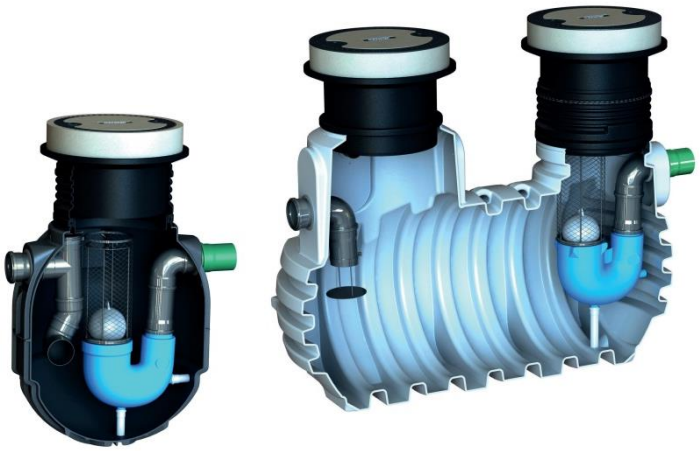
Operating and Maintenance Manual for Oil Water Separator Systems KLsepa.compact



It is imperative to observe the items described in this operating manual. In case of non-compliance, all warranty claims shall lapse.

Missing instructions must be requested from us without delay.

It is imperative to check the tanks for potential damage prior to transferring them into the building pit!

The installation must be carried out by a specialised company.

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System

System

Compact separator	Coalescence (Class. I) ◯	Petrol (Class. II) ◯
Nominal size NS:	_____	
Sampling point:	Internal ◯	External ◯
Article number:	_____	
Order confirmation no.	A- _____	
Sludge trap:	_____	Liter
Oil volume:	_____	Liter
Alert system?	Signalling oil layer thickness ◯	
	Signalling backwater ◯	

Name of the person responsible for the technical operation: _____

Name of the responsible operating staff member on duty: _____

Commissioned on: _____

Has a disposal contract been signed with an authorised specialist company? YES◯ NO ◯

Name: _____

Address: _____

1. General safety instructions

This section contains information on safety measures and residual risks. Read this chapter carefully before using the system to ensure safety in handling of the system.
The applicable accident prevention regulations must be observed during all work. Particularly during the walk through of the tanks, a second person should be present for safety reasons.
Furthermore, all relevant regulations and standards must be observed during assembly, installation, maintenance and repair. Details hereto can be found in the respective paragraphs of this operating manual.
The installation of the system and individual components must be carried out by a specialised company. The overall system must be shut down during all work on the system or the components.
The tank cover must remain closed at all times, except for work inside the tank, otherwise there is a risk of accident. The rain protection mounted at delivery only serves as packaging for the transport and is not accessible or childproof. It must be removed immediately upon delivery and replaced by an appropriate cover (telescopic dome shaft with respective cover).
Only covers that comply with EN124 (or equivalent AS3996) must be used.

1.1. Marking obligation

All covers of the separator system must be marked accordingly with the class of the cover according to EN 124 or equivalent AS3996. Furthermore, the provided identification plate must be attached in a clearly visible manner at one of the access shafts.

1.2. Explanation of Warnings and Prohibitions

Hazard warning

Warning of dangerous electrical voltage

Warning of danger of falling

Warning of hand injuries

Warning of explosive atmospheres

Prohibition of fire, open flames, and smoking

1.3. Hazard statements

1. To ensure safety, all persons coming into direct contact with the plant must take note of the contents of this documentation.
2. It is prohibited to use the system for a purpose other than that described by the manufacturer.
3. Locally applicable labour and safety regulations and laws must be followed even if they are not explicitly listed in this guide. The same applies to environmental legislation.
4. If the operator detects faults or dangers, the manufacturer or the responsible maintenance company must be informed immediately.
5. Safety devices must never be removed or bypassed during normal operation. Safety devices may be temporarily bridged or disabled only by maintenance staff during repair and maintenance.
6. If the use of personal protective equipment (safety shoes, safety glasses, gloves, ear protection, etc.) is required, it must be ensured that it will be used. Defective or damaged personal protective equipment must be replaced immediately with properly functional protection.
7. Work on electrical installations may only be performed by qualified personnel.
8. All safety instructions and warnings on the machine must be kept in easily legible condition.
9. Hot parts must not come into contact with explosive or flammable chemicals.
10. The plant must not be operated under the influence of alcohol (be careful about any residual alcohol from the previous day!) or of medication affecting perception and responsiveness.

1.4. Warnings

Always observe these instructions as personal injury or property damage may result otherwise!

Installation site

Make sure that the warning system is not installed above or in the immediate vicinity of water vessels. Risk of electric shock in case of improper installation.

Electrical supply circuit

Always connect the warning system to a properly installed 230 V socket or grounded socket that is protected with a 16A fuse in accordance with the technical specifications.
In the event of a thunderstorm, electrical equipment connected to the mains may be damaged. An overvoltage protection device in the building installation is recommended as protection. The connection lines must be laid in a manner that they do not present a tripping hazard.

Explosive Atmospheres

The warning system must not be operated if the housing or the insulation of a line is damaged or dented.

Damages

Servicing of the system must be carried out by authorised, qualified personnel or qualified electricians.

Servic work

The power supply must be guaranteed at all times. Please make sure of that. Additional power consumers on the same fuse may disrupt operation.

Power supply

2. Initial commissioning / water tightness test

Prior to the first commissioning, the system must be filled with clean water until no further rise of the water level is noticeable. For this purpose, the float must be lifted or removed, as it will otherwise be sucked down and not be able to rise to the surface on its own.
After filling the system up with fresh water, the float is inserted into the float guide. The float will stick out approx. 2 to 3 cm above the water surface and must be able to freely float.
If a mixture of oil and water is fed into an empty tank, the separator system will not work properly and the wastewater would leave the separator system in a state that is cleaned insufficiently.
Each oil separator is delivered with an identification plate pre-installed on the last riser closest to the finished cover level. If there isn't one in place already, please contact GRAF Australia immediately.
The taper shaft ring must be covered by the original cover supplied and must be marked "separator system".

