ENEKA

GREASE SEPARATORS

Greasly

FREE-STANDING AND UNDERGROUND MODELS

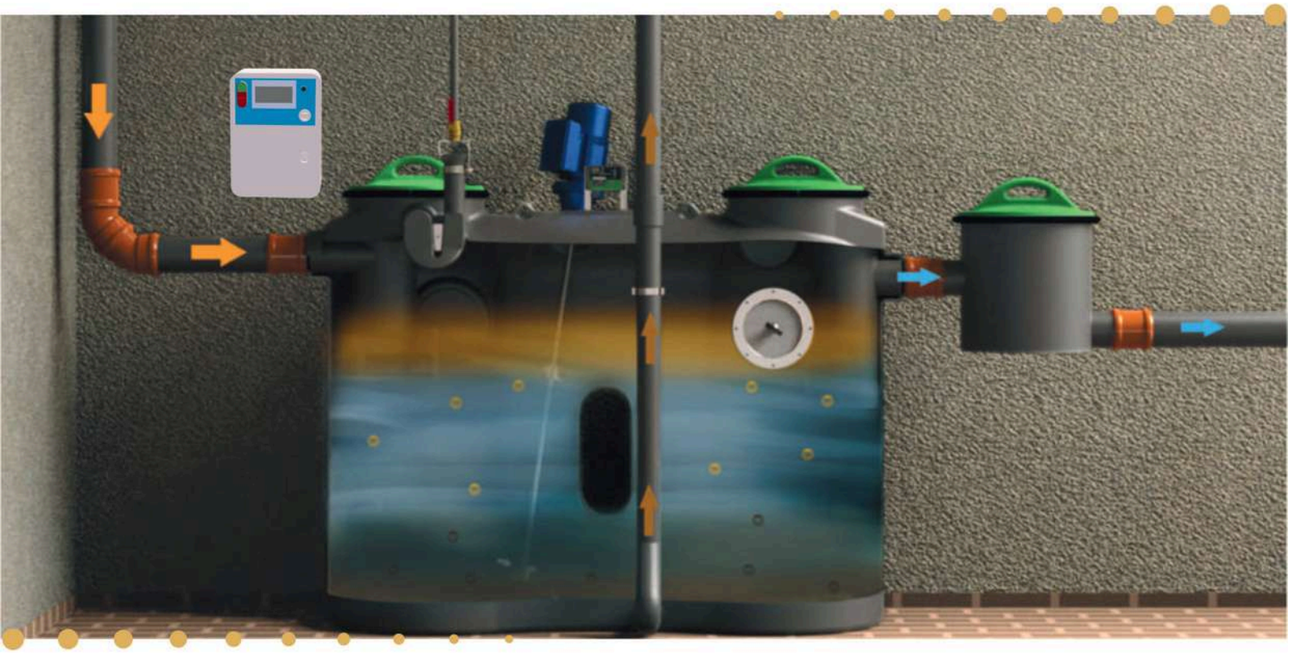
GREASLY – a part of the modern kitchen

A typical application of a grease separator is the treatment of wastewater containing fat and grease from hotels, restaurants, cafeterias and other catering or food processing operations. GREASLY will, by the removal of fat and grease, greatly reduce incidents of blocked drains and prevent contamination of sewage treatment plants.

ENEKA offers Free-standing Greasly-A and Underground Greasly-B grease separator models. The body of the separator made of polyethylene material are durable, corrosion-proof and chemically resistant, light and easy to transport.

Optimal grease separation

Incoming greasy wastewater enters the grease separator through a unique inlet module which creates the circular flow path. As water passes through the separator, grease particles, lighter than water, are driven upwards by gravity and accumulated in the collection area on the water surface. At the same time, solids and other impurities heavier than water settle to sludge trap at the bottom of the tank. Treated water is discharged through the outlet pipe.



Approvals

Greasly separators were developed to comply with EN1825 and DIN4040-100 standards. Greasly is ensuring the residual grease content less than 25 mg/l in the effluent wastewater. The performance of separators was practically tested (at the Danish Technological Institute and Kaunas University Of Technology). The conformity to European standard EN1825 is signified by the CE mark.

Greasly

Selection of Nominal Size

According to European Standard EN1825-2 the nominal size shall be determined from the following formula:

$$NS = Q_s \cdot f_t \cdot f_d \cdot f_r$$

where:
NS - the nominal size of the separator;
Q_s – the maximum flow rate in liters per second;
f_t – the temperature factor: (f_t =1 if the influent water temperature is ≤60°C; f_t =1,3 if >60°C);
f_d – the density factor: f_d = 1* if density of grease/oil is ≤0,94 g/cm^3; f_d =1,5 if >0,94 g/cm^3
(a density factor f_d =1 shall be used for wastewater discharging from kitchens abattoirs, meat and fish processing plants);
f_r – the detergent and rinsing agent factor: f_r =1 detergents never used; f_r =1,3 occasionally or always used; f_r ≥1,5 hospitals and other special cases.

