

®

rm



Telco

Polyethylene tanks
Water purification
Waste oil collection tanks
Multipurpose trunks, construction
Containers for Oil and Wine

Telecom®

SERBATOI PER ACQUA POTABILE

AQUARIUS®

TANKS

ECOGRAY

GRAY WATER RECOVERY

PLUVIUM

RAINWATER RECOVERY

**ECO®
AQUARIUS**

PURIFICATION

OIL-TANK

OIL DISPOSAL

Jolly

TRUNKS - CONSTRUCTION

Le Giare

OIL AND WINE CONTAINERS

Telecom[®]

for the environment



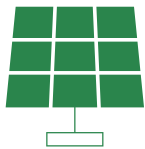
WE PROTECT THE ENVIRONMENT

We produce using long life and 100% recyclable materials



WE RECYCLE THE WASTE

We recycle 100 % of the waste from our production processes



WE PRODUCE AND USE THE ENERGY OF THE SUN

With an area covered by photovoltaic panels equal to 18,000 sqm, TELCOM is able to produce in a year 3,700,000 KW/h thanks to the Clean Energy of the Sun. 2200 tons of CO2 are not released in the environment



WE PRODUCE AT ENVIRONMENTAL IMPACT "ZERO"

Our production technologies do not impact on the environment.



MINIMUM WATER AND ENERGY CONSUMPTION

Our systems are cooled using water recirculation and are illuminated thanks to the use of low-consumption LED lamps



PROTECTING THE FUTURE OF THE ENVIRONMENT

Every day, through small and large actions, TELCOM works respecting the Future of the Environment.

THE COMPANY



TELCOM stands out for the development of innovative products made of thermoplastic materials, which contribute in various ways to improving the quality of life of those who use them, combining Italian design, solidity, and functionality.

A determining element of the company's success on a global scale is the ability to constantly renew and improve its products, thanks to the use of cutting-edge technologies, the continuous training of its collaborators within the company and careful listening to the market.

To guarantee the best products and services to its customers, Telcom effectively implements a corporate strategy of vertical integration of processes, making the most of the skills and know-how gained over the years.

Telcom designers conceive and design the product down to the smallest details, of which authentic wood craftsmen create the model for the mold in the workshop. Every line and every detail are treated with meticulous attention, to achieve a final result of impeccable quality.

All the products in our lines are made of recyclable materials and with non-toxic raw material formulations.



TELCOM AND RENEWABLE ENERGY

With a surface area covered by solar panels of 18,000 sqm Telcom is able to produce 3,700,000 KW/h in a year thanks to the clean energy of the Sun. 2200 Tons/Year of CO₂ are not released into the environment.

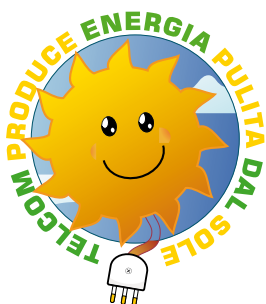


OUR QUALITY HAS A SOLID BASIS

- OVER 110,000 sqm of company structures on three locations.
- 12 PRODUCT LINES
- Fully integrated PRODUCTION PROCESSES
- 3 SEATS
Italy - Romania - Albania

WAREHOUSE AND LOGISTICS

- 20,000 sqm warehouse with packaged products ready for delivery.
- Deliveries all over the world.
- Simultaneous loading capacity of 18 trucks.
- Organization and management of scheduled deliveries.





CERTIFICATIONS

We create products following the principles of quality and respect for the environment, and we have done so since we were born.



Product safety and the quality of business processes are at the top of TELCOM's objectives

In fact, we have obtained the most important certifications:

- EN-ISO 9001: Quality management
- EN-ISO 14001: Environmental management
- ISO 45001: Management of health and safety at work
- AEO - Customs Agency: Certifies that the company is Reliable, Efficient and in compliance with the rules of International Trade, financially solid and which has not been the subject of serious disputes in customs matters.



AUTHORISED
ECONOMIC
OPERATOR



H₂O
AQUARIUS®



The tanks of the **H₂O** line are made with mastered polymers and with additives to resist UV rays. These tanks, colored throughout the mass, stand out for their marine green color with less visual impact and are suitable for installation above ground with direct exposure to the sun rays. The monolithic structure and the thickness of the H₂O tanks, in fact, confer a high mechanical and thermal resistance to temperature changes between -60°C and +80°C and can contain liquids with peaks (not continuous) even between -10°C +50°C.

The tanks of the H₂O line are suitable for containing food substances, are 100% recyclable and are guaranteed to be free of cadmium and against the formation of algae.

- Suitable for the containment of food substances
- DM104/73 and subsequent amendments;
 - EU Regulation N.10/2011 and related rules:
UNI 1186-1: 2003, UNI 1186-4: 2003, UNI 1186-5: 2003
 - MOCA certification.

Onda
AQUARIUS®

Unique products in Italy

The latest creation in the Telcom research laboratories, the **ONDA** line tanks are equipped with triple-layer walls. Their particular production, which avoids the use of any glue or chemical agent, guarantees excellent results on resistance and resilience tests. Tests have shown that these "super" tanks represent the evolution of polyethylene products in terms of robustness and physical-mechanical characteristics. These tanks, produced in high density PE, are suitable for containing food substances, are 100% recyclable and are guaranteed to be free of cadmium and against the formation of algae.



Triple Layer

- *The most advanced*
- *More robust*
- *Maximum quality/price ratio*




The tanks of the **BUNKER** line are suitable for being buried, are made with black mass-colored polymers and can be made with virgin raw materials suitable for containing food. The monolithic structure and the thickness of the tanks from the **BUNKER** line give such mechanical resistance as to make these products suitable for burial and resistant to temperature changes between -60°C and $+80^{\circ}\text{C}$ and can contain liquids with peaks (non-continuous) even between -10°C and $+50^{\circ}\text{C}$. They are 100% recyclable and are guaranteed to be free from cadmium and against the formation of algae.

- Suitable for the containment of food substances
- DM104/73 and subsequent amendments;
 - EU Regulation N.10/2011 and related rules:
UNI 1186-1: 2003, UNI 1186-4: 2003, UNI 1186-5: 2003
 - MOCA certification.



The tanks of the **INDUSTRIA** line are made with neutral-colored polymers with additives to resist to UV rays. Their particular color and thickness make them suitable for containing chemical products. They are 100% recyclable, guaranteed to be cadmium-free and intended for above-ground installation.



- Suitable for the containment of food substances*
- DM104/73 and subsequent amendments;
 - EU Regulation N.10/2011 and related rules:
UNI 1186-1: 2003, UNI 1186-4: 2003, UNI 1186-5: 2003
 - MOCA certification.

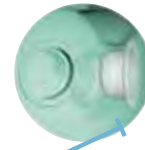
* If used to contain water (even drinkable) or liquid foods, the tank must be installed away from sunlight, as the neutral color could allow the formation of algae.



Vent valve supplied



Female manhole cover to avoid infiltrations



Hygiene-saving caps supplied

Preparation of specific flat areas for the application of additional fittings

Stamping of the serial traceability code on the product. Individually finished and tested

Brand name

Main instructions for use printed in relief on the product

Recyclability symbol

Coloring of raw-material in the mass



Nipples, plugs and O-ring seals (for food) supplied*

Preparation of fittings for installation obtained in production*

*only with tanks up to 2000 litres.

Available colors:
Stone (PT),
Terracotta (TA);
Black (BL)
on request.



"Instructions and Warranty" booklet included in each product



Suitable for the containment of food substances
- DM104/73 and subsequent amendments;
- EU Regulation N.10/2011 and related rules:
UNI 1186-1: 2003, UNI 1186-4: 2003,
UNI 1186-5: 2003
- MOCA certification.



Ecological and recyclable



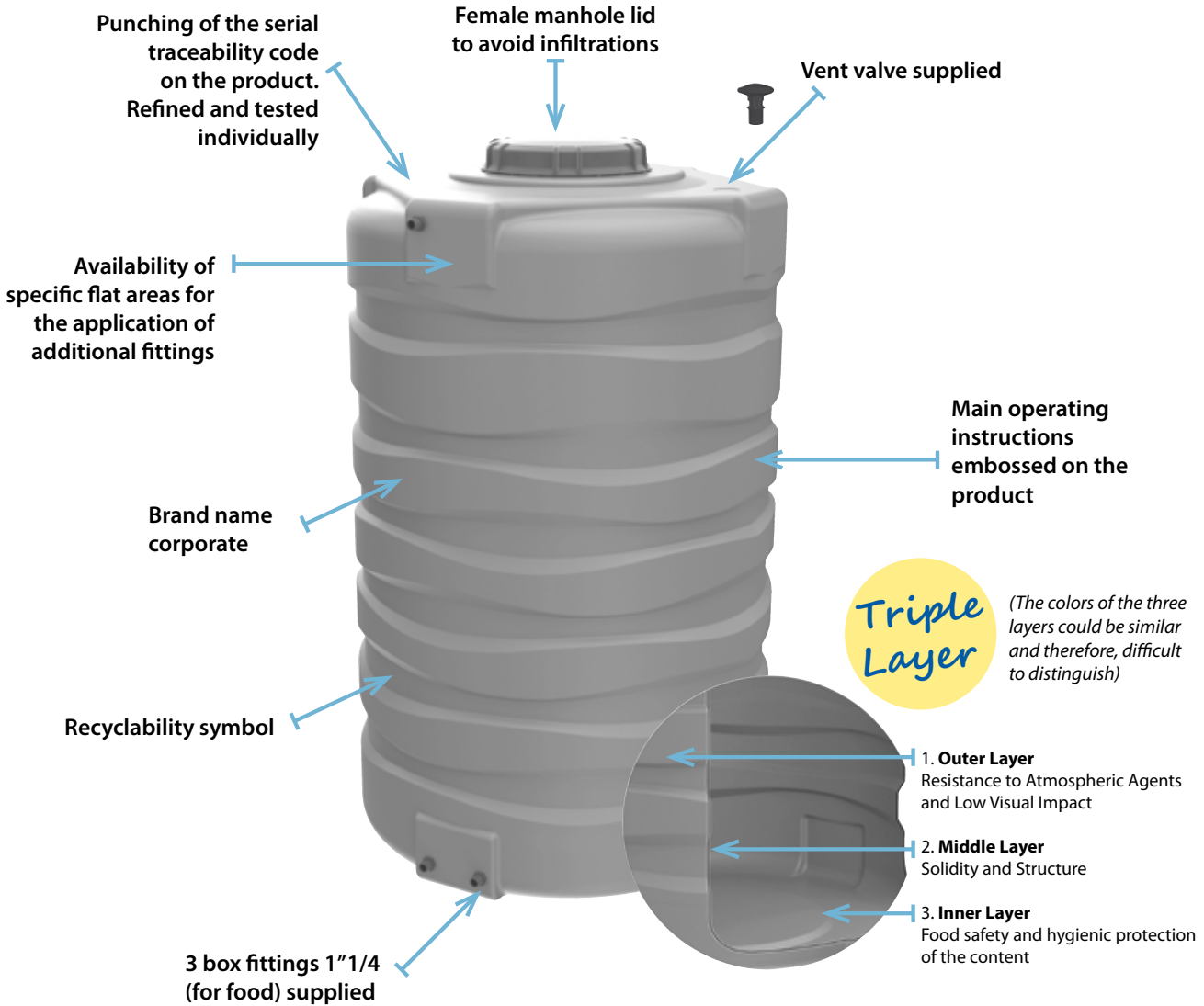
Resistant to temperature changes between -60°C and +80°C
Suitable for containing liquids with peaks (not continuous) even between -10°C + 50°C



Unassailable by the weather agents



100% guaranteed against the formation of algae



"Instructions and Warranty" booklet included in each product



Suitable for the containment of food substances

- DM104/73 and subsequent amendments;
- EU Regulation N.10/2011 and related rules: UNI 1186-1: 2003, UNI 1186-4: 2003, UNI 1186-5: 2003
- MOCA certification.



Ecological and recyclable



Resistant to temperature changes between -60°C and +80°C
Suitable for containing liquids with peaks (not continuous) even between -10°C + 50°C



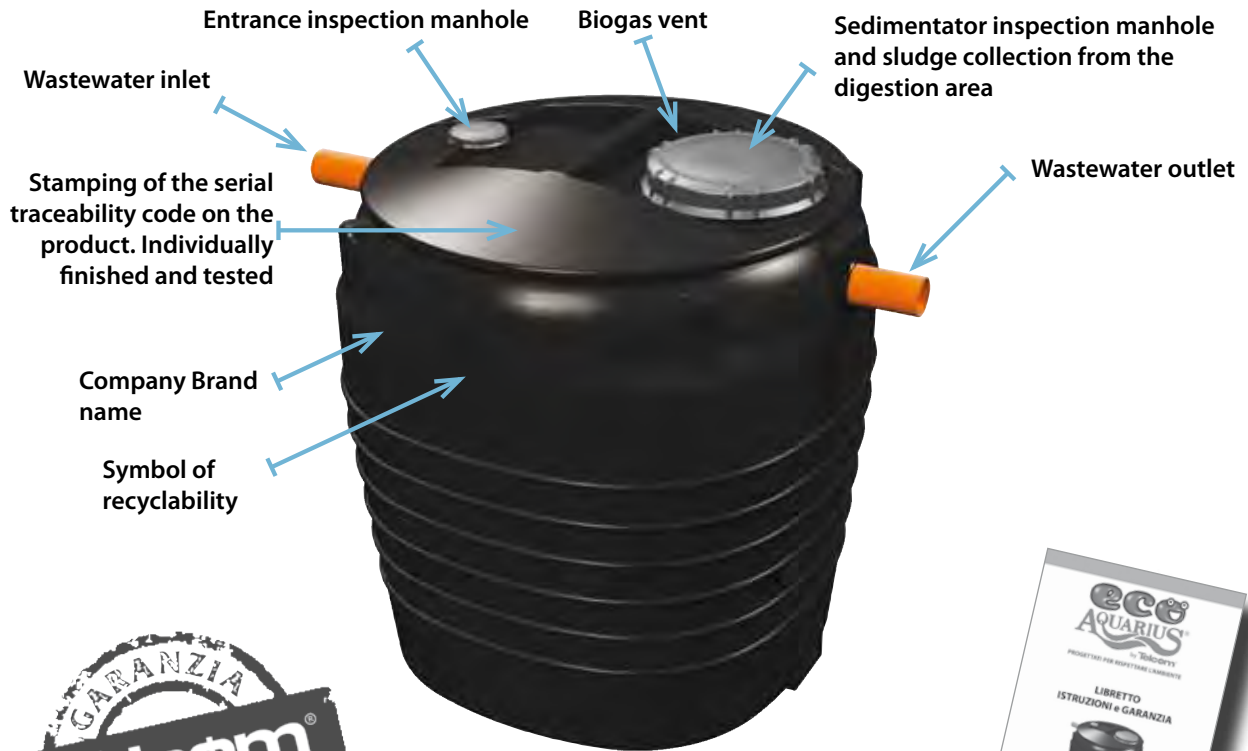
Unassailable by the weather agents



100% guaranteed against the formation of algae

ECO®
AQUARIUS

Designed to respect the environment



"Instructions and Warranty"
Booklet included in each product



DEGREASER



ACTIVATED SLUDGE



PERCOLATOR

- Equipped with "DOP";
- Marked "CE";
- Sized in compliance with National and Regional standards;
- Net volumes instead of overall dimensions;
- Maximum quality of raw materials.



Resistant to temperature changes between -60° C and +80° C
Suitable for containing liquids with peaks (not continuous) even between -10° C + 50° C



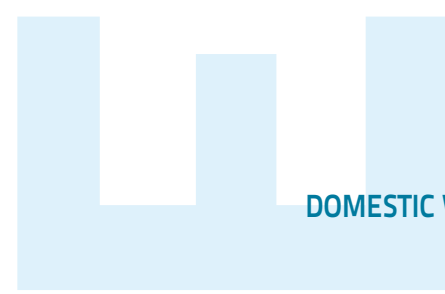
Unassailable by the weather agents



Ecological and recyclable

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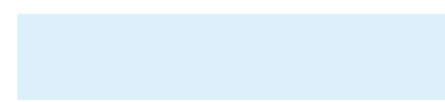
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Designed to respect the environment



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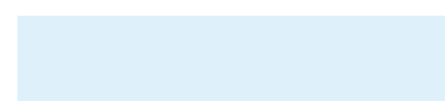
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Le Giare

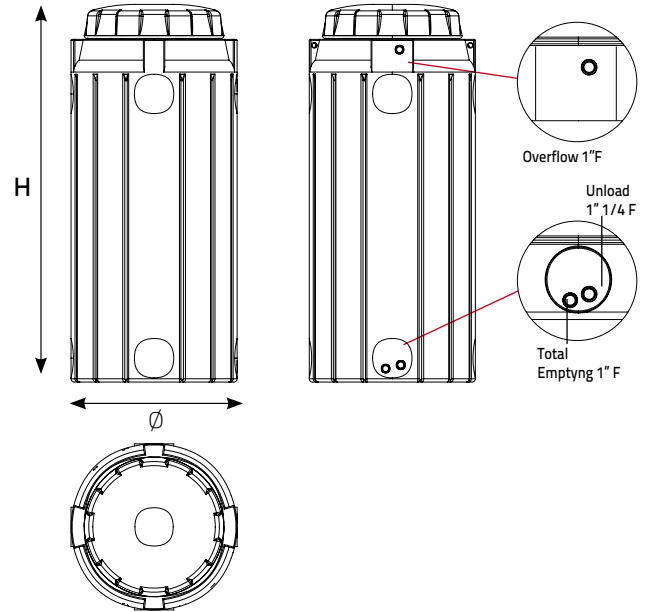


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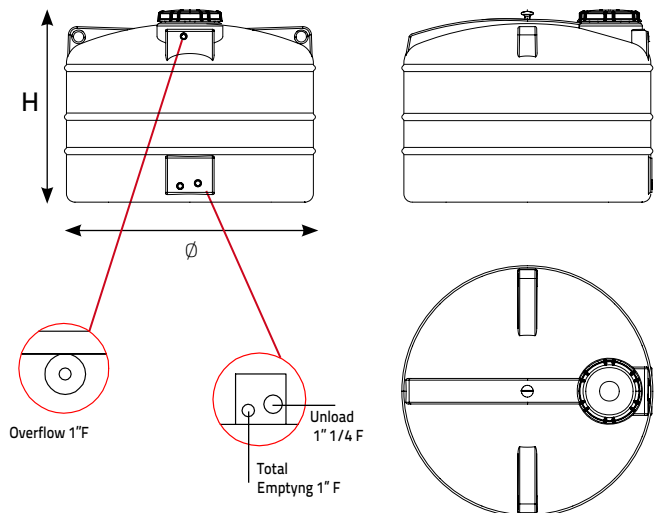


VERTICAL TANK "NSVC 700" of 700 litres

Item	Capacity (litres)	Dimensions (cm)		Lid ø (mm)	Vent	Moulded fittings			€
		H	ø			Unload	Overflow	Total Emptyng	
NSVC 700	700	170	76	550		1" 1/4	1"	1"	324,43

NEW

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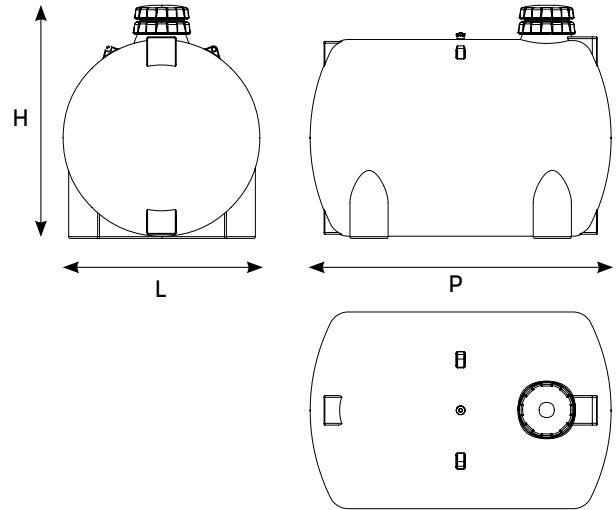
PANETTONE TANK "PAN" 1500 litres


Item	Capacity (litres)	Dimensions (cm)		Lid ø (mm)	Vent	Moulded fittings			€
		H	ø			Unload	Overflow	Total Emptyng	
PAN 1500	1470	113	145	420		1" 1/4	1"	1"	396,93

Overall dimensions tolerance ± 1.5%
Capacity tolerance ±4.6%

NEW

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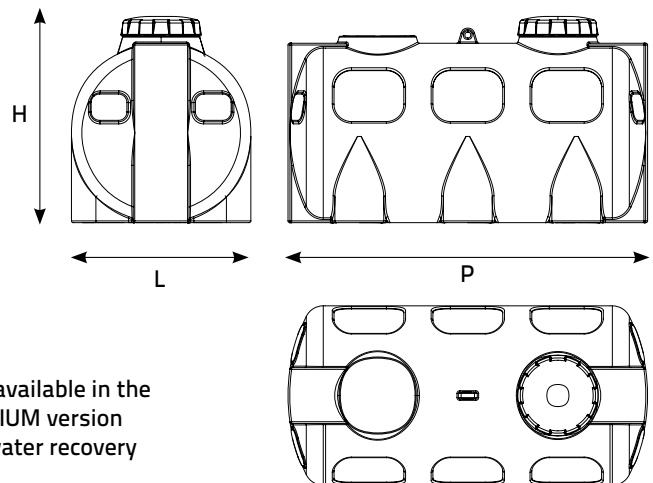

HORIZONTAL TANK "INCON" 10000 litres

Item	Capacity (litres)	Dimensions (cm)			Lid ø (mm)	Vent	€
		H	L	P			
INCON 10000*	10400	255	225	310	550		4.923,98

* Equipped with CL 550 turret


NEW

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Also available in the PLUVIUM version rainwater recovery

HORIZONTAL TANK "CIV" 5000 litres

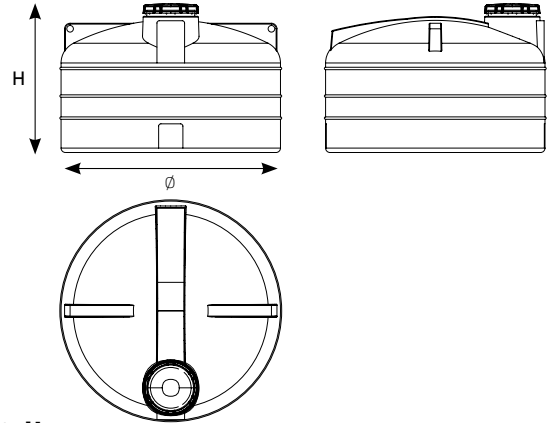
Item	Capacity (litres)	Dimensions (cm)			Lid ø (mm)	Vent	€
		H	L	P			
CIV 5000	5000	167	149	298	550		2.119,68

 Overall dimensions tolerance ± 1.5%
 Capacity tolerance ±4.6%




NEW

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Tanks for shallower excavations

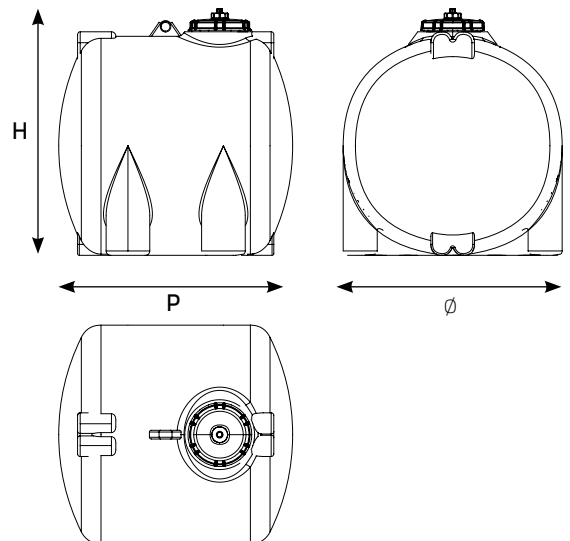


"INPAN" PANETTONE TANKS from 2000 to 5000 litres


Item	Capacity (litres)	Dimensions (cm)		Lid ø (mm)	Vent	€
		H	ø			
INPAN 2000	2050	139	157	420		1.140,92
INPAN 3000	3050	128	194	420		1.591,29
INPAN 5000	4950	142	238	420		1.977,94

NEW

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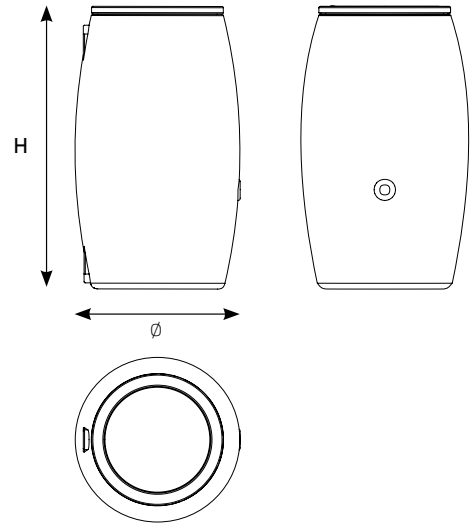
HORIZONTAL TANK "COR" 5000 litres

Item	Capacity (litres)	Dimensions (cm)			Lid ø (mm)	Vent	€
		H	L	P			
COR 5000	4950	191	178	232	420		3.452,35

Overall dimensions tolerance ± 1.5%
Capacity tolerance ±4.6%

NEW
PLUVIUM

on page 95



300 liter "Shabbyrain" RAIN WATER TANK

Item	Capacity (litres)	Dimensions (cm)		€
		H	Ø max	
RAIN AQ 300	297	113	66	326,00

Available colours **1** **67**

Flat area for insertion of downpipe, upper pot holder Ø53 H7
Supplied with 1/2" brass tap

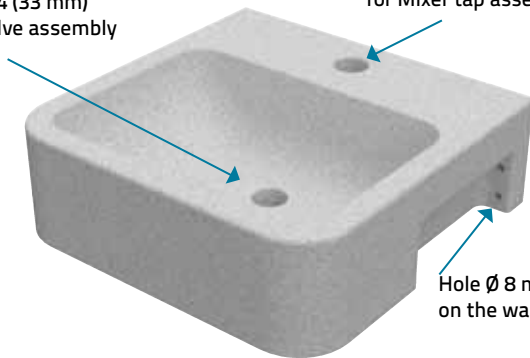
NEW



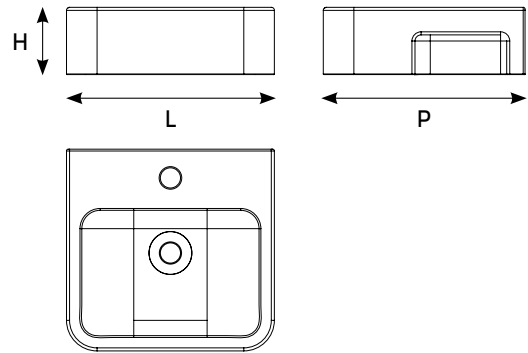
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Hole Ø 1 1/4 (33 mm)
for drain valve assembly

Hole Ø 1 1/4 (33 mm)
for Mixer tap assembly



Hole Ø 8 mm
on the wall using dowels



Wall-mounted HANDWASH BASIN

Item	Description	Color	Dimensions (cm)			€
			L	P	H	
LAMU 34	Wall-mounted handwash basin	(PT)	34	33	11	40,56
LAMU S 34*	Wall-mounted handwash basin with accessories	(PT)	34	33	11	85,27

* The S version is supplied with the following accessories:

1. Specific INOX fixing element kits for sanitary ware
2. Drain with plug and siphon complete with gaskets



2

NEW

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The **ECO GRAY MINI TELCOM** is an easy-to-manage system, in which the water to be treated, after separation through a self-cleaning basket filter, is collected in the accumulation tank and from here sent under pressure to the users after treatment.



NEW

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The **ECO GRAY PLUS TELCOM** is a MEMBRANE ULTRAFILTRATION system that allows the treatment of soluble macromolecules and any substance larger than the membrane cut.



NEW

on page 135

ECO DIS LARGE SYSTEMS LINEDEGREASER with volumes from 10,000 to 50,000 litres
sized on 30 and 50 liters for EI**NEW**

on page 143

ECO VS FA LARGE SYSTEMS LINEACTIVATED SLUDGE PLANTS with volumes from 18,500 to 50,000 litres
with suspended biomass and direct flow with primary sedimentation.

NEW

on page 149

MBBR LARGE SYSTEMS LINE

Moving bed bio reactor systems (activated sludge systems combined with the attached biomass process) with constant flow rate with volumes from 18,500 to 50,000 litres.



NEW

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ECO FAN LARGE SYSTEMS LINE

ANAEROBIC TRICKLING FILTERS with volumes from 10,000 to 50,000 litres.



NEW

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ECO FAN ER LARGE SYSTEMS LINE

ANAEROBIC TRICKLING FILTERS dimensioned according to the Resolution of Emilia-Romagna and Umbria Region with volumes from 10,000 to 50,000 litres.

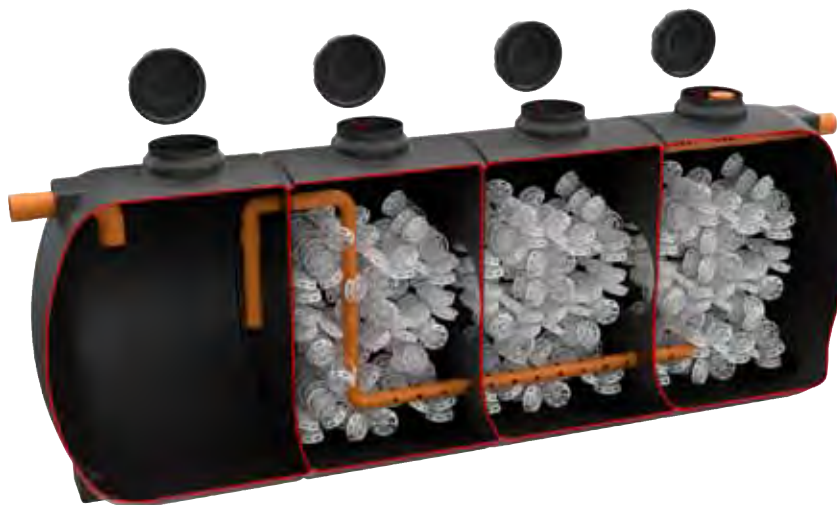


NEW

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ECO VS FAN LARGE SYSTEMS LINE

ANAEROBIC TRICKLING FILTERS with PRIMARY SEDIMENTATION with volumes from 15,000 to 45,000 litres.



NEW

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ECO FAE PLUS LARGE SYSTEMS LINE

FORCED AIR PERCOLATING FILTERS (high outlet) with volumes from 10,000 to 50,000 litres.



NEW

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ECO VS FAE PLUS LARGE SYSTEMS LINE

FORCED AIR PERCOLATING FILTERS (outlet on top)
WITH PRIMARY SEDIMENTATION
with volumes from 15,000 to 35,000 litres.




























OUTDOOR TANKS

**GENERAL TABLE IN ORDER OF CAPACITY
VERTICAL TANKS "NSV, HSV, NPA ed SV"**



Items	Capacity (litres)	Dimensions (cm)		Lid ø (mm)	Vent	Moulded fittings			€
		H	ø			Unload	Over-flow	Total Emptying	
NSV 100	100	67	48	320		1" 1/4	1"	1"	119,10
NSV 200	200	85	60	320		1" 1/4	1"	1"	131,21
NSV 300	300	97	70	320		1" 1/4	1"	1"	142,62
HSV 300	300	166	51	320		1" 1/4	1"	1"	201,41
NSV 500	500	148	70	320		1" 1/4	1"	1"	212,82
 NPA 500	500	116	80	420	 *	1" 1/4	1" 1/4	1" 1/4	176,55
NSV 700	700	199	70	320		1" 1/4	1"	1"	324,43
NEW NSVC 700	700	170	76	550		1" 1/4	1"	1"	324,43
 NPA 750	750	168	80	420	 *	1" 1/4	1" 1/4	1" 1/4	245,91
SV 1000	950	198	81	320		1" 1/4	1"	1"	345,28
 NPA 1000	1000	221	80	420	 *	1" 1/4	1" 1/4	1" 1/4	312,25
NSV 1500	1500	182	110	420		1" 1/4	1"	1"	383,64
NSV 2000	2000	182	127	420		1" 1/4	1"	1"	487,62
NSV 3000	3000	202	147	420		-	-	-	723,58
NSV 4000	4000	206	169	420		-	-	-	1.020,83
NSV 5000	5000	189	203	420		-	-	-	1.237,00
NSV 10000	10000	260	238	550		-	-	-	2.948,38
NSV 16000	15400	384	238	550		-	-	-	6.154,97
NSV 20000	20000	505	238	550	 *	-	-	-	13.306,01
NSV 25000	25000	625	238	550	 *	-	-	-	15.897,27

* Setup by the customer.



download the relevant data sheet



Note: NSV vertical tanks with a volume of up to 4000 liters are equipped with a CENTRAL manhole. The NSV vertical tanks with volumes from 5000 to 25000 are equipped with a SIDE manhole.



Color standard  Moulded fittings

Available colours  


 Color on request (Without moulded fittings)
For the containment of diesel fuel, see page 254

Each tank is equipped with:

- N. 1 vent valve
- No. 3 caps
- No. 3 Nipples
- No. 3 O-Rings

of a diameter equal to the relevant moulded fittings if provided.

Fittings and accessories on request on page. 73




 Pre-assembled fittings

 Available colours

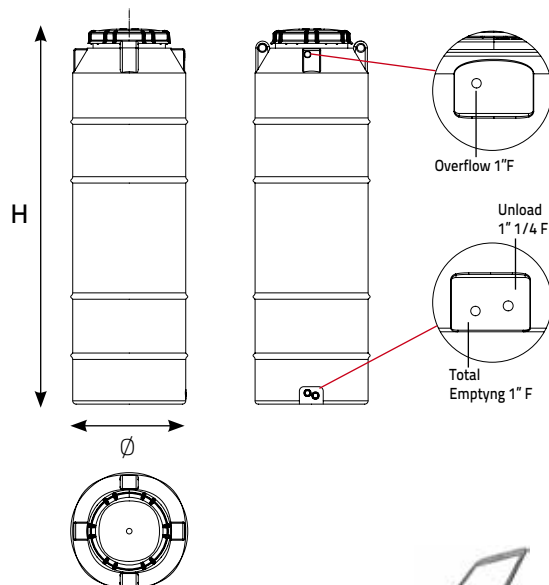
Each tank is equipped with:

- N. 3 1" box fittings 1/4
- N. 1 vent valve



Legend:  Labirint Valve 1"  2" PE box connection (male)

Overall dimensions tolerance ± 1.5%
Capacity tolerance ±4.6%



VERTICAL TANK "HSV 300" litres

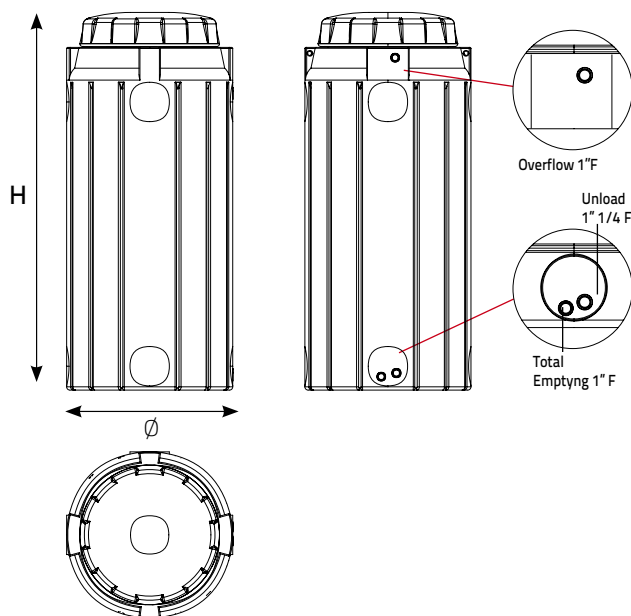
Item	Capacity (litres)	Dimensions (cm)		Lid ø (mm)	Vent	Moulded fittings			€
		H	Ø			Unload	Overflow	Total Emptyng	
HSV 300	300	166	51	320		1" 1/4	1"	1"	201,41



download the relevant data sheet



NEW

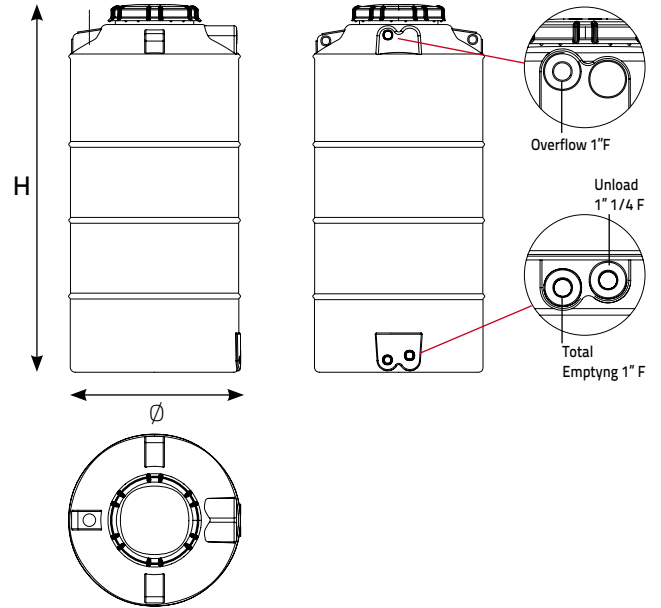


VERTICAL TANKS "NSVC 700" of 700 litres








Item	Capacity (litres)	Dimensions (cm)		Lid ø (mm)	Vent	Moulded fittings			€
		H	Ø			Unload	Overflow	Total Emptyng	
NSVC 700	700	170	76	550		1" 1/4	1"	1"	324,43

Legend: Labirint Valve 1"

Overall dimensions tolerance ± 1.5%
Capacity tolerance ± 4.6%

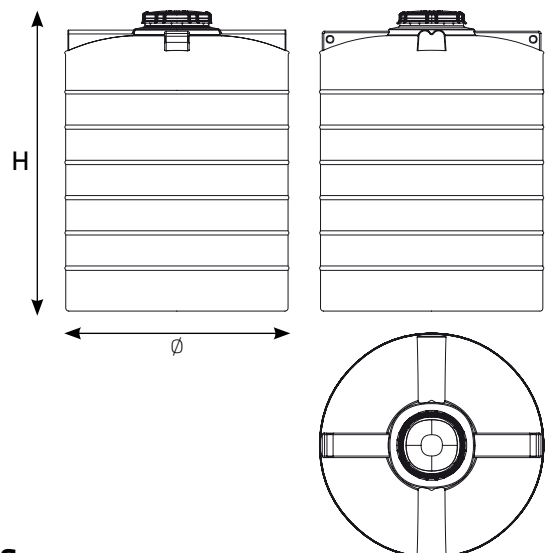


VERTICAL TANKS "NSV" from 100 to 2000 litres



Item	Capacity (litres)	Dimensions (cm)		Lid ø (mm)	Vent	Moulded fittings			€
		H	ø			Unload	Overflow	Total Emptyng	
NSV 100	100	67	48	320		1" 1/4	1"	1"	119,10
NSV 200	200	85	60	320		1" 1/4	1"	1"	131,21
NSV 300	300	97	70	320		1" 1/4	1"	1"	142,62
NSV 500	500	148	70	320		1" 1/4	1"	1"	212,82
NSV 700	700	199	70	320		1" 1/4	1"	1"	324,43
NSV 1500	1500	182	110	420		1" 1/4	1"	1"	383,64
NSV 2000	2000	182	127	420		1" 1/4	1"	1"	487,62




download the relevant data sheet

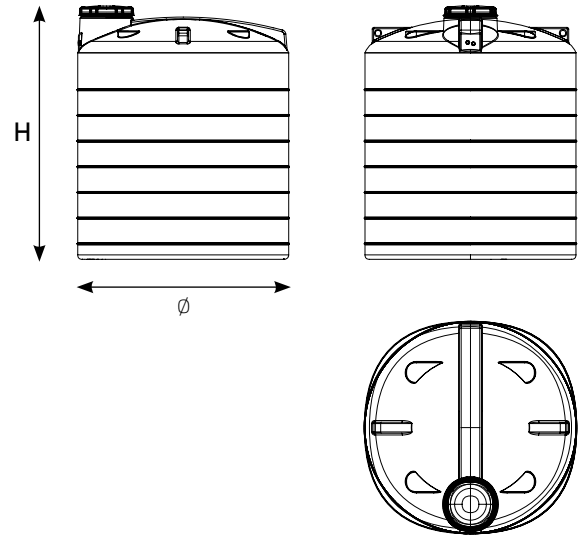





VERTICAL TANKS "NSV" from 3000 to 4000 litres

Item	Capacity (litres)	Dimensions (cm)		Lid ø (mm)	Vent	Moulded fittings			€
		H	ø			Unload	Overflow	Total Emptyng	
NSV 3000	3000	202	147	420		-	-	-	723,58
NSV 4000	4000	206	169	420		-	-	-	1.020,83

Legend:  Labirint Valve 1"

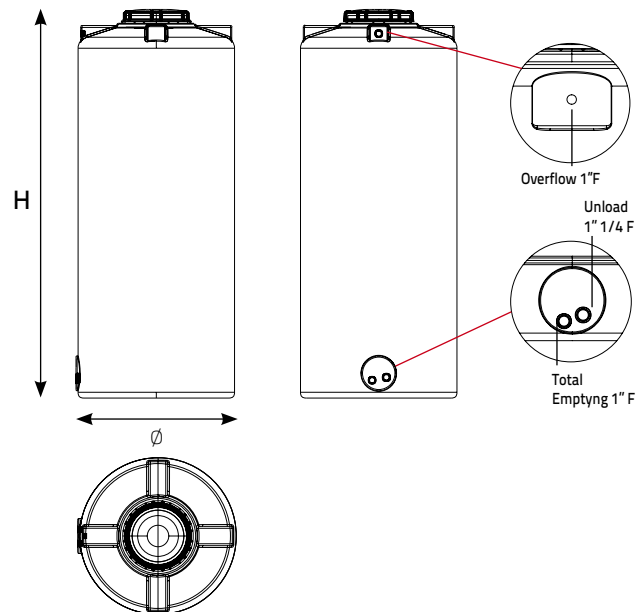
Overall dimensions tolerance ± 1.5%
Capacity tolerance ±4.6%



NSV 10000

VERTICAL TANKS "NSV" from 5000 to 16000 litres

Item	Capacity (litres)	Dimensions (cm)		Lid ø (mm)	Vent	Moulded fittings			€
		H	ø			Unload	Overflow	Total Emptyng	
NSV 5000	5000	189	203	420		-	-	-	1.237,00
NSV 10000	10000	260	238	550		-	-	-	2.948,38
NSV 16000	15400	384	238	550		-	-	-	6.154,97



download the relevant data sheet


VERTICAL TANK "SV 1000"

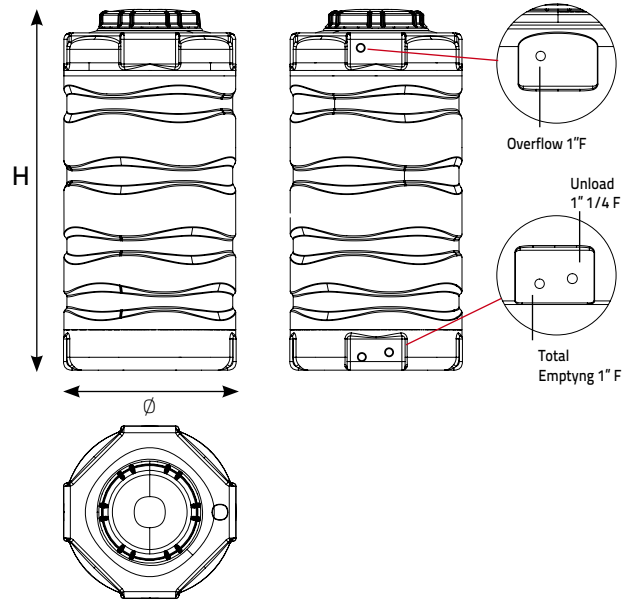
Item	Capacity (litres)	Dimensions (cm)		Lid ø (mm)	Vent	Moulded fittings			€
		H	ø			Unload	Overflow	Total Emptyng	
SV 1000	950	198	81	320		1" 1/4	1"	1"	345,28

Legend:  Labirint Valve 1"




Overall dimensions tolerance ± 1.5%
Capacity tolerance ± 4.6%



Triple Layer



VERTICAL TANKS "NPA" from 500 to 1000 litres

Item	Capacity (litres)	Dimensions (cm)		Lid Ø (mm)	Vent	Moulded fittings			€
		H	Ø			Unload	Overflow	Total Emptying	
NPA 500	500	116	80	420	 *	1" 1/4	1" 1/4	1" 1/4	176,55
NPA 750	750	168	80	420	 *	1" 1/4	1" 1/4	1" 1/4	245,91
NPA 1000	1000	221	80	420	 *	1" 1/4	1" 1/4	1" 1/4	312,25



download the relevant data sheet



*Setup by the customer.



Pre-assembled fittings

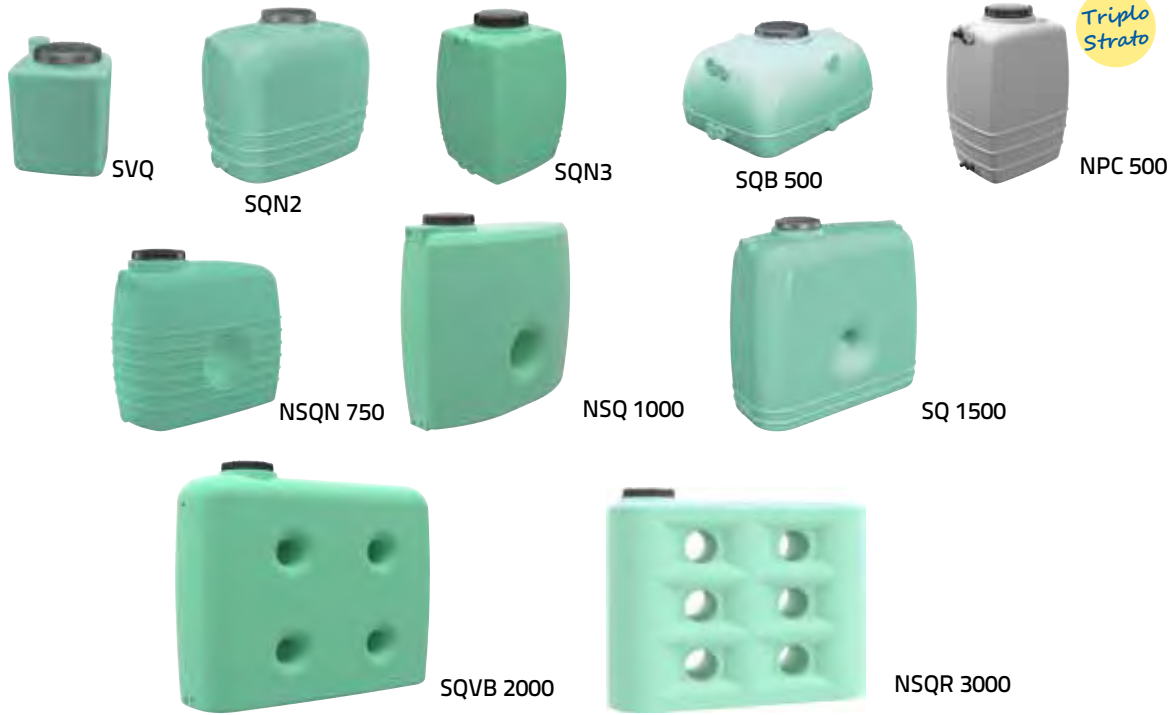
GS Available colours

Each tank is equipped with:

- N. 3 1" box fittings 1/4
- N. 1 vent valve



GENERAL TABLE IN ORDER OF CAPACITY SQUARE TANKS "SVQ, SQN2, SQN3, SQB, NPC, NSQN, SQ, NSQ"



Items	Capacity (litres)	Dimensions (cm)			Lid ø (mm)	Vent	Moulded fittings			€
		H	L	P			Unload	Overflow	Total Emptyng	
SVQ 100	100	58	52	52	320	-	-	-	-	134,06
SQN2 200	200	72	49	84	320		1" 1/4	1"	1"	168,29
SQN2 300	290	70	66	88	320		1" 1/4	1"	1"	193,96
SQN3 300	320	93	65	67	320		1" 1/4	1"	1"	188,25
SQN2 500	490	90	71	109	320		1" 1/4	1"	1"	269,03
SQB 500	500	62	92	122	320		1" 1/4	1"	1"	265,79
NPC 500	510	116	68	87	420	*	1" 1/4	1" 1/4	1" 1/4	235,60
NSQN 750 R	750	118	66	129	220		1" 1/4	1"	1"	376,77
NSQ 1000	1000	142	69	156	320		1" 1/4	1"	1"	438,35
SQ 1500	1350	146	77	167	320		1" 1/4	1"	1"	752,68
SQVB 2000	2000	186	68	220	320		1" 1/4	1"	1"	844,16
NSQR 3000	2850	201	78	258	320		1" 1/4	1"	1"	1.342,55



*Setup by the customer.



Color standard

Molded fittings

Available colours

Color on request (Without molded fittings)

For the containment of diesel fuel, see page 254

Each tank is equipped with:

- N. 1 vent valve
- No. 3 caps
- No. 3 Nipples
- No. 3 O-Rings

of a diameter equal to the relevant molded fittings if provided.

Fittings and accessories on request on page. 73

Pre-assembled fittings

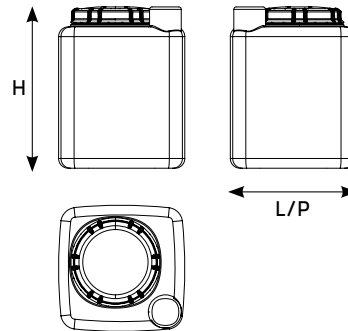
Available colours

Each tank is equipped with:

- N. 3 1" box fittings 1/4
- N. 1 vent valve

Legend: Labirint Valve 1"

Overall dimensions tolerance ± 1.5%
Capacity tolerance ± 4.6%

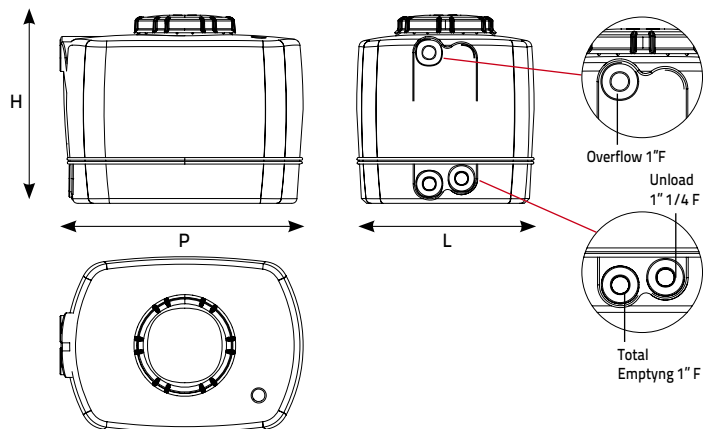


SQUARE TANK "SVQ 100"




Item	Capacity (litres)	Dimensions (cm)			Lid ø (mm)	Vent	Moulded fittings			€
		H	L	P			Unload	Overflow	Total Emptyng	
SVQ 100	100	58	52	52	320	-	-	-	-	134,06

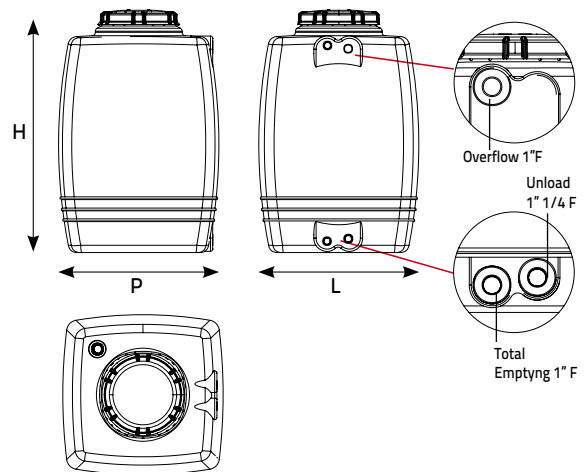



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SQUARE TANKS "SQN2" from 200 to 500 litres

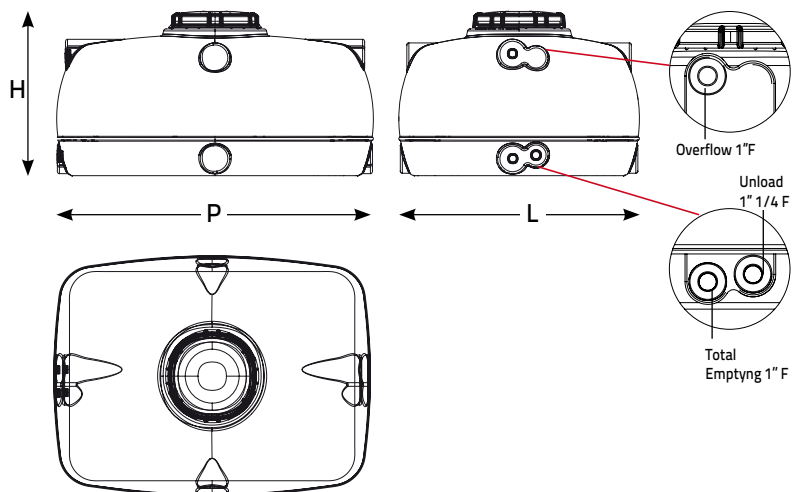
Item	Capacity (litres)	Dimensions (cm)			Lid ø (mm)	Vent	Moulded fittings			€
		H	L	P			Unload	Overflow	Total Emptyng	
SQN2 200	200	72	49	84	320		1" 1/4	1"	1"	168,29
SQN2 300	290	70	66	88	320		1" 1/4	1"	1"	193,96
SQN2 500	490	90	71	109	320		1" 1/4	1"	1"	269,03



SQUARE TANK "SQN3 300"


Item	Capacity (litres)	Dimensions (cm)			Lid \varnothing (mm)	Vent	Moulded fittings			€
		H	L	P			Unload	Overflow	Total Emptyng	
SQN3 300	320	93	65	67	320		1" 1/4	1"	1"	188,25



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SQUARE TANK "SQB 500"

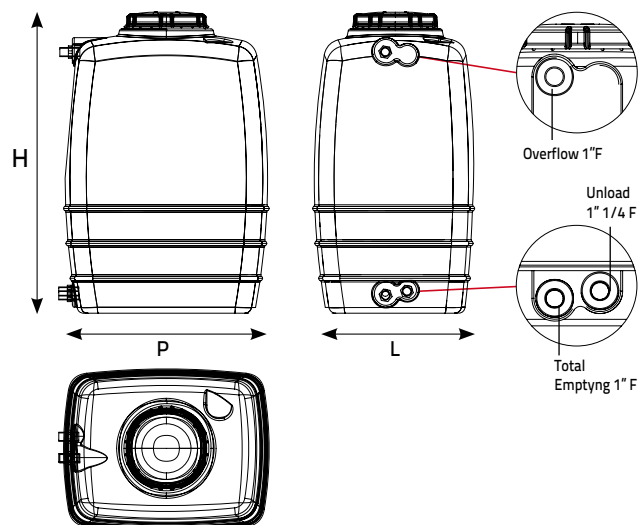
Item	Capacity (litres)	Dimensions (cm)			Lid \varnothing (mm)	Vent	Moulded fittings			€
		H	L	P			Unload	Overflow	Total Emptyng	
SQB 500	500	62	92	122	320		1" 1/4	1"	1"	265,79

Legend:  Labirint Valve 1"


Overall dimensions tolerance $\pm 1.5\%$
Capacity tolerance $\pm 4.6\%$



Triple Layer



SQUARE TANK "NPC 500"


Item	Capacity (litres)	Dimensions (cm)			Lid ø (mm)	Vent	Moulded fittings			€
		H	L	P			Unload	Overflow	Total Emptyng	
NPC 500	510	116	68	87	420	 *	1" 1/4	1" 1/4	1" 1/4	235,60



download the relevant data sheet

*Setup by the customer.






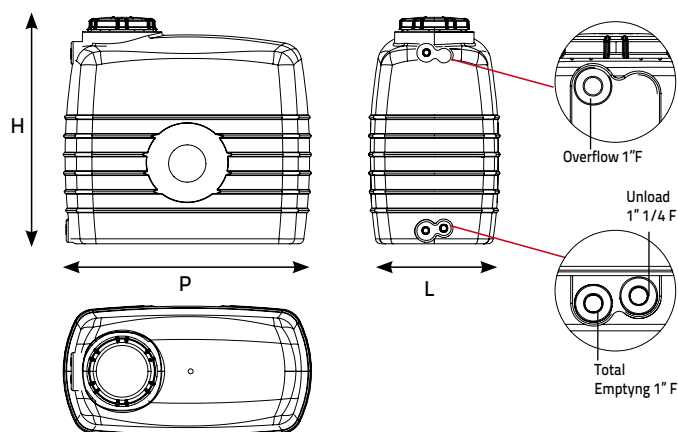
Pre-assembled fittings

GS Available colours


Each tank is equipped with:


- N. 3 1" box fittings 1/4
- N. 1 vent valve



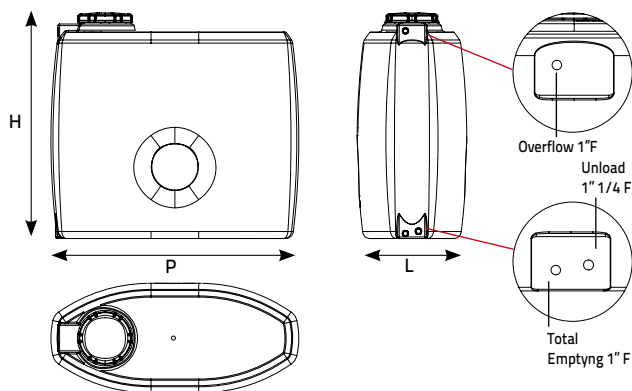



SQUARE TANK "NSQN 750 R"

Item	Capacity (litres)	Dimensions (cm)			Lid ø (mm)	Vent	Moulded fittings			€
		H	L	P			Unload	Overflow	Total Emptyng	
NSQN 750 R	750	118	66	129	220		1" 1/4	1"	1"	376,77

Legend:  Labirint Valve 1"

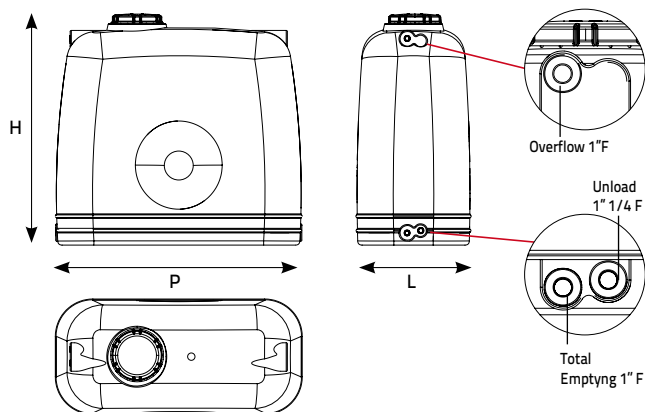
Overall dimensions tolerance ± 1.5%
Capacity tolerance ±4.6%



SQUARE TANK "NSQ 1000"


Item	Capacity (litres)	Dimensions (cm)			Lid ø (mm)	Vent	Moulded fittings			€
		H	L	P			Unload	Overflow	Total Emptying	
NSQ 1000	1000	142	69	156	320		1" 1/4	1"	1"	438,35



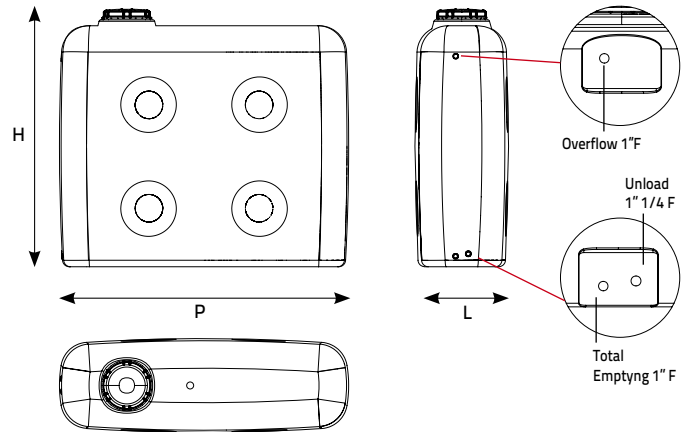
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SQUARE TANK "SQ 1500"


Item	Capacity (litres)	Dimensions (cm)			Lid ø (mm)	Vent	Moulded fittings			€
		H	L	P			Unload	Overflow	Total Emptying	
SQ 1500	1350	146	77	167	320		1" 1/4	1"	1"	752,68

Legend:  Labirint Valve 1"

Overall dimensions tolerance ± 1.5%
Capacity tolerance ± 4.6%

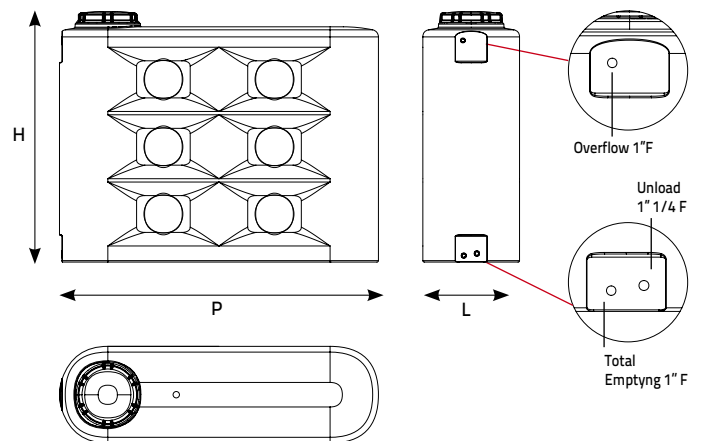


SQUARE TANK "SQVB 2000"


Item	Capacity (litres)	Dimensions (cm)			Lid ø (mm)	Vent	Moulded fittings			€
		H	L	P			Unload	Overflow	Total Emptyng	
SQVB 2000	2000	186	68	220	320		1" 1/4	1"	1"	844,16




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SQUARE TANK "NSQR 3000"

Item	Capacity (litres)	Dimensions (cm)			Lid ø (mm)	Vent	Moulded fittings			€
		H	L	P			Unload	Overflow	Total Emptyng	
NSQR 3000	2850	201	78	258	320		1" 1/4	1"	1"	1.342,55

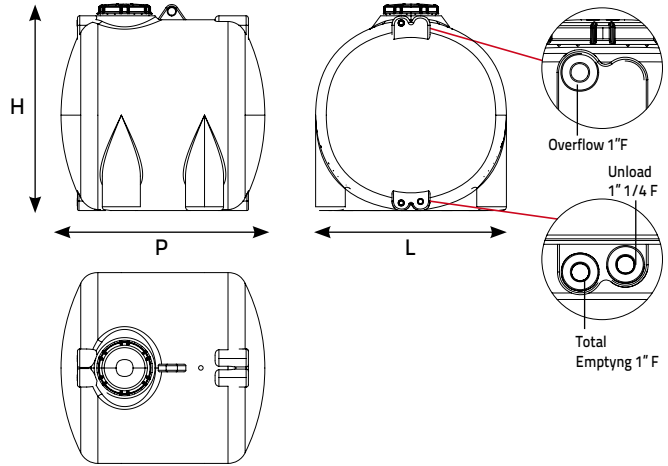
Legend:  Labirint Valve 1"

Overall dimensions tolerance ± 1.5%
Capacity tolerance ± 4.6%

HORIZONTAL TANKS "CON" from 300 to 10.000 liters



CON 300-5000



Items	Capacity (litres)	Dimensions (cm)			Lid \varnothing (mm)	Vent	Moulded fittings			€
		H	L	P			Unload	Over-flow	Total Emptyng	
CON 300	290	82	73	82	320		1" 1/4	1"	1"	167,97
CON 500	500	94	87	98	320		1" 1/4	1"	1"	233,88
CON 1000	1050	115	106	127	320		1" 1/4	1"	1"	308,45
CON 1500	1500	133	125	137	320		1" 1/4	1"	1"	523,40
CON 2000	1950	144	136	155	320		1" 1/4	1"	1"	654,52
CON 3000	2970	166	160	185	420		-	-	-	960,78
CON 5000	4950	186	178	232	420		-	-	-	1.381,13
CON 7500*	7150	217	189	318	550		-	-	-	3.542,88
CON 10000*	10400	255	225	310	550		-	-	-	5.099,21



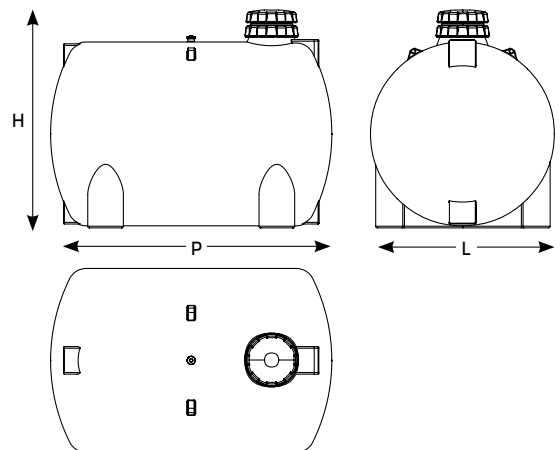
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* Equipped with CL 550 turret



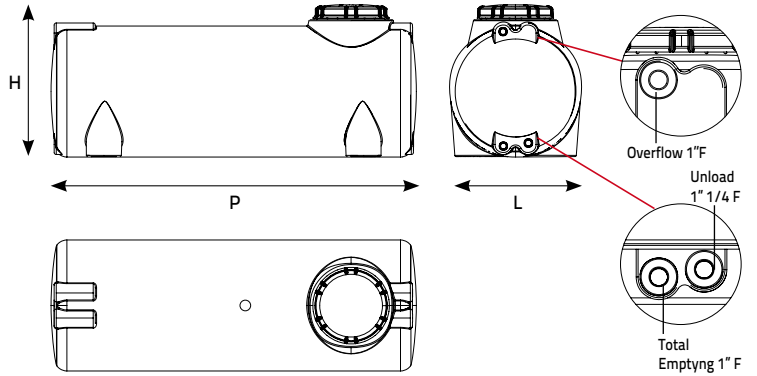
CON 7500 - CON 10000






Legend: Labirint Valve 1"

Overall dimensions tolerance $\pm 1.5\%$
Capacity tolerance $\pm 4.6\%$

SLIM HORIZONTAL TANKS "CO" from 300 to 1000 liters



Items	Capacity (litres)	Dimensions (cm)			Lid ϕ (mm)	Vent	Moulded fittings			€
		H	L	P			Unload	Overflow	Total Emptyng	
CO 300	300	61	52	160	220		1" 1/4	1"	1"	267,85
CO 500	490	72	62	173	320		1" 1/4	1"	1"	373,14
CO 1000	1000	91	81	203	320		1" 1/4	1"	1"	485,57



download the relevant data sheet



Color standard  
Molded fittings

Available colours  

 Color on request (Without molded fittings)

For the containment of diesel fuel, see page 254

Each tank is equipped with:

- N. 1 vent valve
 - No. 3 caps
 - No. 3 Nipples
 - No. 3 O-Rings
- of a diameter equal to the relevant molded fittings if provided.



Fittings and accessories on request on page. 73

Legend:  Labirint Valve 1"  2" breather fitting (male)

Overall dimensions tolerance $\pm 1.5\%$
Capacity tolerance $\pm 4.6\%$

GENERAL TABLE IN ORDER OF CAPACITY PANETTONE "PN", "PAN" and "NPB" TANKS



Items	Capacity (litres)	Dimensions (cm)		Lid ø (mm)	Vent	Moulded fittings			€
		H	ø			Unload	Overflow	Total Emptyng	
PN 200	200	61	78	220		1" 1/4	1"	1"	142,20
PAN 300	310	70	90	220		1" 1/4	1"	1"	159,13
PAN 500	490	77	105	320		1" 1/4	1"	1"	193,67
NPB 1000	1000	108	120	420	*	1" 1/4	1" 1/4	1" 1/4	315,25
PAN 1500	1470	113	145	420		1" 1/4	1"	1"	396,93
PAN 2000	2050	139	157	420		1" 1/4	1"	1"	552,04
PAN 3000	3050	128	194	420		-	-	-	687,55
PAN NEW 5000	4950	142	238	420		-	-	-	1.110,90
PAN 7500	7550	198	238	420		-	-	-	1.681,35



download the relevant data sheet



Triple Layer
NEW

*Setup by the customer.



Color standard

Molded fittings

Available colours

Color on request (Without molded fittings)

For the containment of diesel fuel, see page 254

Each tank is equipped with:

- N. 1 vent valve
- No. 3 caps
- No. 3 Nipples
- No. 3 O-Rings

of a diameter equal to the relevant molded fittings if provided.

Fittings and accessories on request on page. 73

Pre-assembled fittings

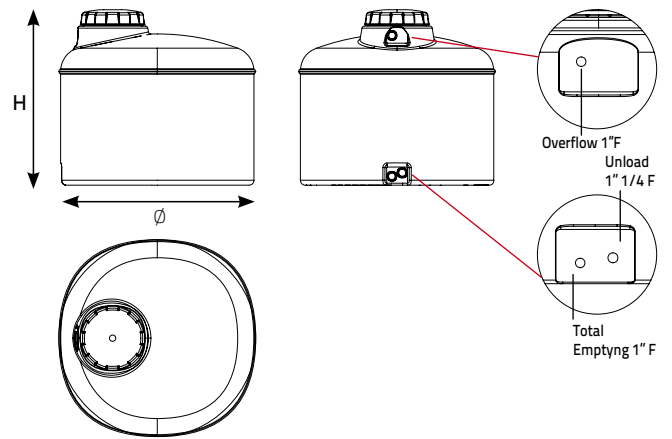
Available colours

Each tank is equipped with:


- N. 3 1" box fittings 1/4
- N. 1 vent valve

Legend: Labirint Valve 1"

Overall dimensions tolerance ± 1.5%
Capacity tolerance ± 4.6%

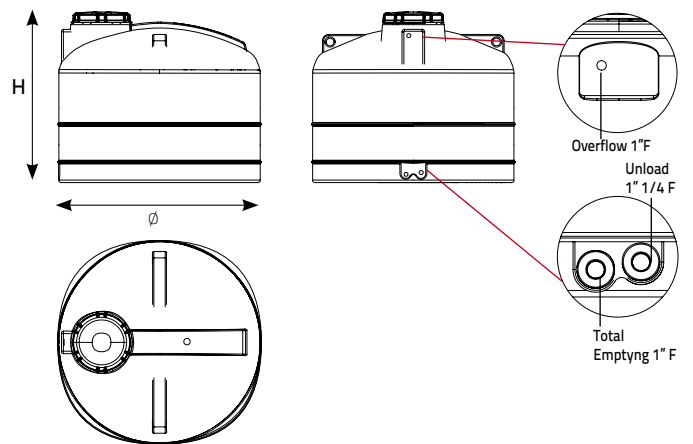


PANETTONE "PN" TANK





Item	Capacity (litres)	Dimensions (cm)		Lid Ø (mm)	Vent	Moulded fittings			€
		H	Ø			Unload	Overflow	Total Emptyng	
PN 200	200	61	78	220		1" 1/4	1"	1"	142,20




download the relevant data sheet

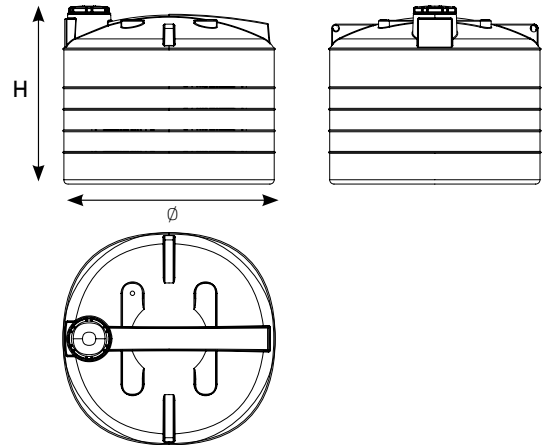



PANETTONE "PAN" TANKS from 300 to 2000 litres

Item	Capacity (litres)	Dimensions (cm)		Lid Ø (mm)	Vent	Moulded fittings			€
		H	Ø			Unload	Overflow	Total Emptyng	
PAN 300	310	70	90	220		1" 1/4	1"	1"	159,13
PAN 500	490	77	105	320		1" 1/4	1"	1"	193,67
NEW PAN 1500	1470	113	145	420		1" 1/4	1"	1"	396,93
PAN 2000	2050	139	157	420		1" 1/4	1"	1"	552,04

Legend:  Labirint Valve 1"

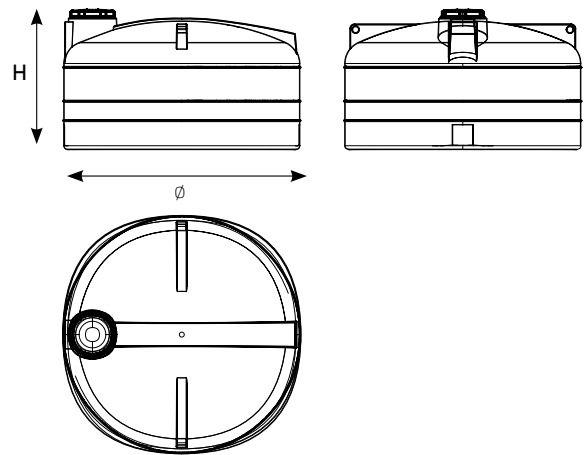
Overall dimensions tolerance ± 1.5%
Capacity tolerance ±4.6%




PANETTONE TANKS "PAN" 3000 litres


Item	Capacity (litres)	Dimensions (cm)		Lid Ø (mm)	Vent	Moulded fittings			€
		H	Ø			Unload	Overflow	Total Emptyng	
PAN 3000	3050	128	194	420		-	-	-	687,55



download the relevant data sheet


PANETTONE "PAN" TANKS from 5000 to 7500 litres

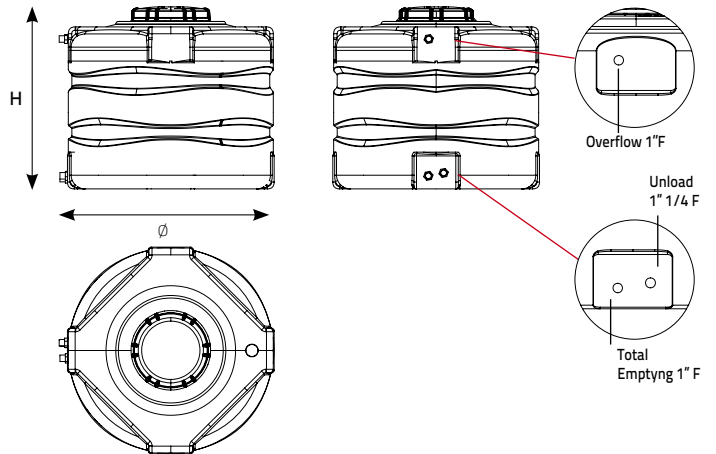
Item	Capacity (litres)	Dimensions (cm)		Lid Ø (mm)	Vent	Moulded fittings			€
		H	Ø			Unload	Overflow	Total Emptyng	
PAN NEW 5000	4950	142	238	420		-	-	-	1.110,90
PAN 7500	7550	198	238	420		-	-	-	1.681,35

Legend:  Labirint Valve 1"


Overall dimensions tolerance ± 1.5%
Capacity tolerance ±4.6%



Triple Layer



SERBATOIO PANETTONE "NPB"

Item	Capacity (litres)	Dimensions (cm)		Lid ø (mm)	Vent	Moulded fittings			€
		H	ø			Unload	Overflow	Total Emptyng	
NPB 1000	1000	108	120	420	 *	1" 1/4	1" 1/4	1" 1/4	315,25

*Setup by the customer.



download the relevant data sheet



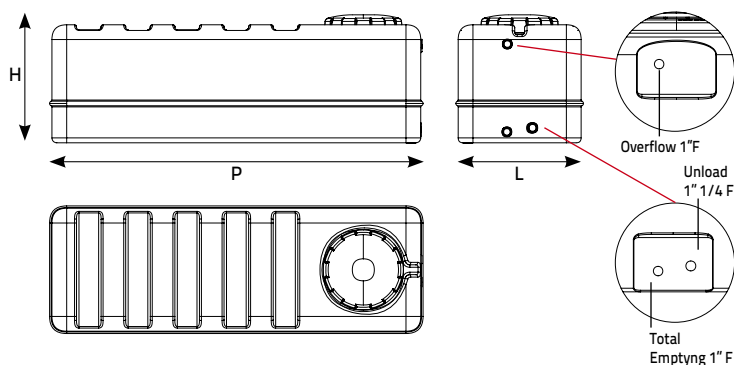
Pre-assembled fittings


GS Available colours

Each tank is equipped with:

- N. 3 1" box fittings 1/4
- N. 1 vent valve

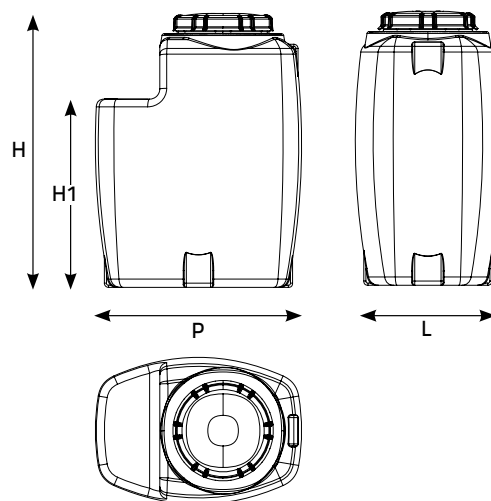






"SRS" ATTIC TANK


Item	Capacity (litres)	Dimensions (cm)			Lid ø (mm)	Vent	Moulded fittings			€
		H	L	P			Unload	Overflow	Total Emptyng	
SRS 300	300	48	50	150	220		1" 1/4	1"	1"	326,10



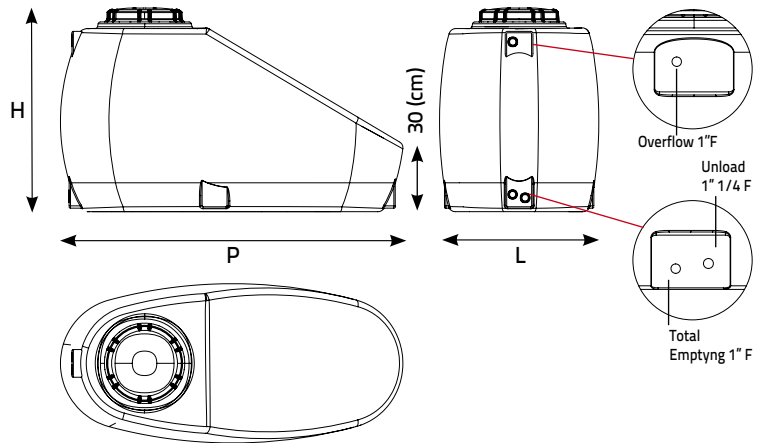
download the relevant data sheet


TANKS FOR SELF-PRIMING PUMP "SPP" from 300 to 800 litres



Articolo	Capacità H (litri)	Capacità H1 (litri)	Dimensioni (cm)				Chiusino ø (mm)	Sfiato	€
			H	H1	L	P			
SPP 300	376	265	96	57	65	93	420		287,92
SPP 500	572	458	131	89	69	99	420		418,23
SPP 800	900	780	170	130	69	129	420		775,09

Legend:  Labirint Valve 1"

Overall dimensions tolerance ± 1.5%
Capacity tolerance ± 4.6%



UNDERSTAIRS TANKS "SPS R" from 500 to 1000 litres

Item	Capacity (litres)	Dimensions (cm)			Lid ø (mm)	Vent	Moulded fittings			€
		H	L	P			Unload	Overflow	Total Emptyng	
SPS 500 R	500	91	69	138	320		1" 1/4	1"	1"	297,66
SPS 1000 R	950	105	90	180	420		1" 1/4	1"	1"	585,95



download the relevant data sheet



Color standard  
Molded fittings

Available colours  


 Color on request (Without molded fittings)
For the containment of diesel fuel, see page 254


Each tank is equipped with:

- N. 1 vent valve
- No. 3 caps
- No. 3 Nipples
- No. 3 O-Rings

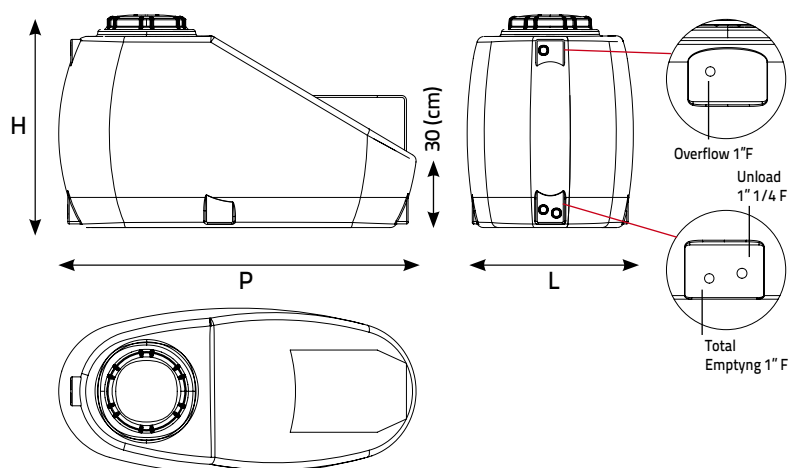
of a diameter equal to the relevant molded fittings if provided.



