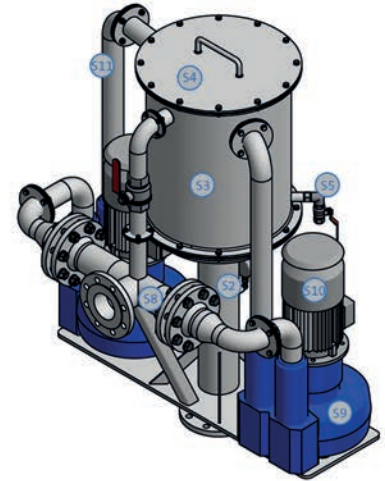
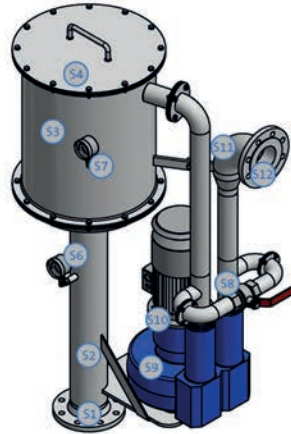
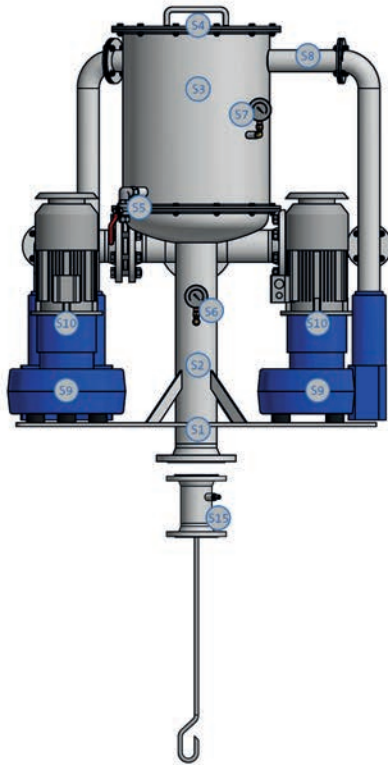


# FRANKE-FILTER GMBH

## Assembly and commissioning



Thank you for choosing a highly efficient Oil Mist Separator from FRANKE-Filter. In the following you will find instructions for the installation and commissioning of your Oil Mist Separator. If you have any questions, please do not hesitate to contact us at +49 (0) 5064 9040.