The maximum flow rate Q_s entering the separator shall be calculated from the equation:

$$Q_s = \frac{F \cdot M \cdot V_m}{3600 \cdot t}$$

where:
M – the number of meals per day;
V_m – the volume of water used per meal, in liters (see table 1);
F – the peak flow coefficient (see table 1);
t – the average duration of operation a day, in hours.

Type of kitchen	V_m, in liters	F
Hotel	100	5
Restaurant	50	8,5
Hospital	20	13
Large catering establishment, open all-day	10	22
Factory/Office canteen	5	20

For nominal size selection for food processing or any other special applications please consult ENEKA engineers.

Free-standing Grease Separators GREASLY-A

FOR INSTALLATION INSIDE BUILDINGS

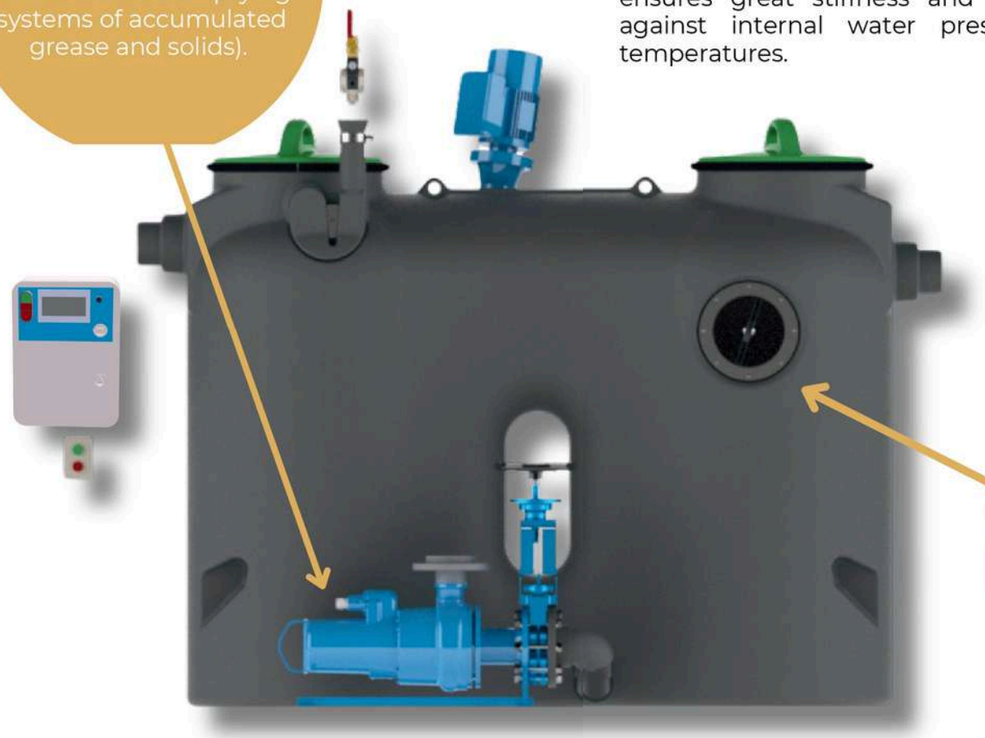
Greasly-A is a new grease separator model made of polyethylene for free-standing installation inside buildings. Greasly-A is compact and lightweight but very rigid units at the same time. All separators are equipped with an integrated sludge trap. Currently, there are nominal sizes of above-ground separators available for flow rates from 2 to 20 l/s.

EASY SELECTION OF FLOW DIRECTION

Due to the symmetrical design of the separator, the flow direction can be selected according to the existing pipeline layout. Inlet or outlet pipe can be connected on the right or left side of the separator.

DISPOSAL PUMP

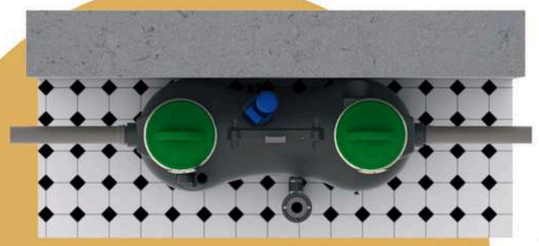
A special heavy-duty disposal pump (manual and automatic emptying systems of accumulated grease and solids).



Inspection window with a wiper for visual control of the grease layer.

CONVENIENT ALLOCATION IN THE ROOM

The grease separator is maintained from one side only, therefore, it can be set up next to the wall. The accessories (inspection window, extraction pipe, disposal pump) can be attached from both sides.



REFILLING UNIT

After disposal, the separator shall be refilled with fresh water without opening the lid and thus ensuring odour-free filling.