Fittings and accessories on request on page. 73



Legend:  Labirint Valve 1"

Overall dimensions tolerance ± 1.5%
Capacity tolerance ±4.6%


UNDERSTAIRS TANKS "SPS R ATC" from 500 to 1000 litres

Item	Capacity (litres)	Dimensions (cm)			Lid ø (mm)	Vent	Moulded fittings			€
		H	L	P			Unload	Overflow	Total Emptyng	
SPS 500 R ATC	500	91	69	138	320		1" 1/4	1"	1"	522,30
SPS 1000 R ATC	950	105	90	180	420		1" 1/4	1"	1"	822,09

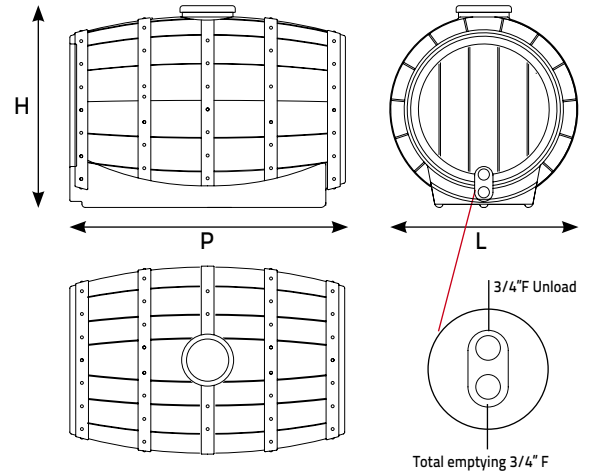


download the relevant data sheet


AUTOCLAVE KIT

Item	HP	Accessories	€
KIT ATC 01	0,7	-	553,81
KIT ATC 02	1	-	600,20
KIT ATC 03	1,5	-	1.103,22
KIT ATC 04	0,7	with Easy Press regulator included	500,70
KIT ATC 05	1	with Easy Press regulator included	560,84
KIT ATC 06	1,5	with Easy Press regulator included	1.016,85






"BARREL" TANKS from 350 to 550 litres

Item	Capacity (litres)	Dimensions (cm)			Lid \varnothing (mm)	Molded Fittings		€
		H	L	P		3/4"	3/4"	
BOT 350	350	74	74	105	140	3/4"	3/4"	302,82
BOT 550	550	82	82	121	140	3/4"	3/4"	379,36



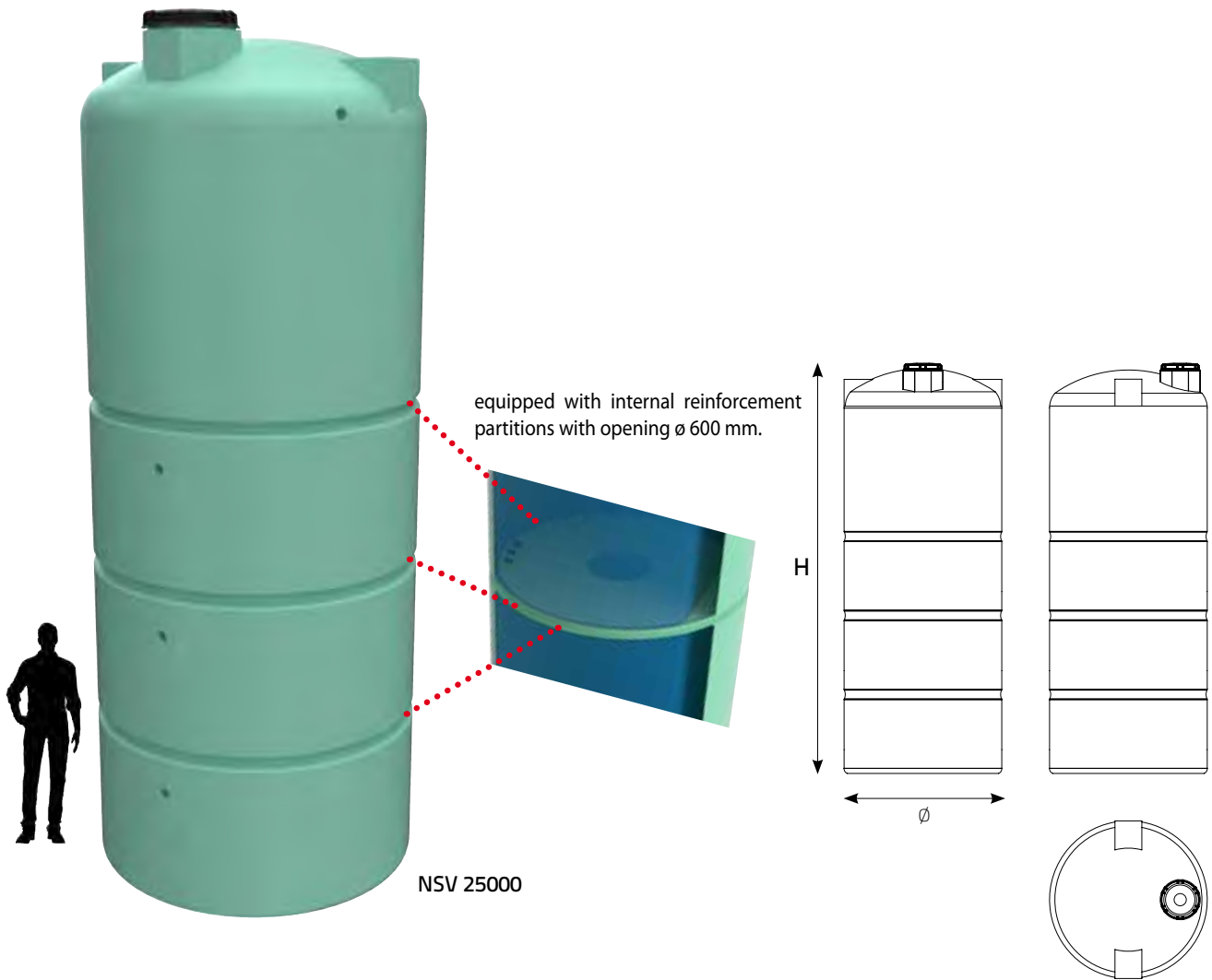
download the relevant data sheet





Standard color: 

Accessories on request on page 252

Overall dimensions tolerance $\pm 1.5\%$
Capacity tolerance $\pm 4.6\%$

VERTICAL TANKS

VERTICAL TANKS "NSV" from 20000 to 25000 litres

Item	Capacity (litres)	Dimensions (cm)		Lid \varnothing (mm)	Vent	Moulded fittings			€
		H	\varnothing			Unload	Overflow	Total Emptyng	
NSV 20000	20000	505	238	550	 *	-	-	-	13.306,01
NSV 25000	25000	625	238	550	 *	-	-	-	15.897,27

* Setup by the customer.



download the relevant data sheet



Fittings and accessories on request on page 73

Modular tank

Unique Color 

HORIZONTAL TANKS

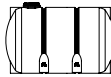
XXLE



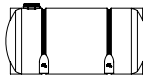
2 modules
10.000 lt



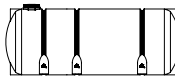
3 modules
15.000 lt



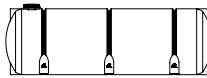
3 modules
20.000 lt



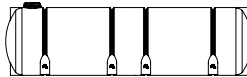
4 modules
25.000 lt



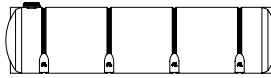
4 modules
30.000 lt



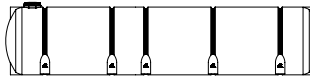
5 modules
35.000 lt



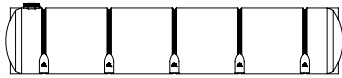
5 modules
40.000 lt



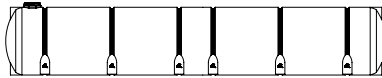
6 modules
45.000 lt



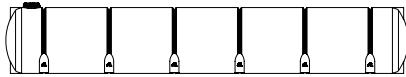
6 modules
50.000 lt



7 modules
55.000 lt



7 modules
60.000 lt



XXLE is a modular outdoor tank whose capacity varies from a minimum of 10,000 litres to a maximum of 60,000 litres.

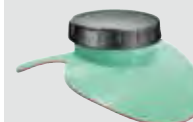
They are composed of monolithic polyethylene modules designed and sized with the aid of F.E.M. analysis to guarantee resistance to hydrostatic load and self-support. Linear polyethylene (PE) is a raw material that has the best characteristics in terms of food use and resistance to organic and inorganic chemical agents.

The XXLE large volume tanks were created to meet the needs of water collection and accumulation for the most diverse needs such as:



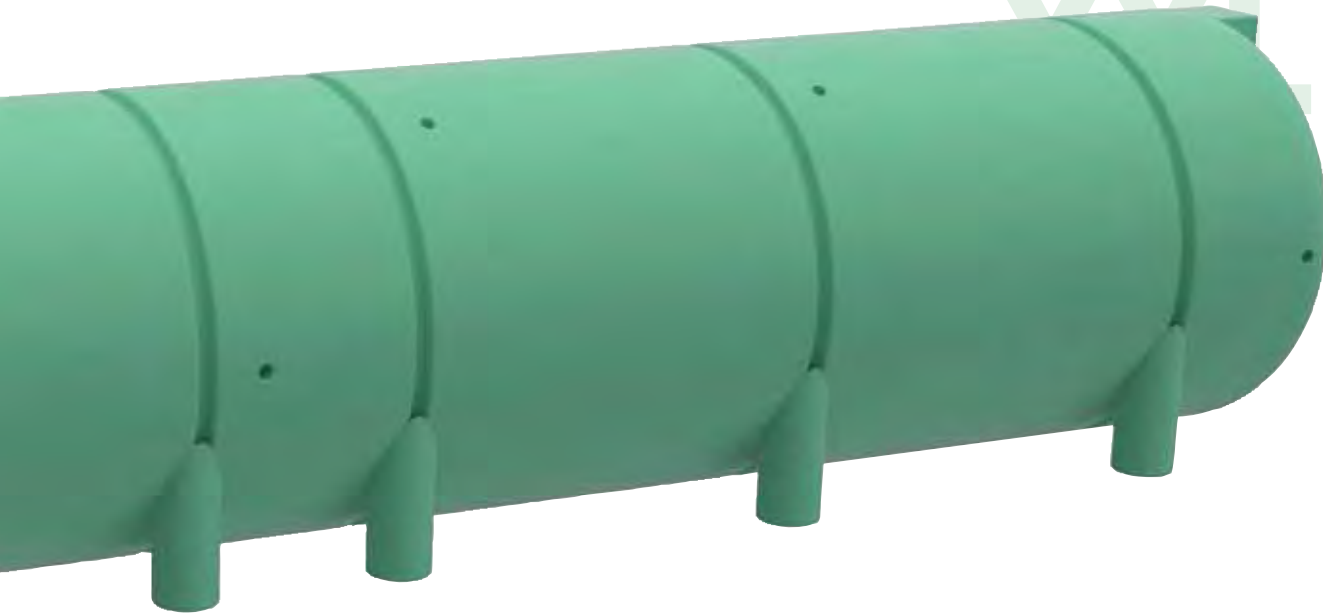
- Water storage for civil use;
- Water storage for industrial use;
- Creation of reserves for fire prevention systems;
- Rainwater collection;
- Service tanks in water and wastewater treatment systems.

ADDITIONAL LIDS

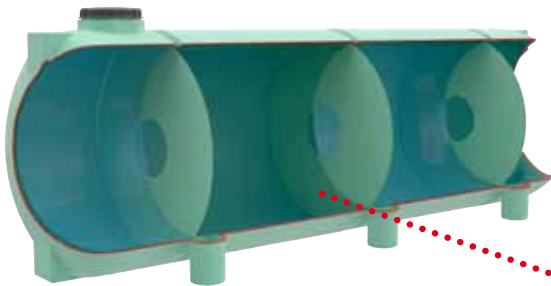


(CodeTRLM 550 KIT) Upon request it is possible to set up the XXLE tanks with more than one manhole cover (in any case no more than one per component module).

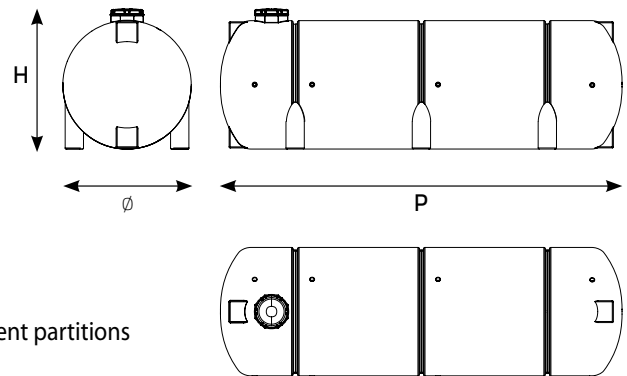
HORIZONTAL TANKS



LARGE VOLUME



equipped with internal reinforcement partitions with opening \varnothing 600 mm.



LARGE VOLUME TANK "XXLE" from 10,000 to 60,000 litres

Item (Food)	Capacity (litres)	Vent*	Dimensions (cm)			Lid \varnothing (mm)	No. Feet	€
			H	\varnothing	P			
XXLE 10000	10000		255	238	275	550	4	6.258,86
XXLE 15000	15000		255	238	394	550	4	8.991,08
XXLE 20000	20000		255	238	510	550	4	11.714,43
XXLE 25000	25000		255	238	630	550	6	14.337,91
XXLE 30000	30000		255	238	746	550	6	16.046,78
XXLE 35000	35000		255	238	865	550	8	19.871,88
XXLE 40000	40000		255	238	982	550	8	21.586,26
XXLE 45000	45000		255	238	1100	550	10	25.642,55
XXLE 50000	50000		255	238	1218	550	10	28.404,78
XXLE 55000	55000		255	238	1336	550	12	30.959,85
XXLE 60000	60000		255	238	1453	550	12	**a richiesta

*Setup by the customer.
*Request a quote based on destination.



download the relevant data sheet



Fittings and accessories on request on page 73

Modular tank



Legend: 2" PE box connection (male)

Overall dimensions tolerance \pm 1.5%
Capacity tolerance \pm 4.6%

**GENERAL TABLE ACCORDING TO CAPACITY
ANPHORA TANKS ORCIOBELLO**



Item	Capacity (litres)	Dimensions (cm)		Lid ø (mm)	Moulded fittings				€
		H	ø		Load	Unload	Overflow	Total Emptying	
ORCIO 200	200	85	73	370	3/4"	1" 1/4	1"	1"	183,15
ORCIO 300	300	96	83	370	3/4"	1" 1/4	1"	1"	210,17
ORCIO 500	500	111	98	450	-	1" 1/4	-	1"	285,23
ORCIO 500 F	500	111	98	450	-	1" 1/4	-	1"	288,23
ORCIO 500 OLD	500	111	98	450	3/4"	1" 1/4	1"	1"	279,22
ORCIO 1000 R	960	140	116	450	-	1" 1/4	-	1"	420,62
ORCIO 1000 R/F	960	140	116	450	-	1" 1/4	-	1"	435,75
ORCIO 1000 R OLD	960	140	116	450	3/4"	1" 1/4	1"	1"	429,27



download the relevant data sheet



Moulded fittings

Available colors



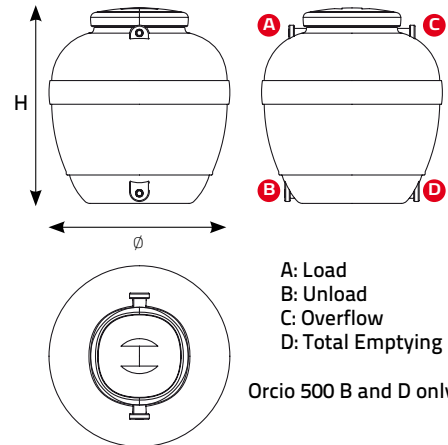
The tank, when provided, is equipped with:

- N. 1 female closing cap
- N. 4 hygiene-saving caps
- No. 4 caps
- No. 4 Nipples
- No. 4 O-Rings



of the same diameter as the relevant moulded fittings if applicable.

Overall dimensions tolerance ± 1.5%
Capacity tolerance ±4.6%



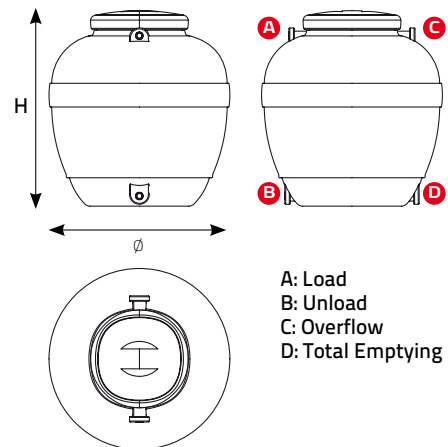
Orcio 500 B and D only

"ORCIOBELLO" ANFORA TANKS from 200 to 500 litres

Item	Capacity (litres)	Dimensions (cm)		Lid ø (mm)	Moulded fittings				€
		H	ø		A Load	B Unload	C Overflow	D Total Emptying	
ORCIO 200	200	85	73	370	3/4"	1" 1/4	1"	1"	183,15
ORCIO 300	300	96	83	370	3/4"	1" 1/4	1"	1"	210,17
ORCIO 500	500	111	98	450	-	1" 1/4	-	1"	285,23

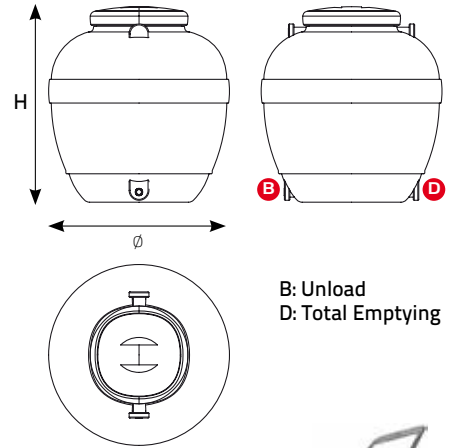


download the relevant data sheet


"ORCIOBELLO" OLD ANFORA TANKS from 500 to 1000 liters

Item	Capacity (litres)	Dimensions (cm)		Lid ø (mm)	Moulded fittings				€
		H	ø		A Load	B Unload	C Overflow	D Total Emptying	
ORCIO 500 OLD	500	111	98	450	3/4"	1" 1/4	1"	1"	279,22
ORCIO 1000 R OLD	960	140	116	450	3/4"	1" 1/4	1"	1"	429,27

 Overall dimensions tolerance ± 1.5%
 Capacity tolerance ±4.6%



B: Unload
D: Total Emptying



download the relevant data sheet

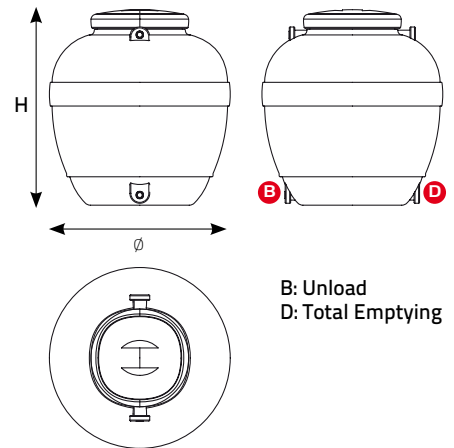


ANFORA TANK "ORCIOBELLO" R 1000 litres

Item	Capacity (litres)	Dimensions (cm)		Lid ø (mm)	Moulded fittings				€
		H	ø		A Load	B Unload	C Overflow	D Total Emptying	
ORCIO 1000 R	960	140	116	450	-	1" 1/4	-	1"	420,62



Model "F" with garland



B: Unload
D: Total Emptying

"ORCIOBELLO FESTONATO" ANFORA TANKS from 500 to 1000 litres

Item	Capacity (litres)	Dimensions (cm)		Lid ø (mm)	Moulded fittings				€
		H	ø		A Load	B Unload	C Overflow	D Total Emptying	
ORCIO 500 F	500	111	98	450	-	1" 1/4	-	1"	288,23
ORCIO 1000 R/F	960	140	116	450	-	1" 1/4	-	1"	435,75



Moulded fittings

Available colors
TA

The tank, when provided, is equipped with:

- N. 1 female closing cap
- N. 4 hygiene-saving caps
- No. 4 caps
- No. 4 Nipples
- No. 4 O-Rings



of the same diameter as the relevant moulded fittings if applicable.

Overall dimensions tolerance ± 1.5%
Capacity tolerance ±4.6%

A large, black, cylindrical underground tank is shown under construction in a deep trench. The tank is positioned horizontally and is surrounded by earth. In the foreground, a circular access opening is visible on the side of the tank, with a stack of white material (possibly insulation or sealant) placed on top of it. The background shows the continuation of the trench and another similar tank further away.










UNDERGROUND TANKS



**GENERAL TABLE ACCORDING TO CAPACITY
VERTICAL TANKS "INPA, INPB, INSV"**



"INPA" and "INPB" ONDA TANKS from 500 to 1000 litres

Item (Food)	Capacity (litres)	Dimensions (cm)		Lid ø (mm)	Vent	Matched Turret	€
		H	ø				
INPA 500	500	116	80	420		CL 420	300,25
INPB 1000	1000	108	120	420		CL 420	504,86
INSV 1500	1360	150	117	420		CL 420	700,81
INSV 2000	2265	182	136	420		CL 420	855,69
INSV 3000	3107	219	146	420		CL 420	1.354,85
INSV 4000	4200	224	165	420		CL 420	1.651,33
INSV 5000	5110	229	184	420		CL 420	1.996,62
INSV 6000	5983	257	185	420		CL 420	2.552,07
INSV 10000	10000	260	238	550	 *	CL 550 F	4.329,50






download the relevant data sheet



* Setup by the customer.

Fittings and accessories on request on page. 73

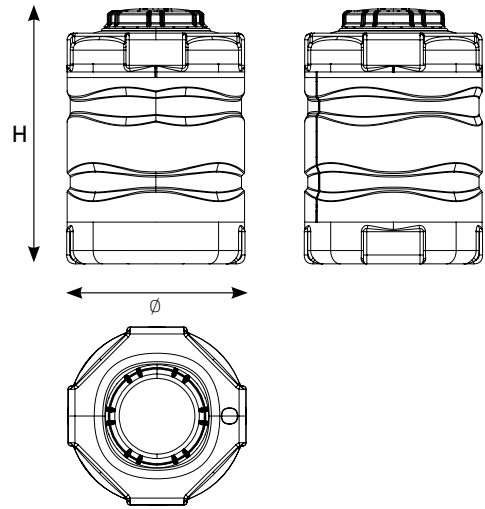
- Legend:
-  Breather Fitting 1" 1/4 (Male)
 -  Predisposition for 1" vent fitting (female)
 -  2" PE box connection (male)

Overall dimensions tolerance ± 1.5%
Capacity tolerance ±4.6%


Fittings and accessories on request on page. 73



Triple Layer



"INPA" ONDA TANK 500 litres

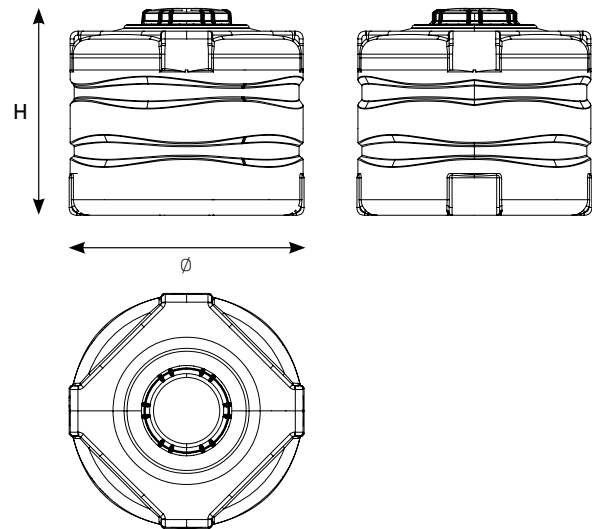
Item (Food)	Capacity (litres)	Dimensions (cm)		Lid ø (mm)	Vent	Matched Turret	€
		H	ø				
INPA 500	500	116	80	420		CL 420	300,25




download the relevant data sheet




Triple Layer



"INPB" WAVE TANK 1000 litres

Item (Food)	Capacity (litres)	Dimensions (cm)		Lid ø (mm)	Vent	Matched Turret	€
		H	ø				
INPB 1000	1000	108	120	420		CL 420	504,86

Standard color: 

For the containment of diesel fuel, see page 254

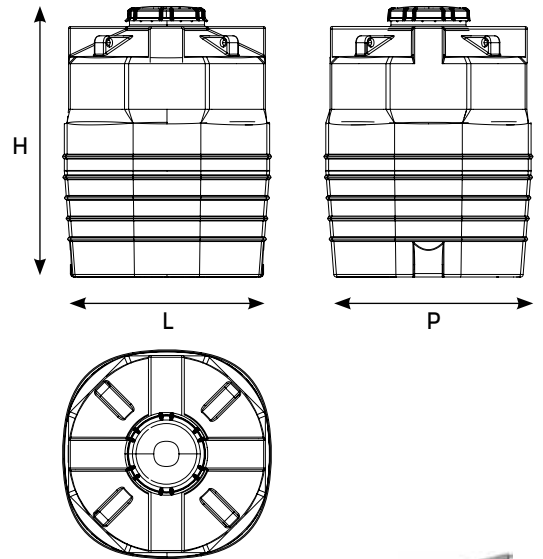
Legend:  Breather Fitting 1" 1/4 (Male)

Overall dimensions tolerance ± 1.5%
Capacity tolerance ±4.6%








Fittings and accessories on request on page. 73



INSV 1500-6000



VERTICAL BUNKER TANK "INSV" from 1500 to 10000 litres

Item (Food)	Capacity (litres)	Dimensions (cm)			Lid ø (mm)	Vent	Matched Turret	€
		H	L	P				
INSV 1500	1360	150	117	117	420		CL 420	700,81
INSV 2000	2265	182	136	136	420		CL 420	855,69
INSV 3000	3107	219	146	146	420		CL 420	1.354,85
INSV 4000	4200	224	165	165	420		CL 420	1.651,33
INSV 5000	5110	229	184	184	420		CL 420	1.996,62
INSV 6000	5983	257	185	185	420		CL 420	2.552,07
INSV 10000	10000	260	238	238	550	 *	CL 550 F	4.329,50



download the relevant data sheet



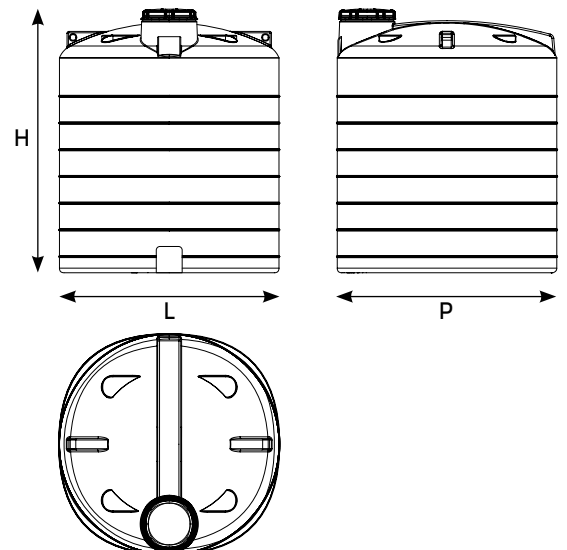
Standard color: **BL**
For the containment of diesel fuel, see page 254



INSV 10000, manhole placed in LATERAL position.

* Setup by the customer.



INSV 10000



Legend:  Predisposition for 1" vent fitting (female)  2" PE box connection (male)

Overall dimensions tolerance ± 1.5%
Capacity tolerance ±4.6%

GENERAL TABLE IN ORDER OF CAPACITY HORIZONTAL BUNKER TANKS "INCO, INCON, CIV and NER"



INCO 1000










INCON 2000/3000/10000



NER



CIV 5000

Item (Food)	Capacity (litres)	Dimensions (cm)			Lid ø (mm)	Vent	Matched Turret	€
		H	L	P				
INCO 1000	1000	91	81	203	320		CL 320	724,93
INCON 2000	1950	144	136	155	320		CL 320	1.140,92
INCON 3000*	2970	193	160	185	420		CL 420	1.591,29
NEW CIV 5000	5000	167	149	298	550		CL 550	2.119,68
INCON 7500**	7150	217	189	318	550		CL 550	4.174,87
NEW INCON 10000**	10400	255	225	310	550		CL 550	4.923,98
NER 10000	9200	275	229	270	550		/	4.484,13

*Equipped with CL 420 turret **Equipped with CL 550 turret



download the relevant data sheet



Standard color: **BL**

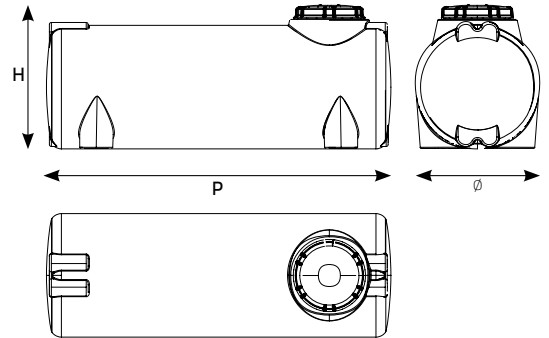
For the containment of diesel fuel, see page 254

Fittings and accessories on request on page. 73


Legend:  Predisposition for 1" vent fitting (female)  Breather Fitting 1" 1/4 (Male)

Overall dimensions tolerance ± 1.5%
Capacity tolerance ± 4.6%

Fittings and accessories on request on page. 73

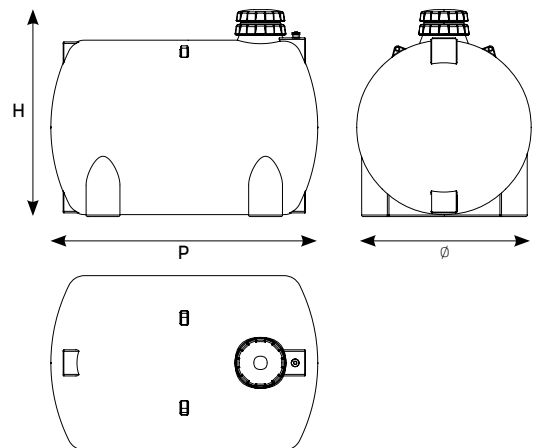


HORIZONTAL BUNKER TANK "INCO"





Item (Food)	Capacity (litres)	Dimensions (cm)			Lid ø (mm)	Vent	Matched Turret	€
		H	L	P				
INCO 1000	1000	91	81	203	320		CL 320	724,93



INCON 7500



HORIZONTAL BUNKER TANKS "INCON" from 2000 to 7500 litres

Item (Food)	Capacity (litres)	Dimensions (cm)			Lid ø (mm)	Vent	Matched Turret	€
		H	L	P				
INCON 2000	1950	144	136	155	320		CL 320	1.140,92
INCON 3000*	2970	193	160	185	420		CL 420	1.591,29
INCON 7500**	7150	217	189	318	550		CL 550	4.174,87
NEW INCON 10000**	10400	255	225	310	550		CL 550	4.923,98

*Equipped with CL 420 turret **Equipped with CL 550 turret



download the relevant data sheet



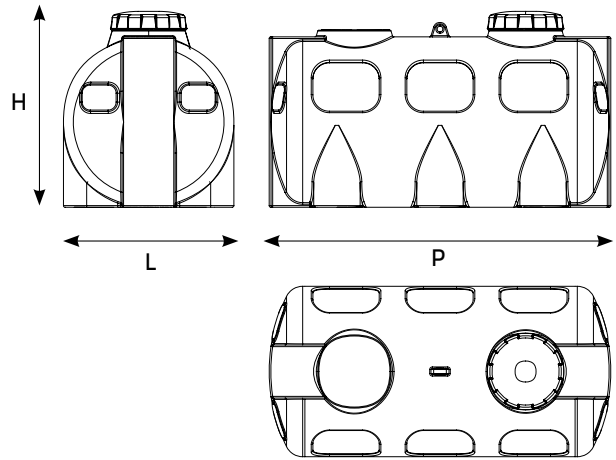
Standard color: **BL**
For the containment of diesel fuel, see page 254

Legend:  Predisposition for 1" vent fitting (female)  Breather Fitting 1" 1/4 (Male)

Overall dimensions tolerance ± 1.5%
Capacity tolerance ± 4.6%

NEW

Fittings and accessories on request on page. 73

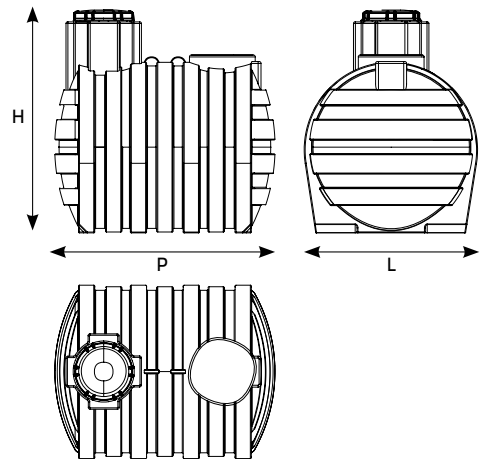


HORIZONTAL TANK "CIV" 5000 litres

Item (Food)	Capacity (litres)	Dimensions (cm)			Lid ø (mm)	Vent	Matched Turret	€
		H	L	P				
CIV 5000	5000	167	149	298	550		CL 550	2.119,68



download the relevant data sheet



HORIZONTAL TANK "NER" 10000 litres

Item (Food)	Capacity (litres)	Dimensions (cm)			Lid ø (mm)	Vent	Matched Turret
		H	L	P			
NER 10000	9200	275	229	270	550		4.484,13

Standard color: **BL**
For the containment of diesel fuel, see page 254

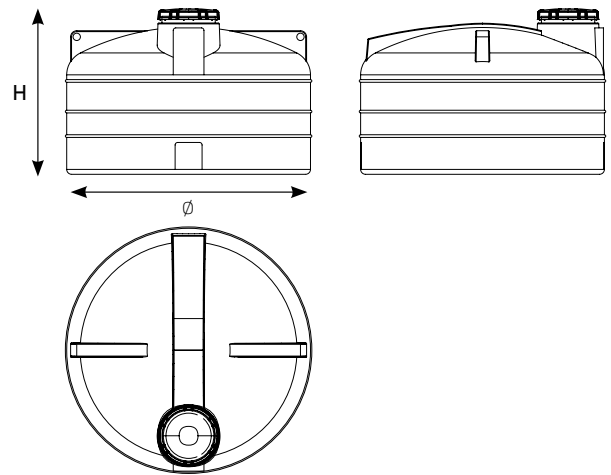
Legend: Breather Fitting 1" 1/4 (Male)




Overall dimensions tolerance ± 1.5%
Capacity tolerance ± 4.6%

**GENERAL TABLE ACCORDING TO CAPACITY
"INPAN" PANETTONE TANKS**

NEW

**Tanks
for shallower
excavations**



Item (Food)	Capacity (litres)	Dimensions (cm)		Lid Ø (mm)	Vent	€
		H	Ø			
INPAN 2000	2050	139	157	420		1.140,92
INPAN 3000	3050	128	194	420		1.591,29
INPAN 5000	4950	142	238	420		1.977,94



download the
relevant data sheet



Standard color: **BL**
For the containment of diesel fuel, see page 254

Fittings and accessories on request on page. 73

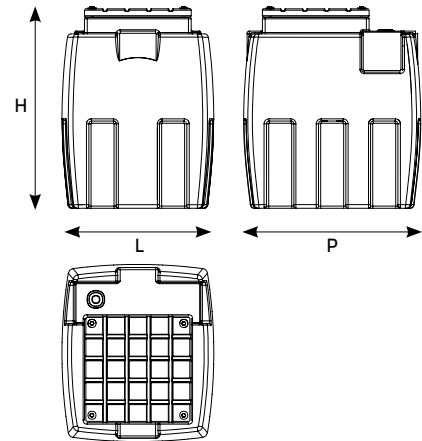
Legend:  Breather Fitting 1" 1/4 (Male)

Overall dimensions tolerance ± 1.5%
Capacity tolerance ± 4.6%

Fittings and accessories on request on page. 73

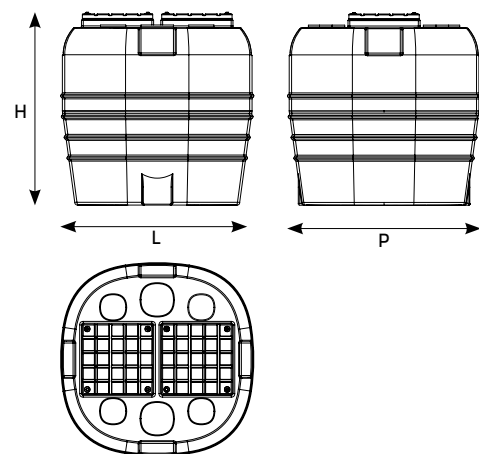
Ideal lifting station tank to be set up easily, equipped with one or two square manhole covers based on the dimensions of the model.

Standard color: **BL**
For the containment of diesel fuel, see page 254



TANKS FOR "NSDS" LIFTING STATION from 100 to 200 litres

Item	Capacity (litres)	Dimensions (cm)			Manhole cover with M10 stop pins (cm)	€
		H	L	P		
NSDS 100	100	58	45	53	30x30	180,89
NSDS 200	200	70	55	65	35x35	306,89



800 liter "NSDS" LIFTING STATION TANK


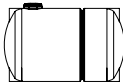
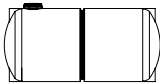
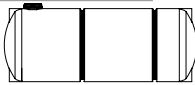







Item	Capacity (litres)	Dimensions (cm)			Manhole cover with M10 stop pins (cm)	€
		H	L	P		
NSDS 800	830	103	107	107	2x (35x35)	625,92

Overall dimensions tolerance ± 1.5%
Capacity tolerance ± 4.6%

HORIZONTAL TANKS

XXLI



2 modules 10.000 lt	
3 modules 15.000 lt	
3 modules 20.000 lt	
4 modules 25.000 lt	
4 modules 30.000 lt	
5 modules 35.000 lt	
5 modules 40.000 lt	
6 modules 45.000 lt	
6 modules 50.000 lt	
7 modules 55.000 lt	
7 modules 60.000 lt	

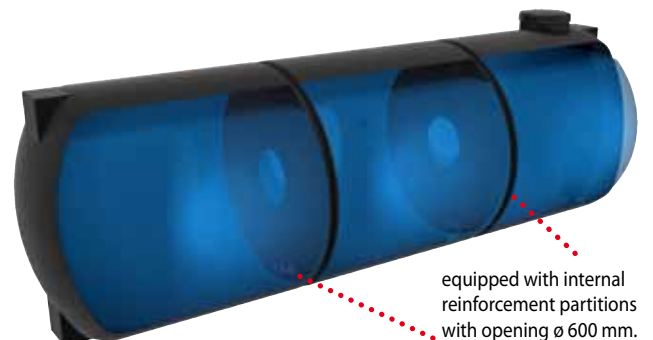
The **XXLI** tanks consist of monolithic polyethylene modules projected and dimensioned with the help of F.E.M analysis to guarantee the requested resistance, either to the hydraulic internal pressures or to the static ones in the ground. Linear polyethylene (PE) is a raw material that presents the best characteristics in terms of food use, resistance to the organic and inorganic chemical agents.

The **XXLI** are modular underground tanks whose capacity varies from a minimum of 10.000 litres to a maximum of 60.000 litres.



The **XXLI** large volume tanks were created to meet the needs of water collection and accumulation for the most diverse needs such as:

- Water storage for civil use;
- Water storage for industrial use;
- Creation of reserves for fire prevention systems;
- Rainwater collection;
- Service tanks in water and wastewater treatment systems.



HORIZONTAL TANKS



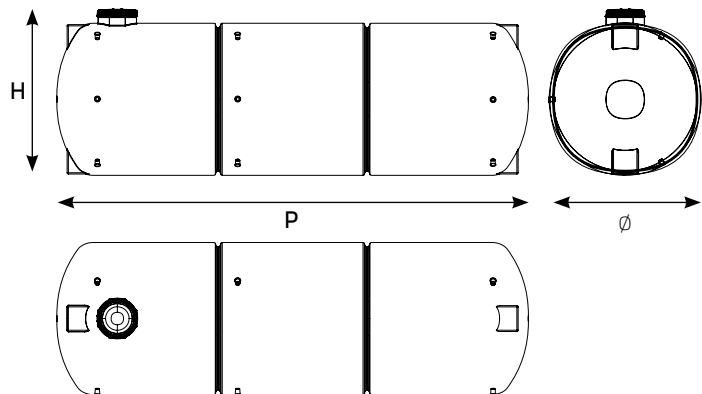
Standard color: **BL**
For the containment of diesel fuel, see page 254

Fittings and accessories on request on page. 73

ADDITIONAL LIDS



(CodeTRLM 550 KIT) Upon request it is possible to set up the XXLI tanks with more than one manhole cover (in any case no more than one per component module).



LARGE VOLUME UNDERGROUND TANK "XXLI" from 10,000 to 60,000 litres

Item	Capacity (litres)	Vent*	Dimensions (cm)			Lid (mm)	Matched Turret	€
			H	Ø	P			
XXLI 10000	10000		255	238	275	550	CL 550 F	4.923,98
XXLI 15000	15000		255	238	390	550	CL 550 F	7.656,20
XXLI 20000	20000		255	238	508	550	CL 550 F	10.202,43
XXLI 25000	25000		255	238	627	550	CL 550 F	12.825,91
XXLI 30000	30000		255	238	743	550	CL 550 F	14.711,90
XXLI 35000	35000		255	238	862	550	CL 550 F	18.537,00
XXLI 40000	40000		255	238	979	550	CL 550 F	20.251,38
XXLI 45000	45000		255	238	1098	550	CL 550 F	24.307,67
XXLI 50000	50000		255	238	1215	550	CL 550 F	27.069,90
XXLI 55000	55000		255	238	1334	550	CL 550 F	29.624,97
XXLI 60000	60000		255	238	1450	550	CL 550 F	**a richiesta



download the relevant data sheet



* Setup by the customer.
**Request a quote based on destination

Legend: 2" PE box connection (male)

Overall dimensions tolerance ± 1.5%
Capacity tolerance ±4.6%



The tanks of the **INDUSTRIA** line are made with neutral colored polymers with additives to resist UV rays. Their particular color and thickness make them suitable for containing chemical products. If used to contain water (even drinkable) or liquid foods, the tank must be installed away from sunlight, as the neutral color could allow the formation of algae. (For these uses we recommend our line of outdoor tanks).


They are 100% recyclable, guaranteed to be cadmium-free and intended for above-ground installation. Below is an indicative table of the chemical agents that can be contained in **INDUSTRY** tanks:

Vinegar	Ammonium nitrate (sat. sol.)	Hydroquinone	Copper sulfate (sat.)
Acetic acid (up to 10%)	Ammonium persulfate (sat. sol.)	Hydrogen	Resorcinol
Arsenic acid (all conc.)	Ammonium sulfate (sat. sol.)	Ink	Brine
Ascorbic acid (10%)	Carbon dioxide	Milk	Diazo salts
Benzoic acid (all conc.)	Nitrated silver (sol.)	Photographic developing liquids	Cider
Boric acid (all conc.)	Air	Lye (10%)	Sodium acetate
Hydrobromic acid (50%)	Barium carbonate (sat. sol.)	Yeast	Sodium benzoate (35%)
Carbonic acid	Barium chloride (sat. sol.)	Magnesium carbonate	Sodium bicarbonate
Cyanitic acid	Barium Hydrate	Magnesium chloride	Sodium carbonate
Citric acid (sat.)	Barium sulfate (sat. sol.)	Magnesium hydroxide	Sodium bisulfate
Hydrochloric acid (dry gas)	Barium sulfide (sat. sol.)	Magnesium nitrate	Sodium bisulfite
Hydrochloric acid (all conc.)	Beer	Magnesium sulfate	Sodium borate
Diglycolic acid	Bismuth carbonate (sat. sol.)	Mercury	Sodium bromide
Fluoboric acid	Borax	Nickel chloride	Sodium carbonate
Hydrofluoric acid (10%)	Boron trifluoride	Nickel nitrate	Sodium cyanide
Fluosidic acid (30%)	Butanediol (100%)	Nickel sulfate	Sodium chlorate
Formic acid (all conc.)	Butanediol (10%)	Nicotine (diluted)	Sodium chloride
Gallic acid	Butanediol (50%)	n-Octane	Sodium ferri/ferricyanide
Glycolic acid	Coffee	Cotton oil	Sodium fluoride
Hypochlorous acid	Calcium bisulfite	Corn oil	Sodium hydroxide
Nitric acid (up to 30%)	Calcium carbonate (sat. sol.)	Castor oil (all conc.)	Sodium hypochlorite
Oxalic acid	Calcium chlorate (sat. sol.)	Carbon monoxide (all conc.)	Sodium nitrate
Salicylic acid	Calcium chloride (sat. sol.)	Lead acetate	Sodium sulfate
Selenic acid	Calcium Hydrate (all conc.)	Lead nitrate	Sodium sulfite
Sulphidic acid	Calcium hypochlorite	Pyridine	Sodium sulfide
Sulfuric acid (up to 50%)	Calcium nitrate (50%)	Fruit pulp	Soap Solution (all conc.)
Sulfurous acid	Calcium oxide (sat. sol.)	Potassium bicarbonate	Photography solutions
Stearic acid (100%)	Calcium sulphate	Potassium bromide	Silver plating solutions
Tannic acid	Cola concentrates	Potassium carbonate	Cadmium plating solutions
Chlorine water (2% sat. sol.)	Dextrin	Potassium chlorate	Nickel plating solutions
Sea water	Dextrose	Potassium chlorite	Gold plating solutions
Wetting agents	Dextrose (sat. aqueous sol.)	Potassium chloride	Brass plating solutions
Amyl alcohol	Synthetic detergents	Potassium chromate (40%)	Lead plating solutions
Butyl alcohol	Diethylene glycol	Potassium dichromate (40%)	Copper plating solutions
Coconut oil alcohol	Emulsified products for photography	Potassium hexacyanoferrate II	Tin plating solutions
Ethyl alcohol	Hexacolorobenzene	Potassium esacianoferrate III	Zinc plating solutions
Ethyl alcohol (35%)	Tertiary hexonol	Potassium fluoride	Tin chloride (ico)
Methyl alcohol (100%)	Iron chloride (ic)	Potassium hydroxide (conc.)	Tin chloride (ose)
Plipalgilic alcohol	Pheno chloride (ose)	Potassium nitrate	Urea (30%)
Propyl alcohol	Iron nitrate (ic)	Potassium perchlorate (10%)	Vanilla
Allume (all types)	Ferrous nitrate (ose)	Potassium permanganate (20%)	Wines
Aluminum chloride (all conc.)	Disodium phosphate	Potassium persulfate	Whiskey
Aluminum fluoride (all conc.)	Sodium phosphate (tri)	Potassium sulfate (conc.)	Zinc bromide
Aluminum sulphate (all conc.)	Fructose	Potassium sulfite (conc.)	Zinc carbonate
Starch (saturated solution)	Diesel	Potassium sulfide (conc.)	Zinc chloride
Anmonia (100% gas)	Glycerine	Propylene glycol	Zinc oxide
Ammonium carbonate	Glycol	Copper cyanide (sat.)	Zinc sulfate
Ammonium chloride (sat. sol.)	Triethylene glycol	Copper chloride (sat.)	Zinc stearate
Ammonium fluoride (sat. sol.)	Ethylene glycol	Copper fluoride (2%)	
Ammonium Hydrate (up to 30%)	Glucose	Copper nitrate (sat.)	

The data reported in this table are purely indicative as the resistance of the products to chemical agents is influenced by their shape and conditions of use. Therefore we recommend you to contact our technical office in advance.

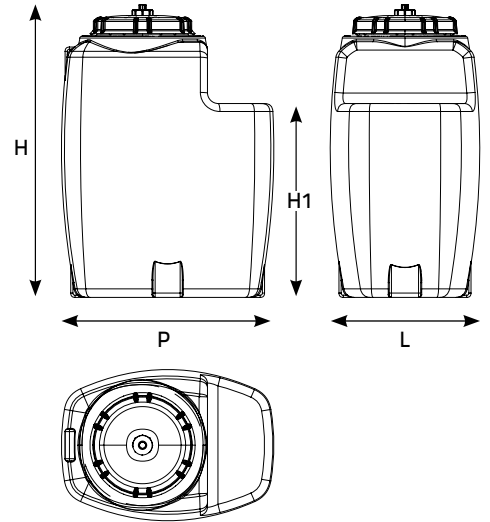


Fittings and accessories on request on page. 72

Standard color: 



Application example, pump not supplied. Max weight of accessories 20 kg.

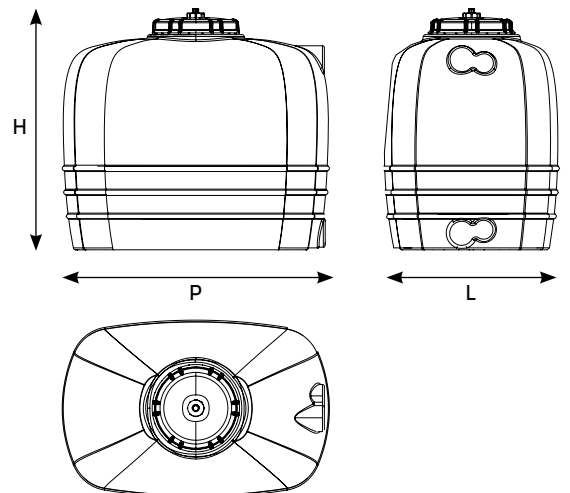


TANK FOR SELF-PRIMING PUMP "SPPI" from 300 to 800 litres



Item	Capacity H (litres)	Capacity H1 (litres)	Dimensions (cm)				Lid ø (mm)	Vent	€
			H	H1	L	P			
SPPI 300	376	265	96	57	65	93	420		380,00
SPPI 500	572	458	131	89	69	99	420		608,00
SPPI 800	900	780	170	130	69	129	420		1.102,00




download the relevant data sheet



SQUARE TANK "CQ" from 200 to 300 litres

Item	Capacity (litres)	Dimensions (cm)			Lid ø (mm)	Vent	€
		H	L	P			
CQ 200	200	77	49	84	320		275,52
CQ 300	290	75	66	88	320		346,08

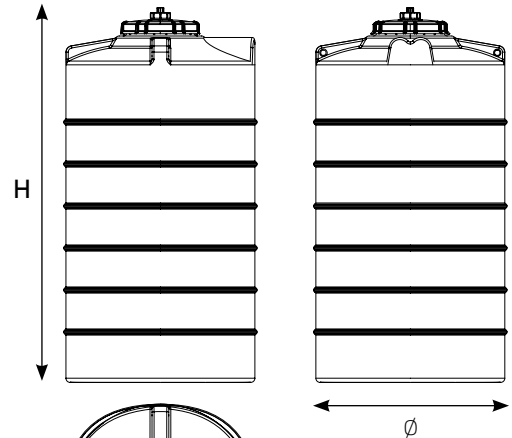
Legend:  Industrial valve on lid









Overall dimensions tolerance ± 1.5%
Capacity tolerance ±4.6%

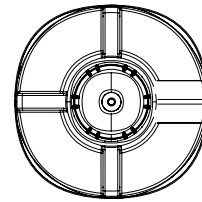


Standard color: (NE)

Fittings and accessories on request on page. 72


CVE 100/4000
VERTICAL TANKS "CVE" from 100 to 4000 litres

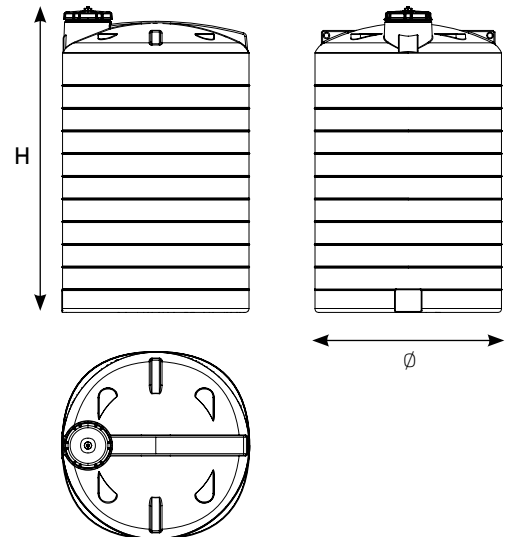
Item	Capacity (litres)	Dimensions (cm)		Lid ø (mm)	Vent	€
		H	ø			
CVE 100	100	72	48	320		129,10
CVE 200	200	90	60	320		152,88
CVE 500	500	153	70	320		382,21
CVE 1000	1000	178	92	320		573,31
CVE 1500	1500	187	110	420		764,42
CVE 2000	2000	187	127	420		1.171,57
CVE 3000	3000	207	147	420		1.607,27
CVE 4000	4000	211	169	420		2.340,69






download the relevant data sheet



Note: CVE vertical tanks with a volume of up to 4,000 liters are equipped with a CENTRAL manhole. In volumes from 5,000 liters onwards the Lids are arranged in a LATERAL position.


CVE 5000/10000

VERTICAL TANKS "CVE" from 5000 to 10000 liters

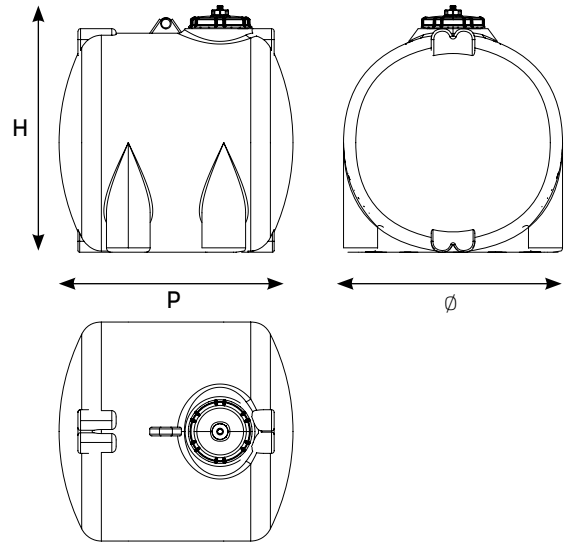
Item	Capacity (litres)	Dimensions (cm)		Lid ø (mm)	Vent	€
		H	ø			
CVE 5000	5000	194	203	420		2.862,12
CVE 10000	10000	265	238	550		6.238,83

 Legend:  Industrial valve on lid






 Overall dimensions tolerance ± 1.5%
 Capacity tolerance ± 4.6%

Standard color: (NE)

Fittings and accessories on request on page. 72

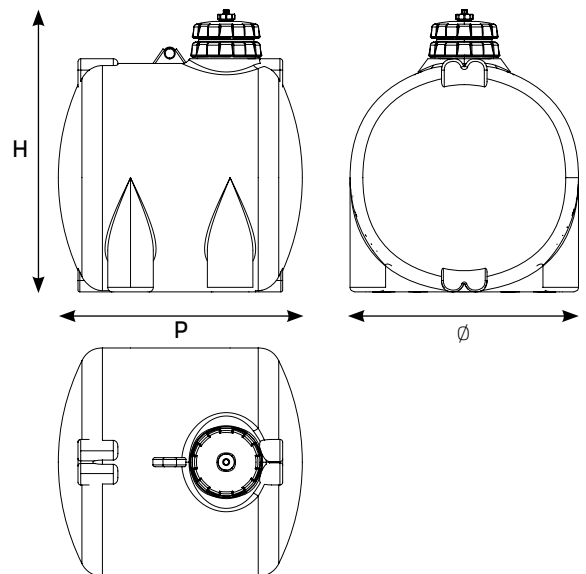


HORIZONTAL TANK "COR" from 500 to 5000 litres


Item	Capacity (litres)	Dimensions (cm)			Lid ø (mm)	Vent	€
		H	L	P			
COR 500	500	99	87	98	320		492,59
COR 1000	1050	120	106	127	320		707,24
COR 2000	1950	149	136	155	320		1.360,77
COR 3000	2970	171	160	185	420		2.263,84
NEW COR 5000	4950	191	178	232	420		3.452,35




download the relevant data sheet




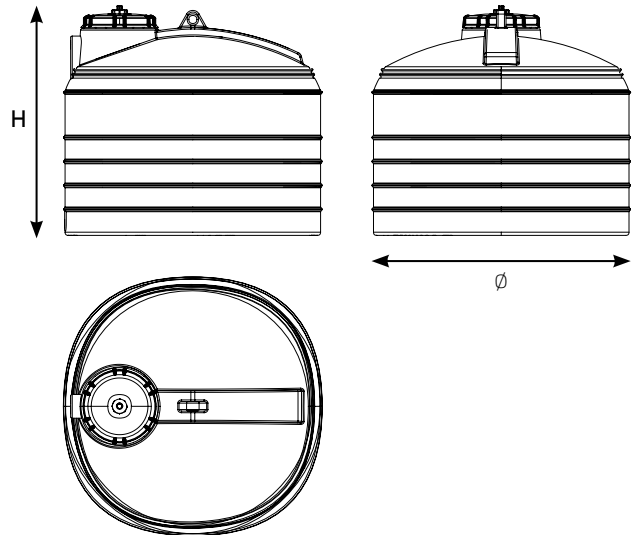
HORIZONTAL TANK "COR" 10000 litres





Item	Capacity (litres)	Dimensions (cm)			Lid ø (mm)	Vent	€
		H	L	P			
COR 10000 *	10400	235	225	310	550		7.299,24

* Equipped with CL 550 turret

Legend:  Industrial valve on lid


Overall dimensions tolerance ± 1.5%
Capacity tolerance ±4.6%

Standard color: 
Fittings and accessories on request on page. 72

SERBATOIO PANETTONE "CCI" da 2000 a 7500 litri

Item	Capacity (litres)	Dimensions (cm)		Lid Ø (mm)	Vent	€
		H	Ø			
CCI 2000	2050	144	157	420		1.163,10
CCI 3000	3050	133	194	420		1.344,12
CCI 5000	4950	147	238	420		2.719,07
CCI 7500	7550	203	238	420		3.814,85



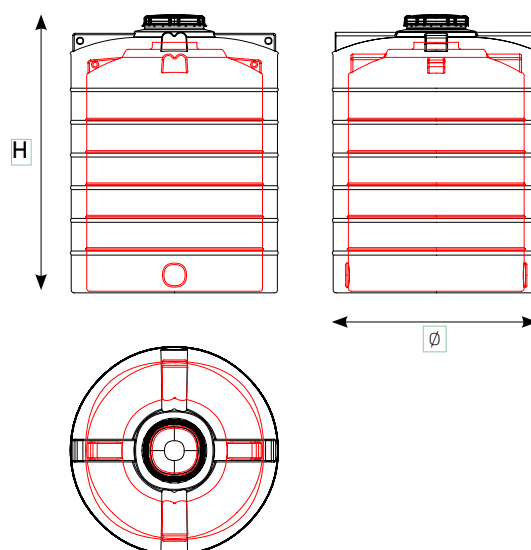
download the relevant data sheet


 Legend:  Industrial valve on lid







 Overall dimensions tolerance $\pm 1.5\%$
 Capacity tolerance $\pm 4.6\%$


DOUBLE CHAMBER OUTDOOR TANKS

Tanks made with neutral-coloured polymers, suitable for containing chemical products, characterized by a safety chamber, which guarantees the containment of any accidental spills.



VERTICAL DOUBLE CHAMBER "SVDC" TANKS from 100 to 5000 litres

Item	Capacity Serb. internal (litres)	Dimensions (cm) External tank		Lid Internal tank ø (mm)	Lid external tank ø (mm)	Vent	€
		H	ø				
SVDC 100	100	85	60	320	320		702,95
SVDC 200	200	125	70	320	320		980,06
SVDC 1000	1000	182	110	320	420		1.782,69
SVDC 2000	2000	202	147	420	420		3.223,79
SVDC 3000	3000	206	169	420	420		4.392,91
SVDC 5000	5000	233	238	420	550		9.545,90


Standard color: 



download the relevant data sheet



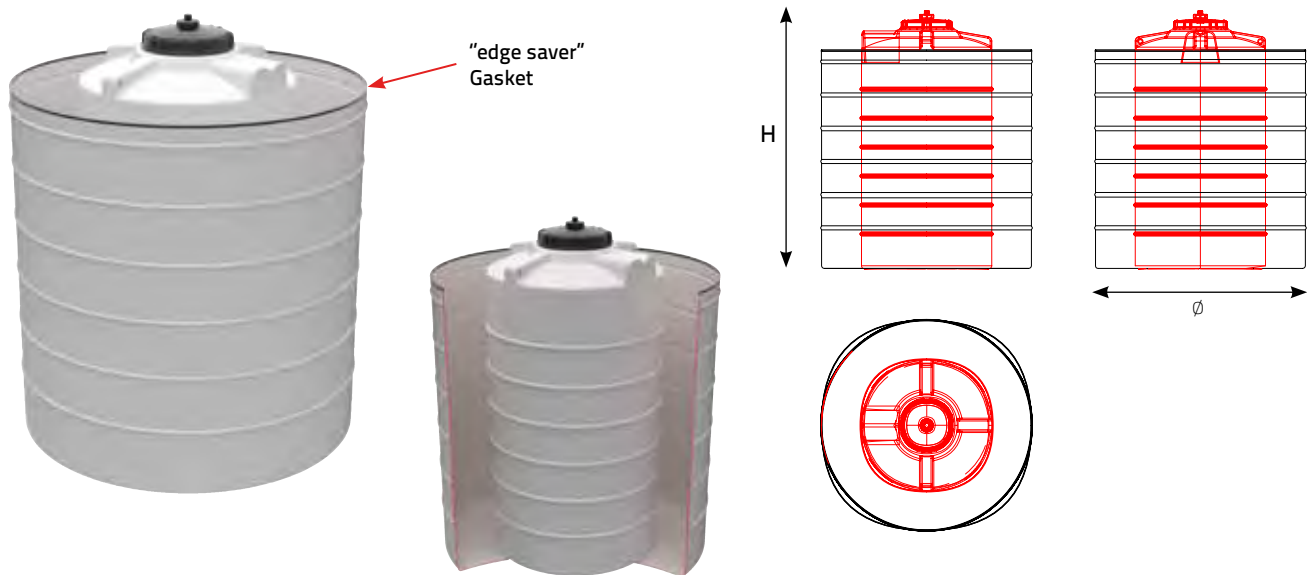
Fittings and accessories on request on page. 72

Legend:  Industrial valve on lid







Overall dimensions tolerance ± 1.5%
Capacity tolerance ±4.6%

INDOOR DOUBLE CHAMBER TANKS

Tanks made with neutral-coloured polymers, suitable for containing chemical products, characterized by a safety chamber, which guarantees the containment of any accidental spills. The model has an open-air external chamber and therefore is to be necessarily installed inside.




VERTICAL DOUBLE CHAMBER OPEN TANKS "SVDCA" from 100 to 5000 litres

Item	Capacity Serb. internal (litres)	Dimensions (cm)		Lid Ø (mm)	Vent	€
		H int. tank	Ø ext. tank			
SVDCA 100	100	72	60	320		332,43
SVDCA 200	200	90	70	320		614,46
SVDCA 1000	1000	178	110	320		1.436,69
SVDCA 2000	2000	182	147	420		2.925,96
SVDCA 3000	3000	207	169	420		4.105,86
SVDCA 5000	5000	194	238	420		9.307,70



download the
relevant data sheet



Standard color: 

Fittings and accessories on request on page. 72

Legend:  Industrial valve on lid

Overall dimensions tolerance ± 1.5%
Capacity tolerance ±4.6%

PE 100 PN 16 connection with flange (Nominal diameters)

Item	Description	€
CA DN 63 I	Flanged Connection in PE100 PN16 DN63 FLAT AREA	505,84
CA DN 90 I	Flanged Connection in PE100 PN16 DN90 FLAT AREA	505,84
CA DN 110 I	Flanged Connection in PE100 PN16 DN110 FLAT AREA	505,84
CA DN63 ZNP I	Flanged Connection in PE100 PN16 DN63 NON-FLAT AREA	660,04
CA DN90 ZNP I	Flanged Connection in PE100 PN16 DN90 NON-FLAT AREA	660,04
CA DN110 ZNP I	Flanged Connection in PE100 PN16 DN110 NON-FLAT AREA	660,04



PE 100 PN 16 pipe (Nominal diameters)

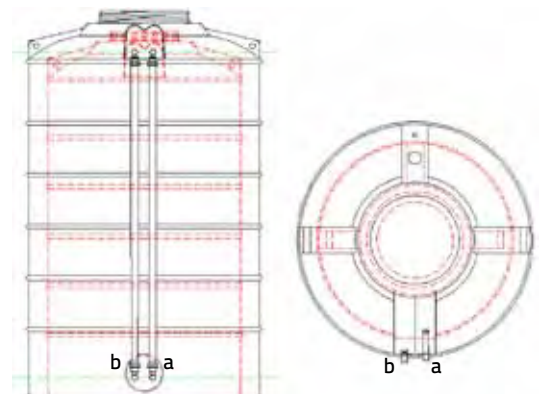


Item	Description	€
TU DN63 ZP I	PE100 PN16 DN63 pipe on FLAT AREA	376,40
TU DN90 ZP I	PE100 PN16 DN90 pipe on FLAT AREA	376,40
TU DN110 ZP I	PE100 PN16 DN110 pipe on FLAT AREA	376,40
TU DN125 ZP I	PE100 PN16 DN125 pipe on FLAT AREA	376,40
TU DN160 ZP I	PE100 PN16 DN160 pipe on FLAT AREA	376,40
TU DN200 ZP I	PE100 PN16 DN200 pipe on FLAT AREA	376,40
TU DN63 ZNP I	PE100 PN16 DN63 pipe on NON-FLAT AREA	505,84
TU DN90 ZNP I	PE100 PN16 DN90 pipe on NON-FLAT AREA	505,84
TU DN110 ZNP I	PE100 PN16 DN110 pipe on NON-FLAT AREA	505,84
TU DN125 ZNP I	PE100 PN16 DN125 pipe on NON-FLAT AREA	505,84
TU DN160 ZNP I	PE100 PN16 DN160 pipe on NON-FLAT AREA	505,84
TU DN200 ZNP I	PE100 PN16 DN200 pipe on NON-FLAT AREA	505,84

(A) Level kit for double chamber tank

It allows you to view the level of liquid in the internal tank.

Item	Description	€
KIT LIV SVDC	Double chamber tank level kit	477,55



a) KIT LIV SVDC internal tank
b) KIT CONT SVDC gap tank

NEW

(B) Gap Control Kit for double chamber tank

Allows you to view any spills in the external tank

Item	Description	€
KIT CONT SVDC	Double chamber tank gap control kit	477,55

Telcom tanks can be set up to meet specific customer requests which must necessarily be agreed with our Technical Office.



PE 100 PN 16 connection with flange (Nominal diameters)

Item	Description	€
CARTELLA DN63	Flanged Connection in PE100 PN16 DN63 FLAT AREA	419,44
CARTELLA DN90	Flanged Connection in PE100 PN16 DN90 FLAT AREA	419,44
CARTELLA DN110	Flanged Connection in PE100 PN16 DN110 FLAT AREA	419,44
CART DN63 ZNP	Flanged Connection in PE100 PN16 DN63 NON-FLAT AREA	573,64
CART DN90 ZNP	Flanged Connection in PE100 PN16 DN90 NON-FLAT AREA	573,64
CART DN110 ZNP	Flanged Connection in PE100 PN16 DN110 NON-FLAT AREA	573,64

(for different DNs please contact our Technical Office)

Not applicable to the following tanks:

NSV from 100 to 5000 litres, PAN from 300 to 3000 litres, for PAN 5000 and 7500 up to max DN90, PN 200, ONDA Series.

Alternatively, appropriate 1" 1/4" and 2" M brass box fittings can be mounted



PE 100 PN 16 pipe (Nominal diameters)

Item	Description	€
TUBO DN63 ZP	Flanged Connection in PE100 PN16 DN63 FLAT AREA	289,89
TUBO DN90 ZP	Flanged Connection in PE100 PN16 DN90 FLAT AREA	289,89
TUBO DN110 ZP	Flanged Connection in PE100 PN16 DN110 FLAT AREA	289,89
TUBO DN125 ZP	Flanged Connection in PE100 PN16 DN125 FLAT AREA	289,89
TUBO DN160 ZP	Flanged Connection in PE100 PN16 DN160 FLAT AREA	289,89
TUBO DN200 ZP	Flanged Connection in PE100 PN16 DN200 FLAT AREA	289,89
TUBO DN63 ZNP	Flanged Connection in PE100 PN16 DN63 NON FLAT AREA	419,44
TUBO DN90 ZNP	Flanged Connection in PE100 PN16 DN90 NON FLAT AREA	419,44
TUBO DN110 ZNP	Flanged Connection in PE100 PN16 DN110 NON FLAT AREA	419,44
TUBO DN125 ZNP	Flanged Connection in PE100 PN16 DN125 NON FLAT AREA	419,44
TUBO DN160 ZNP	Flanged Connection in PE100 PN16 DN160 NON FLAT AREA	419,44
TUBO DN200 ZNP	Flanged Connection in PE100 PN16 DN200 NON FLAT AREA	419,44

Not applicable to the following tanks:

NSV from 100 to 5000 litres, PAN from 300 to 3000 litres, for PAN 5000 and 7500 up to max DN90, PN 200, ONDA Series

Telcom tanks can be set up to meet specific customer requests which must necessarily be agreed with our Technical Office.

NEW

PE/Brass TRANSITION FITTING (male)

Item	Description	€
TRA M 1" 1/4 ZP	1" 1/4 male transition fitting - FLAT AREA	88,93
TRA M 2" ZP	2" male transition fitting - FLAT AREA	111,05
TRA M 3" ZP	3" male transition fitting - FLAT AREA	193,61
TRA M 4" ZP	4" male transition fitting - FLAT AREA	280,11
TRA M 1" 1/4 ZNP	1" 1/4 male transition fitting - NON-FLAT AREA	217,04
TRA M 2" ZNP	2" male transition fitting - NON-FLAT AREA	239,16
TRA M 3" ZNP	3" male transition fitting - NON-FLAT AREA	321,71
TRA M 4" ZNP	4" male transition fitting - NON-FLAT AREA	408,22



PE part welded to the tank, brass part available to the installer.

Not applicable to the following tanks:
NSV from 100 to 5000 litres, PAN from 300 to 3000 litres, PN 200, ONDA series.

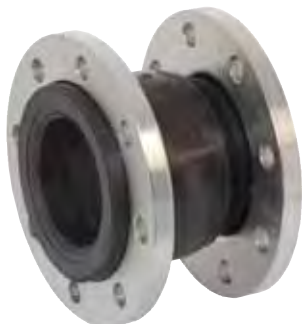
PE/Brass TRANSITION FITTING (female)

Item	Description	€
TRA F 1" 1/4 ZP	1" 1/4" female transition fitting - FLAT AREA	86,95
TRA F 2" ZP	2" female transition fitting - FLAT AREA	114,21
TRA F 3" ZP	3" female transition fitting - FLAT AREA	217,70
TRA F 4" ZP	4" female transition fitting - FLAT AREA	318,43
TRA F 1" 1/4 ZNP	1" 1/4 female transition fitting - NON-FLAT AREA	215,06
TRA F 2" ZNP	2" female transition fitting - NON-FLAT AREA	242,32
TRA F 3" ZNP	3" female transition fitting - NON-FLAT AREA	345,81
TRA F 4" ZNP	4" female transition fitting - NON-FLAT AREA	446,54



PE part welded to the tank, brass part available to the installer.

Not applicable to the following tanks:
NSV from 100 to 5000 litres, PAN from 300 to 3000 litres, PN 200, ONDA series.

NEW

FLANGED ELASTIC JOINT

Item	Description	€
GIUNTO EL. D63	Flanged elastic coupling PN 16 D 63	124,43
GIUNTO EL. D90	Flanged elastic coupling PN 16 D 90	175,78
GIUNTO EL. D110	Flanged elastic coupling PN 16 D 110	213,30

Assembly by the end user/client



Internal thread to the tank

2" BODY CONNECTION in PE 100

Item	Description	€
Raccordo cassone 2" in PE 100 *	2" box connection in PE 100	101,16

*Not applicable to the following tanks: from CON 300 to CON 3000


BRASS FITTING

Item	Description	€
Raccordo in ottone 1" 1/4	1" 1/4 brass box connection	59,29
Raccordo in ottone 2" *	2" brass box fitting	60,40

*Not applicable to the following tanks: from CON 300 to CON 3000

CL TURRETS

Item	Description	€
CL 140	Turret for lid \varnothing 140	54,00
CL 320	Turret for lid \varnothing 320	98,87
CL 420	Turret for lid \varnothing 420	73,39
CL 550 F	Turret for lid \varnothing 550	237,07

Code: CL 140 (for lid \varnothing 140 mm) - Without cap dimensions \varnothing 21.5 cm; H 40;
 Code: CL 320 (for lid \varnothing 320 mm) - With cap \varnothing 420 dimensions \varnothing 47 cm; H 40;
 Code: CL 420 (for lid \varnothing 420 mm) - Without cap dimensions \varnothing 47 cm; H 34;
 Code: CL 550 F (for lid \varnothing 550 mm) - Without cap dimensions \varnothing 68 cm; H 42;



CL 140



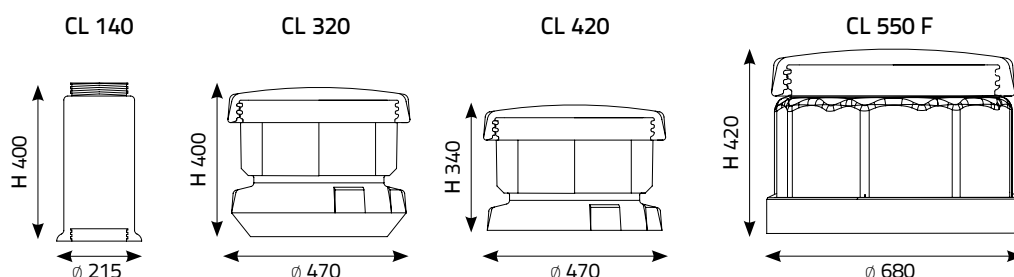
CL 320



CL 550 F



CL 420



SCREW COVER

Item	Description	€
F 220	Screw lid for manhole \varnothing 220	18,51
ITF 32	Screw lid for manhole \varnothing 320	22,22
ITF 42	Screw lid for manhole \varnothing 420	37,01
F 550	Screw lid for manhole \varnothing 550	108,55


GASKET
 Double lip seal

Item	Description	€
Guarn. Ø 100	Double lip seal Ø 100 mm	6,48
Guarn. Ø 125	Double lip seal Ø 125 mm	6,93
Guarn. Ø 160	Double lip seal Ø 160 mm	7,70


Additional MANHOLE

Item	Description	€
KIT TRLM 550	Additional manhole covers for NER, XXLI and XXLE series	237,07


HYDRAULIC REGULATOR WITH INSTANT CLOSING

(Floating)

size: 3/4 inch coupling

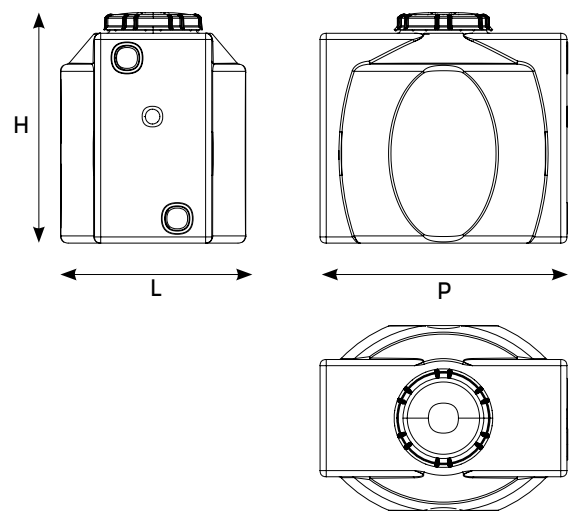
Item	Description	€
REGOLATORE 3/4"	Instant closing hydraulic regulator with 3/4" coupling	30,10

“Open” type expansion vessel for application in heating systems

The expansion tank allows the water that expands during heating to find free outlet without causing damage to the system. In fact, going from approximately 15°C to approximately 90°C, the volume of water increases by approximately 4% and the expansion vessel, with sufficient capacity, intervenes to compensate for this excess volume.

These systems, called open expansion vessel systems, are used in buildings with central heating. Here the expansion of the water is placed in communication with the atmosphere via a vent pipe and the volume is compensated in one or more tanks located at the highest point of the system, connected to the boiler via a pipe upstream of the circulation pump. The height of the expansion vessel consequently determines the hydrostatic head at the inlet of said pumps. The expansion vessel is connected to the aqueduct by a float valve to allow the replenishment of the water evaporated in the vessel itself or dispersed along the circuit. The minimum water level is determined by the float valve (system cold and off).

The maximum level corresponds to the overflow pipe connection level (system at maximum operating temperature). If the vessel is undersized, any change in temperature causes water to leak which must be replenished and therefore adequately treated.



“ESPA” EXPANSION TANK

Item	Capacity (litres)	Dimensions (cm)			Lid ø (mm)	Moulded fittings		€
		H	L	P		Loading/Unloading (threaded)	Preparation for FLOATING (not threaded)	
ESPA 30 R	32	38	30	40	140	3/4"	1/2"	52,34



Overall dimensions tolerance ± 1.5%
Capacity tolerance ±4.6%

GRAY WATER COLLECTION

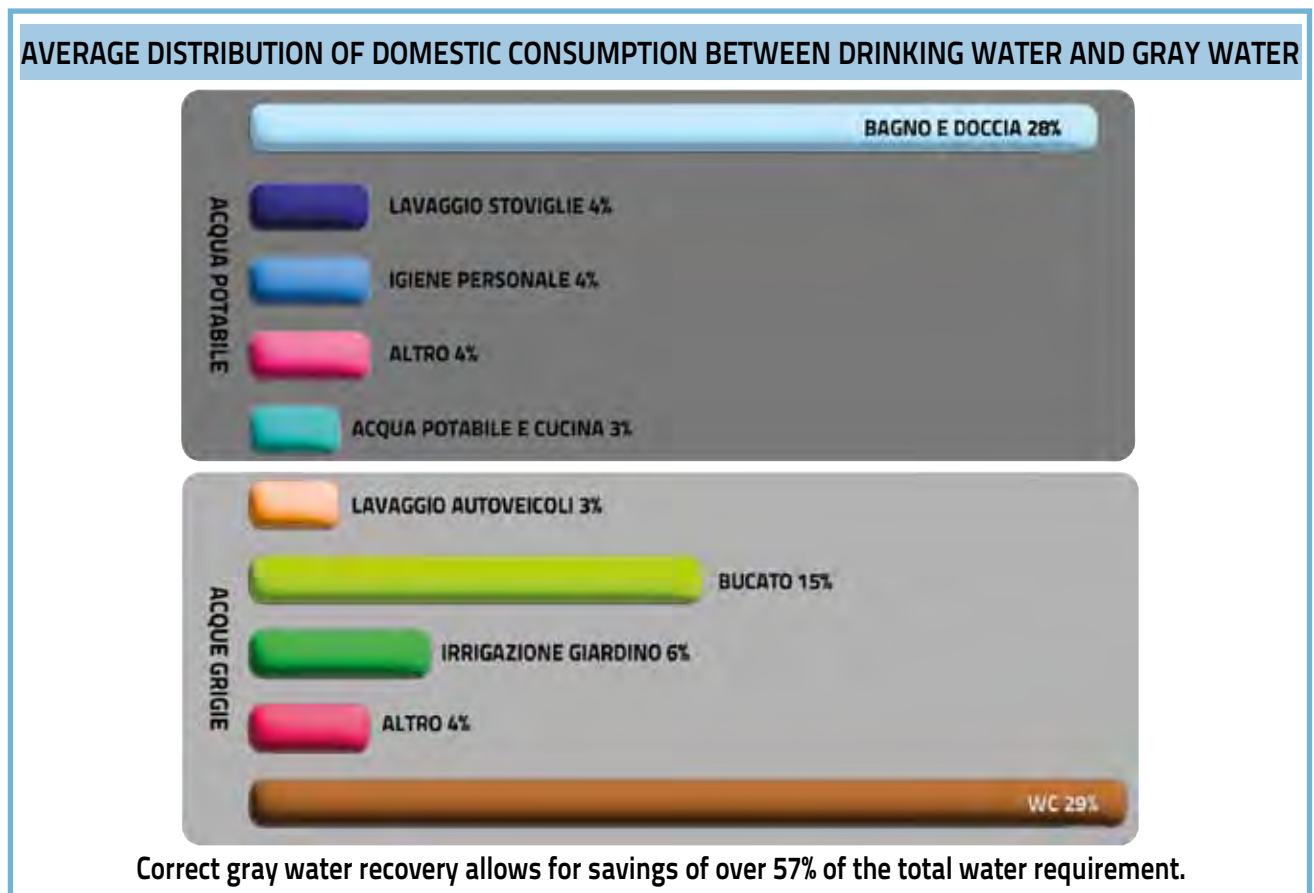
ECOGRAY

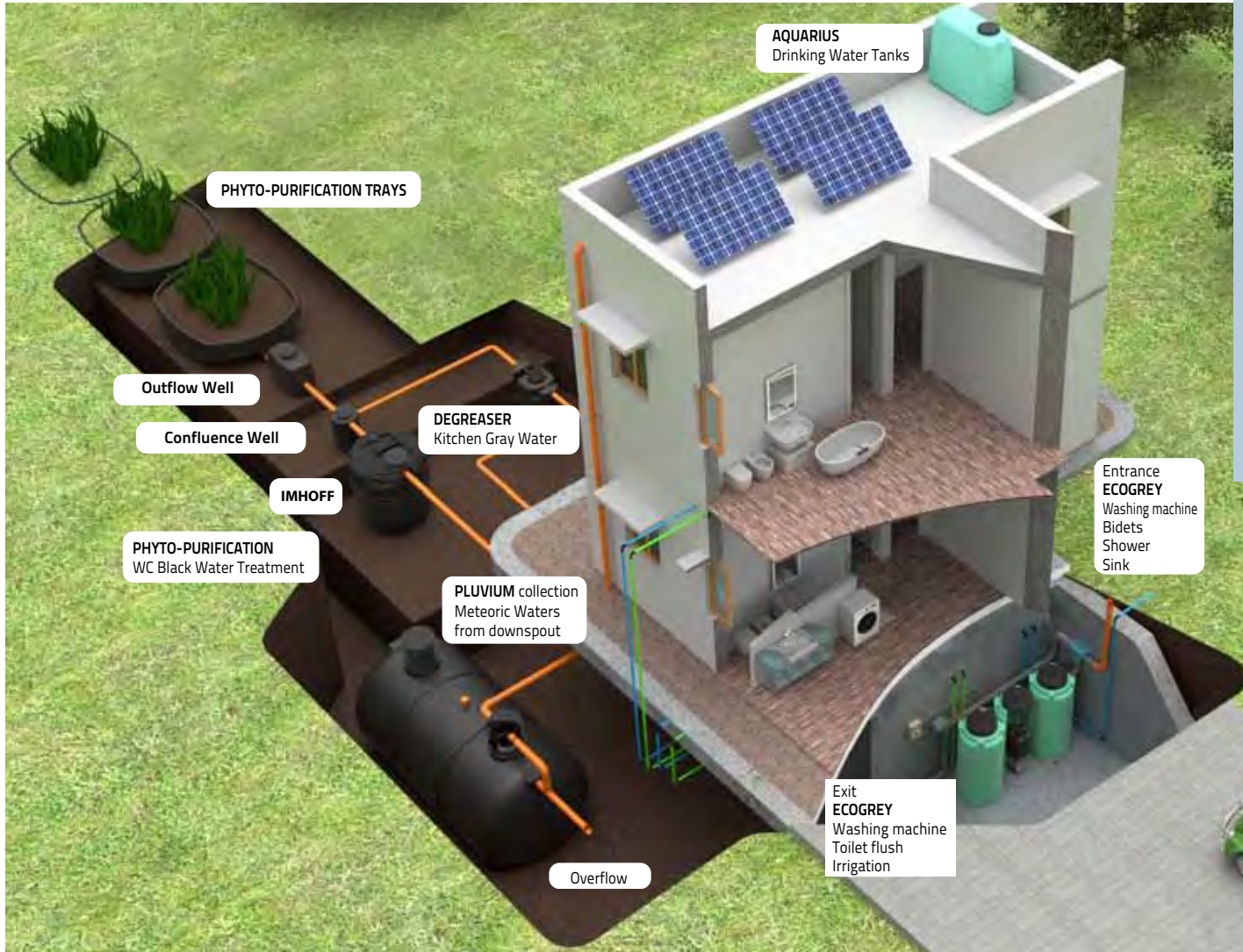
In Western countries, from the 2008 censuses, the average per capita water consumption is around 215 litres/day. Where possible with simple plant engineering measures, more than half could consist of non-potable water.

