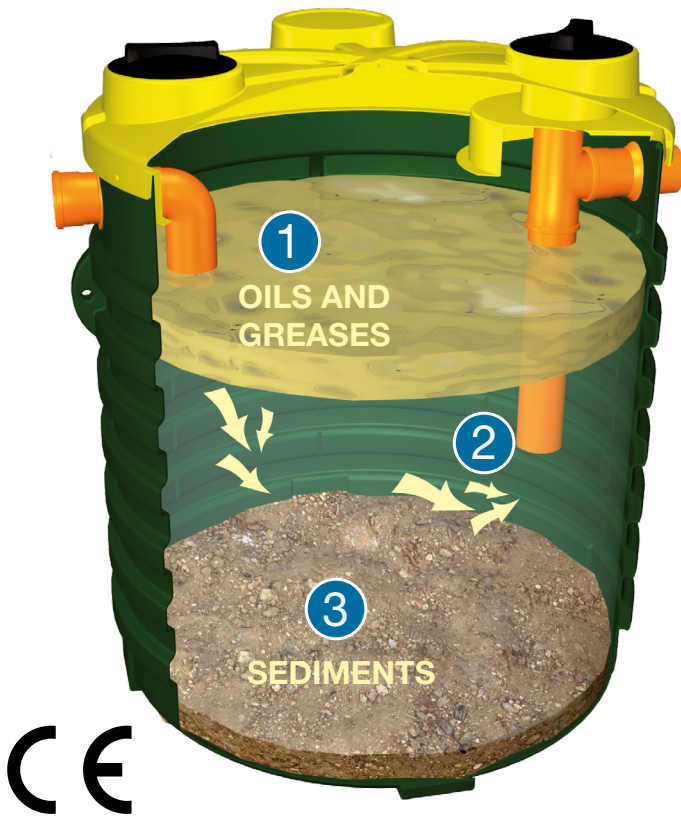
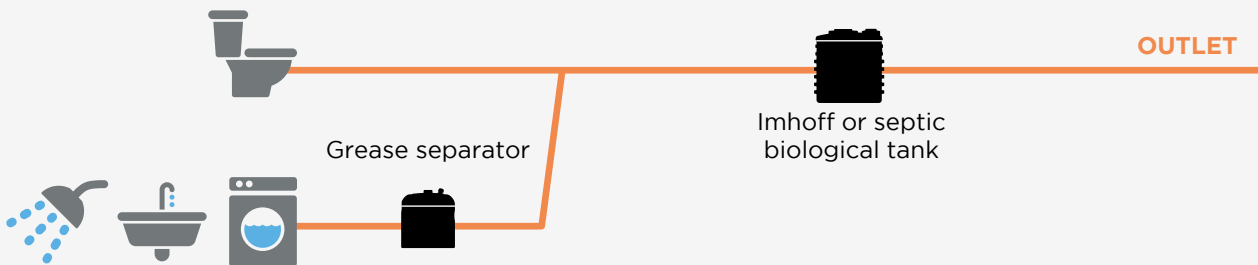


# GREASE SEPARATORS



- 1 OILS AND GREASES**  
inlet zone in which the turbulence of the inlet flow is dampened and in which the substances with a specific weight lower than water (oils, foams, etc...) accumulate.
- 2 STILLING AREA**  
zone into which the separated and treated effluent flows.
- 3 SEDIMENTS**  
area in which temporary accumulation of the solids (food waste, etc...) takes place.

## INSTALLATION DIAGRAM



# SPECIFICATIONS

## TECHNICAL CHARACTERISTICS

The grease separator is a physical pre-treatment process that removes oils, foams, greases and all substances of specific weight less than that of the effluent.

The grease separator is nothing more than a stilling tank in which the substances of specific weight less than water are separated by floatation (surface). Sedimentation also takes place, with a part of the suspended solids depositing at the bottom of the tank.

## USE

Primary treatment of grey water from kitchens, washbasins, bidets, showers, baths, washing machines and dishwashers.

## PRODUCT CERTIFICATION

Rototec grease separators (with the exception of the modular range) are CE marked and are designed, tested and certified compliant with UNI EN 1825-1 "Grease separators – Part 1: Principles of design, performance and testing, marking and quality control".

The grease separators have been verified and tested at Rototec and by a third party certifying body, and have been found to comply with the necessary requirements.

