POLYETHYLENE GREASE SEPARATORS



The Advantages

- A completely sealed water-tight system that prevent ground contamination and protects our environment
- Environmentally friendly - recyclable materials
- PE manufacturing - Rotomoulding
- Excellent chemical resistance - Highly resistance to corrosion internally and externally resulting in long product life span.
- Total protection against tree roots intrusion / penetration.
- Can be installed in driveway as well as enclosed area which have no access to heavy machineries.
- Low maintenance cost as smooth internal surface prevent dirt built-up, resulting in longer periodical cleaning.
- High quality products which comply with stringent specifications and international standards. EN1825.
- Substantial cost saving in both construction and maintenance cost.
- Light weight, quick installation, easy handling (No heavy machinery required)
- Hydrocarbon rejects < 5mg/l

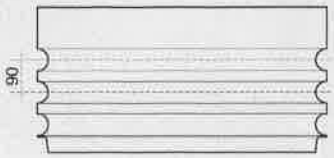
Ductile Iron Cover



Extension Shaft

◢ Extension shafts

The whole range is equipped with a sole circular extension shaft. They can be stacked together and can be adjusted by sections of 90 mm.



Ø: 630 mm
Weight: 14 kg
Height 1 extension shaft: 360 mm
Height 2 extension shafts: 720 mm
Extension Shaft

