

COMS with SECON Clients

Installation Quick Guide

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1 Installation of VISY-Stick Oil Separator and VISY-Sludge



The oil separator is Ex zone. Observe safety regulations!



The COMS system fulfils the functions of an automatic warning device for separators of light liquids. The alarms can be forwarded on request with potential-free change-over contacts.

- a) To connect the sensors, a 4-core cable from the oil separator to the petrol station building must be available.
- b) Clean the oil separator (light liquid separator and sludge trap) and fill it to overflowing with water.
- c) Install VISY-Command Web or alternatively VISY-Command with a SECON client. The software version of SECON must be at least **2.2.5.0!**
- d) Install VISY-Stick Oil Separator (mechanically). For installation of the measuring sensor, the oil reservoir of the oil separator must be within the measuring range of the VISY-Stick Oil Separator.

Note: The dimensions $a_3 = 240$ mm and $a_4 = 100$ mm must not be undercut!
See also

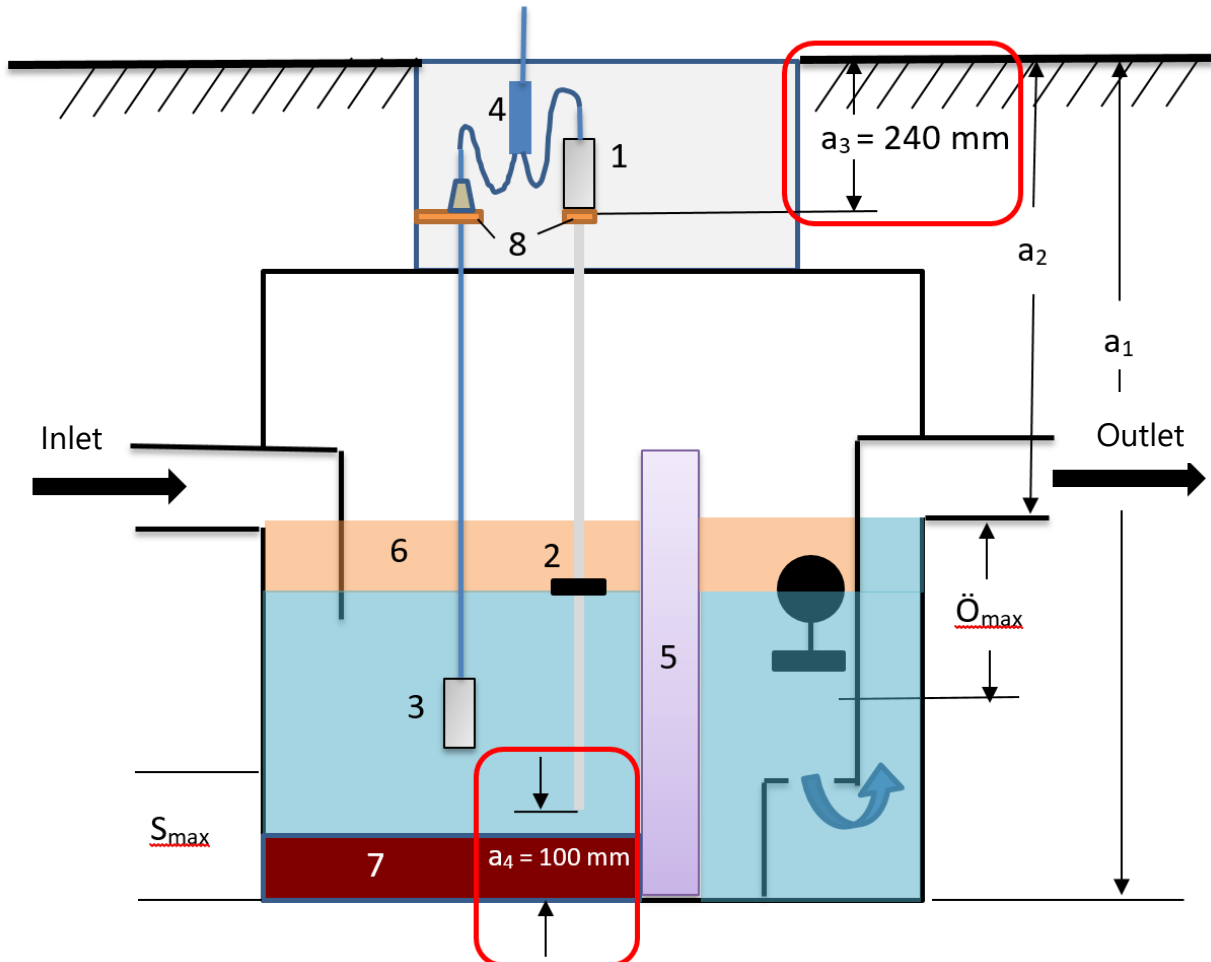


User guide for determining the length and positioning of the probes for an oil separator! (See figure below)

