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# **GREASE & STARCH SEPARATOR**

## **ECODEPUR<sup>®</sup> GORFEC**

UNDERGROUND SOLUTION  
HIGH CAPACITY FOR GREASE AND STARCH SEPARATION AND STORAGE

## ECODEPUR® GORFEC GREASE AND STARCH SEPARATOR

The **ECODEPUR® GORFEC** Grease Separator goal is the reception and treatment of wastewaters contaminated with grease and starch, from the handling of food products in a domestic or industrial environment.

The raw material used (Polyethylene) was tested by an independent entity, in accordance with the requirements of Standard EN1825-1, guaranteeing high mechanical resistance and corrosion protection.

### ADVANTAGES



- Built-in sludge trap;
- Polyethylene Protection Cover;
- Separate inlets for water from sinks and dishwashers and for water from potato peelers;
- Mains water inlet for sprayer to break down accumulated scum;
- Possibility to incorporate a Oil Alarm System directly within the equipment structure;
- High storage capacity for separated products;
- Light and easy to install and maintain;
- High mechanical resistance and corrosion protection;
- Totally watertight (due to the construction materials, there are no leaks in the walls, in contrast with the traditional concrete systems);
- Without odours if provided adequate ventilation;
- No power consumption.

### MAIN CHARACTERISTICS

EUROPEAN STANDARD	EN 1825-1
<b>EQUIPMENT IDENTIFICATION</b>	Grease and Starch Separator
<b>BRAND</b>	ECODEPUR®
<b>TYPE</b>	GORFEC
<b>FIRE REACTION CLASS</b>	F
<b>MATERIAL</b>	Polyethylene
<b>SLUDGE TRAP</b>	Included
<b>VENTILATION OUTLET</b>	Included (F 1"1/2)
<b>PRESSURE WATER INLET</b>	Included (F 3/4")
<b>COVER</b>	Polyethylene

## APPLICATION

The wastewater produced in food processing is full of oils, fats and starch that interfere with drainage systems and sewage treatment systems.

PLUMBING	BIOLOGICAL TREATMENT	SLUDGE TREATMENT	
<ul style="list-style-type: none"> <li>Total or parcial obstruction, due to the gradual accumulation of oils and fats;</li> <li>Plumbing wear and degradation;</li> <li>High costs associated with plumbing cleaning;</li> <li>Unpleasant odours arising from the plumbing system.</li> </ul>	<ul style="list-style-type: none"> <li>Increase of the organic load;</li> <li>Reduction of effluent's biodegradability;</li> <li>Potenciação da formação de espumas, devido a alteração da tensão superficial da água residual;</li> <li>Increased energy consumption on the treatment systems due to reduced oxygen transfer coefficient;</li> <li>One of the causes for failure to comply with discharge parameters.</li> </ul>	<ul style="list-style-type: none"> <li>Operation problems with sludge treatment because the presence of oil and fat;</li> <li>Raise in energy consumption;</li> <li>Difficulty in sending the sludge to a suitable final destination;</li> <li>It can interfere with the operation conditions of the anaerobic digester, if there's any, by inhibiting the growth of microorganisms necessary for its operation .</li> </ul>	

The installation of a grease and starch separator can retain oils, fats and starch, avoiding damage to downstream sanitation systems. Its application is recommended for the following establishments:

- Restaurants;
- Hotels;
- Bars;
- Camping Parks;
- Canteens;
- School's;
- Residential areas;
- Laundries.

## OPERATION

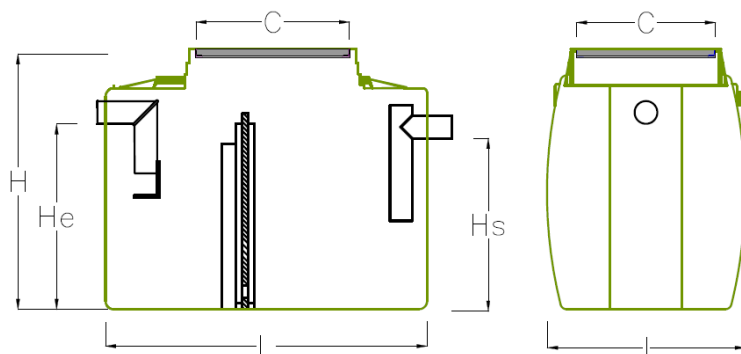
ECODEPUR® GORFEC Grease and Starch Separators does not need any power consumption; it's based on the gravitational separation of materials with different densities than the water.