Greasly

FITS THROUGH ANY DOOR

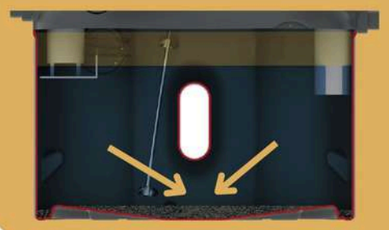
A tight grease separator body (width is only 700 mm of NS2 and NS4) can easily fit through any standard door. Thus Greasly-A is a good choice for installation in spaces with narrow access.

RIGID AND DURABLE DESIGN

The advanced design of the separator's body ensures great stiffness and perfect resistance against internal water pressure and higher temperatures.

COMPLETE EMPTYING OF THE TANK

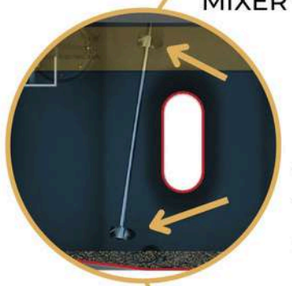
The bottom of the separator is inclined towards the center. The extraction pipe is connected at the lowest point ensuring complete emptying of accumulated grease and solids from the lowest point.



NO BAD ODOUR

Access covers are tightened by a locking ring with a seal ensuring odour-free operation. There is no need to open the cover during the maintenance since accumulated grease and sludge can be disposed of through an extraction pipe or using a disposal pump.

MIXER WITH 2 IMPELLERS



Before disposal, accumulated grease and sludge are blended with water to facilitate the emptying of the separator.

Greasly

The following main components are included in every Greasly-A model: separator tank with two airtight covers ø400 mm with seals and metallic locking rings, integrated sludge trap, sloped bottom for complete discharge, special inlet and outlet for efficient grease separation.

BASE

Greasly-2A-Base

BASE model can be applied in areas where bad odour during maintenance will not cause any inconvenience. Access cover shall be opened for disposal of accumulated grease and solids by a vacuum truck.

NS	Article No.	Weight, kg	Dimensions, mm		
			L	B	H
2	201-0201	78	1940	700	1190
4	201-0301	91	1940	700	1430
7	201-0401	136	1776	980	1750
10	201-0501	173	2356	980	1750
15	201-0601	406	1953	1953	2019

PRIMA

PRIMA model provides odour-free operation without the need for opening of the cover. The accumulated grease layer can be observed through the Inspection window. After reaching the maximum level of grease the contaminants are disposed of through the extraction pipe by a vacuum truck.

Greasly-4A-Prima

After complete disposal, the separator is filled up with fresh water via the refilling unit by opening the manual ball valve.

NS	Article No.	Weight, kg	Dimensions, mm		
			L	B	H
2	201-0202	88	1940	842	1286
4	201-0302	101	1940	842	1526
7	201-0402	145	1776	1080	1716
10	201-0502	182	2356	1080	1816
15	201-0602	415	2000	1953	2019

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MIX

Greasly-4A-Mix

MIX model is equipped with a grease alarm which is indicating when the maximum level of accumulated grease is reached. Before emptying, mixer actuated for blending grease, water and solid layers thus facilitating the disposal of the separator. The extraction pipe is provided for the emptying by the vacuum truck. After complete disposal, the separator is filled up with fresh water via the refilling unit by opening the manual ball valve.

NS	Article No.	Weight, kg	Dimensions, mm		
			L	B	H
2	201-0203	119	1940	842	1352
4	201-0303	132	1940	842	1590
7	201-0403	171	1776	1080	1891
10	201-0503	208	2356	1080	1891
15	201-0603	441	2000	1953	2200

PUMP-M

After reaching the maximum level of grease the heavy-duty disposal pump is activated. The manual switchover valve shall be consecutively switched to positions 1 and 2:

Greasly-7A-Pump-M

Pos.1 - Mixing: water with grease and sludge is extracted by the disposal pump from the bottom and delivered to the top of the separator. The heavy-duty pump is breaking the big contaminants into smaller pieces thus facilitating the disposal.

Pos.2 - Disposal: the mixture of water and contaminants is discharged by the disposal pump into the external tank.
After complete disposal, the separator is filled up with fresh water via the refilling unit by opening the manual ball valve.

NS	Article No.	Weight, kg	Dimensions, mm		
			L	B	H
2	201-0204	158	1940	985	1286
4	201-0304	172	1940	980	1429
7	201-0404	267	1776	1175	1816
10	201-0504	301	2356	1175	1816
15	201-0604	534	2200	1953	2100

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PUMP

PUMP model is equipped with an autonomous program-controlled emptying system including a disposal pump, a mixer and a grease alarm (integrated in the control panel). A grease alarm is indicating when the maximum level of accumulated grease is reached. The operator activates the automatic disposal mode on the control panel or remote controller (optional). First of all, the mixer is turned on for blending grease, water and solids. Then the disposal pump is actuated for emptying of the separator.

