

# Test Report

REPORT NO:  
746905



**DANISH  
TECHNOLOGICAL  
INSTITUTE**

Gregersensvej  
DK-2630 Taastrup  
+45 72 20 20 00  
Info@teknologisk.dk  
www.teknologisk.dk

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**Customer:** Contact: Joakim Fiedler  
Company: Fettavskiljaren Sverige AB  
Address: Gullberna Park Flaggskär 1  
Town: 371 54 Karlskrona, Sweden

**Material:** The grease separator is nominal size NS ½. There was no sludge trap combined to the separator.

All materials are PP also the inlet and outlet. Inlet is ø40 mm and outlet is ø50 for the ½ l/s separator. A drawing of the separator is shown at page 4. Testing was carried out on a prototype-separator.

**Purpose and scope of the test:** The purpose of the test is to obtain CE marking for the separator. The test separator was sent to the Danish Technological Institute by the manufacturer and received at March the 16<sup>th</sup>, 2017.

**Sampling:** The test separator was sent to the Danish Technological Institute by the manufacturer.

**Method:** The test was carried out according to:  
1. EN 1825 - 1, 2003, clause 4, 5.3.1-5.3.10 and 5.5.1  
Analysis of the oil content of the water is carried out by Eurofins Denmark, which is accredited to carry out these analyses.

**Period:** The test was carried out the 5<sup>th</sup> of April 2017 in a set-up described in EN 1825-1.

**Result:** The test shows that the separator meets the efficiency requirements in EN 1825-1. With a flow of ½ l/s, there is a content of residual oil at 24.2 mg/l in the discharge (maximum 25 mg/l oil in the discharge). The results are shown in appendix 1. Furthermore, the grease separator has been controlled according to the requirements in EN 1825-1, clause 5.3.2-5.3.9, see appendix 1.

**Terms:** The test has been performed according to the rear side conditions, which are according to the guidelines laid down by DANAK (The Danish Accreditation). The testing is only valid for the tested specimen.  
The test report may only be extracted, if the laboratory has approved the extract.

**Place:** Date: 28.04.2017, Danish Technological Institute, Taastrup, Pipe Centre

**Signatur:** Stig Clausen  
Consultant

Ulrik Hindsberger  
Center Manager



**DANAK**  
Test Reg. nr. 02



## Appendix 1

### Materials

All materials are PP also the inlet and outlet. There is no documentation for the properties of the materials. The testing has not included checking specific documentation for the composition and grease-resistance of the materials, and no tests of the materials' tightness and resistance to oleaginous liquids have been carried out, except for tests of the separator's efficiency with subsequent observation, which gives no reason for further comment.

### 5.3.2 Watertightness has been testing according to 8.4.1

The system has been tested by filling up water to 40 mm above the maximum operational liquid level. There were no leaks after 20 min of testing. The tightness of the extension shaft has not been tested. If extension shafts are used, the tightness of the connections must be tested after installation.

### 5.3.3 Accessibility

The separator system including the inlet and outlet is accessible for maintenance and inspection.

### 5.3.4 Inlets outlets and connectors

The inlet of the separator is 40 mm and the outlet is 50 mm. The inlet and outlet has to be at least 100 mm according to table 1 in EN 1825-1.

### 5.3.6 Sludge trap

There is no sludge trap.

### 5.3.8 Storage Capacity

Fettavskiljaren Sverige AB has informed that the storage capacity is calculated to 10 l. With a capacity of 10 l there is still a safe distance to the upper edge of the outlet.

### 5.3.9 Fall

The fall through the grease separator is more than 70 mm

### 5.5.3 Determination of the nominal size

The grease separator has been testing according to 8.5.1. The separator has been tested with a flow of ½ l/s. The manufacturer has informed that the maximum flow for less than 30 seconds is 2 l/s.

### 8.5.1 A. Surface levels in the separator

During testing with a flow of ½ l/s there is more than 60 mm from the upper edge of the separator to the water level.

### B. Separator efficiency

The test was carried out as described in EN 1825-1, annex A.

The samples in the separator outlet were taken through an inclined tube to the sample bottle.