- e) Install VISY-Sludge (mechanically).
The measuring sensor must be installed that it
 - is positioned below the maximum oil layer thickness and
 - at least 100 mm above the maximum sludge thickness, and
 - has a maximum distance of 1400 mm to the bottom of the sludge trap.
- f) Electrically connect VISY-Stick Oil separator and VISY-Sludge with the FAFNIR connection cable and, if necessary, an extension to VISY-Command (Web).



Warning: Oil separators are EX zone. Safety regulations must be observed!



O_{max} = maximum oil layer thickness

S_{max} = maximum sludge layer thickness

a_1 = separator depth

a_2 = distance (road - overflow)

a_3 = safety distance = 240 mm

a_4 = safety distance to the ground = 100 mm

1 = VISY-Stick Oil Separator

2 = interface float

3 = VISY-Sludge

4 = cable connector (2-1)

5 = coalescing mat

6 = oil layer

7 = mud layer

8 = mounting bracket

2 Basic settings in VISY-Setup

- a) Adjust the "**Data protocol**" for communication with VISY-Stick" to "Multi Probe 4800 bps":

Menu:

Control Unit [F2] → Advanced settings → Data Protocol for VISY-Stick communication" → Select and accept "**Multi Probe 4800 bps**"

- b) Enter the **device numbers** of VISY-Stick Oil separator / VISY-Sludge:

Menu:

Select *Probes* [F4] → select the "*Probe Terminal No.*" of the sensor → select the measuring sensor (*VISY-Stick / VISY-Sludge*) → enter the "**Serial number of the probe**".

- c) Enter the **type of product** inside the oil separator as described here:

Menu:

Probes [F4] → Type of Product:

- Select "**freely configured**"
- Product Density at 15 °C: Enter **1000 g/l**
- Temperature coefficient: Enter **0.2 per thousand / °C.**

- d) Enter the **Product Name**:

Menu:

Probes [F4] → Product name: Enter **Oil separator #**
(# = **number of the oil separator**)

- e) Enter the **Level- and Volume alarms**:

Menu:

Probes [F4] → Level- and volume alarms ... → Water alarm "Very high" and "High": Enter **10 mm** and Accept

- f) Read and note the **Product Level** (float position) of VISY-Stick Oil Separator and the **Distance** to the bottom of the VISY-Sludge probe:

Menu: Select Current Values [F1] → Select Probe Terminal No." → Select the measuring sensor (*VISY-Stick / VISY-Sludge*)

- **Product Level (VISY-Stick) and**
- **Distance (VISY-Sludge)**

are to be noted down

3 Oil layer table as tank table for VISY-Setup

An Oil layer table with height and volume of the oil layer must be created. To do this, enter the appropriate data (see below) for calculating the oil layer table in the Excel spreadsheet.

- a) Open file "**COMS-Oil-Layer-Table.xlsx**"
- b) Enter the above of item 2f) noted **Product Level** (float-position of the VISY-Stick Oil Separator) into the **yellow field** of the Excel spreadsheet in millimetres.
- c) Enter the maximum **Oil Layer Thickness** and the maximum **Oil Layer Volume** into number 11 of the **green table** of the oil layer table.
- d) Copy the values of the **blue fields** of the tank table (Item No. 1 ... 12, columns of level and oil volume)
- e) Insert the copied fields to VISY-Setup with **Insert Clipboard:**
Menu:
Tank tables [F5] → Insert clipboard → **Accept** new values.
- f) Enter the **Filling Level for the Product Alarm in mm** from the blue table (item No. 10, column "Filling level") in VISY-Setup and Accept new values:
Menu:
Probes [F4] → Level & Volume Alarms ... → Product alarm: Low".
→ **Accept** new values

4 Configuration



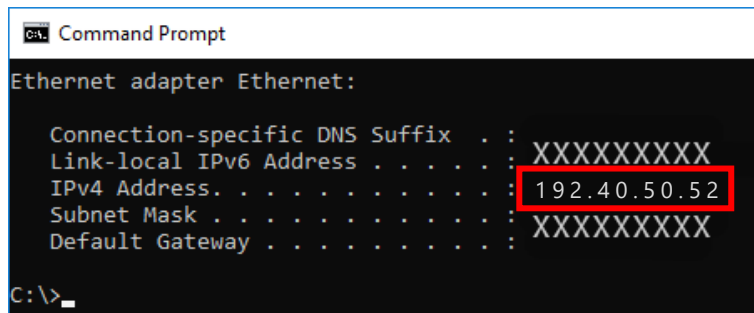
For configuration the internet browser "Mozilla Firefox" is required.