At a national level, Legislative Decree 152/06 - Framework law on water, introduces the concept of water saving and water reuse.

Today, at a regional and municipal level, there are regulations and building regulations that require the reuse of water for new homes in order to reduce the consumption of drinking water.

TELCOM SpA has studied and developed the new range of ECO GRAY systems for the recovery and reuse of gray water, i.e. the water coming from sinks, showers and bathtubs (excluding the toilet, the bidet and the entire kitchen) and which, due to their degree of contamination, can be treated and disinfected, and then returned to domestic users for flushing toilets, cleaning the building, watering the garden etc.





WHY RECOVER AND REUSE GRAY WATER?

From the single-family house to the residential and commercial complex, today it is necessary to take an attitude of responsibility on the issue of water. Water is a limited resource whose value we often forget in both ethical and economic terms.

HOW TO USE GRAY WATER

- TOILET FLUSHING;
- IRRIGATE GREEN AREAS;
- FIRE PREVENTION SYSTEMS;
- FEEDING FOUNTAINS AND WATERPOOLS;
- CLEANING AND WASHING FLOORS;
- CAR WASH;
- LAUNDRY WASHING.



ECO GRAY MINI

ITEM	* N° OF INHABITANTS SERVED (sized to 50 l/AE)	DAILY CAPACITY litres/day	SYSTEM COMPOSITION volume (l) initial accumulation	€
ECO GRAY MINI	6 - 10	500	500	13.984,63

*the sizing refers to residential homes, for different applications please contact our technical office.

PROCESS DESCRIPTION

The **ECO GRAY MINI TELCOM** is an easy-to-manage system, in which the water to be treated, after separation via a self-cleaning basket filter, is collected in the accumulation tank and from here, is sent under pressure to the users after treatment.

The treatment consists of:

- MECHANICAL FILTRATION to eliminate solid particles larger than 90 µ from the water;
- FILTRATION WITH GRANULAR ACTIVATED CARBON of plant origin to remove organic pollutants, surfactants and compounds that can cause bad odors;
- DEBACTERIZATION with UV-C rays to reduce the bacterial load contained in the water.



ECO GRAY PLUS

ITEM	* N° OF INHABITANTS SERVED (sized to 50 l/AE)	DAILY CAPACITY litres/day	SYSTEM COMPOSITION volume (l) Initial accumulation filtration - final accumulation	€
ECO GRAY PLUS 1000	20	1000	700 - 700 - 700	23.488,50
ECO GRAY PLUS 2000	40	2000	1500 - 700 - 1500	23.606,92
ECO GRAY PLUS 3000	60	3000	2000 - (700+700) - 2000	38.211,32

*the sizing refers to residential homes, for different applications please contact our technical office.

PROCESS DESCRIPTION

The **ECO GRAY PLUS TELCOM** is a MEMBRANE ULTRAFILTRATION type system which allows the treatment of soluble macromolecules and any substance larger than the membrane cut.

The process takes place in several subsequent phases:

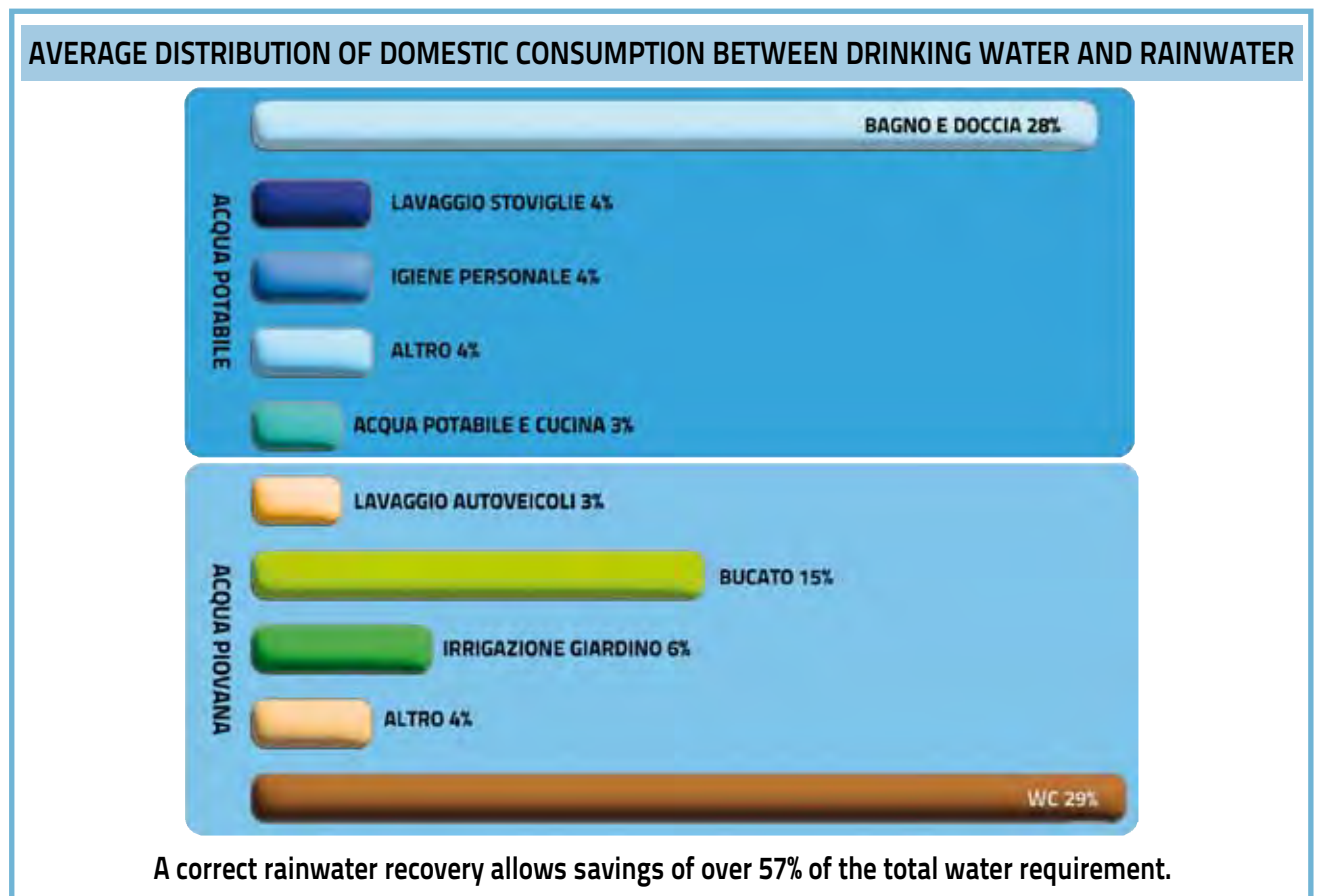
- COARSE FILTRATION to eliminate any suspended solids present (lint, textile fibers, hair);
- INITIAL ACCUMULATION OF UNTREATED GRAY WATER (one or more tanks);
- MEMBRANE ULTRAFILTRATION in which, thanks to the development of specific microorganisms, an initial removal of biodegradable substances (soaps, shampoos) takes place and subsequently, thanks to the physical width of the pores 35 nm, all solid particles, germs and viruses are retained and finally removed from the water.
- STORAGE OF PURIFIED WATER (one or more tanks).

RAIN WATER COLLECTION
PLUVIUM

In western countries, from the censuses carried out in 2008, the average per capita consumption of water is approximately 215 liters per day. Where possible, with simple plant engineering measures, more than half could consist of non-potable water.

For all uses that do not require direct contact of water with people and food, rain water can be used, conveniently collected and distributed, with clear economic benefits for users, avoiding unnecessary waste of drinking water (irrigation, sanitation, car washing, laundry, etc.).

TELCOM offers, through the PLUVIUM products, a complete range of systems suitable for the collection, storage and distribution of rainwater for all users (single-family homes, condominiums, hotels), both in the public and industrial sectors (rainwater can be integrated into various production processes, cooling, cleaning, etc.).



HOW TO USE RAIN WATER

- Toilet flushing, with the greatest saving potential 29%: rainwater is almost limestone free, so it does not promote its formation.
- Irrigation of green areas: rainwater is ideal for watering flowers and plants, it promotes the absorption of minerals and nutrients.
- Laundry: rainwater is very soft water, it contains little Calcium and Magnesium, elements which negatively influence the solubilization of detergents and the good functioning and life of the washing machine.
- Cleaning: washing floors, cars, machinery, etc.
- Multiple industrial uses.

HOW TO CHOOSE THE SYSTEM

Before installing PLUVIUM rainwater collection systems it is advisable to size the collection tank according to the right compromise between water requirements and annual rainfall availability.



CALCULATION OF THE ANNUAL WATER REQUIREMENT (Q1):

$$Q1 = (q1 \cdot g1 \cdot p) + (q2 \cdot g2 \cdot p) + (q3 \cdot g3) + (q4 \cdot g4)$$

Where:

q1 = water consumption for toilet flushing (approx. 10 litres).

q2 = water consumption for one washing cycle in the washing machine (approx. 100 litres).

q3 = water consumption for household cleaning (approx. 25 litres).

q4 = water consumption for garden irrigation (approx. 5 litres/m² multiplied by the surface area in m² of garden to be irrigated).

g1 = number of times you plan to flush the toilet.

g2 = number of times you plan to use the washing machine.

g3 = number of times you plan to use water for household cleaning.

g4 = number of times you plan to water the garden.

p = number of people who use the PLUVIUM by TELCOM System for Rainwater Collection.

CALCULATION OF THE ANNUAL QUANTITY OF RAINFALL (Q2):

$$Q2 = L \cdot S \cdot Y \cdot 0.98$$

Where:

L = annual local precipitation value (l/m²) (average 1000 l/m²).

S = sum of coverage surfaces (m²) used for water collection.

Y = runoff coefficient (expressed as a percentage) characteristic of the type of surface used for rainwater collection. It actually indicates what percentage of water reaches the storage system (e.g. 90% for tiled roofs, 80% for flat concrete roofs, 60% for flat gravel roofs, 40% for green roofs, etc.).

TANK VOLUME:

$$V = (Q \cdot g) : 365$$

Where:

Q = smallest value between Q1 and Q2

g = duration in days of the average dry period that characterizes the specific location

Note: The "L" and "g" values vary from place to place and depend on the changing seasons, they can be deduced from the data that the meteorological stations, scattered throughout the national territory, make available.



REGIONAL RULES on rainwater recovery

ABRUZZO

As stated by regional law n. 17/2008, separate sewerage networks must be provided for rainwater, one of which can be equipped with devices for the collection and separation of the "first rain" water, which is the most polluting, and the another channels the other waste water. They are subject to communication to the province.

EMILIA ROMAGNA

In Emilia Romagna there are the "Guidelines for the management of rainwater" which indicate the methods of management of rainwater and summarize the obligations established by regional regulations to understand in which cases the first rain water treatment.

The RER standard illustrates that the rainwater collection systems envisaged have as their primary purpose the lamination of flow rates higher than those due to the drainage of rainwater from cultivated land (approximately from 10 to 15 l/s per hectare) and secondly, that relating to the reuse of rainwater.

LAZIO

According to regional law n. 6/2008, the recovery of rainwater and gray water and the reuse of the same for compatible uses is imposed in new buildings and renovations, through the creation of specific integrative collection, filtering and dispensing systems, the installation of water cassettes for toilets with differentiated drains;

the installation of taps equipped with an air and water mixer; the use of draining flooring in the case of coverage exceeding 50 percent of the surface itself.

LOMBARDY

Regulation n.2/2006. New construction projects and recovery interventions on the existing building stock must include systems for capturing, filtering and accumulating rain from the roofs as well as reservoirs, possibly underground and protected.

PUGLIA

According to the regional law of 10 June 2008 n. 13 "Standards for sustainable housing", the use of rainwater for compatible uses is required through the creation of specific collection, filtering and supplementary supply systems in new construction and renovation of existing buildings .

TUSCANY

According to regulation no. 15/2009 of the Tuscany region, for large sales structures (from 5 to 15 thousand m²) it is necessary to ensure the collection of rainwater with a recovery tank of adequate dimensions for the needs of operations such as watering, washing areas and any form of reuse for which drinking water is not required.

The official bulletin of the Tuscany region - n.23 indicates, in the art. 21, which in order to encourage the creation of separate networks for the drinking and non-drinking use of water, the municipal building regulations provide for: a) for industrial areas, water accumulation and reuse systems purified waste; b) for land irrigation, suitable rainwater accumulation and reuse systems.

TRENTO

As indicated by law no. 1/2008, the use of rainwater for compatible uses is foreseen (with regulation) through the creation of specific collection, filtering and supplementary supply systems.

Rainwater collection systems

Fully integrated underground tanks for the recovery of rainwater, equipped with a filter for the interception of coarse solids greater than 1 mm.

MODEL FOR INTERNAL PUMP - IN GR


LEGEND:

- 1) WATER INLET FROM RAINPIPE
- 2) FILTERING UNIT (filter-holder structure and bag filter).
- 3) OVERFLOW TANK
- 4) OVERFLOW FILTERING UNIT
- 5) INSPECTION MANHOLE
- 6) MANHOLE cleaning/suction
- 7) 2" VENT (already mounted on tanks up to 10,000 litres. For higher volumes it is supplied as standard in assembly kit).

MODEL WITH PREDISPOSITION FOR EXTERNAL PUMP - ES GR

LEGEND:

- 1) WATER INLET FROM RAINPIPE
- 2) FILTERING UNIT (filter holder structure and bag filter)
- 3) DRAWING SYSTEM
- 4) 1" THREADED CONNECTION for external pump suction sleeve.
- 5) OVERFLOW TANK
- 6) OVERFLOW FILTERING UNIT
- 7) INSPECTION MANHOLE
- 8) MANHOLE cleaning/suction
- 9) 2" VENT (already mounted on tanks up to 10,000 liters. For larger volumes it is supplied as standard in the assembly kit).



PLUVIUM FEATURES

The PLUVIUM systems, each identified by the capacity of the tank used, essentially provides for:

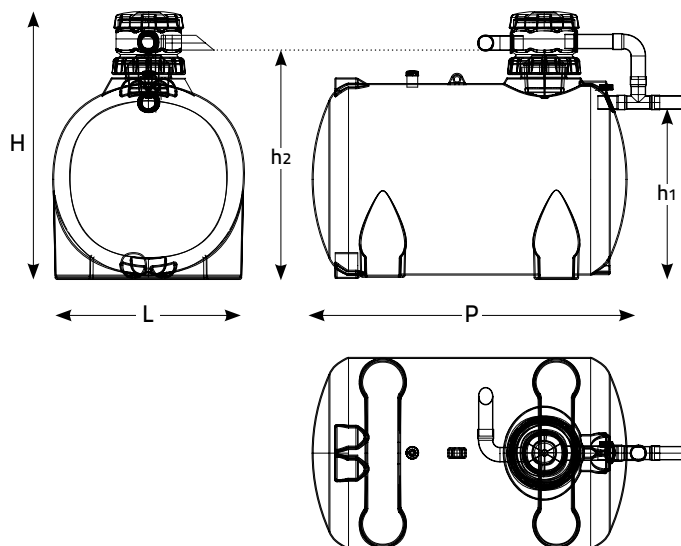
- The provision for collecting water from the roofs via pipes coming from the individual downspouts
- Filtration, essential to eliminate foreign bodies (leaves, debris, soil) collected by runoff.
- Storage in underground tanks, protected from sunlight, such as to guarantee good water conditions for a long time, avoiding the development of algae, bacteria and unpleasant odors.
- On request, submersible or external self-priming pump models are available, whose characteristics are listed among the accessories.


BASKET FEATURES

Filter with 1 mm plastic screen (ø 400xH290)

PLUVIUM PLS IN GR (for internal pump)

Underground tanks equipped with a filter for the interception of coarse solids greater than 1 mm.



PLUVIUM SYSTEMS from 2000 to 3000 litres(For internal pump)

ITEM WITHOUT Pump	Suitable for installation above ground*	Dimensions (cm)					Volume (litres)	Filtering Group	Piping (ø mm)	Lid (ø mm)	€
		H	L	P	h1 Overflow	h2 Entrance					
PLS 2000 IN GR	Yes	179	136	155	118	155	2000	CL 320 F	100	420	1.362,27
PLS 3000 IN GR	Yes	194	160	185	139	171	3000	CL 420 F	100	420	1.812,63

* For outdoor tanks please contact our Technical Office



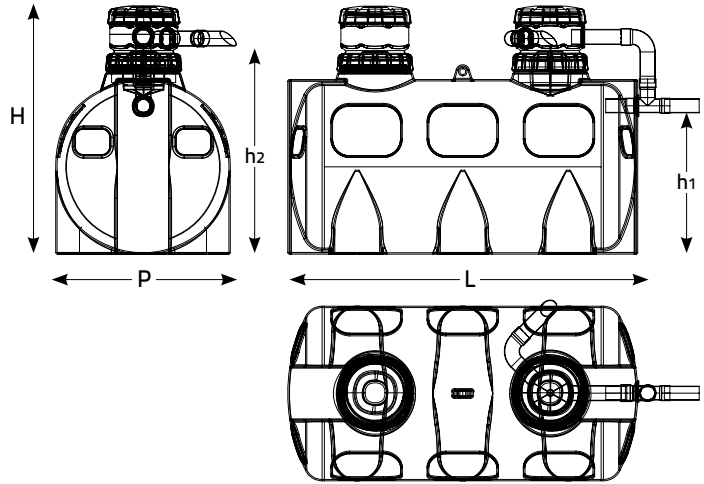
download the
relevant data sheet



PLUVIUM PLS IN GR (for Internal pump)

Underground tanks equipped with a filter for the interception of coarse solids greater than 1 mm.

NEW

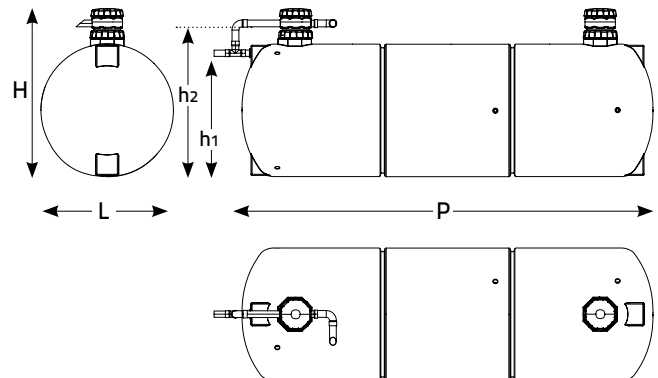


5000 litres PLUVIUM SYSTEM (For internal pump)

ITEM WITHOUT Pump	Suitable for installation above ground*	Dimensions (cm)					Volume (litres)	Filtering Group	Piping (ø mm)	Lid (ø mm)	€
		H	L	P	h1 Overflow	h2 Entrance					
PLS 5000 IN GR	Yes	198	149	298	130	171	5000	CL 550 F/125	125	550	2.813,29



mod. PLS 30000 IN GR



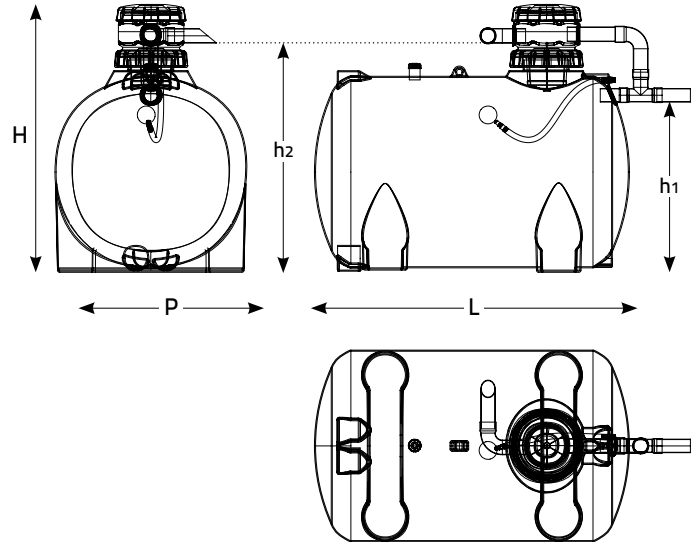
PLUVIUM SYSTEMS from 10,000 to 50,000 litres (For internal pump)

ITEM WITHOUT Pump	Forms	Suitable for installation above ground*	Dimensions (cm)					Volume (litres)	Filtering Group	Piping (ø mm)	Lid (ø mm)	€
			H	L	P	h1 Overflow	h2 Entrance					
PLS 10000 IN GR	2	NO	289	238	275	214	257	10000	CL 550 F/160	160	550	5.617,59
PLS 15000 IN GR	2	NO	289	238	390	214	257	15000	CL 550 F/160	160	550	8.449,07
PLS 20000 IN GR	2	NO	289	238	508	214	257	20000	CL 550 F/160	160	550	10.896,04
PLS 25000 IN GR	3	NO	289	238	627	214	257	25000	CL 550 F/160	160	550	13.943,51
PLS 30000 IN GR	3	NO	289	238	743	214	257	30000	CL 550 F/160	160	550	15.805,01
PLS 35000 IN GR	4	NO	289	238	862	214	257	35000	CL 550 F/160	160	550	19.708,17
PLS 40000 IN GR	4	NO	289	238	979	214	257	40000	CL 550 F/160	160	550	22.110,12
PLS 45000 IN GR	5	NO	289	238	1098	214	257	45000	CL 550 F/160	160	550	27.214,24
PLS 50000 IN GR	5	NO	289	238	1215	214	257	50000	CL 550 F/160	160	550	30.216,68

* For outdoor tanks please contact our Technical Office

PLUVIUM PLS ES GR (with provision for external pump)

Underground tanks equipped with a filter for the interception of coarse solids, and a 1" draft system for connection to an external pump.



PLUVIUM SYSTEMS from 2000 to 3000 litres(For External pump)

ITEM WITHOUT Pump	Suitable for installation above ground*	Dimensions (cm)					Volume (litres)	Filtering Group	Piping (ø mm)	Lid (ø mm)	€
		H	L	P	h1 Overflow	h2 Entrance					
PLS 2000 ES GR	Yes	179	136	155	118	155	2000	CL 320 F	100	420	1.529,13
PLS 3000 ES GR	Yes	194	160	185	139	171	3000	CL 420 F	100	420	1.979,49

* For outdoor tanks please contact our Technical Office



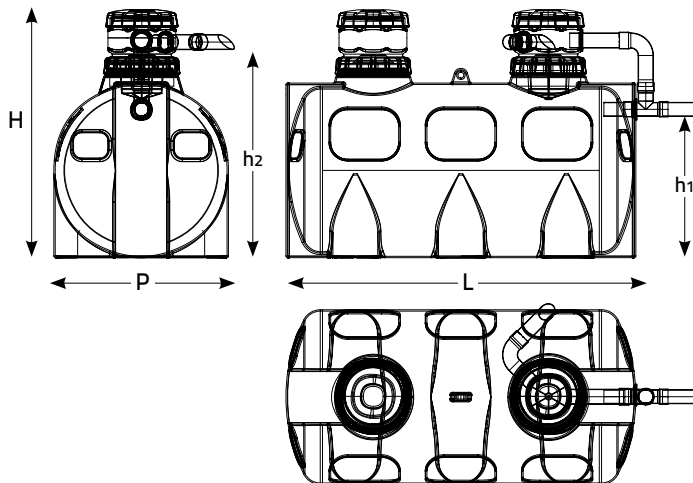
download the
relevant data sheet



PLUVIUM PLS ES GR (with provision for external pump)

Underground tanks equipped with a filter for the interception of coarse solids, and a 1" draft system for connection to an external pump.

NEW

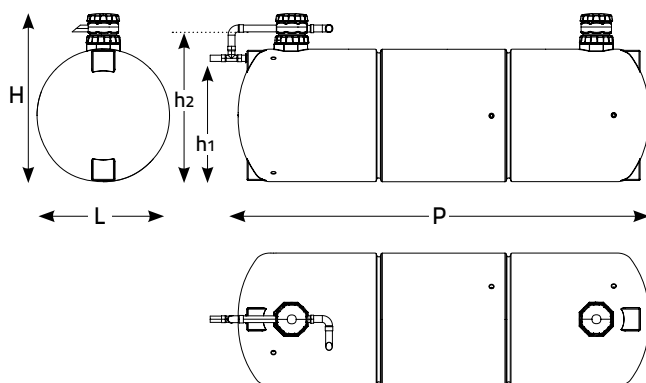


5000 liter PLUVIUM SYSTEM (For external pump)

ITEM WITHOUT Pump	Suitable for installation above ground*	Dimensions (cm)					Volume (litres)	Filtering Group	Piping (ø mm)	Lid (ø mm)	€
		H	L	P	h1 Overflow	h2 Entrance					
PLS 5000 ES GR	Yes	198	149	298	130	171	5000	CL 550 F/125	125	550	2.980,15



mod. PLS 30000 ES GR



PLUVIUM SYSTEMS from 10,000 to 50,000 litres (For External pump)

ITEM WITHOUT Pump	Forms	Suitable for installation above ground*	Dimensions (cm)					Volume (litres)	Filtering Group	Piping (ø mm)	Lid (ø mm)	€
			H	L	P	h1 Overflow	h2 Entrance					
PLS 10000 ES GR	2	NO	289	238	275	214	257	10000	CL 550 F/160	160	550	5.784,45
PLS 15000 ES GR	2	NO	289	238	390	214	257	15000	CL 550 F/160	160	550	8.615,93
PLS 20000 ES GR	2	NO	289	238	508	214	257	20000	CL 550 F/160	160	550	11.062,90
PLS 25000 ES GR	3	NO	289	238	627	214	257	25000	CL 550 F/160	160	550	14.110,37
PLS 30000 ES GR	3	NO	289	238	743	214	257	30000	CL 550 F/160	160	550	15.971,87
PLS 35000 ES GR	4	NO	289	238	862	214	257	35000	CL 550 F/160	160	550	19.875,03
PLS 40000 ES GR	4	NO	289	238	979	214	257	40000	CL 550 F/160	160	550	22.276,98
PLS 45000 ES GR	5	NO	289	238	1098	214	257	45000	CL 550 F/160	160	550	27.381,10
PLS 50000 ES GR	5	NO	289	238	1215	214	257	50000	CL 550 F/160	160	550	30.383,54

* For outdoor tanks please contact our Technical Office

Systems for the micro collection of rainwater

Fully integrated outdoor tanks for the recovery of rainwater equipped with a filter for the interception of coarse solids greater than 1 mm.



ANFORA TANK ORCIOBELLO PRQ

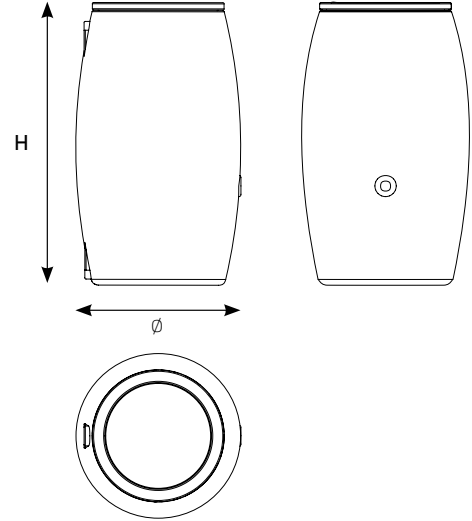
ITEM	Suitable for installation above ground	Capacity (litres)	Dimensions (cm)		Lid ø (mm)	Raccordi di stampata			€
			H	ø		A Load	B Unload	C Total Emp.	
ORCIO 500 PRQ	Yes	500	111	98	450	ø 80	1" 1/4	1"	422,80
ORCIO 1000 R PRQ	Yes	1010	140	116	450	ø 80	1" 1/4	1"	558,13

Without pipe and gasket



download the relevant data sheet



NEW

300 liter "Shabbyrain" RAIN WATER TANK

Item	Capacity (litres)	Dimensions (cm)		€
		H	ø max	
RAIN AQ 300	297	113	66	326,00

 Available colours **I** **67**


download the relevant data sheet



Flat area for insertion of downpipe, upper pot holder ø53 H7 Supplied with 1/2 inch brass tap



INTERNAL SUBMERGED PUMP:

Power kW 0.25,
flow rate up to 135 l/min (8.1 m³/h), head up to 7 metres, 1" delivery port.

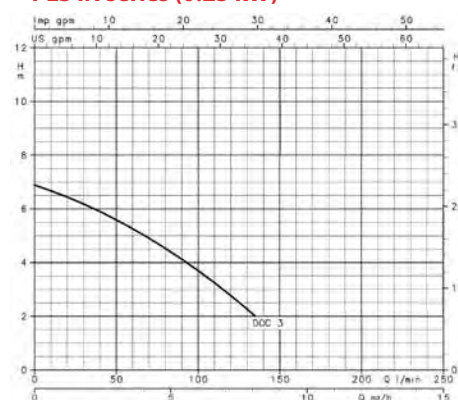


ASSEMBLY INCLUDED

ITEM	DESCRIPTION	€
POMPA ELET. 14	Submersible pump for clear water	411,80

Not suitable for use with PRESS CONTROL

PLS IN series (0.25 kW)



Internal Pump*

** Not suitable for use with PRESS CONTROL*

INTERNAL SUBMERGED PUMP:

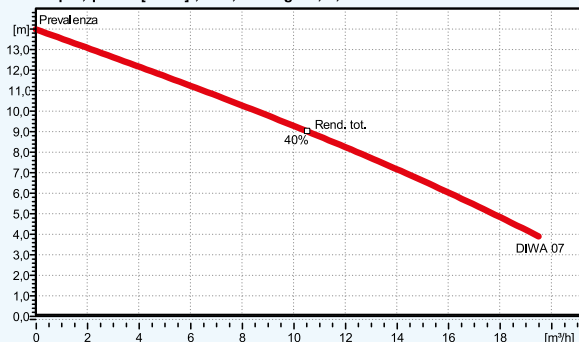
Power kW 0.75 - 1 hp
Flow rate up to 325 l/min (19.5 m³/h)
Head up to 14 metres



ASSEMBLY BY THE CUSTOMER

ITEM	DESCRIPTION	€
POMPA ELET. 15	Submersible pump for clear water	1.576,00

Prestazioni secondo ISO 9906 - Annesso A
Le prestazioni valgono con il seguente fluido:
Acqua, pulita [100%]; 4°C; 1000kg/m³; 1,57mm²/s



PORTABLE EXTERNAL PUMP:

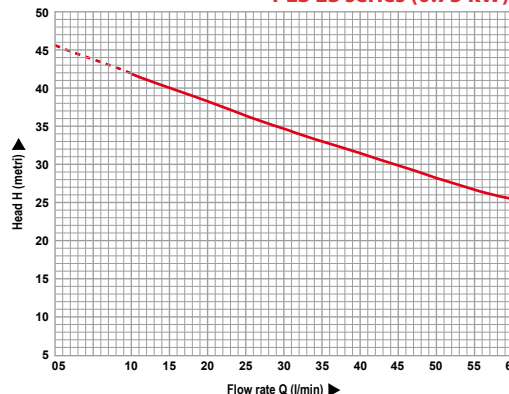
Power kW 0.75,
flow rate up to 60 l/min (3.6 m³/h), head up to 45.4 metres, 1" suction and delivery port.



ASSEMBLY BY THE CUSTOMER

ITEM	DESCRIPTION	€
POMPA ELET. 3	Portable external pump	638,00

PLS ES series (0.75 kW)



External Pump



DRAWING SYSTEM:

Float with 1" anti-crush flexible hose. Equipped with foot valve and filter

ITEM	DESCRIPTION	€
SISTEMA DI PESCAGGIO	Draft system	56,84

WATER REPLENISHMENT KIT:

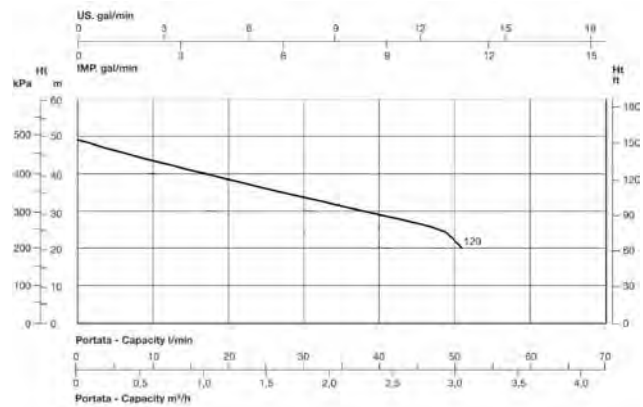
When a rainwater recovery tank is installed, it is necessary to install a submersible pump to pressurize the recovered water. If prolonged absences of rain occur, it is necessary to install a water replenishment system coming from the mains. To exclude pollution and contagion of the public network, European legislation prohibits the re-entry/injection of meteoric water into the mains. For this purpose, a particular system called BREAKAGE KIT is necessary, which excludes any possible contact between rainwater and mains water.



ITEM	DESCRIPTION	€
KIT REINTEGRO 1,2 HP	Rainwater replenishment kit	2.102,46

The Replenishment Kit includes:

- E/automatic pump 1.2 HP
- Control unit
- Breakdown kit.



Electric pump characteristics



REPLENISHMENT CONTROL UNIT KIT:

The version of the water make-up kit without E/pump is available.

The Make-up Control Unit Kit is equipped with:

- Control unit
- Probe
- E/valve 1/2" FF

ITEM	DESCRIPTION	€
KIT CENTRALINA	Rainwater replenishment control unit	615,00

FILTERING GROUP

filtration of bodies ≥ 1 mm.

ITEM	DESCRIPTION	€
CL 320/F	Filtering unit for manhole cover \varnothing 320 mm	196,27
CL 420/F	Filtering unit for manhole cover \varnothing 420 mm	171,03
CL 550/F 125	Filtering unit for manhole cover \varnothing 550 mm	291,25
CL 550/F 160	Filtering unit for manhole cover \varnothing 550 mm	293,65



NB: NOT AVAILABLE FOR TANKS NER 5000.



REUSE KIT FOR RAINWATER:

Treatment unit consisting of a self-cleaning pre-filter with backwashing with a 90 micron filtration degree, a subsequent 25 micron filtration and a final treatment with activated carbon, capable of removing odors and colors from rainwater.

ITEM	DESCRIPTION	€
KIT RIU. PLS	Rainwater reuse kit	254,03

REUSE KIT FOR RAINWATER WITH BATTERIZER:

Treatment unit consisting of a self-cleaning pre-filter with backwashing with a 90 micron filtration degree, a subsequent 25 micron filtration and a final treatment with activated carbon, capable of removing odors and colors from rainwater. A sterilization phase with a UV lamp with a maximum flow rate of 600 l/h is added To this unit.



ITEM	DESCRIPTION	€
KIT RIU. PLS D	Rainwater reuse kit with sterilizer	1.300,11

PRESS CONTROL:

Electronic pressure and flow regulator.

It manages the automatic start and stop of the pump, respectively when the tap is opened and closed. In the event of a lack of water, it ensures automatic stopping of the pump.

Max current 8 Amp, max range 10 m³/h, 1" x 1" connections.

ITEM	DESCRIPTION	€
PRESS CONTROL	Electronic pressure and flow regulator	196,16



ECO[®] AQUARIUS

Designed to respect the environment

ECO[®] AQUARIUS

Designed to respect the environment





Designed to respect the environment

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DOMESTIC WASTEWATER TREATMENT

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TECHNICAL EVALUATIONS FOR PRODUCT SELECTION

The TELCOM Ecology Department represents a valid support for designers and specialized technicians. The technical solutions proposed for the treatment of domestic wastewater allow discharge into public sewerage system, surface water and soil, in compliance with the values indicated in the tables of Legislative Decree 152/06. These technical solutions always provide a primary treatment and a secondary treatment and the sizing of the products that make up the system varies depending on the receiving body. However, knowing the great variety of appropriate treatments proposed by the various bodies, the Ecology Office remains available to accept any indications from the competent authorities. TELCOM products must be chosen based on the number of Equivalent Inhabitants (AE), which is the parameter that characterizes the purification plants in homogeneous and comparable terms. Telcom considers an AE characterized by a hydraulic load of 200 liters per day and an organic load (BOD5) of 60 grams per day. Below is a table to identify the number of equivalent inhabitants for the most widespread activities. This table must be indicative in nature, please refer to the regional regulations.

Eng. Sergio de Gioia

DISCHARGE OF SLUDGES, OILS AND FATS

Our products are not equipped with sludge treatment systems, so those generated in surplus relative to the requirements of the purification process must be periodically removed from the plant by authorized companies in accordance with the regulations in force in the place of installation.



REFERENCE REGULATORY FRAMEWORK*

- Legislative Decree n° 152/06 and subsequent amendments
- DM n° 185 of 12/06/03
- Resolution of 04 February 1977.
- Resolution no. 1053/03 Emilia Romagna Region
- Municipality of Florence building regulations
- ARPA guidelines from various regions
- Regional regulations
- UNI EN 12566-1:2002/A1:2004 standard
- UNI EN 12566-3:2005 standard
- UNI EN 12566-3:2009 standard
- UNI EN 1825-1:2005 standard
- DIN 4040 standard
- EEC Directive n° 91/271 of 05/21/1991
- EU Regulation 305/11

* Regulations subject to possible changes or updates.

KIND OF ACTIVITY	FORMULA FOR THE CALCULATION OF EQUIVALENT INHABITANTS
CIVIL HOUSING	= NUMERO RESIDENTI x 1
RESTAURANT - TRATTORIA	= NUMERO dei PASTI GIORNALIERI x 0,25
HOTEL	= NUMERO degli OSPITI x 1,16
BAR	= NUMERO dei CLIENTI x 0,06
HOSPITAL	= NUMERO degli OSPITI x 3,15
SHOPPING CENTER	= m ² DI COPERTURA x 0,03
OFFICES	= NUMERO degli IMPIEGATI x 0,38
SCHOOL	= NUMERO degli STUDENTI x 0,375
CAMPING (for tents)	= NUMERO degli OSPITI x 1,08
CINEMA - THEATER	= NUMERO dei POSTI A SEDERE x 0,16
AUTOGRILL	= NUMERO dei POSTI A SEDERE x 2
BARRACKS	= NUMERO degli IMPIEGATI x 1,9

NOTES TO THE TABLE: the number of AE resulting from the calculation reported in the table takes into account the greatest value between organic load and hydraulic load per equivalent inhabitant.

Tables 3 and 4 Annex 5, third part of the Legislative Decree n°. 152/06 and e subsequent modifications and additions for the quality of the discharges

Sostanze	Unità di Misura	Tabella 3 Prima Colonna Scarico in acque superficiali	Tabella 3 Seconda Colonna Scarico in pubblica fognatura (*)	Tabella 4 Reflui che recapitano sul suolo
pH		5,5 - 9,5	5,5 - 9,5	6-8
Temperatura		(1)	(1)	SAR 10
Colore		Non percettibile con diluizione 1:20	Non percettibile con diluizione 1:40	
Odore		Non deve essere causa di molestie	Non deve essere causa di molestie	
Materiali grossolani		Assenti	assenti	Assenti
Solidi sospesi totali	mg/L	≤ 80 (2)	≤ 200 (2)	25
BOD ₅ (come O ₂)	mg/L	≤ 40 (2)	≤ 250 (2)	20
COD (come O ₂)	mg/L	≤ 160 (2)	≤ 500 (2)	100
Alluminio	mg/L	≤ 1	≤ 2,0	1
Arsenico	mg/L	≤ 0,5	≤ 0,5	0,05
Bario	mg/L	≤ 20	-	10
Boro	mg/L	≤ 2	≤ 4	0,5
Cadmio	mg/L	≤ 0,02	≤ 0,02	
Cromo totale	mg/L	≤ 2	≤ 4	1
Cromo VI	mg/L	≤ 0,2	≤ 0,20	-
Ferro	mg/L	≤ 2	≤ 4	2
Manganese	mg/L	≤ 2	≤ 4	0,2
Mercurio	mg/L	≤ 0,005	≤ 0,005	
Nichel	mg/L	≤ 2	≤ 4	0,2
Piombo	mg/L	≤ 0,2	≤ 0,3	0,1
Rame	mg/L	≤ 0,1	≤ 0,4	0,1
Selenio	mg/L	≤ 0,03	≤ 0,03	0,002
Stagno	mg/L	≤ 10	-	3
Zinco	mg/L	≤ 0,5	≤ 1,0	0,5
Cianuri totali (come CN)	mg/L	≤ 0,5	≤ 1,0	
Cloro attivo libero	mg/L	≤ 0,2	≤ 0,3	0,2
Solfuri (come H ₂ S)	mg/L	≤ 1	≤ 2	0,5
Solfiti (come SO ₃)	mg/L	≤ 1	≤ 2	0,5
Solfati (come SO ₄)	mg/L	≤ 1000 (3)	≤ 1000 (3)	500
Cloruri	mg/L	≤ 1200 (3)	≤ 1200 (3)	200
Fluoruri	mg/L	≤ 6	≤ 12	1
Fosforo totale (come P)	mg/L	≤ 10 (2)	≤ 10 (2)	2
Azoto ammoniacale (come NH ₄)	mg/L	≤ 15 (2)	≤ 30 (2)	5
Azoto nitroso (come N)	mg/L	≤ 0,6 (2)	≤ 0,6 (2)	
Azoto nitrico (come N)	mg/L	≤ 20 (2)	≤ 30 (2)	
Grassi e oli animali/vegetali	mg/L	≤ 20	≤ 40	
Idrocarburi totali	mg/L	≤ 5	≤ 10	
Fenoli	mg/L	≤ 0,5	≤ 1	0,1
Aldeidi	mg/L	≤ 1	≤ 2	0,5
Solventi organici aromatici	mg/L	≤ 0,2	≤ 0,4	
Solventi organici azotati	mg/L	≤ 0,1 (4)	≤ 0,2 (4)	0,01
Tensioattivi totali	mg/L	≤ 2	≤ 4	0,5
Pesticidi fosforati	mg/L	≤ 0,10	≤ 0,10	
Pesticidi totali (esclusi i fosforati)	mg/L	≤ 0,05 (5)	≤ 0,05 (5)	
tra cui:				
- aldrin	mg/L	≤ 0,01	≤ 0,01	
- dieldrin	mg/L	≤ 0,01	≤ 0,01	
- endrin	mg/L	≤ 0,002	≤ 0,002	
- isodrin	mg/L	≤ 0,002	≤ 0,002	
Solventi clorurati	mg/L	≤ 1 (5)	≤ 2 (5)	
Escherichia coli (4)	UFC/100mL	nota	-	nota
Saggio di tossicità acuta (5)		Il campione non è accettabile quando, dopo 24 ore, il numero degli organismi immobili è uguale o maggiore del 50% del totale.	Il campione non è accettabile quando, dopo 24 ore, il numero degli organismi immobili è uguale o maggiore del 80% del totale.	Il campione non è accettabile quando, dopo 24 ore, il numero degli organismi immobili è uguale o maggiore del 50% del totale.
Azoto totale	mg/L			15
Berillio	mg/L			0,1
Vanadio	mg/L			0,1
Composti organici aromatici totali	mg/L			0,01
Composti organici azotati totali	mg/L			0,01

Notes attached to Tables 3 and 4 Annex 5 third part of the Legislative Decree n°. 152/06 and s.m.a.:

(*) The limits for discharge into the sewerage system are mandatory in the absence of limits set by the environment authority or in the absence of a final treatment plant capable of complying with the emission limits of the final discharge. Different limits set by the managing body shall be brought into line with the requirements of Note 2 of Table 5 on hazardous substances.

1. For watercourses the maximum variation between average temperatures of any section of the watercourse upstream and downstream of the point of entry shall not exceed 3°C. On at least half of any downstream section this variation shall not exceed 1°C. For lakes the temperature of the discharge shall not exceed 30°C while the temperature increase of the receiver body must in no case exceed 3°C more than the 50 metres from the entry point. For artificial channels, the maximum average water temperature of any section must not exceed 35°C, the above condition is subject to the consent of the entity running the channel. For sea and mouth of rivers areas of non-significant water courses, the temperature of the discharge must not exceed 35°C while the temperature increase of the receiver body must in no case exceed 3°C more than the 1000 metres away from the point of entry. In addition, the environmental compatibility of the discharge with the receiving body must be ensured and the formation of thermal barriers at the mouth of the rivers must be avoided.

2. For discharges of urban waste water, the limits given in Table 1 and, for sensitive areas, those in Table 2 shall apply. For industrial waste water discharges into sensitive areas the total phosphorus concentration and total nitrogen concentration shall be 1 and 10 mg/L respectively.

3. These limits shall not apply to discharge into the sea, so that the mouth areas shall be treated in the same way as coastal marine waters, provided that at least half of any section downstream of the discharge is not disturbed by natural variations in the concentration of sulphates or chlorides.

4. When authorising the discharge of the urban waste water treatment plant, the competent authority shall set the most appropriate limit in relation to the environmental and health status of the receiving water body and existing uses. A limit not exceeding 5000 CFU/100 ml is recommended.

5. The toxicity test is mandatory. In addition to the Daphnia magna test, acute toxicity tests may be performed on Ceriodaphnia dubia, Selenastrum capricornutum, bioluminescent bacteria or organisms such as Artemia salina, for discharges of salt water or other organisms among those to be indicated in accordance with point 4 of this Annex. If more than one toxicity test is carried out, the worst result shall be taken into consideration. The positive result of the toxicity test does not lead directly to the application of penalties referred to in Title V, it also determines the obligation to deepen the analytical investigations, the investigation of the causes of toxicity and their removal.



In 1991 the European Community invited member states to develop programs and laws regarding the collection and treatment of waste water in general. The first national regulations on environmental problems in Italy started from there.



In Italy, Legislative Decree 152/99 was issued which later resulted in the Consolidated Environmental Law which only came into force on 29 April 2006 under the name of Legislative Decree 3 April 2006 n. 152 "Regulations on environmental matters". Subsequently, the Regions developed the Water Protection Plan, in compliance with the provisions of Art. 121 of Legislative Decree 152/06. This Plan contains the measures necessary to achieve or maintain the quality objectives [...], the measures necessary for the qualitative and quantitative protection of the water system [...].



ABRUZZO

LR 29 July 2010 n. 31.

Regional regulations containing the first implementation of the legislative decree n. 152, April 3, 2006, (environmental regulations).

BASILICATA

LR May 29, 2017 n. 9 - Article 5.

Regional guidelines on project approval of urban wastewater treatment plants, self-provisional reorganization, discipline and administrative regimes of discharges of domestic wastewater and urban wastewater.

CALABRIA

Regional Law 3 October 1997, n. 10.

Rules regarding valorisation and rational use of water resources and protection of waters from pollution. Delimitation of the optimal territorial areas (ATO) for the management of the integrated water service.

CAMPANIA

Legislative Decree 152/06.

Ref. Consolidated Environmental Law as there is no Regional Standard specific for agglomerations < 2000 PE

EMILIA ROMAGNA

DGR n. 1053 of 9 June 2003.

Directive concerning guidelines for the application of the Legislative Decree. 11

May 1999 n. 152 as amended by Legislative Decree. August 18, 2000 n. 258 regarding the protection of waters from pollution.

FRIULI VENEZIA GIULIA

DPGR 20 March 2018 n. 074.

Technical Implementation Standards of the Regional Waters Protection Plan.

The regulatory references shown are to be considered valid on the date of publication of this catalogue.

The continuous evolution of the legislative framework recommends verifying the existence of specific regional laws referring to the various types of purification always on the date on which the plant is prepared.

LAGUNA VENETA

Ministerial Decree 30 July 1999.
Limits to industrial and civil waste discharges into the Venice lagoon and the water bodies of its drainage basin.

LAZIO

DGR 13 May 2011 n. 21.
Technical characteristics of phytopurification systems, of systems serving installations, of isolated settlements and buildings of less than 50 Equivalent Inhabitants and of systems for the treatment of wastewater from agglomerations of less than 2000 PE

LIGURIA

LR 16 August 1995 n. 43.
Rules regarding the valorization of water resources and the protection of water from pollution.

LOMBARDIA

RR 29 March 2019 n. 6.
Discipline and administrative regimes for domestic wastewater and urban wastewater discharges.

MARCHE

DGR 26 January 2010 n. 145.
Water Protection Plan – Section “D”
Technical implementation standards.

MOLISE

DGR nr. 68/2015.
Water Protection Plan – Draft R14.1:
Discharge regulations.

PIEMONTE

LR 26 March 1990, n.13 (Coordinated text) and subsequent amendments Discipline of discharges from public sewers and civil wastes.

PUGLIA

RR 12 December 2011 n.26.
Regulation of domestic wastewater discharges from settlements of less than 2,000 PE, with the exception of discharges already regulated by the S.I.I.

SARDEGNA

RESOLUTION n.69/25 of 10 December 2008.
Directive on “Regional regulations on discharges”.

SICILIA

Regional Law n. 27 of 15-05-1986.
Discipline of discharges from public sewers and discharges from civil settlements that do not discharge into public sewers and amendments to the regional law of 18 June 1977, n. 39.

TOSCANA

DPGR 8 September 2008 n. 46/R.
Implementation regulation of the Regional Law 31 May 2006, n. 20 “Regulations for the protection of waters from pollution”.

UMBRIA

DGR 19 September 2018, n. 1024.
Regional technical directive for the regulation of wastewater discharges.

VALLE D'AOSTA

Regional Law 24 August 1982, n. 59.
Rules for the protection of waters from pollution.

VENETO

DGR n. 842 of 15 May 2012 – Annex D.
WATER PROTECTION PLAN Art. 121
Legislative Dec. 3 April 2006, n. 152, “Environmental regulations” - TECHNICAL IMPLEMENTATION RULES
Annex A3 to DCR n. 107 of 5/11/2009.

BOLZANO (PROVINCIA AUTONOMA)

Circular no. 3/08 of the water protection office.
Regulation of domestic wastewater discharges and sludge disposal from individual disposal systems, in implementation of LP8/2002 – DPP 21 January 2008, n.6.

TRENTO (PROVINCIA AUTONOMA)

DPGP 26 January 1987, n. 1-41.
Consolidated provincial law on the protection of the environment from pollution.

*The regulatory references shown are to be considered valid on the date of publication of this catalogue.
The continuous evolution of the legislative framework recommends verifying the existence of specific regional laws referring to the various types of purification always on the date on which the plant is prepared.*

DOMESTIC WASTE WATERS

THE EFFLUENT FROM THE PROPOSED INSTALLATION WILL COMPLY WITH THE REGULATORY FRAMEWORK OF REFERENCE, PROVIDED THAT:

- the data provided are true;
- the assumed design data are identical to the actual situation;
- installation and maintenance are carried out correctly and regularly according to the attached technical manual;
- the effluent produced is domestic in nature or similar to it;
- no bactericides, ammonia, chlorine or any product harmful to the bacterial flora that may compromise the purification action have been introduced into the plant;
- no process water and meteoric water are conveyed to the plant;
- no coarse solid bodies (diapers, plastic bags, etc.) have been introduced into the plant which could damage parts of the plant or cause it to be obstructed;
- no waste water reaches the sewage treatment plant with concentrations above the following limits (in mg/l) for the following substances:

PARAMETER	Discharge TAB. III	Discharge TAB IV	PARAMETER	Discharge TAB. III	Discharge TAB IV
ZINC	0.5	0.5	FLUORINE	6	1
ARSENIC	0.5	0.05	LEAD	0.2	0.1
PHENOLS	0.5	0.1	CHLORIDE	1,200	200
CHROMIUM TOT.	2.0	1.0	COPPER	0.1	0.1
SULPHIDES	1	0.5	SURFACTANTS (NOT BIODEGRADABLE)	2	0.5
NICKEL	2	0.2			

MOREOVER:

- Influent waters with pH values of more than 9.5 and less than 5.5 and with a continuously dissolved quantity of oxygen of less than 2 mg/l are considered dangerous.
- the output nitrogen parameters will comply if the inlet sewage is maintained at a ratio of approx. 10% to BOD₅;
- the output phosphorus parameters will be compliant if the inlet slurry has a ratio of 5% to BOD₅;
- the parameters of entering non-biodegradable substances are already in conformity with current legislation, as they are not biologically degraded.
- the ranges of the following substances shall be considered dangerous for the purpose of the nitrification of the slurry:

PARAMETER	RANGE	PARAMETER	RANGE
NICKEL	0.25 - 3.0	COPPER	0.1 - 0.5
CHROMIUM	0.25	ZINC	3

TELCOM S.p.A. declines all responsibility for the purposes of Title V of Legislative Decree n°. 152/06 and s.m.i. in cases where the present WARNINGS are not respected.

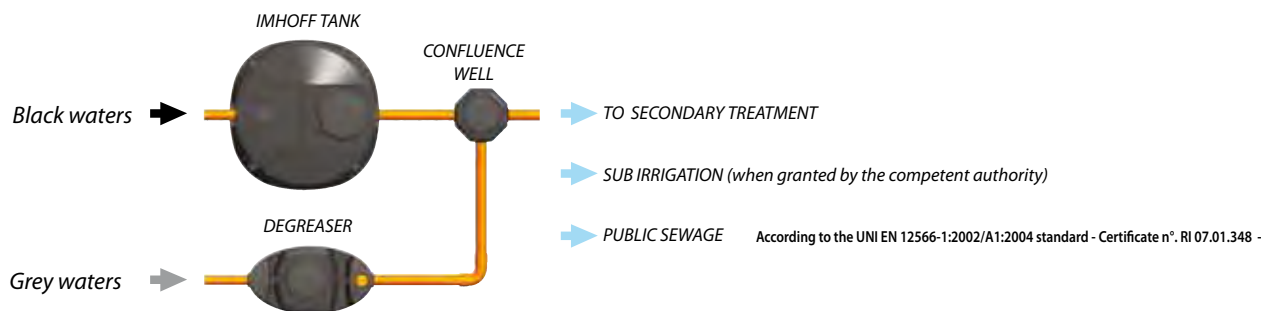
TELCOM S.p.A. reserves the right to make changes to improve plant's efficiency and yielding.

The guarantee of compliance with the limits imposed in Annex 5 of Legislative Decree n°. 152/06 and its subsequent modifications and updates for the receiving bodies is however subordinate to the efficiency of our plants and therefore to the concentration of pollutants present in the affluent waters into the plant.

DOMESTIC WASTE WATER TREATMENT

PRIMARY TREATMENT

In PRIMARY TREATMENTS physical forces are predominant. They have the purpose of pre-treating the wastewater and removing coarse elements that could jeopardize the functioning of the machinery present in the subsequent phases of the plant. In these treatments, an initial roughing of the sewage takes place, in fact a portion of the organic load and suspended solids is removed. Precisely for this reason they are rarely used alone but always before secondary treatments.



IMHOFF TANKS

Imhoff-type septic tanks are anaerobic primary treatment units, consisting of a lower tank called a digester and an upper one called sedimentator. The influent enters the sedimentation compartment which has the purpose of retaining solid bodies and floating material; from here it enters the lower digestion compartment, through the opening on the bottom of the sedimentation tank. The digester and sedimentator are sized in such a way that in the first there is a biological stabilization of the sedimented organic substances (fermentation and anaerobic digestion) and that in the second the necessary calm zone is created, which allows a suitable sedimentation of the solids present in the wastewater. Periodically, mineralized substances, sludge and floating substances must be removed.



SEPTIC TANK IMHOFF type
from 4 to 30 AE



SEPTIC TANK IMHOFF type
SLIM for 5 AE



PDC discharge sump
(optional)



CL 140 turret
for entrance manhole
cover

SPECIFICATION ITEM

IMHOFF type septic tank in recyclable PE (linear polyethylene), composed of two monobloc compartments. The sedimentation tank must have a minimum volume of 40 l/AE and the digester a minimum volume of 110 l/AE. The product is equipped with a first manhole for inspection of the sedimentation tank, for sludge sampling and for inspection of the outlet pipe, of a second manhole for the inspection of the inlet pipe and finally of a vent valve for the removal of the bio-gas. The inlet and outlet pipes are equipped with suitable external double lip rubber seals, to guarantee a perfect seal.



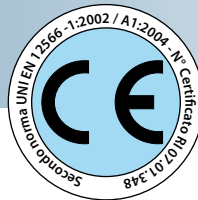
NOMENCLATURE

1. WASTE ENTRY
2. BIOGAS VENT
3. MANHOLE FOR SEDIMENTATION INSPECTION and SLUDGE SAMPLING FROM DIGESTION AREA
4. SEDIMENTATION AREA
5. WASTE OUTPUT
6. DIGESTION AREA
7. ENTRANCE INSPECTION MANHOLE
8. EYEBOLTS

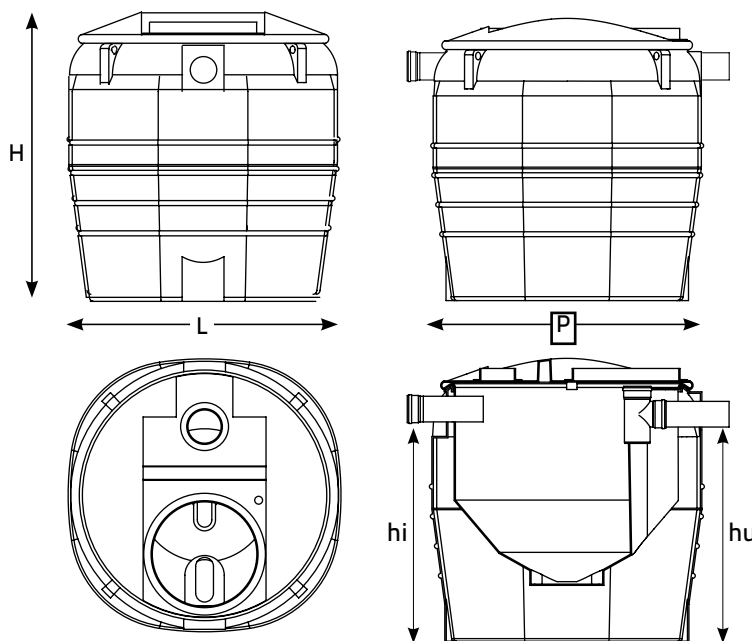
ORDINARY MAINTENANCE

Generally proceed one to four times a year with the extraction of sludge and floating substances from the digester and sedimentator. Make sure that the communication hole between the sedimentator and the digester is not blocked.

STANDARD IMHOFF TANKS



SEPTIC TANK IMHOFF type
from 4 to 30 AE



STANDARD IMHOFF TANKS

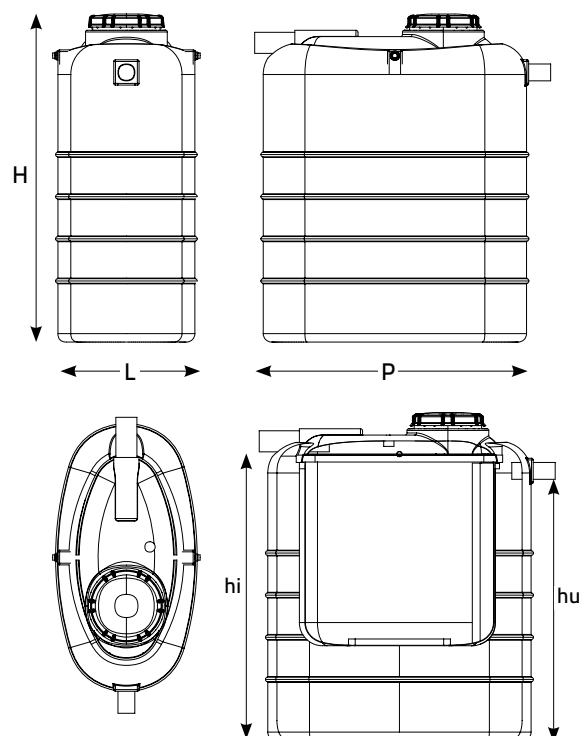
Models		Dimensions (cm)					Overflow volumes (litres)			Dimensions (mm)				€
A.E.	Item	H	L	P	hi	hu	Sedimentator	Digester	Total	øi øu	ø manhole entrance	ø manhole	ø biogas	
4	ECO IMO 4 new	111	107	107	85	83	250	440	690	100	140	420	1"	625,90
6	ECO IMO 6 new	121	117	117	91	89	250	660	910	100	140	420	1"	691,79
10	ECO IMO 10 new	150	136	136	117	115	400	1100	1500	125	140	420	1"	961,32
15	ECO IMO 15 new	187	146	146	153	150	600	1650	2250	125	140	420	1"	1.467,42
20	ECO IMO 20 new	189	165	165	162	160	800	2200	3000	125	140	420	1"	2.141,25
25	ECO IMO 25 new	199	184	184	165	163	1000	2750	3750	125**	140	420	1"	2.408,48
30	ECO IMO 30 new	221	185	185	185,5	182,5	1200	3300	4500	125**	140	420	1"	2.830,03

** Available on request with inlet and outlet (øi and øu) ø=160



Sized according to the Resolution of February 4, 1977 - With extraction of mud at least twice a year

The Imhoff SLIM model bathtub can be used in all cases where space problems exist. The SLIM, in fact, while maintaining the sizing parameters required by current legislation is characterized by a compact shape that allows installation in restricted spaces.



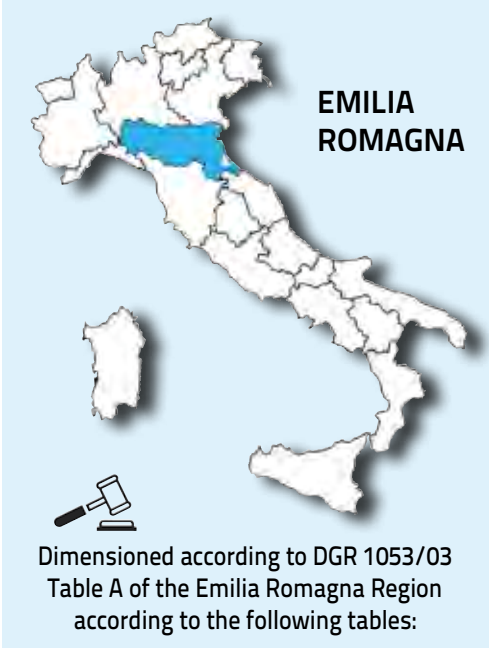
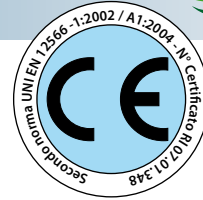
IMHOFF SLIM TANKS

Models		Dimensions (cm)					Overflow volumes (litres)			Dimensions (mm)				€
A.E.	Item	H	L	P	hi	hu	Sedimentator	Digester	Total	øi øu	ø manhole entrance	ø manhole	ø biogas	
5	ECO SLIM 5	159	65	125	138	123	250	570	820	100	100	320	1"	709,01

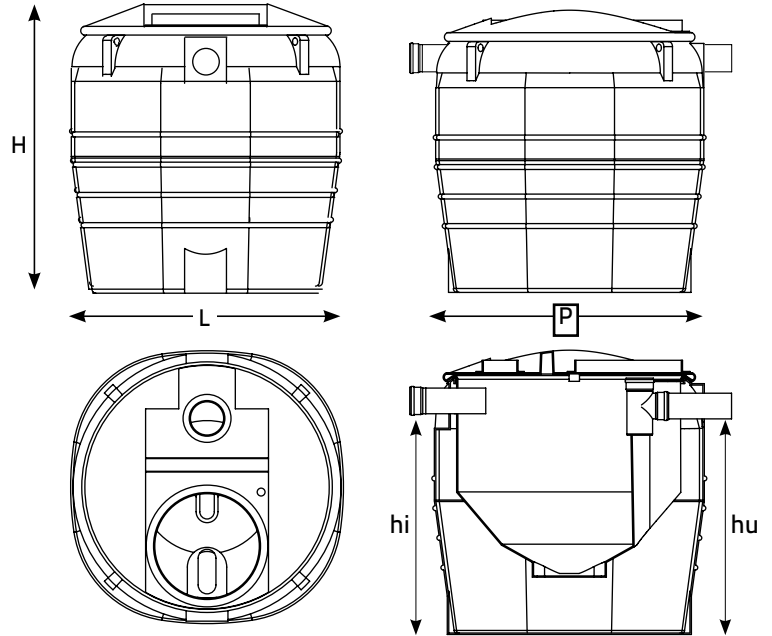
SPECIFICATION ITEM

IMHOFF type septic tank in recyclable PE (linear polyethylene), composed of two monobloc compartments. The sedimentation tank must have a minimum volume of 40 l/AE and the digester a minimum volume of 110 l/AE. The product is equipped with a first manhole for inspection of the sedimentation tank, for sludge sampling and for inspection of the outlet pipe, of a second manhole for the inspection of the inlet pipe and finally of a vent valve for the removal of the bio-gas. The inlet and outlet pipes are equipped with suitable external double lip rubber seals, to guarantee a perfect seal.

IMHOFF TANKS EMILIA ROMAGNA



SEPTIC TANK IMHOFF type
from 2 to 30 AE



download the
relevant data sheet



IMHOFF "EMILIA ROMAGNA" TANKS

With sludge extraction at least once a year

Models		Dimensions (cm)					Overflow volumes (litres)			Dimensions (mm)				€
A.E.	Item	H	L	P	hi	hu	Sedimentator	Digester	Total	øi øu	ø manhole entrance	ø manhole	ø biogas	
2	ECO IMO 4 new	111	107	107	85	83	250	440	690	100	140	420	1"	625,90
3	ECO IMO 6 new	121	117	117	91	89	250	660	910	100	140	420	1"	691,79
5	ECO IMO 10 new	150	136	136	117	115	400	1100	1500	125	140	420	1"	961,32
7	ECO IMO 15 new	187	146	146	153	150	600	1650	2250	125	140	420	1"	1.467,42
10	ECO IMO 20 new	189	165	165	162	160	800	2200	3000	125	140	420	1"	2.141,25
12	ECO IMO 25 new	199	184	184	165	163	1000	2750	3750	125**	140	420	1"	2.408,48
15	ECO IMO 30 new	221	185	185	185,5	182,5	1200	3300	4500	125**	140	420	1"	2.830,03

IMHOFF "EMILIA ROMAGNA" TANKS

With sludge extraction at least twice a year

Models		Dimensions (cm)					Overflow volumes (litres)			Dimensions (mm)				€
A.E.	Item	H	L	P	hi	hu	Sedimentator	Digester	Total	øi øu	ø manhole entrance	ø manhole	ø biogas	
4	ECO IMO 4 new	111	107	107	85	83	250	440	690	100	140	420	1"	625,90
6	ECO IMO 6 new	121	117	117	91	89	250	660	910	100	140	420	1"	691,79
10	ECO IMO 10 new	150	136	136	117	115	400	1100	1500	125	140	420	1"	961,32
15	ECO IMO 15 new	187	146	146	153	150	600	1650	2250	125	140	420	1"	1.467,42
20	ECO IMO 20 new	189	165	165	162	160	800	2200	3000	125	140	420	1"	2.141,25
25	ECO IMO 25 new	199	184	184	165	163	1000	2750	3750	125**	140	420	1"	2.408,48
30	ECO IMO 30 new	221	185	185	185,5	182,5	1200	3300	4500	125**	140	420	1"	2.830,03

** Available on request with inlet and outlet (øi and øu) ø=160



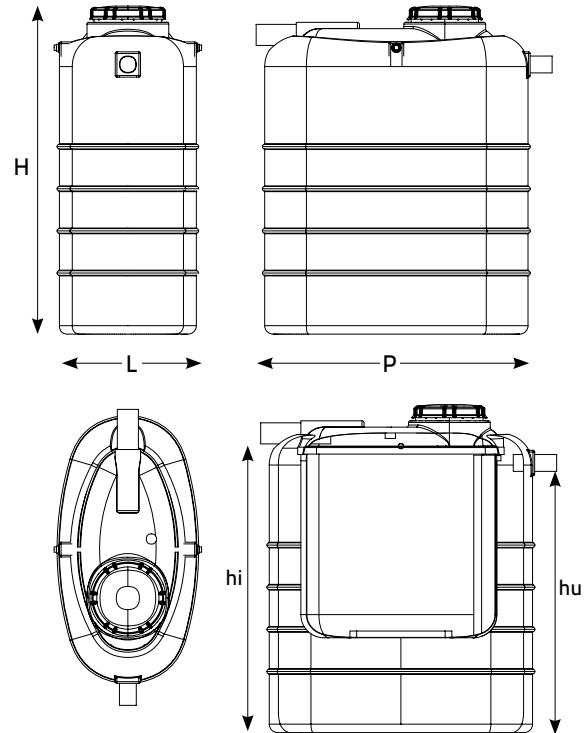
EMILIA ROMAGNA



Dimensioned according to DGR 1053/03
Table A of the Emilia Romagna Region
according to the following tables:



The Imhoff tank SLIM model can be used in all cases where space problems exist. The SLIM, in fact, while maintaining the sizing parameters required by current legislation is characterized by a compact shape that allows installation in restricted spaces.



IMHOFF SLIM TANK "EMILIA ROMAGNA"

With sludge extraction at least once a year

Models		Dimensions (cm)					Overflow volumes (litres)			Dimensions (mm)			€	
A.E.	Item	H	L	P	hi	hu	Sedimentator	Digester	Total	øi øu	ø manhole entrance	ø manhole		ø biogas
2	ECO SLIM 5	159	65	125	138	123	250	570	820	100	100	320	1"	709,01

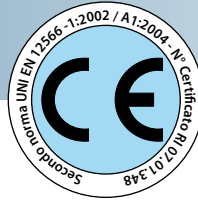
IMHOFF SLIM TANK "EMILIA ROMAGNA"

With sludge extraction at least twice a year

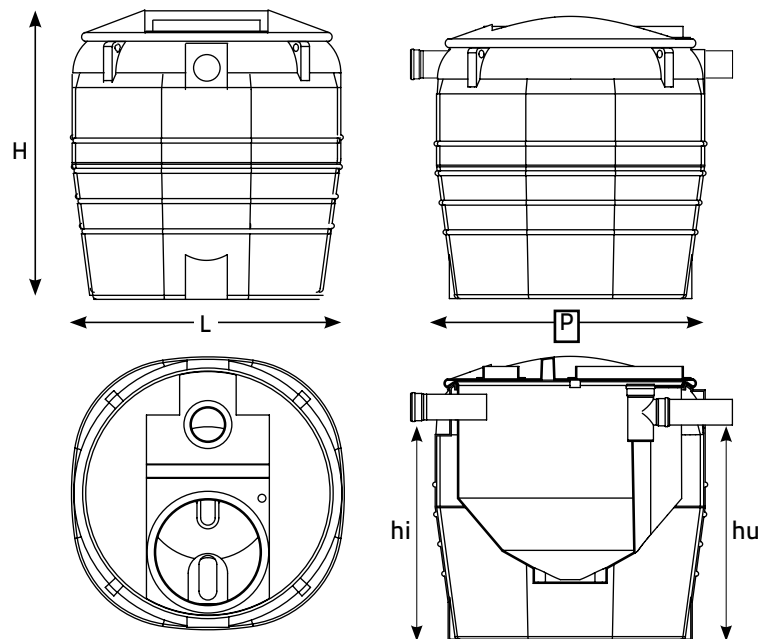
Models		Dimensions (cm)					Overflow volumes (litres)			Dimensions (mm)			€	
A.E.	Item	H	L	P	hi	hu	Sedimentator	Digester	Total	øi øu	ø manhole entrance	ø manhole		ø biogas
5	ECO SLIM 5	159	65	125	138	123	250	570	820	100	100	320	1"	709,01

SPECIFICATION ITEM (EMILIA ROMAGNA Region)

IMHOFF type septic tank in recyclable PE (linear polyethylene), composed of two monobloc compartments. The sedimentation tank must have a minimum volume of 40 l/AE and the digester a minimum volume of 110 l/AE. The product is equipped with a first manhole for inspection of the sedimentation tank, for sludge sampling and for inspection of the outlet pipe, of a second manhole for the inspection of the inlet pipe and finally of a vent valve for the removal of the bio-gas. The inlet and outlet pipes are equipped with suitable external double lip rubber seals, to guarantee a perfect seal.



SEPTIC TANK IMHOFF type
from 3 to 24 A.E.



download the relevant data sheet



IMHOFF "MARCHE" TAN

Models		Dimensions (cm)					Overflow volumes (litres)			Dimensions (mm)				€
A.E.	Item	H	L	P	hi	hu	Sedimentator	Digester	Total	øi øu	ø manhole entrance	ø manhole	ø biogas	
3	ECO IMO 4 new	111	107	107	85	83	250	440	690	100	140	420	1"	625,90
5	ECO IMO 6 new	121	117	117	91	89	250	660	910	100	140	420	1"	691,79
8	ECO IMO 10 new	150	136	136	117	115	400	1100	1500	125	140	420	1"	961,32
12	ECO IMO 15 new	187	146	146	153	150	600	1650	2250	125	140	420	1"	1.467,42
16	ECO IMO 20 new	189	165	165	162	160	800	2200	3000	125	140	420	1"	2.141,25
20	ECO IMO 25 new	199	184	184	165	163	1000	2750	3750	125**	140	420	1"	2.408,48
24	ECO IMO 30 new	221	185	185	185,5	182,5	1200	3300	4500	125**	140	420	1"	2.830,03

** Available on request with inlet and outlet (øi and øu) ø=160

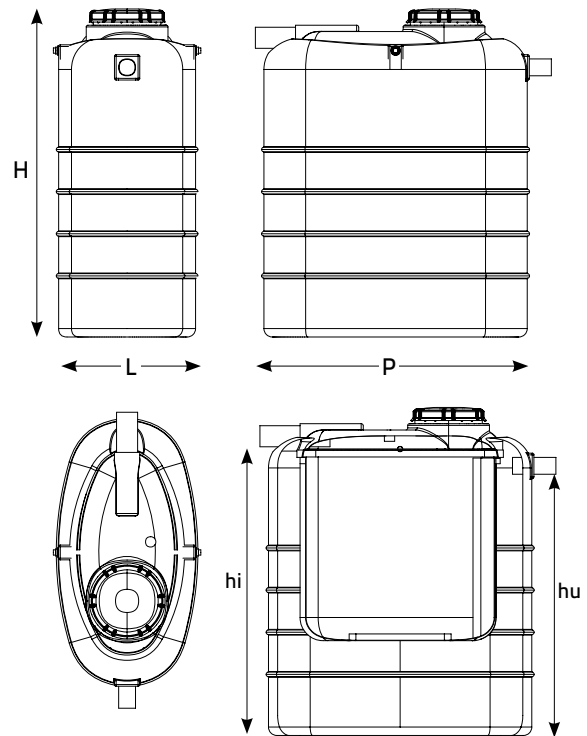


MARCHE



In compliance with the parameters indicated in administrative resolution No. 145 of 26 January 2010. (For tanks with sludge removal at least twice a year)

The Imhoff SLIM model tank can be used in all cases where space problems exist. The SLIM, in fact, while maintaining the sizing parameters required by current legislation is characterized by a compact shape that allows installation in restricted spaces.

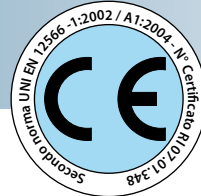


IMHOFF SLIM "MARCHE" TANK

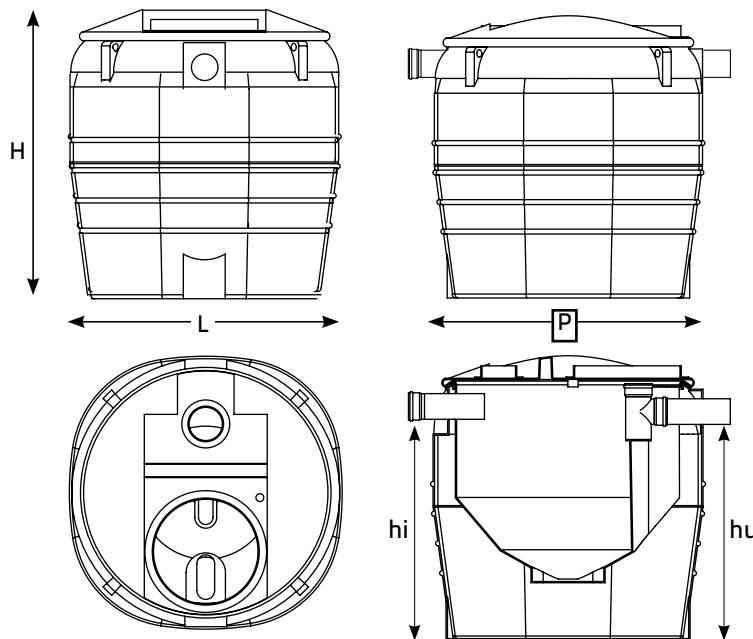
A.E.	Models	Dimensions (cm)					Overflow volumes (litres)			Dimensions (mm)				€
		H	L	P	hi	hu	Sedimentator	Digester	Total	øi øu	ø manhole entrance	ø manhole	ø biogas	
4	ECO SLIM 5	159	65	125	138	123	250	570	820	100	100	320	1"	709,01

SPECIFICATION ITEM (Marche Region)

IMHOFF type septic tank in recyclable PE (linear polyethylene), composed of two monobloc compartments. The sedimentation tank must have a minimum volume of 50 l/AE and the digester a minimum volume of 135 l/AE. The product is equipped with a first manhole for inspection of the sedimentation tank, for sludge sampling and for inspection of the exit pipe, of a second manhole for the inspection of the inlet pipe and finally of a vent valve for the removal of the bio-gas. The inlet and outlet pipes are equipped with suitable external double lip rubber gaskets, to guarantee a perfect seal.



SEPTIC TANK IMHOFF type
from 2 to 18 AE



IMHOFF "FRIULI" TANKS

Models		Dimensions (cm)					Overflow volumes (litres)			Dimensions (mm)				€
A.E.	Item	H	L	P	hi	hu	Sedimentator	Digester	Total	øi øu	ø manhole entrance	ø manhole	ø biogas	
2	ECO IMO 4 new	111	107	107	85	83	250	440	690	100	140	420	1"	625,90
3	ECO IMO 6 new	121	117	117	91	89	250	660	910	100	140	420	1"	691,79
6	ECO IMO 10 new	150	136	136	117	115	400	1100	1500	125	140	420	1"	961,32
9	ECO IMO 15 new	187	146	146	153	150	600	1650	2250	125	140	420	1"	1.467,42
12	ECO IMO 20 new	189	165	165	162	160	800	2200	3000	125	140	420	1"	2.141,25
15	ECO IMO 25 new	199	184	184	165	163	1000	2750	3750	125**	140	420	1"	2.408,48
18	ECO IMO 30 new	221	185	185	185,5	182,5	1200	3300	4500	125**	140	420	1"	2.830,03

** Available on request with inlet and outlet (øi and øu) ø=160

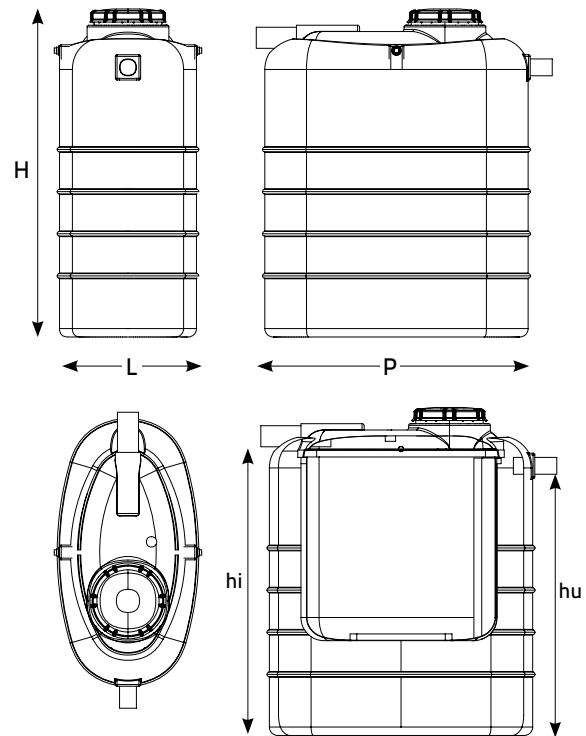


**FRIULI
VENEZIA
GIULIA**



ARPA Guidelines - Lg 40.02 Ed. 2
Rev.1 11/06/2020

The Imhoff SLIM model tank can be used in all cases where space problems exist. The SLIM, in fact, while maintaining the sizing parameters required by current legislation is characterized by a compact shape that allows installation in restricted spaces.



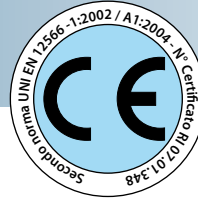
IMHOFF SLIM "FRIULI" TANK

A.E.	Models	Dimensions (cm)					Overflow volumes (litres)			Dimensions (mm)			€	
		H	L	P	hi	hu	Sedimentator	Digester	Total	ø i ø u	ø manhole entrance	ø manhole		ø biogas
3	ECO SLIM 5	159	65	125	138	123	250	570	820	100	100	320	1"	709,01

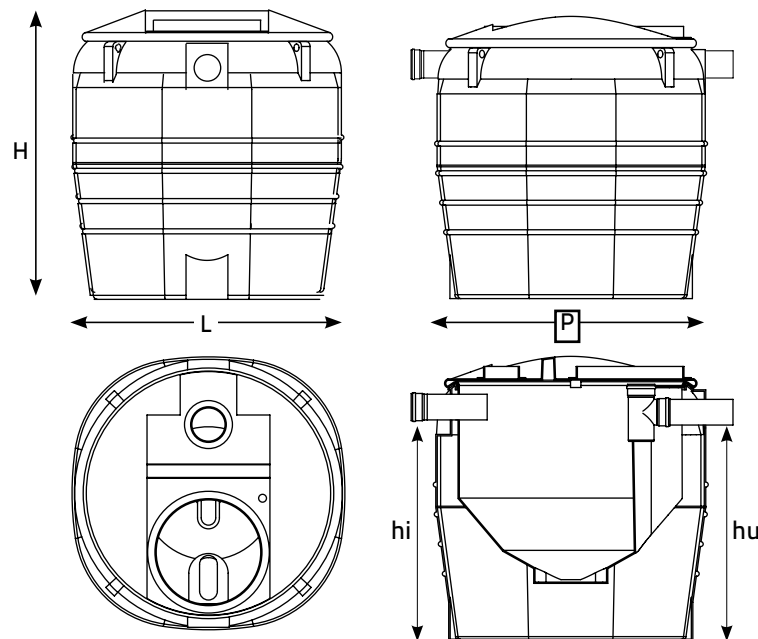
SPECIFICATION ITEM (FRIULI VENEZIA GIULIA Region)

IMHOFF type septic tank in recyclable PE (linear polyethylene), composed of two monobloc compartments. The sedimentation tank must have a minimum volume of 40/50 l/AE and the digester a minimum volume of 180/200 l/AE. The product is equipped with a first manhole for inspection of the sedimentation tank, for the collection of sludge and for the inspection of the outlet pipe, of a second manhole for the inspection of the inlet pipe and finally of a vent valve for the removal of the bio-gas. The inlet and outlet pipes are equipped with suitable external double lip rubber gaskets, to guarantee a perfect seal

IMHOFF BASILICATA TANKS



SEPTIC TANK IMHOFF type
from 3 to 24 AE



download the
relevant data sheet



IMHOFF "BASILICATA" TANKS

Models		Dimensions (cm)					Overflow volumes (litres)			Dimensions (mm)			€	
A.E.	Item	H	L	P	hi	hu	Sedimentator	Digester	Total	øi øu	ø manhole entrance	ø manhole		ø biogas
3	ECO IMO 4 new	111	107	107	85	83	250	440	690	100	140	420	1"	625,90
4	ECO IMO 6 new	121	117	117	91	89	250	660	910	100	140	420	1"	691,79
8	ECO IMO 10 new	150	136	136	117	115	400	1100	1500	125	140	420	1"	961,32
12	ECO IMO 15 new	187	146	146	153	150	600	1650	2250	125	140	420	1"	1.467,42
16	ECO IMO 20 new	189	165	165	162	160	800	2200	3000	125	140	420	1"	2.141,25
20	ECO IMO 25 new	199	184	184	165	163	1000	2750	3750	125**	140	420	1"	2.408,48
24	ECO IMO 30 new	221	185	185	185,5	182,5	1200	3300	4500	125**	140	420	1"	2.830,03

** Available on request with inlet and outlet (øi and øu) ø=160

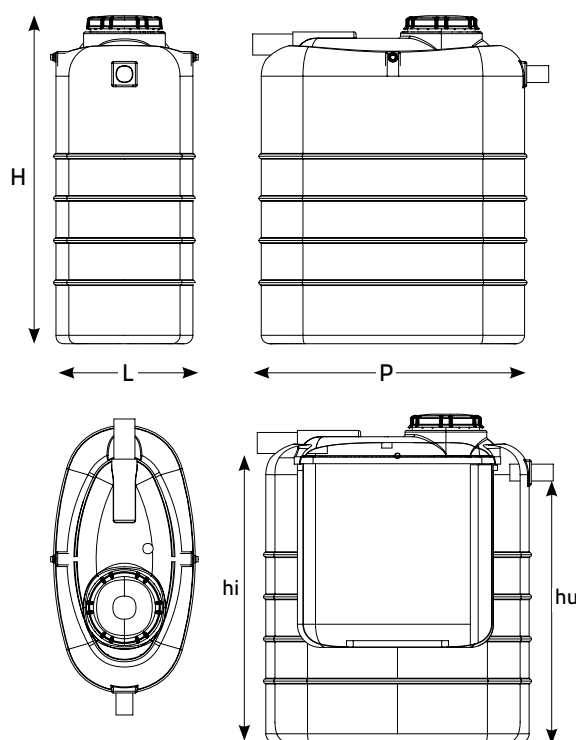


BASILICATA



LR 29 May 2017 n.9 - Art. 5 Regional Guidelines for the treatment of urban wastewater.