The following tests use an oil type with specifications corresponding to ISO 8217, ISO-F-DMA, with a density of  $0.85 \pm 0.015 \text{ g/cm}^3$  at 12°C.

### C. Method

The separator is measured and the dimensions noted on the manufacturer's drawing.

The separator is filled with water up to the outlet. The volume of water is called:  $V_K = 35$  litres.





Flow  $\frac{1}{2}$  l/s

Water at  $\frac{1}{2}$  l/s and oil at 5 ml/s (2,5 ml per l/s) is added for a period of:

$T_B = 4 \times V_K / Q_w \times 60$  minutes (though at least 15 minutes) plus the test period  $T_P$ , which is 10 minutes.

$T_B = 15$  minutes. **Oil is added for 15 minutes + 5 minutes, i.e. a total of 20 minutes.**

In the period  $T_P$ , samples are taken from the outlet directly to the sample bottle in the **first** minute after  $T_B$ , and then a further 4 samples at 1-minute intervals.

The 5 samples are analysed separately, and the test results given as the arithmetic calculated mean value.

**Total quantity of oil: 3 l**

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#### **Marking**

The separator is marked with a THOR, see also picture 1. The manufacturer has stated that operating and maintenance instructions are enclosed with the separator on delivery.

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#### **Manufacturer's product information**

The conformity of the test separator with the manufacturer's construction drawings has been controlled. The main dimensions tally with the manufacturer's drawing.