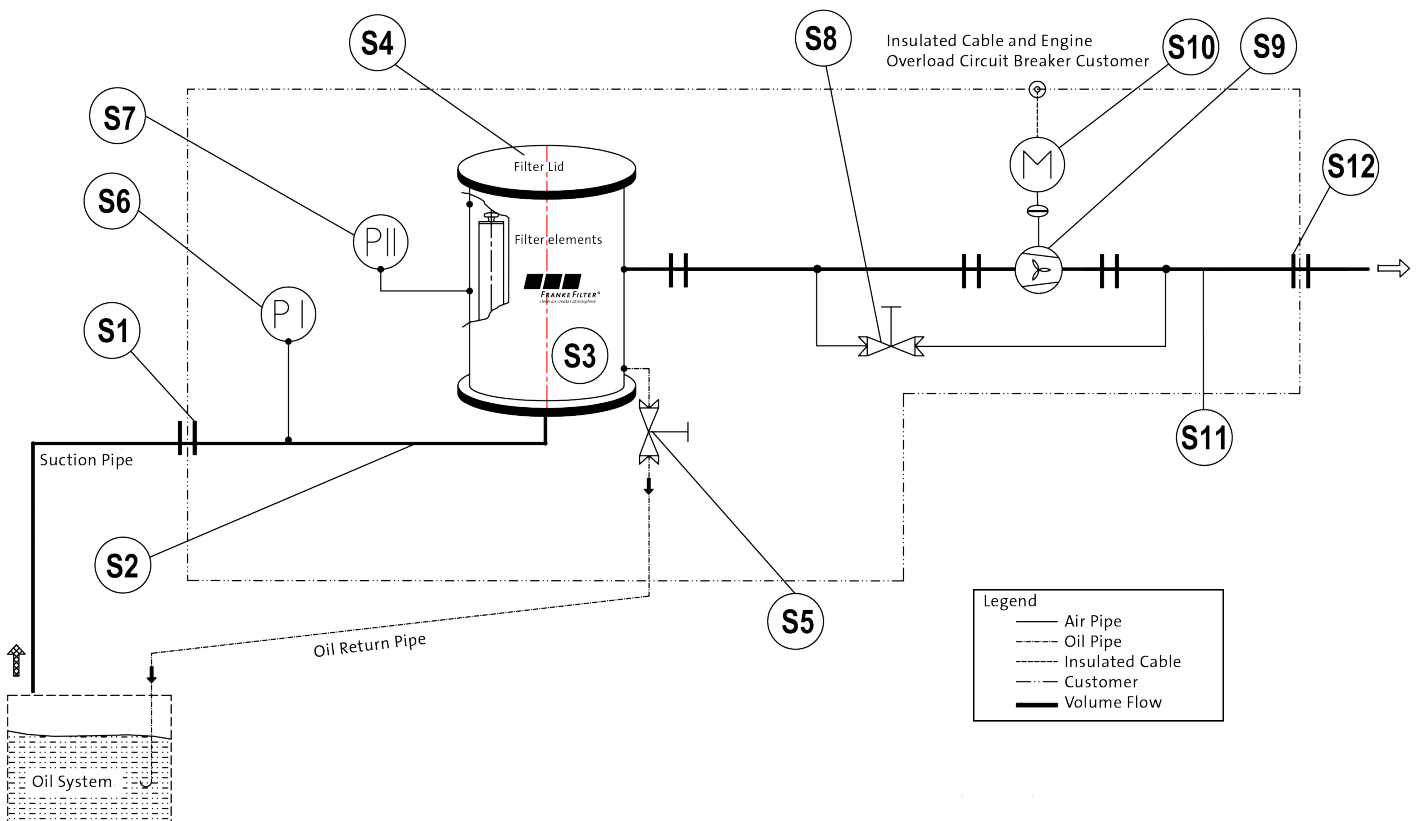
### Legend

- S1 Suction Flange
- S2 Suction Pipe
- S3 Filter Housing
- S4 Filter Lid
- S5 Oil Return Connection with Shut-Off Valve
- S6 Vacuum Pressure Gauge I
- S7 Vacuum Pressure Gauge II
- S8 Internal Air
- S9 Side Channel Vacuum Pump
- S10 Motor
- S11 Clean Air Piping
- S12 Clean Air Flange
- S15 Stand Pipe

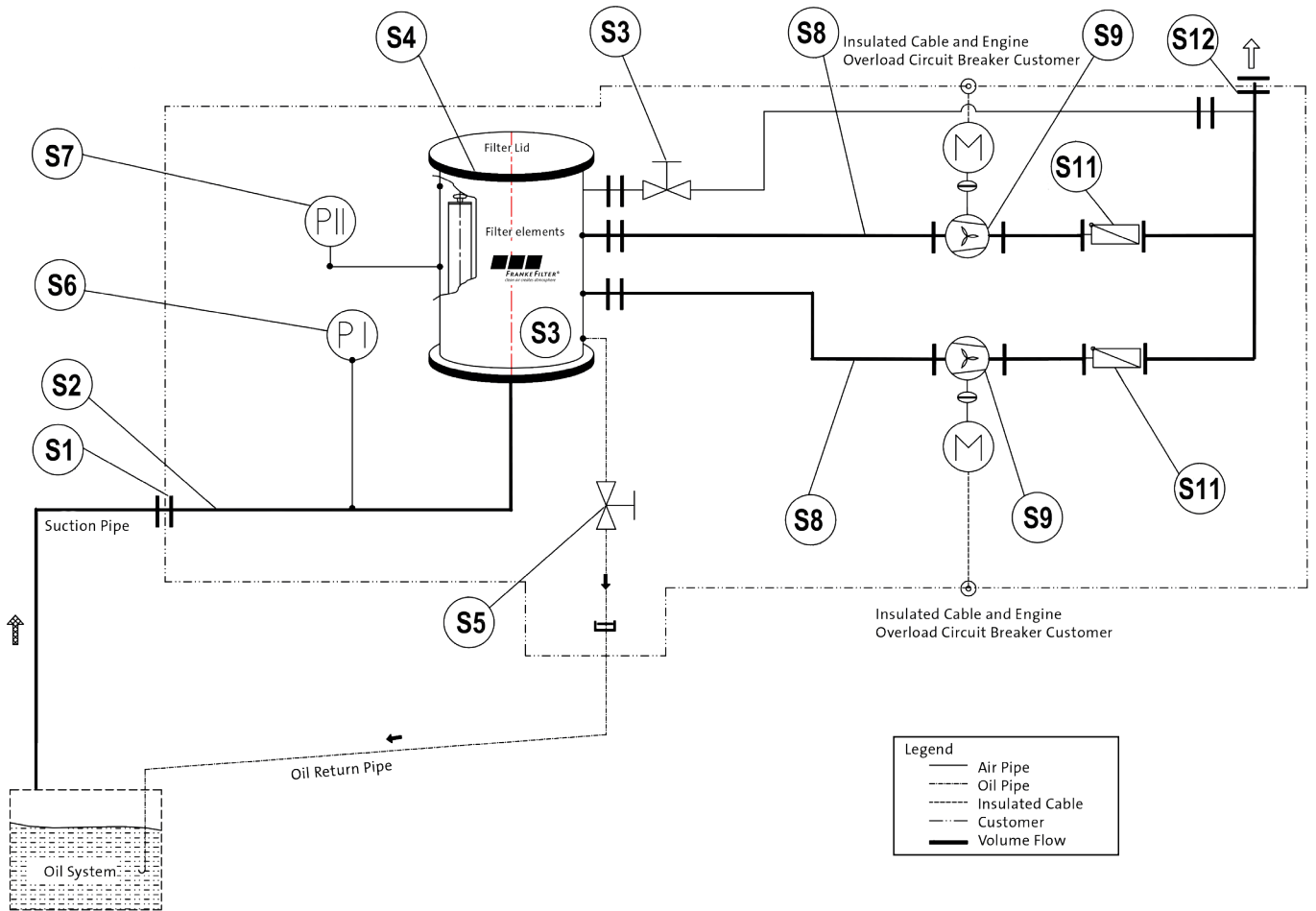
**!** NOT EVERY FILTER SYSTEM CONSISTS OF ALL THE COMPONENTS SHOWN HERE!