The Imhoff SLIM model tank can be used in all cases where space problems exist. The SLIM, in fact, while maintaining the sizing parameters required by current legislation is characterized by a compact shape that allows installation in restricted spaces.

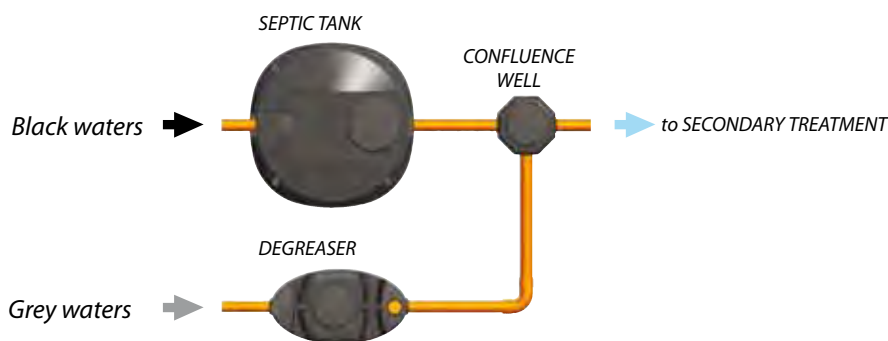


IMHOFF SLIM "BASILICATA" TANK

Models		Dimensions (cm)					Overflow volumes (litres)			Dimensions (mm)			ø biogas	€
A.E.	Item	H	L	P	hi	hu	Sedimentator	Digester	Total	øi øu	ø manhole entrance	ø manhole		
4	ECO SLIM 5	159	65	125	138	123	250	570	820	100	100	320	1"	709,01

SPECIFICATION ITEM (BASILICATA Region)

IMHOFF type septic tank in recyclable PE (linear polyethylene), composed of two monobloc compartments. The sedimentation tank must have a minimum volume of 33 l/AE and the digester a minimum volume of 133 l/AE. The product is equipped with a first manhole for inspection of the sedimentation tank, for sludge sampling and for inspection of the exit pipe, of a second manhole for the inspection of the inlet pipe and finally of a vent valve for the removal of the bio-gas. The inlet and outlet pipes are equipped with suitable external double lip rubber seals, to guarantee a perfect seal.



ECO VSV 500

ECO VSV 1000

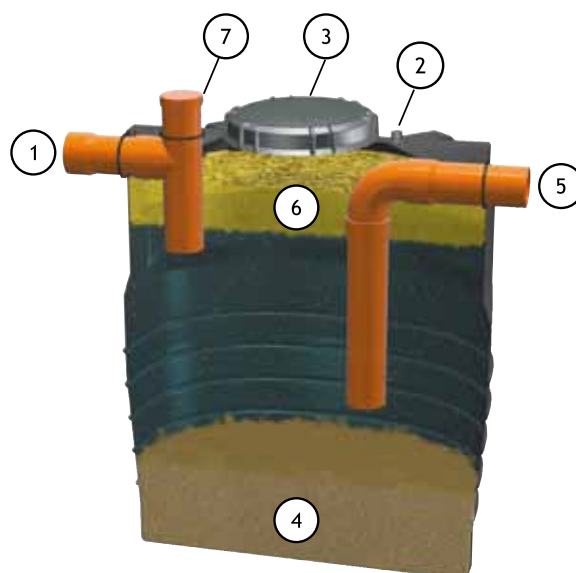
ECO VSV from 1500 to 6000

ECO VSV 10000

SEPTIC TANKS

Septic tanks are anaerobic primary treatment units in which the removal of a portion of organic material and suspended solids takes place. They are defined as septic tanks because in them an anaerobic fermentation is generated which is precisely of the "septic" type.

Septic tanks are suitable only as accessories to a secondary treatment plant, but can be used individually only in the case of specific authorizations. The Ministerial Resolution of 4 February 1977 prohibits, in fact, the installation of individual septic tanks for new installations. The two-chamber and three-chamber septic tanks carry out a more thorough primary treatment, as being composed of several compartments they allow a progressive clarification of the wastewater.

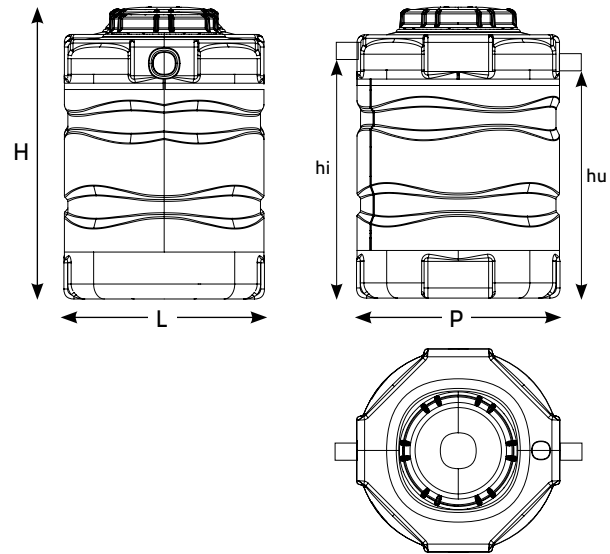


NOMENCLATURE:

- 1 - WASTE INLET
- 2 - BIO-GAS VENT
- 3 - MANHOLE
- 4 - SEDIMENTATION
- 5 - WASTE OUTPUT
- 6 - FLOATING MATERIAL
- 7 - ENTRANCE MANHOLE

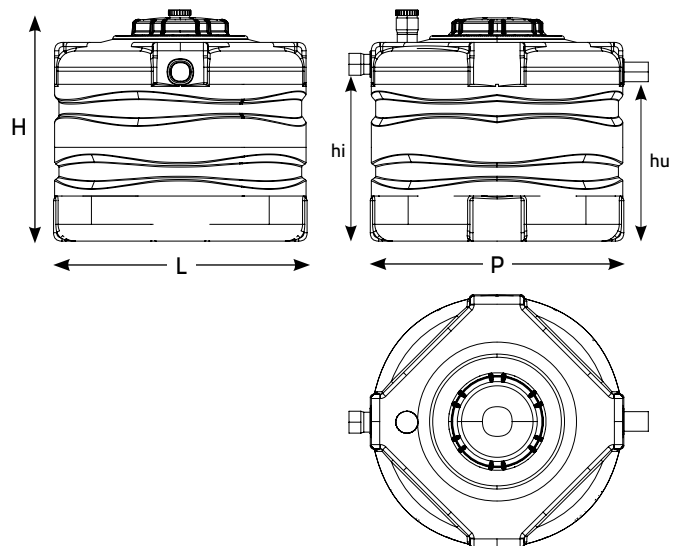
ORDINARY MAINTENANCE

Generally proceed one to four times a year with the extraction of the sludge and floating substances accumulated in the tank.



ECO VSV 500 Vertical SEPTIC TANK

Models		Dimensions (cm)					Volumes (litres)		Dimensions (mm)			Surface of sedimentation (m ²)	Ø biogas	€
A.E.	Item	H	L	P	hi	hu	Overflow	Total	Øi Øu	Ø manhole entrance	Ø manhole			
3	ECO VSV 500	116	80	80	90	87	432	500	100	/	420	0,5	1"	444,86

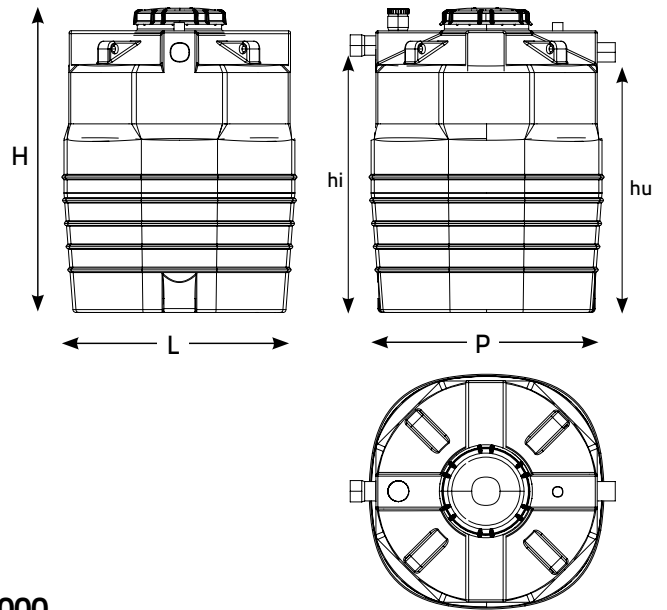


ECO VSV 1000 Vertical SEPTIC TANK

Models		Dimensions (cm)					Volumes (litres)		Dimensions (mm)			Surface of sedimentation (m ²)	Ø biogas	€
A.E.	Item	H	L	P	hi	hu	Overflow	Total	Øi Øu	Ø manhole entrance	Ø manhole			
6	ECO VSV 1000	108	120	120	83	80	835	1000	100	100	420	1,1	1"	608,41

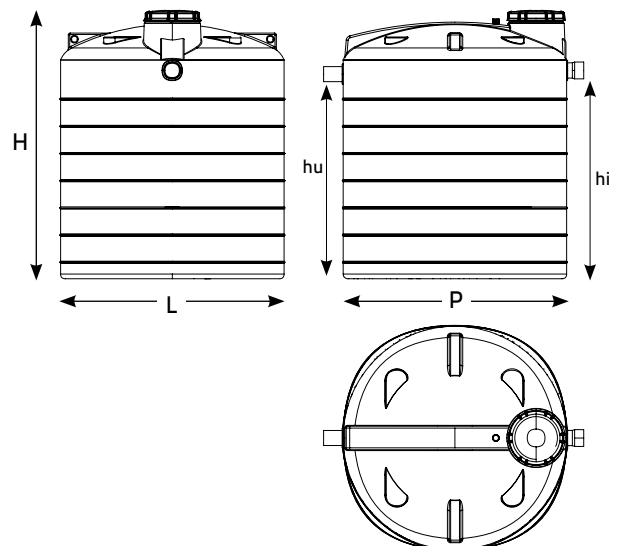
SPECIFICATION ITEM

Septic tank in recyclable PE (linear polyethylene), composed of a monobloc compartment and a screw lid for inspection, for the collection of sludge and suspended solids. There is also a vent valve and a manhole cover for inspection of the inlet pipe. The inlet and outlet pipes are equipped with suitable external double lip rubber gaskets, to guarantee a perfect seal.



ECO VSV Vertical SEPTIC TANKS from 1500 to 6000

Models		Dimensions (cm)					Volumes (litres)		Dimensions (mm)			Surface of sedimentation (m ²)	Ø biogas	€
A.E.	Item	H	L	P	hi	hu	Overflow	Total	Øi Øu	Ø manhole entrance	Ø manhole			
8	ECO VSV 1500	150	117	117	118	115	1243	1360	100	100	420	1,4	1"	845,42
14	ECO VSV 2000	182	136	136	151	148	2104	2265	125	125	420	1,8	1"	1.000,31
19	ECO VSV 3000	219	146	146	184	181	2923	3107	125	125	420	2,1	1"	1.521,71
25	ECO VSV 4000	224	165	165	189	186	3800	4200	160	160	420	2,7	1"	1.818,19
31	ECO VSV 5000	229	184	184	188	185	4705	5110	160	160	420	3,4	1"	2.150,13
37	ECO VSV 6000	257	185	185	216	213	5575	5993	160	160	420	3,4	1"	2.705,58

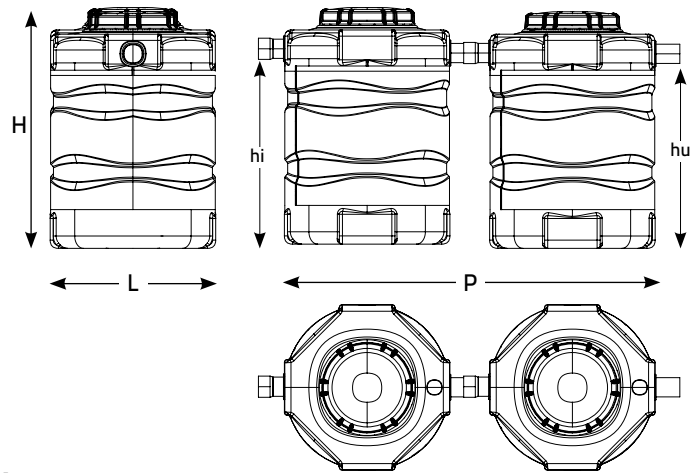


ECO VSV 10000 Vertical SEPTIC TANK

Models		Dimensions (cm)					Volumes (litres)		Dimensions (mm)			Surface of sedimentation (m ²)	Ø biogas	€
A.E.	Item	H	L	P	hi	hu	Overflow	Total	Øi Øu	Ø manhole entrance	Ø manhole			
60	ECO VSV 10000	260	238	238	214	210	8928	10000	160	/	550	4,4	2"	4.356,91

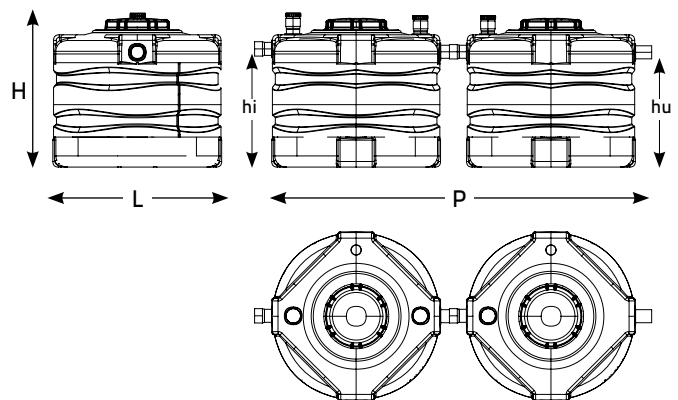
DOUBLE CHAMBER SEPTIC TANKS

The building regulations of the Municipality of Florence provide very precise indications regarding the sizing of two-chamber septic tanks, i.e.: they must be made up of two watertight chambers with a total capacity of 225 l per AE, with an absolute minimum of 3000 l. The depth of the liquid in each chamber must be between 1.5 m and 1.7 m. In each chamber, a free space of at least 200 mm must be ensured between the level of the liquid and the top of the pit. The pipes for the inlet and outlet of the sewage must have a diameter of no less than 100 mm and must immerse themselves at least 300 mm below the liquid level. The communication device between one chamber and another (saddle) must be made with pipes with a diameter of no less than 100 mm, positioned in an "H" or inverted "U" shape, extended upwards to the top of the pit and downwards until it is immersed at least 300 mm below the level of the liquid. Furthermore, they must be equipped with two manhole covers, one for inspection at the communication element between the two chambers and one for sludge collection.



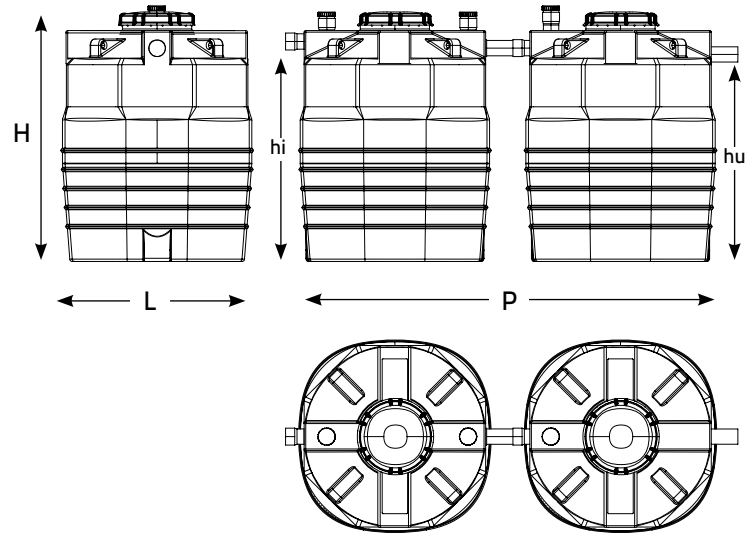
ECO VBC 1000 DOUBLE CHAMBER SEPTIC TANK

Models		Dimensions (cm)					Volumes (litres)		Dimensions (mm)			Surface of sedimentation (m ²)	ø biogas	€
A.E.	Item	H	L	P	hi	hu	Over-flow	Total	øi øu	ø manhole entrance	ø manhole			
6	ECO VBC 1000	116	80	min ~ 165	91	85	849	1000	100	/	420x2	0,5x2	1"	889,71



ECO VBC 2000 DOUBLE CHAMBER SEPTIC TANK

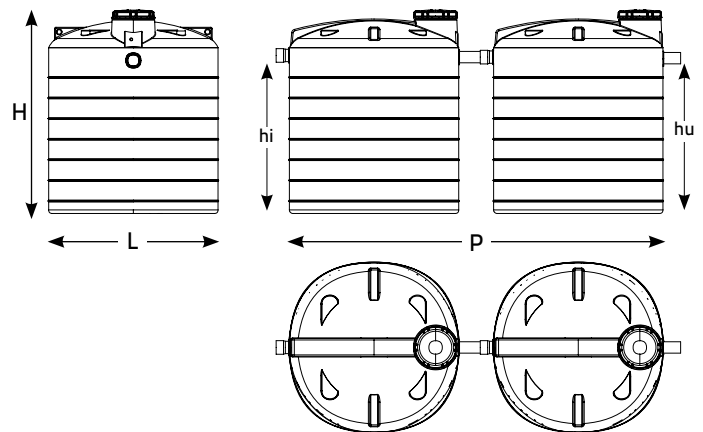
Models		Dimensions (cm)					Volumes (litres)		Dimensions (mm)			Surface of sedimentation (m ²)	ø biogas	€
A.E.	Item	H	L	P	hi	hu	Over-flow	Total	øi øu	ø manhole entrance	ø manhole			
11	ECO VBC 2000	108	120	min ~ 245	78	72	1636	2000	100	100	420x2	1,1x2	1"	1.216,81



ECO VBC DOUBLE CHAMBER SEPTIC TANKS from 3000 to 11000

Models		Dimensions (cm)					Volumes (litres)		Dimensions (mm)			Surface of sedimentation (m ²)	Ø biogas	€	
A.E.	Item	H	L	P	hi	hu	Over-flow	Total	Øi Øu	Ø manhole entrance	Ø manhole				
*	20	ECO VBC 3000	183	117	min ~ 239	153	146	3120	3430	100	100	420x2	1,4x2	1"	1.690,85
*	27	ECO VBC 4000	182	136	min ~ 277	151	145	4100	4530	125	125	420x2	1,8x2	1"	2.000,60
	38	ECO VBC 6000	219	146	min ~ 297	184	178	5724	6214	125	125	420x2	2,1x2	1"	3.043,42
	49	ECO VBC 8000	224	165	min ~ 335	189	183	7438	8400	160	160	420x2	2,7x2	1"	3.636,39
	61	ECO VBC 10000	229	184	min ~ 373	188	182	9212	10220	160	160	420x2	3,4x2	1"	4.300,25
	73	ECO VBC 11000	257	185	min ~ 375	226	220	10950	11986	160	160	420x2	3,4x2	1"	5.411,16

* Complies with the Building Regulations of the Municipality of Florence



ECO VBC 20000 DOUBLE CHAMBER SEPTIC TANK

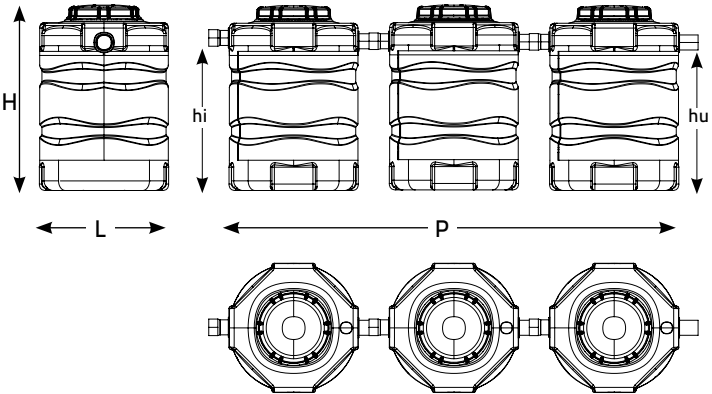
Models		Dimensions (cm)					Volumes (litres)		Dimensions (mm)			Surface of sedimentation (m ²)	Ø biogas	€	
A.E.	Item	H	L	P	hi	hu	Over-flow	Total	Øi Øu	Ø manhole entrance	Ø manhole				
	118	ECO VBC 20000	260	238	min ~ 480	211	203	17683	20000	160	160	550x2	4,4x2	2"	8.713,83

SPECIFICATION ITEM

The double chambers have two completely watertight monobloc compartments in recyclable PE (linear polyethylene), connected by saddles of at least Ø100 mm. Each compartment is equipped with a vent valve, a manhole cover for inspecting the entrance and a manhole cover for sludge collection. The inlet, outlet and connection pipes are equipped with suitable double lip rubber gaskets, to guarantee a perfect seal.

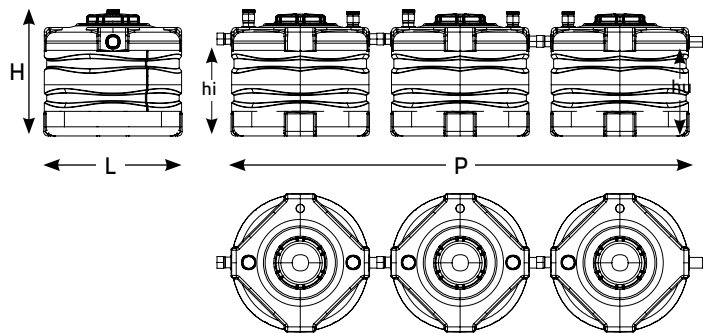
TRI-CHAMBER SEPTIC TANKS

Other Tuscan municipalities provide indications regarding the sizing and use of three-chamber septic tanks, i.e.: they must be composed of three watertight chambers with a total capacity of 200 l per AE and with a minimum of 1800 l. The depth of the liquid must be between 1 m and 2 m and the tanks must be connected to each other using "H" saddles with a minimum diameter of 100 mm and dipping into the liquid for 300 mm. Furthermore, they must be equipped with two manhole covers, one for inspection at the communication element between the two chambers and one for sludge collection.



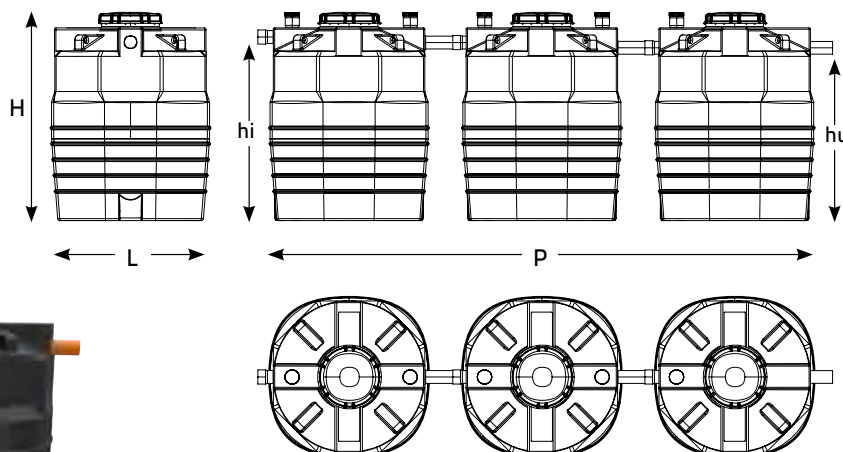
TRI-CHAMBER SEPTIC TANK ECO VTC 1500

Models		Dimensions (cm)					Volumes (litres)		Dimensions (mm)			Surface of sedimentation (m ²)	Ø biogas	€
A.E.	Item	H	L	P	hi	hu	Over-flow	Total	Øi Øu	Ø manhole entrance	Ø manhole			
8	ECO VTC 1500	116	80	min ~ 250	91	82	1251	1500	100	/	420x3	0,5x3	1"	1.334,58



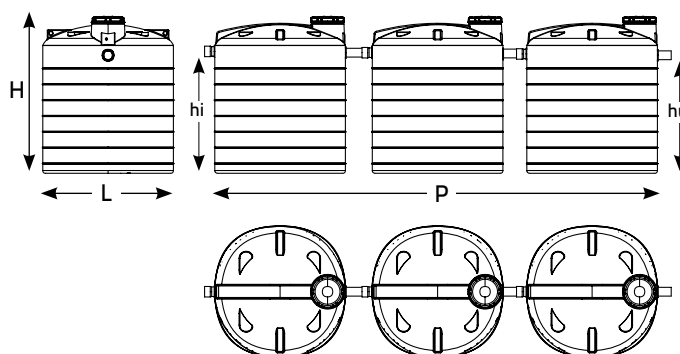
TRI-CHAMBER SEPTIC TANK ECO VTC 3000

Models		Dimensions (cm)					Volumes (litres)		Dimensions (mm)			Surface of sedimentation (m ²)	Ø biogas	€
A.E.	Item	H	L	P	hi	hu	Over-flow	Total	Øi Øu	Ø manhole entrance	Ø manhole			
16	ECO VTC 3000	108	120	min ~ 370	78	69	2404	3000	100	100	420x3	1,1x3	1"	1.825,21



TRI-CHAMBER SEPTIC TANKS ECO VTC from 4000 to 14500

Models		Dimensions (cm)					Volumes (litres)		Dimensions (mm)			Surface of sedimentation (m ²)	Ø biogas	€
A.E.	Item	H	L	P	hi	hu	Over-flow	Total	Øi Øu	Ø manhole entrance	Ø manhole			
23	ECO VTC 4000	150	117	min ~ 361	118	109	3486	4080	100	100	420x3	1,4x3	1"	2.536,27
40	ECO VTC 6500	182	136	min ~ 418	157	142	5988	6795	125	125	420x3	1,8x3	1"	3.000,91
56	ECO VTC 9000	219	146	min ~ 448	184	175	8397	9321	125	125	420x3	2,1x3	1"	4.565,13
73	ECO VTC 11500	224	165	min ~ 505	188	180	10920	12600	160	160	420x3	2,7x3	1"	5.454,58
90	ECO VTC 14500	229	184	min ~ 562	188	178	13524	15330	160	160	420x3	3,4x3	1"	6.450,38



TRI-CHAMBER SEPTIC TANK ECO VTC 30000

Models		Dimensions (cm)					Volumes (litres)		Dimensions (mm)			Surface of sedimentation (m ²)	Ø biogas	€
A.E.	Item	H	L	P	hi	hu	Over-flow	Total	Øi Øu	Ø manhole entrance	Ø manhole			
175	ECO VTC 30000	260	238	min ~ 725	214	205	26266	30000	160	160	550x3	4,4x3	2"	13.070,74

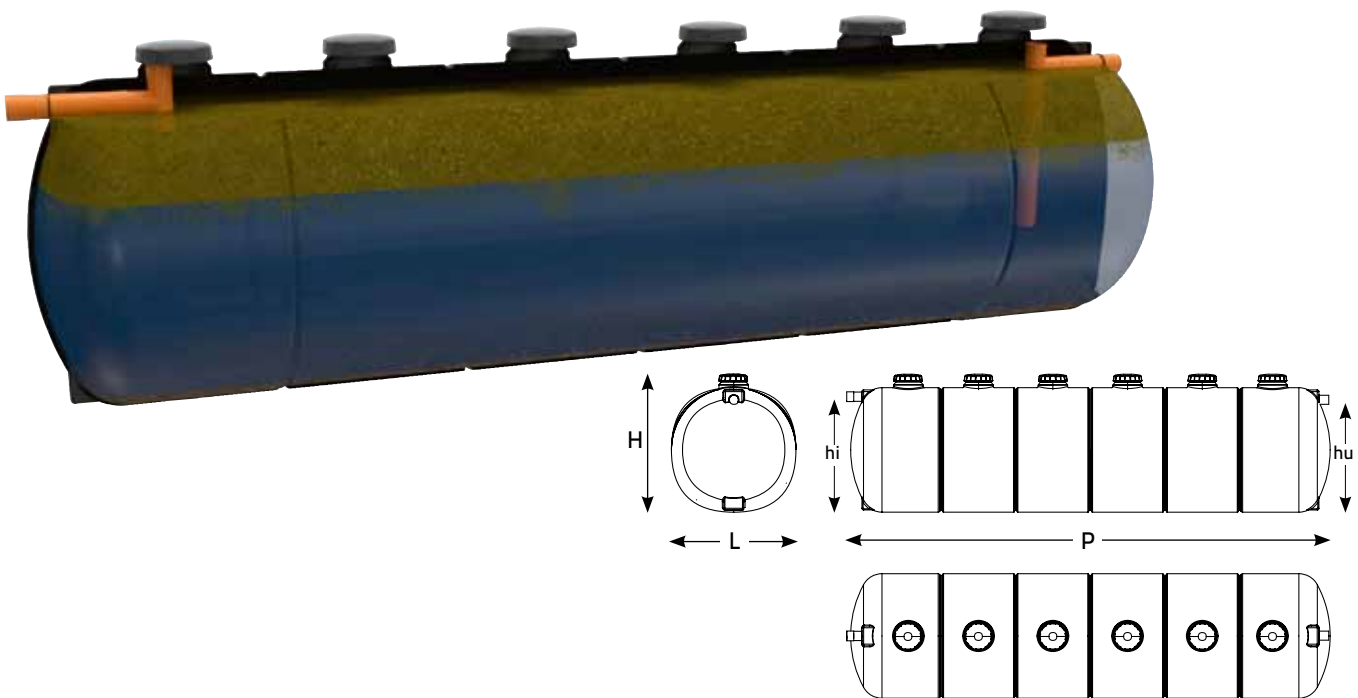
SPECIFICATION ITEM

The three-chamber units have three completely watertight monobloc compartments in recyclable PE (linear polyethylene), connected by saddles of at least Ø100 mm. Each compartment is equipped with a vent valve, a manhole cover for inspecting the entrance and a manhole cover for sludge collection. The inlet, outlet and connection pipes are equipped with suitable double lip rubber gaskets, to guarantee a perfect seal.

The septic tanks TELCOM line G.I. are composed of several compartments to concentrate in the first compartments both the sedimentation of the sludge, creating a suitable zone of calm, both the flotation of the substances that, due to the low relative specific weight, tend to float on the surface. In the following rooms, therefore, a progressive clarification of the waste water.

These compartments are dimensioned in such a way that biological stabilisation of sedimented organic substances (fermentation or anaerobic digestion) is achieved and the ratio between BOD₅, nitrogen and phosphorus remains balanced. An excessive sizing of septic tanks, in fact, can cause an imbalance between the ratio of these factors with negative effects on the purification capacity of a possible secondary treatment downstream of them.

TELCOM septic tanks are made of PE (linear polyethylene), a completely recyclable material and have manhole covers for the inspection and collection of sludge, an inlet sewage pipe with its external rubber gasket, a clarified water outlet pipe with its seal and a vent for the removal of bio-gas.

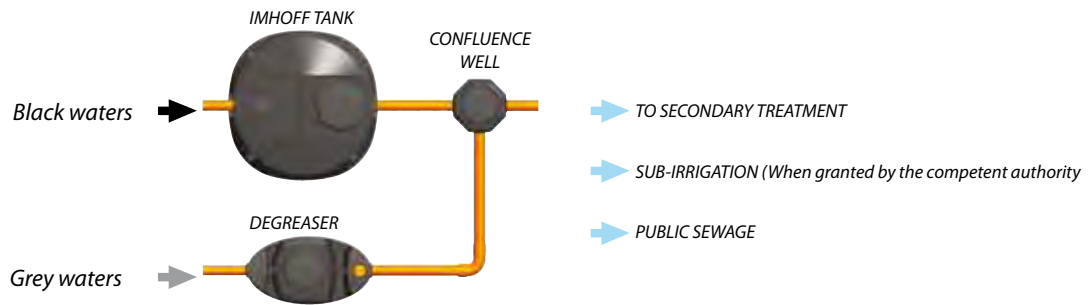


SEPTIC TANKS Large Systems line

A.E.	ITEM	TOTAL VOLUME (litres)	Dimensions (cm)			Number manhole ø550	ø Pipe IN/OUT (mm)	hi (cm)	hu (cm)	€
			L	P	H					
NEW 56	VS 8500	8500	225	279	243	2	160	204	200	5.670,14
67	VS 10000	10000	225	320	243	2	160	204	200	5.915,00
80	VS 12000	12000	225	370	243	2	160	204	200	7.594,89
100	VS 15000	15000	225	452	243	2	160	204	200	8.645,67
113	VS 17000	17000	225	502	243	2	160	204	200	10.297,07
123	VS 18500	18500	225	543	243	2	160	204	200	10.820,27
133	VS 20000	20000	225	584	243	2	160	204	200	11.343,47
167	VS 25000	25000	225	716	243	3	160	204	200	14.839,43
200	VS 30000	30000	225	848	243	4	160	204	200	17.537,55
235	VS 35000	35000	225	980	243	4	160	204	200	21.362,65
265	VS 40000	40000	225	1112	243	5	160	204	200	23.757,38
300	VS 45000	45000	225	1244	243	5	160	204	200	27.813,67
333	VS 50000	50000	225	1376	243	6	160	204	200	32.363,47

ORDINARY MAINTENANCE

For Telcom GI septic tanks, preferably empty one to three times a year.



DEGREASERS

The degreasers are used for carrying out the separation of fats and oils (not emulsinated) or sands. In public discharges, the kind of particular uses like restaurants, hotels etc., are always present oils and fats, while the removal of such substances is necessary because they can seriously compromise the working of successive biologic depuration plants. The functioning of degreasers is based on the use of properly equipped stilling tanks in which oils and fats (in general all substances with a lower specific weight than water) are allowed to float and sedimentable materials to precipitate.

The degreasers are dimensionally designed by taking into consideration a working section for the purpose of floating that would not be lower than 0,25 m² for every litre per second of entering flow as specified by the DIN 4040 norms.



ECO DIS 1/3



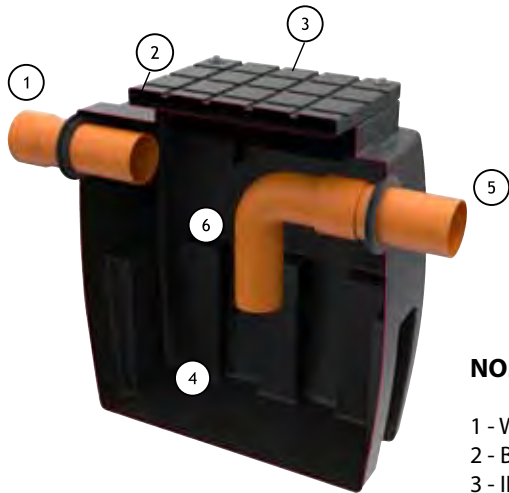
ECO DIS 18



DEGREASER MOD. TECHNO

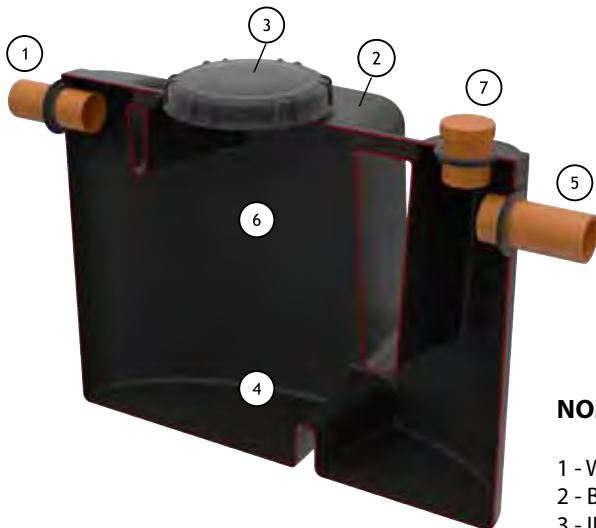
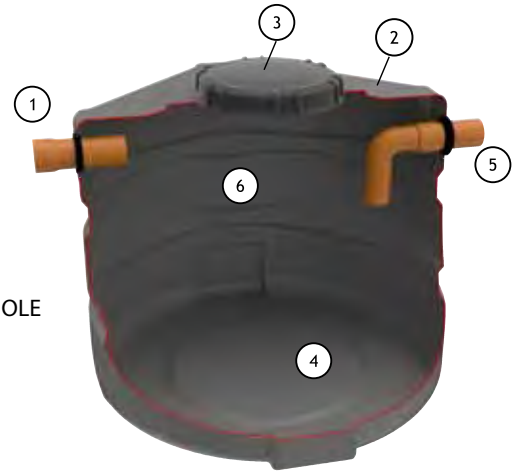


DEGREASER MOD. STANDARD (20-110)



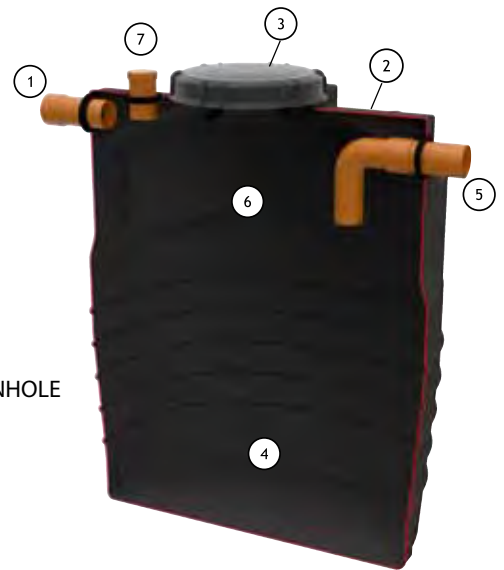
NOMENCLATURE:

- 1 - WASTE INLET
- 2 - BIO-GAS VENT
- 3 - INSPECTION AND SAMPLING MANHOLE
- 4 - SEDIMENTATION AREA
- 5 - WASTE OUTLET
- 6 - GREASE COLLECTION



NOMENCLATURE:

- 1 - WASTE INLET
- 2 - BIO-GAS VENT
- 3 - INSPECTION AND SAMPLING MANHOLE
- 4 - SEDIMENTATION AREA
- 5 - WASTE OUTPUT
- 6 - GREASE COLLECTION
- 7 - EXIT MANHOLE



ORDINARY MAINTENANCE

Unless specifically indicated by the competent authority, generally clean the tank one to four times a year, removing accumulated fats, oils and inert materials.

SPECIFICATION ITEM

Degreaser in recyclable PE (linear polyethylene), composed of a monobloc compartment. The product is equipped with a vent valve for removing biogas, a manhole cover for inspecting the inlet pipe and a manhole cover for removing sludge and grease. It has inlet and outlet pipes equipped with suitable double lip rubber gaskets, to guarantee a perfect seal.

DEGREASERS

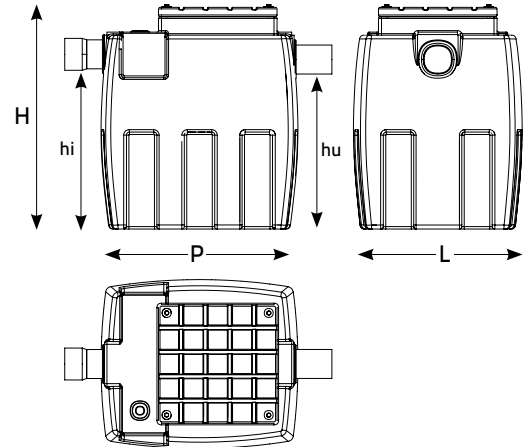
Sized on 50 liters per AE

RECOMMENDED DEGREASERS (Sized at 50 liters per AE)

DIMENSIONED ACCORDING TO REGIONAL REGULATIONS:

-EMILIA ROMAGNA
DGR n.1053 of 9 June 2003
-UMBRIA
DGR n.1029 of 19 September 2018

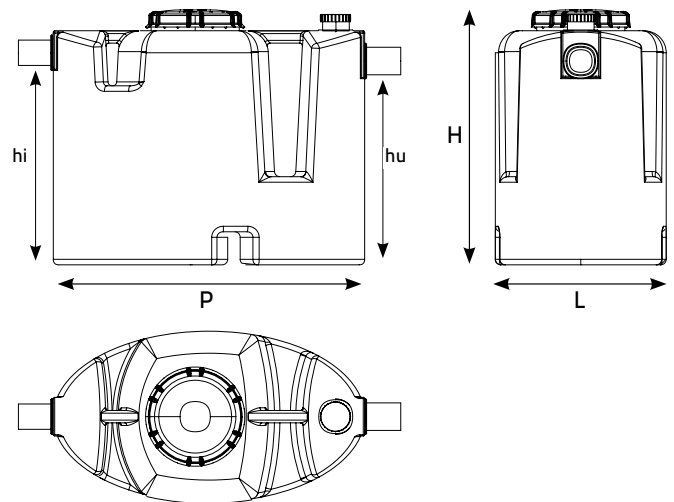
-MOLISE
DGR n.68 of 2015
-FRIULI VENEZIA GIULIA
DGR n.2000 of 15 November 2012



DEGREASER for residential areas, hotels with restaurants, similar activities (50 liters per AE)

Models		Dimensions (cm)					Volumes (litres)		Dimensions (mm)			ø biogas	€
A.E.	Item	H	L	P	hi	hu	Overflow	Total	øi øu	ø manhole exit	manhole		
1	ECO DIS 1	58	45	53	42	40	80	100	100	/	300x300*	1"	236,51
3	ECO DIS 3	70	55	65	51	49	150	200	100	/	350x350*	1"	306,89

* Manhole cover with M10 stop pins and gaskets



DEGREASER for residential areas, hotels with restaurants, similar activities (50 liters per AE)

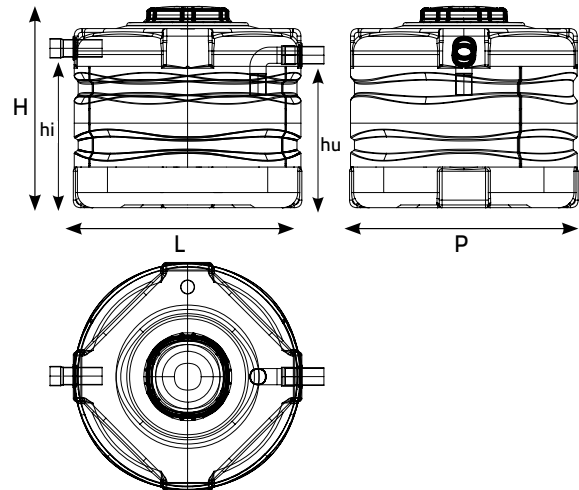
Models		Dimensions (cm)					Volumes (litres)		Dimensions (mm)			ø biogas	€
A.E.	Item	H	L	P	hi	hu	Overflow	Total	øi øu	ø manhole exit	ø manhole		
4	ECO DIS 4	80	56	101	54	52	200	260	100	100	320	1"	320,44
6	ECO DIS 6	91	63	114	66	64	320	380	100	100	320	1"	376,20
10	ECO DIS 10	103	74	135	76	74	500	590	100	100	320	1"	449,20

RECOMMENDED DEGREASERS (Sized at 50 liters per AE)

DIMENSIONED ACCORDING TO REGIONAL REGULATIONS:

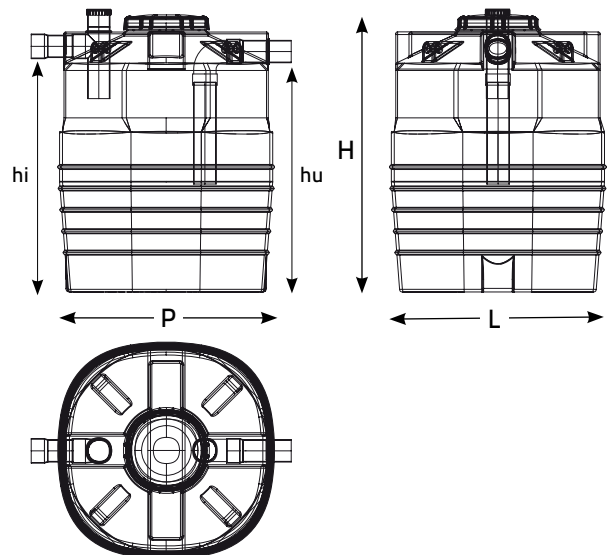
-EMILIA ROMAGNA
DGR n.1053 of 9 June 2003
-UMBRIA
DGR n.1029 of 19 September 2018

-MOLISE
DGR n.68 of 2015
-FRIULI VENEZIA GIULIA
DGR n.2000 of 15 November 2012



DEGREASER for residential areas, hotels with restaurants, similar activities (50 liters per AE)

Models		Dimensions (cm)					Volumes (litres)		Dimensions (mm)			ø biogas	€
A.E.	Item	H	L	P	hi	hu	Overflow	Total	øi øu	ø manhole exit	ø manhole		
18	ECO DIS 18	108	120	120	82	80	900	1000	100	/	420	1"	608,41

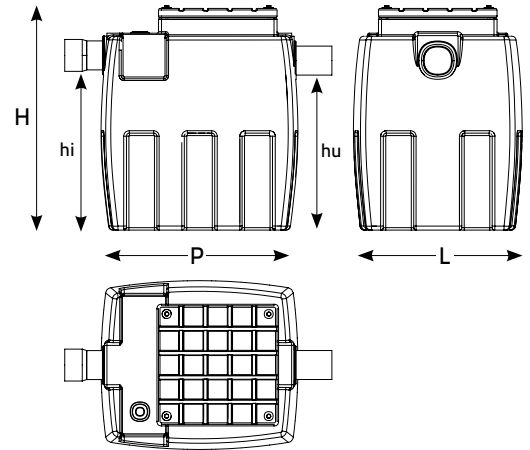


DEGREASER for residential areas, hotels with restaurants, similar activities (50 liters per AE)

Models		Dimensions (cm)					Volumes (litres)		Dimensions (mm)			ø biogas	€
A.E.	Item	H	L	P	hi	hu	Overflow	Total	øi øu	ø manhole exit	ø manhole		
25	ECO DIS 30	150	117	117	118	115	1170	1360	100	100	420	1"	845,42
42	ECO DIS 40	182	136	136	151	148	2006	2265	125	125	420	1"	1.000,31
58	ECO DIS 60	219	146	146	184	181	2800	3107	125	125	420	1"	1.521,71
76	ECO DIS 80	224	165	165	195	192	3758	4200	125	125	420	1"	1.818,19
94	ECO DIS 100	229	184	184	195	192	4671	5110	125	125	420	1"	2.150,13
111	ECO DIS 110	257	185	185	221	218	5520	5993	125	125	420	1"	2.705,58

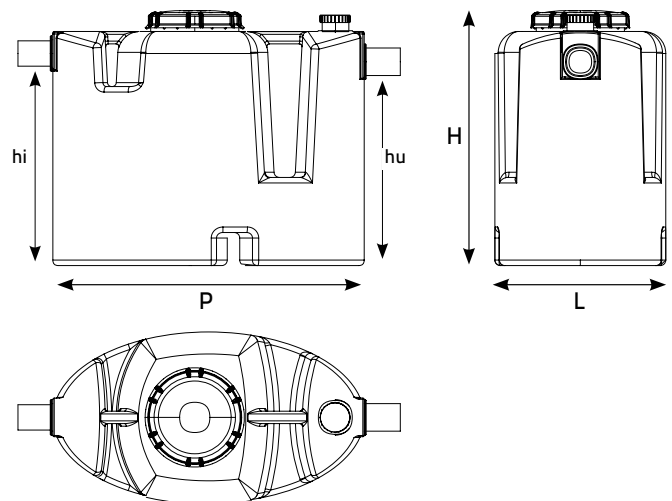
For a larger number of Covered/AE contact our Technical/Commercial Office.

RECOMMENDED DEGREASER (Sized at 30 liters per AE) for discharge into the SEWER



DEGREASERS (30 liters per AE)

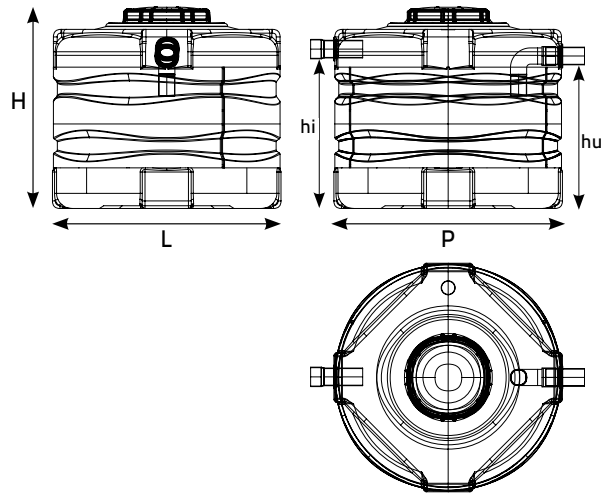
Models		Dimensions (cm)					Volumes (litres)		Dimensions (mm)			ø biogas	€
A.E.	Item	H	L	P	hi	hu	Overflow	Total	øi øu	ø manhole exit	manhole		
2	ECO DIS 1	58	45	53	42	40	80	100	100	/	300x300*	1"	236,51
5	ECO DIS 3	70	55	65	51	49	150	200	100	/	350x350*	1"	306,89



DEGREASERS (30 liters per AE)

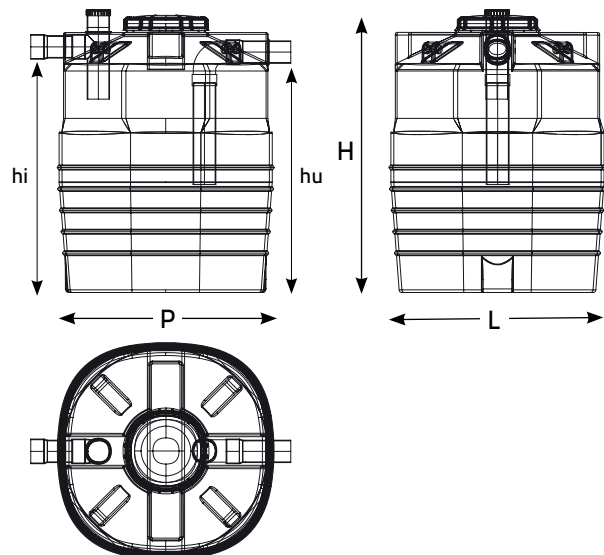
Models		Dimensions (cm)					Volumes (litres)		Dimensions (mm)			ø biogas	€
A.E.	Item	H	L	P	hi	hu	Overflow	Total	øi øu	ø manhole exit	ø manhole		
6	ECO DIS 4	80	56	101	54	52	200	260	100	100	320	1"	320,44
10	ECO DIS 6	91	63	114	66	64	320	380	100	100	320	1"	376,20
17	ECO DIS 10	103	74	135	76	74	500	590	100	100	320	1"	449,20

RECOMMENDED DEGREASER (Sized at 30 liters per AE) for discharge into the SEWER



DEGREASERS (30 liters per AE)

Models		Dimensions (cm)					Volumes (litres)		Dimensions (mm)			Ø biogas	€
A.E.	Item	H	L	P	hi	hu	Overflow	Total	Øi Øu	Ø manhole entrance	Ø manhole		
30	ECO DIS 18	108	120	120	82	80	900	1000	100	/	420	1"	608,41



DEGREASERS (30 liters per AE)

Models		Dimensions (cm)					Volumes (litres)		Dimensions (mm)			Ø biogas	€
A.E.	Item	H	L	P	hi	hu	Overflow	Total	Øi Øu	Ø manhole entrance	Ø manhole		
41	ECO DIS 30	150	117	117	118	115	1243	1360	100	100	420	1"	845,42
70	ECO DIS 40	182	136	136	151	148	2104	2265	125	125	420	1"	1.000,31
97	ECO DIS 60	219	146	146	184	181	2923	3107	125	125	420	1"	1.521,71
126	ECO DIS 80	224	165	165	195	192	3800	4200	125	125	420	1"	1.818,19
156	ECO DIS 100	229	184	184	195	192	4705	5110	125	125	420	1"	2.150,13
185	ECO DIS 110	257	185	185	221	218	5575	5993	125	125	420	1"	2.705,58

For a larger number of Covered/AE contact our Technical/Commercial Office.

DEGREASERS

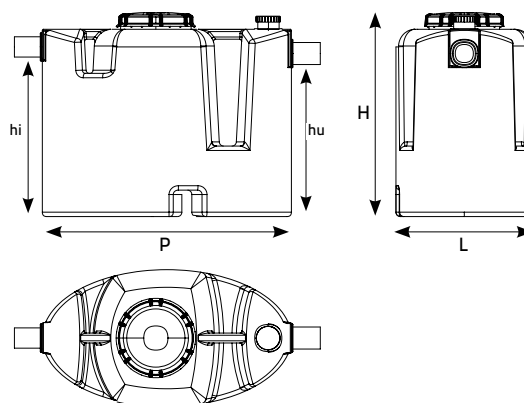
According to UNI 1825-2 standard

DEGREASERS DIMENSIONED ACCORDING TO UNI 1825-2 STANDARD for RESTAURANTS, HOSPITALS, CATERING, COMPANY - SCHOOL CANTEENS

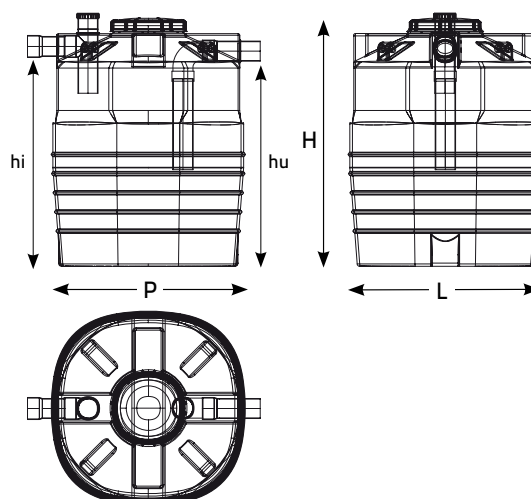
$$\text{CALCULATION OF MEALS DAY} = \frac{\text{NS} \times 3600 \times \text{hours of work}}{\text{peak flow} \times \text{meal-water volume}}$$

PARAMETERS OF CALCULATION ACCORDING TO RULE UNI 1825-2

ACTIVITY	Restaurant	Hostital	Catering	Company canteen/ School
Working hours	8	8	8	8
Peak FLOW	8,5	13	20	22
VOL. of water per meal (litres)	50	20	10	5

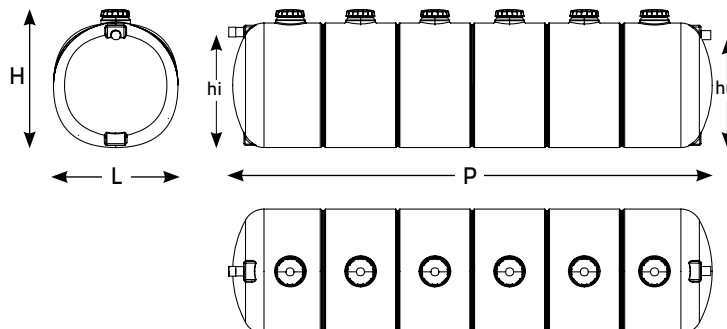


Models	NS	MEALS/ DAY (UNI 1825-2 Standard)				Dimensions (cm)					Volumes (litres)		Dimensions (mm)			€	
		Restaurant	Hospital	Catering	Canteen Az.	H	L	P	hi	hu	Overflow	Total	øi øu	ø manhole EXIT	ø manhole		ø biogas
ECO DIS 4	1	51	111	144	262	80	56	101	54	52	200	260	100	100	320	1"	320,44
ECO DIS 6	2	102	222	288	524	91	63	114	66	64	320	380	100	100	320	1"	376,20
ECO DIS 10	3	152	332	432	785	103	74	135	76	74	500	590	100	100	320	1"	449,20



Models	NS	MEALS/ DAY (UNI 1825-2 Standard)				Dimensions (cm)					Volumes (litres)		Dimensions (mm)			€	
		Restaurant	Hospital	Catering	Canteen Az.	H	L	P	hi	hu	Overflow	Total	øi øu	ø manhole Entrance	ø manhole		ø biogas
ECO DIS 30	7	356	775	1008	1833	150	117	117	118	115	1243	1360	100	100	420	1"	845,42
ECO DIS 40	10	508	1108	1440	2618	182	136	136	151	148	2104	2265	125	125	420	1"	1.000,31
ECO DIS 60	15	762	1662	2160	3927	219	146	146	184	181	2923	3107	125	125	420	1"	1.521,71
ECO DIS 80	17	864	1883	2448	4451	224	165	165	195	192	3800	4200	125	125	420	1"	1.818,19
ECO DIS 100	20	1016	2215	2880	5236	229	184	184	195	192	4705	5110	125	125	420	1"	2.150,13
ECO DIS 110	25	1271	2769	3600	6545	257	185	185	221	218	5575	5993	125	125	420	1"	2.705,58

NEW



RECOMMENDED GREASE REMOVERS (Sized at 50 liters per AE)

DIMENSIONED ACCORDING TO REGIONAL REGULATIONS:

-EMILIA ROMAGNA
DGR n.1053 of 9 June 2003

-UMBRIA
DGR n.1029 of 19 September 2018

-MOLISE
DGR n.68 of 2015
-FRIULI VENEZIA GIULIA
DGR n.2000 of 15 November 2012

DEGREASERS LARGE SYSTEMS line (50 liters per AE)

A.E.	ITEM	CAPACITY (litri)	VOL. OVERFLOW	L (cm)	P (cm)	H (cm)	ø IN/OUT (mm)	Number Manhole ø 550	€
192	ECO DIS 10000	10000	9634	225	320	243	160	2	5.915,00
296	ECO DIS 15000	15000	14424	225	452	243	160	3	8.645,67
391	ECO DIS 20000	20000	19214	225	584	243	160	4	11.343,47
486	ECO DIS 25000	25000	24004	225	716	243	160	5	14.839,43
581	ECO DIS 30000	30000	28794	225	848	243	160	6	17.537,55
676	ECO DIS 35000	35000	33584	225	980	243	160	7	21.362,65
771	ECO DIS 40000	40000	38374	225	1112	243	160	8	23.757,38
849	ECO DIS 45000	45000	43164	225	1244	243	160	9	27.813,67
960	ECO DIS 50000	50000	47954	225	1376	243	160	10	32.363,47

RECOMMENDED DEGREASER (Sized at 30 liters per AE) for discharge into the SEWER

DEGREASERS LARGE SYSTEMS line (30 liters per AE)

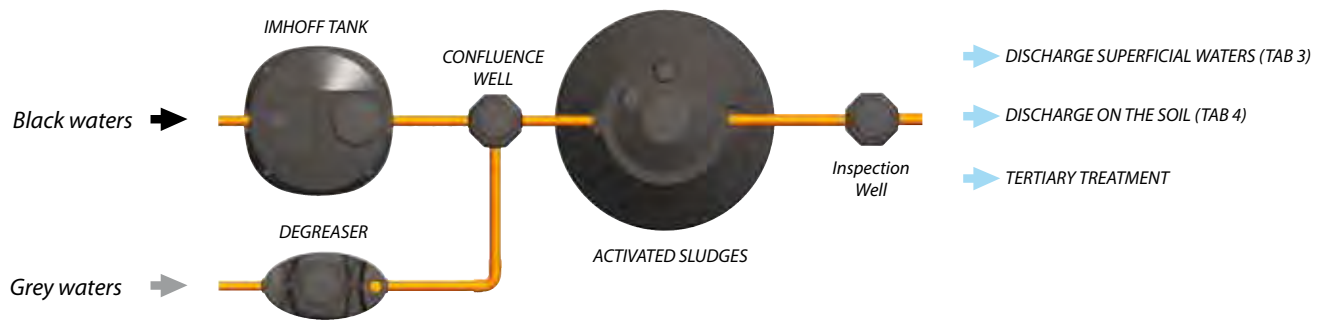
A.E.	ITEM	CAPACITY (litri)	VOL. OVERFLOW	L (cm)	P (cm)	H (cm)	ø IN/OUT (mm)	Number Manhole ø 550	€
321	ECO DIS 10000	10000	9634	225	320	243	160	2	5.915,00
500	ECO DIS 15000	15000	14424	225	452	243	160	3	8.645,67
667	ECO DIS 20000	20000	19214	225	584	243	160	4	11.343,47
833	ECO DIS 25000	25000	24004	225	716	243	160	5	14.839,43
1000	ECO DIS 30000	30000	28794	225	848	243	160	6	17.537,55
1167	ECO DIS 35000	35000	33584	225	980	243	160	7	21.362,65
1333	ECO DIS 40000	40000	38374	225	1112	243	160	8	23.757,38
1500	ECO DIS 45000	45000	43164	225	1244	243	160	9	27.813,67
1667	ECO DIS 50000	50000	47954	225	1376	243	160	10	32.363,47

SECONDARY TREATMENT

SECONDARY TREATMENTS are those responsible for the removal of biodegradable organic substances. They are generally based on biological processes and are the treatments most responsible for the purification of wastewater.

They are divided into:

- suspended biomass treatments
- adhered biomass treatments



ACTIVATED SLUDGE

Activated sludge plants are biological purification systems with suspended biomass and prolonged action. They are defined as "biological" plants as the degradation of the organic substance and part of the suspended solids present in the sewage occurs through the action of bacteria which, by feeding on the polluting substances, purify the wastewater. The artificial aeration of the wastewater guarantees the proliferation of these bacteria which, associating in colonies, form the sludge flakes typical of suspended biomass. Activated sludge plants are composed of two compartments: the oxidation one and the sedimentation one. In the first, the oxidative phase of the wastewater occurs: the sewage, in fact, is subjected to an intense artificial aeration treatment and in such an oxygen-rich environment, physical, chemical and above all biological processes are triggered which degrade the polluting load. The high microbial concentrations present in the oxidation compartment, responsible for the purification of the wastewater, are guaranteed by the continuous recirculation of the activated sludge collected in the subsequent sedimentation compartment. In it, by virtue of a state of quiet, the separation and precipitation of the sludge occurs which is then recirculated in the oxidation compartment. The clarified and purified wastewater is sent to the next treatment phase possibly foreseen by the designer. Only the sludge produced in excess of the needs of the purification process (excess sludge) must be periodically removed from the plant.



ACTIVATED SLUDGE system
from 5 AE (FA5)



ACTIVATED SLUDGE system
10 to 25 AE



CL 140 turret
for collection and
inspection manholes

SPECIFICATION ITEM

Monobloc activated sludge plant in recyclable PE (linear polyethylene), composed of two compartments and a central manhole, a manhole for inspection of the sedimentation compartment, one for inspection of the digester compartment and a vent valve for the removal of biogas.

The product is equipped with n°..... linear diaphragm pump ofW, 230V-50Hz and n°..... membrane diffusers disc EPDM microbubble brane. The inlet and outlet pipes are equipped with suitable double lip rubber gaskets, to guarantee a perfect seal.



NOMENCLATURE:

- 1 - WASTE WATER INLET
- 2 - BIOGAS VENT
- 3 - INSPECTION MANHOLE \varnothing 420
- 4 - INSPECTION MANHOLE SETTLER \varnothing 140
- 5 - WASTE WATER EXIT
- 6 - SLUDGE SAMPLING DIGESTION AREA \varnothing 140
- 7 - CONNECTION BETWEEN OXIDATION & SEDIMENTATION
- 8 - OXIDATION COMPARTMENT
- 9 - BLOWER PUMP
- 10 - BLOWER TUBE INLET
- 11 - DIFFUSER OF BLOWER UNIT

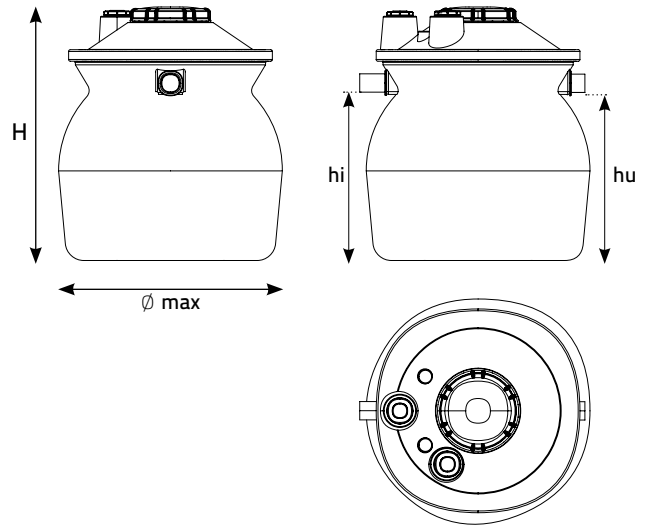
Technical Note: For correct installation, activated sludge systems must be preceded by a primary treatment.

EFFICIENCY FA

- Breakdown of solids in suspension: ~ 93,7%
- Breakdown BOD₅: ~ 79,6%
- Breakdown COD: ~ 83,5%

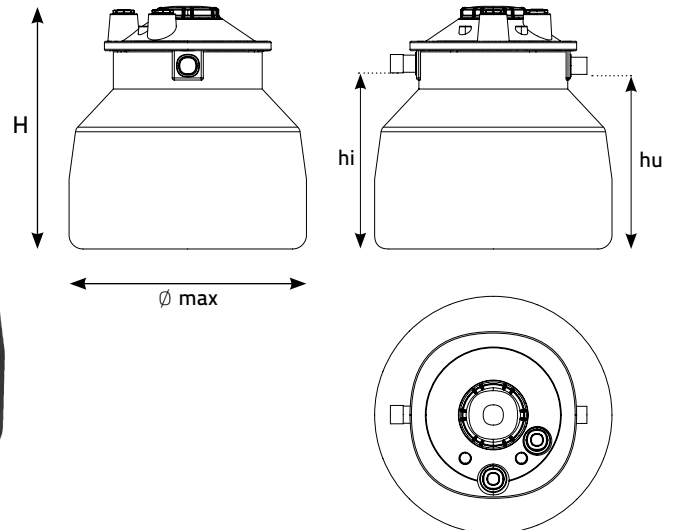
ORDINARY MAINTENANCE

Unless specifically indicated by the competent authority, generally proceed with the extraction of excess sludge from the sedimentation tank one to four times a year. Carefully clean the sludge storage area, making sure that the communication hole(s) in the sedimentation tank are not blocked. Take care to add the recommended doses of bacterial-enzyme mixture every time you carry out start-up operations. The linear diaphragm pump must be installed in an adequately ventilated place and in general the instructions in the manuals for the maintenance of the electromechanical devices supplied with the product must be scrupulously followed. (It must not be used in the compartment used only for transport).



“FA” ACTIVATED SLUDGE PLANT 5

MODELS			Dimensions (cm)				Overflow volumes (litres)			Dimensions (mm)			Dimensions (mm)			€
A.E. Tab.3	A.E. Tab.4	Item	H	Ø max	hi	hu	SED.	OSS.	Total	Øi Øu	Ø sludge sampl.	Ø inspection sediment.	Ø biogas	No Diffusors	Power W	
5	-	FA 5	132	118	90	88	170	850	1020	100	140	140	1"	2	48	1.574,00

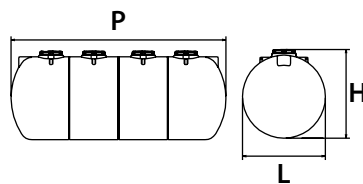


ACTIVATED SLUDGE PLANTS from “FA” 10 to “FA” 25

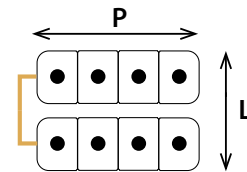
MODELS			Dimensions (cm)				Overflow volumes (litres)			Dimensions (mm)			Dimensions (mm)			€
A.E. Tab.3	A.E. Tab.4	Item	H	Ø max	hi	hu	SED.	OSS.	Total	Øi Øu	Ø sludge sampl.	Ø inspection sediment.	Ø biogas	No Diffusors	Power W	
10	5	FA 10	166	164	120	117	340	1700	2040	125	140	140	1"	2	50	2.276,01
15	10	FA 15	171	194	125	122	510	2600	3110	125	140	140	1"	4	75	2.883,49
20	15	FA 20	184	213	135	132	700	3400	4100	125	140	140	1"	4	95	3.449,95
25	20	FA 25	211	217	161	158	900	4300	5200	125	140	140	1"	6	143	3.983,02



DIRECT FLOW ACTIVATED SLUDGE systems are complete with electro-blower and/or diaphragm compressor, on request they can be equipped with an electrical panel.



Mod. FA



Form N.2 FA

DIRECT FLOW ACTIVATED SLUDGE PLANTS GI Line

ITEM	A.E. Tab. 4	Medium range hourly m ³ /h Tab. 4	A.E. Tab. 3	Medium range hourly m ³ /h Tab. 3	Overall dimensions of the plant (Without accessories) P x L H=2,5 m	Volume TOTAL (litres)	Total installed Power (KW)	Voltage (V)	€
FA 13500	51	0,4	60	0,5	4,11 x 2,5 m	13500	0,24	220	18.284,92
FA 18500	70	0,6	90	0,8	5,43 x 2,5 m	18500	1,55	380	22.159,08
FA 25000	95	0,8	120	1,0	7,16 x 2,5 m	25000	1,55	380	25.976,34
FA 30000	120	1,0	150	1,3	8,48 x 2,5 m	30000	3	380	30.888,47
FA 35000	145	1,2	180	1,5	9,8 x 2,5 m	35000	3	380	36.967,00
FA 40000	170	1,4	200	1,7	11 x 2,5 m	40000	2	380	43.042,58
FA 48500	200	1,7	250	2,1	14 x 2,5 m	48500	2	380	51.127,72
N. 2 FA 30000	250	2,1	300	2,5	8 x 7 m	60000	3	380	63.546,88
N. 2 FA 35000	300	2,5	350	2,9	10 x 7 m	70000	3	380	73.783,79
N. 2 FA 40000	350	2,9	400	3,3	11 x 7 m	80000	3	380	83.635,22
N. 2 FA 48500	400	3,3	500	4,2	14 x 7 m	97000	4	380	99.196,40
N. 4 FA 30000	500	4,2	600	5,0	8 x 15 m	120000	7	380	127.092,81
N. 4 FA 35000	600	5,0	700	5,8	10 x 15 m	140000	7	380	147.566,47
N. 4 FA 40000	700	5,8	800	6,7	11 x 15 m	160000	7	380	167.277,93
N. 4 FA 48500	800	6,7	1000	8,3	14 x 15 m	194000	9	380	198.395,52

ATTENTION: in order for the discharge limits to be respected, a constant supply of wastewater must be guaranteed at all hours of the day; the system is not able to dispose of flow peaks exceeding the average values (m³/hour) indicated in the table.

Activated sludge plants with primary sedimentation

The VSFA monobloc purification plant has the function of completely treat the wastewater through a primary treatment of sedimentation and anaerobic digestion followed by a secondary treatment of oxidation and aerobic digestion.

The system consists of three sections:

DESCRIPTION OF THE OPERATION

Zone A - PRIMARY SEDIMENTATION

in which the wastewater is roughed up with relative anaerobic digestion;

Zone B - BIOLOGICAL SUSPENDED BIOMASS TREATMENT

in which the oxidative phase of the wastewater occurs. The sewage, in fact, is subjected to an intense artificial aeration treatment and in an environment rich in oxygen, physical, chemical, and biological processes are triggered which degrade the polluting load. The high microbial concentrations present in the oxidation compartment responsible for the purification of the wastewater are made possible by the continuous recirculation of the activated sludge collected in the subsequent sedimentation compartment.

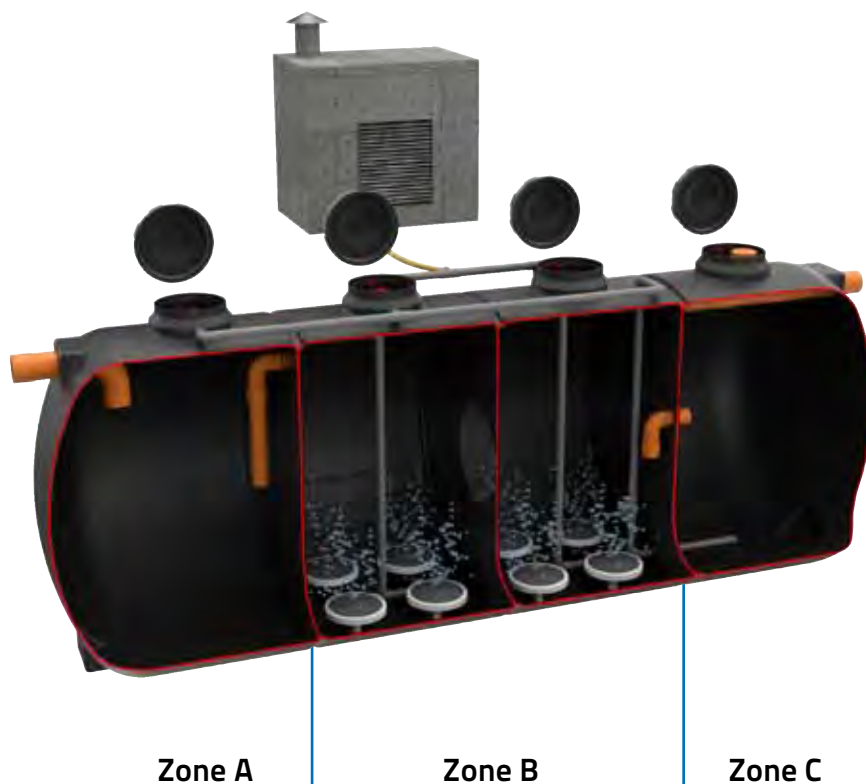
Zone C - SECONDARY SEDIMENTATION

in this section, by virtue of a state of quiet, the separation and precipitation of the sludge occurs which is then recirculated in the sedimentation/oxidation compartment. The clarified wastewater is sent to the next phase possibly foreseen by the designer. Excess sludge will be periodically removed.

Where possible it is advisable to provide suitable primary roughing treatment of gray water coming from bathrooms and kitchens.

The wastewater coming out of an **ECO VSFA** type plant can be discharged into a surface watercourse (TAB.3).

NEW



ECO VSFA SYSTEMS Table 3

Item Characteristics										Design Features					
A.E. TAB. 3	ITEM	VOLUME TOTAL	L (cm)	P (cm)	H (cm)	Ø TUBE IN/OUT (mm)	No manhole ø550	hi (cm)	hu (cm)	VOL. TOT. PRIMARY SEDIMENT.	VOL. TOT. OXIDATION	VOL. TOT. SECONDARY SEDIMENT.	TOTAL POWER	VOLTAGE	€
60	ECO VSFA 22000	22000	225	640	243	160	5	204	200	8500	10000	3500	0,9	220	21.286,74
90	ECO VSFA 28500	28500	225	675	243	160	6	204	200	10000	15000	3500	2,18	380	30.583,14
120	ECO VSFA 37000 B	37000	225	939	243	160	8	204	200	13500	20000	3500	2,18	380	37.718,37
150	ECO VSFA 45000 B	45000	225	1112	243	160	9	204	200	15000	25000	5000	2,18	380	47.117,06

Constant flow activated sludge systems

TELCOM SUSPENDED BIOMASS PLANTS are biological purification systems according to the principle of ACTIVATED SLUDGE with prolonged aeration. The degradation of the organic substance and part of the suspended solids present in the sewage occurs through the action of bacteria which, by feeding on the polluting substances, purify the wastewater. Artificial aeration guarantees the proliferation of these bacteria which, associating in colonies, form the mud flakes typical of suspended biomass.

DESCRIPTION OF OPERATION

Zone A - EQUALIZATION - DENITRIFICATION

This section has the function of equalizing the hydraulic load and making the polluting load of the wastewater feeding the system as homogeneous as possible. Sudden load peaks (shock loads) would, in fact, lead to serious consequences on purification efficiency as microorganisms hardly adapt to sudden environmental variations. Furthermore, in the same adequately sized compartment, through the recirculation of the aerated mixture and the activated sludge respectively from the oxidation and sedimentation compartment, the denitrification process of the wastewater is activated in an anoxic environment for the reduction of the nitrogen values in the its various oxidized forms.

Zone B - OXIDATION

The oxidative phase of the wastewater takes place in this compartment. The sewage, in fact, is subjected to an intense artificial aeration treatment and in an environment so rich in oxygen, physical, chemical and above all biological processes are triggered which degrade the polluting load. The high microbial concentrations present in the oxidation compartment, responsible for the purification of the wastewater, are made possible by the continuous recirculation of the activated sludge collected in the subsequent sedimentation compartment.

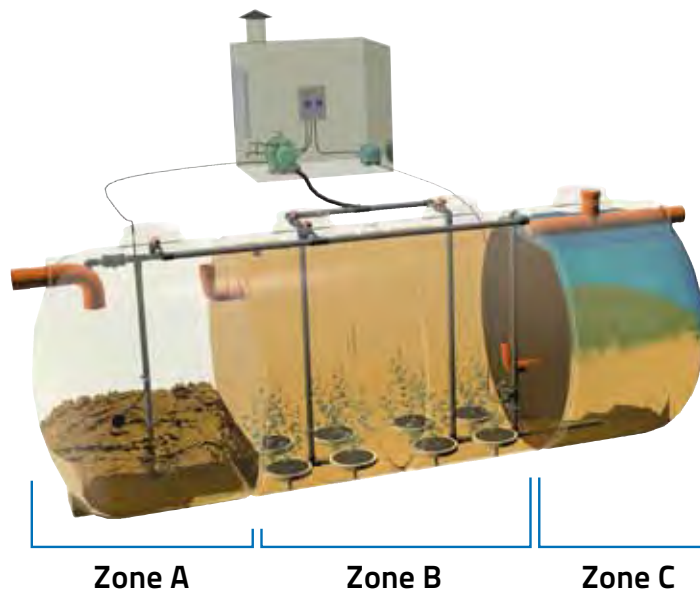
Zone C - SEDIMENTATION

In the sedimentation compartment, by virtue of a state of quiet, the separation and precipitation of the sludge occurs which is then recirculated, by means of a pneumatic extractor (air-lift), in the equalization and oxidation compartment.

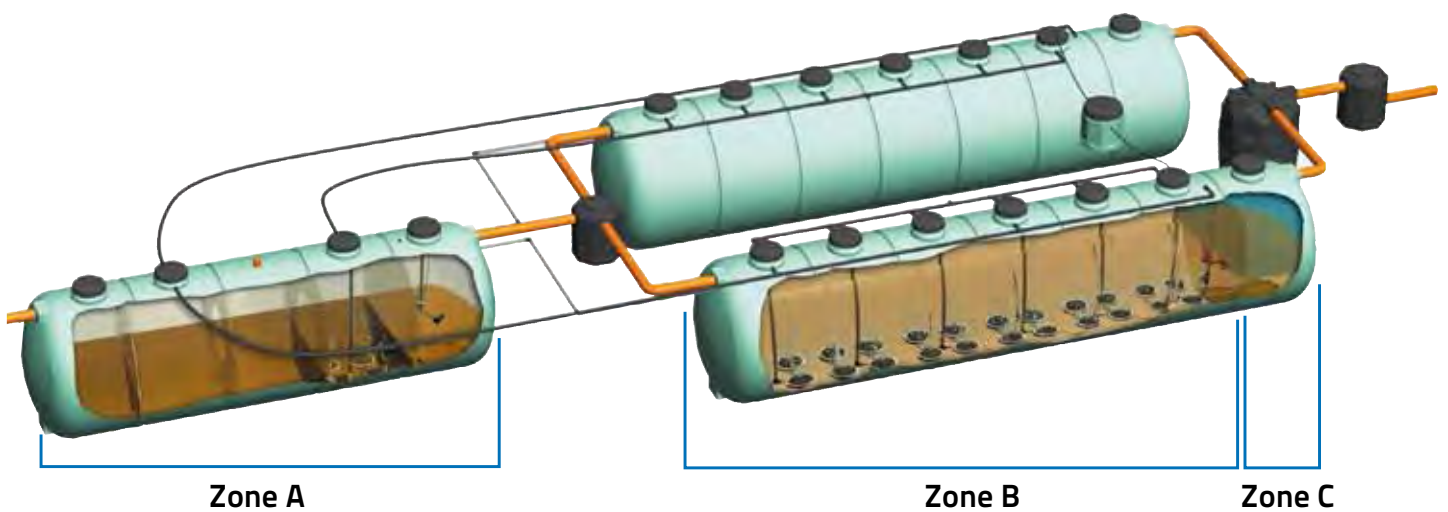
The clarified and purified wastewater is sent to the next treatment phase possibly foreseen by the designer. Only the sludge produced in excess by the needs of the purification process (excess sludge) must be periodically removed from the plant.

