PENTAIR
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Splitfix

THE COMPACT ABOVE-GROUND GREASE SEPARATOR

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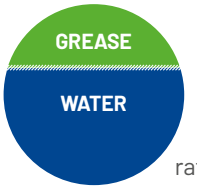


What is a grease separator?

A grease separator separates grease, oil and solids from wastewater before the wastewater enters the sewer system. It takes advantage of the fact that **grease is lighter than water** and therefore floats to the top. Once the wastewater has been separated from the grease in this initial cleaning process, it can be discharged to the public sewer.

Grease separators are **required by law** for businesses that produce wastewater that contains grease. If grease is discharged with the wastewater, it could cause odour problems as well as blockages and damage to the sewer network and sewage treatment works. Jung Pumpen's solution to this problem is the **Splitfix grease separator**, which can be installed above ground as a modular system.

The legal requirements for the use of grease separators are defined in the DIN EN 1825 standard (design and nominal size) and DIN 4040-100 (operation, maintenance and monitoring). Local by-laws concerning wastewater disposal may include additional requirements regarding installation, emptying frequencies and documentation.

If the outlet lies below backflow level, or the backflow protection requirements of DIN 4040-100 are not met, then a **lifting station**, such as Jung Pumpen's **Compli 1000**, must be installed downstream of the grease separator.

Splitfix introduction

The Splitfix grease separator is available in **five different sizes**, with the **connection for the direction of flow on the right or left**, as required.

The sampling tank, which is a required accessory, is available in **three different sizes**. Each size is available with either a **vertical or horizontal outlet**.

The modular system, with **six different accessory sets**, allows the grease separator to be expanded as required.

Versatile thanks to modular expansion

Powerful where grease abounds: Splitfix in action

Grease separators protect the sewer system and the environment wherever businesses produce wastewater that contains grease.

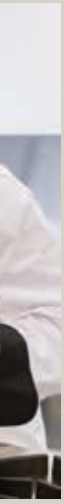
Such businesses include the hospitality sector, with restaurants, snack bars, hotels, commercial kitchens, canteens (in schools, hospitals and commercial premises) and catering services, but also butchers, meat processing plants and the food industry.

The size of grease separator required is determined based on the number or connected operating facilities, the type of facility, or the calculated peak water discharge rate.

Restaurants

Canteens and commercial

Separate the grease. Prevent damage.



Butchers & food industry

Snack

Seven good reasons at a glance:

1. Odour-free disposal, without opening the tank

The Splitfix system is fully enclosed, since the waste is disposed of via a discharge pipe.

- No unsavoury odours in the kitchen or utility room
- Ideal for installing indoors (basement or utility rooms)

2. Compact design

The slim design (the smallest size is just 700 mm wide) allows easy transport through just about any door. Mounting right next to a wall is possible.

- Retrofitting for existing systems is no problem
- No wall breakthrough, no crane, no earthworks

3. Above ground, with no earthworks

Designed for installation above ground, in buildings – no earthworks or buoyancy control required.

- Quick installation
- Significantly lower costs for construction and installation

4. High-quality polyethylene – durable and corrosion resistant

The tank is resistant to aggressive fatty acids, cleaning agents and higher temperatures

- Long service life
- No risk of corrosion
- Low weight yet excellent stability

5. Maintenance access is possible from two sides

- Ideal where installation space is restricted
- Shorter maintenance times
- Lower operating costs

6. The grease level is monitored via a viewing window, integrated as standard

- Unambiguous visual checks instead of estimations
- Optimal planning of emptying appointments
- Overfilling and operational disruptions are avoided

7. Modular accessory concept

The Splitfix grease separator is compatible with a wide selection of accessories:

- Mixer/agitator
- Discharge pump
- Sampling tank with vertical and horizontal outlet
- Intelligent controls
- Conversion from manual to automated filling is possible

For smaller catering businesses

The grease separator, installed indoors, includes the essential functions for discharging greasy wastewater from businesses with **low to medium levels of grease**. The system includes a tank, a manually operated inlet valve with ball valve, a tank lid, a viewing window (on the left or right, as required) and a connector for direct discharge.

The fill level can be checked quickly and easily by looking through the viewing window, making it easy to determine the right time for disposal.

The system is emptied via the direct discharge connector, provided the grease separator is easily accessible and the vacuum tanker can be parked nearby. Once emptied, the grease separator must be refilled manually. It is then ready for operation again.

- **Manual filling**
- **Direct disposal via vacuum tanker**
- **Viewing window for checking the fill level**
- **Low maintenance**

Large amounts of grease, long disposal distances

This version also offers a **control unit**, an **automated filling system** and, if desired, a **discharge pump** and/or a **mixer**. This allows the **discharge process to be automated** to a large extent and time controlled.

The mixer ensures even mixing before discharge and prevents grease deposits.