**!** THE EXACT DESIGN OF YOUR OIL MIST SEPARATOR CAN BE FOUND IN YOUR MANUAL.

## PROCESS SCHEME FOR STANDARD DESIGN



# PROCESS SCHEME FOR REDUNDANT DESIGN

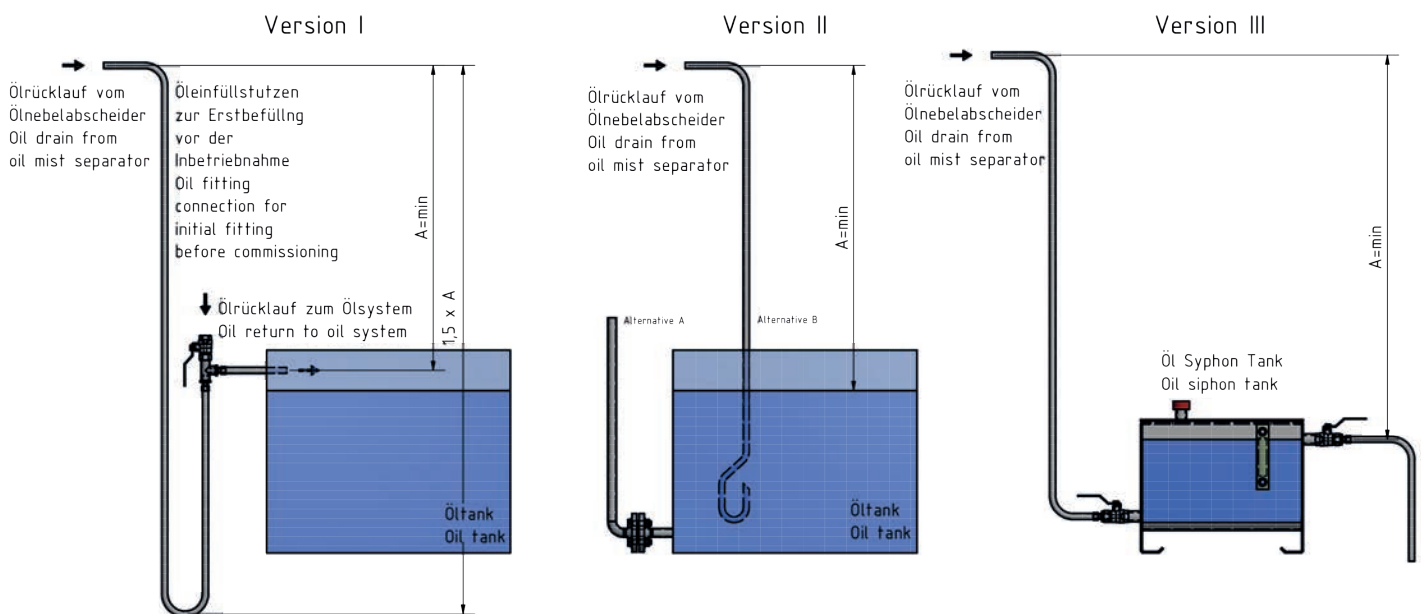


## THE OIL RETURN

The oil return serves to return the oil separated from the sucked air back to the lubricating oil tank. If the oil return is not supplied as an integrated version, the following points must be observed.