The router must be set to Dynamic Host Configuration Protocol (DHCP)!

4.1 Network connection between SECON client and laptop

- a) Connect your notebook via network cable to the router to which the SECON-X is connected.
- b) Determine the IP address of the laptop
 - In the Run dialog box (Windows key + R), type "**cmd**" and press ENTER
 - In the command line window that opens, enter the command "**ipconfig**" and press ENTER -> the IP address of the laptop is displayed:



```

C:\> ipconfig

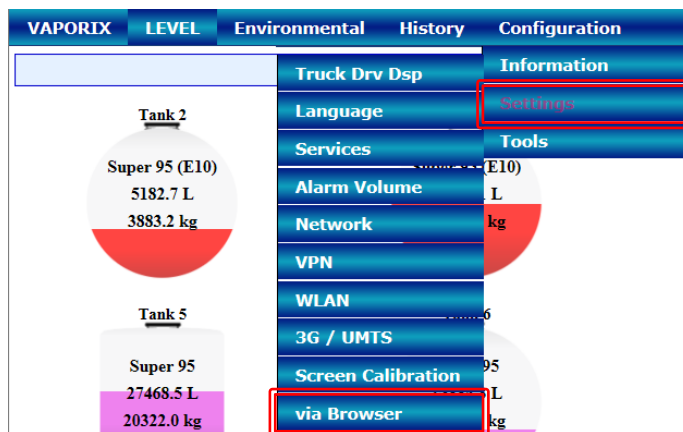
Ethernet adapter Ethernet:

    Connection-specific DNS Suffix  . : XXXXXXXXXX
    Link-local IPv6 Address . . . . . : XXXXXXXXXX
    IPv4 Address. . . . . : 192.40.50.52
    Subnet Mask . . . . . : XXXXXXXXXX
    Default Gateway . . . . . : XXXXXXXXXX

C:\>
  
```

- c) Get access to the configuration menu in the SECON client with:

User: admin
Password: vap22765
- d) Enter the IP address of the laptop in the SECON client:
Menu: Configuration – Settings – Via browser



Enter the last digits after the point of the Laptop IPv4 address in the field "Laptops / PCs IP address" of the SECON client (*in this example 52, see picture above*):

VAPORIX	LEVEL	Environmental	History	Configuration
Configuration > Settings > via Browser				
		SECONs IP Address:	192.40.50.146	
		Laptops / PCs IP Address:	192.40.50.	<input type="text"/>
		<input type="button" value="Reset"/> <input type="button" value="Start"/>		

- e) Press the "Start" button
- f) Following is a confirmation with the IP addresses that an https connection to the laptop has been established (see the following figure).

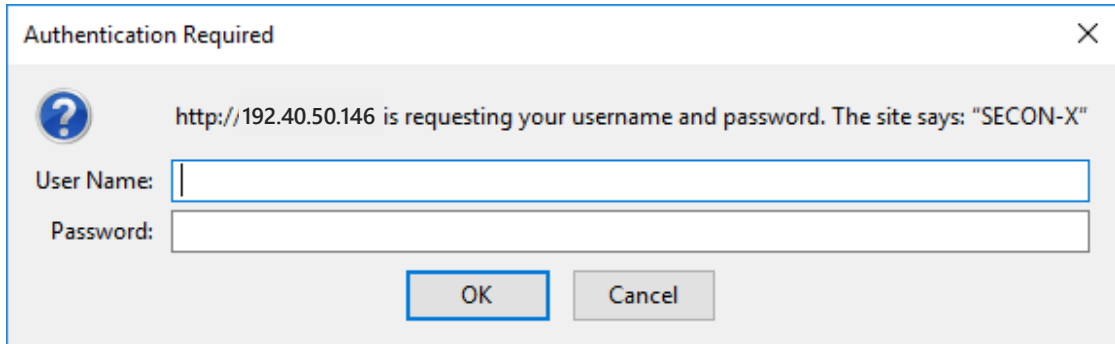
VAPORIX	LEVEL	Environmental	History	Configuration
Configuration > Settings > via Browser				
Information: The configuration has been saved successfully.				
Information: The SECON can be reached at the following address: https://192.40.50.146				
		SECONs IP Address:	192.40.50.146	
		Laptops / PCs IP Address:	<input type="text" value="192.40.50.52"/>	
		<input type="button" value="Reset"/> <input type="button" value="Stop"/>		