Greasly-10A-Pump

After complete disposal, the separator can be rinsed by freshwater which is filled through the refilling unit, mixed and emptied by the disposal pump. After rinsing, the separator is filled up completely with fresh water.

NS	Article No.	Weight, kg	Dimensions, mm		
			L	B	H
2	201-0205	214	1940	1060	1352
4	201-0305	227	1940	1060	1592
7	201-0405	277	1776	1175	1891
10	201-0505	311	2356	1175	1891
15	201-0605	544	2200	1953	2200
20	201-0705	655	2240	2400	2281

ACCESSORIES

	Grease Alarm	Extraction Pipe	Refilling Unit		Mixer	Inspection Window	Control Panel		Disposal Pump	Manual 3-way Valve
			MANUAL	AUTOMATIC			MANUAL	AUTOMATIC		
BASE										
PRIMA		+	+			+				
MIX	+	+	+		+	+	+			
PUMP-M		+	+			+	+		+	+
PUMP	INTEGRATED IN THE CONTROL PANEL			+	+	+		+	+	

OPTIONAL:

SAMPLING CHAMBER

REMOTE CONTROLLER

COARSE STRAINER

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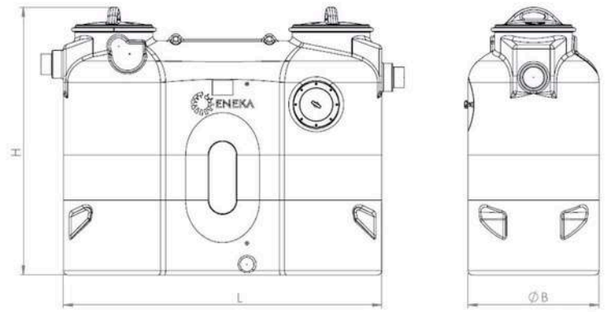
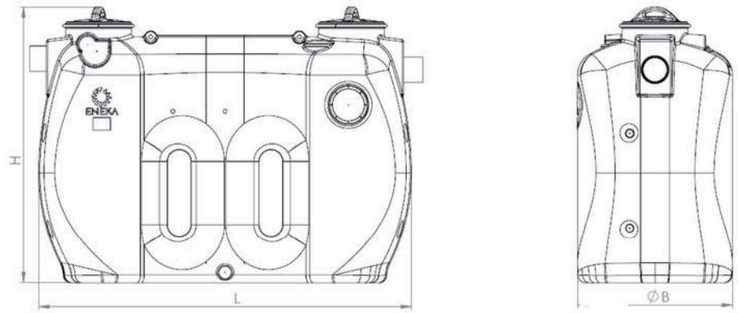
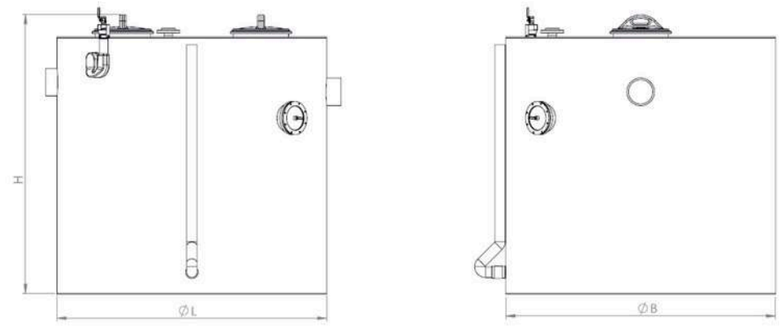
Greasly-2A & 4A dimensions



Greasly-7A & 10A dimensions



Greasly-15A & 20A dimensions



Type	Flow rate, l/s	Sludge trap volume, l	Inlet/Outlet, mm	Separator volume, l	Grease volume, l	Total volume, l
Greasly-2A	2	200	DN110	450	80	650
Greasly-4A	4	400	DN110	450	160	850
Greasly-7A	7	700	DN160	960	280	1660
Greasly-10A	10	1000	DN160	1076	400	2076
Greasly-15A	15	1500	DN200	1800	600	3300
Greasly-20A	20	2000	DN200	2200	800	4200