**THE OIL CAN BE RECIRCULATED IN A NUMBER OF WAYS:**



### VERSION I: SIPHON

The siphon must already be filled with oil before commissioning.

### VERSION II: DIRECT OIL RETURN TO THE TANK

For direct oil return, please ensure that the return pipe is always immersed in the oil. At least 300 mm below the minimum oil level in the tank is optimal.

### VERSION III: INTERMEDIATE TANK (OIL SIPHON TANK)

The intermediate tank must already be filled with oil before commissioning ensuring that the oil return is below oil level.

For all versions, it is mandatory to ensure that the distance between the oil return at the filter housing and the maximum oil level in the oil system (this dimension is referred to as the **geodetic height**) is at least maintained. The geodetic height is shown as **dimension A** in the drawing and depends on the negative pressure in the oil system.



**THE RETURN PIPE FROM THE OIL MIST SEPARATOR MUST BE LAID WITH A CONSTANT GRADIENT AND ABSOLUTELY AIRTIGHT! THE VACUUM IN THIS LINE CANNOT BE INTERRUPTED UNDER ANY CIRCUMSTANCES!**

## THE CLEAN AIR CONNECTION

- The clean air pipe downstream of the Oil Mist Separator (clean air flange S12) can be installed as a free-blowing pipe or piped to the outside.
- When piping, make sure that the diameter of the pipeline is not reduced. However, it is possible to increase the diameter.
- In the case of horizontal piping, an additional drain must be installed immediately after the S12 clean air flange. This can be used to drain off any condensate that may have accumulated.
- The pipeline must be connected to the S12 flange without any forces or moments. Make sure that additional pipe losses do not exceed 10 mbar.
- The clean air flange cannot be used as a transport aid or for support at any time.

## THE SUCTION FLANGE

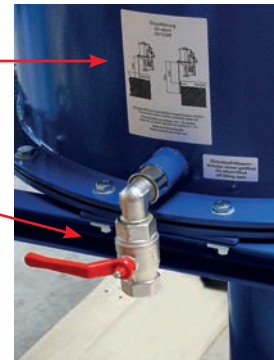
- The suction pipe including the suction flange (S1) is usually designed in a way that installation can be carried out directly on the oil system. If this is not the case, the connection should be made by means of the shortest possible pipe connection. If the connection cannot be made vertically, a permanent descent towards the lubricating oil tank must be maintained.
- If the tank connection is located above the suction flange (S1) of the Oil Mist Separator, a drain must be provided at the lowest point of the pipeline, as possible condensate could cause a blockage in the pipeline.
- The pipeline must be connected free of forces and moments.

## TESTING BEFORE INITIAL COMMISSIONING



**IS THE GEODETIC HEIGHT MAINTAINED?**

**IS THE SHUT-OFF VALVE (S5) OPEN?**



### **FILTER CARTRIDGES**

Before commissioning, please unscrew the filter lid and check all filter cartridges (see maintenance instructions in the manual).

### **OIL RETURN**

1. Oil return via Siphon:
  - Is the siphon filled with oil?
2. Direct oil return:
  - Is the oil return pipe permanently immersed in the oil in the tank?
  - Is the shut-off valve (S5) open?

### **FUNCTION VACUUM PRESSURE GAUGES (S6 AND S7)**

The pressure gauge S6 indicates the vacuum in the tank. You should find the value to be set in the operating instructions of your turbine manufacturer.

Pressure gauge S7 indicates the vacuum behind the filter cartridges.

### **ADJUSTING THE NEGATIVE PRESSURE BY BYPASS (S8)**

During commissioning, the internal air (S8) must be open. Then the bypass can be closed slowly until the desired negative pressure in the tank is reached at S6.

### **SIDE CHANNEL VACUUM PUMP (S9)**

For the side channel vacuum pump, the direction of rotation must be checked in advance. Please refer to the circuit diagram for the correct connection of the side channel vacuum pump.

Please don't hesitate to get in touch for any further questions you may have. Please contact us via e-mail ([info@franke-filter.de](mailto:info@franke-filter.de)) or call us at +49 (0) 5064 9040.