Heavier materials (sludge, sand, etc) settle into the Sludge Trap compartment and are trapped there. This compartment also holds Grease that easily floats. In order to break the accumulated scum, there is a sprayer that emits a jet of water onto the surface of the liquid line. This water jet will be activated by a manual valve or solenoid valve, to be provided by the customer, whenever there is scum on the surface.

Greasy water from sinks and dishwashers must be directed to the main entrance of the equipment, and starch-rich water from potato peelers must be directed to the perpendicular entrance.

Only water and substances lighter than water, namely the fats to be separated, pass to the separation zone. The grease will accumulate on the surface, while the clean water is drained at a level that does not allow the mixing of the phases.

## DIMENSIONS



### OPTIONS

OIL ALARM SYSTEM  
CAST IRON COVER  
ENZYMATIC ACTIVATION KIT  
TIMED SOLENOID VALVE  
BIOLOGICAL SOLUTION TO DEGRADE OILS AND FATS

TYPE	NS (l/s)	VOLUME TOTAL (l)	L (mm)	I (mm)	H (mm)	He (mm)	Hs (mm)	C (mm)	Ø PIPE (mm)	Ø STARCH PIPE (mm)	WEIGHT (kg)
GORFEC NS 1,5	2	1.360	1.560	960	1.230	930	820	750 x 750	110	110	100
GORFEC NS 3	4	2.410	2.580	960	1.230	930	820	750 x 1415	110	110	165
GORFEC NS 6	6	3.770	4.060	960	1.230	915	805	(750 x 750) + (750 x 1.415)	125	110	270
GORFEC NS 8	8	4.820	5.080	960	1.230	880	770	2 x (750 x 1.415)	160	110	305

The pictures and dimensions can be changed without notice.

The dimensions indicated have a tolerance of  $\pm 2\%$ .

Grease and starch separators with higher treatment capacity are available – Information upon request

## DIMENSIONS OF GREASE SEPARATION CHAMBERS

VOLUMES IN ACCORDANCE TO THE REQUIREMENTS OF THE EUROPEAN STANDARD EN 1825-1.

TYPE	SUPERFACE OF GREASE SEPARATION ZONE (m <sup>2</sup> )	VOLUME OF GREASE SEPARATION ZONE (l)	VOLUME OF GREASE COLLECTION AREA (l)	VOLUME OF SLUDGE TRAP (l)
GORFEC NS 1,5	1,30	510	250	490
GORFEC NS 3	2,20	970	430	990
GORFEC NS 6	3,40	1.810	880	1.080
GORFEC NS 8	4,40	2.620	1.300	1.010

## INSTALAÇÃO

ECODEPUR® GORFEC Grease and Starch Separators installation must follow the recommendations of the document supplied Installation Instructions for Polyethylene Reactors/Tanks (<10.000l), which is provided with the Product Catalogue. Simultaneously, please bear in mind the following consideration:

1. The protection covers supplied with this equipment are made in polyethylene. Is a Customer responsibility the acquisition and installation of a cover complying with EN124 with the inscription "SEPARATOR" according with EN1825. The access covers installation must be on surface of the installation respecting the class mark on the covers (Ex: class B125 - Footways, pedestrian areas and comparable areas, car parks or car parking decks);
2. A waterpoint and a manual valve or solenoid valve (at the customer's expense) must be provided to supply water to the sprayer; This valve will be installed outside the tank, and access for opening/closing must be guaranteed.
3. As a good practice, a vent should be installed on the equipment.

In case of doubt do not hesitate to contact ECODEPUR technical services.

## MAINTENANCE

ECODEPUR® GORFEC Grease and Starch Separators do not need special care from a structural point of view, due to the high resistance and corrosion protection of the material from which they are made.

Grease and Starch Separators must be inspected, emptied and cleaned regularly. The frequency of inspection, emptying and cleaning should be determined with regard to the grease and sludge storage capacity of the separator and in accordance with operational experience. After cleaning and emptying, the equipment must be filled again with clean water and the sprayer must be cleaned.

## WARRANTY

Five (5) years, covering any manufacturing defects.

ECODEPUR® – Tecnologias de Protecção Ambiental, Lda will not be responsible if there are clear indications of poor installation, misuse (including the use of chemical emulsifiers) or poor maintenance, or if it is shown that the equipment was overloaded, based on the terms stipulated in Standard EN 1825-1.

## CONTACTS

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## WATER AND WASTEWATER TECHNOLOGIES

All technical data, indications, photographs or other information provided in our brochures and publications are provided for guidance only. ECODEPUR® reserves the right to modify the information presented without prior notice.