Based on the number of equivalent inhabitants, these systems can be: "MONOBLOC" or "MODULAR"

MONOBLOCK SYSTEMS EQFA model



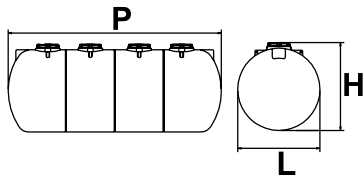
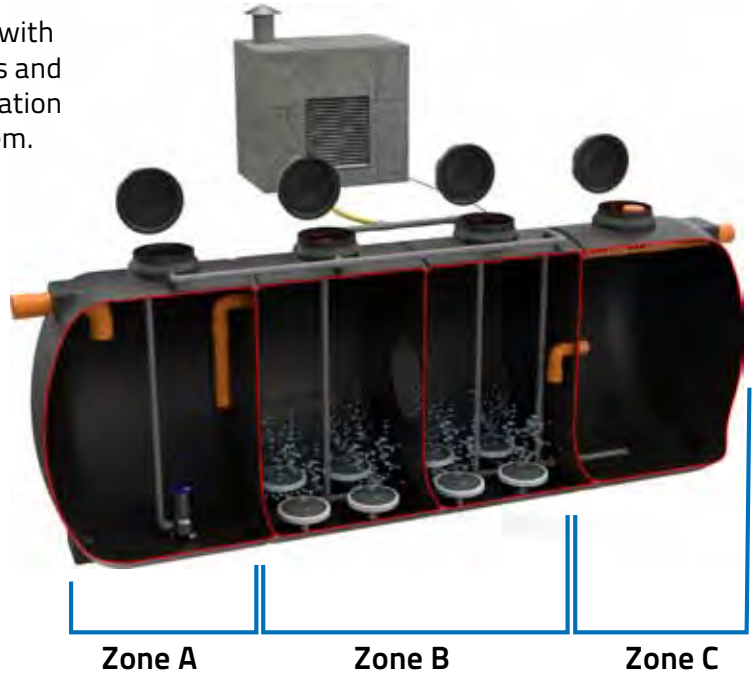
MODULAR SYSTEMS EQ + FA mode



ACTIVATED SLUDGE with PROLONGED OXIDATION

EQFA systems are **MONOBLOC SYSTEMS** suspended biomass suitable for treatment of wastewater coming from the different categories multitudes of structures.

The **EQFA** monobloc systems are complete with electrical panel compliant with CE standards and of each appliance electromechanical clarification necessary for correct operation of the system.



CONSTANT FLOW MONOBLOC ACTIVATED SLUDGE PLANTS - TABLE 3

Item Characteristics								Design Features					
A.E.	ITEM	Volume TOT.	L (cm)	P (cm)	H (cm)	No Manhole Ø550	Ø IN/OUT (mm)	ZONE A - VOL. TOT. DENITRIFICATION (litres)	ZONE B - VOL. TOT. OXIDATION (litres)	ZONE C - VOL. TOT. SEDIMENTATION SECONDARY (litres)	TOT. POWER installed (KW)	VOLTAGE (V)	€
60	EQFA 18500	18500	225	543	243	4	160	5000	10000	3500	2,45	220	20.454,92
90	EQFA 28500	28500	225	807	243	6	160	10000	15000	3500	2,55	380	31.421,90
120	EQFA 33500 B	33500	225	939	243	7	160	10000	20000	3500	2,55	380	36.886,55
150	EQFA 43500 B	43500	225	1203	243	9	160	13500	25000	5000	4,05	380	47.955,82
180	EQFA 50000 B	50000	225	1376	243	10	160	15000	30000	5000	4,05	380	54.328,23

CONSTANT FLOW MONOBLOC ACTIVATED SLUDGE PLANTS - TABLE 4

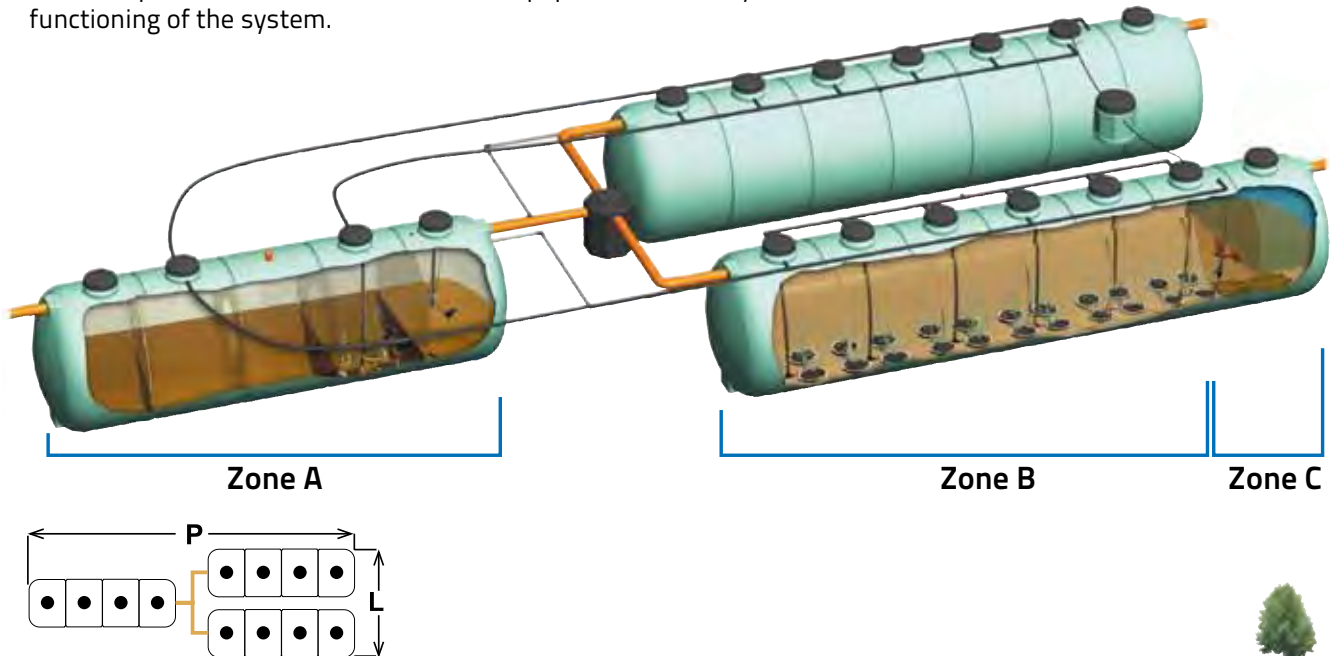
Item Characteristics								Design Features					
A.E.	ITEM	Volume TOT.	L (cm)	P (cm)	H (cm)	No Manhole Ø550	Ø IN/OUT (mm)	ZONE A - VOL. TOT. DENITRIFICATION (litres)	ZONE B - VOL. TOT. OXIDATION (litres)	ZONE C - VOL. TOT. SEDIMENTATION SECONDARY (litres)	TOT. POWER installed (KW)	VOLTAGE (V)	€
51	EQFA 18500	18500	225	543	243	4	160	5000	10000	3500	2,45	220	20.454,92
70	EQFA 23500 B	23500	225	675	243	5	160	5000	15000	3500	2,55	380	27.822,98
95	EQFA 33500 B	33500	225	939	243	7	160	10000	20000	3500	2,55	380	36.886,55
120	EQFA 40000	40000	225	1112	243	8	160	10000	25000	5000	4,05	380	42.722,76
145	EQFA 50000 B	50000	225	1376	243	10	160	15000	30000	5000	4,05	380	54.328,23

NOTE: In case of SEPARATE EXHAUSTS, contact our Technical Office.

* The overall dimensions do not include accessories

ACTIVATED SLUDGE with PROLONGED OXIDATION

The EQ+FA systems are MODULAR suspended biomass PLANTS suitable for the treatment of wastewater coming from the different categories of structures. The EQ+FA modular systems are complete with a CE compliant electrical panel and all electromechanical equipment necessary for the correct functioning of the system.



CONSTANT FLOW MODULAR ACTIVATED SLUDGE PLANTS - TABLE 3

Item Characteristics				Design Features					
A.E.	Equalization Denitrification	Plant Activated Sludge	Overall dimensions of the system* (m) P x L H = 2,5 m	TOT. Volume EQUALIZATION DENITRIFICATION (litres)	TOT. Volume OXIDATION (litres)	TOT. Volume SEDIMENTATION SECONDARY (litres)	TOT. POWER installed (KW)	VOLTAGE (V)	€
200	EQ 18500	FA 40000	18 x 2,5	18500	35000	5000	3	380	59.390,79
250	EQ 23500	FA 48500	22 x 2,5	23500	40000	8500	3	380	72.094,40
300	EQ 25000	N. 2 FA 30000	18 x 7	25000	50000	10000	4	380	85.589,83
350	EQ 28500	N. 2 FA 35000	20 x 7	28500	60000	10000	4	380	98.793,43
400	EQ 33500	N. 2 FA 40000	23 x 7	33500	70000	10000	4	380	112.223,74
500	EQ 40000	N. 2 FA 48500	27 x 7	40000	80000	17000	6	380	131.573,36
600	EQ 48500	N. 4 FA 30000	25 x 15	48500	100000	20000	8	380	168.320,02
700	N. 2 EQ 28500	N. 4 FA 35000	21 x 15	57000	120000	20000	8	380	196.940,04
800	N. 2 EQ 30000	N. 4 FA 40000	23 x 15	60000	140000	20000	8	380	217.658,21
1000	N. 2 EQ 40000	N. 4 FA 48500	28 x 15	80000	160000	34000	10	380	262.730,59



CONSTANT FLOW MODULAR ACTIVATED SLUDGE PLANTS - TABLE 4

Item Characteristics				Design Features					
A.E.	Equalization Denitrification	Plant Activated Sludge	Overall dimensions of the system* (m) P x L H = 2,5 m	TOT. Volume EQUALIZATION DENITRIFICATION (litres)	TOT. Volume OXIDATION (litres)	TOT. Volume SEDIMENTATION SECONDARY (litres)	TOT. POWER installed (KW)	VOLTAGE (V)	€
170	EQ 15000	FA 40000	21 x 2,5	15000	35000	5000	3	380	56.613,87
200	EQ 18500	FA 48500	26 x 2,5	18500	40000	8500	3	380	67.473,74
250	EQ 23500	N. 2 FA 30000	23 x 7	23500	50000	10000	4	380	85.048,79
300	EQ 25000	N. 2 FA 35000	26 x 7	25000	60000	10000	4	380	95.819,04
350	EQ 28500	N. 2 FA 40000	27 x 7	28500	70000	10000	4	380	108.646,71
400	EQ 33500	N. 2 FA 48500	27 x 7	33500	80000	17000	5	380	128.133,66
500	EQ 40000	N. 4 FA 30000	24 x 15	40000	100000	20000	7	380	162.219,67
600	EQ 48500	N. 4 FA 35000	27 x 15	48500	120000	20000	7	380	188.793,13
700	N. 2 EQ 28500	N. 4 FA 40000	23 x 15	57000	140000	20000	8	380	216.661,42
800	N. 2 EQ 30000	N. 4 FA 48500	25 x 15	60000	160000	34000	10	380	249.134,18

NOTE: In case of SEPARATE EXHAUSTS, contact our Technical Office.

* The overall dimensions do not include accessories

MBBR PLANTS are purification systems that reflect the conformation of activated sludge processes, in which the bacterial biomass, rather than forming freely dispersed flocculent aggregates, develops in the form of biofilm on particular filling bodies with a high specific surface area.

DESCRIPTION OF OPERATION

Zone A - EQUALIZATION - DENITRIFICATION

This section has the function of equalizing the hydraulic load and making the polluting load of the wastewater feeding the system as homogeneous as possible. Sudden load peaks (shock loads) would, in fact, lead to serious consequences on purification efficiency as microorganisms hardly adapt to sudden environmental variations. Furthermore, in the same adequately sized compartment, through the recirculation of the aerated mixture and the activated sludge respectively from the oxidation and sedimentation compartment, the denitrification process of the wastewater is activated in an anoxic environment for the reduction of the nitrogen values in its various oxidized forms.

Zone B - BIOLOGICAL TREATMENT thanks to the presence of particular filling bodies with a high specific surface area, combines the well-known purification function of activated sludge systems with the action of the adhered biomass process;

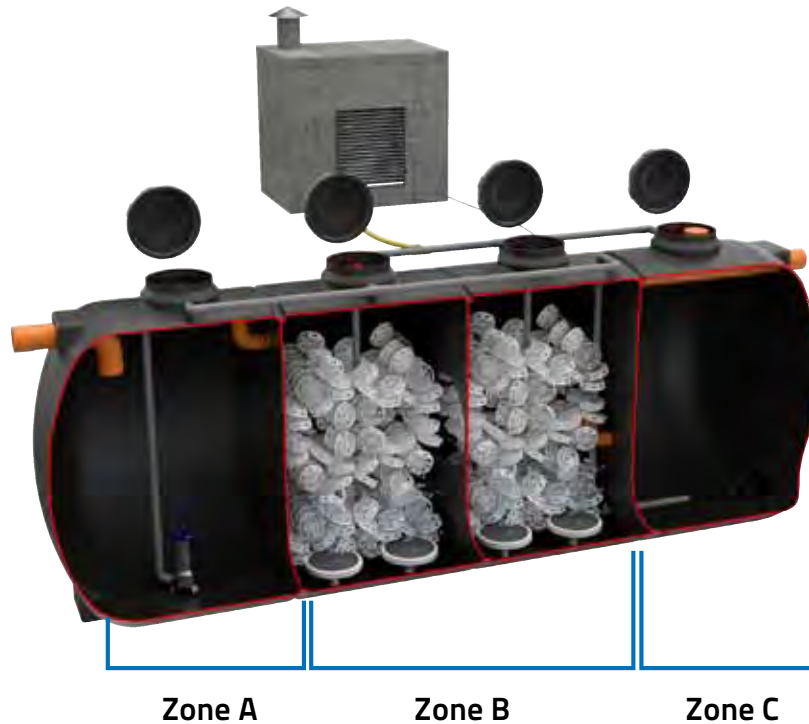
Zone C - SEDIMENTATION

In the sedimentation compartment, by virtue of a state of quiet, the separation and precipitation of the sludge occurs which is then recirculated, by means of a pneumatic extractor (air-lift), in the equalization and oxidation compartment.

The clarified and purified wastewater is sent to the next treatment phase possibly foreseen by the designer. Only the sludge produced in excess by the needs of the purification process (excess sludge) must be periodically removed from the plant.

MBBR systems are used as a complete purification treatment of domestic or similar wastewater. The wastewater coming out of an MBBR type plant can be discharged into surface watercourse (TAB.3) or soil (TAB.4) depending on needs.

NEW



PURIFICATION

MBBR PLANTS - Table 3



Item Characteristics										Design Features					
A.E. TAB. 3	ITEM	VOLUME TOTAL	L (cm)	P (cm)	H (cm)	ø TUBE IN/OUT (mm)	No manhole ø550	hi (cm)	hu (cm)	VOL. TOT. EQUALIZ. DENITRIF.	VOL. TOT. OXIDATION	VOL. TOT. SECONDARY SEDIMENT.	TOTAL POWER	VOLTAGE	€
75	MBBR 18500	18500	225	543	243	160	4	204	200	5000	9580	3500	0,9	220	22.114,09
110	MBBR 28500	28500	225	675	243	160	6	204	200	10000	14370	3500	2,18	380	33.910,66
150	MBBR 33500 B	33500	225	939	243	160	7	204	200	10000	19160	3500	2,18	380	40.204,90
190	MBBR 43500 B	43500	225	1203	243	160	9	204	200	13500	23950	5000	2,18	380	52.103,75
225	MBBR 50000 B	50000	225	1376	243	160	10	204	200	15000	28740	5000	2,88	380	59.305,75

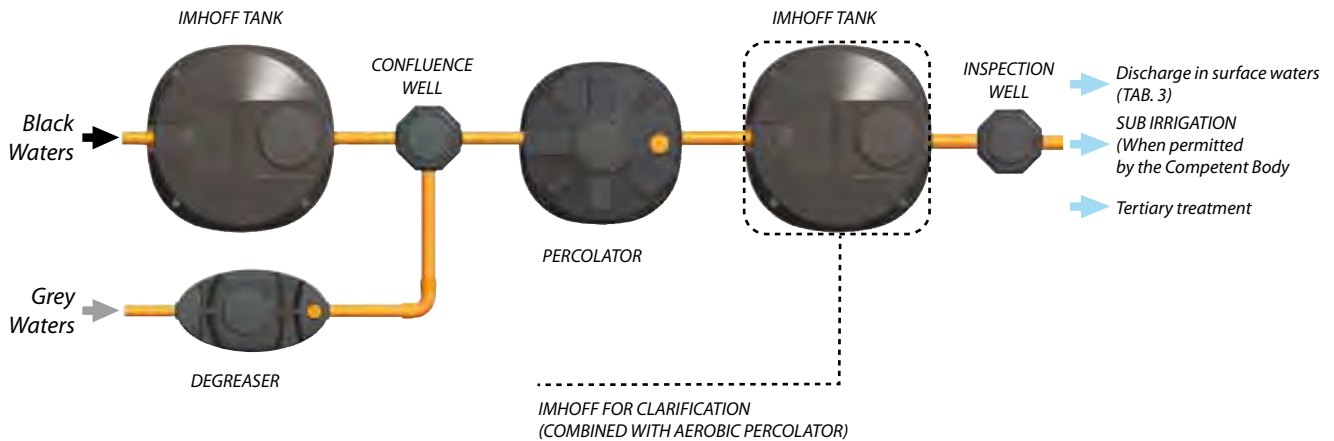
60% media fill rate

MBBR PLANTS - Table 4



Item Characteristics										Design Features					
A.E. TAB. 3	ITEM	VOLUME TOTAL	L (cm)	P (cm)	H (cm)	ø TUBE IN/OUT (mm)	No manhole ø550	hi (cm)	hu (cm)	VOL. TOT. EQUALIZ. DENITRIF.	VOL. TOT. OXIDATION	VOL. TOT. SECONDARY SEDIMENT.	TOTAL POWER	VOLTAGE	€
65	MBBR 18500	18500	225	543	243	160	4	204	200	5000	9580	3500	0,9	220	22.114,09
85	MBBR 23500 B	23500	225	675	243	160	5	204	200	5000	14370	3500	2,18	380	30.371,74
120	MBBR 33500 B	33500	225	939	243	160	7	204	200	10000	19160	3500	2,18	380	40.204,90
150	MBBR 40000	40000	225	1112	243	160	8	204	200	10000	23950	5000	2,18	380	46.870,69
180	MBBR 50000 B	50000	225	1376	243	160	10	204	200	15000	28740	5000	2,88	380	59.305,75

60% media fill rate



PERCOLATOR FILTERS

The percolators are biological secondary treatment systems for attached biomass. Inside these systems, particular filling bodies with a high specific surface area are placed on which the bacterial colonies responsible for the purification of the wastewater develop.

ANAEROBIC PERCOLATOR FILTERS

ECO FAN percolators are anaerobic as the type of bacteria that develops here lives in the absence of oxygen. Correct installation of a system with a percolating filter always includes a primary treatment unit upstream.



ANAEROBIC PERCOLATOR FILTER

FORCED AIR AEROBIC PERCOLATOR FILTERS (HIGH OUTPUT)

In the ECOFAE PLUS series of systems, the oxidative action of the air introduced into the wastewater via a system consisting of a blower pump and diffusers is added to the well-known purifying function of the attached biomass systems. The greater purification capacity of the PLUS system (for the same volume as a common aerobic percolating system) finds application where it is not possible, due to limited space, to install systems of larger dimensions.

AEROBIC PERCOLATOR FILTERS (LOW OUTPUT)

Aerobic percolators (Mod. ECO FAE) with low output are available on request. In the case of these systems, it is necessary to install a second clarification tank (smaller than the first) also downstream for the removal of the biofilm.

SPECIFICATION ITEM

Percolators system in recyclable PE (linear polyethylene), composed of a monobloc compartment where polypropylene filling bodies are housed, each of which develops a specific surface area of approximately 0.14 m². The product is equipped with a manhole cover for central inspection and routine maintenance. It has inlet and outlet pipes equipped with suitable double lip rubber gaskets, to guarantee a perfect seal. It also has internal pipes that guarantee homogeneous distribution and correct flow of the wastewater.



ECO FAN trickling filters are anaerobic
Regarding the type of bacteria that develops
there lives in the absence of oxygen.



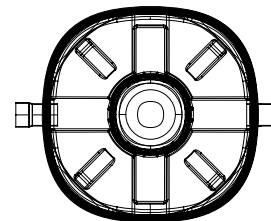
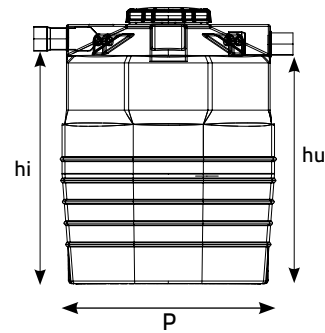
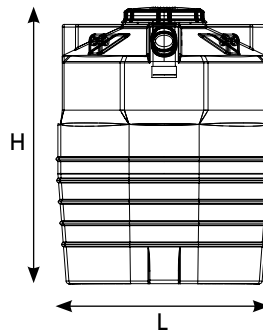
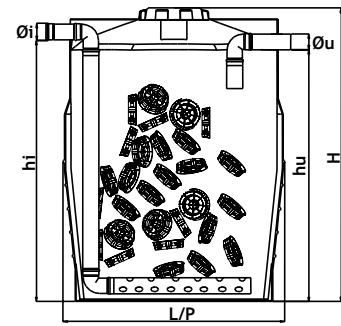
Recommended for unloading in Table 3

ECOFAN YIELDINGS

- Breakdown suspended solids ~ 72%
- Breakdown BOD₅: ~ 69%
- Breakdown COD: ~ 67%

NOMENCLATURE:

- 1 - WASTE WATER INLET
- 2 - BIOGAS VENT
- 3 - INSPECTION MANHOLE
- 4 - FILLING BODY
- 5 - WASTE WATER EXIT



ANAEROBIC PERCOLATORS

Models		Dimensions (cm)						Volume (litres)		Dimensions (mm)		S sed (m ²)	Ø biogas	€
A.E. Tab.3	Item	H	L	P	hi	hu	hr	Total	V filter	Øi Øu	Ø manhole			
6	ECO FAN 1500	150	117	117	125	121	140	1360	1345	100	420	0,96	1"	1.302,72
11	ECO FAN 2000	182	136	136	158	154	173	2265	2256	100	420	1,30	1"	2.096,33
15	ECO FAN 3000	219	146	146	192	188	209	3107	3099	125	420	1,48	1"	2.785,11
20	ECO FAN 4000	224	165	165	192	188	214	4200	4117	125	420	1,92	1"	3.414,01
24	ECO FAN 5000	229	184	184	197	193	220	5110	5100	125	420	2,32	1"	4.042,92
29	ECO FAN 6000	257	185	185	224	220	248	5993	5987	125	420	2,41	1"	4.791,59

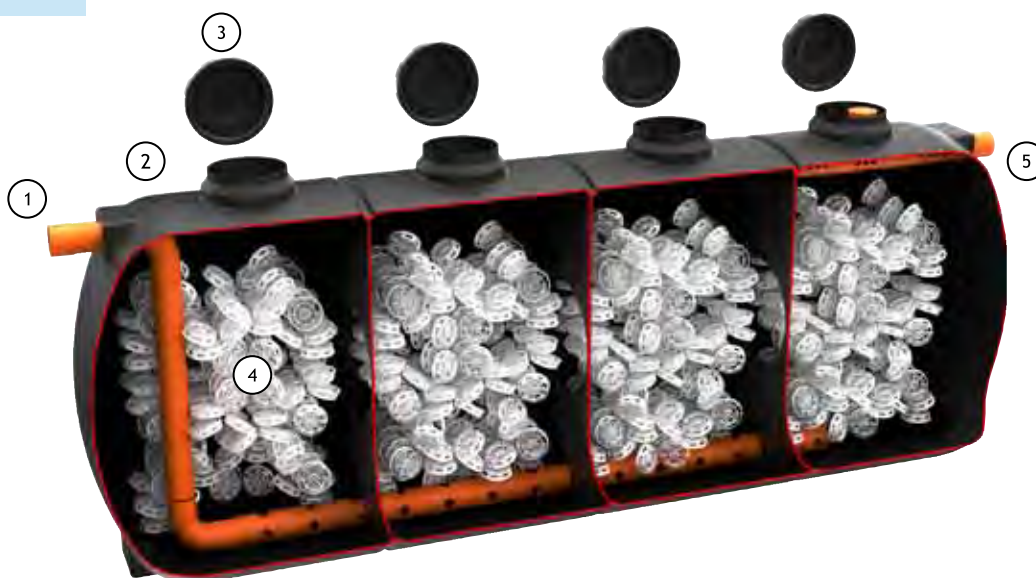
hr = Filter material height

ANAEROBIC PERCOLATORS LARGE SYSTEMS

The **ECO FAN** anaerobic percolator filter is a biological secondary treatment system for attached biomass.

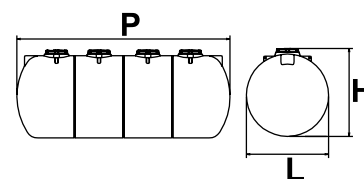
Inside these tanks, particular filling bodies with a high specific surface area are placed, on which ANAEROBIC bacterial colonies responsible for the purification of the wastewater develop. Upstream of the system it is necessary to provide a suitable primary roughing treatment for black and gray water.

NEW



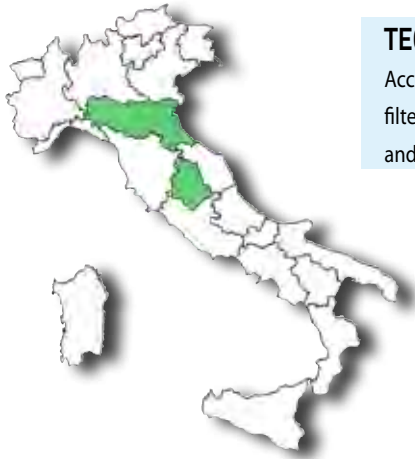
NOMENCLATURE:

- 1 - WASTE WATER INLET
- 2 - BIOGAS VENT
- 3 - INSPECTION MANHOLE
- 4 - FILLING BODY
- 5 - WASTE WATER OUTPUT



ANAEROBIC PERCOLATORS LARGE PLANTS

ITEM	A.E. CALCULATED on 195 l/A.E.	A.E. CALCULATED on 150 l/A.E.	CAPACITY (Litres)	CAPACITY at the edge (Litres)	L (cm)	P (cm)	H (cm)	ø TUBE IN/OUT (mm)	Nr. Manhole	€
ECO FAN 10000	51	63	10000	9444	238	275	255	160	2	8.064,61
ECO FAN 15000	72	94	15000	14135	238	390	255	160	2	12.401,83
ECO FAN 20000	97	126	20000	18826	238	508	255	160	2	16.553,06
ECO FAN 25000	121	157	25000	23561	238	627	255	160	3	20.248,29
ECO FAN 30000	145	188	30000	28252	238	743	255	160	3	24.279,28
ECO FAN 350000	169	220	35000	32987	238	862	255	160	4	29.741,75
ECO FAN 40000	193	251	40000	37678	238	979	255	160	4	33.061,13
ECO FAN 45000	218	283	45000	42413	238	1098	255	160	5	38.729,18
ECO FAN 50000	242	314	50000	47104	238	1215	255	160	5	43.096,41



TECHNICAL SPECIFICATIONS for the EMILIA ROMAGNA and UMBRIA Regions

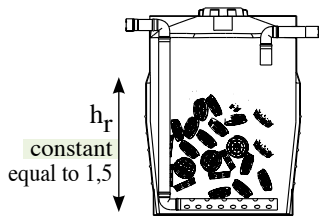
According to Regional Resolution No. 1053 of Emilia Romagna, all filter purification plants with Percolator filter must be sized according to the formula $AE = S \times H^2$, where S is the surface area in m² of sedimentation and H corresponds to the height in meters (not less than 0.9 and not more than 1.5) of the filter body.



- NOMENCLATURE:**
- 1 - WASTE WATER INLET
 - 2 - BIOGAS VENT
 - 3 - INSPECTION MANHOLE
 - 4 - FILLING BODY
 - 5 - WASTE WATER EXIT



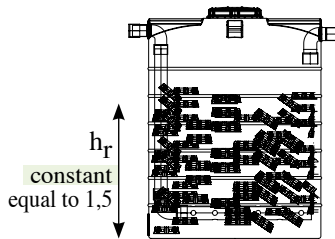
Recommended for unloading in Table 3



ECO FAN 2000 ER

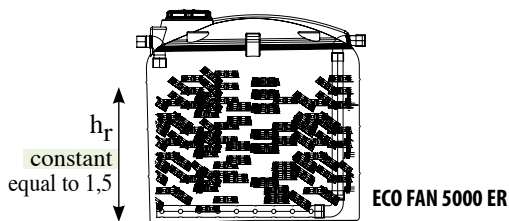
A.E. Emilia = $S_{sed} * (hr)^2$
 S_{sed} = sedimentation surface
 h_r = Filter material height

Models		Dimensions (cm)						Volume (litres)		Dimensions (mm)		S sed	Ø	€
A.E. ER	Item	H	L	P	hi	hu	hr	V Filter	V Total	Øi Øu	Ø manhole	(m ²)	biogas	
3	ECO FAN 2000 ER	182	136	136	158	154	150	2180	2250	100	420	1,45	1"	2.036,43

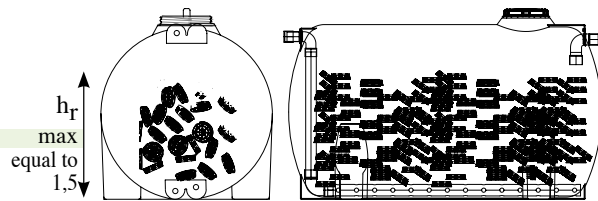


ECO FAN 4000 ER

Models		Dimensions (cm)						Volume (litres)		Dimensions (mm)		S sed	Ø	€
A.E. ER	Item	H	L	P	hi	hu	hr	V Filter	V Total	Øi Øu	Ø manhole	(m ²)	biogas	
5	ECO FAN 4000 ER	206	169	169	169	165	150	3300	4200	125	420	2,20	1"	2.845,01

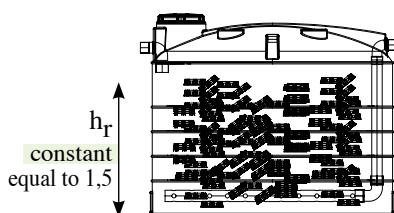


ECO FAN 5000 ER



ECO FAN 5000 ER CON

Models		Dimensions (cm)						Volume (litres)		Dimensions (mm)		S sed	Ø	€
A.E. ER	Item	H	L	P	hi	hu	hr	V Filter	V Total	Øi Øu	Ø manhole	(m ²)	biogas	
6	ECO FAN 5000 ER	189	203	203	154	150	150	3640	5100	125	420	2,43	1"	3.743,44
7	ECO FAN 5000 ER CON	186	178	232	158	155	150	4500	4950	125	550	3,00	1"	4.104,17



ECO FAN 7500 ER

Models		Dimensions (cm)						Volume (litres)		Dimensions (mm)		S sed	Ø	€
A.E. ER	Item	H	L	P	hi	hu	hr	V Filter	V Total	Øi Øu	Ø manhole	(m ²)	biogas	
10	ECO FAN 7500 ER	198	238	238	155	151	150	6390	7550	160	420	4,26	1"	6.433,73

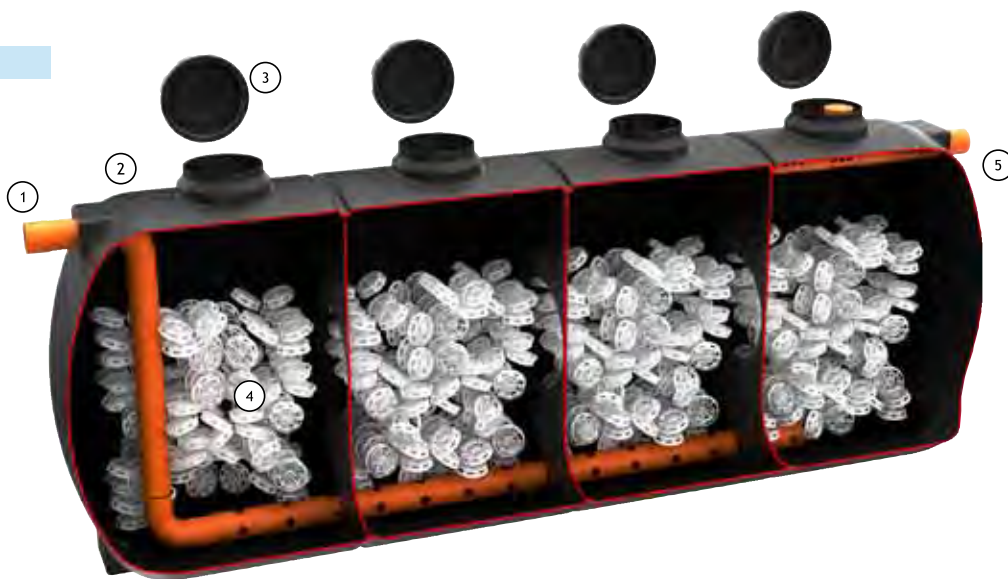
ECO FAN ER LARGE SYSTEMS LINE

ECO FAN ER ANAEROBIC TRICKLING FILTERS are biological secondary treatment systems for attached biomass, characterized by the presence inside the tank of particular filling bodies with a high specific surface area.

The **ECO FAN ER** are sized according to Regional Resolution N° 1053 of Emilia-Romagna, following the formula $AE = S \times H^2$ where S is the surface area in m^2 of sedimentation and H corresponds to the height in meters (not less than 0.9 and not more than 1.5) of the filter body.

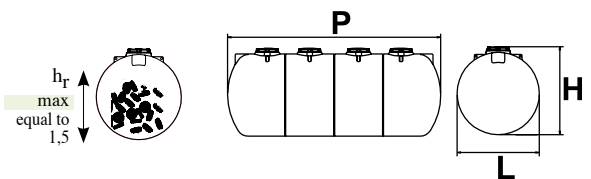
Upstream of the system it is necessary to provide suitable primary roughing treatment for black and gray water.

NEW



NOMENCLATURE:

- 1 - WASTE WATER INLET
- 2 - BIOGAS VENT
- 3 - INSPECTION MANHOLE
- 4 - FILLING BODY
- 5 - WASTE WATER OUTPUT



ANAEROBIC PERCOLATORS LARGE PLANTS EMILIA ROMAGNA

ITEM	A.E. CALCULATED $S_{sed} \times h_r^2$	CAPACITY (Litres)	VOLUME FILTER (Litres)	Sup. Sedimentation	L (cm)	P (cm)	H (cm)	H_r (cm)	Ø TUBE IN/OUT (mm)	Nr. Manhole	€
ECO FAN 10000 ER	11	10000	7406	4,94	225	320	243	150	160	2	7.733,10
ECO FAN 15000 ER	17	15000	11049	7,37	225	452	243	150	160	3	11.902,01
ECO FAN 20000 ER	22	20000	14692	9,79	225	584	243	150	160	4	15.884,93
ECO FAN 25000 ER	28	25000	18335	12,22	225	716	243	150	160	5	19.411,84
ECO FAN 30000 ER	33	30000	21978	14,65	225	848	243	150	160	6	23.274,52
ECO FAN 35000 ER	38	35000	25621	17,08	225	980	243	150	160	7	28.543,06
ECO FAN 40000 ER	44	40000	29264	19,51	225	1112	243	150	160	8	31.694,12
ECO FAN 45000 ER	49	45000	32907	21,94	225	1244	243	150	160	9	37.193,85
ECO FAN 50000 ER	55	50000	36550	24,37	225	1376	243	150	160	10	41.392,77

The **ECO VSFAN** anaerobic percolating filter with primary sedimentation is a system suitable for treating wastewater completely and is characterized by two compartments.

Inside the first compartment, consisting of a **SEPTIC TANK**, the incoming wastewater undergoes primary sedimentation and sludge digestion.

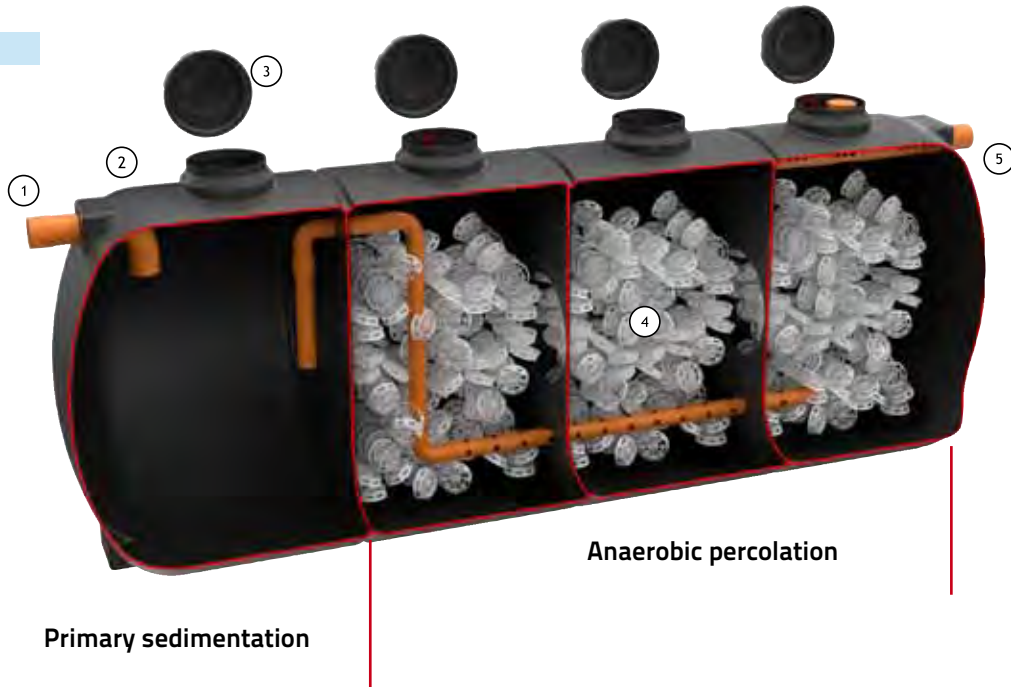
In the second compartment, particular filling bodies with a high specific surface area are arranged haphazardly, on which the **ANAEROBIC** bacterial colonies develop, responsible for the purification of the wastewater.

The **ECO VSFAN** monobloc anaerobic percolator systems are used as a complete purification treatment of domestic or similar wastewater.

Where possible it is advisable to provide suitable primary roughing treatment of gray water coming from bathrooms and kitchens.

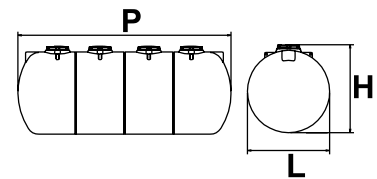
The wastewater coming out of an **ECO VSFAN** type plant can be discharged into surface watercourses (seas, rivers, lakes...).

NEW



NOMENCLATURE:

- 1 - WASTE WATER INLET
- 2 - BIOGAS VENT
- 3 - INSPECTION MANHOLE
- 4 - FILLING BODY
- 5 - WASTE WATER OUTPUT



ANAEROBIC PERCOLATORS WITH PRIMARY SEDIMENTATION LARGE PLANTS

ITEM	A.E. CALCULATED su 195 l/A.E.	VOLUME SEDIMENTATION	VOLUME PERCOLATION	CAPACITY (Litres)	CAPACITY Percolator at the edge (Litres)	L (cm)	P (cm)	H (cm)	ø TUBE IN/OUT (mm)	Nr. Manhole	€
ECO VS FAN 15000	52	5000	10000	15000	10080	225	452	243	160	3	8.831,90
ECO VS FAN 23500	76	8500	15000	23500	14826	225	675	243	160	5	14.426,73
ECO VS FAN 30000	100	10000	20000	30000	19572	225	848	243	160	6	19.274,79
ECO VS FAN 38500	125	13500	25000	38500	24318	225	1071	243	160	8	23.666,85
ECO VS FAN 45000	149	15000	30000	45000	29064	225	1244	243	160	9	28.394,66

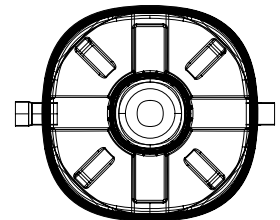
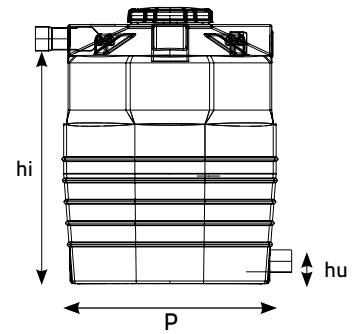
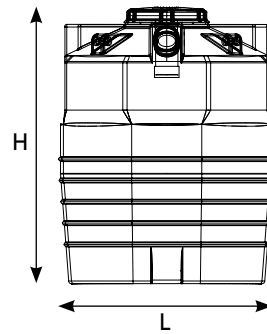
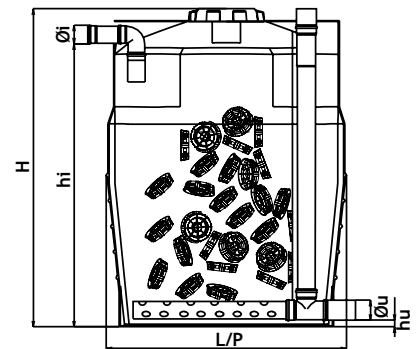


AEROBIC PERCOLATING FILTERS (LOW OUTPUT)

Aerobic trickling filters (Mod. ECO FAE) with low output are available on request. In the case of these systems, it is necessary to install a second clarification tank (smaller than the first) also downstream for the removal of the biofilm.

NOMENCLATURE:

- 1 - WASTE INLET
- 2 - BIO-GAS VENT
- 3 - INSPECTION MANHOLE
- 4 - FILLING BODY
- 5 - WASTE OUTPUT
- 6 - EXIT INSPECTION



ECO FAE AEROBIC PERCOLATORS

Models		Dimensions (cm)						Volume (litres)		Dimensions (mm)		S sed (m ²)	ø biogas	€
A.E.	Item	H	L	P	hi	hu	hr	Total	V filter	øi øu	ø manhole			
6	ECO FAE 1500	150	117	117	125	7	140	1360	1345	100	420	0,96	1"	1.302,72
11	ECO FAE 2000	182	136	136	158	7	173	2265	2256	100	420	1,30	1"	2.096,33
15	ECO FAE 3000	219	146	146	192	7	209	3107	3099	125	420	1,48	1"	2.785,11
20	ECO FAE 4000	224	165	165	192	7	214	4200	4117	125	420	1,92	1"	3.414,01
24	ECO FAE 5000	229	184	184	197	7	220	5110	5100	125	420	2,32	1"	4.042,92
29	ECO FAE 6000	257	185	185	224	7	248	5993	5987	125	420	2,41	1"	4.791,59

hr = Altezza materiale filtrante



TECHNICAL SPECIFICATIONS FOR THE EMILIA ROMAGNA AND UMBRIA REGIONS

According to Regional Resolution No. 1053 of Emilia Romagna, all trickling filter purification plants must be sized according to the formula $AE = S \times H^2$ where S is the surface area in m² of sedimentation and H corresponds to the height in meters (not less than 0.9 and not more than 1.5) of the filter body.

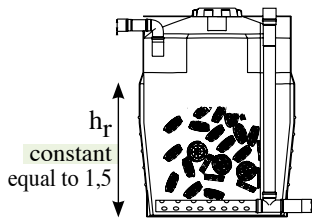


NOMENCLATURE:

- 1 - WASTE INLET
- 2 - BIO-GAS VENT
- 3 - INSPECTION MANHOLE
- 4 - FILLING BODY
- 5 - WASTE OUTPUT
- 6 - EXIT INSPECTION



Recommended for unloading in Table 3

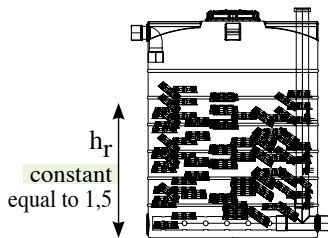


ECO FAE 2000 ER

$$A.E. \text{ Emilia} = S_{sed} * (hr)^2$$

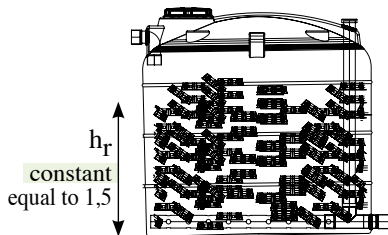
S_{sed} = sedimentation surface
 hr = Filter material height

A.E. ER	Models		Dimensions (cm)						Volume (litres)		Dimensions (mm)		S sed (m ²)	ø biogas	€
	Item	H	L	P	hi	hu	hr	V Filter	V Total	øi øu	ø manhole				
3	ECO FAE 2000 ER	182	136	136	158	7	150	2180	2250	100	420	1,45	1"	2.036,43	

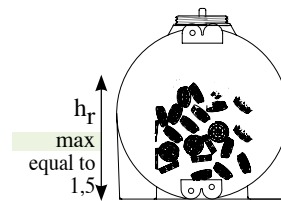


ECO FAE 4000 ER

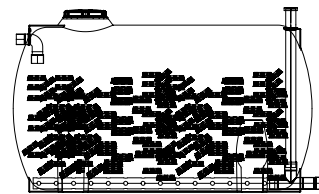
A.E. ER	Models		Dimensions (cm)						Volume (litres)		Dimensions (mm)		S sed (m ²)	ø biogas	€
	Item	H	L	P	hi	hu	hr	V Filter	V Total	øi øu	ø manhole				
5	ECO FAE 4000 ER	206	169	169	169	7	150	3300	4200	125	420	2,20	1"	2.845,01	



ECO FAE 5000 ER

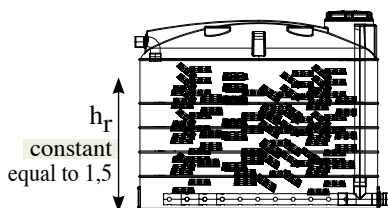


h_r max equal to 1,5



ECO FAE 5000 ER CON

A.E. ER	Models		Dimensions (cm)						Volume (litres)		Dimensions (mm)		S sed (m ²)	ø biogas	€
	Item	H	L	P	hi	hu	hr	V Filter	V Total	øi øu	ø manhole				
6	ECO FAE 5000 ER	189	203	203	154	7	150	3640	5100	125	420	2,43	1"	3.743,44	
7	ECO FAE 5000 ER CON	186	178	232	158	7	150	4500	4950	125	550	3,00	1"	4.104,17	



ECO FAE 7500 ER

A.E. ER	Models		Dimensions (cm)						Volume (litres)		Dimensions (mm)		S sed (m ²)	ø biogas	€
	Item	H	L	P	hi	hu	hr	V Filter	V Total	øi øu	ø manhole				
10	ECO FAE 7500 ER	198	238	238	155	7	150	6390	7550	160	420	4,26	1"	6.433,73	

AEROBIC PERCOLATORS PLUS WITH FORCED VENTILATION

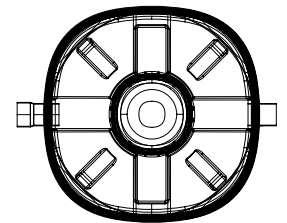
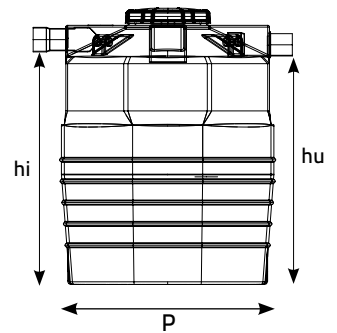
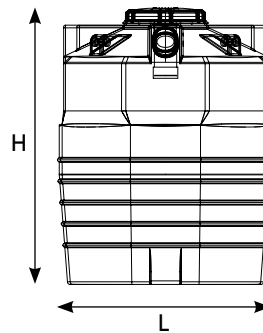
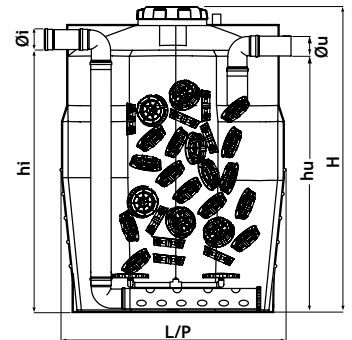


AEROBIC PERCOLATORS PLUS (HIGH OUTPUT)

In the ECOFAE PLUS series of systems, the oxidative action of the air introduced into the wastewater via a system consisting of a blower pump and diffusers is added to the well-known purifying function of attached biomass systems. The greater purification capacity of the PLUS system (for the same volume as a common aerobic percolating system) finds application where it is not possible, due to limited space, to install systems of larger dimensions.

NOMENCLATURE:

- 1 - WASTE INLET
- 2 - BIO-GAS VENT
- 3 - INSPECTION MANHOLE
- 4 - FILLING BODY
- 5 - WASTE OUTPUT
- 6 - DIAPHRAGM COMPRESSOR
- 7 - DIFFUSER



AEROBIC PERCOLATORS PLUS

Models			Dimensions (cm)						Volume (litres)			Dimensions (mm)		S sed (m ²)	Nr. diffus.	Power (W)	Ø biogas	€
A.E. Tab.3	A.E. Tab.4	Item	H	L	P	hi	hu	hr	Sfioro	Totale	V filtro	Øi Øu	Ø chiusino					
10	6	ECO FAE PLUS 1500	150	117	117	125	121	140	1300	1360	1345	100	420	0,96	2	48	1"	2.051,40
17	10	ECO FAE PLUS 2000	182	136	136	158	154	173	2175	2265	2256	100	420	1,30	2	50	1"	2.665,33
24	13	ECO FAE PLUS 3000	219	146	146	192	188	209	2990	3107	3099	125	420	1,48	4	75	1"	4.102,81
32	18	ECO FAE PLUS 4000	224	165	165	192	188	214	3980	4200	4117	125	420	1,92	4	75	1"	4.432,23
39	22	ECO FAE PLUS 5000	229	184	184	197	193	220	4930	5110	5100	125	420	2,32	4	95	1"	5.600,18
46	26	ECO FAE PLUS 6000	257	185	185	224	220	248	5810	5993	5987	125	420	2,41	6	143	1"	6.887,93

ORDINARY MAINTENANCE

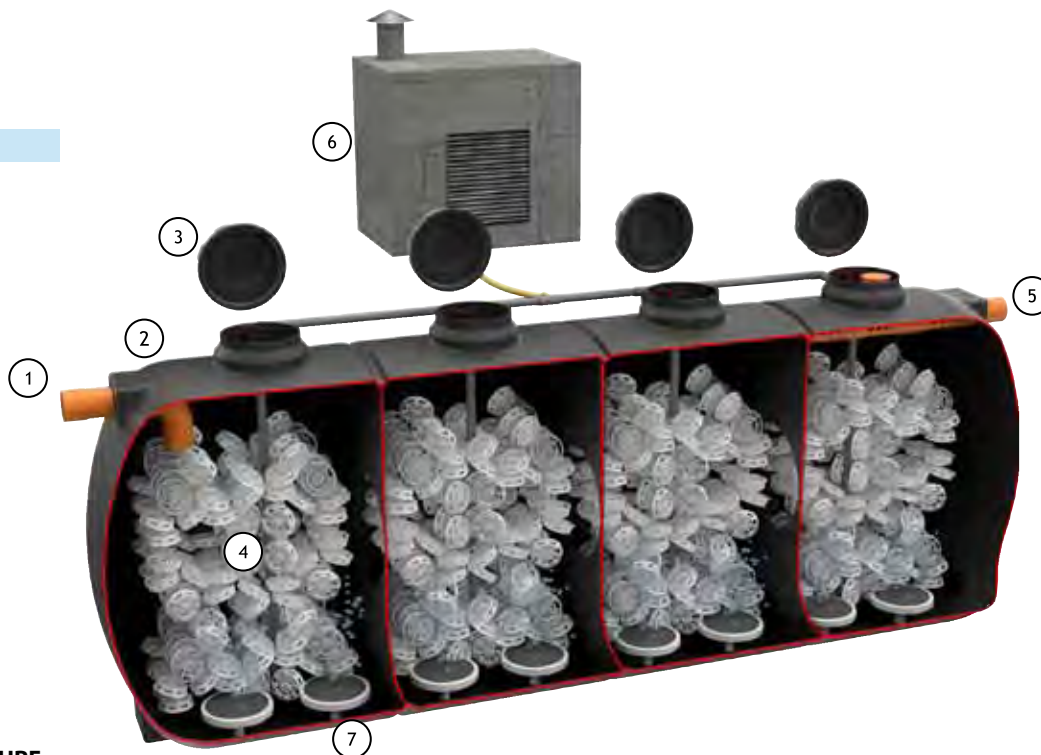
Generally proceed one to four times a year, or in any case as needed, to clean the filling bodies and the sewage distribution organs. Take care to add the recommended doses of bacterial-enzyme mixture every time you carry out start-up operations.

PLUS PERCOLATING FILTER (HIGH OUTPUT)

The **ECO FAE PLUS** percolating filter is a biological secondary treatment system for attached biomass which combines its well-known purifying function with the oxidative action of the air continuously introduced into the tank through the external compressor and then distributed inside through the speakers.

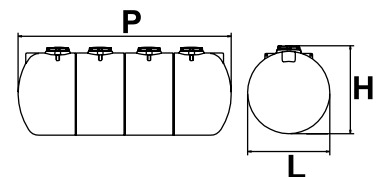
The greater purification capacity of the ECO FAE PLUS system finds wide application where, due to reduced availability of space, it is not possible to install systems with larger dimensions. Upstream of the system it is necessary to provide suitable primary roughing treatment for black and gray water.

NEW



NOMENCLATURE:

- 1 - WASTE INLET
- 2 - BIO-GAS VENT
- 3 - INSPECTION MANHOLE
- 4 - FILLING BODY
- 5 - WASTE OUTPUT
- 6 - DIAPHRAGM COMPRESSOR
- 7 - DIFFUSER



FORCED AIR PERCOLATING FILTER

ITEM	A.E. TAB. 3	A.E. TAB. 4	CAPACITY (Litres)	CAPACITÀ at the edge (Litres)	L (cm)	P (cm)	H (cm)	ø TUBE IN/OUT (mm)	Nr. Manhole	€
ECO FAE 10000 PLUS	73	43	10000	9444	238	275	255	160	2	10.579,70
ECO FAE 15000 PLUS	109	64	15000	14135	238	390	255	160	3	16.059,76
ECO FAE 20000 PLUS	145	86	20000	18826	238	508	255	160	4	20.749,98
ECO FAE 25000 PLUS	181	107	25000	23561	238	627	255	160	5	25.630,24
ECO FAE 30000 PLUS	217	128	30000	28252	238	743	255	160	6	30.200,22
ECO FAE 40000 PLUS	290	171	40000	37678	238	979	255	160	8	41.322,87
ECO FAE 50000 PLUS	362	214	50000	47104	238	1215	255	160	10	53.491,13

FORCED AIR AEROBIC PERCOLATOR WITH PRIMARY SEDIMENTATION - LARGE PLANTS

The forced aeration aerobic trickling filter with primary sedimentation **ECO VSFAE PLUS** is a system suitable for treating wastewater completely and is characterized by two compartments. Inside the first compartment, consisting of a SEPTIC TANK, the incoming wastewater undergoes primary sedimentation and sludge digestion.

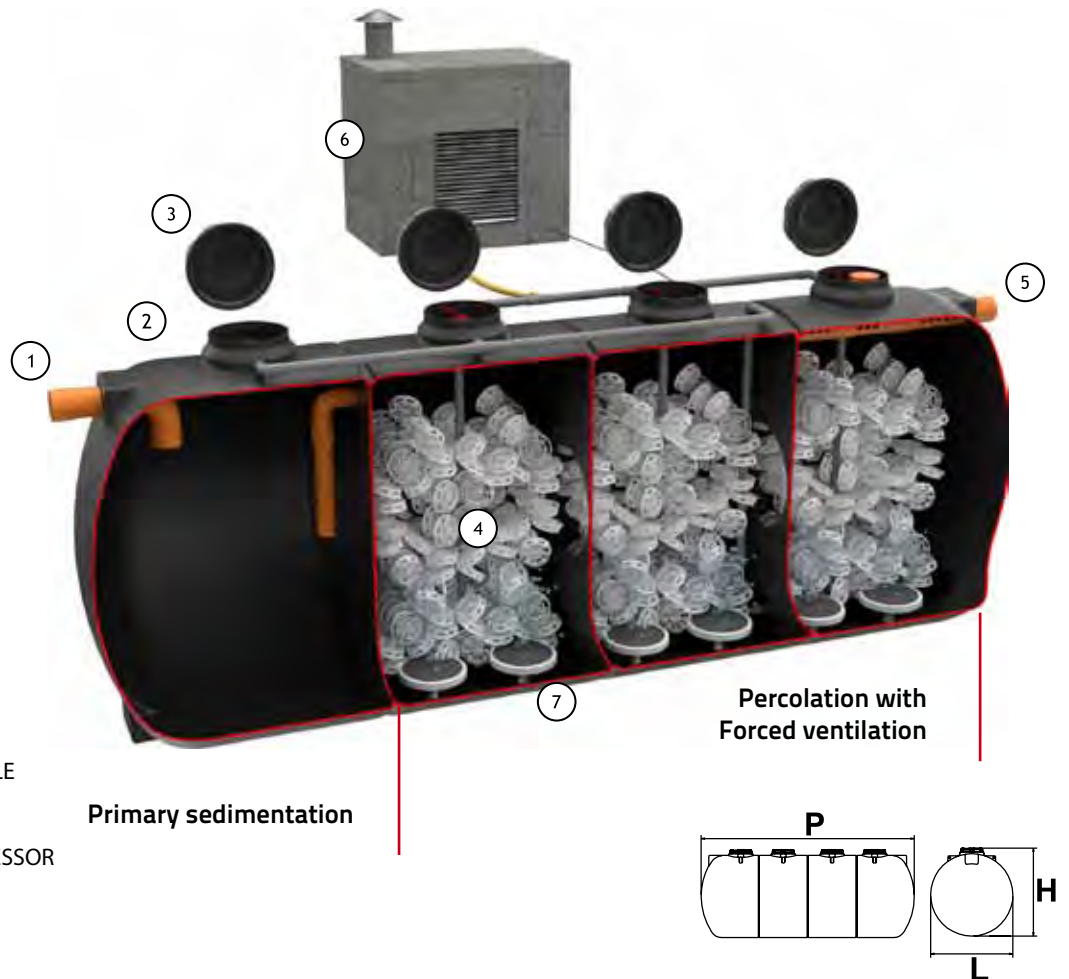
The second compartment consists of a secondary treatment system with attached biomass which combines its well-known purifying function with the oxidative action of the air continuously introduced into the tank through an external compressor and then distributed inside through the diffusers.

The **ECO VSFAE PLUS** monobloc aerobic percolator systems are used as a complete purification treatment of domestic or similar wastewater.

Where possible it is advisable to provide suitable primary roughing treatment of gray water coming from bathrooms and kitchens.

The wastewater coming out of an ECO VSFAE PLUS type system can be discharged into a surface watercourse (TAB.3) or soil (TAB.4) depending on needs.

NEW

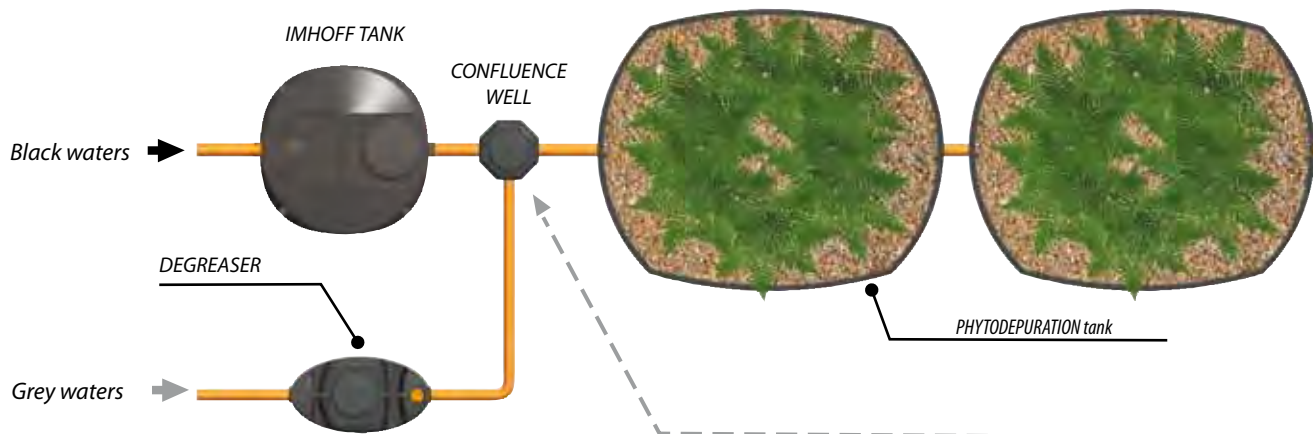


NOMENCLATURE:

- 1 - WASTE INLET
- 2 - BIO-GAS VENT
- 3 - INSPECTION MANHOLE
- 4 - FILLING BODY
- 5 - WASTE OUTPUT
- 6 - DIAPHRAGM COMPRESSOR
- 7 - DIFFUSER

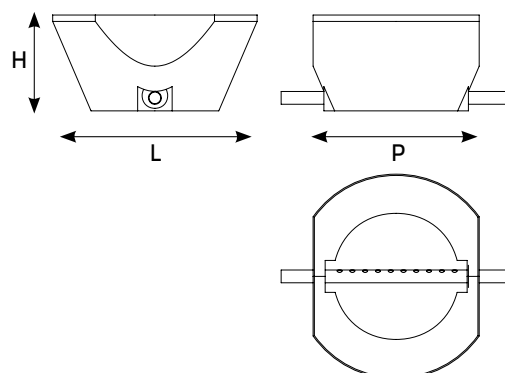
FORCED AIR AEROBIC PERCOLATOR WITH PRIMARY SEDIMENTATION

A.E. TAB. 3	A.E. TAB. 4	ITEM	VOLUME TOTAL	L (cm)	P (cm)	H (cm)	Ø TUBE IN/OUT (mm)	Nr. Manhole	SEDIMENTATION	PERCOLATION/OXIDATION	POWER Installed	Voltage	€
51	40	ECO VS FAE 15000 PLUS	15000	225	452	243	160	3	5000	10000	0,19	220	13.697,65
70	60	ECO VS FAE 22000 PLUS	22000	225	640	243	160	5	8500	13500	1,5	380	20.338,79
80	70	ECO VS FAE 25000 PLUS	25000	225	716	243	160	5	10000	15000	1,5	380	22.499,68
90	80	ECO VS FAE 28500 PLUS	28500	225	807	243	160	6	10000	18500	1,5	380	25.256,42
110	100	ECO VS FAE 35000 PLUS	35000	225	980	243	160	7	15000	20000	1,5	380	29.837,07



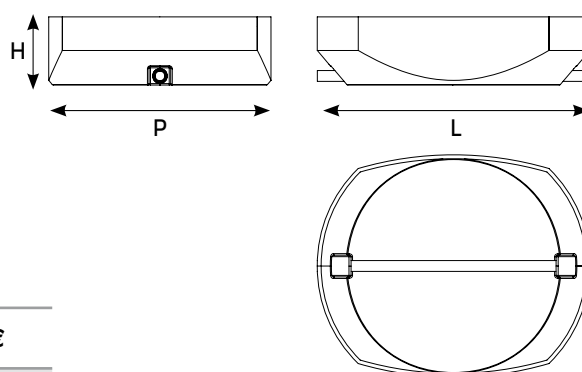
PHYTO-PURIFICATION

Phytopurification is a natural purification system that allows pre-treated wastewater to be refined by triggering both aerobic and anaerobic processes, typical of aquatic environments and wetlands. The purifying effect occurs thanks to the continuous action of digestion and assimilation of the substances contained in the wastewater through the root systems of shrubs, herbs and flowers, constantly lapped in the appropriate trays by the clarified water. TELCOM constructed wetland systems are horizontal submerged flow systems and are made up of trays containing inert material (gravel and crushed stone are commonly used) on which the roots of emerging plants develop. The level of the wastewater inside the trays is kept constant thanks to the installation of a level trap downstream of the trays and the flow flows horizontally. It is always necessary to provide a primary treatment of the wastewater upstream of the constructed wetlands. In the case of separate drains, we generally recommend a grease trap for the grey water and an Imhoff tank for the black water, while in the case of joint drains, a three-chamber tank is preferable.



VAS 1 PHYTO-PURIFICATION tank

ITEM	SURFACE (m ²)	VOLUME (m ³)	Dimensions (cm)			ø tube (mm)	€
			H	L	P		
VAS 1	2	1	76	160	130	100	299,48

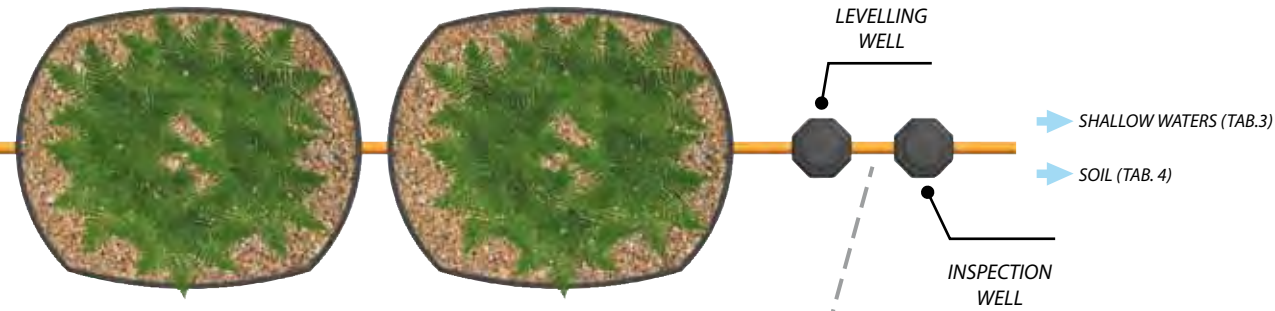


VAS 2 PHYTO-PURIFICATION tank

ITEM	SURFACE (m ²)	VOLUME (m ³)	Dimensions (cm)			ø tube (mm)	€
			H	L	P		
VAS 2	5	3	70	280	228	100	747,68

PRODUCT SELECTION

When explicitly indicated by the competent authority as appropriate treatment, the use of a surface equal to 5 m² is recommended for AE. In the case of use for the refinement of pre-treated wastewater, the use of a surface equal to 2 m² is considered adequate per Equivalent Inhabitant.

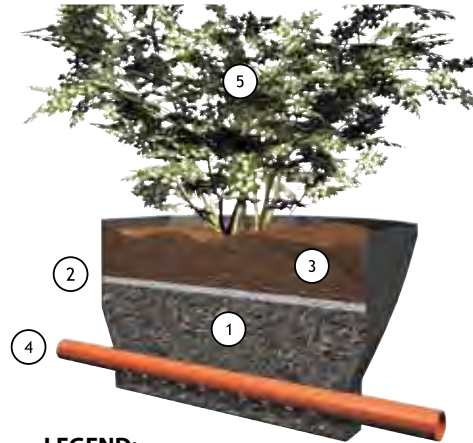
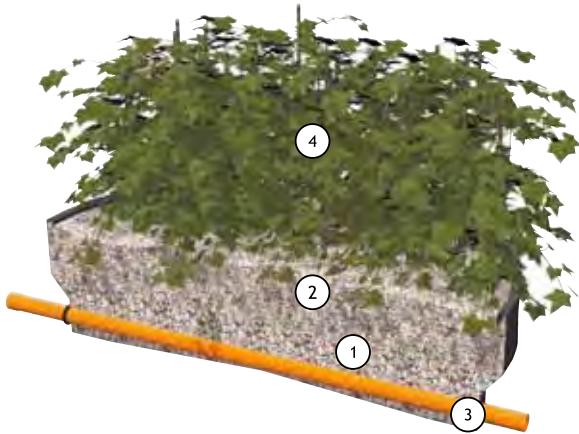


At the request of the competent authority, the recycling of waste water may be carried out

Note: Install the trays on surfaces without roughness and ensure a natural outflow of wastewater.

Filling according to the APAT-ARPAT Guidelines of the TOSCANA Region

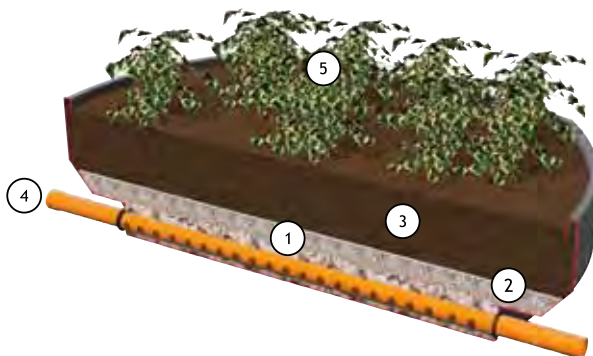
Filling according to the Decision n° 1053 / 09.06.2003 of EMILIA ROMAGNA Region



- LEGEND:**
- 1 - CRUSHED STONE (granule dimensions 80/120 mm)
 - 2 - GRAVEL (granule dimensions 4/16 mm)
 - 3 - DRAINING TUBE
 - 4 - PLANT (RECOMMENDED SHRUB OR FLOWER FOR PHYTODEPURATION - see pag.164)

- LEGEND:**
- 1 - GRAVEL and PEBBLE
 - 2 - TNT layer (non woven fabric)
 - 3 - TOPSOIL
 - 4 - DRAINING TUBE
 - 5 - PLANT (RECOMMENDED SHRUB OR FLOWER FOR PHYTODEPURATION - see pag.164)

Filling according to the Regional Regulation n°. 7 of 2016 of the APULIA Region



- LEGEND:**
- 1 - 15/20 cm SCREE granules 4/7 cm
 - 2 - 10 cm GRAVEL granules 1/2 cm
 - 3 - 35/50 cm TOPSOIL separated from the subsiding Gravel by a layer of TNT
 - 4 - DRAINING TUBE
 - 5 - PLANT (RECOMMENDED SHRUB OR FLOWER FOR PHYTODEPURATION - see pag.164)

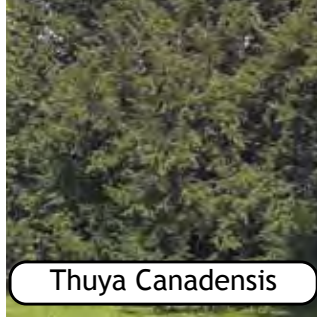
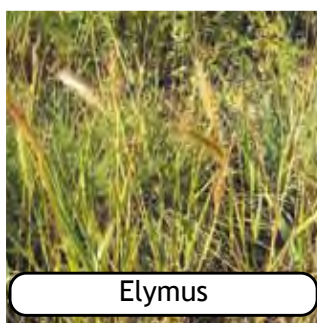
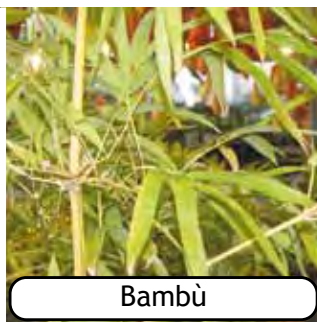
SPECIFICATION ITEM

Waterproof trays in recyclable PE (linear polyethylene), 2 m² and 5 m². They have inlet and outlet pipes equipped with suitable double rubber lip seals, to guarantee a perfect seal. Inside the tray there are PVC pipes designed to guarantee uniform distribution of the wastewater.

ORDINARY MAINTENANCE

Generally clean the primary treatment plants upstream of the phytodepurification trays and the sewage distribution systems one to four times a year. Periodically check the correct flow of wastewater.

PLANTS COMMONLY USED IN PHYTODEPURATION



RECOMMENDED SYSTEMS



RECOMMENDED SYSTEMS FOR DISCHARGE ON THE GROUND (TAB. 4 and VENICE LAGOON)

Joint gray and black water discharges



TABLE 4- JOINT DISCHARGES TO THE GROUND

ITEM	A.E.	IMHOFF TANK	ACTIVATED SLUDGE	ANAEROBIC PERCOLATOR	CHLORINATOR WELL	INSPECTION WELL	€
ECO IRC 5 S PLUS	5	ECO IMO 6 NEW	FA 5	ECO FAN 1500	POZ 100 CLO	POZ 100 G.I.	3.983,61
ECO IRC 10 S PLUS	10	ECO IMO 10 NEW	FA 10	ECO FAN 2000	POZ 100 CLO		5.748,76
ECO IRC 15 S PLUS	15	ECO IMO 15 NEW	FA 15	ECO FAN 3000	POZ 300 CLO		7.726,41
ECO IRC 20 S PLUS	20	ECO IMO 20 NEW	FA 20	ECO FAN 4000	POZ 300 CLO		9.595,57
ECO IRC 25 S PLUS	25	ECO IMO 25 NEW	FA 25	ECO FAN 5000	POZ 300 CLO		11.024,76
ECO IRC 29 S PLUS	29	ECO IMO 30 NEW	FA 25	ECO FAN 6000	POZ 300 CLO		12.195,00

Separate gray and black water drains

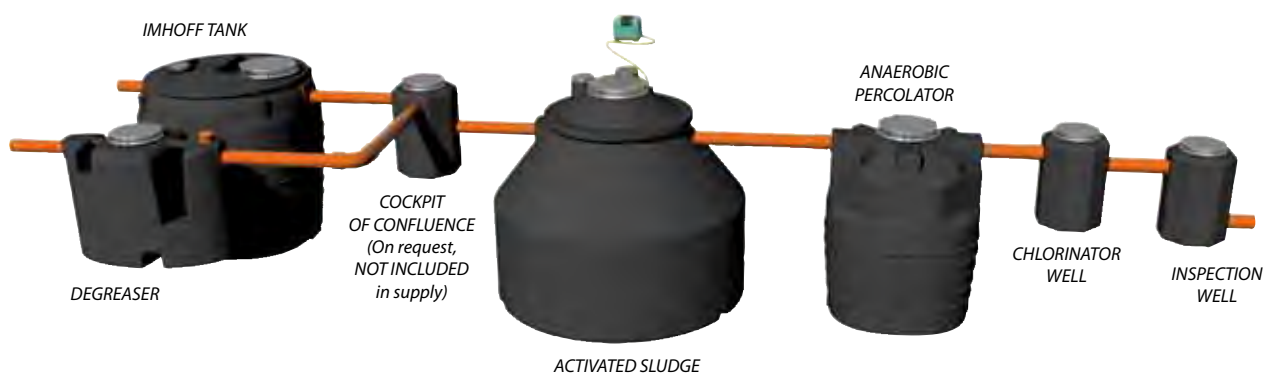


TABLE 4- SEPARATE DISCHARGES TO THE GROUND

ITEM	A.E.	IMHOFF TANK	DEGREASER	ACTIVATED SLUDGE	ANAEROBIC PERCOLATOR	CHLORINATOR WELL	INSPECTION WELL	€
ECO IRS 5 S PLUS	5	ECO IMO 4 NEW	ECO DIS 6	FA 5	ECO FAN 1500	POZ 100 CLO	POZ 100 G.I.	4.293,92
ECO IRS 10 S PLUS	10	ECO IMO 6 NEW	ECO DIS 10	FA 10	ECO FAN 2000	POZ 100 CLO		5.928,44
ECO IRS 15 S PLUS	15	ECO IMO 10 NEW	ECO DIS 18	FA 15	ECO FAN 3000	POZ 300 CLO		7.828,69
ECO IRS 20 S PLUS	20	ECO IMO 15 NEW	ECO DIS 18	FA 20	ECO FAN 4000	POZ 300 CLO		9.530,17
ECO IRS 25 S PLUS	25	ECO IMO 20 NEW	ECO DIS 30	FA 25	ECO FAN 5000	POZ 300 CLO		11.457,31
ECO IRS 29 S PLUS	29	ECO IMO 25 NEW	ECO DIS 30	FA 25	ECO FAN 6000	POZ 300 CLO		12.618,33

RECOMMENDED PLANTS WHEN ONLY ACTIVATED SLUDGE SYSTEM IS REQUIRED

Joint gray and black water discharges



**TABLE 3
DISCHARGE INTO
SUPERFICIAL
WATER**

ITEM	A.E.	IMHOFF TANK	ACTIVATED SLUDGE	CHLORINATOR WELL*	INSPECTION WELL	€
ECO IRC 5 AS	5	ECO IMO 6	FA 5	POZ 100 CLO	POZ 100 G.I.	2.680,91
ECO IRC 10 AS	10	ECO IMO 10	FA 10	POZ 100 CLO		3.652,43
ECO IRC 15 AS	15	ECO IMO 15	FA 15	POZ 300 CLO		4.941,29
ECO IRC 20 AS	20	ECO IMO 20	FA 20	POZ 300 CLO		6.181,56
ECO IRC 25 AS	25	ECO IMO 25	FA 25	POZ 300 CLO		6.981,85

**TABLE 4
DISCHARGE
ON GROUND**

ITEM	A.E.	IMHOFF TANK	ACTIVATED SLUDGE	CHLORINATOR WELL*	INSPECTION WELL	€
ECO IRC 5 S	5	ECO IMO 6	FA 10	POZ 100 CLO	POZ 100 G.I.	3.382,91
ECO IRC 10 S	10	ECO IMO 10	FA 15	POZ 100 CLO		4.259,92
ECO IRC 15 S	15	ECO IMO 15	FA 20	POZ 300 CLO		5.507,74
ECO IRC 20 S	20	ECO IMO 20	FA 25	POZ 300 CLO		6.714,62

**Follow the opinion of the competent body*

separated gray and black water discharges

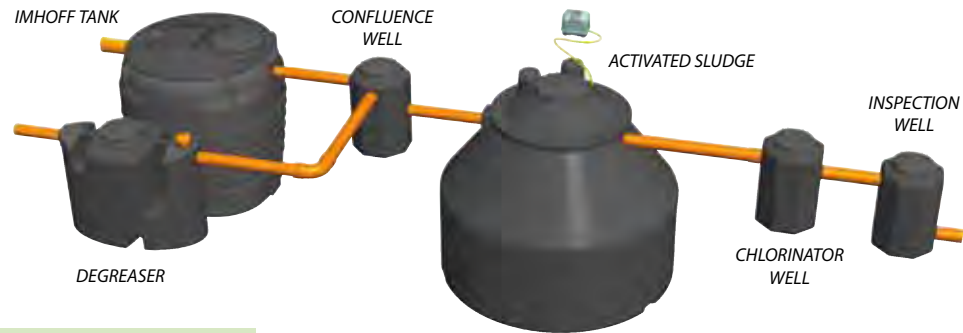


TABLE 3 - DISCHARGE INTO SURFACE WATERS

ITEM	A.E.	IMHOFF TANK	DEGREASER	ACTIVATED SLUDGE	CHLORINATOR WELL*	CONFLUENCE WELL	INSPECTION WELL	€
ECO IRS 5 AS	5	ECO IMO 4	ECO DIS 4	FA 5	POZ 100 CLO	POZ 100 CO	POZ 100 G.I.	3.125,53
ECO IRS 10 AS	10	ECO IMO 6	ECO DIS 6	FA 10	POZ 100 CLO			3.949,17
ECO IRS 15 AS	15	ECO IMO 10	ECO DIS 10	FA 15	POZ 300 CLO			5.074,47
ECO IRS 20 AS	20	ECO IMO 15	ECO DIS 18	FA 20	POZ 300 CLO			6.306,22
ECO IRS 25 AS	25	ECO IMO 20	ECO DIS 30	FA 25	POZ 300 CLO			7.604,46

TABLE 4 - DISCHARGE ON GROUND

ITEM	A.E.	IMHOFF TANK	DEGREASER	ACTIVATED SLUDGE	CHLORINATOR WELL*	CONFLUENCE WELL	INSPECTION WELL	€
ECO IRS 5 S	5	ECO IMO 4	ECO DIS 6	FA 10	POZ 100 CLO	POZ 100 CO	POZ 100 G.I.	3.883,29
ECO IRS 10 S	10	ECO IMO 6	ECO DIS 10	FA 15	POZ 100 CLO			4.629,69
ECO IRS 15 S	15	ECO IMO 10	ECO DIS 18	FA 20	POZ 300 CLO			5.800,11
ECO IRS 20 S	20	ECO IMO 15	ECO DIS 18	FA 25	POZ 300 CLO			6.839,29

**Follow the opinion of the competent body*

ACTIVATED SLUDGE PLANTS RECOMMENDED FOR COMMERCIAL ACTIVITIES

RECOMMENDED SYSTEMS WHEN ONLY AN ACTIVATED SLUDGE SYSTEM IS REQUIRED

Joint gray and black water discharges



TABLE 3- DISCHARGE INTO SURFACE WATERS

ITEM	A.E.	IMHOFF TANK	EQUALIZER	ACTIVATED SLUDGE	CHLORINATOR WELL*	STILLING WELL	INSPECTION WELL	€
ECO ICC 5 AS	5	ECO IMO 6	-	FA 5	POZ 100 CLO	-	POZ 100 G.I.	2.680,91
ECO ICC 10 AS	10	ECO IMO 10	EQ 1500	FA 10	POZ 100 CLO	POZ 100 CA		7.646,65
ECO ICC 15 AS	15	ECO IMO 15	EQ 2000	FA 15	POZ 300 CLO			9.182,65
ECO ICC 20 AS	20	ECO IMO 20	EQ 3000	FA 20	POZ 300 CLO			11.117,61
ECO ICC 25 AS	25	ECO IMO 25	EQ 4000	FA 25	POZ 300 CLO			12.330,72

TABLE 4- DISCHARGE TO THE GROUND

** Follow the opinion of the competent body*

ITEM	A.E.	IMHOFF TANK	EQUALIZER	ACTIVATED SLUDGE	CHLORINATOR WELL*	STILLING WELL	INSPECTION WELL	€
ECO ICC 5 S	5	ECO IMO 6	-	FA 10	POZ 100 CLO	-	POZ 100 G.I.	3.382,91
ECO ICC 10 S	10	ECO IMO 10	EQ 1500	FA 15	POZ 100 CLO	POZ 100 CA		8.254,14
ECO ICC 15 S	15	ECO IMO 15	EQ 2000	FA 20	POZ 300 CLO			9.749,10
ECO ICC 20 S	20	ECO IMO 20	EQ 3000	FA 25	POZ 300 CLO			11.650,66

Separate gray and black water drains

** Follow the opinion of the competent body*



TABLE 3- DISCHARGE INTO SURFACE WATERS

ITEM	A.E.	IMHOFF TANK	DEGREASER	EQUALIZER	ACTIVATED SLUDGE	CHLORINATOR WELL*	CONFLUENCE WELL	STILLING WELL	INSPECTION WELL	€
ECO ICS 5 AS	5	ECO IMO 4	ECO DIS 4	-	FA 5	POZ 100 CLO	POZ 100 CO	-	POZ 100 G.I.	3.009,15
ECO ICS 10 AS	10	ECO IMO 6	ECO DIS 6	EQ 1500	FA 10	POZ 100 CLO		POZ 100 CA		7.943,38
ECO ICS 15 AS	15	ECO IMO 10	ECO DIS 10	EQ 2000	FA 15	POZ 300 CLO				9.315,83
ECO ICS 20 AS	20	ECO IMO 15	ECO DIS 18	EQ 3000	FA 20	POZ 300 CLO				11.242,25
ECO ICS 25 AS	25	ECO IMO 20	ECO DIS 30	EQ 4000	FA 25	POZ 300 CLO				13.099,00

TABLE 4- DISCHARGE TO THE GROUND

** Follow the opinion of the competent body*

ITEM	A.E.	IMHOFF TANK	DEGREASER	EQUALIZER	ACTIVATED SLUDGE	CHLORINATOR WELL*	CONFLUENCE WELL	STILLING WELL	INSPECTION WELL	€
ECO ICS 5 S	5	ECO IMO 4	ECO DIS 6	-	FA 10	POZ 100 CLO	POZ 100 CO	-	POZ 100 G.I.	3.883,29
ECO ICS 10 S	10	ECO IMO 6	ECO DIS 10	EQ 1500	FA 15	POZ 100 CLO		POZ 100 CA		8.623,91
ECO ICS 15 S	15	ECO IMO 10	ECO DIS 18	EQ 2000	FA 20	POZ 300 CLO				10.041,47
ECO ICS 20 S	20	ECO IMO 15	ECO DIS 18	EQ 3000	FA 25	POZ 300 CLO				11.775,32

** Follow the opinion of the competent body*

RECOMMENDED SYSTEMS WHEN ONLY PERCOLATING FILTER IS REQUIRED

Joint gray and black water discharges



**TABLE 3
DISCHARGE INTO
SUPERFICIAL
WATER**

A.E.	IMHOFF TANK	ANAEROBIC PERCOLATOR	CHLORINATOR WELL*	INSPECTION WELL	€
6	ECO IMO 6	ECO FAN 1500	POZ 100 CLO	POZ 100 G.I.	2.409,61
10	ECO IMO 10	ECO FAN 2000	POZ 100 CLO		3.472,75
15	ECO IMO 15	ECO FAN 3000	POZ 300 CLO		4.842,91
20	ECO IMO 20	ECO FAN 4000	POZ 300 CLO		6.145,62
24	ECO IMO 25	ECO FAN 5000	POZ 300 CLO		7.041,76
29	ECO IMO 30	ECO FAN 6000	POZ 300 CLO	8.212,00	

TABLE 3- DISCHARGE INTO SURFACE WATERS (Emilia R.-Umbria)

A.E.	IMHOFF TANK	ANAEROBIC PERCOLATOR	CHLORINATOR WELL*	INSPECTION WELL	€
3	ECO IMO 4	ECO FAN 2000 ER	POZ 100 CLO	POZ 100 G.I.	3.077,43
5	ECO IMO 6	ECO FAN 4000 ER	POZ 300 CLO		4.127,16
7	ECO IMO 10	ECO FAN 5000 ER	POZ 300 CLO		5.295,11
10	ECO IMO 10	ECO FAN 7500 ER	POZ 300 CLO		7.985,40

According to Regional Resolution No. 1053 of Emilia Romagna, with sludge extraction at least twice a year.