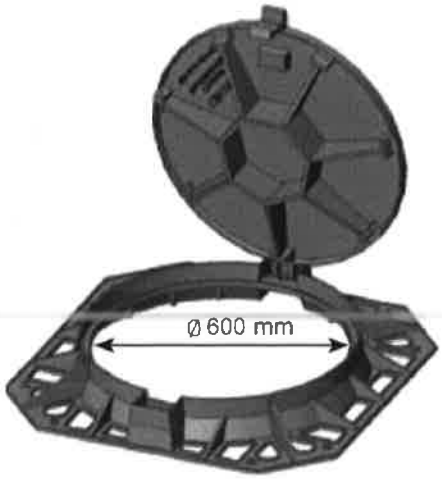
◢ Polyethylene (PE) Cover

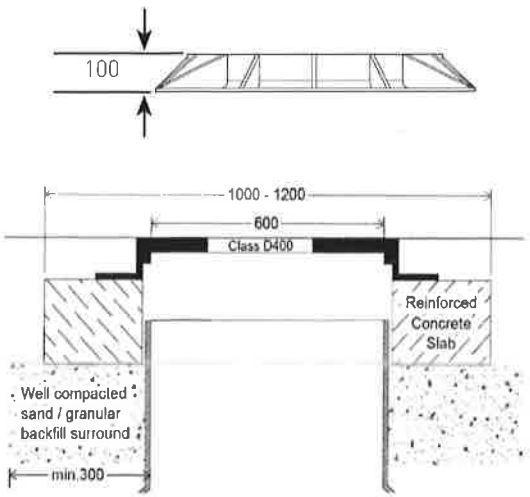
Load: Class A-15 KN



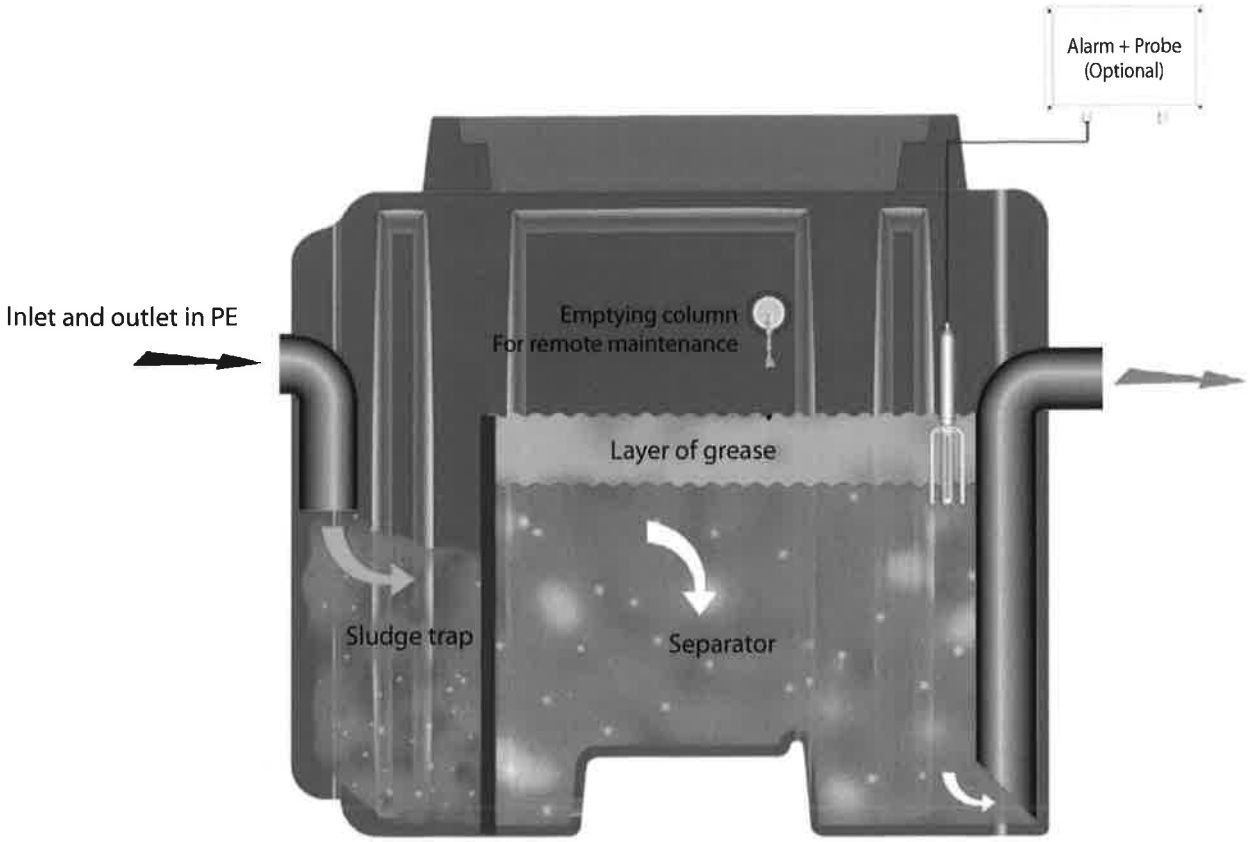
◢ Ductile Iron Cover for Traffic Load Application

Load: Class D400

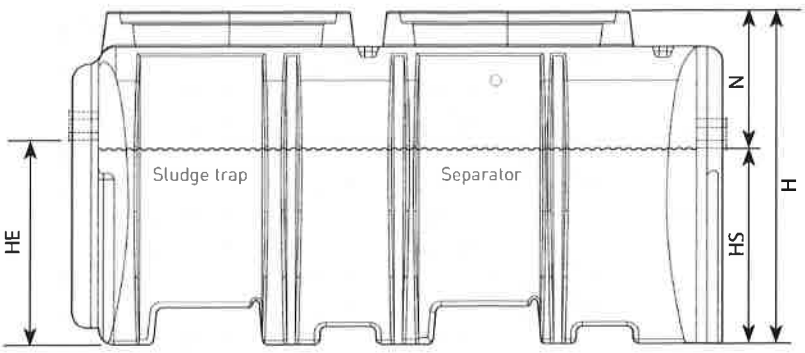


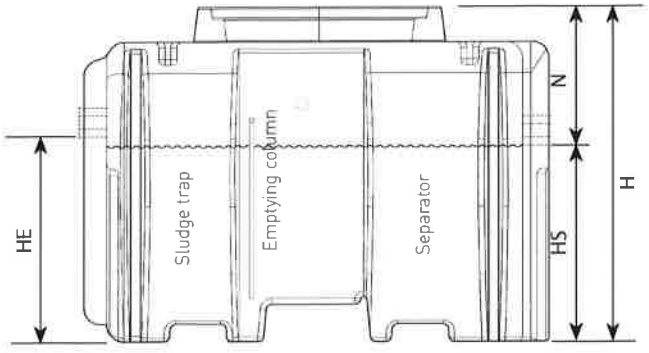


Operation of the Grease Separator



The **grease separator** works on the principle of the decantation of matters contained in waste resulting from restaurant, collective kitchens or agroalimentary industries.
The grease separator is generally preceded by sludge trap compartment which retain the heavy particles.



