Clean the walls of the separator compartment, coalescing filter and automatic stopper using a high-pressure jet.

View of the separator chamber



Draining the separator chamber



Cleaning the walls with high-pressure jet

The coalescing filter

It must also be cleaned, or replaced if completely clogged. This might be the case if effluent contains large amounts of suspended solids.

Remove the coalescing filter block from its position. The blocks can normally be handled by a single person.

Wash the coalescing filter with a high-pressure jet.

Replace the blocks if the coalescing cell is damaged or clogged.

Finally, replace the coalescing filter in its location by checking the flow direction.

The automatic stopper

When restoring the water supply, hold the float in an upper position to reposition it at the outlet water level once stabilised.

Detail of coalescing filter heavily clogged with sludge and requiring maintenance





Maintenance* of grease and/or starch separators



Reminder

The network temperature should never exceed 30 °C.

Do not use a scraper, a scraper damages the unit's walls.

Some units have compartments:

0 compartment => starch separator,

2 compartments => grease separator and grease and starch separator.

Unit maintenance involves draining and cleaning different compartments.

The grease alarm (optional) can detect unit saturation and trigger draining at the correct time.

The unit must be emptied at least every 2 months by a specialist company¹.

The drain intervals directly influence unit sanitation capacities, so pipework clogging.

The guarantee conditions can only apply on presentation of drain reports by a specialist company.



Example of a grease separator needing to be emptied

Draining a unit without a drain column:

Open the unit,

Break the grease layer (if there is a grease compartment) if solid to pump the grease lumps,

Pump the contents of the separator compartments,

Rinse the walls with pressurised cold water,

If there is a starch compartment, check that the spray nozzle is not blocked, ALWAYS refill the unit with water then close the cover again (risk of unit deformation). The AG grease alarm option can also detect a lack of water in the tank.



Detail of spray nozzle for starch inlet

Draining a unit with a drain column:

Draining uses a pipe installed in the unit and to which the vacuum truck can connect directly using a symmetrical connection (called a "firefighter connection").

To drain:

Open the unit,

Break the grease layer (if there is a grease compartment) if solid to pump the grease lumps,

Pump the contents of the separator compartments,

Rinse the walls with pressurised cold water,

If there is a starch compartment, check that the spray nozzle is not blocked, ALWAYS refill the unit with water then close the cover again (risk of unit deformation). The AG grease alarm option can also detect a lack of water in the tank.



Vacuum truck required to maintain your unit with drain column

¹ for more information, see the standard EN 1825•2.





Maintenance* of grease collectors

Mini GR stainless steel grease collector



The reference guide remains the one supplied with the unit

Daily maintenance is required depending on the pollutant load sent to the unit. To make maintenance easier, a grease drain valve, outlet isolation valve and complete drain valve are supplied with the unit.



"Peelings":

The "peelings" basket must be checked and potentially emptied every day.

- 1 - Remove the cover.
- 2 - Check for waste.
- 3 - If there is any waste, remove the "peelings" basket from its holder.
- 4 - Empty it into the bin provided for this purpose.
- 5 - Rinse the basket with hot water.
- 6 - Place the basket back on its holder.

Grease:

To drain grease trapped on the surface of the MiniGR:

- 1 - Open the cover.
- 2 - Place a container under the grease drain valve.
- 3 - Close the outlet isolation valve.
- 4 - Open the grease drain valve. Note that this valve can be fitted on the left or right of the outlet. Do not forget to tighten the stopper.
- 5 - Gently open the very hot water inlet at the sink or one of the kitchen dishwashing sinks. The water level will rise in the MiniGR; grease will flow through the drain valve into the container. Monitor the process by looking inside the unit.
- 6 - Close the water inlet once all the grease has flowed into the container.
- 7 - Close the grease drain valve.
- 8 - Open the outlet isolation valve.
- 9 - Remove the container and empty the grease into the appropriate bin.

Complete cleaning:

You can completely drain the unit.

- 1 - Fit the unit to a drain siphon or position a container under the drain valve.
- 2 - Open the drain valve.
- 3 - Clean inside the unit using hot water.
- 4 - Close the complete drain valve.
- 5 - Refill the unit with water up to the outlet level.



Maintenance* of storm water treatment units or treatment units for

Reminder of safety instructions



Always perform maintenance activities in pairs. Never work on the unit alone.

Secure the working area: work indication, traffic diversion (if necessary), protection for open covers.

Remove the covers and wait at least 15 minutes before entering the storm water treatment unit.

Do not use any equipment likely to generate sparks inside the storm water treatment unit, or any incandescent object (cigarettes, lighters, etc.).

The person performing maintenance inside must be connected to a rope to avoid any accidental fall inside the unit.

Clothing soiled during maintenance work should be dropped off in the areas provided for this purpose.

Thoroughly clean and disinfect any wounds or cuts (no matter how small) and contact the site's medical department which will determine the appropriate treatment.

Note: the safety instructions indicated above are not exhaustive. The professional performing maintenance should refer to the prevailing safety rules.

Maintenance activities

1- inspections:

Inspections are strongly recommended each quarter, following exceptional rainfall or in the event of an accidental discharge:

Retrieve floating material in the grit trap as often as needed.

Clean the screen.

Check for light liquids in the 1st and/or last compartments and whether the AlvéEau filter is clean.

Check the condition of the decantation cells using the openings above the AlvéEau filter. If the sludge layer is larger than 5 mm, drain the unit and clean the cells using a high-pressure jet through the top of the decantation cell.

Check the amount of grit: if the settled materials reach 1/3 of the height of the storm water treatment unit, drain the grit trap by inserting a drain pipe into the bottom of the compartment.



Unit with a sludge alarm:

Clean the sludge probe using a cloth, replace it and check if the sludge level in the tank stays below the trigger level. If the alarm triggers (sludge level less than 200 mm under the filter), drain the unit using the drain column provided in the grit chamber primer (optional for NV and NVB type storm water treatment units). If saturated, drain the compartment and fill with clean water.

Note: The chamber separating the first 2 compartments has a removable hatch enabling access under the filter in the extreme situation of complete saturation of the unit.

2- full draining:

It is strongly recommended to fully drain the unit once a year if there is no sludge alarm, or at least once every 2 years if there is a sludge alarm.

Retrieve any light liquids on the surface using a pump.

Clean the screen.

Pump the grit chamber by inserting a suction pipe directly into its base.

Pump the decantation filter compartment using the drain column (optional for NV and NVB type storm water treatment units) located in the grit chamber primer.

Clean inside the unit and the decantation filter using a high-pressure jet before draining fully.

Check the condition of the coating and touch up if needed.



Unit with a sludge alarm:

Clean the sludge probe using a cloth, replace it and check that it is working properly (see corresponding file). Refill the unit with clean water.

Note: The chamber separating the first 2 compartments has a removable hatch enabling access under the filter in the extreme situation of complete saturation of the unit.

Effluent from the unit will be taken to an approved treatment unit with a BSDI (Industrial Waste Tracking File) or any other document approved by the local authorities.

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