**TABLE 4
DISCHARGE
ON GROUND**

A.E.	IMHOFF TANK	ANAEROBIC PERCOLATOR	CHLORINATOR WELL*	INSPECTION WELL	€
6	ECO IMO 6	ECO FAE PLUS 1500	POZ 100 CLO	POZ 100 G.I.	3.158,30
10	ECO IMO 10	ECO FAE PLUS 2000	POZ 100 CLO		4.041,75
13	ECO IMO 15	ECO FAE PLUS 3000	POZ 300 CLO		6.160,60
18	ECO IMO 20	ECO FAE PLUS 4000	POZ 300 CLO		7.163,84
22	ECO IMO 25	ECO FAE PLUS 5000	POZ 300 CLO		8.599,03
26	ECO IMO 30	ECO FAE PLUS 6000	POZ 300 CLO		10.308,33

* Follow the opinion of the competent body

Separate gray and black water drains

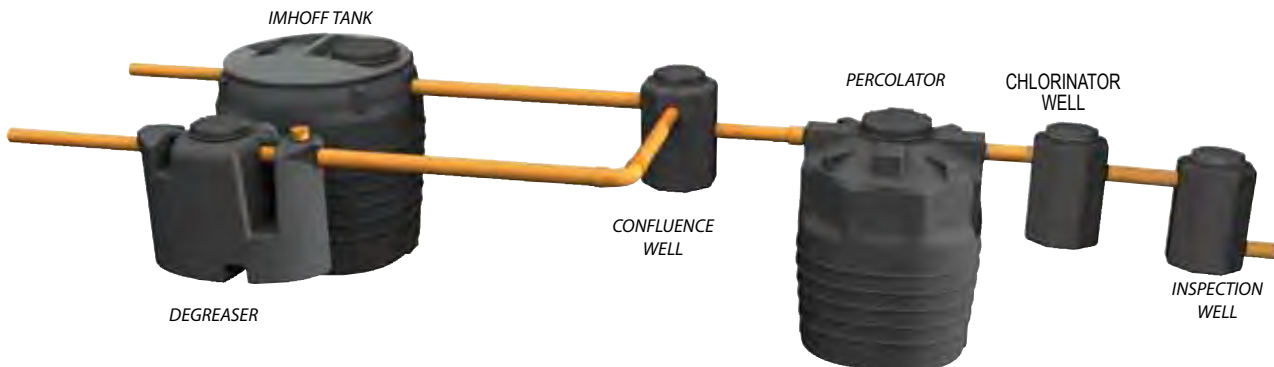


TABLE 3- DISCHARGE INTO SURFACE WATERS

A.E.	IMHOFF TANK	DEGREASER	PERCOLATOR	CHLORINATOR WELL*	CONFLUENCE WELL	INSPECTION WELL	€
6	ECO IMO 4	ECO DIS 4	ECO FAN 1500	POZ 100 CLO	POZ 100 CO	POZ 100 G.I.	2.854,24
10	ECO IMO 6	ECO DIS 6	ECO FAN 2000	POZ 100 CLO			3.769,49
15	ECO IMO 10	ECO DIS 10	ECO FAN 3000	POZ 300 CLO			4.976,08
20	ECO IMO 15	ECO DIS 18	ECO FAN 4000	POZ 300 CLO			6.270,28
24	ECO IMO 20	ECO DIS 30	ECO FAN 5000	POZ 300 CLO			7.664,36
29	ECO IMO 25	ECO DIS 30	ECO FAN 6000	POZ 300 CLO			8.680,29

TABLE 3- DISCHARGE INTO SURFACE WATERS (Emilia R.-Umbria)

A.E.	IMHOFF TANK	DEGREASER	PERCOLATOR	CHLORINATOR WELL*	CONFLUENCE WELL	INSPECTION WELL	€
3	ECO IMO 4	ECO DIS 3	ECO FAN 2000 ER	POZ 100 CLO	POZ 100 CO	POZ 100 G.I.	3.552,16
5	ECO IMO 4	ECO DIS 4	ECO FAN 4000 ER	POZ 300 CLO			4.571,78
7	ECO IMO 6	ECO DIS 6	ECO FAN 5000 ER	POZ 300 CLO			5.591,85
10	ECO IMO 10	ECO DIS 10	ECO FAN 7500 ER	POZ 300 CLO			8.624,69

According to Regional Resolution No. 1053 of Emilia Romagna, with sludge extraction at least twice a year.

**TABLE 4
DISCHARGE
ON GROUND**

A.E.	IMHOFF TANK	DEGREASER	PERCOLATOR	CHLORINATOR WELL*	CONFLUENCE WELL	INSPECTION WELL	€
6	ECO IMO 6	ECO DIS 6	ECO FAE PLUS 1500	POZ 100 CLO	POZ 100 CO	POZ 100 G.I.	3.724,57
10	ECO IMO 10	ECO DIS 10	ECO FAE PLUS 2000	POZ 100 CLO			4.681,04
13	ECO IMO 15	ECO DIS 18	ECO FAE PLUS 3000	POZ 300 CLO			6.959,08
18	ECO IMO 20	ECO DIS 18	ECO FAE PLUS 4000	POZ 300 CLO			7.962,32
22	ECO IMO 25	ECO DIS 30	ECO FAE PLUS 5000	POZ 300 CLO			9.634,52
26	ECO IMO 30	ECO DIS 30	ECO FAE PLUS 6000	POZ 300 CLO			11.198,17

* Follow the opinion of the competent body

RECOMMENDED MONOBLOC ACTIVATED SLUDGE PLANTS FOR USERS OVER 50 EA

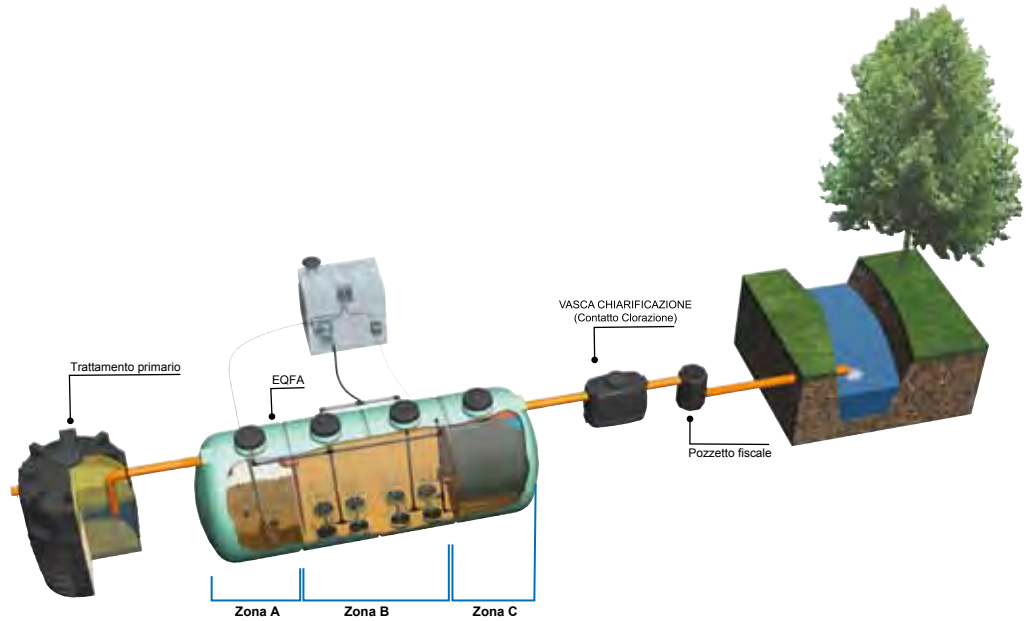


TABLE 3 - DISCHARGE INTO SURFACE WATERS

A.E.	PRIMARY TREATMENT	EQFA	CONTACT TANK CHLORINATION CLARIFICATION	INSPECTION WELL	€
60	ECOVSV 6000	EQFA 18500	ECO CLO 500	POZ 100 GI	24.020,27
90	VS 10000	EQFA 28500	ECO CLO 1000	POZ 100 GI	38.404,05
120	VS 12000	EQFA 33500 B	ECO CLO 1000	POZ 300 GI	46.779,08
150	VS 15000	EQFA 43500 B	ECO CLO 1500	POZ 300 GI	58.114,06
180	VS 18500	EQFA 50000 B	ECO CLO 1500	POZ 300 GI	67.144,27

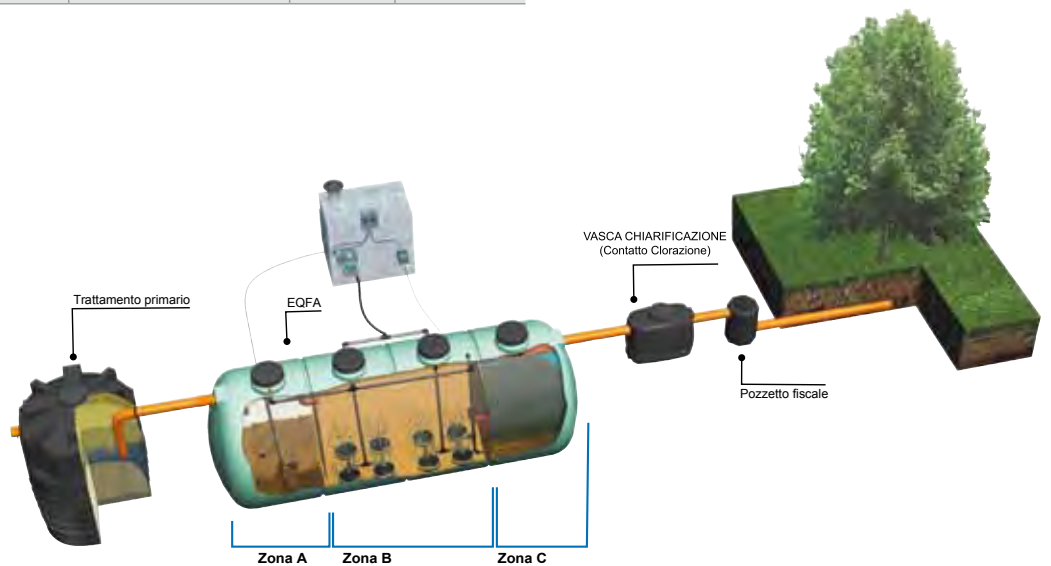


TABLE 4 - DISCHARGE ONTO THE GROUND

A.E.	PRIMARY TREATMENT	EQFA	CONTACT TANK CHLORINATION CLARIFICATION	INSPECTION WELL	€
51	ECOVSV 5000	EQFA 18500	ECO CLO 500	POZ 100 GI	23.464,82
70	ECOVSV 6000	EQFA 23500 B	ECO CLO 1000	POZ 100 GI	31.595,71
95	VS 10000	EQFA 33500 B	ECO CLO 1000	POZ 100 GI	43.868,70
120	VS 12000	EQFA 40000	ECO CLO 1500	POZ 300 GI	52.841,00
145	VS 15000	EQFA 50000 B	ECO CLO 1500	POZ 300 GI	64.446,47

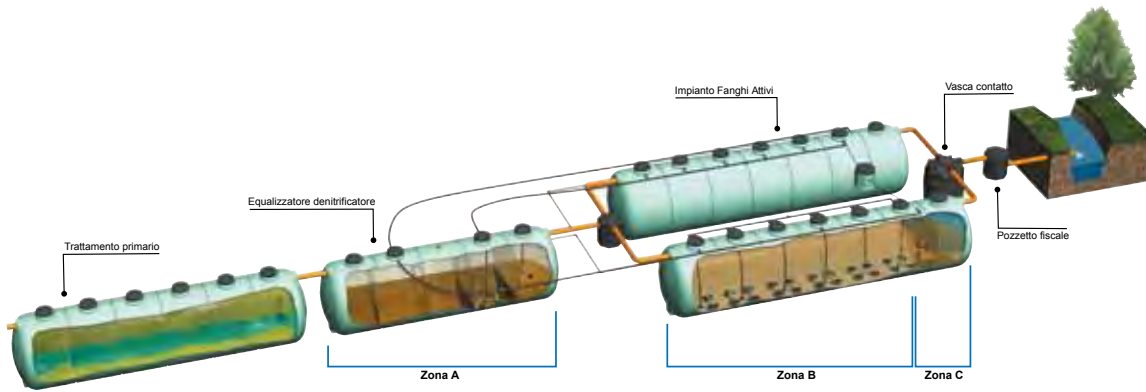


TABLE 3 - DISCHARGE INTO SURFACE WATERS

A.E.	PRIMARY TREATMENT	Equalization Denitrification	Activated sludge Plant	CONTACT TANK CHLORINATION CLARIFICATION	INSPECTION WELL	€
200	VS 20000	EQ 18500	FA 40000	ECO CLO 2000	POZ 300 GI	72.376,31
250	VS 25000	EQ 23500	FA 48500	ECO CLO 2000	POZ 300 GI	88.575,88
300	VS 30000	EQ 25000	N. 2 FA 30000	ECO CLO 2500	POZ 300 GI	105.371,64
350	VS 35000	EQ 28500	N. 2 FA 35000	ECO CLO 2500	POZ 300 GI	122.400,34
400	VS 40000	EQ 33500	N. 2 FA 40000	ECO CLO 4000	POZ 300 GI	138.637,12
500	VS 50000	EQ 40000	N. 2 FA 48500	ECO CLO 4000	POZ 300 GI	166.592,83
600	N. 2 VS 30000	EQ 48500	N. 4 FA 30000	ECO CLO 6000	POZ 300 GI	207.431,70
700	N. 2 VS 35000	N. 2 EQ 28500	N. 4 FA 35000	ECO CLO 6000	POZ 300 GI	243.701,93
800	N. 2 VS 40000	N. 2 EQ 30000	N. 4 FA 40000	ECO CLO 7500	POZ 300 GI	271.119,50
1000	N. 2 VS 50000	N. 2 EQ 40000	N. 4 FA 48500	ECO CLO 10000	POZ 300 GI	332.844,75

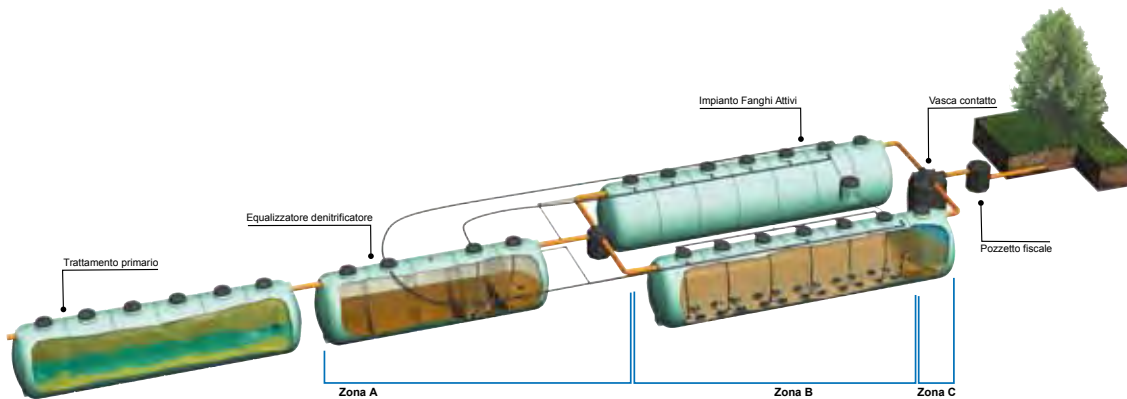


TABLE 4 - DISCHARGE ONTO THE GROUND

A.E.	PRIMARY TREATMENT	Equalization Denitrification	Activated sludge Plant	CONTACT TANK CHLORINATION CLARIFICATION	INSPECTION WELL	€
170	VS 17000	EQ 15000	FA 40000	ECO CLO 1500	POZ 300 GI	68.379,04
200	VS 20000	EQ 18500	FA 48500	ECO CLO 2000	POZ 300 GI	80.459,26
250	VS 25000	EQ 23500	N. 2 FA 30000	ECO CLO 2000	POZ 300 GI	101.530,27
300	VS 30000	EQ 25000	N. 2 FA 35000	ECO CLO 2500	POZ 300 GI	115.600,85
350	VS 35000	EQ 28500	N. 2 FA 40000	ECO CLO 2500	POZ 300 GI	132.253,61
400	VS 40000	EQ 33500	N. 2 FA 48500	ECO CLO 4000	POZ 300 GI	154.547,03
500	VS 50000	EQ 40000	N. 4 FA 30000	ECO CLO 4000	POZ 300 GI	197.239,14
600	N. 2 VS 30000	EQ 48500	N. 4 FA 35000	ECO CLO 6000	POZ 300 GI	227.904,81
700	N. 2 VS 35000	N. 2 EQ 28500	N. 4 FA 40000	ECO CLO 6000	POZ 300 G	263.423,30
800	N. 2 VS 40000	N. 2 EQ 30000	N. 4 FA 48500	ECO CLO 7500	POZ 300 G	302.595,46

RECOMMENDED MBBR SYSTEMS FOR USERS OVER 50 EA

NEW

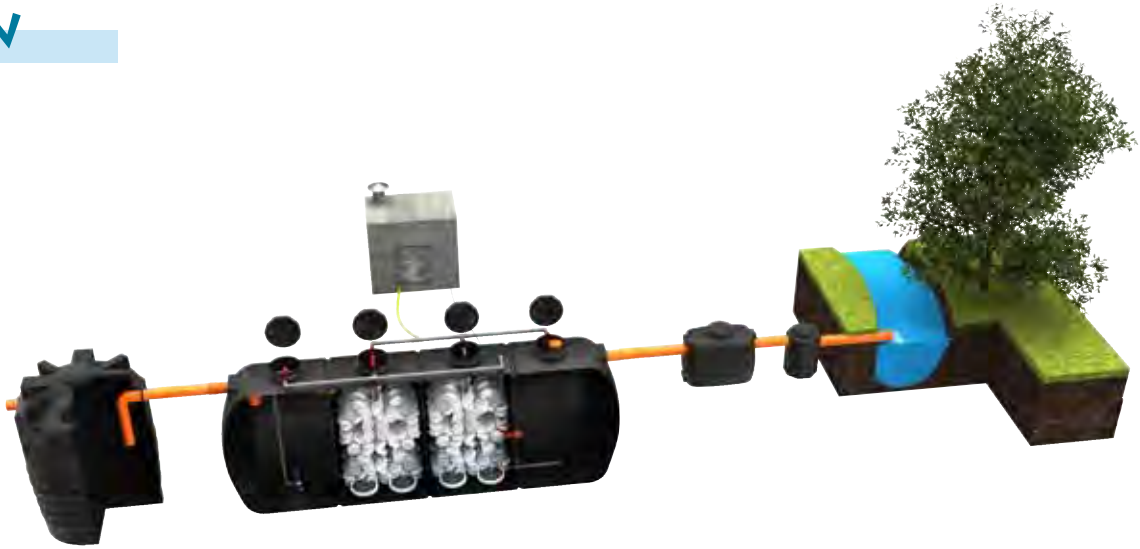


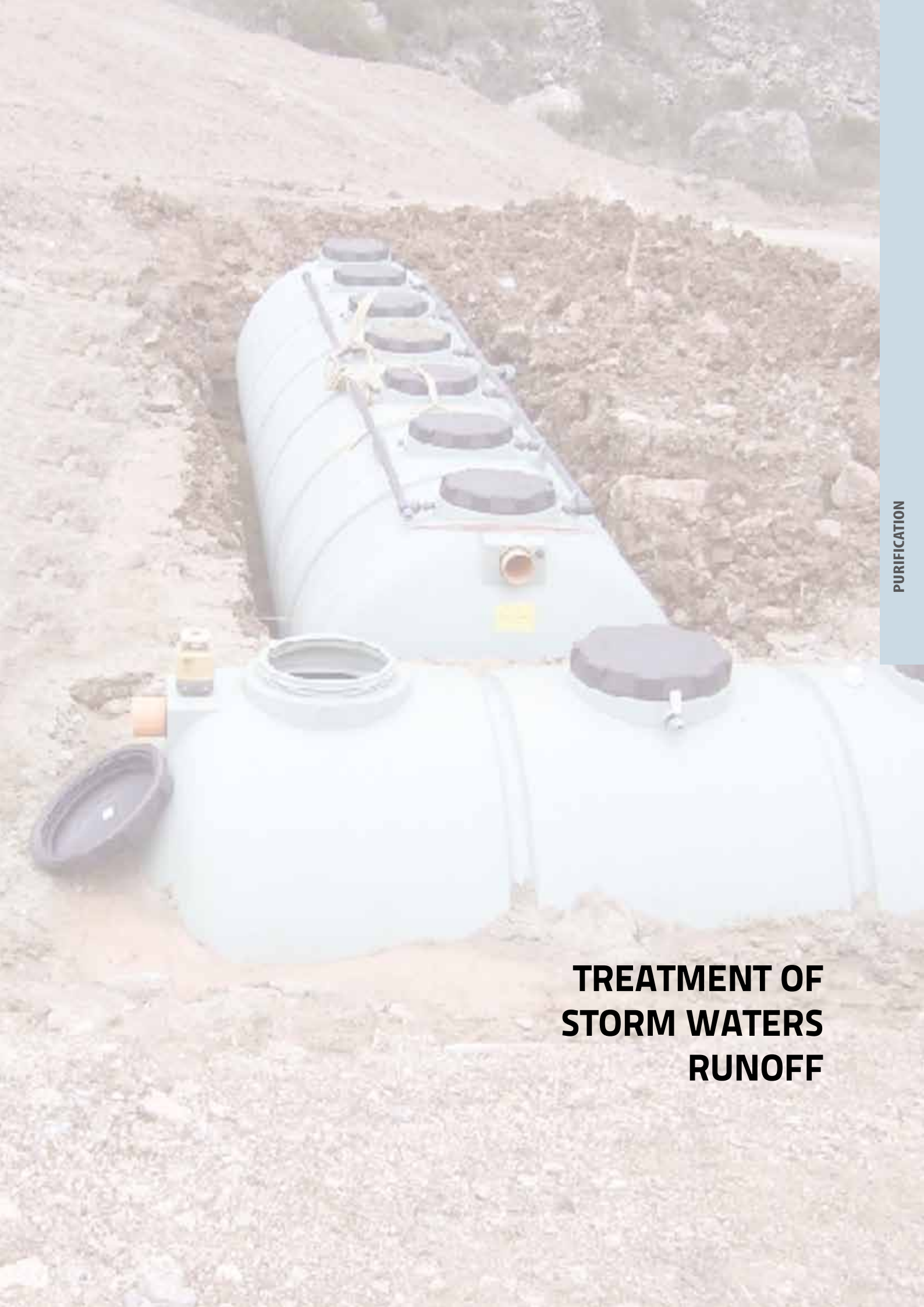
TABLE 3 - DISCHARGE INTO SURFACE WATERS

A.E. TAB. 3	PRIMARY TREATMENT	MBBR	CONTACT TANK CHLORINATION CLARIFICATION	INSPECTION WELL	€
75	VS 8500	MBBR 18500	ECO CLO 1000	POZ 100 G.I.	28.851,38
110	VS 12000	MBBR 28500	ECO CLO 1000	POZ 100 G.I.	42.572,70
150	VS 15000	MBBR 33500 B	ECO CLO 1500	POZ 100 G.I.	50.143,43
190	VS 20000	MBBR 43500 B	ECO CLO 1500	POZ 100 G.I.	64.740,08
225	VS 25000	MBBR 50000 B	ECO CLO 2000	POZ 100 G.I.	75.611,98



TABLE 4 - DISCHARGE ONTO THE GROUND

A.E. TAB. 4	PRIMARY TREATMENT	MBBR	CONTACT TANK CHLORINATION CLARIFICATION	INSPECTION WELL	€
65	VS 8500	MBBR 18500	ECO CLO 750	POZ 100 G.I.	28.736,00
85	VS 10000	MBBR 23500 B	ECO CLO 1000	POZ 100 G.I.	37.353,89
120	VS 12000	MBBR 33500 B	ECO CLO 1000	POZ 100 G.I.	48.866,94
150	VS 15000	MBBR 40000	ECO CLO 1500	POZ 100 G.I.	56.809,22
180	VS 20000	MBBR 50000 B	ECO CLO 1500	POZ 100 G.I.	71.942,08



**TREATMENT OF
STORM WATERS
RUNOFF**



In 1991 the European Community invited member states to develop programs and laws regarding the collection and treatment of waste water in general. The first national regulations on environmental problems in Italy started from there.



In Italy, Legislative Decree 152/99 was issued, which later resulted in the Consolidated Environmental Law which only came into force on 29 April 2006 under the name of Legislative Decree 3 April 2006 n. 152 "Regulations on environmental matters".

Subsequently, the Regions developed the Water Protection Plan, in compliance with the provisions of Art. 121 of Legislative Decree 152/06.

This Plan contains the measures necessary to achieve or maintain the quality objectives [...], the measures necessary for the qualitative and quantitative protection of the water system [...].



REFERENCE REGULATORY FRAMEWORK

- Legislative Decree no. 152/06 and subsequent amendments
- EEC Directive n° 91/271 of 05/21/91
- UNI EN 858/1 and UNI EN 858/2 standards
- DIN 4040 standard
- ARPA guidelines from various regions

However, Legislative Decree 152/06 prohibits the discharge or direct introduction of rainwater into groundwater. In compliance with the technical regulations, rainwater and washing water must be delivered, in preferential order:

- in the sewer system
- in a body of surface water
- on the ground or in the superficial layers of the subsoil.

ABRUZZO

LR 29 July 2010, n. 31.

Regional regulations containing the first implementation of Legislative Decree 3 April 2006, n.152 (environmental regulations).

BASILICATA

DGR 21 December 2008 n. 1888.

Regional Water Protection Plan.
Technical Implementation Standards.

CALABRIA

Legislative Decree 152/06.

Ref. Consolidated Environmental Law Art. 113.

CAMPANIA

Legislative Decree 152/06

Ref. Consolidated Environmental Law Art. 113.

EMILIA ROMAGNA

DGR 14 February 2005, n. 286.

Directive concerning guidelines for the management of rainwater and washing water from external areas.

FRIULI VENEZIA GIULIA

DPGR 20 March 2018 n. 074.

Technical Implementation Standards of the Regional Water Protection Plan.

The regulatory references shown are to be considered valid on the date of publication of this catalogue.

The continuous evolution of the legislative framework recommends verifying the existence of specific regional laws referring to the various types of purification always on the date on which the plant is prepared.

LAZIO

DCR n. 18 of 23 November 2018.
Water Protection Plan - update of the Technical Implementation Standards.

LIGURIA

Regional Regulation 10 July 2009 No. 4.
Regulation of rainwater runoff and washing water from external areas (Regional Law 28 October 2008, n.39).

LOMBARDIA

Regional Regulation 24 March 2006, No. 4.
Discipline of the disposal of rainwater and washing of external areas, in implementation of article 52, paragraph 1, letter a) of regional law 12 December 2003, n. 26.

MARCHE

DGR 26 January 2010 n. 145.
Water Protection Plan - Section "D" Technical implementation standards.

MOLISE

DGR nr. 68/2015.
Water Protection Plan – Draft R14.1: Regulation of discharges.

PIEMONTE

LR 20 February 2006, n.1/R and subsequent amendments
Regulation of rainwater runoff and washing water of external areas.

PUGLIA

Regional Regulation 9 December 2013, n. 26 Regulation of run-off and first rain water.

SARDEGNA

RESOLUTION n.69/25 of 10 December 2008.
Directive on "Regional regulations on discharges".

SICILIA

Legislative Decree 152/06
Ref. Consolidated Environmental Law Art. 113.

TOSCANA

DPGR 8 September 2008 n. 46/R
Implementation regulation of the Regional Law 31 May 2006, n. 20 "Regulations for the protection of waters from pollution".

UMBRIA

DGR 19 September 2018, n. 1024.
Regional technical directive for the regulation of wastewater discharges.

VALLE D'AOSTA

Legislative Decree 152/06.
Ref. Consolidated Environmental Law Art. 113.

VENETO

DGR n. 842 of 15 May 2012 – Annex D WATER PROTECTION PLAN Art. 121, Legislative Decree 3 April 2006, n. 152, "Environmental regulations" - TECHNICAL IMPLEMENTATION RULES Annex A3 to DCR n. 107 of 5/11/2009.

*The regulatory references shown are to be considered valid on the date of publication of this catalogue.
The continuous evolution of the legislative framework recommends verifying the existence of specific regional laws referring to the various types of purification always on the date on which the plant is prepared.*

RUN-OFF RAINWATER

No work of any kind is to be carried out in the yard, nor are dangerous substances stored as per Tab. 3/A of Annex 5 of Legislative Decree 152/06 and subsequent amendments;

Any goods stored or moved on the yard must be packaged in a workmanlike manner to avoid the release of polluting substances;

A screening treatment must be carried out upstream of the system;

The installation and maintenance of the oil separators must be carried out correctly and regularly according to the installation instructions supplied with the system;

The inert materials present in the adducting wastewater must have dimensions greater than 0.2 mm and a specific weight equal to 0.85 g/cm³ for oils;

The parameters of the incoming metals must already comply with the current legislation;

The pollutants supplied by the system, i.e. non-emulsified oils and any traces of hydrocarbons, must be the only ones present so as to be eliminated by the planned treatment (non-emulsified oil de-oiling).

GUARANTEES

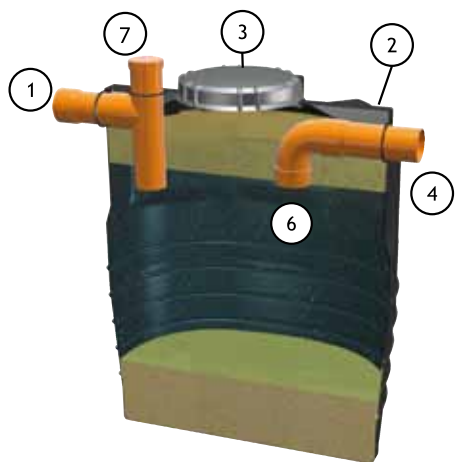
The guarantee of compliance with the limits imposed in Annex 5 of Legislative Decree 152/06 and subsequent amendments for the various receiving bodies is in any case subordinated to the performance of our systems and therefore to the concentration of polluting substances present in the water supplying the system.

NOTE TO THE INSTALLER

The installation of the systems will be carried out in such a way as to guarantee the periodic extraction of the material present on the surface and sedimented. The location must be outside the buildings and at least 1m away from foundation walls. When burying the product, carefully follow the instructions in this manual.

SAND TRAPS

Sand traps are used to separate sand and sedimentable materials from theoretical run-off water. The operation of sand traps is based on the use of adequately set-up stilling tanks in which sedimentable materials are given the opportunity to precipitate. The sand traps are sized taking into account a size of the inert materials greater than 0.2 mm and a detention time of at least 4 minutes.

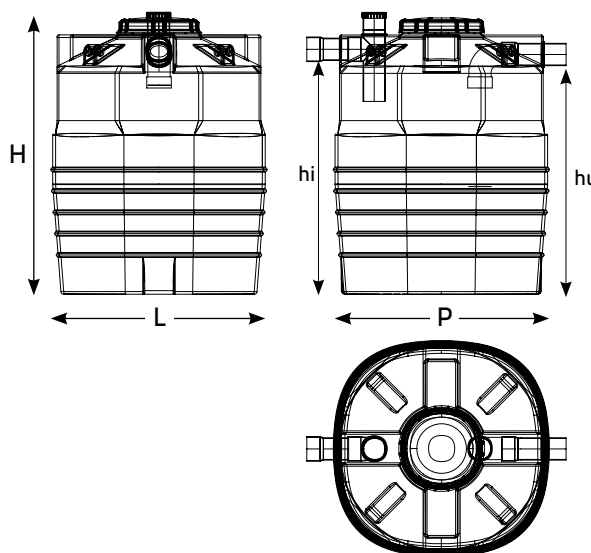


ECO SED



LEGEND

- 1 - WASTE WATER INLET
- 2 - BIO-GAS VENT
- 3 - INSPECTION AND MAINTENANCE MANHOLE
- 4 - TREATED WATER OUTLET
- 5 - SEPARATION AREA
- 6 - CLARIFIED WATER AREA
- 7 - ENTRANCE INSPECTION MANHOLE



SAND TRAPS

ITEM	CAPACITY (litres)		SURFACE (m ²) Coeff. Port. 70 mm/h	SURFACE (m ²) Coeff. Port. 20 mm/h	Capacity (l/sec.)	DIMENSIONS (cm)					ø IN/OUT (mm)	€
	Overflow	TOTAL				L	P	H	hi	hu		
ECO SED 1500	1243	1360	250	870	4,86	117	117	150	116	113	125	845,42
ECO SED 2000	2104	2265	400	1400	7,78	136	136	182	151	148	125	1.000,31
ECO SED 3000	2923	3107	550	1650	10,69	146	146	219	184	181	125	1.521,71
ECO SED 4000	3800	4200	750	2250	14,58	165	165	224	189	186	160	1.818,19
ECO SED 5000	4705	5110	900	3150	17,50	184	184	229	188	185	160	2.150,13
ECO SED 6000	5575	5993	1000	3500	19,44	185	185	257	216	213	160	2.705,58

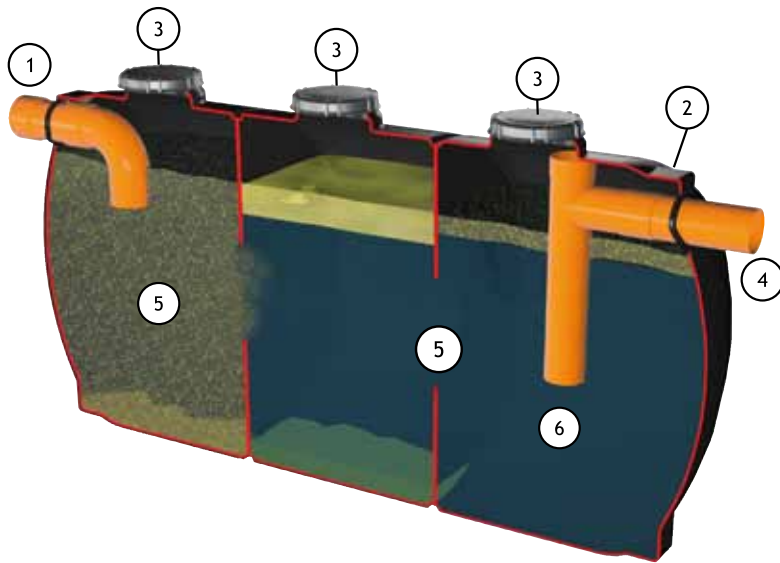
SPECIFICATION ITEM

Sand trap in recyclable PE (linear polyethylene), composed of a monobloc compartment (mod. ECO SED) or a modular product (mod. ECO DEO). The product is equipped with a vent valve, one or more manhole covers for inspecting the inlet pipe and a manhole cover for removing sand. It has inlet and outlet pipes equipped with suitable double lip rubber gaskets, to guarantee a perfect seal.

ORDINARY MAINTENANCE

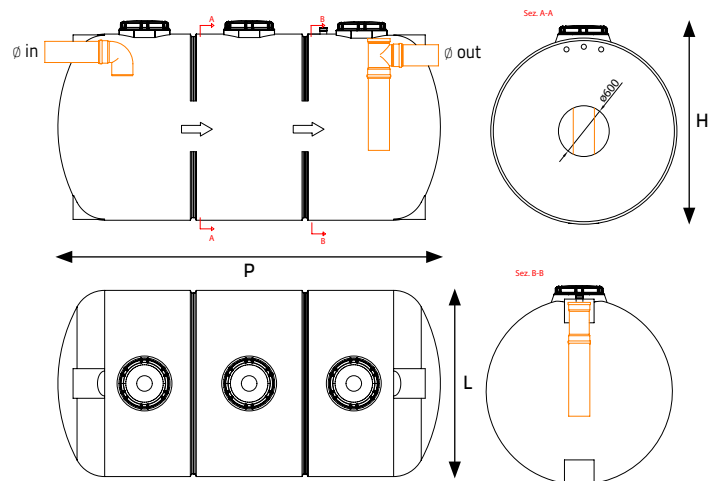
Unless specifically indicated by the competent authority, generally clean the tank one to four times a year.

STORM WATER TREATMENT SAND TRAPS - LARGE SYSTEMS



LEGEND

- 1 - WASTE WATER INLET
- 2 - BIO-GAS VENT
- 3 - MANHOLE INSPECTION AND MAINTENANCE
- 4 - TREATED WATER OUTLET
- 5 - SEPARATION AREA
- 6 - CLARIFIED WATER AREA



SAND TRAPS FOR LARGE SYSTEM LINE

ITEM	CAPACITY (litri)	SURFACE (m ²) Coeff. Port. 70 mm/h	SURFACE (m ²) Coeff. Port. 20 mm/h	Capacity (l/sec.)	L (cm)	P (cm)	H (cm)	ø IN/OUT (mm)	Nr Manhole ø 550	€
ECO DEO 7000	7200	1200	4200	23,33	225	238	243	250	2	5.105,03
ECO DEO 8500	8500	1500	5200	29,17	225	279	243	250	2	5.670,14
ECO DEO 10000	10000	2000	7000	38,89	225	320	243	315	2	5.915,00
ECO DEO 15000	15000	2700	9500	52,50	225	452	243	315	3	8.645,67
ECO DEO 20000	20000	3500	12200	68,06	225	584	243	315	4	11.343,47
ECO DEO 25000	25000	4300	15000	83,61	225	716	243	315	5	14.839,43
ECO DEO 30000	30000	5200	18200	97,22	225	848	243	315	6	17.537,55
ECO DEO 40000	40000	6800	23800	132,22	238	979	255	400	4	23.757,38
ECO DEO 50000	50000	8400	26250	145,83	238	12150	255	400	5	32.363,47



TELCOM Deoliators, made of polyethylene, a completely recyclable material, are to be used when it is necessary to separate mineral oils (not emulsified), not soluble in water, present in water coming from runoff from yards, before the discharge into the public sewer system or into the receiving body indicated by the competent authority. Such products represent, in any case, the preliminary roughing stage of more complex systems. Their operating principle is based on the use of stilling basins equipped with an internal compartment, in which the oils are allowed to float according to the physical mechanisms of gravimetric liquid-liquid separation; the separated substances remain trapped in the internal compartment, while the purified effluents pass into the main basin through the special opening at the bottom of the internal compartment, and are directed to the outlet.

The **ECO DEO** models, are deoliators that are defined in the UNI EN 858/1 and 858/2 standards as CLASS II -Gravity separators-.

The **ECO DEO/C** models are equipped with a reed pack to induce the coalescence process, which means combining several droplets into a single droplet.

In addition to the lamellar pack, the **ECO DEO/CF** models are also equipped with a polyurethane foam filter for additional separation.

These products are defined in the UNI EN 858/1 and 858/2 standards as CLASS I -Coalescent separators - and allow a higher efficiency with the same volume. They are recommended where there are particularly restrictive limits.



TECHNICAL NOTE

For the treatment of water from runoff from yards, the correct installation always requires the presence of a sand trap upstream of the oil separator.

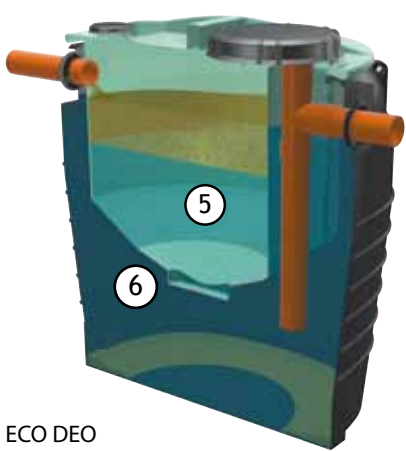
(See Continuous Installations on p. 182)

STORMWATER RUNOFF TREATMENT DEOLIATORS

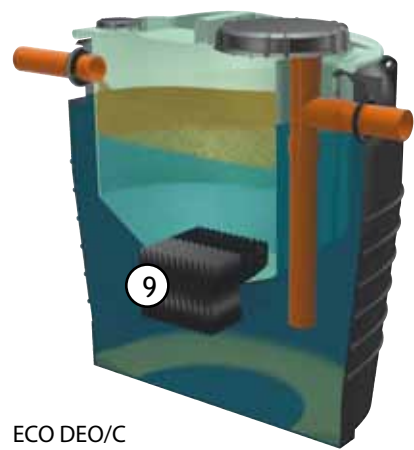


NOMENCLATURE

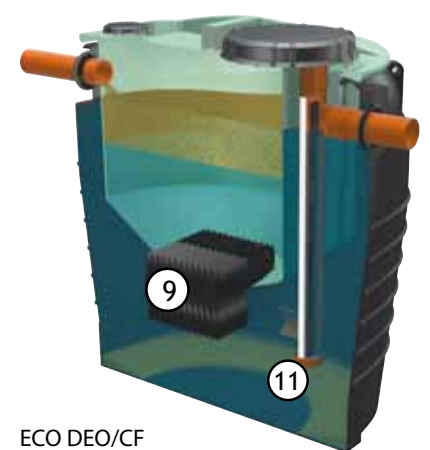
- NOMENCLATURE
- 1 - WASTE WATER INLET
 - 2 - BIO-GAS VENT
 - 3 - INSPECTION AND REMOVAL MANHOLE \varnothing 420
 - 4 - TREATED WATER OUTLET
 - 5 - SEPARATION ZONE
 - 6 - CLARIFIED WATER AREA
 - 7 - REINFORCING RIBS
 - 8 - ENTRANCE MANHOLE \varnothing 140
 - 9 - LAMELLAR PACK
 - 10 - MAINTENANCE MANHOLE (ECO DEO/CF)
 - 11 - POLYURETHANE FOAM FILTER



ECO DEO



ECO DEO/C



ECO DEO/CF



Turret CL 140
for manhole maintenance



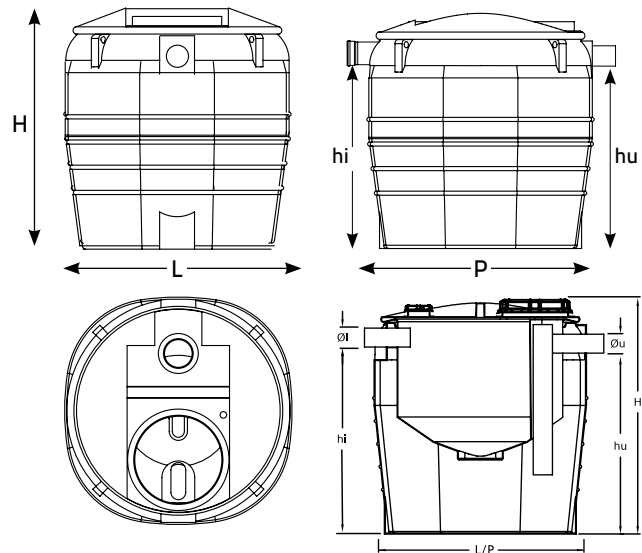
Turret CL 420

Considering how many variables are involved during a rainfall event (intensity and duration of the phenomenon, characteristics of the draining surface, characteristics of the drainage network, type and nature of hydrocarbons), **TELCOM** recommends to never disregard an accurate analysis of the areas to be treated and the rainfall pattern of the location.

The oil separators must be selected on the basis of the average flow rate considering a maximum rainfall coefficient.

For the treatment of water from yard runoff, the **correct installation always requires the presence of a sand trap upstream of the oil separator.**

The choice of larger volumes will allow for less frequent maintenance and removal of separated oils. This consideration is especially valid for **covered yards** for which an estimated volume figure is not available, since runoff is often linked to how and how often such surfaces are cleaned.



DEOLIATORS

ITEM	SURFACE (m ²) Port.70 mm/h	SURFACE (m ²) Port.20 mm/h	SCOPE (l/sec.)	Overflow volumes (litres)			Dimensions (cm)					ø tubes (mm)	Surface area (m ²)		€
				Total	Oils Sediment.	Total Oils	L	P	H	hi	hu		Separat. sediment.	Total	
ECO DEO 5 NEW ECO DEO 5/C NEW ECO DEO 5/CF NEW	130	460	2,44	690	250	550	107	107	111	85	83	100	0,6	0,9	662,23 1.118,78 1.288,02
ECO DEO 7 NEW ECO DEO 7/C NEW ECO DEO 7/CF NEW	180	630	3,33	910	250	750	117	117	121	89	86	125	0,71	1,07	731,11 1.149,50 1.312,50
ECO DEO 11 NEW ECO DEO 11/C NEW ECO DEO 11/CF NEW	300	1000	5,68	1500	400	1280	136	136	150	117	115	125	0,87	1,45	1.051,44 1.544,17 1.704,51
ECO DEO 17 NEW ECO DEO 17/C NEW ECO DEO 17/CF NEW	430	1500	8,88	2250	600	2000	146	146	187	153	150	125	0,98	1,67	1.481,88 2.011,52 2.239,54
ECO DEO 22 NEW ECO DEO 22C NEW ECO DEO 22/CF NEW	570	2000	11,77	3000	800	2650	165	165	189	159	156	160	1,09	2,14	2.164,69 2.683,86 2.917,81
ECO DEO 28 NEW ECO DEO 28/C NEW ECO DEO 28/CF NEW	700	2500	14,88	3750	1000	3350	184	184	199	161	159	160	1,63	2,66	2.432,79 3.096,57 3.320,92
ECO DEO 33 NEW ECO DEO 33/C NEW ECO DEO 33/CF NEW	950	3000	18,22	4500	1200	4100	185	185	221	184	181	160	1,63	2,69	2.797,29 3.428,11 3.665,63

Guaranteed holding time at least 4 minutes.

SAND TRAPS - CONTINUOUS DEOILERS

Telcom S.p.A. envisages a desanding and oil removal process as “continuous treatment” of rainwater “for draining surfaces intended only for transit, parking or parking of vehicles, as well as for the handling and storage of non-hazardous materials”. The operation of Telcom’s sand and oil separators is based on physical processes based on reducing the velocity of the effluent. By ensuring a calming zone, in fact, the substances present, characterized by a specific weight different from that of the water, under the action of gravity, float up or sediment to the bottom.



PRODUCT CHOICE: Considering how many variables are involved during a rainfall event (intensity and duration of the phenomenon, characteristics of the draining surface, of the draining network, types of hydrocarbons of different origin and nature) TELCOM recommends to never disregard an accurate analysis of the areas to be treated and of **the rainfall pattern of the location**. Oil separators must be chosen on the basis of the average flow rate considering a maximum rainfall coefficient.

Recommending that you always submit the technical solution to the competent authority for a positive opinion, TELCOM advise:

- **mod. ECO DEO/F for discharge into Public Sewers and surface waters;**
- **mod. ECO DEO/CF for ground discharge.**

The choice of larger volumes will allow the user to resort less frequently to maintenance and separate oil extraction operations. This consideration is especially valid for covered forecourts for which an estimated volume figure is not available, as runoff is often linked to how and how often such surfaces are cleaned.



NOMENCLATURE

- 1 - WASTE WATER INLET
- 2 - BIO-GAS VENT
- 3 - INSPECTION AND REMOVAL MANHOLE \varnothing 420
- 4 - TREATED WATER OUTLET
- 5 - SEPARATION ZONE
- 6 - CLARIFIED WATER AREA
- 7 - REINFORCING RIBS
- 8 - INLET MANHOLE \varnothing 140
- 9 - LAMELLAR PACK
- 10 - MANHOLE COVER FOR MAINTENANCE
- 11 - POLYURETHANE FOAM FILTER



GENERAL TABLE CONTINUOUS METEORIC WATER TREATMENT PLANTS (Separate) Public Drainage Surface Water

ITEM	RECEPTOR BODY	SURFACE (m ²) Port.70 mm/h	SURFACE (m ²) Port.20 mm/h	SCOPE (l/sec.)	SAND TRAP		DEOLIATOR		Total VOLUME	\varnothing IN/OUT (mm)	€
					Model	Volume (litres)	Model	Volume (litres)			
ECO IC 300/C	Public Sewerage	300	1000	5,83	ECO SED 1500	1360	ECO DEO 7/C NEW	910	2270	125	1.994,92
ECO IC 500/C		500	1700	9,72	ECO SED 2000	2265	ECO DEO 11/C NEW	1500	3765	125	2.544,48
ECO IC 700/C		700	2400	13,61	ECO SED 3000	3107	ECO DEO 17/C NEW	2250	5357	125	3.533,23
ECO IC 1000/C	Surface Waters	1000	3500	19,44	ECO SED 4000	4200	ECO DEO 22/C NEW	3000	7200	160	4.502,06
ECO IC 1200/C		1200	4200	23,33	ECO SED 5000	5110	ECO DEO 28/C NEW	3750	8860	160	5.246,69



NOMENCLATURE

- 1 - WASTE WATER INLET
- 2 - BIO-GAS VENT
- 3 - INSPECTION AND REMOVAL MANHOLE \varnothing 420
- 4 - TREATED WATER OUTLET
- 5 - SEPARATION ZONE
- 6 - CLARIFIED WATER AREA
- 7 - REINFORCING RIBS
- 8 - INLET MANHOLE \varnothing 140
- 9 - LAMELLAR PACK
- 10 - MANHOLE COVER FOR MAINTENANCE
- 11 - POLYURETHANE FOAM FILTER

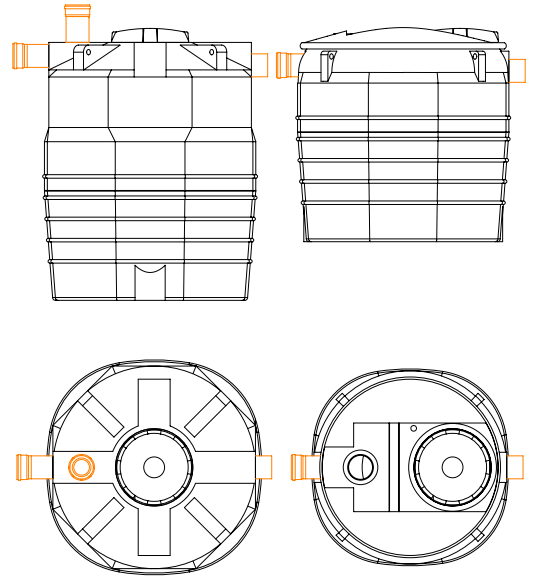


GENERAL TABLE CONTINUOUS METEORIC WATER TREATMENT PLANTS (Separate) Discharge to the Ground

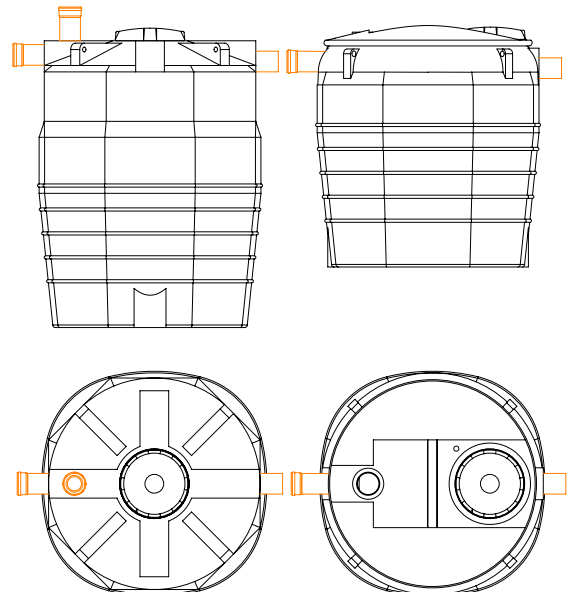
ITEM	RECEPTOR BODY	SURFACE (m ²) Port.70 mm/h	SURFACE (m ²) Port.20 mm/h	SCOPE (l/sec.)	SAND TRAP		DEOLIATOR		Total VOLUME	\varnothing IN/OUT (mm)	€
					Model	Volume (litres)	Model	Volume (litres)			
ECO IC 300/CF	Soil	300	1000	5,83	ECO SED 1500	1360	ECO DEO 7/CF NEW	910	2270	125	2.157,93
ECO IC 500/CF		500	1700	9,72	ECO SED 2000	2265	ECO DEO 11/CF NEW	1500	3765	125	2.704,82
ECO IC 700/CF		700	2400	13,61	ECO SED 3000	3107	ECO DEO 17/CF NEW	2250	5357	125	3.761,25
ECO IC 1000/CF		1000	3500	19,44	ECO SED 4000	4200	ECO DEO 22/CF NEW	3000	7200	160	4.736,01
ECO IC 1200/CF		1200	4200	23,33	ECO SED 5000	5110	ECO DEO 28/CF NEW	3750	8860	160	5.471,05

STORMWATER RUNOFF TREATMENT SEPARATE CONTINUOUS PLANTS

CONTINUOUS METEORIC WATER TREATMENT PLANTS (Separate)

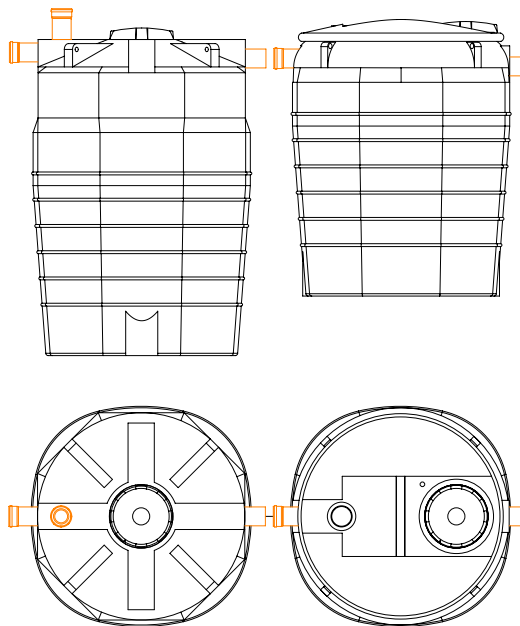


ITEM	RECEPTOR BODY	SURFACE (m ²) Port.70 mm/h	SURFACE (m ²) Port.20 mm/h	SCOPE (l/sec.)	SAND TRAP		DEOLIATOR		Total VOLUME	Ø IN/OUT (mm)	€
					Model	Volume (litres)	Model	Volume (litres)			
ECO IC 300/C	Public Sewerage Surface waters	300	1000	5,83	ECO SED 1500	1360	ECO DEO 7/C NEW	910	2270	125	1.994,92
ECO IC 300/CF	Soil						ECO DEO 7/CF NEW				2.157,93

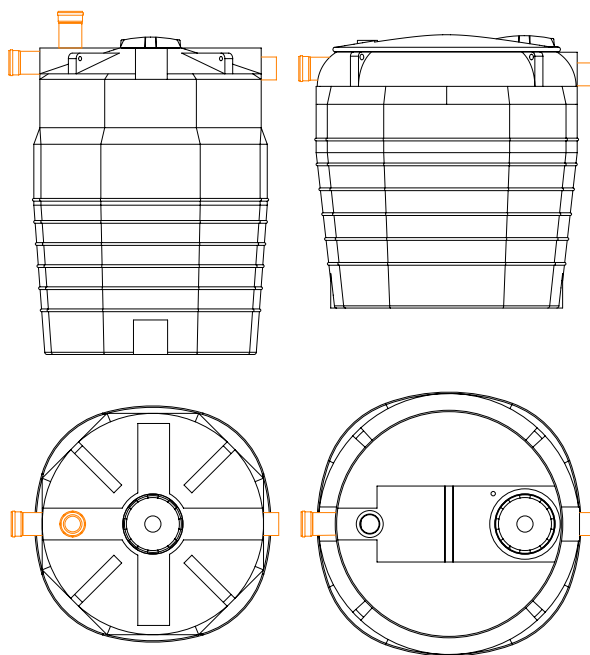


ITEM	RECEPTOR BODY	SURFACE (m ²) Port.70 mm/h	SURFACE (m ²) Port.20 mm/h	SCOPE (l/sec.)	SAND TRAP		DEOLIATOR		Total VOLUME	Ø IN/OUT (mm)	€
					Model	Volume (litres)	Model	Volume (litres)			
ECO IC 500/C	Public Sewerage Surface waters	500	1700	9,72	ECO SED 2000	2265	ECO DEO 11/C NEW	1500	3765	125	2.544,48
ECO IC 500/CF	Soil						ECO DEO 11/CF NEW				2.704,82

CONTINUOUS METEORIC WATER TREATMENT PLANTS (Separate)



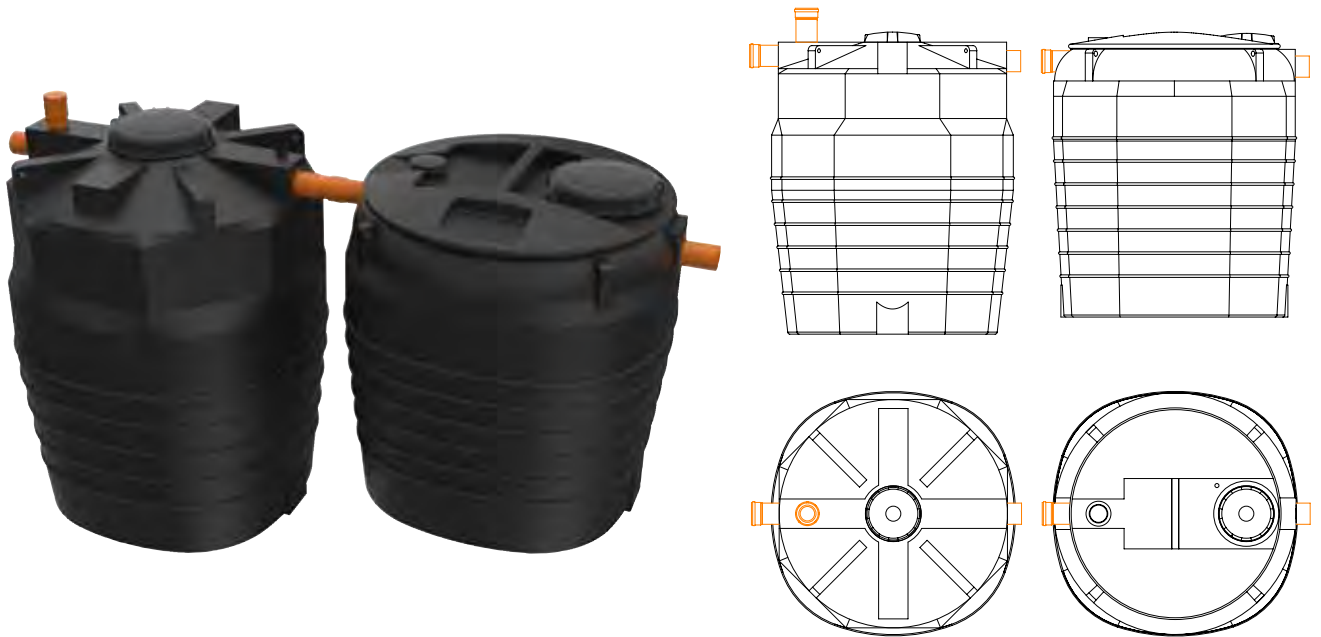
ITEM	RECEPTOR BODY	SURFACE (m ²) Port.70 mm/h	SURFACE (m ²) Port.20 mm/h	SCOPE (l/sec.)	SAND TRAP		DEOLIATOR		Total VOLUME	Ø IN/OUT (mm)	€
					Model	Volume (litres)	Model	Volume (litres)			
ECO IC 700/C	Public Sewerage Surface waters	700	2400	13,61	ECO SED 3000	3107	ECO DEO 17/C NEW	2250	5357	125	3.533,23
ECO IC 700/CF	Soil						ECO DEO 17/CF NEW				3.761,25



ITEM	RECEPTOR BODY	SURFACE (m ²) Port.70 mm/h	SURFACE (m ²) Port.20 mm/h	SCOPE (l/sec.)	SAND TRAP		DEOLIATOR		Total VOLUME	Ø IN/OUT (mm)	€
					Model	Volume (litres)	Model	Volume (litres)			
ECO IC 1000/C	Public Sewerage Surface waters	1000	3500	19,44	ECO SED 4000	4200	ECO DEO 22/C NEW	3000	7200	160	4.502,06
ECO IC 1000/CF	Soil						ECO DEO 22/CF NEW				4.736,01

STORMWATER RUNOFF TREATMENT SEPARATE CONTINUOUS PLANTS

CONTINUOUS METEORIC WATER TREATMENT PLANTS (Separate)



ITEM	RECEPTOR BODY	SURFACE (m ²) Port.70 mm/h	SURFACE (m ²) Port.20 mm/h	SCOPE (l/sec.)	SAND TRAP		DEOLIATOR		Total VOLUME	Ø IN/OUT (mm)	€
					Model	Volume (litres)	Model	Volume (litres)			
ECO IC 1200/C	Public Sewerage	1200	4200	23,33	ECO SED 5000	5110	ECO DEO 28/C NEW	3750	8860	160	5.246,69
ECO IC 1200/CF	Soil						ECO DEO 28/CF NEW				5.471,05

CONTINUOUS SAND TRAPS - DEOLIATORS: Telcom S.p.A. provides a process of de-sanding and de-oiling as continuous treatment of rainwater "for draining surfaces intended only for transit, parking or stopping of vehicles, as well as for the handling and storage of non-hazardous materials". The operation of Telcom desanders-desoliators is based on physical processes based on reducing the velocity of the effluent. By ensuring a calm zone, in fact, the substances present, characterized by a specific weight different from that of water, under the action of gravity, rise by floating or sediment to the bottom. This process is favored by the compartmentalization of the structures; in fact, the accumulation of oils and sedimentable substances occurs in the former, while in the latter compartments there is a progressive and increasing clarification of the effluent.



PRODUCT CHOICE: Considering how many variables are at play during a rainfall event (intensity and duration of the phenomenon, characteristics of the draining surface, of the draining network, types of hydrocarbons of different origin and nature) TELCOM recommends to never disregard an accurate analysis of the areas to be treated and of the rainfall pattern of the location. Oil separators must be chosen on the basis of the average flow rate considering a maximum rainfall coefficient.

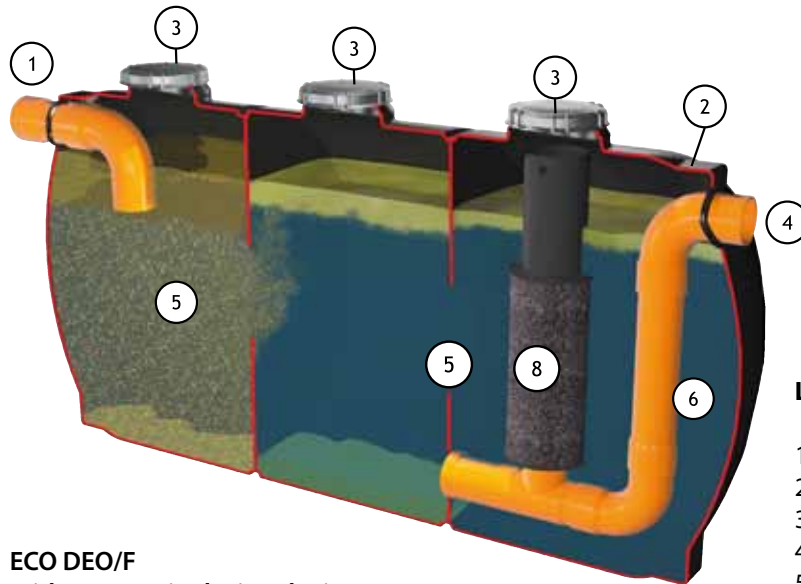
Recommending that you always submit the technical solution to the competent authority for a positive opinion, TELCOM advises:

- mod. ECO DEO/F for discharge into Public Sewers and surface waters;
- mod. ECO DEO/CF for ground discharge.

The choice of larger volumes will allow the user to use have less frequently maintenance and separate oil extraction operations. This consideration is especially valid for covered forecourts for which an estimated volume figure is not available, as runoff is often linked to how and how often such surfaces are cleaned.

STORMWATER RUNOFF TREATMENT CONTINUOUS MONOBLOC PLANTS

The **ECO DEO/F** models are equipped with a polyurethane foam filter for additional separation. These products are defined in the UNI EN 858/1 and 858/2 standards as CLASS I - Coalescent separators - and allow a higher efficiency with the same volume. They are equipped with a closing device to prevent accidental oil spillage.



LEGEND

- 1 - WASTE WATER INLET
- 2 - BIO-GAS VENT
- 3 - MANHOLE COVER INSPECTION AND MAINTENANCE
- 4 - TREATED WATER OUTLET
- 5 - SEPARATION ZONE
- 6 - CLARIFIED WATER AREA
- 8 - POLYURETHANE FOAM FILTER

ECO DEO/F
With automatic closing device

The illustration on this page refers to the 15,000 litre model, is purely indicative and for the sole purpose of illustrating the operation of the product.



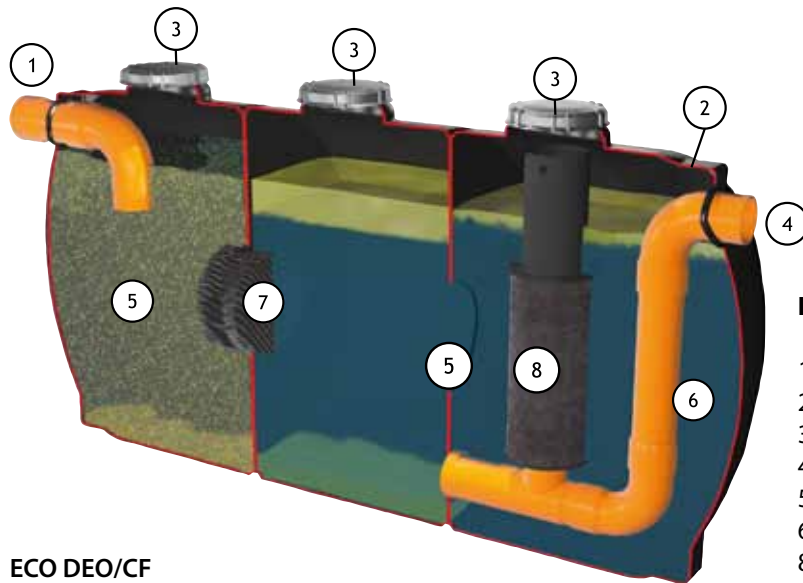
GENERAL TABLE CONTINUOUS METEORIC WATER TREATMENT SYSTEMS Public Drainage Surface Water

ITEM	RECEPTOR BODY	CAPACITY (litres)	SURFACE (m ²) Port.70 mm/h	SURFACE (m ²) Port.20 mm/h	SCOPE (l/sec.)	L (cm)	P (cm)	H (cm)	∅ IN/OUT (mm)	H IN (cm)	H OUT (cm)	Nr Manhole ∅ 550	€
ECO DEO 8500/F	Public Sewerage	8500	1500	5200	29,17	225	279	243	250	189	185	2	9.116,59
ECO DEO 10000/F		10000	2000	7000	38,89	225	320	243	315	185	181	2	9.912,50
ECO DEO 15000/F		15000	2700	9500	52,50	225	452	243	315	185	181	3	12.598,89
ECO DEO 20000/F		20000	3500	12200	68,06	225	584	243	315	185	181	4	15.368,12
ECO DEO 25000/F	Surface waters	25000	4300	15000	83,61	225	716	243	315	185	181	5	18.618,78
ECO DEO 30000/F		30000	5000	18200	97,22	225	848	243	315	185	181	6	21.248,48
ECO DEO 40000/F*		40000	6800	23800	132,22	238	979	255	400	-	-	4	31.915,27
ECO DEO 50000/F*		50000	7500	26250	145,83	238	12150	255	400	-	-	5	38.535,19

* Equipped with double coalescence filter and double automatic closing device

Note: Guaranteed holding time at least 4 minutes

The **ECODEO/CF** models are equipped with a polyurethane foam filter for additional separation in addition to the lamellar pack. These products are defined in the EN 858/1 and 858/2 standards as CLASS I - Coalescent separators - and allow a higher efficiency with the same volume. They are recommended in cases where there are particularly restrictive limits and are equipped with a closing device to prevent the accidental release of oil.



LEGEND

- 1 - WASTE WATER INLET
- 2 - BIO-GAS VENT
- 3 - MANHOLE COVER INSPECTION AND MAINTENANCE
- 4 - TREATED WATER OUTLET
- 5 - SEPARATION ZONE
- 6 - CLARIFIED WATER AREA
- 8 - POLYURETHANE FOAM FILTER

ECO DEO/CF With automatic closing device

The illustration on this page refers to the 15,000 litre model, is purely indicative and for the sole purpose of illustrating the operation of the product.

REED PACK (7)

Technical specifications: Dimensions [mm]: 500x500x300
Exchange surface area: 240 m²/m³



GENERAL TABLE CONTINUOUS METEORIC WATER TREATMENT SYSTEMS Discharge to the ground

ITEM	RECEPTOR BODY	CAPACITY (litres)	SURFACE (m ²) Port.70 mm/h	SURFACE (m ²) Port.20 mm/h	SCOPE (l/sec.)	L (cm)	P (cm)	H (cm)	∅ IN/OUT (mm)	H IN (cm)	H OUT (cm)	Nr Manhole ∅ 550	€
ECO DEO 8500/CF	Soil	8500	1500	5200	29,17	225	279	243	250	189	185	2	9.990,31
ECO DEO 10000/CF		10000	2000	7000	38,89	225	320	243	315	185	181	2	10.786,22
ECO DEO 15000/CF		15000	2700	9500	52,50	225	452	243	315	185	181	3	13.472,61
ECO DEO 20000/CF		20000	3500	12200	68,06	225	584	243	315	185	181	4	16.241,84
ECO DEO 25000/CF		25000	4300	15000	83,61	225	716	243	315	185	181	5	19.492,50
ECO DEO 30000/CF		30000	5000	18200	97,22	225	848	243	315	185	181	6	22.122,20
ECO DEO 40000/CF*		40000	6800	23800	132,22	238	979	255	400	-	-	4	32.788,99
ECO DEO 50000/CF*		50000	7500	26250	145,83	238	12150	255	400	-	-	5	39.408,91

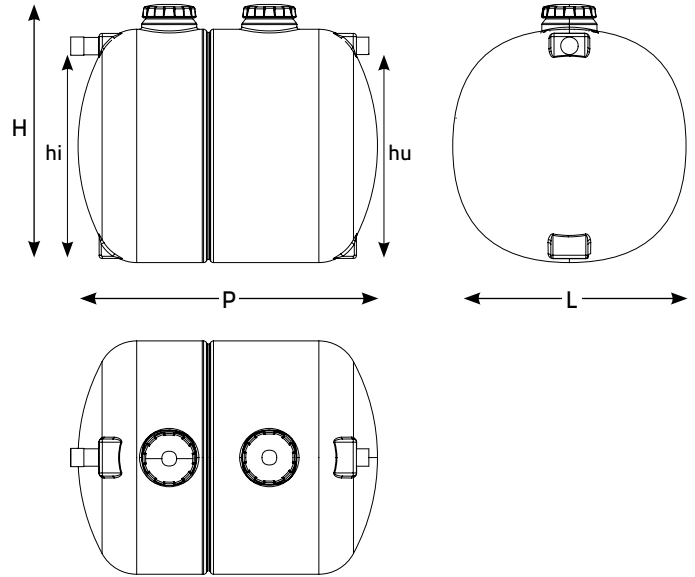
* Equipped with double coalescence filter and double automatic closing device

Note: Guaranteed holding time at least 4 minutes

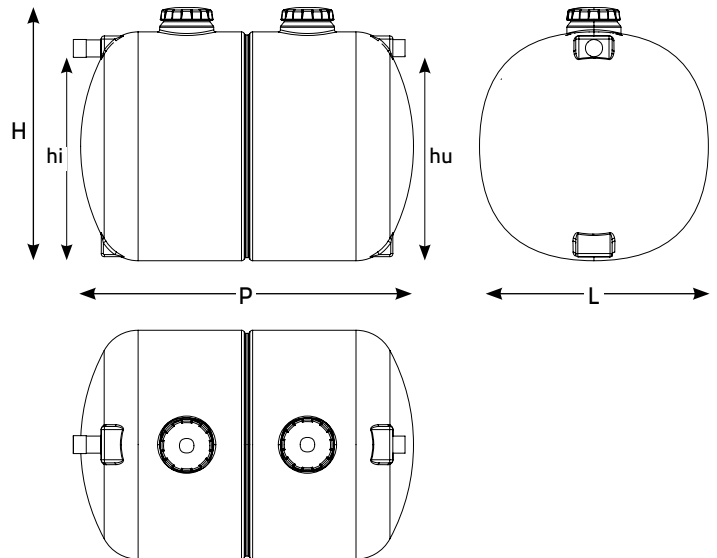
STORMWATER RUNOFF TREATMENT CONTINUOUS MONOBLOC PLANTS

CONTINUOUS METEORIC WATER TREATMENT SYSTEMS (Monobloc)

Note: Guaranteed holding time at least 4 minutes



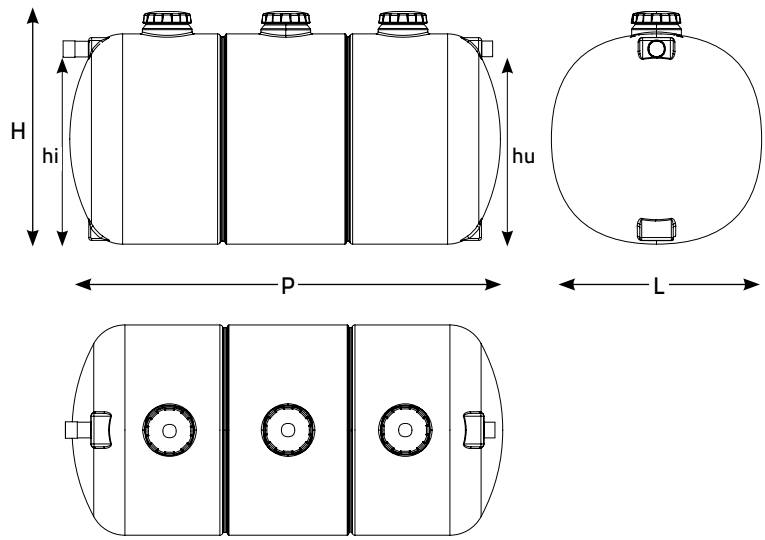
ITEM	RECEPTOR BODY	CAPACITY (litres)	SURFACE (m ²) Port.70 mm/h	SURFACE (m ²) Port.20 mm/h	SCOPE (l./sec.)	L (cm)	P (cm)	H (cm)	Ø IN/OUT (mm)	H IN (cm)	H OUT (cm)	Nr Manhole ø 550	€
ECO DEO 8500/F	Public Sewerage Surface waters	8500	1500	5200	29,17	225	279	243	250	189	185	2	9.116,59
ECO DEO 8500/CF	Soil												9.990,31



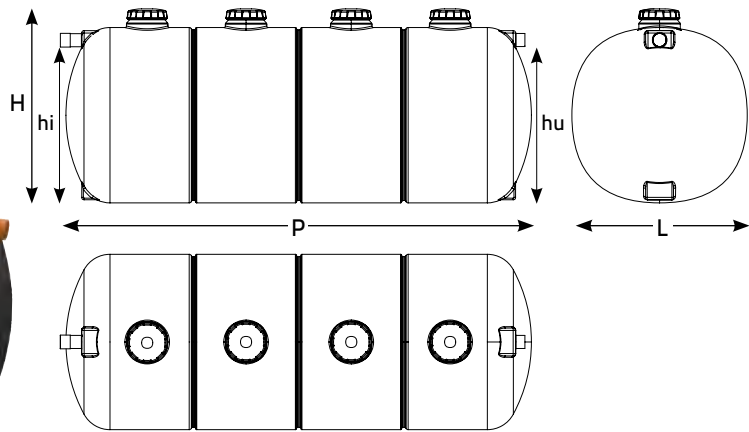
ITEM	RECEPTOR BODY	CAPACITY (litres)	SURFACE (m ²) Port.70 mm/h	SURFACE (m ²) Port.20 mm/h	SCOPE (l./sec.)	L (cm)	P (cm)	H (cm)	Ø IN/OUT (mm)	H IN (cm)	H OUT (cm)	Nr Manhole ø 550	€
ECO DEO 10000/F	Public Sewerage Surface waters	10000	2000	7000	38,89	225	320	243	315	185	181	2	9.912,50
ECO DEO 10000/CF	Soil												10.786,22

CONTINUOUS METEORIC WATER TREATMENT SYSTEMS (Monobloc)

Note: Guaranteed holding time at least 4 minutes



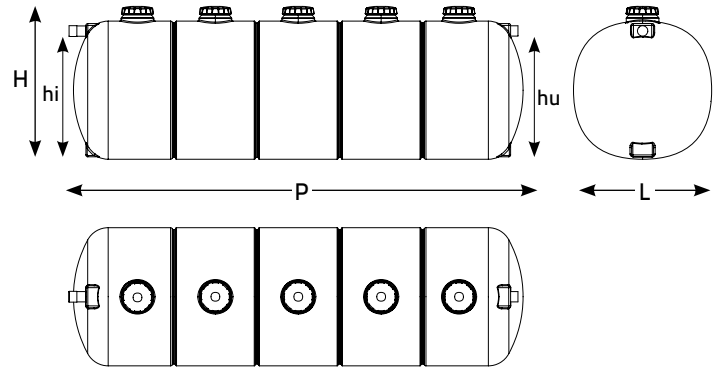
ITEM	RECEPTOR BODY	CAPACITY (litres)	SURFACE (m ²) Port.70 mm/h	SURFACE (m ²) Port.20 mm/h	SCOPE (l/sec.)	L (cm)	P (cm)	H (cm)	∅ IN/OUT (mm)	H IN (cm)	H OUT (cm)	Nr Manhole ∅ 550	€
ECO DEO 15000/F	Public Sewerage Surface waters	15000	2700	9500	52,50	225	452	243	315	185	181	3	12.598,89
ECO DEO 15000/CF	Soil												13.472,61



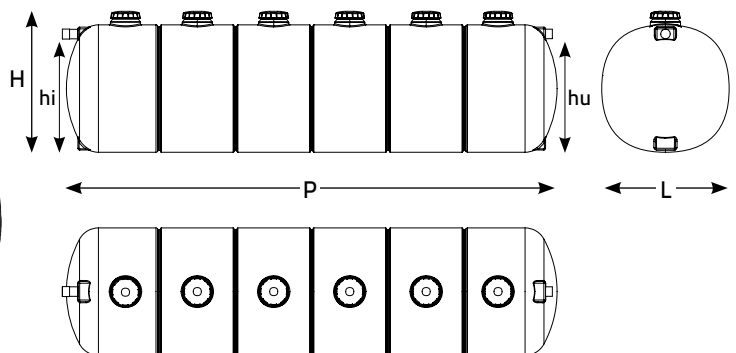
ITEM	RECEPTOR BODY	CAPACITY (litres)	SURFACE (m ²) Port.70 mm/h	SURFACE (m ²) Port.20 mm/h	SCOPE (l/sec.)	L (cm)	P (cm)	H (cm)	∅ IN/OUT (mm)	H IN (cm)	H OUT (cm)	Nr Manhole ∅ 550	€
ECO DEO 20000/F	Public Sewerage Surface waters	20000	3500	12200	68,06	225	584	243	315	185	181	4	15.368,12
ECO DEO 20000/CF	Soil												16.241,84

CONTINUOUS METEORIC WATER TREATMENT SYSTEMS (Monobloc)

Note: Guaranteed holding time at least 4 minutes



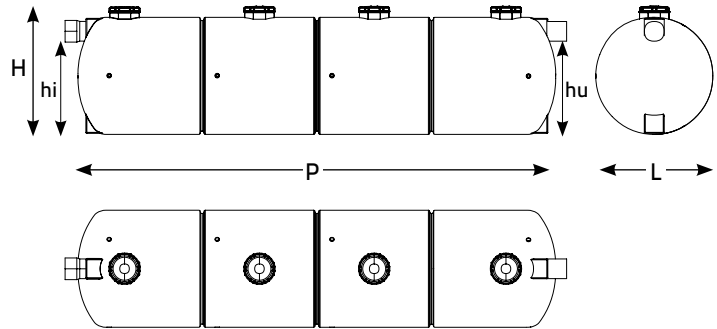
ITEM	RECEPTOR BODY	CAPACITY (litres)	SURFACE (m ²) Port.70 mm/h	SURFACE (m ²) Port.20 mm/h	SCOPE (l/sec.)	L (cm)	P (cm)	H (cm)	ø IN/OUT (mm)	H IN (cm)	H OUT (cm)	Nr Manhole ø 550	€
ECO DEO 25000/F	Public Sewerage Surface waters	25000	4300	15000	83,61	225	716	243	315	185	181	5	18.618,78
ECO DEO 25000/CF	Soil												19.492,50



ITEM	RECEPTOR BODY	CAPACITY (litres)	SURFACE (m ²) Port.70 mm/h	SURFACE (m ²) Port.20 mm/h	SCOPE (l/sec.)	L (cm)	P (cm)	H (cm)	ø IN/OUT (mm)	H IN (cm)	H OUT (cm)	Nr Manhole ø 550	€
ECO DEO 30000/F	Public Sewerage Surface waters	30000	5000	18200	97,22	225	848	243	315	185	181	6	21.248,48
ECO DEO 30000/CF	Soil												22.122,20

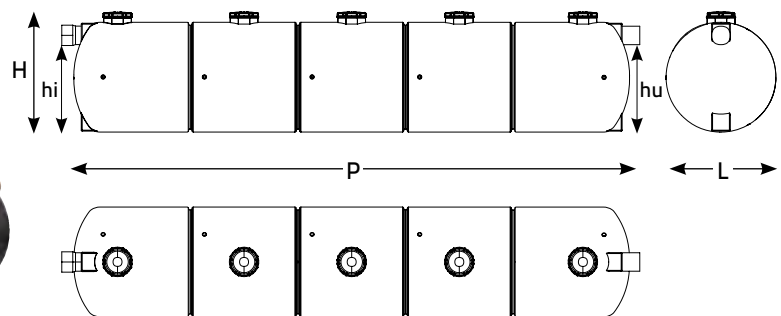
CONTINUOUS METEORIC WATER TREATMENT SYSTEMS (Monobloc)

Note: Guaranteed holding time at least 4 minutes



ITEM	RECEPTOR BODY	CAPACITY (litres)	SURFACE (m ²) Port.70 mm/h	SURFACE (m ²) Port.20 mm/h	SCOPE (l/sec.)	L (cm)	P (cm)	H (cm)	∅ IN/OUT (mm)	H IN (cm)	H OUT (cm)	Nr Manhole ∅ 550	€
ECO DEO 40000/F*	Public Sewerage Surface waters	40000	6800	23800	132,22	238	979	255	400	-	-	4	31.915,27
ECO DEO 40000/CF*	Soil												32.788,99

* Equipped with double filter and double automatic shut-off device



ITEM	RECEPTOR BODY	CAPACITY (litres)	SURFACE (m ²) Port.70 mm/h	SURFACE (m ²) Port.20 mm/h	SCOPE (l/sec.)	L (cm)	P (cm)	H (cm)	∅ IN/OUT (mm)	H IN (cm)	H OUT (cm)	Nr Manhole ∅ 550	€
ECO DEO 50000/F*	Public Sewerage Surface waters	50000	7500	26250	145,83	238	12150	255	400	-	-	5	38.535,19
ECO DEO 50000/CF*	Soil												39.408,91

* Equipped with double filter and double automatic shut-off device

FIRST RAIN SYSTEMS are suitable in cases where the regulations in force provide for the separation and accumulation of first rainwater of runoff from yards or impermeable surfaces. The systems consist of the following elements:

- **Overflow well:** in which the first rainwater sent to the storage tank is separated from the subsequent rainwater that is sent to the receiving body via the by-pass pipe.