4.2 Configuration of the SECON client with the laptop

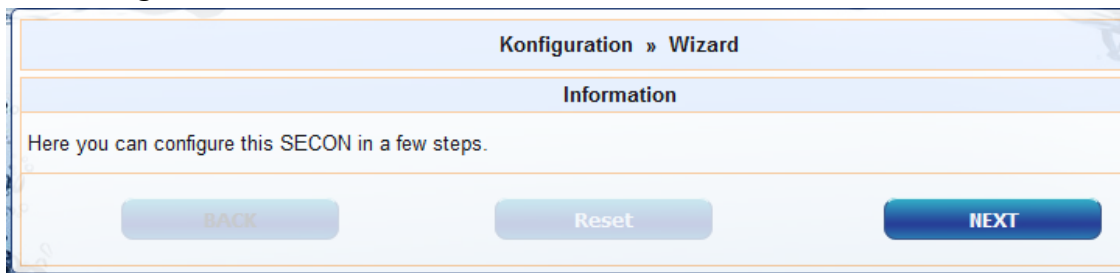
- a) Start the internet browser "**Mozilla Firefox**" on your laptop.
- b) In the address bar of the browser, enter the IP address of the SECON client. (in this example it is the address <https://192.40.50.146>)

VAPORIX	LEVEL	Environmental	History	Configuration
Configuration > Settings > via Browser				
Information: The configuration has been saved successfully.				
Information: The SECON can be reached at the following address: https://192.40.50.146				
		SECONs IP Address:	<input type="text" value="192.40.50.146"/>	
		Laptops / PCs IP Address:	192.40.50.52	
		<input type="button" value="Reset"/> <input type="button" value="Stop"/>		

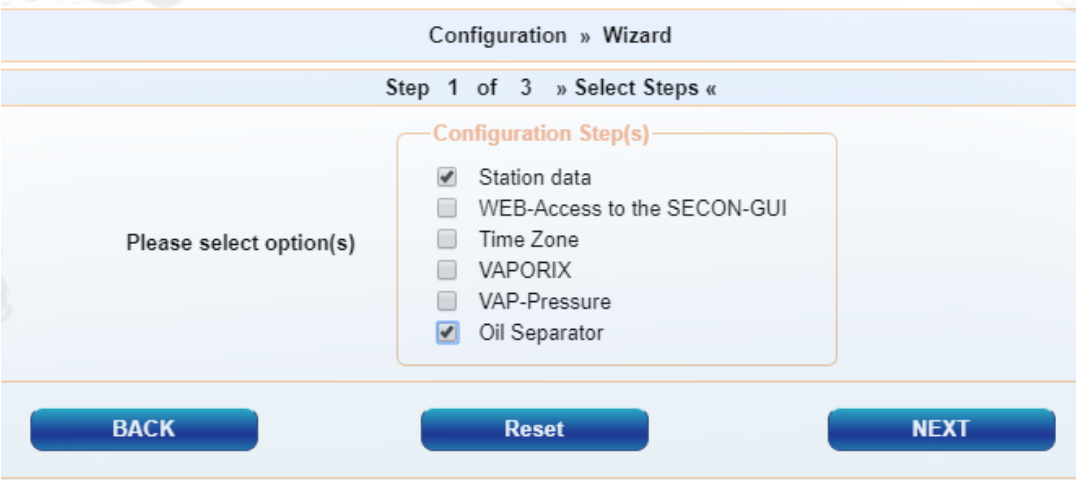
- c) In the browser the following window opens.
Enter your user name and password:
User Name: admin
Password: Fafnir22765Altona
and confirm with OK