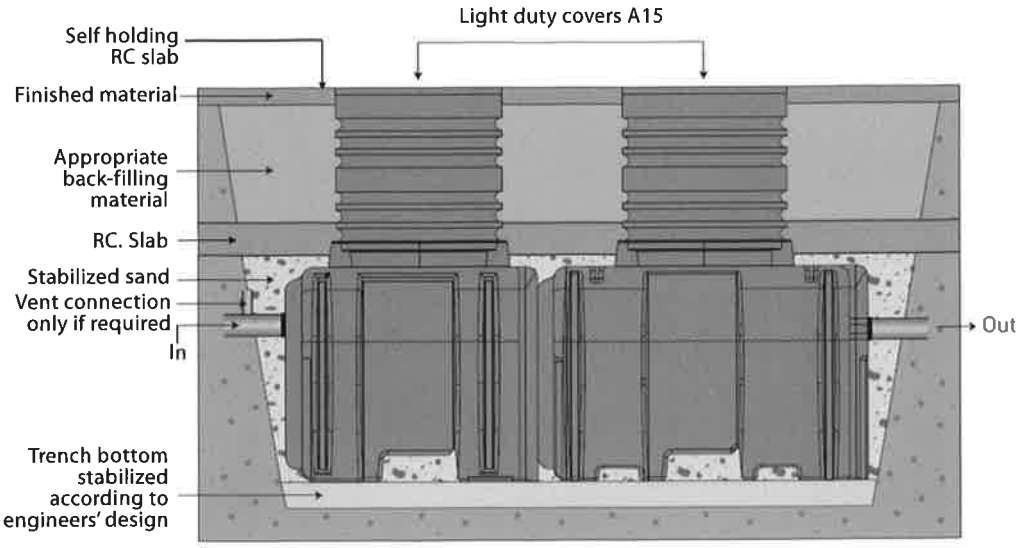


	Length *mm*	Width *mm*	H *mm*	HE *inlet mm*	HS *outlet mm*	N *mm*	max. Flow *ℓ/S*	Sludge *ℓ*	Separator *ℓ*	DN inlet *mm*	DN outlet *mm*	Weight *kg*
SFPE 2/200	1120	1185	1152	804	774	378	2	200	650	160	160	92
SFPE 3/300	1221	1270	1152	804	774	378	3	300	700	160	160	103
SFPE 6/600	1613	1270	1152	752	722	430	6	600	900	160	160	113
SFPE 7/700	2250	1633	1152	752	722	430	7	700	1680	160	160	168
SEPF 10/1000	3370	1633	1152	752	722	430	10	1000	1500	160	160	240
SFPE 15/1500	3863	1633	1152	712	682	470	15	1500	2000	200	200	267
SFPE 20/2000	4500	1633	1152	712	682	470	20	2000	2000	200	200	353

Installation Drawing

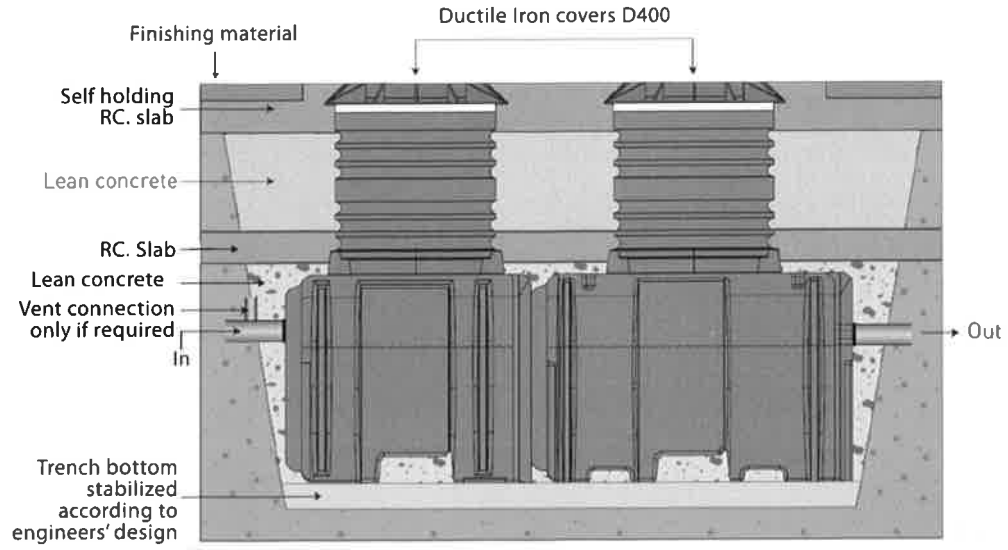
◢ Off-the-road placing

1. The separator has to be buried.
2. Place the separator horizontally at the bottom of the excavation (lean concrete).
3. Connect in/outlet on the pipe.
4. Place a T-connection at the entry to ventilate the separator.
5. Place extension shaft (if necessary) and adjust it to the floor level.
6. **Fill up the separator with clear water. At the same time backfill with sand.**
7. If several extension shafts are needed, a self-holding slab has to be foreseen (thickness and reinforcement to be defined).