- Watertightness
- Structural stability
- Determination of the nominal size
- Functional requirements
- Reaction to fire

✓  
✓  
✓  
✓  
(Class E)

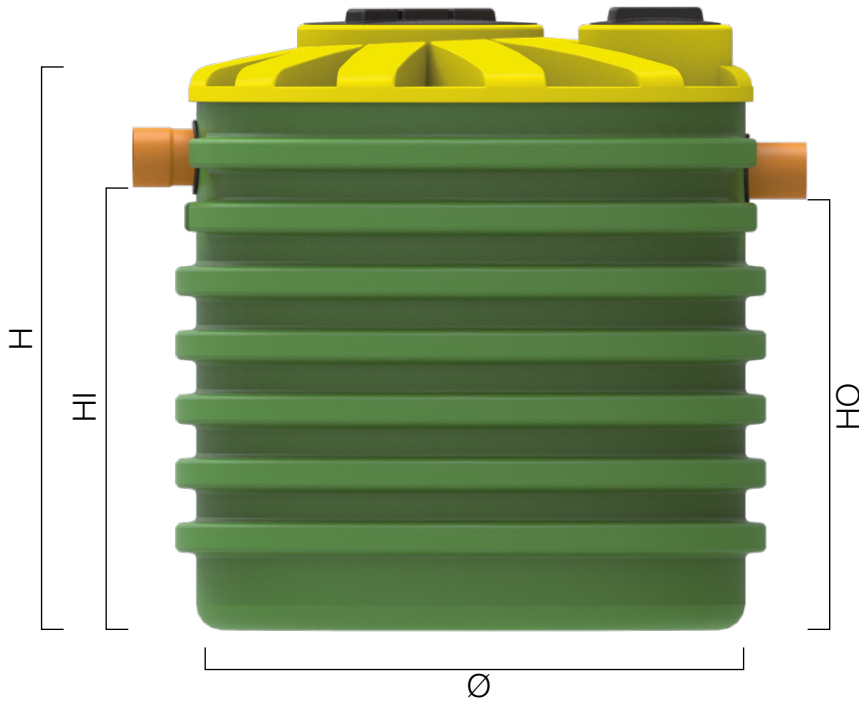
**CERTIFIED**  
**UNI EN 1825-1**



## SEPARATION BAFFLES



# GREASE SEPARATORS



## MODEL

SMOOTH



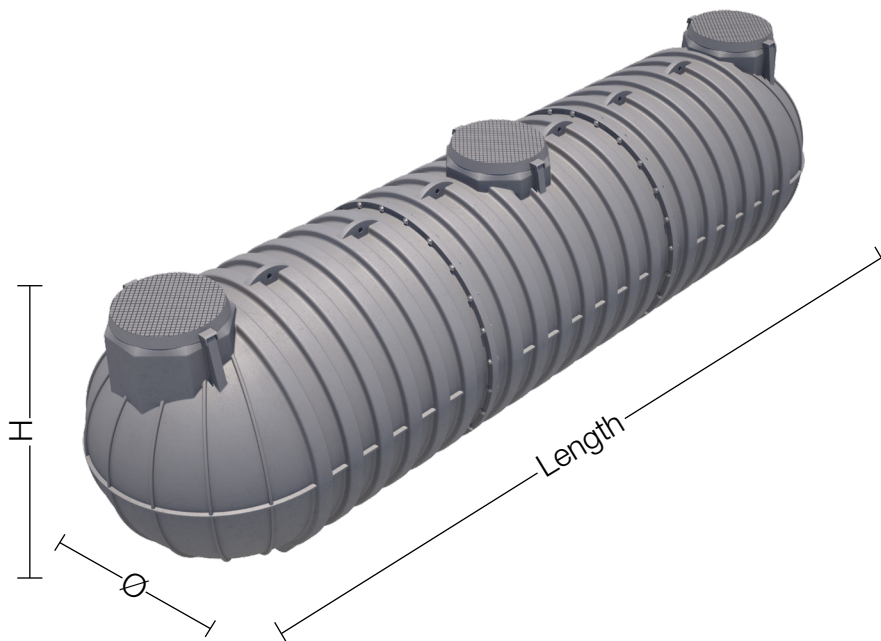
SEPARATION  
BAFFLES



CORRUGATED



# GREASE SEPARATORS MODULAR









































ELIPSE



MODULAR



Item	Mod.	Length mm	Width mm	Ø mm	H mm	HI mm	HO mm	Ø I/O mm	Covers 1	Covers 2	Extension 1 (optional)	Extensions 2 (optional)	Useful Vol. l	Vol. of grease l	Vol. of sediment l	NS	PE.
<b>DD50</b>		-	-	430	430	270	200	100	CC300	-	PP35	-	39	5	10	0,1	<b>1</b>
<b>DD150</b>		-	-	580	660	510	440	100	CC200	-	PP30	-	121	16	32	0,3	<b>5</b>
<b>NDD150</b>		950	650	-	565	375	345	100	CC200	CC130	PM30x30G	PM20x20G	180	25	35	0,4	<b>7</b>
<b>NDD200</b>		1000	635	-	675	490	440	100	CC200	CC130	PM30x30G	PM20x20G	205	30	50	0,5	<b>10</b>
<b>DD300</b>		-	-	630	970	770	700	100	CC200	-	PP30	-	218	30	59	0,5	<b>10</b>
<b>NDD300</b>		1100	700	-	775	585	535	100	CC200	CC130	PM30x30G	PM20x20G	303	40	80	0,7	<b>15</b>
<b>NDD400</b>		1150	750	-	890	695	645	100	CC200	CC130	PM30x30G	PM20x20G	409	55	110	1	<b>20</b>
<b>DD500</b>		-	-	790	790	630	560	100	CC400	CC130	PP45	-	276	32	72	0,7	<b>15</b>
<b>NDD500</b>		1400	900	-	750	560	530	100	CC200	CC130	PM30x30G	PM20x20G	510	75	140	1,2	<b>25</b>
<b>NDD700</b>		-	-	1050	1030	760	690	110	CC400	CC200	PP45	PP30	580	80	156	1,5	<b>28</b>
<b>DD800</b>		1480	630	-	1090	870	800	110	CC300	CC200	PP35	PP30	693	80	180	1,8	<b>20</b>
<b>NDD1000</b>		-	-	1150	1220	880	810	110	CC400	CC200	PP45	PP30	774	90	200	2	<b>30</b>
<b>NDD1200</b>		1900	708	-	1630	1250	1180	110	CC300	CC300	PP35	PP35	1142	120	300	3	<b>35</b>
<b>NDD1250</b>		-	-	1050	1650	1370	1300	110	CC400	CC200	PP45	PP30	1100	125	310	3	<b>35</b>
<b>NDD1500</b>		-	-	1150	1720	1360	1290	110	CC400	CC200	PP45	PP30	1193	128	320	3,1	<b>40</b>
<b>NDD1700</b>		1900	708	-	2140	1760	1690	110	CC300	CC300	PP35	PP35	1775	200	450	4	<b>50</b>