- d) The configuration wizard starts. Press the "Next" button

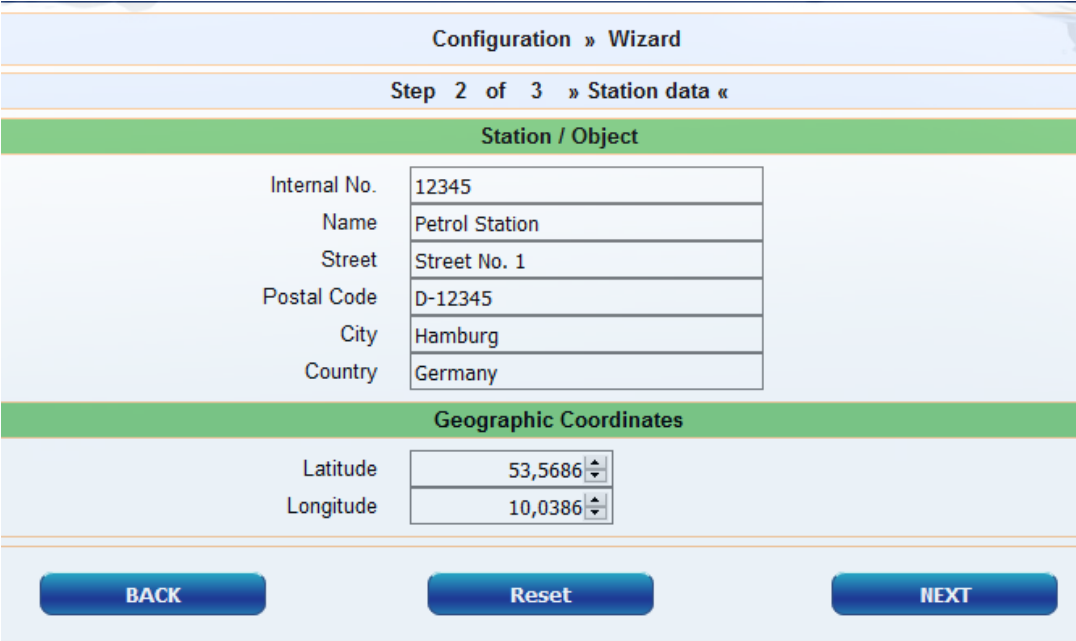


- e) Select options "**Station data**" and "**Oil Separator**"



Press the "NEXT" button

- f) Enter the station data:



- g) Determination of geographic coordinates (latitude and longitude, optional):

1. Open the internet browser
2. Start Google Maps
3. Right click on the location of the station with the mouse
4. In the opened context menu select "What is here?"
5. The coordinates are displayed (latitude / longitude)
6. Enter the geographical coordinates in the according fields
7. Press the "NEXT" button

h) Configuration of the oil separators and the evaluation

The following window is divided into three sections:

1. INFORMATION: Detected Probes (current readings)
2. Common settings for all oil separators
3. Settings for individual oil separators

1. INFORMATION: Detected Probes (current readings)

The measured values of the [Sludge Probe » VISY-Sludge «](#) and the [Tank Probe » VISY-Stick Oil Separator «](#) are displayed here:

Configuration » Wizard				
Step 3 of 3 » Oil Separator «				
INFORMATION: Detected Probes [2018-01-23 08:46:12]				
Sludge Probe » VISY-Sludge «			Tank Probe » VISY-Stick «	
Probe No.	Measurement values	Lev.[mm]	Product name / Probe No.	Measurement values
1		830.9	Super 95 (E10) 1	Vol. [L] Lev. [mm]
14		940.9	Super 95 (E10) 2	2610.8 769.0
16		960.9	Super 95 (E10) 3	6100.0 860.5
			Super 95 (E10) 4	11158.4 1017.4

2. Common settings for all oil separators

"Logging" area:

The settings in this area should remain unchanged.

The checkbox "Activation" is already activated by default.

"Options" area:

- Time-out maintenance after: 8 hours (recommendation)
- Day of monthly inspection: 28 (recommendation)
- Alarm repeat »Light fluid too long constant« after: 1 or 2 day (s) (recommendation)

Common settings for all Oil Separators	
<p>Logging</p> <p>Activation <input checked="" type="checkbox"/></p> <p>Interval <input type="text" value="1"/> Hour(s)</p> <p>Start Time <input type="text" value="00:00"/></p>	<p>Options</p> <p>Time-out Maintenance after <input type="text" value="8"/> Hour(s)</p> <p>Day of monthly Inspection <input type="text" value="28"/></p> <p>Alarm rep. »Light fluid too long constant« <input type="text" value="2"/> Day(s)</p>

3. Settings for individual oil separators

"Oil separator" area:

- **Number**: freely selectable; e.g. **1** for the first oil separator ...
- **Name**: choose a significant name, e.g.: City (HH); Station Number: 54; Number of the oil separator: 12345678