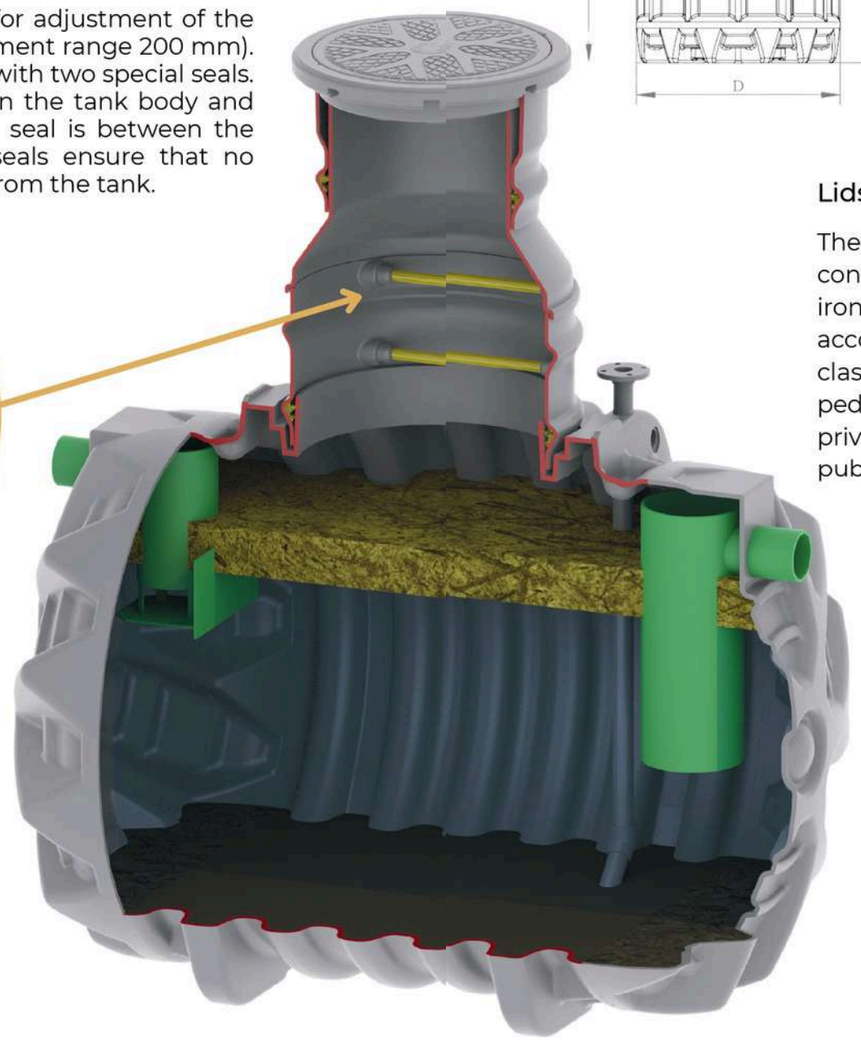
Underground Grease Separators GREASLY-B

Rigid body

A great stiffness of the separator body against ground and groundwater loads is achieved due to the advanced design and special ribbed structure. The consistent quality of the product is ensured by the automatic manufacturing method. Due to the seamless structure, the separator is leak and corrosion-proof.

Telescopic maintenance shaft for adjustment of the lid flush with the terrain (adjustment range 200 mm). The manhole shaft is equipped with two special seals. The first seal is located between the tank body and the manhole shaft, the second seal is between the manhole and telescope. The seals ensure that no liquid droplet will penetrate to/from the tank.

The integrated ladder in the maintenance shaft provides easy and safe access to the tank.

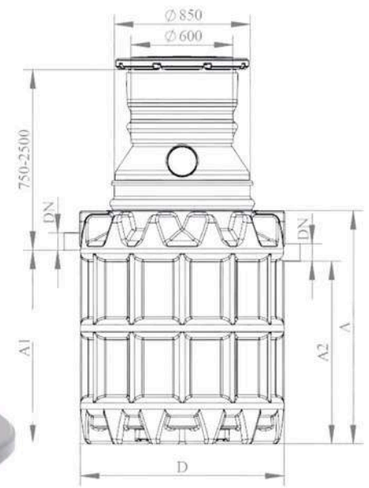


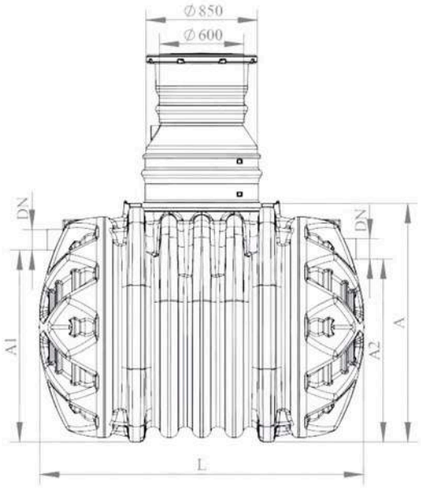
Greasly - environmental friendly product

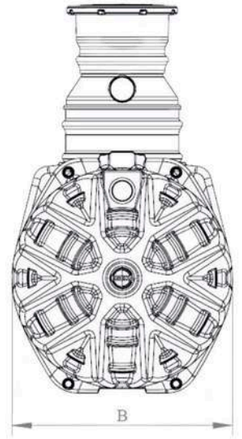
A very important feature of polyethylene products is that they can be easily recycled and reused thus reducing the waste and environmental impact.