It the grease separator is a long way from the vacuum tanker, the vacuum generated by the vehicle is often insufficient to extract the viscous waste. In this case, the discharge pump takes on the task of actively pumping the waste out in order to completely and reliably empty the tank, even across longer distances.

The automated refilling system automatically fills the system up to the required operating level again once the tank has been emptied.

- **Automated filling system**
- **Mixer for homogenisation**
- **Optional discharge pump**
- **Time-controlled operation**

Ideal for deep basements

Planning and installation

In normal operation, grease separators installed above ground in the basement do need **none of the usual buoyancy control** measures of traditional systems. For this type of above ground installation, the DIN 4040-100 standard requires stable mounting, but no explicit buoyancy control. The following must be observed:

Stability & foundations

- A level, load-bearing floor
- An adequately dimensioned floor slab
- No point loading

Accessibility

- Free access for maintenance, emptying and inspection
- Adequate opening options
- Suitable accessibility for disposal vehicles

To plan means to profit

Backflow protection

If the grease separator lies below backflow level, a **wastewater lifting station in accordance with DIN EN 12050-2** must be installed downstream of the separator. Duplex sewage lifting stations from the Compli range, such as the Compli 1000 or Compli 1200, are ideally suited for this purpose. **Direct gravity discharge** into the sewer is **not permitted**. The installation of **backflow check valves/preventers** is **not permitted** for this type of application.

Aeration and venting

Grease separators installed above ground must be properly aerated and vented. Ventilation is not an optional extra; it is a mandatory functional requirement of DIN 1986-100 in conjunction with DIN 4040-100.

- **Connection to the building's venting system**
- At least at its end point, the inlet pipe to the grease separator must be vented above roof level.
- It is not permitted to vent only into the room.
- The clean tank of the grease separator need not be vented.
- The vent pipe of the lifting station must not connect to the inlet/vent pipe of the grease separator.

- **Dimensioning the vent pipe**
- The cross-sectional area of the vent pipe must equal that of the inlet pipe.
- Long sections of horizontally laid pipeline must be avoided

Temperature and stability of the medium

The wastewater temperature at the inlet of the grease separator must not exceed 60°C. The separation efficiency of the grease separator drops at higher temperatures – in particular, hot water from dishwashers must be cooled accordingly before it flows into the separator.

- **Why this limit is important (briefly explained)**

Grease separators work according to the principle of gravity. If the wastewater is too hot, the grease and oil remain more fluid or emulsify more easily – the separation process becomes less efficient, grease can "slip through", and limits could be exceeded, resulting in deposits forming in the pipe.

- **So what happens with hot water and water from dishwashers (> 60°C)?**

Many dishwashers discharge hot rinsewater (> 60°C, up to 90°C). Usually, the wastewater cools down as it flows from the dishwasher to the grease separator. Ideally, the temperature at the inlet is then below 60°C. Inlet temperatures above 60°C would mean using a higher nominal size of grease separator in order to comply with the dimensioning requirements.

Operation and maintenance

To ensure that a grease separator continues to work reliably in the long term and to operate in compliance with the regulations, regular measures, including their proper documentation, are prescribed.

Minimum 1x /month

Emptying and cleaning

Grease separators and sludge traps need to be completely emptied and cleaned – **at least once a month, but more commonly every 14 days**. The intervals depend on the amount of grease and on the statutory requirements.

Monthly

In-house monitoring

A **qualified person** must carry out a visual inspection and check, among other things, the level of the grease and sludge and the condition of the system. The results must be recorded in operating log book.

Yearly

Maintenance

Once a year, the system must be serviced by **qualified persons/specialist companies**, while the system is empty and clean. The interior surfaces, the fittings and the technical components must be inspected, and the operating log book must be checked to ensure there are no omissions.

Every 5 years

General inspection

This must be carried out by **a specialist** before initial commissioning and at least once every five years during ongoing operation, unless otherwise specified.

Regularly

Documentation

All of these measures must be documented fully in the **operating log book**. The operator is always the responsible party, even if the work is contracted out to third parties.

What kind of discharge pump?

If the grease separator is to be emptied mechanically via a discharge pump, the pump must be suitable for pumping **wastewater that contains grease and sludge and is sometimes heavily contaminated**.