The name would then be, for example: **HH-54-12345678**

Idx.	Settings for individual Oil Separators	
	Oil Separator	
	Number <input type="text" value="1"/>	Identifier <input type="text" value="HH-54-12345678"/>

Section "Sludge probe »VISY-Sludge«":

- **Probe assigned to this oil separator**: Activate **the checkbox by a check mark**
- **Probe No.:** Probe terminal to which VISY-Sludge is connected.
- **Distance to oil separator bottom**: [See point 2f](#) [measured value VISY-Sludge]
- **Alarm threshold of the mud layer**: **50% of the maximum permitted sludge layer**

Sludge Probe » VISY-Sludge «	
Assign probe to this Oil Sep.	<input checked="" type="checkbox"/>
Probe No.	<input type="text" value="2"/>
Distance to Oil sep. bottom	<input type="text" value="980"/> mm
Alarm threshold sludge layer	<input type="text" value="216"/> mm

Tank probe »VISY-Stick« area:

- **Assign probe to this oil separator**: Activate **the checkbox by a check mark**
- **Probe No.:** Probe terminal to which VISY-Stick Oil Separator is connected.
- **Maximum filling level**: Corresponds to the reference height: [See point 2f](#) [measured value VISY-Stick]
- **Max. Light fluid volume**: see **blue table item no. 12** "Oil volume", [see also item 3c](#)
- **Level at max. light fluid volume**: see **blue table item no. 12** "Filling Level", [see also point 3c](#)
- **»Light fluid layer too thick« Alarm threshold**: Enter 80% of the maximum permitted oil layer thickness (see nameplate)
- **»High level, retention« Alarm threshold**: here enter a value between **120** and **200** mm (measured from the reference height)

Tank Probe » VISY-Stick «

Assign probe to this Oil Sep.

Probe No.	2
Max. filling level	494 mm
Max. Light fluid Volume	300 L
Level at max. Light fluid	200 mm
»Light fluid layer too thick« Alarm threshold	160 mm
»High level, retention« Alarm threshold	120 mm

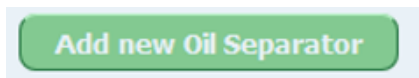
Alarm » Light fluid too long constant «

Recognition time span	25 Day(s)
Min. Level change	5 mm

"Alarm »Light fluid for too long constant«" area:

- Recognition time span: 25 days (recommendation)
- Minimum level change: 5 mm(recommendation)

If another oil separator is to be added, then press the following key:



If no further oil separator is to be added, then press the following key:



Idx.	Settings for individual Oil Separators																						
1	<p>Oil Separator</p> <p>Number <input type="text" value="1"/> Identifier <input type="text" value="HH-54-12345678"/></p> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>Sludge Probe » VISY-Sludge «</p> <p>Assign probe to this Oil Sep. <input checked="" type="checkbox"/></p> <table border="1"> <tr><td>Probe No.</td><td>2</td></tr> <tr><td>Distance to Oil sep. bottom</td><td>980 mm</td></tr> <tr><td>Alarm threshold sludge layer</td><td>216 mm</td></tr> </table> </div> <div style="width: 45%;"> <p>Tank Probe » VISY-Stick «</p> <p>Assign probe to this Oil Sep. <input checked="" type="checkbox"/></p> <table border="1"> <tr><td>Probe No.</td><td>2</td></tr> <tr><td>Max. filling level</td><td>494 mm</td></tr> <tr><td>Max. Light fluid Volume</td><td>300 L</td></tr> <tr><td>Level at max. Light fluid</td><td>200 mm</td></tr> <tr><td>»Light fluid layer too thick« Alarm threshold</td><td>160 mm</td></tr> <tr><td>»High level, retention« Alarm threshold</td><td>120 mm</td></tr> </table> <p>Alarm » Light fluid too long constant «</p> <table border="1"> <tr><td>Recognition time span</td><td>25 Day(s)</td></tr> <tr><td>Min. Level change</td><td>5 mm</td></tr> </table> </div> </div>	Probe No.	2	Distance to Oil sep. bottom	980 mm	Alarm threshold sludge layer	216 mm	Probe No.	2	Max. filling level	494 mm	Max. Light fluid Volume	300 L	Level at max. Light fluid	200 mm	»Light fluid layer too thick« Alarm threshold	160 mm	»High level, retention« Alarm threshold	120 mm	Recognition time span	25 Day(s)	Min. Level change	5 mm
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Min. Level change	5 mm																						

END of configuration

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