- **Accumulation tank:** in which the first rainwater is collected and treated 48* hours after the end of the last meteoric event. For the sizing of the first rain basin, the first 5 mm of rain falling on the equivalent draining impervious surface was considered.

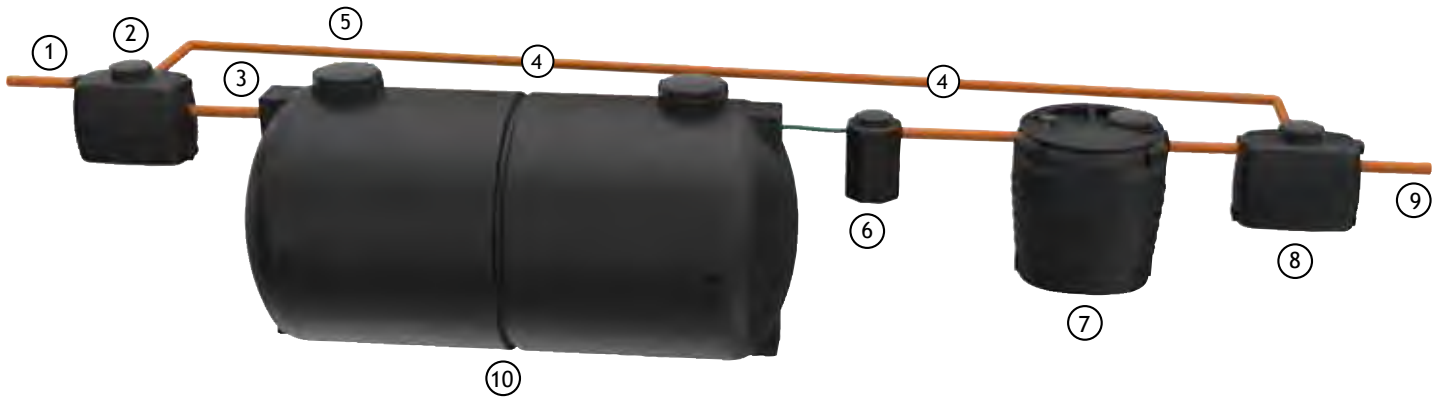
*The time after which first rainwater must be disposed varies according to regional regulations, so it can be regulated by a special timer.

- **Oil Separator:** in which the separation of non-emulsified oils takes place. Subject to always submitting the technical solution to the competent authority for a positive opinion, TELCOM recommends:

- mod. ECO DEO/C for discharge into Public Sewers and surface waters;
- mod. ECO DEO/CF for ground discharge.
- Confluence well: where first and second rainwater converge before discharge.

The automatism of the systems are managed by an electrical panel, which is included in the scope of supply.





NOMENCLATURE

- 1 - STORMWATER INLET
- 2 - DRAINAGE WELL COMPLETE WITH RAIN SENSOR
- 3 - FIRST RAINWATER STORAGE INLET
- 4 - PLANT BY-PASS
- 5 - MANHOLE COVER INSPECTION AND MAINTENANCE
- 6 - STILLING WELL
- 7 - DE-OILING UNIT
- 8 - CONFLUENCE WELL
- 9 - PLANT OUTPUT
- 10 - ACCUMULATION with E/PUMP and Electric Float

TELCOM recommends to never disregard an accurate analysis of the areas to be treated and the rainfall pattern of the location in view of the many variables involved in a rainfall event - intensity and duration, characteristics of the drainage surface and drainage network, types of hydrocarbons of different origin and nature.

We recommend that you contact our Technical Department when:

- in addition to de-oiling treatment, a desanding treatment or the removal of particular pollutants with pressure filtration or chemical-physical treatments is required;
- the competent authority requires the treatment of water after the first rainwater.



GENERAL TABLE RAINWATER SYSTEMS Discharge to Public Sewerage and Surface Water (C)

ITEM	RECEPTOR BODY	YARD SURFACE (m ²) (1)	TUBE Ø IN/OUT (mm) (2)	Drain and branch Well		RAINWATER STORAGE		DEOLIATOR (3)	€	
				Capacity (litres)	Dimensions (cm)	Capacity (litres)	Dimensions (cm)			
ECO IPP 400/C	Public Sewerage	400	125	100	L48xP48xH75	2000	L136xP155xH144	ECO DEO 5/C NEW	4.278,25	
ECO IPP 600/C		600	125	100	L48xP48xH75	3000	L160xP185xH166	ECO DEO 5/C NEW	4.715,50	
ECO IPP 1000/C		1000	160	100	L48xP48xH75	5000	L184xP184xH229	ECO DEO 7/C NEW	5.251,47	
ECO IPP 1500/C		1500	200	100	L48xP48xH75	7500	L189xP318xH201	ECO DEO 7/C NEW	7.278,26	
ECO IPP 2000/C		2000	200	300	L73xP73xH82	10000	L238xP275xH255	ECO DEO 7/C NEW	8.766,40	
ECO IPP 3000/C		3000	250	300	L73xP73xH82	15000	L238xP390xH255	ECO DEO 11/C NEW	11.775,40	
ECO IPP 4000/C		Surface waters	4000	250	300	L73xP73xH82	20000	L238xP508xH255	ECO DEO 17/C NEW	15.020,16
ECO IPP 5000/C			5000	315	500	L68xP87xH116	25000	L238xP627xH255	ECO DEO 17/C NEW	18.441,10
ECO IPP 6000/C			6000	315	500	L68xP87xH116	30000	L238xP743xH255	ECO DEO 22/C NEW	21.548,96
ECO IPP 7000/C			7000	315	500	L68xP87xH116	35000	L238xP862xH255	ECO DEO 22/C NEW	25.452,11
ECO IPP 8000/C			8000	315	500	L68xP87xH116	40000	L238xP979xH255	ECO DEO 22/C NEW	27.854,05
ECO IPP 9000/C			9000	315	500	L68xP87xH116	45000	L238xP1098xH255	ECO DEO 22/C NEW	32.958,19
ECO IPP 10000/C	10000		315	500	L68xP87xH116	50000	L238xP1215xH255	ECO DEO 22/C NEW	36.135,86	

(1) Extent assessed by assuming an inflow coefficient of 1 (corresponding to impermeable drainage areas).

(2) Check the suitability of the pipe diameter for the expected flow rate.

(3) In order to reduce the frequency of de-oliator cleaning, Telcom Spa is available for the dimensioning of a larger-volume de-oliator.

Note: For larger areas please contact our Technical Department or Sales Network.



**GENERAL TABLE
FIRST RAINWATER SYSTEMS
Discharge to Ground (CF)**

ITEM	RECEPTOR BODY	YARD SURFACE (m ²) (1)	TUBE Ø IN/OUT (mm) (2)	Drain and branch Well		RAINWATER STORAGE		DEOLIATOR (3)	€
				Capacity (litres)	Dimensions (cm)	Capacity (litres)	Dimensions (cm)		
ECO IPP 400/CF	Soil	400	125	100	L48xP48xH75	2000	L136xP155xH144	ECO DEO 5/CF NEW	4.442,55
ECO IPP 600/CF		600	125	100	L48xP48xH75	3000	L160xP185xH166	ECO DEO 5/CF NEW	4.879,80
ECO IPP 1000/CF		1000	160	100	L48xP48xH75	5000	L184xP184xH229	ECO DEO 7/CF NEW	5.409,72
ECO IPP 1500/CF		1500	200	100	L48xP48xH75	7500	L189xP318xH201	ECO DEO 7/CF NEW	7.712,20
ECO IPP 2000/CF		2000	200	300	L73xP73xH82	10000	L238xP275xH255	ECO DEO 7/CF NEW	8.924,66
ECO IPP 3000/CF		3000	250	300	L73xP73xH82	15000	L238xP390xH255	ECO DEO 11/CF NEW	11.931,06
ECO IPP 4000/CF		4000	250	300	L73xP73xH82	20000	L238xP508xH255	ECO DEO 17/CF NEW	15.243,43
ECO IPP 5000/CF		5000	315	500	L68xP87xH116	25000	L238xP627xH255	ECO DEO 17/CF NEW	18.664,35
ECO IPP 6000/CF		6000	315	500	L68xP87xH116	30000	L238xP743xH255	ECO DEO 22/CF NEW	21.772,23
ECO IPP 7000/CF		7000	315	500	L68xP87xH116	35000	L238xP862xH255	ECO DEO 22/CF NEW	25.686,06
ECO IPP 8000/CF		8000	315	500	L68xP87xH116	40000	L238xP979xH255	ECO DEO 22/CF NEW	28.088,00
ECO IPP 9000/CF		9000	315	500	L68xP87xH116	45000	L238xP1098xH255	ECO DEO 22/CF NEW	33.192,14
ECO IPP 10000/CF		10000	315	500	L68xP87xH116	50000	L238xP1215xH255	ECO DEO 22/CF NEW	36.369,81

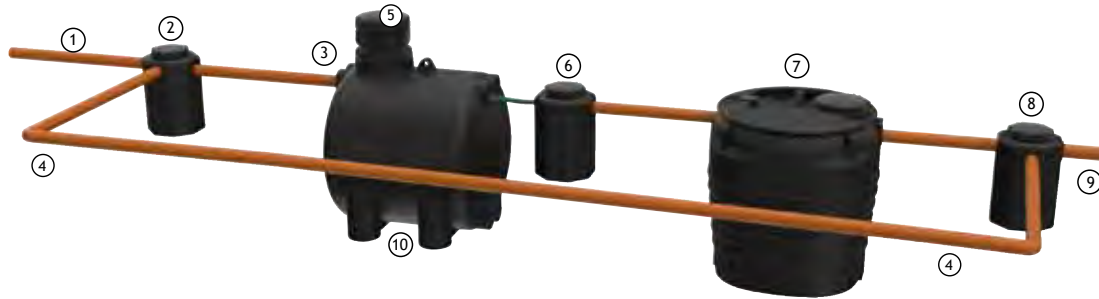
(1) Extent assessed by assuming an inflow coefficient of 1 (corresponding to impermeable drainage areas).

(2) Check the suitability of the pipe diameter for the expected flow rate.

(3) In order to reduce the frequency of de-oliator cleaning, Telcom Spa is available for the dimensioning of a larger-volume de-oliator.

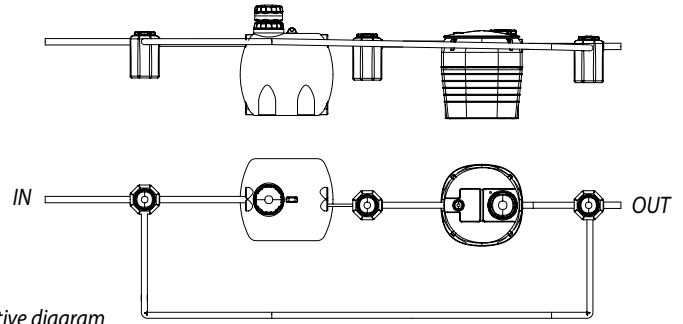
Note: For larger areas please contact our Technical Department or Sales Network.

STORMWATER RUNOFF TREATMENT FIRST RAIN SYSTEMS

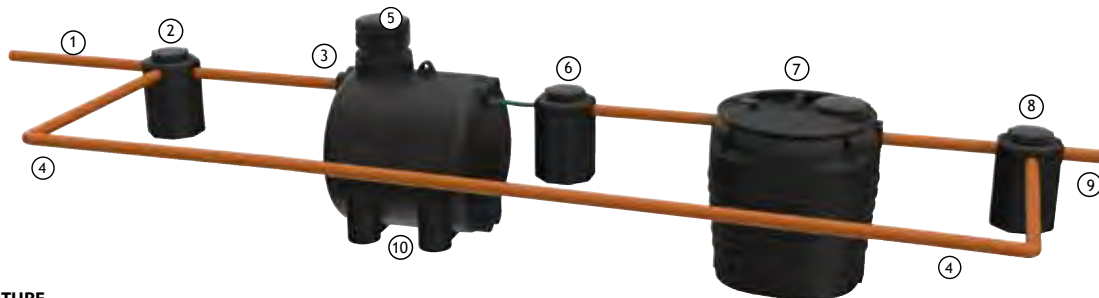


NOMENCLATURE

- 1 - STORMWATER INLET
- 2 - DRAINAGE SUMP COMPLETE WITH RAIN SENSOR
- 3 - FIRST RAINWATER STORAGE INLET
- 4 - PLANT BY-PASS
- 5 - MANHOLE COVER INSPECTION AND MAINTENANCE
- 6 - STILLING WELL
- 7 - DE-OILING UNIT
- 8 - CONFLUENCE WELL
- 9 - PLANT OUTPUT
- 10 - ACCUMULATION with E/PUMP and Electric Float
(Pipes NOT INCLUDED)

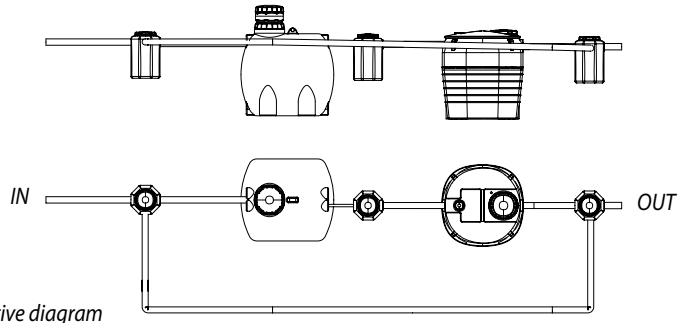


ITEM	RECEPTOR BODY	YARD SURFACE (m ²) (1)	TUBE ø IN/OUT (mm) (2)	Drain and branch Well		RAINWATER STORAGE		DEOLIATOR (3)	€
				Capacity (litres)	Dimensions (cm)	Capacity (litres)	Dimensions (cm)		
ECO IPP 400/C	Public Sewerage Surface waters	400	125	100	L48xP48xH75	2000	L136xP155xH144	ECO DEO 5/C NEW	4.278,25
ECO IPP 400/CF	Soil							ECO DEO 5/CF NEW	4.442,55

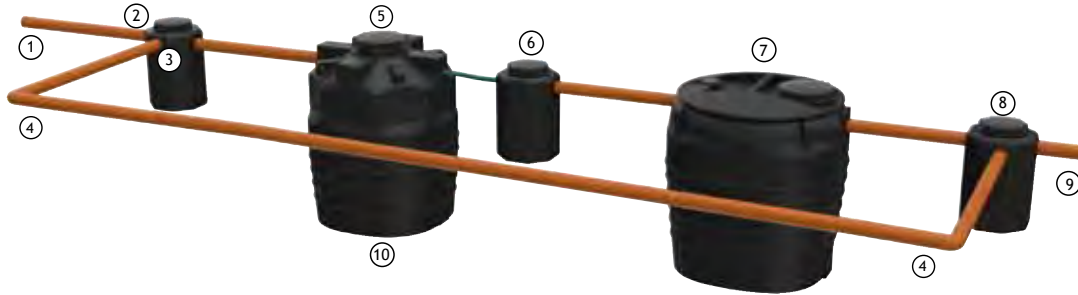


NOMENCLATURE

- 1 - STORMWATER INLET
- 2 - DRAINAGE SUMP COMPLETE WITH RAIN SENSOR
- 3 - FIRST RAINWATER STORAGE INLET
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- 6 - STILLING WELL
- 7 - DE-OILING UNIT
- 8 - CONFLUENCE WELL
- 9 - PLANT OUTPUT
- 10 - ACCUMULATION with E/PUMP and Electric Float
(Pipes NOT INCLUDED)

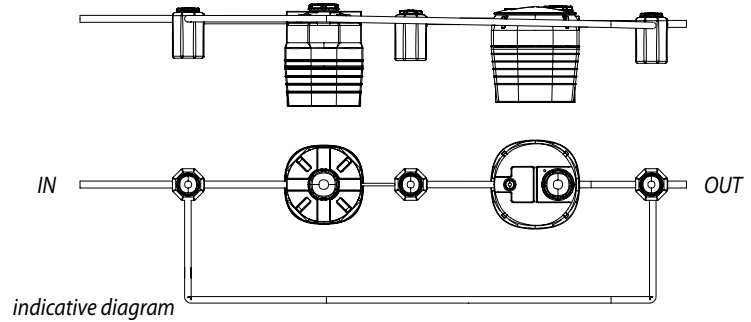


ITEM	RECEPTOR BODY	YARD SURFACE (m ²) (1)	TUBE ø IN/OUT (mm) (2)	Drain and branch Well		RAINWATER STORAGE		DEOLIATOR (3)	€
				Capacity (litres)	Dimensions (cm)	Capacity (litres)	Dimensions (cm)		
ECO IPP 600/C	Public Sewerage Surface waters	600	125	100	L48xP48xH75	3000	L160xP185xH166	ECO DEO 5/C NEW	4.715,50
ECO IPP 600/CF	Soil							ECO DEO 5/CF NEW	4.879,80

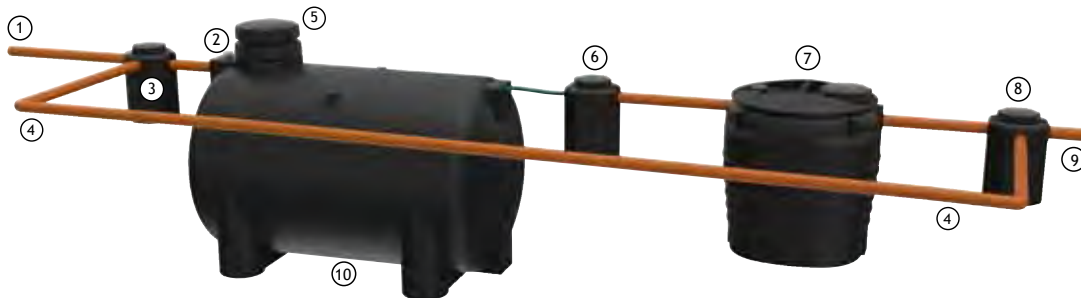


NOMENCLATURE

- 1 - STORMWATER INLET
- 2 - DRAINAGE SUMP COMPLETE WITH RAIN SENSOR
- 3 - FIRST RAINWATER STORAGE INLET
- 4 - PLANT BY-PASS
- 5 - MANHOLE COVER INSPECTION AND MAINTENANCE
- 6 - STILLING WELL
- 7 - DE-OILING UNIT
- 8 - CONFLUENCE WELL
- 9 - PLANT OUTPUT
- 10 - ACCUMULATION with E/PUMP and Electric Float
(Pipes NOT INCLUDED)

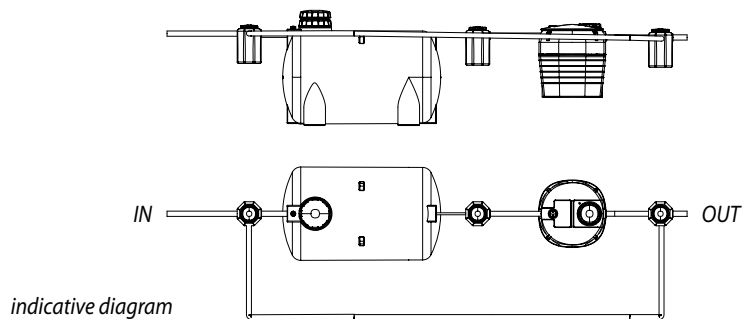


ITEM	RECEPTOR BODY	YARD SURFACE (m ²) (1)	TUBE Ø IN/OUT (mm) (2)	Drain and branch Well		RAINWATER STORAGE		DEOLIATOR (3)	€
				Capacity (litres)	Dimensions (cm)	Capacity (litres)	Dimensions (cm)		
ECO IPP 1000/C	Public Sewerage Surface waters	1000	160	100	L48xP48xH75	5000	L184xP184xH229	ECO DEO 7/C NEW	5.251,47
ECO IPP 1000/CF	Soil							ECO DEO 7/CF NEW	5.409,72



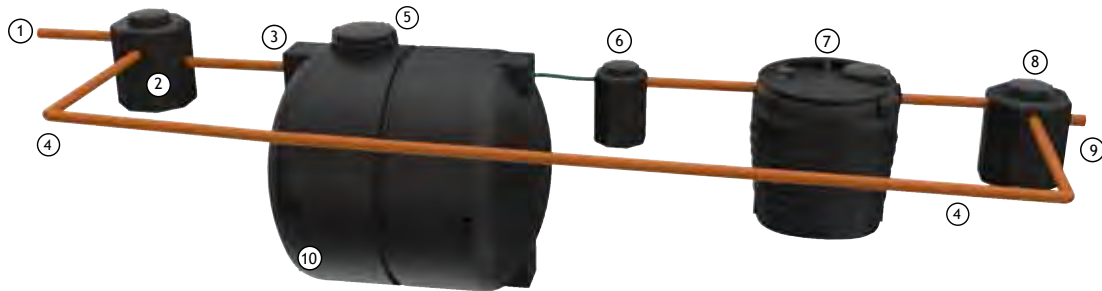
NOMENCLATURE

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(Pipes NOT INCLUDED)



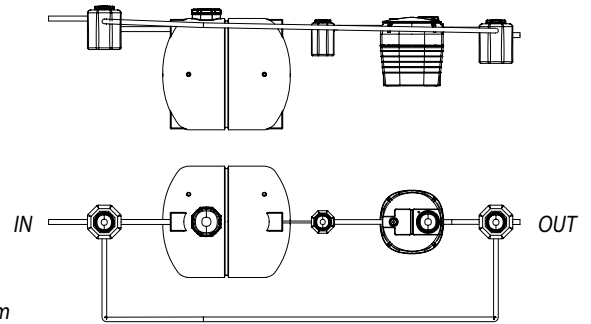
ITEM	RECEPTOR BODY	YARD SURFACE (m ²) (1)	TUBE Ø IN/OUT (mm) (2)	Drain and branch Well		RAINWATER STORAGE		DEOLIATOR (3)	€
				Capacity (litres)	Dimensions (cm)	Capacity (litres)	Dimensions (cm)		
ECO IPP 1500/C	Public Sewerage Surface waters	1500	200	100	L48xP48xH75	7500	L189xP318xH201	ECO DEO 7/C NEW	7.278,26
ECO IPP 1500/CF	Soil							ECO DEO 7/CF NEW	7.712,20

STORMWATER RUNOFF TREATMENT FIRST RAIN SYSTEMS



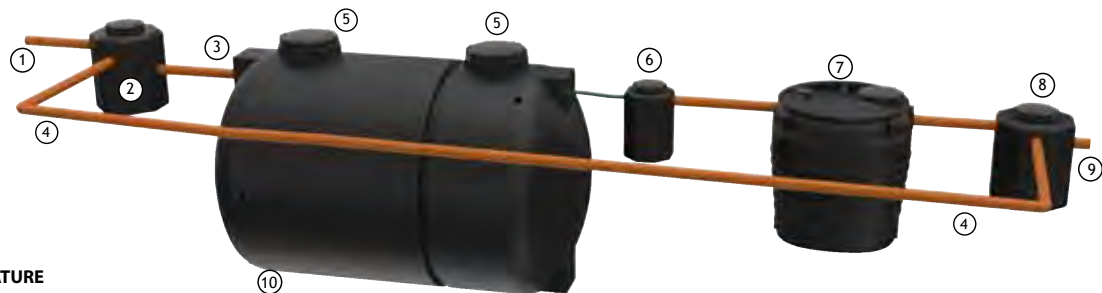
NOMENCLATURE

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(Pipes NOT INCLUDED)



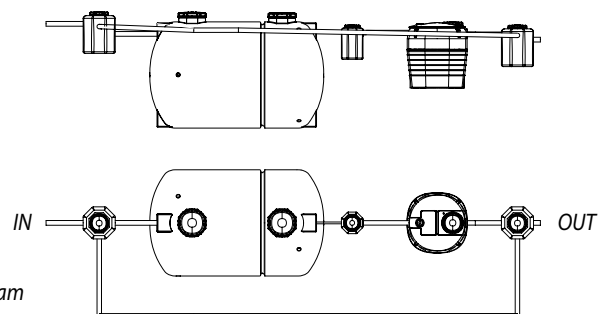
indicative diagram

ITEM	RECEPTOR BODY	YARD SURFACE (m ²) (1)	TUBE Ø IN/OUT (mm) (2)	Drain and branch Well		RAINWATER STORAGE		DEOLIATOR (3)	€
				Capacity (litres)	Dimensions (cm)	Capacity (litres)	Dimensions (cm)		
ECO IPP 2000/C	Public Sewerage Surface waters	2000	200	300	L73xP73xH82	10000	L238xP275xH255	ECO DEO 7/C NEW	8.766,40
ECO IPP 2000/CF	Soil							ECO DEO 7/CF NEW	



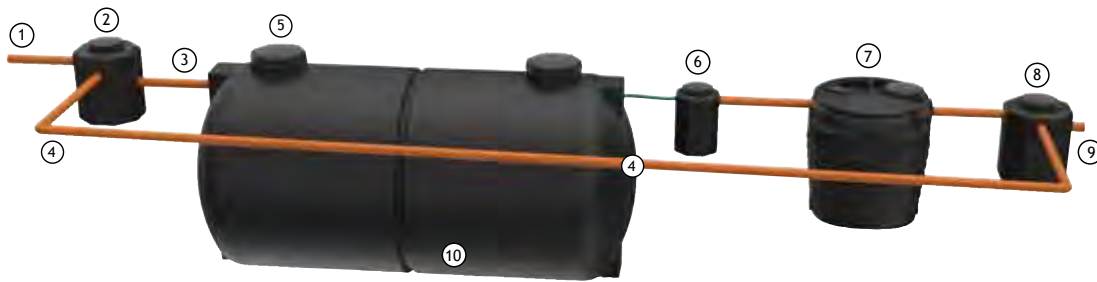
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(Pipes NOT INCLUDED)



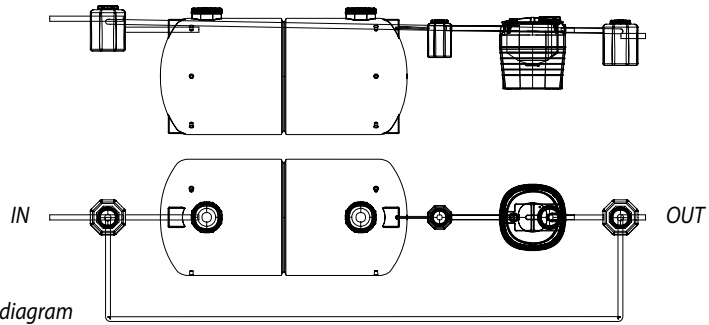
indicative diagram

ITEM	RECEPTOR BODY	YARD SURFACE (m ²) (1)	TUBE Ø IN/OUT (mm) (2)	Drain and branch Well		RAINWATER STORAGE		DEOLIATOR (3)	€
				Capacity (litres)	Dimensions (cm)	Capacity (litres)	Dimensions (cm)		
ECO IPP 3000/C	Public Sewerage Surface waters	3000	250	300	L73xP73xH82	15000	L238xP390xH255	ECO DEO 11/C NEW	11.775,40
ECO IPP 3000/CF	Soil							ECO DEO 11/CF NEW	

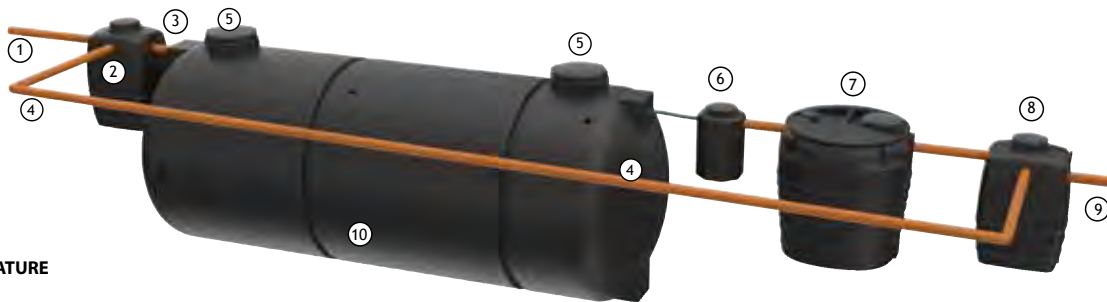


NOMENCLATURE

- 1 - STORMWATER INLET
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(Pipes NOT INCLUDED)

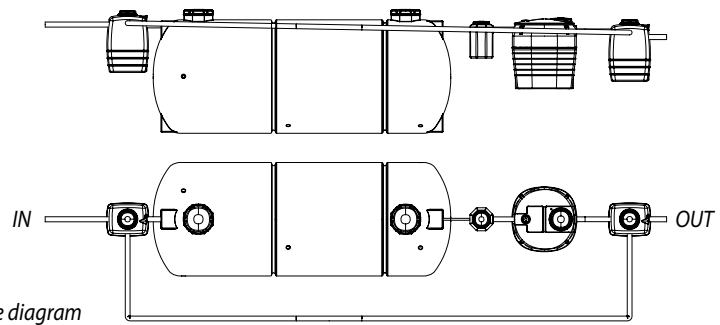


ITEM	RECEPTOR BODY	YARD SURFACE (m ²) (1)	TUBE ø IN/OUT (mm) (2)	Drain and branch Well		RAINWATER STORAGE		DEOLIATOR (3)	€
				Capacity (litres)	Dimensions (cm)	Capacity (litres)	Dimensions (cm)		
ECO IPP 4000/C	Public Sewerage Surface waters	4000	250	300	L73xP73xH82	20000	L238xP508xH255	ECO DEO 17/C NEW	15.020,16
ECO IPP 4000/CF	Soil							ECO DEO 17/CF NEW	



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- 9 - PLANT OUTPUT
- 10 - ACCUMULATION with E/PUMP and Electric Float
(Pipes NOT INCLUDED)



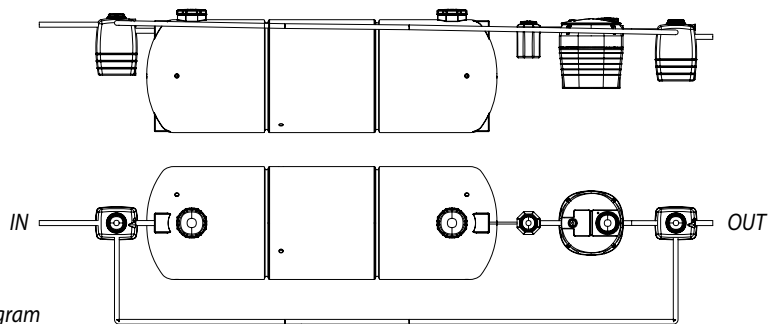
ITEM	RECEPTOR BODY	YARD SURFACE (m ²) (1)	TUBE ø IN/OUT (mm) (2)	Drain and branch Well		RAINWATER STORAGE		DEOLIATOR (3)	€
				Capacity (litres)	Dimensions (cm)	Capacity (litres)	Dimensions (cm)		
ECO IPP 5000/C	Public Sewerage Surface waters	5000	315	500	L68xP87xH116	25000	L238xP627xH255	ECO DEO 17/C NEW	18.441,10
ECO IPP 5000/CF	Soil							ECO DEO 17/CF NEW	

STORMWATER RUNOFF TREATMENT FIRST RAIN SYSTEMS



NOMENCLATURE

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(Pipes NOT INCLUDED)

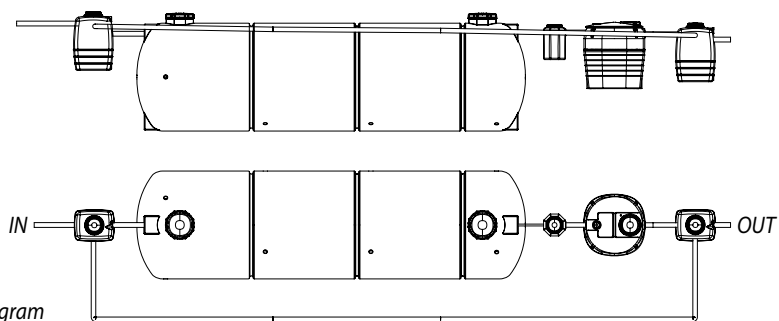


ITEM	RECEPTOR BODY	YARD SURFACE (m ²) (1)	TUBE ø IN/OUT (mm) (2)	Drain and branch Well		RAINWATER STORAGE		DEOLIATOR (3)	€
				Capacity (litres)	Dimensions (cm)	Capacity (litres)	Dimensions (cm)		
ECO IPP 6000/C	Public Sewerage Surface waters	6000	315	500	L68xP87xH116	30000	L238xP743xH255	ECO DEO 22/C NEW	21.548,96
ECO IPP 6000/CF	Soil							ECO DEO 22/CF NEW	21.772,23

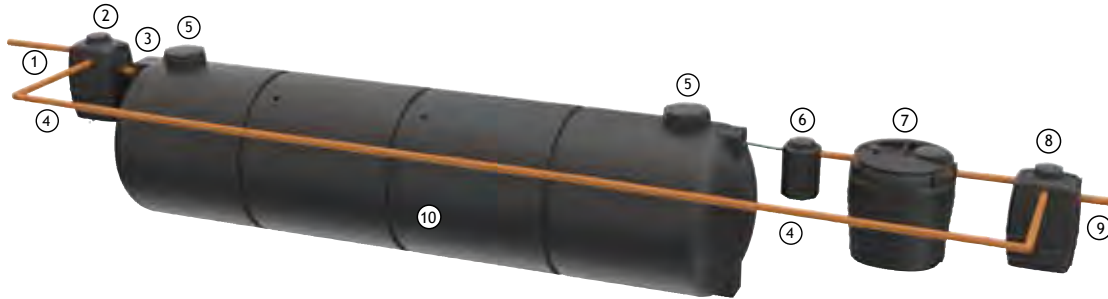


NOMENCLATURE

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- 9 - PLANT OUTPUT
- 10 - ACCUMULATION with E/PUMP and Electric Float
(Pipes NOT INCLUDED)

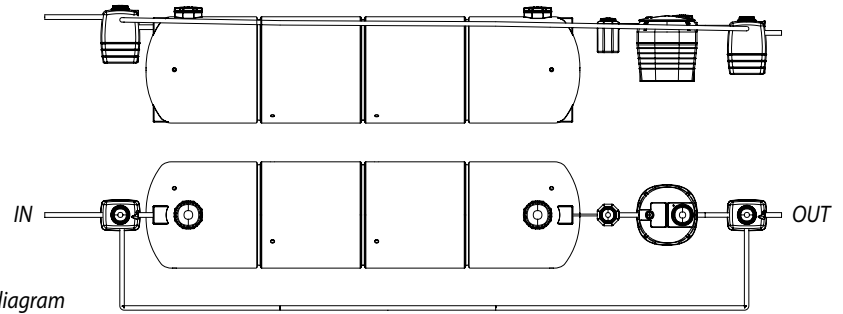


ITEM	RECEPTOR BODY	YARD SURFACE (m ²) (1)	TUBE ø IN/OUT (mm) (2)	Drain and branch Well		RAINWATER STORAGE		DEOLIATOR (3)	€
				Capacity (litres)	Dimensions (cm)	Capacity (litres)	Dimensions (cm)		
ECO IPP 7000/C	Public Sewerage Surface waters	7000	315	500	L68xP87xH116	35000	L238xP862xH255	ECO DEO 22/C NEW	25.452,11
ECO IPP 7000/CF	Soil							ECO DEO 22/CF NEW	25.686,06



NOMENCLATURE

- 1 - STORMWATER INLET
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- 9 - PLANT OUTPUT
- 10 - ACCUMULATION with E/PUMP and Electric Float
(Pipes NOT INCLUDED)

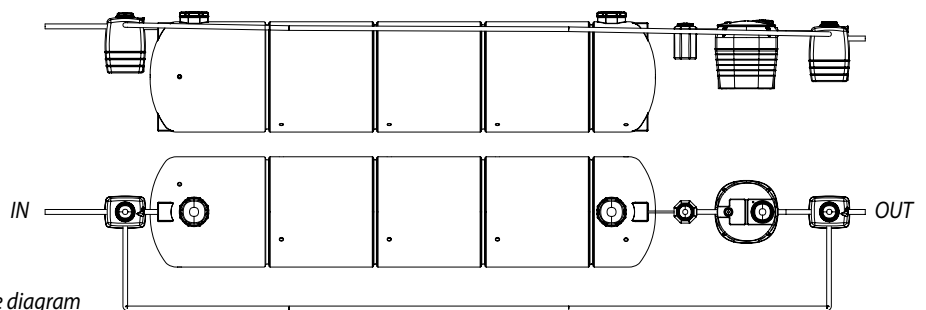


ITEM	RECEPTOR BODY	YARD SURFACE (m ²) (1)	TUBE ø IN/OUT (mm) (2)	Drain and branch Well		RAINWATER STORAGE		DEOLIATOR (3)	€
				Capacity (litres)	Dimensions (cm)	Capacity (litres)	Dimensions (cm)		
ECO IPP 8000/C	Public Sewerage Surface waters	8000	315	500	L68xP87xH116	40000	L238xP979xH255	ECO DEO 22/C NEW	27.854,05
ECO IPP 8000/CF	Soil							ECO DEO 22/CF NEW	28.088,00



NOMENCLATURE

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- 10 - ACCUMULATION with E/PUMP and Electric Float
(Pipes NOT INCLUDED)



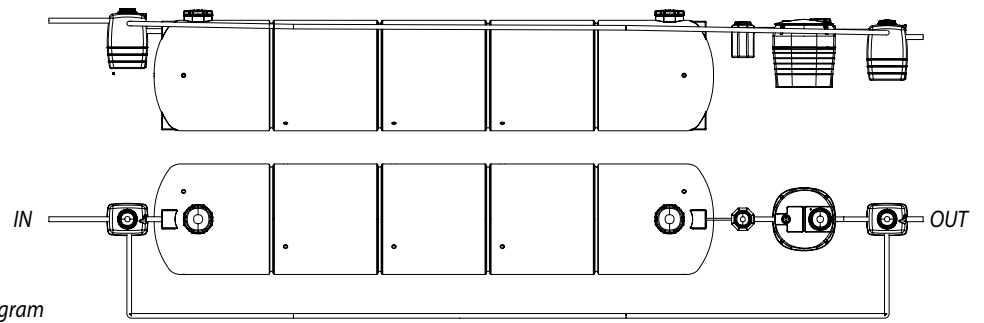
ITEM	RECEPTOR BODY	YARD SURFACE (m ²) (1)	TUBE ø IN/OUT (mm) (2)	Drain and branch Well		RAINWATER STORAGE		DEOLIATOR (3)	€
				Capacity (litres)	Dimensions (cm)	Capacity (litres)	Dimensions (cm)		
ECO IPP 9000/C	Public Sewerage Surface waters	9000	315	500	L68xP87xH116	45000	L238xP1098xH255	ECO DEO 22/C NEW	32.958,19
ECO IPP 9000/CF	Soil							ECO DEO 22/CF NEW	33.192,14

STORMWATER RUNOFF TREATMENT FIRST RAIN SYSTEMS

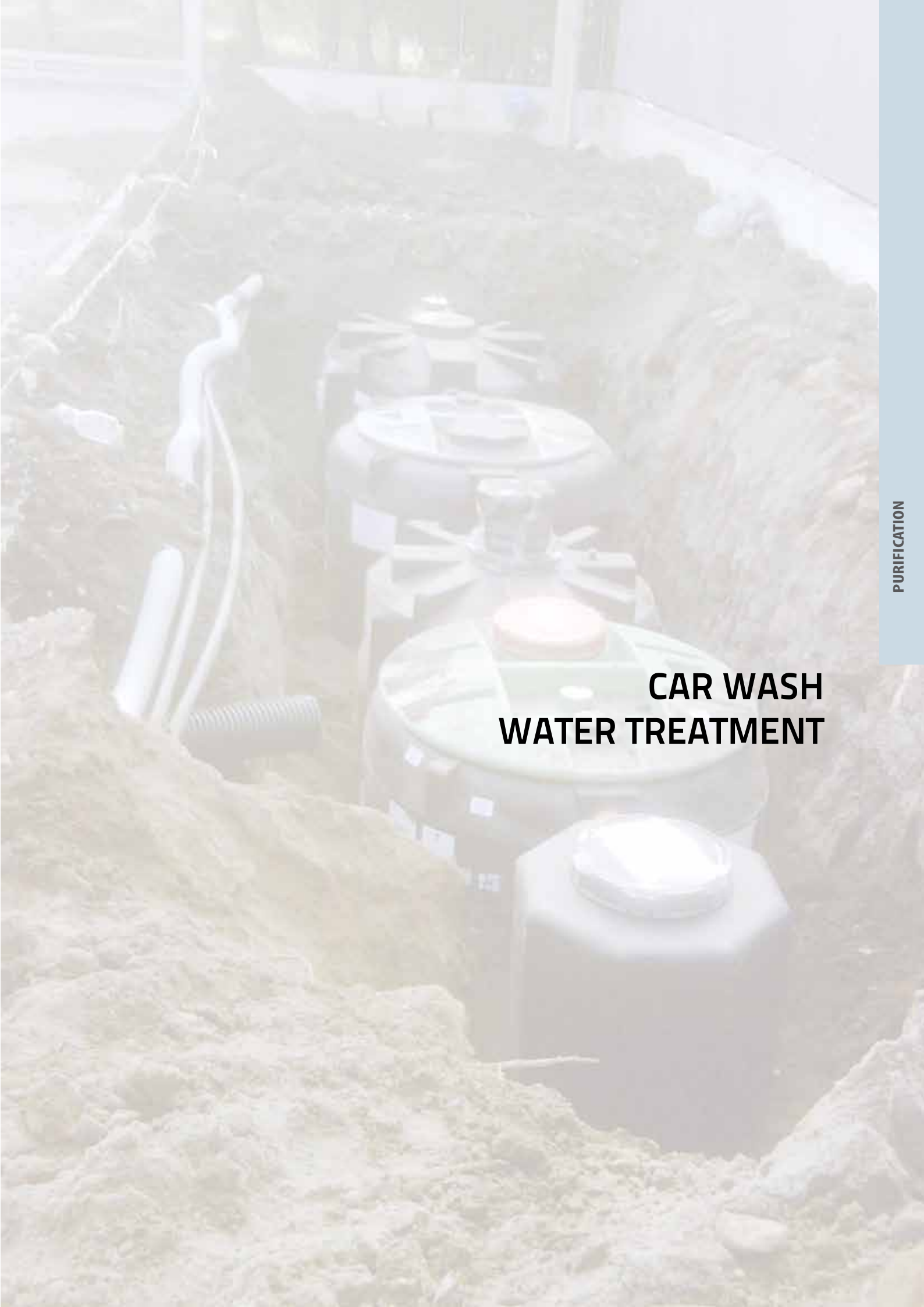


NOMENCLATURE

- 1 - STORMWATER INLET
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- 8 - CONFLUENCE WELL
- 9 - PLANT OUTPUT
- 10 - ACCUMULATION with E/PUMP and Electric Float
(Pipes NOT INCLUDED)



ITEM	RECEPTOR BODY	YARD SURFACE (m ²) (1)	TUBE ø IN/OUT (mm) (2)	Drain and branch Well		RAINWATER STORAGE		DEOLIATOR (3)	€
				Capacity (litres)	Dimensions (cm)	Capacity (litres)	Dimensions (cm)		
ECO IPP 10000/C	Public Sewerage Surface waters	10000	315	500	L68xP87xH116	50000	L238xP1215xH255	ECO DEO 22/C NEW	36.135,86
ECO IPP 10000/CF	Soil							ECO DEO 22/CF NEW	



CAR WASH WATER TREATMENT

WATER FROM CAR WASH

- The car wash provides for the exclusive treatment of the external bodywork, where washing of the engine compartment is totally forbidden;
- It is advisable to provide one or more decanter sumps immediately after the grated drains for collecting washing waters;
- The data provided, which is the basis for the dimensioning performed, must be true;
- The design data assumed to be identical to the actual situation;
- Inlet water parameters are within the ranges indicated in the accompanying technical manual.
- Installation and maintenance are carried out correctly according to the enclosed technical manual;
- No bactericides, ammonia, chlorine or any product harmful to the bacterial flora that could compromise its purifying action, is introduced into the plant;
- No rainwater is conveyed to the plant;
- No coarse solids are introduced into the system which could damage parts of the system or cause obstructions;
- The inlet metal parameters already comply with current regulations.

REGULATORY FRAMEWORK

- Legislative Decree No. 152/06 as amended.
- EEC Directive No. 91/271 of 21/05/91
- ARPA guidelines of various regions

NOTES FOR THE INSTALLER

The installation of the products shall be carried out in such a way as to guarantee the periodic removal of the material present on the surface and removed. The location must be outside buildings and at least 1 m away from foundation walls. When burying the product, the instructions in the accompanying manual must be strictly adhered to.



PROCESS DESCRIPTION

The TELCOM purification plant for car wash water includes the following treatment steps:

- 1. DE-SANDBLASTING PHASE:** vertical flow desander in which the gravimetric separation of settleable solids is ensured.
- 2. DISOILING PHASE:** oil separator whose operation is based on the use of stilling basins equipped with an internal compartment in which the separated substances are trapped. The de-oiling unit is equipped with a reed filter to induce the coalescence process.
- 3. STAGE OF ORGANIC TREATMENT WITH TIGHT BIOMASS:** Percolating Filter with Forced Aeration whose operating principle is essentially based on the process of biological oxidation with suspended biomass. Inside these percolating filters are special filling bodies with a high specific surface area on which the aerobic bacterial flora can settle and trigger the purification process guaranteed by the oxidative action of the air introduced into the waste water through a system consisting of a blower pump and diffusers.
- 4. CLARIFICATION PHASE:** clarification tank equipped with an internal compartment to ensure clarification of the effluent.
- 5. INSPECTION PHASE:** Inspection well for sampling effluent. Depending on the purification requirements and the type of discharge, the installation of a pressure refining unit described below is envisaged.
- 6. REFINING UNIT Mod. GDA S:** Stainless steel electro pump - Filter loading and unloading pipes in PVC-PN10 and galvanized - Activated carbon filter (290-430 litres) entirely in hot galvanized sheet metal and painted with epoxy powders, complete with valves and fittings - Manual backwashing system of the filtering columns - Pallet base in hot galvanized sheet metal and painted with epoxy powders - Flow meter and flow rate adjustment valve - Control, protection and monitoring electrical panel. Voltage: 220 V single-phase - Installed power: 1.0 kW.
- 7. REFINING GROUP Mod. GDA SCA:** Stainless steel electro pump - Filter loading and unloading pipes in PVC- PN10 and galvanized - Quartz Sand Filter and Activated Carbon Filter (2 x 290-430 litres) entirely in hot galvanized sheet metal and painted with epoxy powders, complete with valves and fittings - Manual backwashing system of the filter columns - Pallet base made of hot galvanized sheet metal and painted with epoxy powders - Flow meter and flow rate regulating valve - Electric control, protection and control panel - Voltage: 220 V single-phase - Installed power: 1.5 kW.

ECO WASH

ITEM	HOURLY FLOW RATE [litres/h]	N. CARS per DAY	RECEPTOR BODY	TOTAL VOLUME [litres]	GROUP OF REFINING (Above ground)	Ø IN/OUT	€
ECO WASH 100	100	10	Public Sewerage	5130	-	125	5.324,49
ECO WASH AS 100			Surface waters		GDA S		16.605,81
ECO WASH SR 100			Soil - Reutilisation		GDA SCA		23.709,81
ECO WASH 300	300	30	Public Sewerage	8125	-	125	7.008,74
ECO WASH AS 300			Surface waters		GDA S		18.290,04
ECO WASH SR 300			Soil - Reutilisation		GDA SCA		25.394,06
ECO WASH 600	600	60	Public Sewerage	11715	-	125	9.132,77
ECO WASH AS 600			Surface waters		GDA S		20.414,08
ECO WASH SR 600			Soil - Reutilisation		GDA SCA		27.518,10
ECO WASH 1200	1200	120	Public Sewerage	16060	-	125	12.161,98
ECO WASH AS 1200			Surface waters		GDA S		25.663,30
ECO WASH SR 1200			Soil - Reutilisation		GDA SCA		34.543,33
ECO WASH 2000	2000	200	Public Sewerage	21893	-	160	16.768,92
ECO WASH AS 2000			Surface waters		GDA S		30.270,24
ECO WASH SR 2000			Soil - Reutilisation		GDA SCA		39.150,26

Please refer to the instructions in the Technical Manual for the correct interruption conditions.
Also available for outdoor installation (subject to approval by the competent authority).

STANDARD COMPOSITION



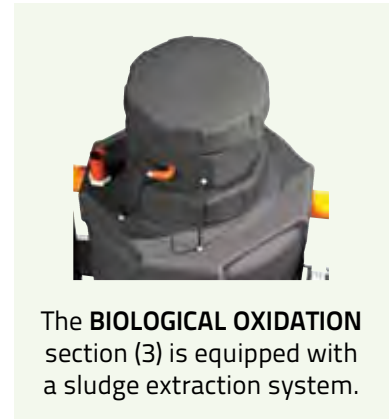
ITEM	SAND TRAP		DEOLIATOR		PERCOLATOR FILTER Forc. Vent.		CLARIFICATION TANK		INSPECTION WELL	
	Mod.	Vol.(litres)	Mod.	Vol.(litres)	Mod.	Vol.(litres)	Mod.	Vol.(litres)	Mod.	Vol.(litres)
ECO WASH 100	ECOVSV 1500	1360	ECODEO 11/C	1500	ECOF AE 1500 PLUS	1360	ECOIMO 6F	910	POZ 300 G.I.	300
ECO WASH 300	ECOVSV 2000	2265	ECODEO 17/C	2250	ECOF AE 1500 PLUS	1360	ECOIMO 15F	2250	POZ 300 G.I.	300
ECO WASH 600	ECOVSV 4000	4200	ECODEO 22/C	3000	ECOF AE 2000 PLUS	2265	ECOIMO 15F	2250	POZ 300 G.I.	300
ECO WASH 1200	ECOVSV 5000	5110	ECODEO 28/C	3750	ECOF AE 4000 PLUS	4200	ECOIMO 20F	3000	POZ 300 G.I.	300
ECO WASH 2000	ECOVBC 8000	8400	ECODEO 33/C	4500	ECOF AE 6000 PLUS	5993	ECOIMO 20F	3000	POZ 300 G.I.	300

Car wash purification plant with above-ground installation consisting of the following purification chain:

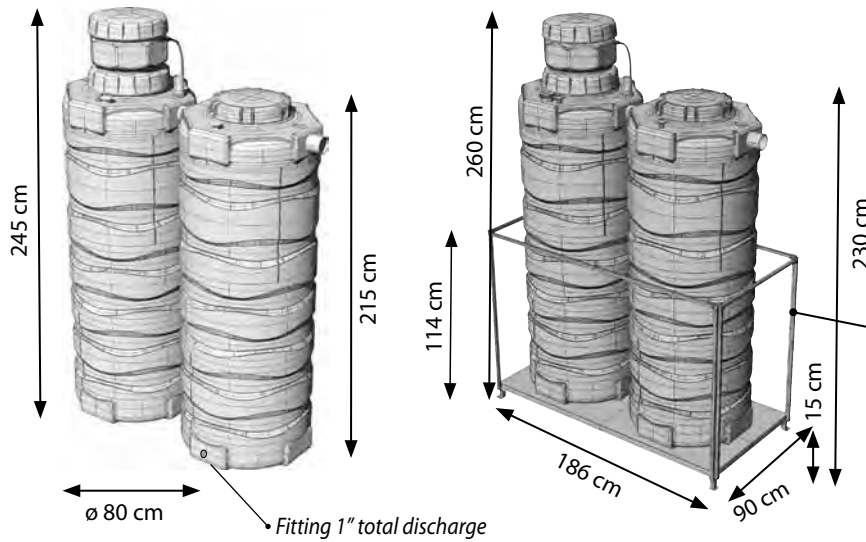


- 1 – SAND TRAP
- 2 – OIL TRAP
- 3 - BIOLOGICAL OXIDATION WITH SLUDGE EXTRACTION
- 4 - CLARIFICATION (with 1" connection for full discharge)

The system is complete with a membrane blower and electrical panel.



The **BIOLOGICAL OXIDATION** section (3) is equipped with a sludge extraction system.



The **ECO WASH FT SKID** model is equipped with a modular skid (consisting of two compartments L186xP90xH114) for the storage of products, the top has an overhang of 15 cm so that it can be moved.

ECO WASH FT

ITEM	HOURLY FLOW RATE [litres/h]	N. CARS per DAY	RECEPTOR BODY	TOTAL VOLUME [litres]	GROUP OF REFINING (Above ground)	Ø IN	Ø OUT	POWER Kw	€
ECO WASH FT			Public Sewerage		-				3.983,02
ECO WASH AS FT**	70	10*	Surface waters	4000	GDA S	1"1/2	100	0,48	15.264,33
ECO WASH SR FT**			Soil - Reutilisation		GDA SCA				22.368,33
ECO WASH FT SKID			Public Sewerage		-				6.378,81
ECO WASH AS FT SKID**	70	10*	Surface waters	4000	GDA S	1"1/2	100	0,48	17.660,13
ECO WASH SR FT SKID**			Soil - Reutilisation		GDA SCA				24.764,14

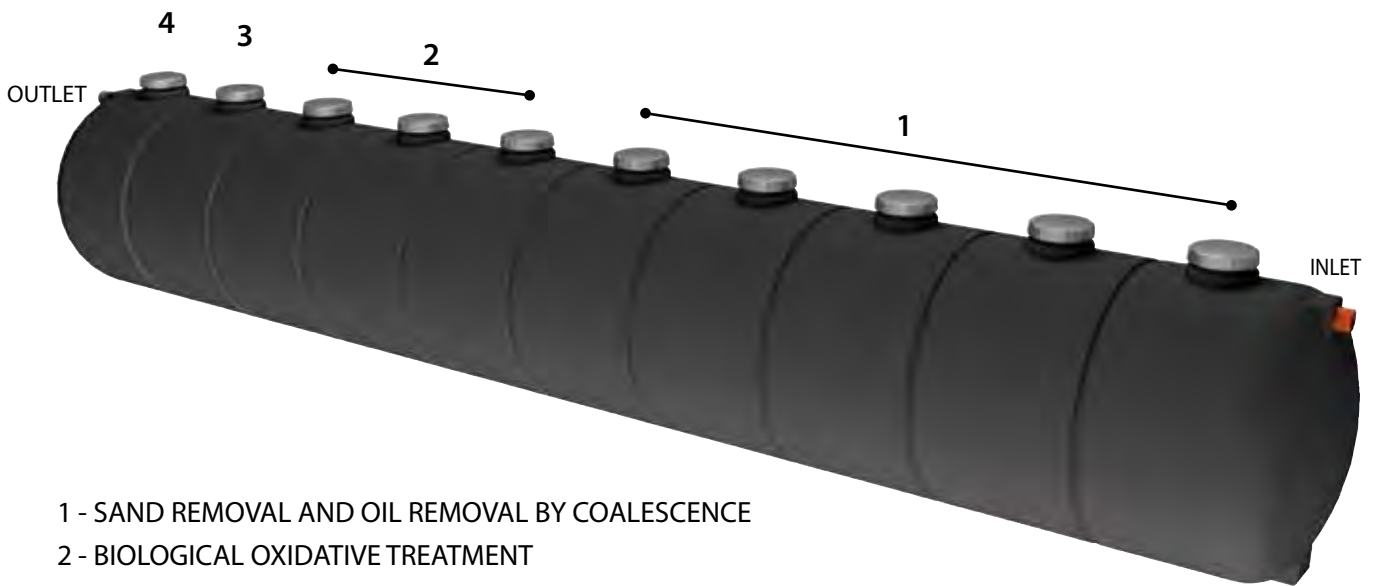
* Projected consumption per car 70 litres

** Relief well supplied on request

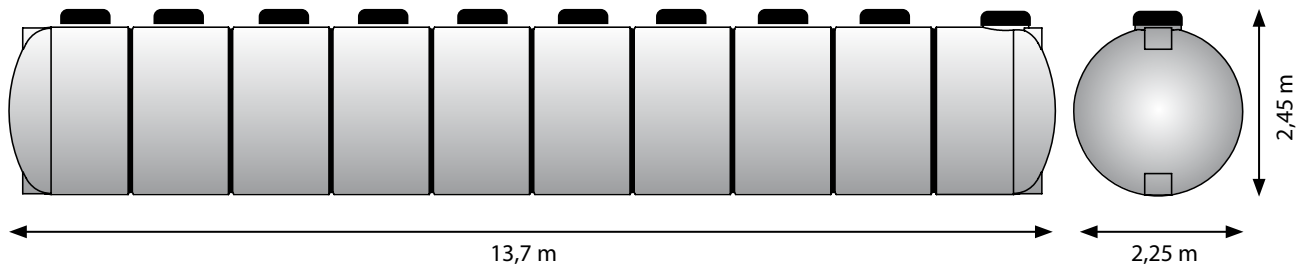
TREATMENT OF WATER FROM CAR WASHES ECO WASH 6000 Monobloc



MONOBLOCK multi-compartment biological purification plant made of PE modules appropriately set up to form the following compartments:



- 1 - SAND REMOVAL AND OIL REMOVAL BY COALESCENCE
- 2 - BIOLOGICAL OXIDATIVE TREATMENT
- EQUIPPED WITH A SLUDGE EXTRACTION SYSTEM**
- 3 - CLARIFICATION
- 4 - SECONDARY OXIDATION



ECO WASH 6000 (Monobloc)

ITEM	HOURLY FLOW RATE [litres/h]	N. CARS per DAY	RECEPTOR BODY	TOTAL VOLUME [litres]	OVERALL DIMENSIONS	GROUP OF REFINING (Above ground)	∅ IN/OUT	POWER Kw	€
ECO WASH 6000	4000/6000	400/600	Public Sewerage	50000	13,76x2,25xH2,45	-	160	1,6	45.342,38
ECO WASH AS 6000			Surface waters			GDA S			58.843,70
ECO WASH SR 6000			Soil - Reutilisation			GDA SCA			67.723,73



ELECTRIC PANEL

ITEM	DESCRIPTION	€
QE COM	Electrical control panel for management and timing of diaphragm compressor	569,88



OUTDOOR COMPRESSOR COMPARTMENT

- Code COMP (VCM 550) dimensions [cm]
W=68, D=68, H=60

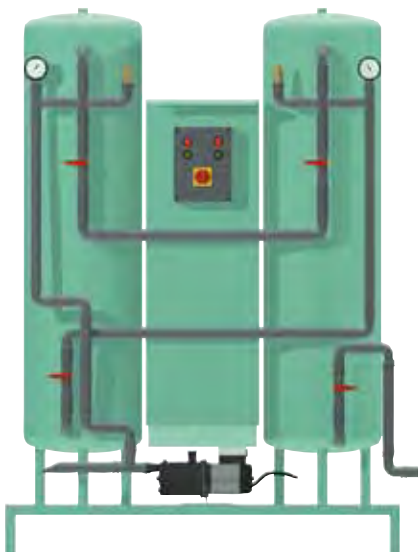
ITEM	DESCRIPTION	€
VCM 550	Outdoor compressor compartment	400,27



MIXTURE - DEGRADATION OF SURFACTANTS

ITEM	DESCRIPTION	€
NOTENS	Mixture - Surfactant Molecule Degradator (5 litres)	304.59

REFINING GROUP



Mod. GDA S: stainless steel electro pump - Loading and draining pipes for filters in PVC-PN10 and galvanized - Activated carbon filter (290-430 litres) entirely in hot galvanized sheet metal and painted with epoxy powders, complete with valves and fittings - Manual backwashing system for filter columns - Palletizable base in hot galvanized sheet metal and painted with epoxy powders - Flow meter and flow rate adjustment valve - Control, protection and monitoring electrical panel. Voltage: 220 V single-phase - Installed power: 1.0 kW.

Mod. GDA SCA: stainless steel electric pump - PVC-PN10 and galvanized loading and unloading pipes - Quartz Sand Filter and Activated Carbon Filter (2 x 290-430 litres) made entirely of hot galvanized sheet metal and painted with epoxy powders, complete with valves and fittings - Manual backwashing system for the filter columns - Base pallet made of hot-dip galvanized sheet metal and painted with epoxy powders - Flow meter and flow rate regulating valve - Electric control, protection and control panel - Voltage 220 V single-phase - Installed power: 1.5 kW.



ACCESSORIES

LIFTING STATIONS

Lifting stations are sorting units for water that cannot be disposed of by gravity. They are suitable for collecting, lifting and subsequently delivering rainwater or wastewater to the public sewerage system or a treatment plant. The tanks are made of recyclable polyethylene, inside of which are housed one or two pumps suitable for lifting the collected water. The pumps supplied, suitable for continuous and heavy-duty use, are recommended for draining sewage, water mixed with sludge, groundwater and surface water; they are suitable for lifting liquids in which suspended solids of size up to Ø 50 mm are present.

SPECIFICATION ITEM

Lifting station in recyclable PE (linear polyethylene), consisting of a monobloc compartment, a closure for inspection, maintenance and cleaning, and nr. submersible centrifugal electric pumps with vortex impeller, equipped with a float switch for automatic operation. Each station is equipped with a hole with a double-lip seal for the inlet and a threaded connector for the outlet, respectively arranged for the connection of a PVC pipe and a delivery pipe on which, on request, a non-return valve can be installed. The pumps are connected to a nylon thread to facilitate extraction operations. A vent is installed on the top of the lifting stations to remove the biogas.

CHOICE OF PRODUCT

For the selection of lifting stations, specialist advice should be sought. The size must be assessed in relation to the quantity of liquid to be lifted in a unit of time and the height to which it must be raised, taking into account any localized and distributed pressure losses in the pressure pipe.

ROUTINE MAINTENANCE

The maintenance of Lift Stations is reduced to a few simple operations:

- Carry out regular cleaning of the tank to remove any solid residues;
- Check seals periodically to avoid damage;
- For the maintenance of the pump, the enclosed pump manual must be strictly adhered to.

Systems with capacities from 100 to 1000 litres

For higher capacities please contact our Technical Department



100 SS



200 SS



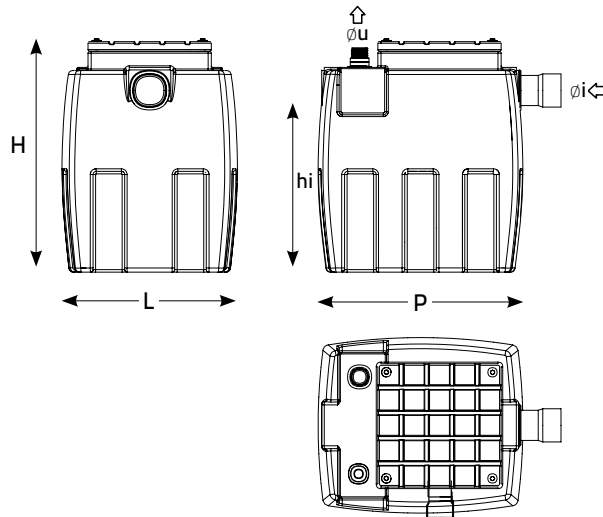
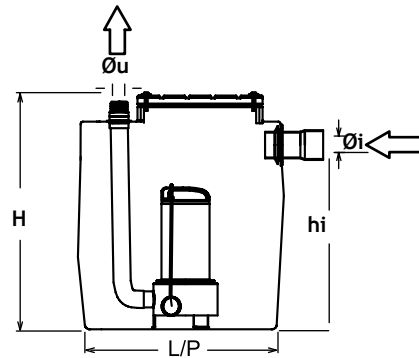
500 SS



800 SS



1000 SS



LIFTING STATIONS from 100 to 200 litres

ITEM	VOLUME (lt)	Dimensions (cm)			Dimensions SHUTTER (mm)	Input		Output	PUMP			€	ELECTRIC PANEL not included
		H	L	P		$\varnothing i^*$ (mm)	h_i^{**} (cm)	$\varnothing u^{***}$	Pumps	Power			
										KW	HP		
100 ss 60	100	58	45	53	300x300	100	43	1" 1/2	No. 1 for sewage	0,55	0,75	806,22	QE 1xM
200 ss 60	200	73	64	55	350x350	100	54	1" 1/2	No. 1 for sewage	0,55	0,75	932,23	QE 1xM
200 ss 75	200	73	64	55	350x350	100	54	2"	No. 1 for sewage	0,75	1	1.186,83	QE 1xM
200 ss TR	200	73	64	55	350x350	100	54	1" 1/2	N°1 GRINDER PUMP	1,1	1,5	1.567,35	QE 1xM

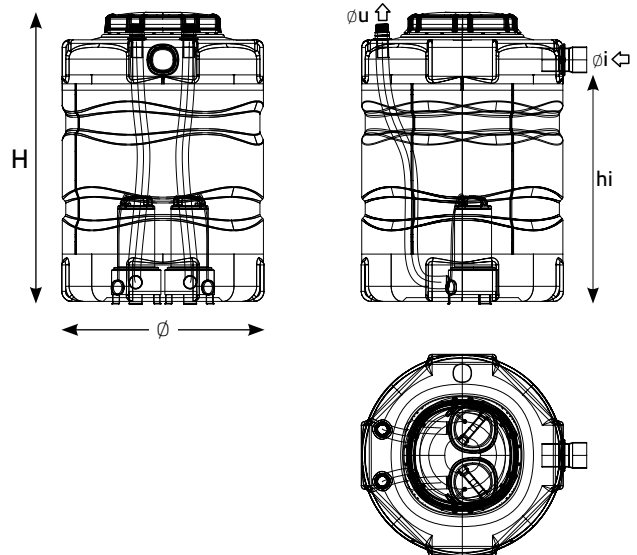
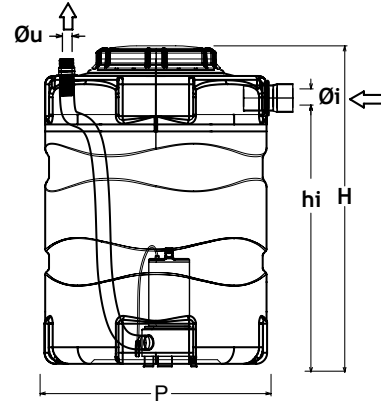
* Hole with rubber gasket to allow inlet pipe connection.

** Height at the overflow.

*** Threaded fitting for pipe connection.



Model with 2 pumps



500-litre LIFTING STATIONS

ITEM	VOLUME (lt)	Dimensions (cm)		Dimensions SHUTTER (mm)	Input		Output $\varnothing u^{***}$	PUMPS	Power		€	ELECTRIC PANEL not included	
		H	\varnothing		$\varnothing i^*$ (mm)	h_i^{**} (cm)			Pumps	KW			HP
500 ss 60	500	110	80	420	100	92	1" 1/2	N°1 per acque cariche	0,55	0,75	1.243,58	QE 1xM	
500 ss 2x60	500	110	80	420	100	92	1" 1/2	N°2 per acque cariche	2x0,55	2x0,75	2.177,24	QE 2xM	
500 ss TR	500	110	80	420	100	92	1" 1/2	N°1 POMPA TRITURATRICE	1,1	1,5	1.820,85	QE 1xM	
500 ss 2xTR	500	110	80	420	100	92	1" 1/2	N°2 POMPA TRITURATRICE	2x1,1	2x1,5	3.182,09	QE 2xM	

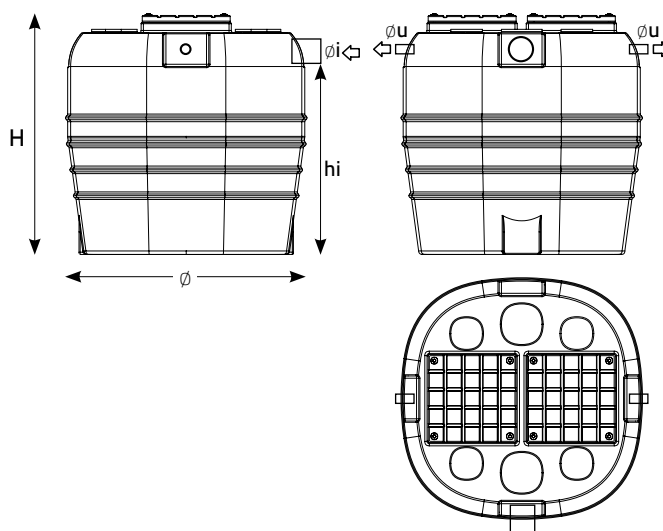
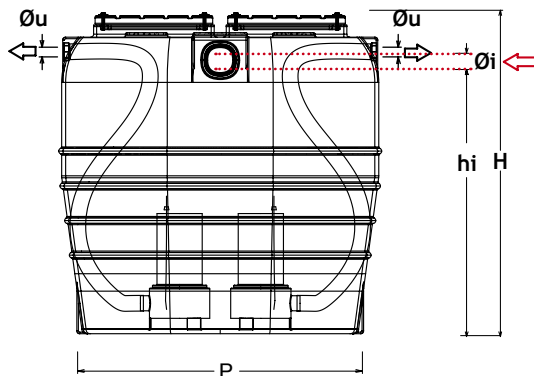
* Hole with rubber gasket to allow inlet pipe connection.

** Height at the overflow.

*** Threaded fitting for pipe connection.



Model with 2 pumps



800-litre LIFTING STATIONS

ITEM	VOLUME (lt)	Dimensions (cm)		Dimensions SHUTTER (mm)	Input		Output	PUMP			€	ELECTRIC PANEL not included
		H	\varnothing		$\varnothing i^*$ (mm)	h_i^{**} (cm)	$\varnothing u^{***}$	Pumps	Power			
									KW	HP		
800 ss 2x60	830	103	107	2x(350x350)	100	86	1" 1/2	N°2 per acque cariche	2x0,55	2x0,75	2.351,81	QE 2xM
800 ss 2x75	830	103	107	2x(350x350)	100	86	2"	N°2 per acque cariche	2x0,75	2x1	2.606,53	QE 2xM
800 ss 2x110	830	103	107	2x(350x350)	100	86	2"	N°2 per acque cariche	2x1,1	2x1,5	4.014,33	QE 2xM
800 ss 2x150	830	103	107	2x(350x350)	100	86	2"	N°2 per acque cariche	2x1,5	2x2	4.271,64	QE 2xT
800 ss 2xTR	830	103	107	2x(350x350)	100	86	1" 1/2	N°2 POMPA TRITURATRICE	2x1,1	2x1,5	3.716,00	QE 2xM

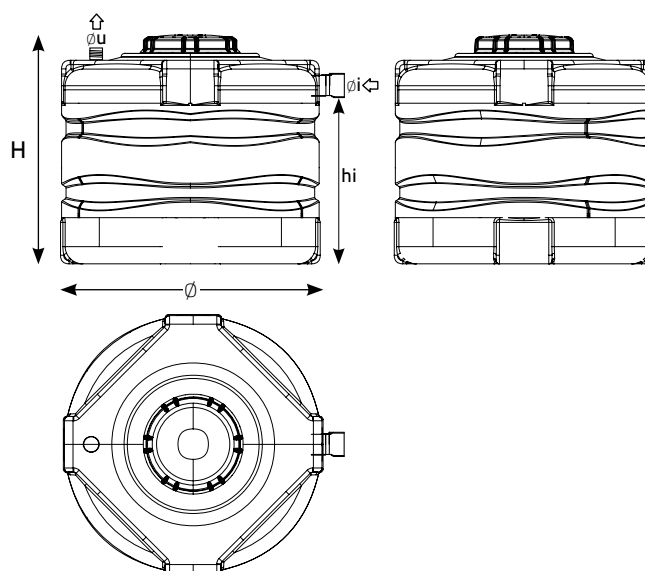
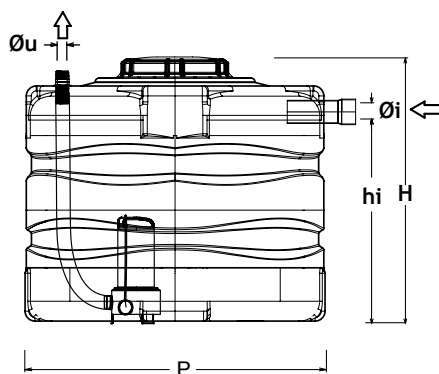
* Hole with rubber gasket to allow inlet pipe connection.

** Height at the overflow.

*** Threaded fitting for pipe connection.



Model with 2 pumps



1000-litre LIFTING STATIONS

ITEM	VOLUME (lt)	Dimensions (cm)		Dimensions SHUTTER (mm)	Input		Output $\varnothing u^{***}$	PUMP	Pumps	Power		€	ELECTRIC PANEL not included
		H	\varnothing		$\varnothing i^*$ (mm)	h_i^{**} (cm)				KW	HP		
1000 ss 60	1000	102	120	420	100	59	1" 1/2	N°1 per acque cariche	0,55	0,75	1.405,63	QE 1xM	
1000 ss 75	1000	102	120	420	100	59	2	N°1 per acque cariche	0,75	1	1.600,96	QE 1xM	
1000 ss 2x60	1000	102	120	420	100	59	1" 1/2	N°2 per acque cariche	2x0,55	2x0,75	2.230,73	QE 2xM	
1000 ss 2x75	1000	102	120	420	100	59	2"	N°2 per acque cariche	2x0,75	2x1	2.485,46	QE 2xM	
1000 ss 110	1000	102	120	420	100	59	2"	N°1 per acque cariche	1,1	1,5	2.293,76	QE 1xM	
1000 ss 150	1000	102	120	420	100	59	2"	N°1 per acque cariche	1,5	2	2.328,72	QE 1xT	
1000 ss 2x110	1000	102	120	420	100	59	2"	N°2 per acque cariche	2x1,1	2x1,5	3.893,26	QE 2xM	
1000 ss 2x150	1000	102	120	420	100	59	2"	N°2 per acque cariche	2x1,5	2x2	4.150,57	QE 2xT	
1000 ss TR	1000	102	120	420	100	59	1" 1/2	N°1 POMPA TRITURATRICE	1,1	1,5	2.227,72	QE 1xM	
1000 ss 2xTR	1000	102	120	420	100	59	1" 1/2	N°2 POMPA TRITURATRICE	2x1,1	2x1,5	3.594,92	QE 2xM	

* Hole with rubber gasket to allow inlet pipe connection.

** Height at the overflow.

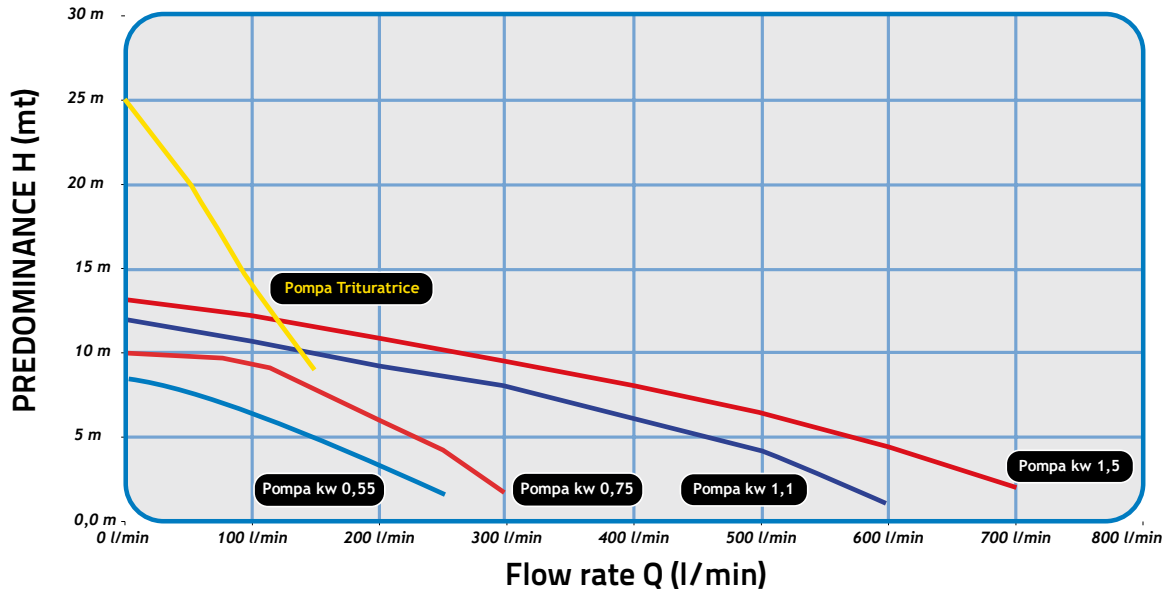
*** Threaded fitting for pipe connection.

PUMP CHARACTERISTICS

OPERATION LOGIC OF LIFTING STATIONS WITH 2 PUMPS

During ordinary operation, the pumps are activated alternately at each start. The activation of an emergency float activates the rescue function by starting both pumps.

PERFORMANCE CURVES at n = 2850 1/min



ELECTRIC PUMPS (pumps for sewage water)

TYPE	Power		V	Performance data											
	kW	HP		0 l/min	80 l/min	100 l/min	150 l/min	175 l/min	200 l/min	225 l/min	260 l/min				
Pump for sewage water	0,55	0,75	220	0 l/min	80 l/min	100 l/min	150 l/min	175 l/min	200 l/min	225 l/min	260 l/min				
				9,1 m	7,1 m	6,6 m	5,1 m	4,4 m	3,7 m	3,0 m	2,0 m				
Pump for sewage water	0,75	1	220	0 l/min	80 l/min	100 l/min	150 l/min	175 l/min	200 l/min	225 l/min	260 l/min	300 l/min	400 l/min		
				7,7 m	7,3 m	7,1 m	6,7 m	6,5 m	6,2 m	5,9 m	5,4 m	4,8 m	3,1 m		
Pump for sewage water	1,1	1,5	220	0 l/min	50 l/min	100 l/min	150 l/min	200 l/min	250 l/min	300 l/min	350 l/min	400 l/min	450 l/min	500 l/min	
				10,6 m	10,1 m	9,6 m	9,1 m	8,6 m	8,0 m	7,4 m	6,6 m	5,8 m	4,8 m	3,7 m	
Pump for sewage water	1,5	2	380	0 l/min	50 l/min	100 l/min	150 l/min	200 l/min	250 l/min	300 l/min	350 l/min	400 l/min	450 l/min	500 l/min	600 l/min
				13,1 m	12,5 m	12,0 m	11,5 m	11,0 m	10,5 m	9,9 m	9,3 m	8,5 m	7,7 m	6,6 m	4,0 m
Grinder pump	1,1	1,5	220	0 l/min	15 l/min	30 l/min	40 l/min	50 l/min	60 l/min	70 l/min	80 l/min	90 l/min	100 l/min	110 l/min	
				25,0 m	23,5 m	21,7 m	20,5 m	19,3 m	18,0 m	16,6 m	15,2 m	13,5 m	11,7 m	9,5 m	

ACCESSORIES FOR LIFTING STATIONS

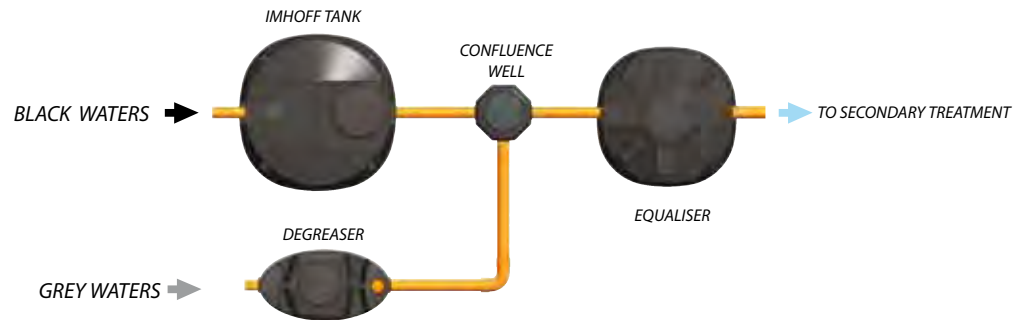
ITEM	DESCRIPTION	€
VALVOLA RITEGNO 1" 1/2	Cast iron 1 1/2" ball check valve	174,36
VALVOLA RITEGNO 2"	2" cast iron ball check valve	341,40
QE ss 1xM	Switchboard for starting and stopping a HP 0.75 - 1 - 1.5 pump	370,03
QE ss 1xT	Switchboard for starting and stopping a HP 2 pump	501,66
QE ss 2xM	Switchboard for starting and stopping two HP 0.75 - 1 - 1.5 pumps with emergency and alternating operation	501,29
QE ss 2xT	Switchboard for starting and stopping two HP 2 pumps with emergency and alternating operation	658,11



Check Valve



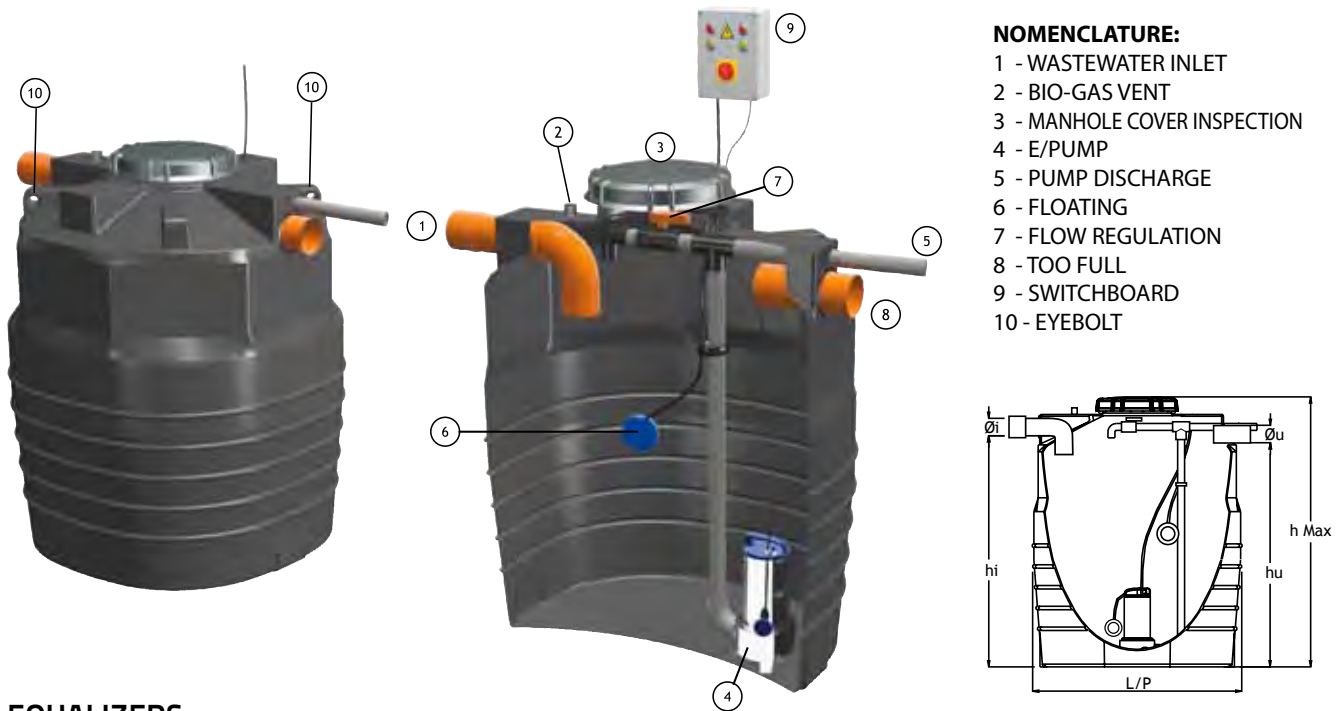
Electric panel



The equalizer has the function of equalizing the hydraulic load and making the pollutant load of the effluent feeding the plant as homogenous as possible. Sudden peaks in the load would, in fact, have serious consequences on the purification efficiency, as microorganisms find it difficult to adapt to abrupt changes in the environment. The equalization compartment is advisable in all applications but becomes indispensable in cases where the variability of the flow rate, and consequently of the pollutant load, is particularly high. (see commercial activities, offices, bars, restaurants, etc.).