Simple maintenance

GREASLY requires only little service which is limited by the removal of accumulated grease and sludge by a vacuum truck. After disposal, the internal surfaces of the separator shall be cleaned by the high-pressure device. Smooth surfaces of rotomoulded polyethylene tanks are ensuring simple and efficient cleaning.







Lids

The maintenance shaft is designed for connection with standard polyethylene or cast iron lids for load classes from A15 to D400 according to standard EN 124. Polyethylene lid class A35 can be applied in the areas used by pedestrians, pedal cyclists and light vehicles on private household driveways (not part of the public highway).

Extraction pipe can be paid to the area for convenient connection to extraction hose of a vacuum truck.

Easy transportation and installation

Greasly-B is made of polyethylene material therefore it is lightweight and easy to transport. Due to its rigid body, Greasly-B can be installed deep in the ground without any concrete reinforcements.

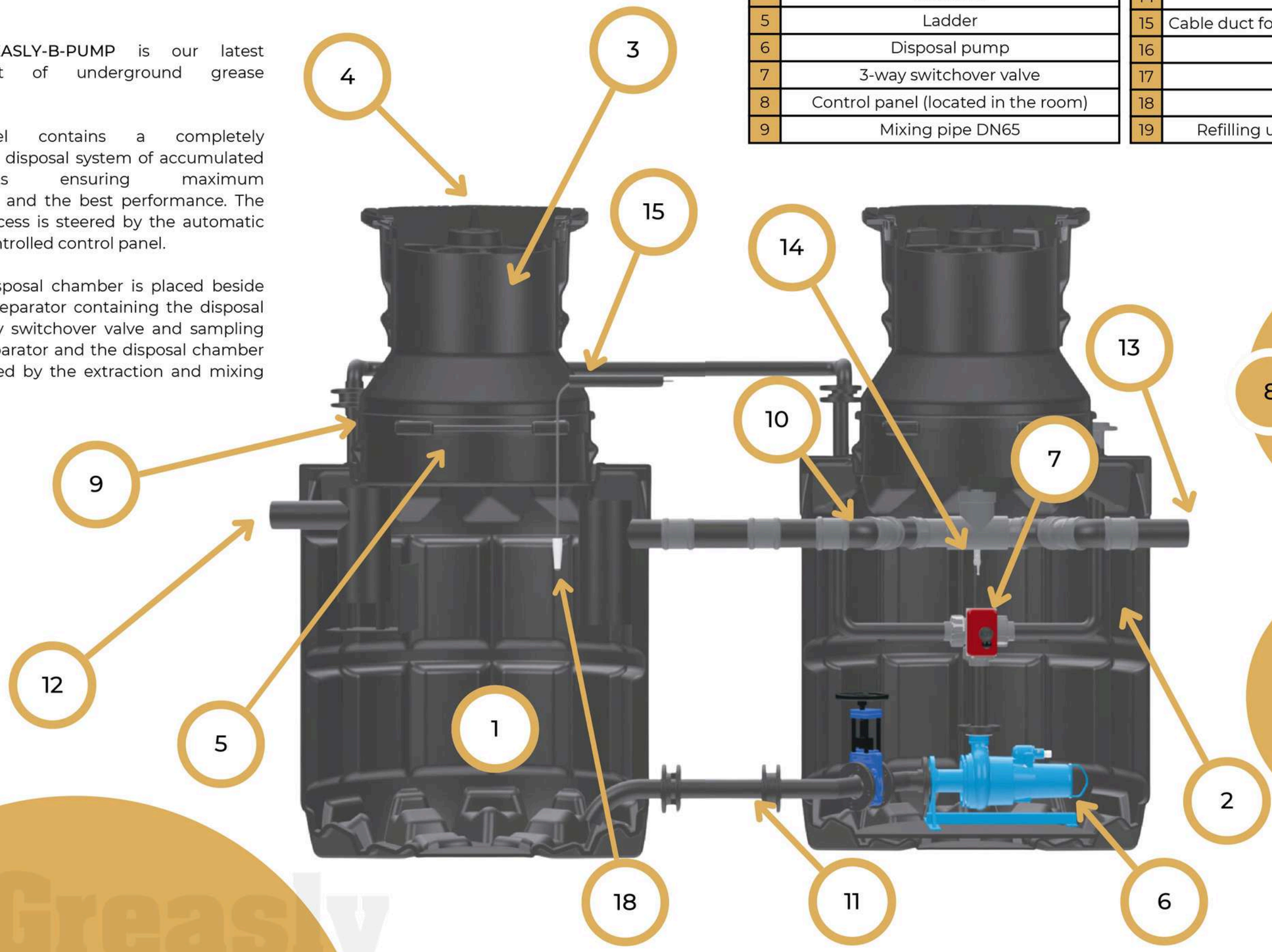
Underground Grease Separators GREASLY-B

WITH AUTOMATIC DISPOSAL

Series **GREASLY-B-PUMP** is our latest development of underground grease separators.