◢ In carriage zone placing

1. The separator has to be buried.
2. Place the separator horizontally at the bottom of the excavation (lean concrete).
3. Connect in/outlet on the pipe.
4. Place a T-connection at the entry to ventilate the separator.
5. Place extension shaft (if necessary) and adjust it to the floor level.
6. **Fill up the separator with clear water. At the same time backfill with sand.**
7. In case of placing underneath road traffic, separators have to be covered with Ductile Iron covers (class D-400 kN). The covers will be sealed In the self-holding concrete slab, which will be supported by the edge of the excavation (thickness and reinforcement to be defined).



CAUTION: *This design is **NOT** recommended if there is a presence of ground water. In case of doubt, please contact us for further clarification.*

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Polyethylene Grease Separators

1) Exceptionally compact in size

- Polyethylene grease separator is extremely compact and eases planning for space constraint sites. It comes together with a sludge trap and the construction of a screening chamber is not required. A polyethylene grease separator saves up to 5 times of the installation space as compared to conventional separators of equivalent size. 600mm diameter opening is inconspicuous to the public and minimize possible annoyances.

2) Extremely fast installation

- Polyethylene Grease Trap is prefabricated with sludge trap and grease separation compartment and is light-weight. Installation of the grease trap is extremely fast and easy and can usually be installed within a day.

3) Easier maintenance

- Low maintenance cost as smooth internal surface prevents dirt build up which leads to shorter disposal times and lower cleaning water consumption.

4) Effective FOG separation

- Polyethylene grease separator has a linear flow pattern and a relatively long body for influent to travel through. This allows longer retention time and an undisrupted flow allowing the separation to be more effective.

5) No smell issue

- Smooth internal surface results in an easier cleaning and thus stench does not root in the grease separator. The cover further improves the containment of smell.

6) High chemical and corrosion resistance

- Polyethylene grease separator has a very good chemical resistance and renders it to be almost corrosion free.

7) Effective utilization of capacity

- Polyethylene grease separator comes in various sizes to cater for different needs without over-sizing or under-sizing.

8) Environmental friendly

- Polyethylene is 100% recyclable.

9) Water tightness

- A completely sealed water-tight system that prevents ground water contamination and protects our environment.

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GREASE TRAP COMPARISON - CONCRETE VS HDPE

PARAMETERS	CONVENTIONAL Ø1050 CONCRETE GREASE TRAP	HDPE GREASE TRAP (SFPE 2/200)	DIFFERENCE
CAPACITY	$0.6*(3.142*(0.525^2-(0.2^2-0.15^2)))-2*(0.115*0.525*0.65) = 0.408\ m^3 = 408\ L$	850 L	**2 times**
FLOW RATE	1600/24/3600 = 0.0185 L/s	2 L/s	**108 times**
DEPTH	0.65m Inlet, 0.6m Outlet	0.804m Inlet, 0.774m Outlet	-
FLOW DIRECTION	Circular Cyclonic	Linear Overflow	**Lesser disturbance to the separation section**
SLUDGE TRAP CAPACITY	$0.65*0.325*0.28 = 0.059\ m^3 = 59\ L$	200 L	**3.4 times**

PARAMETERS	CONVENTIONAL Ø1050 CONCRETE GREASE TRAP	HDPE GREASE TRAP (SFPE 3/300)	DIFFERENCE
CAPACITY	$0.6*(3.142*(0.525^2-(0.2^2-0.15^2)))-2*(0.115*0.525*0.65) = 0.408\ m^3 = 408\ L$	1000 L	**2.5 times**
FLOW RATE	1600/24/3600 = 0.0185 L/s	3 L/s	**162.2 times**
DEPTH	0.65m Inlet, 0.6m Outlet	0.752m Inlet, 0.722m Outlet	-
FLOW DIRECTION	Circular Cyclonic	Linear Overflow	**Lesser disturbance to the separation section**
SLUDGE TRAP CAPACITY	$0.65*0.325*0.28 = 0.059\ m^3 = 59\ L$	300	**5.1 times**

CAPACITY OF GREASE TRAP Height of Outlet * (π * (Radius of Chamber Ring)2 - ((Outer Radius DN Butt Ended Pipe)2 - (Radius DN Butt Ended Pipe)2)) - (No. of Brickwall Partition)