### **Test results**

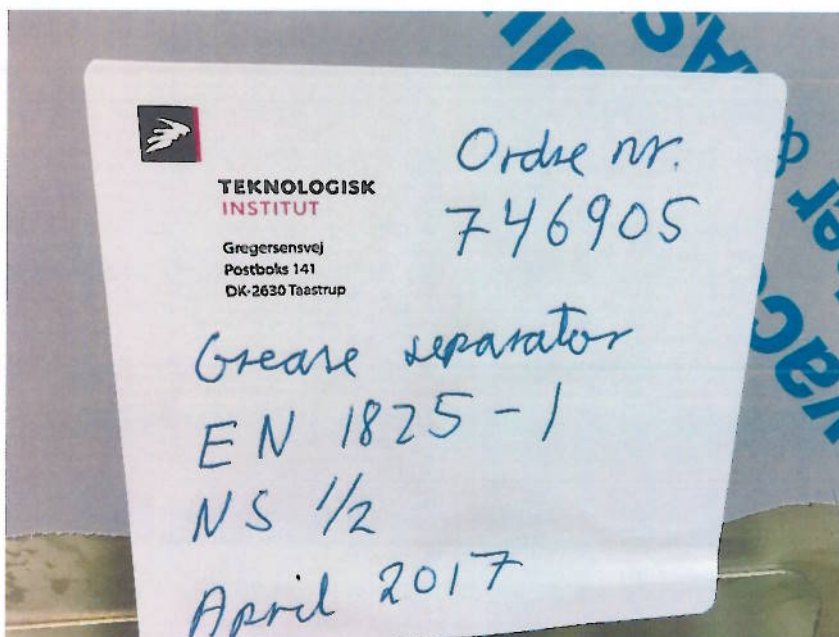
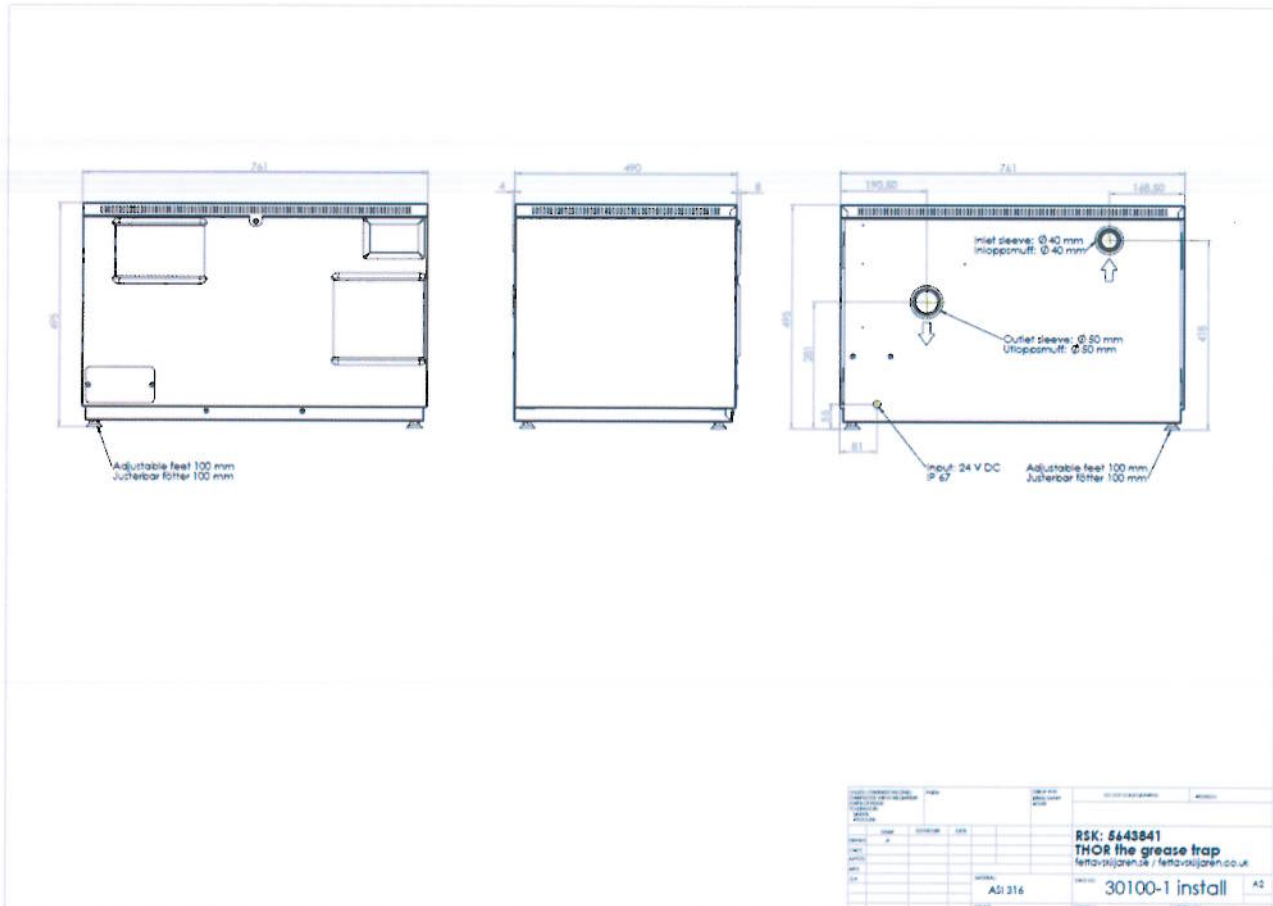
<b>Sample glass no.</b>	1050417	2050417	3050417	4050417	5050417
<b>Test/minutes</b>	16	17	18	19	20