The model contains a completely autonomous disposal system of accumulated contaminants ensuring maximum convenience and the best performance. The disposal process is steered by the automatic program-controlled control panel.

A special disposal chamber is placed beside the grease separator containing the disposal pump, 3-way switchover valve and sampling unit. The separator and the disposal chamber are connected by the extraction and mixing pipes.



Main components:

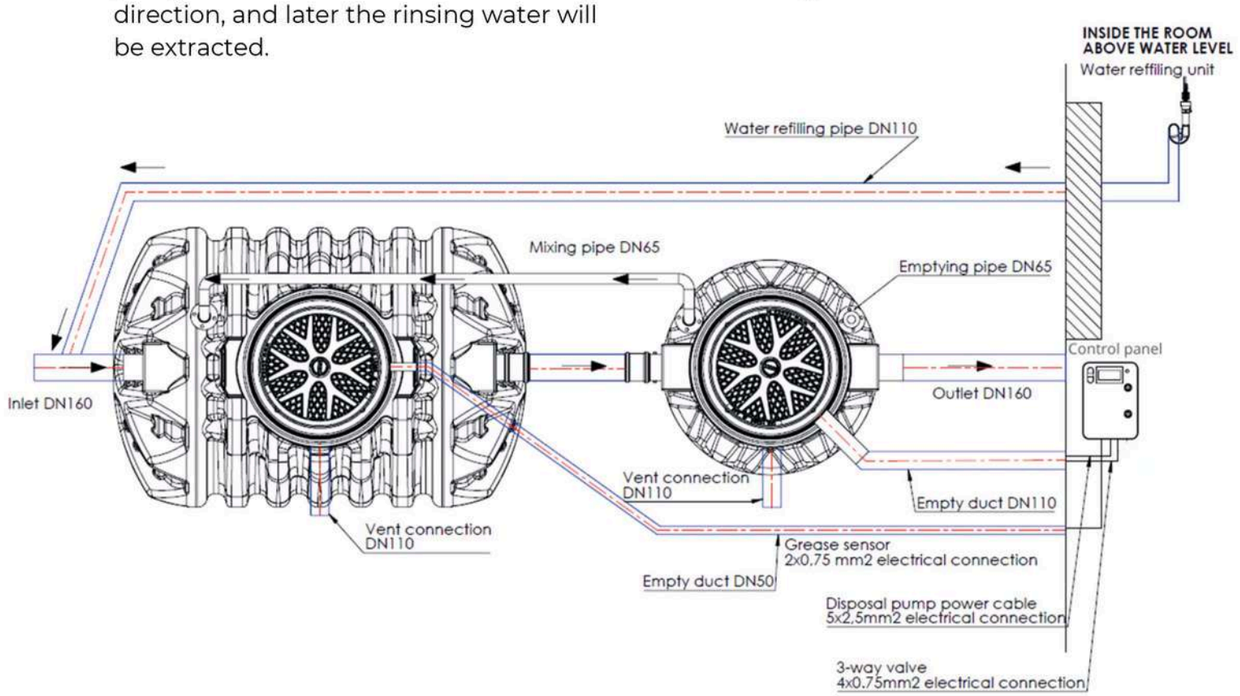
1	Grease separator
2	Disposal chamber
3	Maintenance shaft
4	Cover class A35 / D400 according to EN124 standard
5	Ladder
6	Disposal pump
7	3-way switchover valve
8	Control panel (located in the room)
9	Mixing pipe DN65

10	Emptying pipe DN65
11	Extraction pipe DN80
12	Inlet
13	Outlet
14	Sampling unit
15	Cable duct for Grease alarm sensor cable
16	Cable duct
17	Refilling pipe
18	Grease sensor
19	Refilling unit (located in the room)

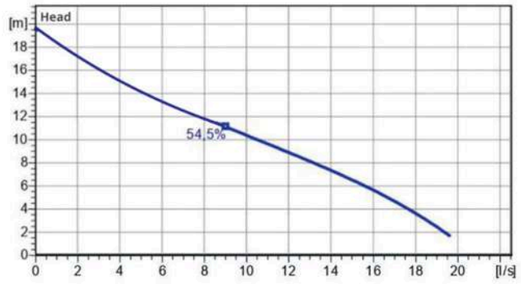
When the maximum grease amount is reached the Grease alarm is actuating the alarm signal. The Operator starts the disposal process by pushing the button in the main control panel or remote controller.