<b>NDD2100</b>		-	-	1350	1975	1540	1490	110	CC400	CC300	PP45	PP35	1850	260	550	4	<b>60</b>
<b>NDD2600</b>		-	-	1710	1450	1000	930	125	CC400	CC300	PP45	PP35	1971	220	550	5	<b>70</b>
<b>NDD3200</b>		-	-	1710	1725	1240	1170	125	CC400	CC300	PP45	PP35	2435	256	640	6,4	<b>80</b>
<b>NDD3800</b>		-	-	1710	1955	1480	1410	160	CC400	CC300	PP45	PP35	3026	330	800	7,9	<b>90</b>
<b>NDD4600</b>		-	-	1710	2225	1700	1630	160	CC400	CC300	PP45	PP35	3510	400	910	9	<b>110</b>
<b>NDD5400</b>		-	-	1950	2250	1630	1560	200	CC400	CC400	PP45	PP45	4152	462	1085	10,5	<b>140</b>
<b>NDD6400</b>		-	-	1950	2530	1940	1870	200	CC400	CC400	PP45	PP45	4862	495	1268	11,8	<b>160</b>
<b>NDD7000</b>		-	-	2250	2367	1810	1740	200	CC400	CC400	PP45	PP45	6711	900	1400	13	<b>200</b>
<b>NDD9000</b>		-	-	2250	2625	2030	1960	200	CC400	CC400	PP45	PP45	7534	1200	1800	15,5	<b>250</b>
<b>ITDD11000</b>		4420	-	2100	2200	1820	1750	200	TAP800	-	PP77	-	10135	1250	2350	23,5	<b>285</b>
<b>ITDD13000</b>		5010	-	2100	2200	1820	1750	200	TAP800	-	PP77	-	12105	1330	3020	30,0	<b>340</b>
<b>ITDD15000</b>		5620	-	2100	2200	1820	1750	200	TAP800	-	PP77	-	14150	1490	3720	37,2	<b>400</b>
<b>ITDD18000</b>		6680	-	2100	2200	1820	1750	200	TAP800	-	PP77	-	16900	1725	4320	43,0	<b>475</b>
<b>ITDD20000</b>		7270	-	2100	2200	1820	1750	200	TAP800	-	PP77	-	18610	1950	4870	48,7	<b>540</b>
<b>ITDD22000</b>		7880	-	2100	2200	1820	1750	200	TAP800	-	PP77	-	20700	2170	5450	54,5	<b>600</b>
<b>ITDD25000</b>		8940	-	2100	2200	1780	1710	250	TAP800	-	PP77	-	22800	2410	6010	60,1	<b>640</b>
<b>ITDD28000</b>		9530	-	2100	2200	1780	1710	250	TAP800	-	PP77	-	25200	2670	6620	66,1	<b>700</b>
<b>ITDD30000</b>		10140	-	2100	2200	1780	1710	250	TAP800	-	PP77	-	27250	2870	7170	71,7	<b>800</b>
<b>ITDD33000</b>		11200	-	2100	2200	1780	1710	250	TAP800	-	PP77	-	29540	3150	7710	77,2	<b>825</b>
<b>ITDD35000</b>		11790	-	2100	2200	1780	1710	250	TAP800	-	PP77	-	31710	3310	8250	82,5	<b>885</b>
<b>ITDD36000</b>		12400	-	2100	2200	1780	1710	250	TAP800	-	PP77	-	33800	3560	8890	88,9	<b>1000</b>
<b>ITDD40000</b>		13460	-	2100	2200	1780	1710	250	TAP800	-	PP77	-	36180	3820	9410	94,2	<b>1150</b>