All relevant information, including the serial number from the type approval plate must be entered on page 2 in this operating manual!
Commissioning must be documented in the commissioning report (please refer to section 4 in the annex). Any claims under the warranty can only be made if the completed commissioning report is provided!

3. Operation and maintenance according to EN 858-2

3.1. Operation

In general, the provisions of EN 858-2 apply. Please note the following issues:

- The draining intervals must be arranged such that a continuous and flawless functioning of the system is ensured. The drainage must be carried out at least semi-annually (for exceptions see next point).
- Maintenance must be carried out according to the maintenance instructions for the sepa.compact separator system by an authorised maintenance company. This will guarantee the correct functionality of the system.
- The operator must make sure that no unauthorised substances or stable emulsions are introduced into the separator. It is essential to make sure that only harmless washing and cleaning agents are used for the separator system. Do not use cleaning agents containing solvents. It is advised to have the manufacturer of the cleaning agent confirm that.
- Only the flow rate determined by the nominal size may be fed into the separator system. It may only contain light liquids comprising free (floating) mineral oils. Emulsions and dissolved oils deriving from the use of washing and cleaning agents that are hard to separate cannot be retained (please refer to the table of substances in the technical specification).
- Unauthorised removal of separator components such as the float, is not permitted.
- Prior to accessing the container, it must be vented appropriately. Smoking is not allowed at all times. It is advised to additionally use respiratory protective devices.

3.2. Maintenance

All measurements and events must be recorded in the operational log!

The extension of disposal intervals must be communicated to the relevant authority, if required according to the applicable wastewater regulations.

3.2.1. Monthly self-inspection by the operator

1. Measure the oil layer thickness
2. Determine the height of the sludge level
3. Visually inspect the coalescence unit and clean or replace, if necessary
4. Check for a potential difference in water level before and after the coalescence level
5. Check automatic closure device for ease of movement and cleanliness; press the float down about 2 cm and check whether it rises by itself; clean, if necessary.
6. Skim off floating substances.
7. Monitor formation of odours (thinners, waxes, etc.)
8. Check the warning and/or control system for cleanliness and proper functionality according to the operating instructions of the alarm system.

The cleaning intervals must be arranged such that the storage capacity of the separator and the sludge trap is not exceeded and the functionality is not interrupted. The separators must be drained at a level of separated light fluid volume corresponding with 80% of the storage capacity, and the sludge traps/volume if they are at half level of capacity as per following chart:

Designation	Sludge storage		Oil storage		
NS	Volume	Coating thickness	Volume	Coating thickness	
[l/s]	[l]	50 % [cm]	[l]	max. [cm]	80 % [cm]
3-300	300	53,0	300	33,0	28,0
3-400T	400	66,5	500	56,5	44,5
3-600 6-600	600	86,5	300	33,0	26,0
6-1300T 10-1300T	1300	65,0	500	31,0	26,0
10-2000T 15-2000T	2000	80,8	660	34,1	28,4

3.2.2. Semi-annual check

1. Cleaning of the sampling shaft.
2. Cleaning of the coalescence unit parts.
3. Drainage of the separator system, if necessary.

3.2.3. Maintenance by service company / waste management company

Please proceed as follows when draining the separator:

1. Extract the oil layer.
   → Extracted oil must only be temporarily stored in facilities approved for storing oil.
2. Extract the water phase/floating substances completely underneath by means of suction.
3. Sludge trap area must be purged with a high pressure cleaner and extracted again.
4. Refill the drainage bend in case no more water is left.
5. Refill the complete separator with clean water.

In general, it must be made sure that the float is floating freely and does not plug the outlet opening.

3.2.4. What to Do in the Event of a Fault

If the water is no longer able to flow freely through the separator system inlet

a. Check the thickness of the oil layer.
b. Check the proper function of the float.
c. Notify the maintenance company

3. Operation and maintenance according to EN 858-2

Operating Manual

Operating year:_____

Monthly		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Layer thickness of the light fluid in the separator	[mm]												
Sludge level in sludge trap	[yes/no]												
Is the float free floating and does is close tightly?	[yes/no]												
Is the warning system functioning properly?	[yes/no]												
Have the coarse floating substances in the sludge trap and separator been removed?	[yes/no]												
Coalescence insert plugged and cleaned?	[yes/no]												
Any visual defects?	[yes/no]												
Are the covers IO?	[yes/no]												
Are inlet, outlet and connection lines unplugged?	[yes/no]												
Has sludge and / or light fluid been removed?	[yes/no]												

Semi annually		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Sludge removed from separator and separator cleaned?	[yes/no]]												
Coalescence insert cleaned?	[yes/no]												
Sampling port cleaned?	[yes/no]												

4. Record of Commissioning:

4.1. Measures taken during installation

The watertightness test was carried out and recorded by a qualified person in accordance with the requirements from the relevant responsible authorities:

Date: _____

Stamp: _____

Signature: _____

Company responsible for the installation: _____

4.2. Measures taken during commissioning

1. The identification plate was attached to the shaft structure with dowels.
Carried out by:_____ date:_____
Signature Company responsible for the installation:_____

2. All tanks in the separator system were filled with fresh water.
Carried out by:_____ date:_____
Signature:_____

3. The float for automatic closure was inserted.
Inserted by:_____ date:_____
Signature:_____

3. The operating manual was handed over.
Inserted by:_____ date:_____
Signature Operator:_____