### **Results from analysis**

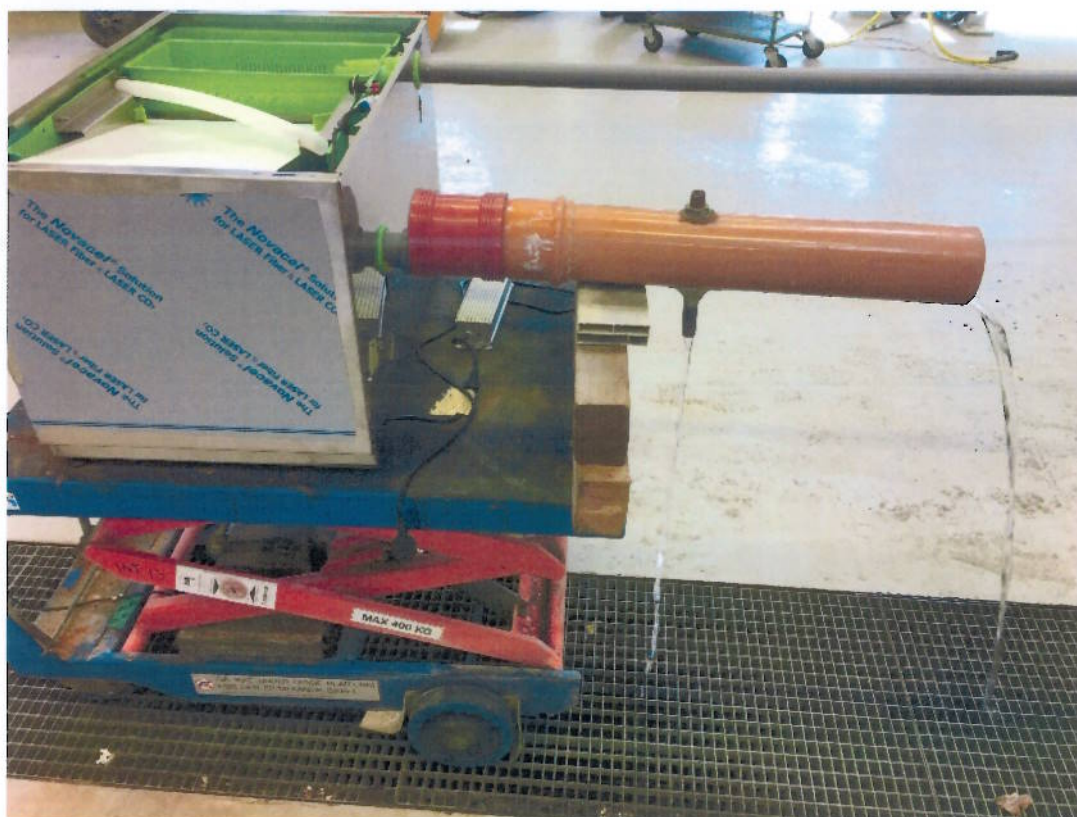
<b>Sample label</b>	<b>Variable</b>	<b>Result</b>	<b>Unit</b>	<b>Method used</b>
Sample glass 1050417	Total hydrocarbon	22	mg/l	EN 1825-1, 2003
Sample glass 2050417	Total hydrocarbon	25	mg/l	EN 1825-1, 2003
Sample glass 3050417	Total hydrocarbon	26	mg/l	EN 1825-1, 2003
Sample glass 4050417	Total hydrocarbon	23	mg/l	EN 1825-1, 2003
Sample glass 5050417	Total hydrocarbon	25	mg/l	EN 1825-1, 2003
<b>Arithmetic mean</b>	<b>Total hydrocarbon</b>	<b>24.2</b>	<b>mg/l</b>	



### Appendix 2: Drawings and pictures from the test









The general conditions pertaining to assignments accepted by Danish Technological Institute shall apply in full to the technical testing or calibration at Danish Technological Institute and to the completion of test reports or calibration certificates within the relevant field.

**Danish Accreditation (DANAK):**

DANAK is the national accreditation body in Denmark in compliance with EU regulation No. 765/2008.

DANAK participates in the multilateral agreements for testing and calibration under European co-operation for Accreditation (EA) and under International Laboratory Accreditation Cooperation (ILAC) based on peer evaluation. Accredited test reports and calibration certificates issued by laboratories accredited by DANAK are recognized cross border by members of EA and ILAC equal to test reports and calibration certificates issued by these members' accredited laboratories.

The use of the accreditation mark on test reports and calibration certificates or reference to accreditation, documents that the service is provided as an accredited service under the company's DANAK accreditation according to EN ISO IEC 17025.

**Construction Product Directive:**

The Danish Technological Institute guarantees that employees carrying out tests to be used together with harmonized standards under notification no. 1235 according to EU regulation 305/2011, article 43, satisfy all the requirements made for capability, integrity and impartiality. You find the CPD here:

[http://ec.europa.eu/growth/single-market/european-standards/harmonised-standards/construction-products/index\\_en.htm](http://ec.europa.eu/growth/single-market/european-standards/harmonised-standards/construction-products/index_en.htm)