Clear rules ensure reliability

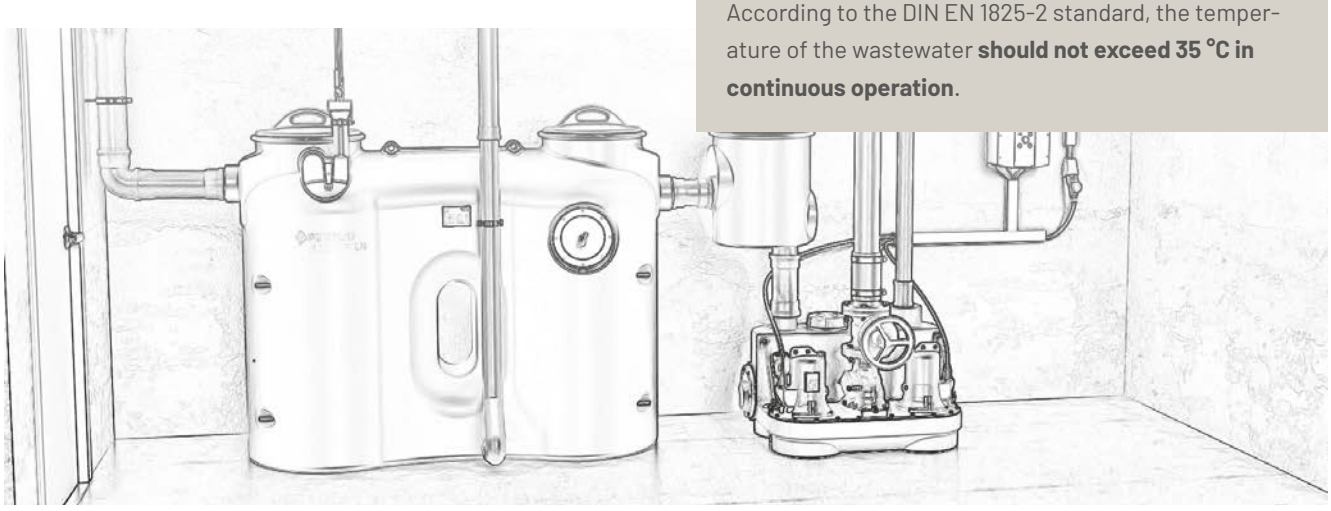
In practice, the following requirements have established themselves with regard to the minimum **free passage (passage of solids)** of discharge pumps for grease separators:

- Free ball passage **≥ 30 mm**
  (minimum value usually applied in practice)
- For wastewater containing larger quantities of sludge or food residues, the value is often **≥ 40 mm**

The reason:

During emptying, homogenised mixtures of grease, water and sludge are pumped out. Blockages, breakdowns and increased wear could occur if the free passage is too small.

The **temperature resistance of the pump** is of critical importance when it comes to grease separators. According to the DIN EN 1825-2 standard, the temperature of the wastewater **should not exceed 35 °C in continuous operation**.



Splitfix grease separator – article numbers, dimensions and weights

Product	Dimensions LxWxH (mm)	Weight (kg)	Article no.	Sampling tank
Splitfix NS2 - right	1940 x 842 x 1286	88	JP51024	DN 100
Splitfix NS2 - left	1940 x 842 x 1286	88	JP51025	DN 100
Splitfix NS4 - right	1940 x 842 x 1526	101	JP51026	DN 100
Splitfix NS4 - left	1940 x 842 x 1526	101	JP51027	DN 100
Splitfix NS7 - right	1776 x 1080 x 1716	145	JP51028	DN 150
Splitfix NS7 - left	1776 x 1080 x 1716	145	JP51029	DN 150
Splitfix NS10 - right	2356 x 1080 x 1816	182	JP51030	DN 150
Splitfix NS10 - left	2356 x 1080 x 1816	182	JP51031	DN 150
Splitfix NS15 - right	2000 x 1953 x 2019	415	JP51032	DN 200
Splitfix NS15 - left	2000 x 1953 x 2019	415	JP51033	DN 200

Note: "Right" and "left" refer to the connection of the flow direction.

Required accessories

Product	Article no.
Sampling tank DN 100 horizontal outlet	JP51037
Sampling tank DN 150 horizontal outlet	JP51038
Sampling tank DN 200 horizontal outlet	JP51039
Sampling tank DN 100 vertical outlet	JP51046
Sampling tank DN 150 vertical outlet	JP51047
Sampling tank DN 200 vertical outlet	JP51048

Accessory sets for modular expansion

Product	Article no.
Accessory set A NS2-NS4, comprising:	JP51034
GS control unit, filling system NS2 - NS4 and GS remote control	

Product	Article no.
Accessory set A NS7-NS15, comprising:	JP51040
GS control unit, filling system NS7 - NS15 and GS remote control	

Product	Article no.
Accessory set B NS2-NS4, comprising:	JP51035
GS control unit, filling system NS2 - NS4, GS remote control, connection set for pump NS2-NS4, and GS pump 25/2 AW1	

Product	Article no.
Accessory set B NS7-NS15, comprising:	JP51041
GS control unit, filling system NS7 - NS15, GS remote control, connection set for pump NS7-NS15, and GS pump 25/2 AW1	

Product	Article no.
Accessory set C NS2-NS4, comprising:	JP51036
GS control unit, filling system NS2 - NS4, GS remote control, connection set for pump NS2-NS4, GS pump 25/2 AW1 and GS mixer	

Product	Article no.
Accessory set C NS7-NS15, comprising:	JP51042
GS control unit, filling system NS7 - NS15, GS remote control, connection set for pump NS7-NS15, GS pump 25/2 AW1 and GS mixer	

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