SLUDGE TRAP CAPACITY Size of Stainless Steel Bracket * Height

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GREASE TRAP COMPARISON - CONCRETE (MULTIPLE) VS HDPE

PARAMETER	CONVENTIONAL Ø1800 CONCRETE GREASE TRAP	HDPE GREASE TRAP (SFPE 6/600)	DIFFERENCE
CAPACITY	0.6*(3.142*(0.9^2-(0.43^2-0.3^2)))-3*(0.115*0.47*0.6) = 1.251 m^3 = 1251 L	1500 L	**19%**
FLOW RATE	4800/24/3600 = 0.056 L/s	6 L/s	**107 times**
DEPTH	0.65m Inlet, 0.6m Outlet	0.752m Inlet, 0.772m Outlet	-
FLOW DIRECTION	Circular Cyclonic	Linear Overflow	**Lesser disturbance to the separation section**
SLUDGE TRAP CAPACITY	0.65*0.47*0.48 = 0.147 m^3 = 147 L	600 L	**4 times**
DIMENSION	2.67m x 2.67m x Ht.	1.613m (L) x 1.27m (W) x 1.152m (H) ; 113kg	-

PARAMETER	CONVENTIONAL Ø1800 CONCRETE GREASE TRAP	HDPE GREASE TRAP (SFPE 10/1000)	DIFFERENCE
CAPACITY	0.6*(3.142*(0.9^2-(0.43^2-0.3^2)))-3*(0.115*0.47*0.6) = 1.251 m^3 = 1251 L	2500 L	**2 times**
FLOW RATE	4800/24/3600 = 0.056 L/s	10 L/s	**178.6 times**
DEPTH	0.65m Inlet, 0.6m Outlet	0.752m Inlet, 0.772m Outlet	-
FLOW DIRECTION	Circular Cyclonic	Linear Overflow	**Lesser disturbance to the separation section**
SLUDGE TRAP CAPACITY	0.65*0.47*0.48 = 0.147 m^3 = 147 L	1000 L	**6.8 times**
DIMENSION	2.67m x 2.67m x Ht.	3.37m (L) x 1.633m (W) x 1.152m (H) ; 240kg	-

CAPACITY OF GREASE TRAP Height of Outlet * (π * (Radius of Chamber Ring)^2 - ((Outer Radius DN Butt Ended Pipe)^2 - (Radius DN Butt Ended Pipe)^2)) - (No. of Brickwall Partition

SLUDGE TRAP CAPACITY Size of Stainless Steel Bracket * Height

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GREASE TRAP COMPARISON - CONCRETE (MULTIPLE) VS HDPE

PARAMETER	CONVENTIONAL Ø1800 CONCRETE GREASE TRAP	HDPE GREASE TRAP (SFPE 15/1500)	DIFFERENCE
CAPACITY	$0.6*(3.142*(0.9^2-(0.43^2-0.3^2)))-3*(0.115*0.47*0.6) = 1.251\ m^3 = 1251\ L$	3500 L	**2.8 times**
FLOW RATE	4800/24/3600 = 0.056 L/s	15 L/s	**268 times**
DEPTH	0.65m Inlet, 0.6m Outlet	0.712m Inlet, 0.682m Outlet	-
FLOW DIRECTION	Circular Cyclonic	Linear Overflow	**Lesser disturbance to the separation section**
SLUDGE TRAP CAPACITY	$0.65*0.47*0.48 = 0.147\ m^3 = 147\ L$	1500 L	**10.2 times**
DIMENSION	2.67m x 2.67m x Ht.	3.863m (L) x 1.633m (W) x 1.152m (H) ; 267kg	-

PARAMETER	CONVENTIONAL Ø1800 CONCRETE GREASE TRAP	HDPE GREASE TRAP (SFPE 20/2000)	DIFFERENCE
CAPACITY	$0.6*(3.142*(0.9^2-(0.43^2-0.3^2)))-3*(0.115*0.47*0.6) = 1.251\ m^3 = 1251\ L$	4000 L	**3.2 times**
FLOW RATE	4800/24/3600 = 0.056 L/s	20 L/s	**357.14 times**
DEPTH	0.65m Inlet, 0.6m Outlet	0.712m Inlet, 0.682m Outlet	-
FLOW DIRECTION	Circular Cyclonic	Linear Overflow	**Lesser disturbance to the separation section**
SLUDGE TRAP CAPACITY	$0.65*0.47*0.48 = 0.147\ m^3 = 147\ L$	2000 L	**13.6 times**
DIMENSION	2.67m x 2.67m x Ht.	4.5m (L) x 1.633m (W) x 1.152m (H) ; 353kg	-

CAPACITY OF GREASE TRAP Height of Outlet * (π * (Radius of Chamber Ring)^2 - ((Outer Radius DN Butt Ended Pipe)^2 - (Radius DN Butt Ended Pipe)^2)) - (No. of Brickwall Partition

SLUDGE TRAP CAPACITY Size of Stainless Steel Bracket * Height