The sequence of the automatic disposal:

1. **Mixing:** 3-way Switchover valve turns to mixing direction. The disposal pump takes the liquid with solids and grease from the bottom of the separator and delivers it to the top of the tank thus mixing the contents of the separator.
2. **Emptying**: After the preset mixing period, the 3-way valve will be switched to Disposal mode. The disposal pump will be emptying the separator through the disposal pipe.
3. **Rinsing**: the separator is partially filled with freshwater, then the disposal pump is switched to the mixing direction, and later the rinsing water will be extracted.
4. **Refilling**: the freshwater supply is opened to fill up the separator via the Refilling unit located in the room.



DISPOSAL PUMP

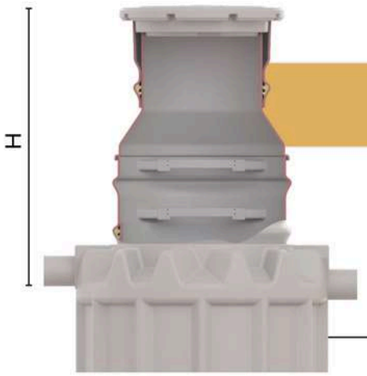


UNDERGROUND GREASE SEPARATORS

Type	Flow rate NS, l/s	Sludge trap volume, l	Separator volume, l	Grease volume, l	Total volume, l	Dimensions, mm						Weight, kg (without shaft) S/R **
						D/L*	A	B	A1	A2	DN	
Greasly-1B	1	100	250	40	350	860	1100	860	755	685	110	86/110
Greasly-2B	2	200	550	80	750	1300	1000	1300	740	670	110	80/120
Greasly-4B	4	400	850	160	1250	1300	1490	1300	1240	1170	110	96/146
Greasly-7B	7	710	1920	450	2620	2400	1510	1410	1170	1100	160	166/250
Greasly-10B	10	1030	2730	640	3760	2500	1830	1690	1170	1100	160	206/317
Greasly-15B	15	1560	3970	750	5530	3500	1830	1690	1450	1380	200	305/415
Greasly-20B	20	2140	4930	1000	7070	4500	1830	1690	1450	1380	200	376/535
Greasly-25B	25	2500	5720	1250	8220	5000	1830	1690	1450	1380	200	475/600

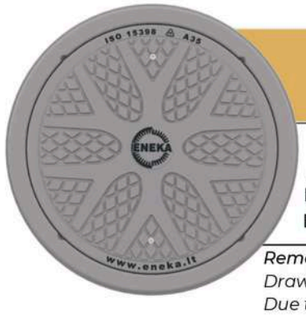
*L - for horizontal and D - vertical models **S - Standard body for installation in depth ≤ 1500 mm, R - reinforced body for installation depth ≤ 2500 mm

MAINTENANCE SHAFTS



Model	Diameter of clear opening d, mm	External diameter D, mm	Height H, mm*	Weight, kg
MS H1.0	600	Ø850	750-1000	31
MS H1.25	600	Ø850	1000-1250	33
MS H1.5	600	Ø850	1250-1500	42
MS H1.75	600	Ø850	1500-1750	52
MS H2.0	600	Ø850	1750-2000	62
MS H2.25	600	Ø850	2000-2250	71
MS H2.5	600	Ø850	2250-2500	80

LIDS



Model	Material	External diameter, mm	Diameter of clear opening, mm	Height, mm	Weight, kg
A15 - 1,5 t	Polyethylene	Ø1068	Ø800	164	20
A35 - 3,5 t	Polyethylene	Ø850	Ø600	162	13
B125 - 12,5 t	Cast iron	Ø868	Ø600	190	45
D400 - 40 t	Cast iron	Ø868	Ø600	190	73

Remarks: *All dimensions are approximate for general information only.*
Drawings of separators up to NS 150 are available on request.
Due to continuous product development the dimensions can be changed without further notice.

DISPOSAL CHAMBER

Inlet/Outlet size	L1, mm	L2, mm	D1, mm	D2, mm	h1, mm	h2	Weight, kg
Acc. to NS	1300	1300	1490	1300	1170	1140	146

ENEKA

ENEKA UAB is a Lithuanian company with long-term experience in the manufacturing of oil/water and grease separators. The sales network of ENEKA products covers not only Lithuania and the neighbouring countries as the Baltic states or Scandinavia, but many countries in Europe, the Middle East and Asia as well.

EXPERIENCE SINCE 1998 Y.

Manufacturing of
Oil/Water separators;
Grease separators;
Pumping stations;
Wastewater treatment plants;

CERTIFICATES

ISO 9001
ISO 14001
ISO 45001
SINTEF
SINGAPORE GREEN BUILDING PRODUCT "VERY GOOD"

SERVICES

Custom rotational molding;
Design and manufacturing of unique plastic products;

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