Sizing: PE. = population equivalent; Ø = diameter; H = height; HI = inlet pipe height; HO = outlet pipe height; ØE/U = inlet/outlet pipe diameter; NS = limit flow rate (l/s).

# TECHNICAL SECTION - GREASE SEPARATORS

## TECHNICAL CHARACTERISTICS

The grease separator is a **physical pre-treatment process** that removes oils, foams, greases and all substances of specific weight less than that of the effluent. Greases and oils produced during normal domestic activities derive from the consumption of butter, margarine, lard and vegetable oils. They also originate from waste meat and vegetables and from some cosmetic products. Greases are insoluble in water and have a low density. In the presence of surface-active agents (detergents), they create stable foams of floating materials that can cause an accumulation of putrescible substances in the sewerage pipes and render oxygenation of the sewage difficult, which also has a detrimental effect on the biological treatment processes located downstream.

The grease separator is nothing more than a **stilling tank** in which the substances of specific weight less than water are separated by floatation (surface). The reduced velocity of the fluid also allows sedimentation of a part of the suspended solids which deposit at the bottom of the tank. As temperature has a considerable influence on the operation of the grease separator, the separation process becomes 100% effective when the temperature does not rise much above the melting point of the greases, estimated as being around 20°C.

Rototec gravity grease separators consist of a polyethylene tank with two semi-submerged inlet and outlet pipes at different levels. The working volume is divided into three compartments: an inlet zone in which the turbulence of the inlet flow is dampened, a second zone in which the separation takes place together with temporary accumulation of the solids and a third outlet zone for the treated effluent. The longer the retention time of the sewage in the grease separator the more efficient is the removal of the floating materials. This retention time must nevertheless be more than 3 minutes at peak flow. **The grease separators are certified in accordance with standard UNI-EN 1825-1** (with the exception of modular, above-ground and unde-sink range) and guarantee a sewage retention time of at least 4 minutes at peak flow (Qmax), taking into account the available volume only, i.e. that not occupied by greases or heavy sediments. This guarantees retention times at mean daily flow rates of more than 15 minutes.

## USE AND MAINTENANCE

The substances removed by floatation accumulate at the surface of the grease separator in the form of a surface crust, while the heavier solids settle at the bottom of the tank to form a deposit of putrescible sludge.

It is advisable to provide for the periodic removal of the accumulated materials by specialist technicians, as they reduce the effective volume required for the passage of the effluent, thus reducing the retention time and, as a result, compromising the efficiency of the plant. An excessive accumulation of sludge in the grease separator can cause septic conditions to develop, resulting in resulting bad smells, in particular during the summer.

## MANAGEMENT

WHAT TO DO	WHEN	HOW
Inspect the grease separator	Every 1 / 2 months	Unscrew the covers on the inspection holes and check the level of sediment and the surface crust.
Remove the surface crust, the settled sludge and clean the inlet and outlet pipes	Every 6 / 12 months	Contact a licensed waste disposal company

**N.B.** the frequency of cleaning depends on the amount of oil, grease and solids in the wastewater.

## PROHIBITIONS

- **do not use toxic and/or poisonous substances** (bleach, solvents, insecticides, disinfectant substances, aggressive detergents), always use biodegradable products;
- **NEVER** allow rainwater to enter the system.

## WARNINGS

- make sure that drains have a siphon;
- check that the pipes have sufficient gradient (approximately 1% - 2%);
- connect the biogas vent pipe (**see underground installation**);
- in the case where grey water and sewage flow through the same pipe, **DO NOT** install the grease separator, but an Imhoff septic tank one class higher than that for the Population Equivalent (P.E.) number;
- after emptying, fill the tank again with **clean water**;
- in the event of a maintenance operation of any kind, always comply with the **safety regulations** regarding operations within enclosed wastewater treatment areas and with the general technical procedures applicable.