Telcom equalizers are dimensioned considering a production time of:

- 8 hours for commercial activities
- 16 hours for residential or similar activities



NOMENCLATURE:

- 1 - WASTEWATER INLET
- 2 - BIO-GAS VENT
- 3 - MANHOLE COVER INSPECTION
- 4 - E/PUMP
- 5 - PUMP DISCHARGE
- 6 - FLOATING
- 7 - FLOW REGULATION
- 8 - TOO FULL
- 9 - SWITCHBOARD
- 10 - EYEBOLT

EQUALIZERS

A.E. Commercial Activities	A.E. Residential or similar	ITEM	Dimensions (cm)					Overflow Volume (litres)	Dimensions (mm)			€
			H	L	P	hi	hu		øi øu	ø manhole	ø biogas	
8	15	EQ 1500	150	117	117	125	121	1243	125	420	2"	3.790,15
15	30	EQ 2000	182	136	136	158	154	2104	125	420	2"	4.037,30
20	40	EQ 3000	219	146	146	192	188	2923	125	420	2"	4.731,98
25	55	EQ 4000	224	165	165	192	188	3800	125	420	2"	5.144,82
30	70	EQ 5000	229	184	184	197	193	4705	125	420	2"	5.997,65
40	80	EQ 6000	257	185	185	224	220	5575	125	420	2"	6.631,30

SPECIFICATION ITEM

Equalizer in recyclable PE (linear polyethylene), consisting of a one-piece housing. The product is equipped with a 0.55 kW 220V - 50Hz lifting pump, a level float switch, an IP55 electrical panel and a screw-on cover for central inspection and maintenance. The inlet and outlet pipes are fitted with suitable double-lip rubber gaskets to guarantee a perfect seal.

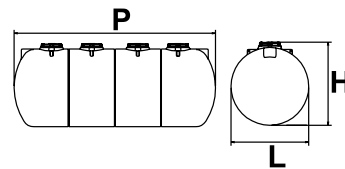
ROUTINE MAINTENANCE

Check that the float switches are working properly, generally clean the tank at least once a year, and scrupulously follow the instructions in the maintenance manuals for the electromechanical devices supplied with the product.



- CIVILHOMES
- AIRPORT
- SHOPPING CENTRE
- DEPARTMENT STORES
- HOTEL
- COMMERCIAL ACTIVITY (SHOP)
- MILITARY BARRACKS
- COLLEGE
- HOSPITAL
- CAMPSITE
- HOLIDAY VILLAGE
- SPORTS CLUB

Production time: 16 hours

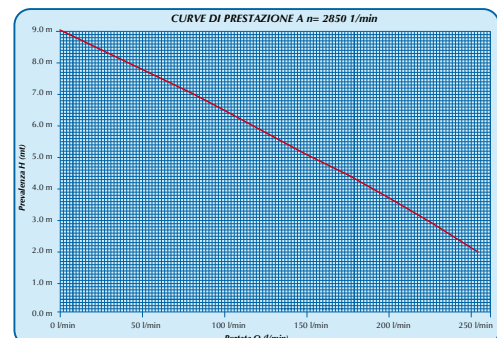


LARGE SYSTEM EQUALIZERS

ITEM	A.E.	TOTAL VOLUME (litres)	Dimensions (cm)			€
			L	P	H	
EQ 15000	170	15000	225	452	243	11.581,65
EQ 18500	200	18500	225	543	243	14.358,52
EQ 23500	250	23500	225	675	243	18.617,57
EQ 25000	300	25000	225	716	243	19.158,21
EQ 28500	350	28500	225	807	243	22.125,25
EQ 30000	-	30000	225	848	243	22.623,79
EQ 33500	400	33500	225	939	243	25.705,70
EQ 38500	-	38500	225	1071	243	29.042,63
EQ 40000	500	40000	225	1112	243	29.599,74
EQ 45000	-	45000	225	1244	243	32.949,14
EQ 48500	600	48500	225	1295	243	35.701,45
EQ 50000	-	50000	225	1376	243	36.175,58

E / LIFTING PUMP

TYPE	Power		V	Performance data							
	kW	HP		0 l/min	80 l/min	100 l/min	150 l/min	175 l/min	200 l/min	225 l/min	260 l/min
Pump for sewage water	0,55	0,75	220	9,1 m	7,1 m	6,6 m	5,1 m	4,4 m	3,7 m	3,0 m	2,0 m



WELLS

An eight-sided monolithic manhole has been realized for the installation requirements. The special shape allows for easy connection with 45° or multiple directions. Considering the specific installation requirements (slope, inlet/outlet dimensions, etc.) the fitting of the gullies is the responsibility of the installer.



POZ 300 GR

POZ 100 GR

RAW WELL

- Code: **POZ 100GR** - Manhole Ø320 mm
dimensions [cm]: 48x48x75H
capacity 100 litres
- Code: **POZ 300GR** - Manhole Ø420 mm
dimensions [cm]: 73x73x82H
capacity 300 litres

ITEM	DESCRIPTION	€
POZ 100 GR	Raw Well	127,14
POZ 300 GR	Raw Well	302,38



INSPECTION WELL

- Code: **POZ 100 GI** - Manhole Ø320 mm
dimensions [cm]: 48x48x75H
capacity 100 litres
- Code: **POZ 300 GI** - Manhole Ø420 mm
dimensions [cm]: 73x73x82H
capacity 300 litres

ITEM	DESCRIPTION	ø 100 mm	ø 125 mm	ø 160 mm	ø 200 mm	ø 250 mm	ø 315 mm
POZ 100 GI	Inspection Well	162,10	162,10	162,10	/	/	/
POZ 300 GI	Inspection Well	/	/	341,81	365,32	435,26	463,21



BY-PASS SECURITY WELL

- Code: **POZ 100 BP** - Manhole Ø320 mm
dimensions [cm]: 48x48x75H (capacity 100 litres)
- Code: **POZ 300 BP** - Manhole Ø420 mm
dimensions [cm]: 73x73x82H (capacity 300 litres)

ITEM	DESCRIPTION	ø 100 mm	ø 125 mm	ø 160 mm	ø 200 mm	ø 250 mm	ø 315 mm
POZ 100 BP	By-Pass Security Well	190,08	190,08	190,08	/	/	/
POZ 300 BP 250	By-Pass Security Wel	/	/	/	/	502,25	/
POZ 300 BP 315	By-Pass Security Wel	/	/	/	/	/	541,20



CONTACT WELL

- Code: **ECOCLO 100** - Manhole Ø320 mm
dimensions [cm]: 48x48x75H (capacity 100 litres)
- Code: **ECOCLO 300** - Manhole Ø420 mm
dimensions [cm]: 73x73x82H (capacity 300 litres)

ITEM	DESCRIPTION	€
ECO CLO 100	Contact Well	190,08
ECO CLO 300	Contact Well	365,31



LEVELLING WELL

- Code: **POZ 100 LI** - Manhole Ø320 mm dimensions [cm]: 48x48x75H (capacity 100 litres)
- Code: **POZ 300 LI** - Manhole Ø420 mm dimensions [cm]: 73x73x82H (capacity 300 litres)

ITEM	DESCRIPTION	ø 100 mm
POZ 100 LI	Levelling Well	232,04
POZ 300 LI	Levelling Well	407,28



CONFLUENCE WELL

- Code: **POZ 100 CO** - Manhole Ø320 mm dimensions [cm]: 48x48x75H (capacity 100 litres)
- Code: **POZ 300 CO** - Manhole Ø420 mm dimensions [cm]: 73x73x82H (capacity 300 litres)

ITEM	DESCRIPTION	ø 100 mm	ø 125 mm	ø 160 mm
POZ 100 CO	Confluence Well	190,08	190,08	190,08
POZ 300 CO	Confluence Well	a richiesta		



JUNCTION WELL

- Code: **POZ 100 RI** - Manhole Ø320 mm dimensions [cm]: 48x48x75H (capacity 100 litres)
- Code: **POZ 300 RI** - Manhole Ø420 mm dimensions [cm]: 73x73x82H (capacity 300 litres)

ITEM	DESCRIPTION	ø 100 mm	ø 125 mm	ø 160 mm
POZ 100 RI	Junction Well	190,08	190,08	190,08
POZ 300 RI	Junction Well	a richiesta		



SETTLING WELL

- Code: **POZ 100 CA** - Manhole Ø320 mm dimensions [cm]: 48x48x75H (capacity 100 litres)
- Code: **POZ 300 CA** - Manhole Ø420 mm dimensioni [cm]: 73x73x82H (capacity 300 litres)

ITEM	DESCRIPTION	ø 100 mm	ø 125 mm
POZ 100 CA	Settling Well	204,06	204,06
POZ 300 CA	Settling Well	379,31	/



CHLORINATION WELL

- Code: **POZ 100 CLO** - Manhole Ø320 mm dimensions [cm]: 48x48x75H (capacity 100 litres)
- Code: **POZ 300 CLO** - Manhole Ø420 mm dimensions [cm]: 73x73x82H (capacity 300 litres)

ITEM	DESCRIPTION	ø 100 mm	ø 125 mm
POZ 100 CLO	Chlorination Well	253,00	253,00
POZ 300 CLO	Chlorination Well	/	428,26



LEAF FILTER MANHOLE

- Code: **POZ 100 PLS** - Manhole Ø320 mm
dimensions [cm]: 48x48x111H
capacity 100 litres
- Code: **POZ 300 PLS** - Manhole Ø420 mm
dimensions [cm]: 73x73x108H
capacity 300 litres

ITEM	DESCRIPTION	ø 100 mm
POZ 100 PLS	Leaf filter well	348,47
POZ 300 PLS	Leaf filter well	498,48



GRID WELL

- Code: **POZ 550 GR**
dimensions [cm] L=68, P=68, H=60
manhole: ø 550 mm
diameter Øi/Øu: 160 mm
capacity ~ 140 litres

ITEM	DESCRIPTION	ø 160 mm
POZ 550 GR	Grid Well	999,52

other diameters on request



OUTFLOW WELL

The outflow well is recommended for all cases where it is necessary to ensure proper outflow of the waste water. It bases its operation on physical principles and has no electrical equipment. Depending on its use, it can have "high" or "low" inlet piping.

- Code: **PDC 300**
dimensions [cm] L=88, P=66, H=70
capacity 300 litres
manhole ø 320 mm
diameter Øi/Øu: 100 mm

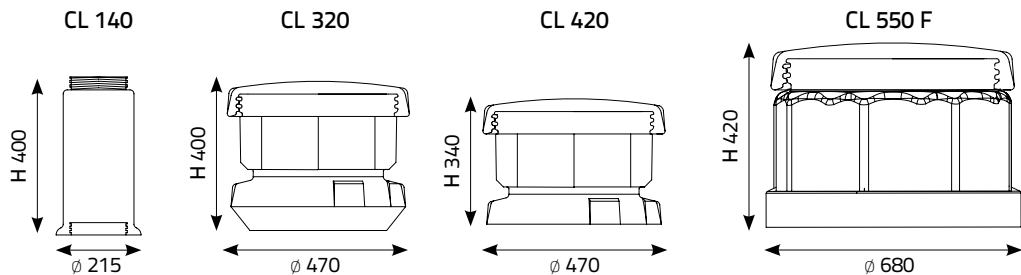
ITEM	DESCRIPTION	ø 100 mm
PDC 300	Outflow Well	524,09





CHLORINATION-CLARIFICATION CONTACT TANK

ITEM	Total VOLUME (litres)	€	ITEM	Total VOLUME (litres)	€
ECO CLO 100	100	190,08	ECO CLO 2000	2000	1.304,70
ECO CLO 300	300	365,31	ECO CLO 2500	2500	1.906,90
ECO CLO 500	500	697,67	ECO CLO 4000	4000	2.318,65
ECO CLO 750	750	789,67	ECO CLO 6000	6000	3.699,22
ECO CLO 1000	1000	905,05	ECO CLO 7500	7500	5.609,19
ECO CLO 1500	1500	1.130,76	ECO CLO 10000	10000	6.930,42



TURRET CL

ITEM	DESCRIPTION	€
CL 140	Turret for manholes \varnothing 140	54,00
CL 320	Turret for manholes \varnothing 320	98,87
CL 420	Turret for manholes \varnothing 420	73,39
CL 550 F	Turret for manholes \varnothing 550	237,07

Cod.: CL 140 (for manholes \varnothing 140 mm) - cap not included
dimensions cm \varnothing 21,5; H 40;

Cod.: CL 320 (for manholes \varnothing 320 mm) - cap included \varnothing 420
dimensions cm \varnothing 47; H 40;

Cod.: CL 420 (for manholes \varnothing 420 mm) - cap not included
dimensions cm \varnothing 47; H 34;

Cod.: CL 550 F (for manholes \varnothing 550 mm) - cap not included
dimensions cm \varnothing 68; H 42;



INLET COMPRESSOR for outdoors

- Code: **VANO COMP (VCM 550)**
dimensions [cm] L=68, P=68, H=60

ITEM	DESCRIPTION	€
VCM 550	INLET COMPRESSOR for outdoors	400,27

DIAPHRAGM LINEAR COMPRESSOR

Low noise and Low consumption



ITEM	DESCRIPTION	€
COMPR. DS 40 L	Linear compressor EL 60 N - 48 W	521,81
COMPR. DS 80 L	Linear compressor JDK-S 80 - 50 W	656,66
COMPR. DS 120 L	Linear compressor JDK-S 100 - 75 W	756,33
COMPR. DS 160 L	Linear compressor JDK-S 120 - 95 W	1.108,11



GASKET

Double lip gasket

ITEM	DESCRIPTION	€
Guarn. ø 100	Double lip gasket	6,48
Guarn. ø 125	Double lip gasket	6,93
Guarn. ø 160	Double lip gasket	7,70
Guarn. ø 200	Double lip gasket	37,76
Guarn. ø 250	Double lip gasket	48,90
Guarn. ø 315	Double lip gasket	56,34



DEGRADER MIX

ITEM	DESCRIPTION	€
NO TENS	Degradar Mix of tensioactive molecules (5 litres)	304,59



BACTERIAL-ENZYMATIC MIX

Appropriately designed triggering or restarting the bacterial activities in biological depuration systems of waste waters.

ITEM	DESCRIPTION	€
BIOACTIVE	Bacterial-Enzymatic Mix (blister 10 tablets)	39,44



CHLORINE TABLET

ITEM	DESCRIPTION	€
TRICL 90/200 BL	Chlorine tablet of 200 gr.	10,26



FILL-UP BODIES

In isotactic Polypropylene Ø 200

Built expressly for high/medium loaded percolator beds.

ITEM	DESCRIPTION	€
CRP 19	Fill-up bodies for Percolator Filters (Price expressed on m ³)	525,13



DIFFUSER

ITEM	DESCRIPTION	€
DIFF. DIEP. D260	Diffuser	82,40



SIPHONED WELL (STREET DISCHARGE)
Usable for collecting and conveying street rain water.

- Code: **POTAC 62**
dimensions [cm] L=62, P=40, H=47
capacity 70 litres - exit Ø 110 mm.
Suited for grided manhole.
Upper opening cm. 20x30

ITEM	DESCRIPTION	€
POTAC 62 (Uscita ø 110)	Siphoned Well	78,24



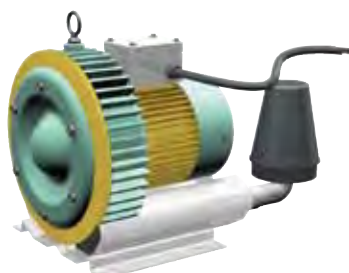
CHECK VALVE
- with 1 1/2" and 2" connector

ITEM	DESCRIPTION	€
VALVOLA RITEGNO 1" 1/2	Cast iron ball check valve 1" 1/2	174,36
VALVOLA RITEGNO 2"	Cast iron ball check valve 2"	341,40



LIFTING ELECTRIC PUMP

ITEM	DESCRIPTION	€
POMPA ELET. 6	Submerged pump for sewage water 0,75 HP 220V	568,60
POMPA ELET. 7	Submerged pump for sewage water 1 HP 220V	689,67
POMPA ELET. 8	Submerged pump for sewage water 1,5 HP 220V	1.589,66
POMPA ELET. 9	Submerged pump for sewage water 2 HP 380V	1.631,21
POMPA ELET. 13	Grinder pump 1,5 HP 220V	1.468,10
POMPA ELET. 14	Submerged pump for clear water 0,33 HP 220V	349,54



E/FAN
Fitted with suction silencer
and on delivery line and safety valve

Price to be assessed on the basis of necessary features.



ELECTRIC PANELS

Electric panel with electronic circuit for controlling a single-phase or three-phase pump:

- Code: **QE SS 1xM** for items with 0.55 KW pump
- Code: **QE SS 1xM** for items with 0.75 KW pump
- Code: **QE SS 1xM** for items with 1.1 KW pump
- Code: **QE SS 1xT** for items with 1.5 KW (T) pump

Electric panel with electronic circuit for controlling two single-phase or three-phase pumps with alternating and rescue operation:

- Code: **QE SS 2xM** for items with 0.55 KW pumps
- Code: **QE SS 2xM** for items with 0.75 KW pumps
- Code: **QE SS 2xM** for items with 1.1 KW pumps
- Code: **QE SS 2xT** for items with 1.5 KW (T) pumps

Electric panel with electronic circuit for **timed** controlling of a single-phase pump:

- Code: **QE FITO** for items with single-phase pump

Electric panel with electronic circuit for **timed** controlling of one or two diaphragm compressors:

- Code: **QE COM**

ITEM	DESCRIPTION	€
QE COM	Electric panel for control & timing of diaphragm compressor	569,88
QE FITO	Electric panel for starting a single-phase pump with timer	514,57
QE ss 1xM	Electric panel for starting & stopping of a HP 0.75 - 1 - 1.5 pump	370,03
QE ss 1xT	Electric panel for starting & stopping of a HP 2 pump	501,66
QE ss 2xM	Electric panel for starting & stopping of two HP 0.75 - 1 - 1.5 pumps with alternating and rescue operation	501,29
QE ss 2xT	Electric panel for starting & stopping of two HP 2 pumps with alternating and rescue operation	658,11

OIL-TANIK



Workshops - Service Stations - Ecological Islands...



Workshops - Service Stations - Ecological Islands...



Canteens - Restaurants - Fryers...

SOL 250 and SOL 500 BLACK

TECHNICAL FEATURES

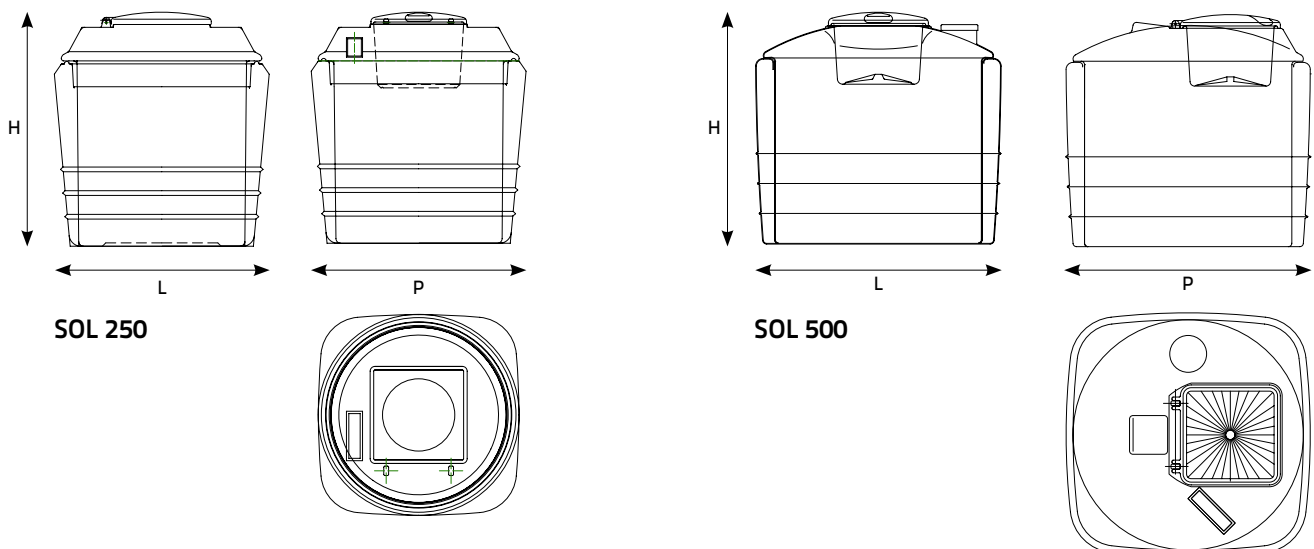
High-density linear polyethylene tank made of black mass-coloured polymers. Composed of an internal collection compartment and an external containment tank. High mechanical resistance, frost and sunlight resistance from -60°C to +80°C. Equipped with a level indicator and a safety mirror that allows the integrity of the inner container to be checked at any time. It is equipped with a filter-draining basket with a removable grid that allows easy and immediate access to the removal of substances from the container.

The use of OIL TANK for the collection of waste oil guarantees ideal environmental protection. (Also suitable for 'emulsions' and 'antifreeze liquid').

It is 100% recyclable.

CERTIFICATIONS

- Complies with Decree 392/96



SOL BLACK WASTE OIL TANKS

ITEM	Interior compartment capacity (litres)	Max dimensions (cm)			LxP Base (mm)	Lid (mm)	Filter's useful dimensions	€	Colour: BL
		H	L	P					
SOL250 BLACK	250	92	88	88	80x80	44x47	38x38xH18	713,08	
SOL500 BLACK	500	106	110	107	89x89	44x47	38x38xH18	869,95	

Overall dimensions have a tolerance of $\pm 1.5\%$, capacities have a tolerance of $\pm 4.6\%$

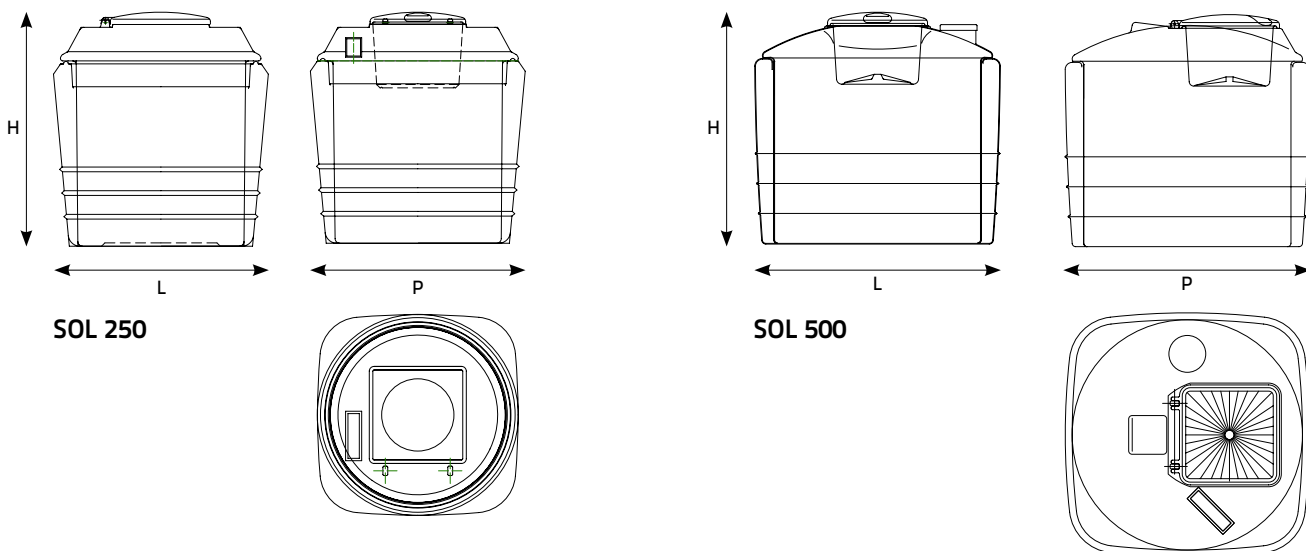
SOL 250 and SOL 500 H₂O

TECHNICAL FEATURES

Polyethylene tank made of coloured in the mass green polymers. Consists of an internal collection compartment and an external containment tank. High mechanical resistance, frost and sunlight resistance from -60°C to +80°C. Equipped with a level indicator and a safety mirror that allows the integrity of the inner container to be checked at any time. It is equipped with a filter-draining basket with a removable grid that allows easy and immediate access for the removal of substances from the container. The use of OIL TANK for the collection of "emulsions" and "antifreeze liquid" guarantees ideal respect for the environment. It is 100% recyclable.

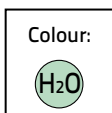
CERTIFICATIONS

- Complies with Decree 392/96



SOL H₂O ANTIFREEZE TANKS

ITEM	Interior compartment capacity (litres)	Max dimensions (cm)			LxP Base (mm)	Lid (mm)	Filter's useful dimensions	€
		H	L	P				
SOL250 H ₂ O	250	92	88	88	80x80	44x47	38x38xH18	713,08
SOL500 H ₂ O	500	106	110	107	89x89	44x47	38x38xH18	869,95



Overall dimensions have a tolerance of ± 1.5%, capacities have a tolerance of ± 4.6%

SOL 250 and SOL 500 THE V

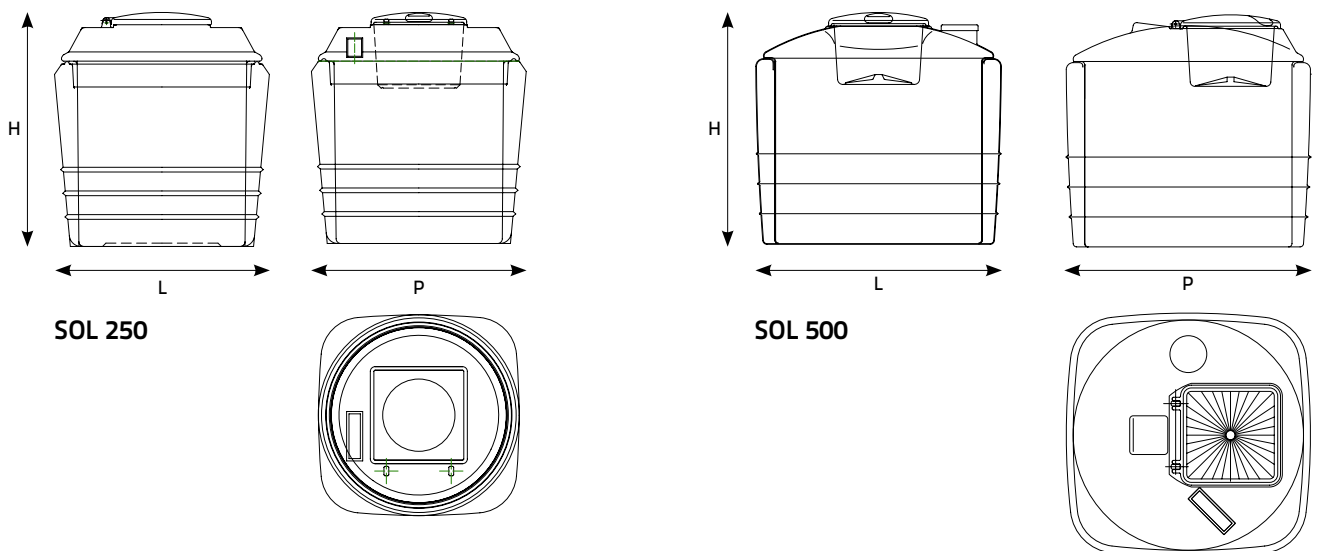
TECHNICAL FEATURES

Polyethylene tank made of coloured in the mass green polymers. Consists of an internal collection compartment and an external containment tank. High mechanical resistance, frost and sunlight resistance from -60°C to +80°C. Equipped with a level indicator and a safety mirror that allows the integrity of the inner container to be checked at any time. It is equipped with a filter-draining basket with a removable grid that allows easy and immediate access to the removal of substances from the container. The use of OIL TANK for the collection of vegetable oils guarantees ideal respect for the environment.

It is 100% recyclable.

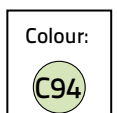
CERTIFICATIONS

- Complies with Decree 392/96



TANKS FOR VEGETABLE OIL SOL THE V

ITEM	Interior compartment capacity (litres)	Max dimensions (cm)			LxP Base (mm)	Lid (mm)	Filter's useful dimensions	€
		H	L	P				
SOL250 THE V	250	92	88	88	80x80	44x47	38x38xH18	713,08
SOL500 THE V	500	106	110	107	89x89	44x47	38x38xH18	869,95



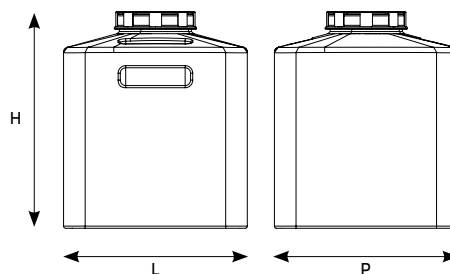
Overall dimensions have a tolerance of $\pm 1.5\%$, capacities have a tolerance of $\pm 4.6\%$

CONTAINERS FOR VEGETABLE OIL

Polyethylene tank, made of green coloured in the mass polymers. High mechanical strength, frost and sunlight resistance from -60°C to +80°C.

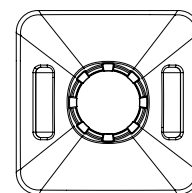
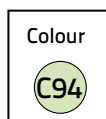
Ideal for collecting and handling small quantities of oil.

It is 100% recyclable.

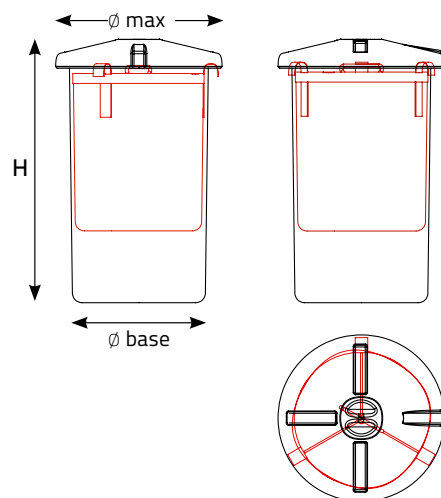
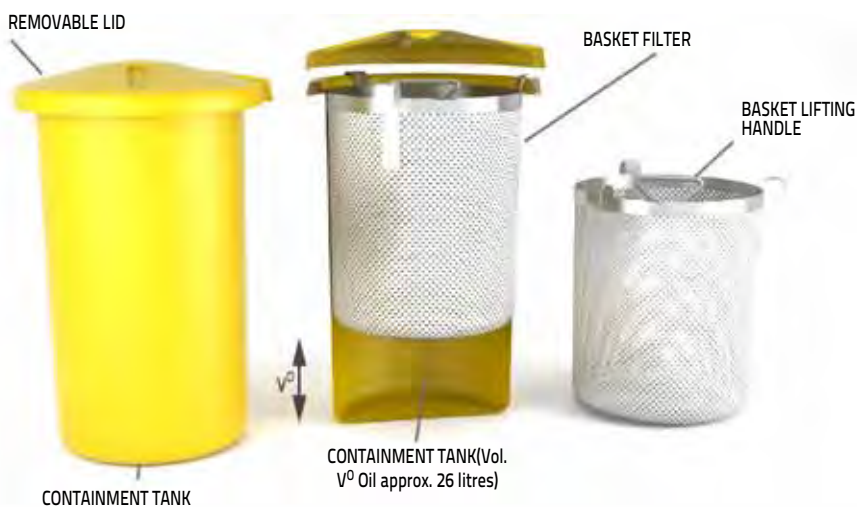


BOQN VEGETABLE OIL CONTAINERS

ITEM	Litres	L	P	H	Moulded fittings	€
BOQN 30 THE V	30	34	34	40	1/2"	67,35
BOQN 55 THE V	55	34	34	61	1/2"	107,76



OIL FILTER CONTAINER CPF 100



OIL FILTER CONTAINER CPF 100

ITEM	V Total Volume (litres)	V ^o Drain liquid volume (litres)	Dimensions (cm)			€
			H total	ø base	ø max	
CPF 100	100	26	81	41	53	413,59



Overall dimensions tolerance ± 1.5%.
Tolerance capacity ± 4.6%.



SOL BLACK

Intended for the collection of used mineral oils at petrol stations, workshops, industries, etc.



SOL H₂O

Intended for collecting antifreeze and other emulsions in petrol stations, workshops, industries, etc.



SOL THE V

Intended for the collection of used vegetable oil in restaurants, canteens, apartment buildings, ecological islands, etc.

DECLARATION OF CONFORMITY

TELCOM S.p.A., certifies that the SOL series, produced and sold by our company, has been designed in accordance with the indications of **Legislative Decree 392/96** and subsequent amendments, containing provisions on the collection, preservation and storage of used oils, in particular those designed to prevent contamination of the soil by accidental spillage. TELCOM S.p.A., therefore, guarantees its correct functioning, declining all liability in the event of incorrect installation and use. (Tank NOT suitable for burying).





MULTIPURPOSE TRUNKS CONSTRUCTION SITES

Super **MULTIPURPOSE TRUNKS**

Designed to protect against impact, dust, weather and manipulation. Designed for easy handling, transport, stackability.

Made of special, recyclable and non-toxic super-resins, food-safe (black and PT colour), frost- and sunlight-resistant (- 60°C + 80°C), acid-resistant, mould- and lichen-proof, washable with common detergents. A wide range of sizes and colours to meet countless needs for work, hobbies, sport, home: tools, equipment, fragile objects, food, seasonal clothing, duvets and blankets, boating, camping, moving, diving equipment, firewood, toys, etc.

**Robust containers
to transport and store
with maximum safety and practicality**



Baule 45

ITEM	DESCRIPTION	MEASURES			COLOUR		PIECES ON PALLETS		€
		L	P	H	Base	Lid	euro-pallet	110x130	
BAULE 45 BL	Multipurpose trunk	45	45	35	Black	Black	20	32	131,19
BAULE 45 GS	Multipurpose trunk	45	45	35	Grey	Grey	20	32	131,19
BAULE 45 BLU/GI	Multipurpose trunk	45	45	35	Blue	Yellow	20	32	131,19
BAULE 45 BLU/RO	Multipurpose trunk	45	45	35	Blue	Red	20	32	131,19





Indestructible lever locks with steel striker and padlock eyelet.



Nylon hinges with stainless steel pin and low-profile.



Raised feet in the base to allow the passage of water and cables and an optimal fit when overlapping with other HR trunks of the same size.



Interlocking holes with drainage channels at the top against water and dirt.



Practical galvanized steel handles



Baule HR 60

ITEM	DESCRIPTION	MEASURES			COLOUR	PIECES ON PALLETS		€
		L	P	H		euro-pallet	110x130	
BAULE HR 60 GI	Multipurpose trunk	60	40	46	YELLOW	16	23	185,39
BAULE HR 60 OG	Multipurpose trunk	60	40	46	OXFORD GREEN	16	23	185,39
BAULE HR 60 PT	Multipurpose trunk	60	40	46	WHITE DOTTED	16	23	185,39



Container

- Anti-water and anti-dirt perimeter border.
- Ribs on the bottom to withstand any load.



Upper lid

- Solid ribs and deep grooves for optimal fastening of overlapping elements during transport.
- Anti-water and anti-dirt perimeter channel.



Baule HR 80

ITEM	DESCRIPTION	MEASURES			COLOUR	PIECES ON PALLETS		€
		L	P	H		euro-pallet	110x130	
BAULE HR 80 GI	Multipurpose trunk	80	40	46	YELLOW	12	12	226,24
BAULE HR 80 OG	Multipurpose trunk	80	40	46	OXFORD GREEN	12	12	226,24
BAULE HR 80 PT	Multipurpose trunk	80	40	46	WHITE DOTTED	12	12	226,24





Baule 100 Slim

ITEM	DESCRIPTION	MEASURES			COLOUR		PIECES ON PALLETS		€
		L	P	H	Base	Lid	euro-pallet	110x130	
BAULE SLIM 100 GS	Multipurpose trunk	100	40	53	Grey	Grey	8	11	267,60



Baule 100/B Large

ITEM	DESCRIPTION	MEASURES			COLOUR		PIECES ON PALLETS		€
		L	P	H	Base	Lid	euro-pallet	110x130	
BAULE LARGE 100/B GS	Multipurpose trunk	100	60	45	Grey	Grey	4	8	355,06





Baule 110 Maxi

ITEM	DESCRIPTION	MEASURES			COLOUR		PIECES ON PALLETS		€
		L	P	H	Base	Lid	euro-pallet	110x130	
BAULE MAXI 110 GS	Multipurpose trunk	110	55	64	Grey	Grey	3	6	390,04



Baule Coffe 110

ITEM	DESCRIPTION	MEASURES			COLOUR		PIECES ON PALLETS		€
		L	P	H	Base	Lid	euro-pallet	110x130	
BAULE COFFER 110 GS	Multipurpose trunk	110	52	55	Grey	Grey	4	8	454,76





Baule 125 Large

ITEM	DESCRIPTION	MEASURES			COLOUR		PIECES ON PALLETS		€
		L	P	H	Base	Lid	euro-pallet	110x130	
BAULE 125 BLU M.A.	Trunk for moving	125	62	62	Blueberry/Blue	Orange	3	3	526,24
BAULE 125 BLU MIRTILLO	Trunk for moving	125	62	62	Blueberry/Blue	Blueberry/Blue	3	3	526,24





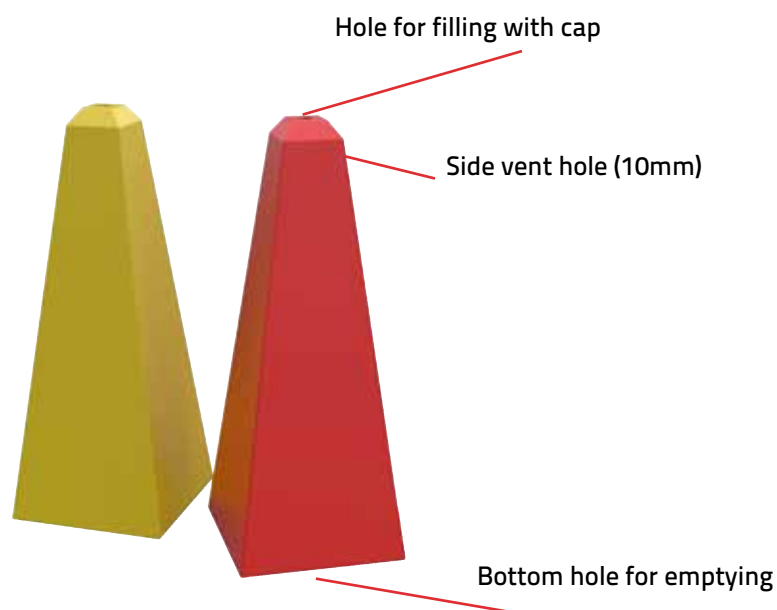
Baule della Nonna

ITEM	DESCRIPTION	MEASURES			COLOUR		PIECES ON PALLETS		€
		L	P	H	Base	Lid	euro-pallet	110x130	
BADN 100 PS	Baule	100	55	65	Brown dotted		3	6	306,07



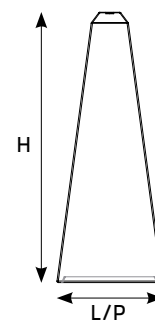
PYRAMID DELIMITER PSP 100

The PSP100 Pyramid Boundary Marker is useful for marking and delimiting transit limits or encroachments and routes in industrial and private vehicle manoeuvring areas. Stable, Lightweight and Weatherproof, it is equipped with a 1" connector for filling with water or sand.



PYRAMID DELIMITER PSP 100

ITEM	Col.	Ballast (litres)	Dimensions (cm)			€
			L	P	H	
PSP 100 GIALLO		30	40	40	100	70,25
PSP 100 ROSSO		30	40	40	100	70,25

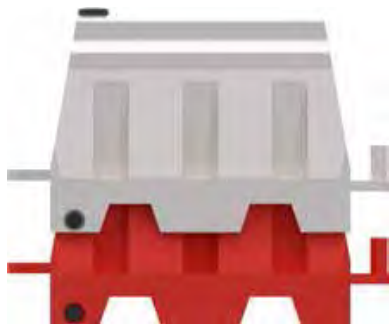


LANE DIVIDER TYPE "NEW JERSEY"

Modular "chainable" divider that can be ballasted with liquids or sandy materials if necessary. Useful for indicating lane limits or separating several lanes of traffic at construction sites, car parks and public events, as a boundary barrier in cases of access and traffic control.

Easy to transport when empty, each divider is equipped with a level indicator and a 20-litre safety "overflow hole". It is also equipped with a "total emptying" cap for quick retrieval from the areas of use.

Resistant to weather, heat and frost (-40°C + 60°C).



Light, robust and stackable for easy transport

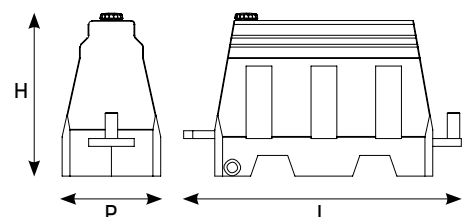


Equipped with a fill level indicator and overflow hole at 20 litres

NEW JERSEY LANE DIVIDER NJ 100

ITEM	Col.	Dimensions (cm)			Maximum weight Kg.	€
		L	P	H		
NJ 100 BIANCO		107	38	60	55	85,57
NJ 100 ROSSO		107	38	60	55	85,57

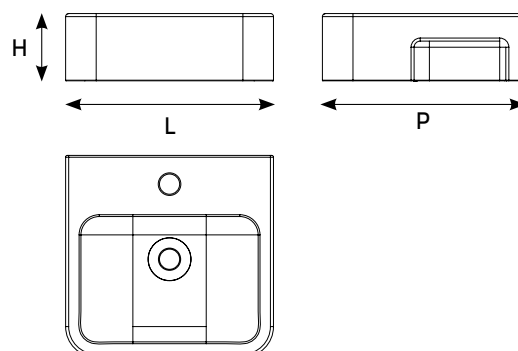
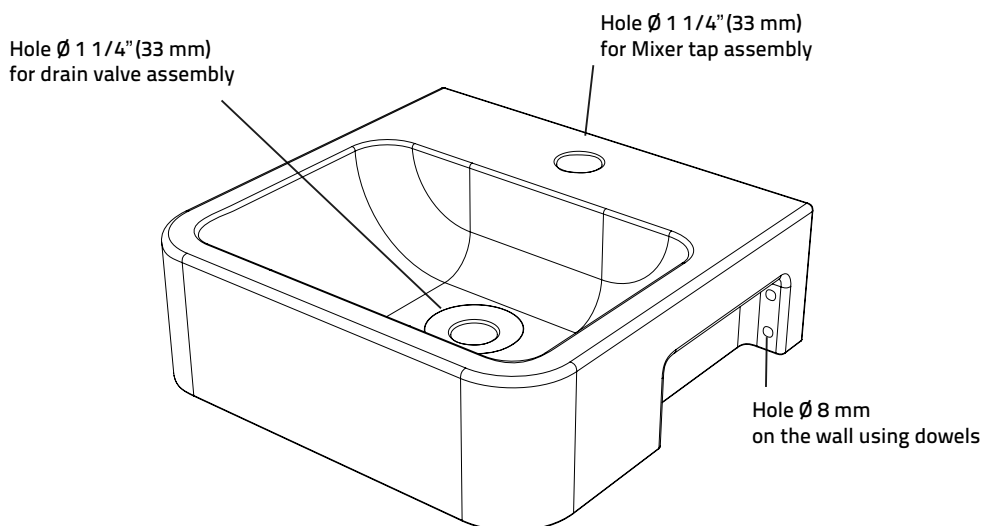
Colour on request



Overall dimensions tolerance ± 1.5%
Capacity tolerance ± 4.6%

WALL-MOUNTED HANDWASH BASIN

NEW



Wall-mounted HANDWASH BASIN

Item	Description	Color	Dimensions (cm)			€
			L	P	H	
LAMU 34	Wall-mounted handwash basin	(PT)	34	33	11	40,56
LAMU S 34*	Wall-mounted handwash basin with accessories	(PT)	34	33	11	85,27

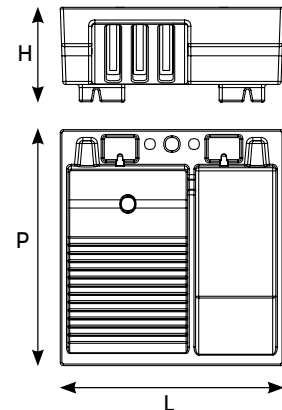
* The S version is supplied with the following accessories:

1. Specific INOX fixing element kits for sanitary ware
2. Drain with plug and siphon complete with gaskets



Overall dimensions tolerance \pm 1.5%
Capacity tolerance \pm 4.6%

SINK PILAV 70



SINK PILAV 70

ITEM	Description	Colour	Dimensions (cm)			€
			L	P	H	
PILAV 70	Washhouse	(PT)	70	75	30	145,13
PILAV S 70*	Accessorised Washhouse	(PT)	70	75	30	210,13

- * The S version is supplied with the following accessories:
1. Stainless steel fastener kit specifically for sanitary ware
 2. Drainvalve with plug and siphon complete with gaskets
 3. Adjustable metal wall brackets
(Height from top edge of pool = 70 cm)



Overall dimensions tolerance $\pm 1.5\%$
Capacity tolerance $\pm 4.6\%$



Le Giare

Quality containers
for oil and wine

Quality **Telcom**[®]



The quality of our products is ensured by the following:

- Use of “virgin” raw materials of the best quality.
- Suitability of our containers for use in foodstuffs.
- No alteration of taste or odour.
- D.M.104/73 with its subsequent modifications;
- EU Regulation n°.10/2011 and its related normatives:
UNI 1186-1 : 2003, UNI 1186-4 : 2003, UNI 1186-5 : 2003
- MOCA (materials and objects in contact with foodstuff) certification.


Barile

The traditional forms proposed with modern materials & technologies.



The **BARILE** with a volume of up to 50 litres are equipped as standard with a food-grade polypropylene tap.



ITEM	Litres	Ø	H	L	Moulded fittings		Standard accessories	€
					N.º	Measure		
BOT 5	5	17	22	26	1	1/2"		22,18
BOT 10	10	23	26	33	1	1/2"		41,20
BOT 30	30	32	37	47	1	1/2"		73,20
BOT 50	50	38	44	56	1	1/2"		103,16
BOT 100	100	47	53	70	2	3/4"	/	156,41
BOT 150	150	55	60	82	2	3/4"	/	169,71
BOT 200	200	62	65	90	2	3/4"	/	249,58
BOT 350	350	74	74	105	2	3/4"	/	302,82
BOT 550	550	82	82	121	2	3/4"	/	379,36


 Tap 1/2" PP

Capasa



The **CAPASA** with a volume of up to 55 litres is equipped with a food-grade polypropylene tap as standard.

ITEM	Litres	Ø	H	L	Moulded fittings	Standard accessories	€
CPN 5	5	33	25	12	1/2"		15,85
CPN 10	10	45	31	15	1/2"		30,11
CPN 33	33	58	38	23	1/2"		53,87
CPN 55	55	77	44	24	1/2"		94,28
CPN 100	100	93	54	30	3/4"	/	121,22

 Tap 1/2" PP

Botticella



The **BOTTICELLA** containers are stackable to exploit space at its best.



ITEM	Litres	L	P	H	Moulded fittings	€
BOQN 30	30	34	34	40	1/2"	67,35
BOQN 55	55	34	34	61	1/2"	107,76

Damigiana



The **DAMIGIANA** container is superimposable to exploit space at its best.







ITEM	Litres	L	P	H	€
DMGA	55	44	44	50	107,76


Vertical tank



Flat surfaces for positioning fittings and taps.

ITEM	Litres	Ø	H	Standard accessories	€
NSV 100 TE	100	48	67		143,46
NSV 200 TE	200	60	85		145,79
NSV 300 TE	300	70	97		158,47

 Brass tap 3/4"

 Double-acting valve

Accessories



Tap 1/2" PP
Code RUBINET. 1/2" PP.



PE double-acting valve
Code VAL.A DOPP.EF.

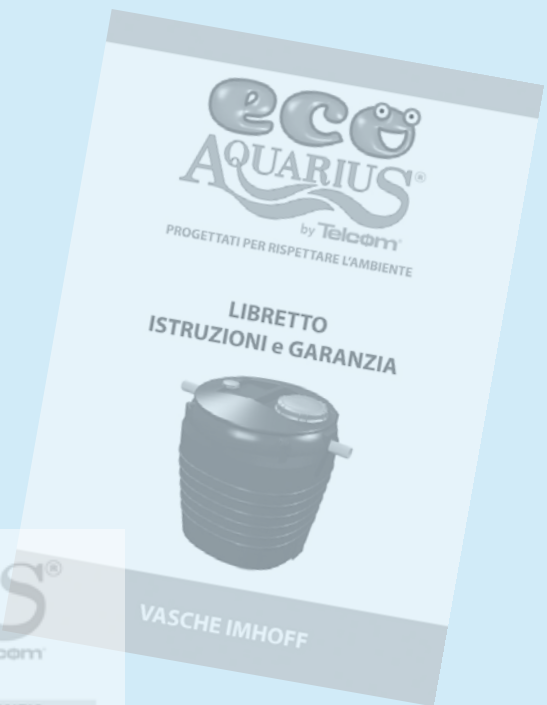


Brass tap 3/4" Code
RUB. 3/4

ITEM	Description	€
RUBINET. 1/2" PP.	PP tap	2,35
RUB. 1/2"	Brass tap	11,43
RUB. 3/4"	Oenological brass tap	15,02
TAPPO 90	Plug ø 90 BL	0,49
TAPPO 140	Plug ø 140 BL	2,61
TAPPO 1"	Cap	0,36
TAPPO 3/4"	Cap	0,20
VAL. A DOPP.EF.	Double-acting PE valve	11,77

The data and images in this catalogue are indicative only. Telcom reserves the right to make any changes or improvements to the articles without prior notice. Overall dimensions are expressed in centimetres with a tolerance of $\pm 1.5\%$, capacities have a tolerance of $\pm 4.6\%$.

TECHNICAL INFORMATION and INSTRUCTIONS





Suitable for the storage of food

- Ministerial Decree n°. 104/73 with its subsequent modifications;
- **EU Regulation n°. 10/2011 and its pertaining norms**
UNI 1186-1 : 2003, UNI 1186-4 : 2003, UNI 1186-5 : 2003
- **Certification for Materials and Objects in Contact with Food**

100% guaranteed against the formation of algae



Resistant to temperature swings from -60°C to +80°C
Suitable for liquids with peaks
(non continuous) from -10°C to +50°C

Fitted with hygiene protection caps



Weather resistant

Eco-friendly & Recyclable



- Made of high density nontoxic polyethylene
- Suitable for the containment of liquids at atmospheric pressure (tanks for first collection)
- Suitable for the containment of diesel oil, **preferably tanks of BLACK color, but in any case equipped with brass fittings and appropriate gaskets** (the provisions of the Fire Brigade and the competent authorities must be complied with for this use, in accordance with the laws in force).
- Resistant to UV rays.
- Corrosion-resistant and resistant to moulds and lichens formation.
- Easily washable with any household detergent.
- Aging resistant.

Proprieties of Polyethylene	M.U.	Value	ASTM Method	ONDA tank series	
				Value	Method
Melt Flow Index (190° C 2.16 kg)	g/10'	4 ÷ 9	D 1238	0,25	ISO 1133
Density (23° C)	g/cm³	0,935 ÷ 0,940	D 1505	0,954	ISO 1183
Melting point	°C	126 ÷ 128	DSC	135	Internal
Brittleness temperature	°C	<-70	D 746	<-60	ASTMD 746
Softening point Vicat (1 kg oil50° C/min)	°C	113 ÷ 117	D 1525	125	ISO 306/A
Proof stress / Yield strength	MPa	17 ÷ 19	D 638	27	ISO 527
Breaking load	MPa	16 ÷ 21	D 638	30	ISO 527
Elongation to failure	%	800 ÷ 900	D 638	>600	ISO 527
Modulus of elasticity	MPa	600 ÷ 690	D 790	1200	ISO 178
Hardness Shore D		55 ÷ 60	D 2240	64	ISO 868/A
Resistance to surfactants (ESCR)	h	200 ÷ 400	D 1693 (B)	>60	ASTM D 1693 (B)

WARNINGS

- All installation and burying operations must be carried out in compliance with Legislative Decree 81/80 and amendments.
- In all handling operations, use lifting and transport equipment suitable for the weight of the article.
- Outdoor tanks may not be buried except in accordance with the instructions in the Instruction and Warranty Booklet.
- Underground tanks can be placed above ground, with the exception of the NER and XXLI models and all their fittings (for this reason please contact our Technical Department before proceeding).
- Do not use the tanks to contain liquids that are not compatible with polyethylene.

PLACE OF INSTALLATION

Before choosing the right model of our tanks, make sure that the path and place where it is to be installed is wide enough and that there is a flat, solid and smooth base to support the weight of the full tank. The tank must rest completely on the base, and it must also be level, avoiding installation near heat sources. The walls of the tank must not rest on any masonry or objects, they must be at least 20 cm away. Specifically for the XXLE series, the feet, when the tank is empty, are at a height of 20 mm from the ground, and no risers or shims must be placed below them. Always consult an engineer about the resistance of the structures to the loads to be installed.

INSTALLATION

When connecting rigid mains piping to our fittings (or extra fittings fitted by you or welded by us to your specifications), please remember that it is essential to interpose flexible piping at least 2 times longer than the diameter of the fitting or an expansion joint, to prevent the fittings from being subjected to stresses, bending and tensioning due to the continuous loading and unloading of the tank liquid. In fact this could produce imperceptible and slight bending of the walls, which would cause damage to the fittings if the aforementioned precautions are not taken. To obtain a perfect seal between the thread of the fitting and the thread of the hose, interpose a few layers of Teflon tape (PTFE) in the right amount, without excessive force when tightening. Finally, screw the manhole cover onto the tank without tightening it, and ensure that the vent valve (or venting system), which serves to maintain a constant pressure inside the tank, is working. In the event of accidental breakage of the connection, proceed as indicated in the "Instruction and Warranty Booklet" (in that case a tank connection has to be fitted). In all installation or repair operations, use the assistance of a specialized operator, who will carry out the work taking all necessary safety measures.

TRANSPORT

During transport, never slam the tank against edges or blunt objects because, although it is very impact-resistant, it may have breakage points that are not immediately visible. It is also recommended that the tank body is secured by using canvas straps.

However, never handle a full tank.

HANDLING TANKS AND LARGE VOLUME PLANTS (by the buyer)

For tanks of up to 20,000 litres, i.e. products weighing less than 900 kg and with a length of less than 6 metres, handling can be carried out with a forklift equipped with forks or another lifting system, provided that it is possible to fasten the slings that are to encircle the product. In this case, loading onto the vehicle can also take place laterally. For larger tanks, a lifting gear suitable for the weight and size of the goods must be used for both loading and unloading (for a 50,000 litre tank, for example, a 5000 kg lifting gear is required). In the latter case, the truck must be loaded from above. When loading and transporting, take care not to hit the tank against edges or blunt objects. Although it is extremely impact-resistant, its inertia may cause damages that are not visible to the naked eye. In addition, it is essential to secure the product with canvas straps during transport.



For the handling of the large tanks XXLI and XXLE, textile slings are required, which, for safety reasons, must have a load capacity of more than 4500 kg.

A correct installation procedure is fundamental to the success of the installation. **In any case, it is necessary to get the assistance of a competent technician, who will advise on the most suitable choices in relation to the characteristics of the ground, follow all the stages of the operation and issue a written report on what has been done.**

This document must be stored together with the traceability code that is attached to the tank. Without these documents, the guarantee offered by Telcom s.p.a. shall become null and void.

ATTENTION: If the tank is to be placed in the presence of a shallow water table or on landslides, clay soils, on slopes, in locations subject to rainwater run-off, sandy shores, etc., please continue with the chapter on "INSTALLATION IN SEVERE CONDITIONS".

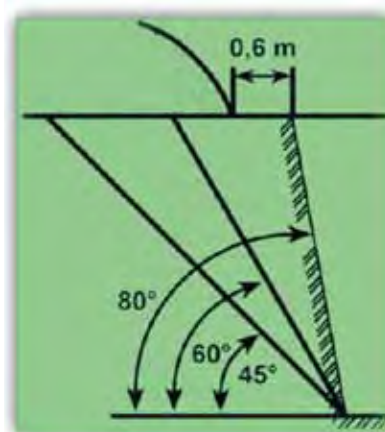
Carry out the excavation considering that, in addition to the dimensions of the tank, a distance of 30 cm beyond the overall dimensions must be calculated on each side, as shown in figure 1. The bottom of the excavation must allow a perfect drainage, to prevent it from causing water stagnation and accumulation.

Observe the following practical rules when carrying out the excavation: (see figure below)

- **A: for non-load-bearing soils** (soft soil)
consider that the excavation angle cannot be greater than 45 degrees
- **B: for medium-hard soils** do not exceed 60 degrees
- **C: for rock excavations** up to 80 degrees can be achieved.

In the upper part, around the excavation, a free zone of approx. 60 cm width must be left to prevent the earth from collapsing and to allow the operators to move around during the burying process.

Ensure that the artefact does not come into contact with any roots that could damage it.



Representation of excavation angle for different soil types

BURYING PROCEDURES:

1. Carry out the excavation with the dimensions suggested in figure 1.

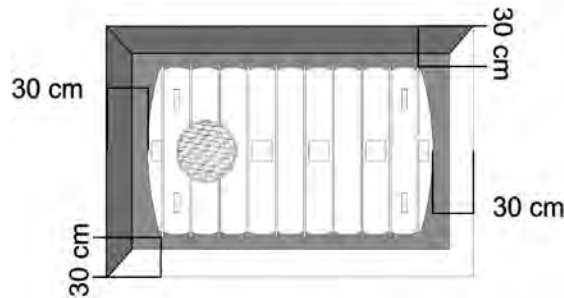


Fig. 1

2. Create a bed of 15-20 cm of non-recycled sand, placing at least one drainage pipe inside it. Carefully level the base thus created, taking care to eliminate any roughness. Ensure that the support area does not collapse under the weight of the full tank.

3. Once the integrity of the tank has been ascertained, move it empty (figure 2), using the eyebolts, if any, or using a sling to pass through the grooves of the article.

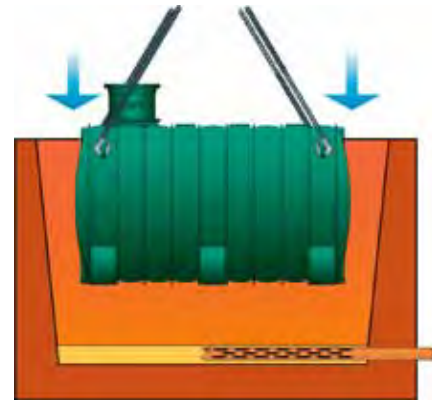


Fig. 2

4. Perfectly level the tank and its extension well, if any. Make all hydraulic connections with the rest of the system and check for leaks before continuing with the burying.

5. Fill the tank for approximately 20-30 cm with water and fill the empty space between the tank and the wall of the excavation with fine sand (P.S. max 1.5 kg/dm³), up to the water level, in layers of approximately 20-30 cm at a time, **taking care to compact them perfectly**, with the help of a **wooden stake (figure 3) or other suitable means**. Avoid discharging fine sand in large quantities, as this could create accumulations that could deform the tank, while it could generate voids in other areas. **It is essential to try to compact each individual layer that is being poured as much as possible.**



Fig. 3

Note - Excellent burying results can be achieved by using lightweight concrete instead of sand. Also in this case, pour the concrete in successive layers that must be levelled out, taking care not to exceed a thickness of 20-30 cm in each layer, and avoiding discharging excessive quantities in one pour, both to avoid damaging the tank and to avoid localized accumulations and consequent voids in adjacent areas. The different layers should be poured allowing the concrete to settle and create a seal for the next layer.

6. Continue burying the tank in successive layers, each time levelling out the level of fine sand with that of the water entering the tank, until it is completely filled.

7. We recommend filling the upper part of the hole, up to the beginning of the extension of the lid, if present, with non-recycled sand, completing the last burying phase with topsoil, taking care not to exceed the maximum burying depth of 30 cm, as indicated in figure 4. (~ 50 cm for the serie NER, PLS and XXLI).

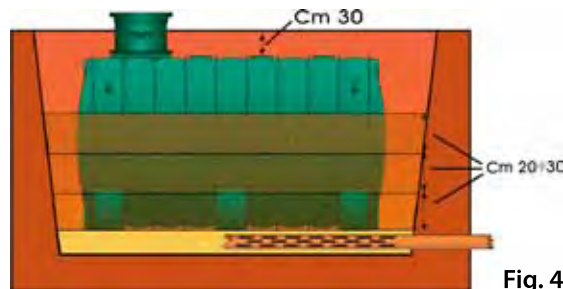


Fig. 4

8. Leave the underground tank filled with water with the cap screwed down for at least two days to allow for better settling. **Prior to use, especially with hydraulic pumps, ensure that a suitable venting system has been set up to prevent the creation of a void, allowing air to constantly flow in when emptying the tank.**

INSTALLATIONS IN DIFFICULT LOCATIONS

If the tank is to be placed in landslides, on slopes, in locations subject to rainwater run-off, on sandy shores, etc., a competent technician must be consulted who knows the morphological and hydrogeological characteristics of the installation area and defines the most appropriate action to be taken.

- *When a shallow water table is present and its uplift can be expected, it is necessary to prevent water from reaching the structure. A geotechnical report by a specialist is recommended, which calculates the buoyancy of the water and the consequent sizing of the base slab and the concrete retaining walls.*

(burying procedures remain indicated in PROCEDURES 1 to 8)

- *Even in case of installations on or near slopes, the tank must be equipped with reinforced concrete walls, which must be dimensioned by a competent engineer.*

(burying procedures remain indicated in PROCEDURES 1 to 8)

• In the case of burying in landslides, clay, marshy ground, or in any case ground that does not allow deep drainage, it is necessary to ensure that rainwater does not exert pressure on the structure and that it can drain away. It is therefore necessary to require the advice of a competent technician who can calculate the buoyancy level of the ground and size a backfill. It is therefore necessary to backfill the tank and cover the bottom of the excavation with 20/30 mm washed gravel and provide a drainage system. A possible solution is shown in figure 5, which represents the construction of a water collection system by means of a drainage shaft. The collected water can be disposed of using a sewage pump to drain the bottom of the pit.

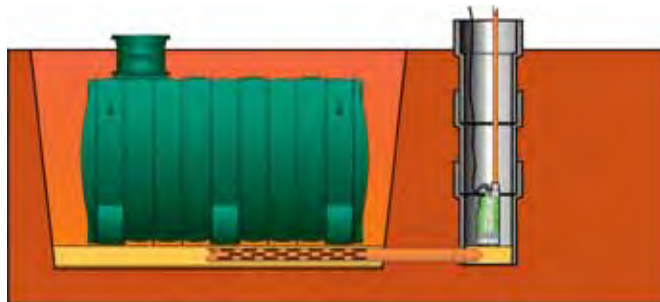


Fig. 5

Please note:

For the INSM, XXLI, NER and PLS series (except PLS 2000 and PLS 3000) use the tank only underground. The use above ground is not permitted and will in any case invalidate the product warranty. Under normal conditions of use, the tank should be filled to its mouth, avoiding filling the extension (lid) if any

The above points relate to the burying of a single tank. For several tanks (in series or in parallel), separate excavations must be carried out at least one metre apart, and a supporting wall of at least 20 cm must be provided (figure 6).

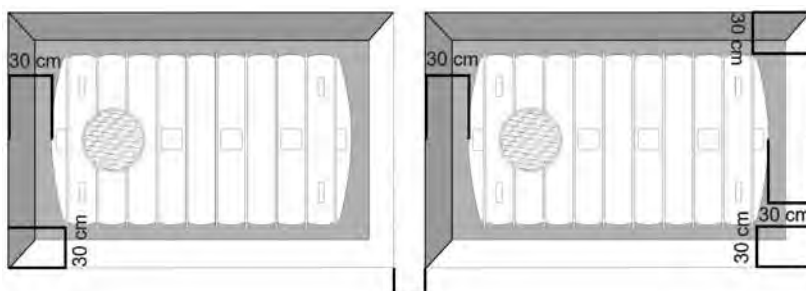


Fig. 6

During installation, it is advisable to close the excavation as soon as possible, as sudden torrential rain or exceptional events could create water stagnation and cause irreversible damage to the tank.

The burying zone will be pedestrian and the passage of vehicles will be prohibited up to 2m from the excavation. The area can only be made drivable or for trucks with the construction of suitable structures, which must be calculated by a competent technician. Such structures or any other construction or artefacts (walls, manholes, etc.) must not encumber the reservoir.

TIPS FOR SANITISING WATER STORAGE TANKS FOR HUMAN CONSUMPTION

Various products can be used to clean and sanitize drinking water storage tanks, but the most common are chlorine-based products. The UNI EN 805 standard 'Requirements for water supply systems' includes sodium hypochlorite among the chemicals for disinfecting water distribution systems, with a maximum concentration of 50 mg/l (50 ppm). Sodium hypochlorite is a clear, liquid antimicrobial compound; the commercially available product that is normally used for water chlorination is a 12-13% sodium hypochlorite solution.

It is important to emphasize that whatever product is used, this must be compatible with water intended for human consumption.

The actions to be taken are as follows:

1. Drain the tank through the bottom valve, after closing the inlet valve;
2. Remove any solid residues deposited on the bottom;
3. Fill the tank with water and at the same time pour in the disinfectant to a maximum concentration of about 50 mg/l;
4. Keep the tank in this condition for approx. 8 - 10 hours;
5. Operate the autoclave to drain the tank by running water through the internal pipes, keeping the taps open;
6. Refill the tank by opening the inlet valve and letting the water run for about 30 minutes while keeping the taps open to remove excess chlorine.

N.B. Water leaving the sanitized tank must have a maximum residual chlorine concentration of 0.2 mg/l

CHLORINE SOLUTION CONCENTRATION

Residual chlorine (mg/l)	0,5%	1%	5%	15%	
0,2	40	20	4	1,33	Millilitres to inject
0,5	100	50	10	3,33	
1,0	200	100	20	6,66	
1,5	300	150	30	9,99	
2,0	400	200	40	13,32	
3,0	600	300	60	19,98	

- The volumes in ml (milliliters) to be injected refer to 1m³

This guarantee, which is attached to the Instruction Booklet or Technical Manual that Telcom S.p.A. supplies with the purchase of its products, is intended as an addition to and not a substitute for any other right enjoyed by the consumer/purchaser of the product, without prejudice to the rights held by the latter pursuant to Legislative Decree no. 24 dated 2.02.2002, which implemented Directive 1999/44/EC on guarantees for consumer goods in Italy.

1) With the present guarantee Telcom S.p.A. guarantees the product against any material or manufacturing defects for a period of 24 months from the original date of purchase.

Every container produced by Telcom S.p.A. is subject to testing, however, it may be damaged due to storage or transport, for which Telcom S.p.A. is to be held responsible. For this reason Telcom S.p.A. suggests the consumer/purchaser of the container to check its integrity before installation and use.

2) Should material or manufacturing defects be found during the warranty period (on the original date of purchase), Telcom S.p.A. shall repair or (at Telcom S.p.A.'s discretion) replace the product or its defective components under the terms and conditions indicated below, without any charge for labor or spare parts costs, provided that the part under warranty reaches the Telcom S.p.A. factory at the consumer's expense.

3) Telcom S.p.A. disclaims all liability for loss or damage to products, services, including economic or in-tangible loss - the price paid for the product - loss of profits, income, data, enjoyment or use of the product or other associated products - indirect loss or damage, or caused to third parties due to the defect found, incidental or consequential loss or damage. This applies to losses and damages under any legal theory, including negligence and other tortious acts, breach of contract, express or implied warranties, and strict liability.

4) Warranty work will only be carried out if the defective product is presented within the statutory period together with the original sales invoice or receipt.

5) Telcom S.p.A. reserves the right to refuse warranty work in the absence of the aforementioned documents.

6) This Guarantee shall lapse if the model undergoes unauthorised construction modifications and/or the model designation or serial number on the product is changed, deleted, removed or made illegible.

7) This Warranty does not cover the costs and risks associated with transporting your product to Telcom S.p.A.

8) The guarantee operates on the condition that the product is serviced in accordance with the instructions enclosed with the product itself and that the servicing is carried out by specialised technical personnel and that no changes and/or repairs are made to the products without written authorisation or not in accordance with the enclosed instructions;

The guarantee operates on condition that the product found to be defective is kept by the Customer in the state in which it is for as long as is necessary to allow Telcom S.p.A. to carry out the necessary checks on the defects/faults allegedly found.

Excluded from this Guarantee are:

a) Periodic maintenance and repair or replacement of parts due to wear and tear;

b) damage or defects due to improper use, handling or handling of the product for other than normal purposes, i.e. for purposes other than those indicated in the enclosed instruction manual or technical manual;

c) damage by improper use of the product:

• incorrect installation or use of the product for purposes other than those intended or non-compliance with Telcom S.p.A. instructions on installation and use;

• improper maintenance of the product, not in accordance with Telcom S.p.A. instructions on correct maintenance;

• installation or use of the product that does not comply with the technical or safety regulations in force in the country in which the product is installed or used, as well as with the burial regulations contained in the instruction manual.

d) Product defects due to unforeseen and unforeseeable events (unforeseeable and/or force majeure, extraordinary weather events) that exclude the traceability of such defects to the production/manufacturing process of the product.

1 • Subject matter and scope of application

1.1. These general terms and conditions define the terms of sale between Telcom S.p.A. and its Customers.

1.2. Purchases by e-mail, telephone, fax or post also imply the acceptance of these General Conditions of Sale, which can be read directly on the website www.telcomitalia.eu. The sending or delivery of any purchase order by the Purchaser to Telcom S.p.A. implies the full and unreserved acceptance by the Purchaser of the general terms and conditions of sale of our Company, even if not signed by them.

1.3. These General Terms and Conditions of Sale shall prevail over any other terms or contractual conditions contained elsewhere, over any other rules contained in commercial customs or practices, and over rules arising from practices developed between the parties, subject to express exceptions accepted in writing by Telcom S.p.A. or expressly indicated in the order confirmation issued by Telcom S.p.A. (hereinafter the "Order Confirmation").

2 • Orders

2.1. The Sales Agreement shall be deemed to have been concluded, becoming binding on the parties, when the Order Confirmation of our Company reaches the Purchaser (by e-mail, fax, mail, by hand). The Order Confirmation sent by Telcom S.p.A. defines and reports all the conditions and the final and binding contents of the Contract, replacing, in full, the Order sent by the Buyer. In particular, with reference to the orders made to the staff/agent of Telcom S.p.A., there shall be reserved the period of 7 working days from when the order arrives at the headquarters of the company to confirm and accept or, on the contrary, cancel and refuse the order. In any case, if within the aforesaid period of 7 working days the order is not expressly cancelled and rejected in writing by Telcom S.p.A., it shall be deemed accepted and confirmed.

2.2. When sending the first Order Confirmation, Telcom S.p.A. will send the Customer these General Conditions of Sale that the Customer must return duly signed.

2.3. The Customer declares itself informed on the fact that, even in the absence of return of the General Conditions of Sale stamped and signed for acceptance, any supply of goods performed by Telcom S.p.A. is however regulated and subject to the content of these General Conditions of Sale.

3 • Changing orders

3.1. Orders already received and approved cannot be modified or cancelled without the written consent of Telcom S.p.A. Any costs already incurred and arising from the cancellation or modification of the order, will be borne by the Customer.

4 • Prices

4.1. The prices are set exclusively for the supply referred to in this contract and refer to the costs in force at the time of its conclusion. Any increase in costs before delivery will produce a proportional increase, even if part of the delivery has been delivered.

4.2. All prices are in Euro and exclusive of VAT.

4.3. Prices may vary at any time without Telcom S.p.A. being obliged to give any advance notice.

4.4. The Customer shall also bear any costs for duties, customs and anything else or for failure to make an appointment with the courier.

5 • Shipping/Product Collection - Complaints

5.1. Upon receipt/collection of the product, the Customer will verify the integrity of the packages and the quantitative and qualitative correspondence with what is indicated in the accompanying document. The customer is required to check the goods on arrival. The verification shall cover any possible damage, missing goods, defects or apparent defects or non-conformity of the products delivered to the order and the transport document and the quality, quantity, size and type of the items received.

The verification shall also include the packaging condition.

Any damages, deficiencies or tampering to the packaging and their content, discrepancies and/or deformities, must be immediately reported and for this purpose will be the Customer's care, to describe them analytically on the transport document, assuming, in default, as seen and liked, the product under consideration.

5.2. In any case, whatever the terms of delivery agreed by the parties, the risks pass to the Buyer at the latest with the delivery to the first carrier.

5.3. Any complaints relating to the condition of the packaging, quantity, number or external characteristics of the Products (vices and apparent defects) must be indicated in detail and notified to Telcom S.p.A. by registered letter RR or by pec / certified electronic mail, under penalty of forfeiture, within 7 days from the date of receipt of the Products. Any possible claims relating to defects not detectable by a diligent check at the time of receipt (apparent and hidden defects) must be indicated in detail and notified to Telcom S.p.A. by registered letter RR or pec / certified electronic mail, under penalty of forfeiture, within 7 days from the date of noticing the defect and in any case no later than 12 months from delivery. The denunciation of vices and/or defects shall be considered valid and timely only if carried out within the aforementioned period and only if made in writing; telephone or verbal complaints will not be accepted.

5.4. Complaints shall not entitle the customer to suspend payment of the invoice relating to the contested goods.

6 • Delivery conditions

6.1. Delivery time, where specified, shall not be understood as peremptory and essential, nor as binding in any way for Telcom S.p.A. Unforeseeable circumstances or force majeure, strikes, closings, lack of raw materials, the restrictions by the central or local Public Authorities or any other reason that leads to a delay in delivery, will not give the buyer a right to claim any sum or compensation, and neither interests or rebates on the agreed price.

6.2. Any possible delay in delivery does not give the right to cancellation or termination.

6.3. Any possible requests to modify the indicated delivery terms will be accepted only if previously agreed in writing.

7 • Features and technical data

7.1. Technical features and data - weights, measurements, surfaces, shapes, dimensions, colours and other data - are indicative and non-binding.

8 • Right of withdrawal and suspension of execution

8.1. In the event of payment delays by the Customer, Telcom S.p.A. reserves the right to suspend the deliveries, with immediate effect, even without notice, and/or to terminate any ongoing contracts, even if different from those to which the delayed or non-payment refers to. And this without any right on the part of the customer to indemnity or compensation of any kind.

8.2. Telcom S.p.A. also reserves the right to withdraw and/or suspend the execution whenever it is found complains against the Customer, also from third parties, and/or other signs of insolvency.

8.3. In the event of a change in the assets of the buyer, Telcom S.p.A. reserves the right to request from it the issuance of guarantees, including bank guarantees, even after the completion of the order, it being understood that, in default, Telcom S.p.A. has the right to suspend the delivery.

9 • Penalty clause

9.1. It is agreed that in the event of default of the buyer's obligation (including refusal to pick up or accept the delivery of the goods), the sums paid as down payment at the time of conclusion of the contract are retained by Telcom S.p.A. as a penalty, without prejudice to the possibility of claiming compensation for further damages.

10 • Payments - Unpaid - Interest - Forfeiture of the term benefit

10.1. The exact method of payment, as well as the payment terms, will be agreed from time to time at the time of each individual order made.

10.2. The customer will not be able to waive the obligation to pay the payments in particular months such as August or December. Each deadline should therefore be respected without the possibility of postponement.

10.3. The failure to pay within the set terms, which must be considered binding and cannot be extended or derogated, will also give to Telcom S.p.A. the right to demand, in a single settlement, the remaining amount still due with forfeiture of any time-limit benefit.

10.4. In the event that payment is deferred in several instalments of each invoice, the non-payment of even one instalment makes it immediately due by Telcom S.p.A. the entire credit, the Customer being immediately considered as forfeited from the benefit of the term.

10.5. In case of late payment by the Customer, the Supplier, pursuant to art. 4 of Legislative Decree n° 231/2002, as amended by Legislative Decree n° 192/2012, without the need for the formal notice, from the day following the expiry of the deadline for payment, shall be entitled to claim the interests at the average of the current reference base rate during the delay period, as determined by the European Central Bank, augmented with 8 points.

11 • Retention of title

11.1. In the event that payment is deferred in several instalments of each invoice, the goods are intended as sold under a reserved domain agreement pursuant to art. 1523 and subsequent of the Civil Code and, therefore, the goods sold/purchased shall remain the property of Telcom S.p.A. until the time of full payment of the price.

12 • Guarantee

12.1. All products of Telcom S.p.A. are tested in our factory. Our products are guaranteed for 2 years against construction defects, provided that the standards indicated in the installation, use and maintenance documents, in the catalogue, instruction booklet and on the labels on the products are respected.

12.2. The guarantee provided by Telcom S.p.A. shall lapse and the company shall be relieved of all liability in the following cases:

- failure to comply with the installation and/or maintenance instructions as described in the above documentation;
- the product is modified, disassembled, tampered with;
- improper use of the product or failure to comply with the rules of use of the product contained in the aforementioned documentation and in the catalogue;
- maintenance has not been carried out as indicated in the instruction manual;
- the product has been overloaded with respect to its specified capacity or has been employed for uses not in accordance with the manufacturer's specified intended usage.

12.3. In addition, Telcom S.p.A. shall not be held liable for vices, defects and/or damages that result, directly or indirectly, in the following cases:

- storage of products unprotected or prolonged or otherwise incorrect;
- negligence, incorrect assembly, installation, maintenance and usage as well as the usage of products not in accordance with the technical specifications in the catalogue and in the instruction manual;
- modifications or transformations made to products or parts thereof carried out by the customer or by third parties in general.

Moreover, Telcom S.p.A. shall not be held liable for any damage that may directly or indirectly incur to persons or property as a result of incorrect installation, use and maintenance by the customer or third parties of the products sold.

13 • Place of jurisdiction for disputes

13.1. For any dispute relating to or in connection with the contracts to which these General Terms and Conditions apply, the parties to the contract expressly agree that the Court of Brindisi has exclusive jurisdiction. Purchases carried out by e-mail, telephone, fax or post also imply acceptance of these General Conditions of Sale, which can be read directly on the website www.telcomitalia.eu.

14 • Processing of Personal Data pursuant to European Regulation N° 679/2016.

Telcom S.p.A. hereby informs you that your personal data will be used by the company as Data Controller, in compliance with the principles of protection of personal data set for by the European Regulation n° 679/2016.

The processing of your personal data will be carried out for purposes related to and instrumental to the commercial and administrative processing of the same. The data will be treated mainly with manual, electronic and computer tools. The processed data will be stored on paper, and any other type of suitable media in compliance with the measures provided for by G.D.P.R. n° 679/2016. The data required for contractual and accounting purposes are kept for the time necessary to carry out the commercial and accounting relationship. In accordance with European Regulation n° 679/2016 (the so-called G.D.P.R.) and the national legislation, the interested party may, in the manner and within the limits provided by the current legislation, exercise the following rights: request confirmation of the existence of personal data concerning him; the right of access; knowing its origin; receiving intelligible communication from them; have information about the logic, the methods and the purposes of the processing; request the updating, rectification, integration, cancellation, transformation into anonymous form, the blocking of data processed in violation of the law, including those no longer necessary for the pursuit of the purposes for which they were collected; the right of limitation and/or opposition to the processing of data concerning him; right of revocation; right to data portability; in cases of consent-based processing, receive their data provided to the controller, in a structured and readable form by a data processor and in a format commonly used by an electronic device; the right to lodge a complaint with the Supervisory Authority.



Telcom[®]
TECNOLOGIE PER L'UOMO

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Overall dimensions of items have a tolerance of $\pm 1.5\%$, capacities have a tolerance of $\pm 4.6\%$.

The tanks and modular systems are produced under licence-patent application number PI2005A00084

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Telcom Technical Division

OUR
WEBSITE



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Telcom[®]
TECNOLOGIE PER L'UOMO

Via dell'industria 21 - 72017 Ostuni (Br) Italy
Tel. +39.0831.348.111 - Fax +39.0831.304.510
Mailbox: telcom@telcomitalia.it - PEC telcom@legalmail.it
www.telcomitalia.eu

