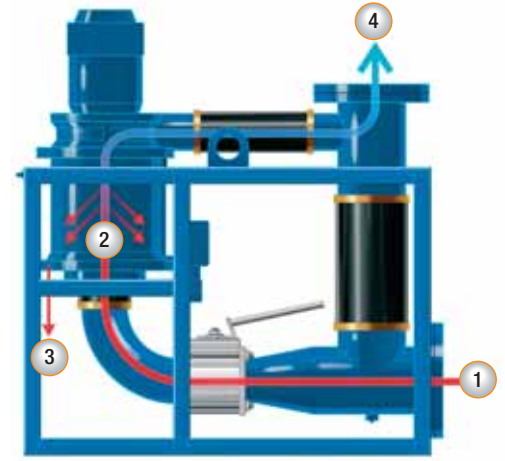


OIL MIST SEPARATOR – CLEAN CRANKCASE VENTILATION



Crankcase gas (1) is led to the separator (2) which removes the oil (3). Clean gas (4) to open air.

TOTAL PLANT CLEANLINESS

Requirements for minimal environmental impact and low emissions are not restricted just to the exhaust gas system and stacks. Cleaning the oil mist – the oil droplets from the crankcase ventilation pipe – will eliminate the problem of areas close to the ventilation pipe getting dirty.

Cleaning the crankcase gases also eliminates the problem of oil mist being sucked into the engine air inlet filter, which clogs the turbocharger and the charge air cooler.

More stringent environmental legislation, such as VOC emission regulations, regarding crankcase ventilation is also likely to be imposed in the near future. Why not deal with the problem now and install the only solution that effectively eliminates the oil mist?

WORKING PRINCIPLE

The Oil Mist Separator removes more than 98% of the oil mist in the crankcase ventilation gas. The system is safe and easy-to-install and enables plant owners to avoid problems with oil mist. The oil mist looks like smoke because

the droplets are very small in size, between 0.1 and 2 μm , which is why till now it has been difficult to remove them effectively.

The key component in the module is an electrically driven separator. The engine crankcase ventilation gas is fed into the separator where the oil particles are centrifuged and collected in a small container. The oil is then fed back via a drain pipe to the engine. A frequency converter boosts the speed of the electric motor to improve separation efficiency. The separator unit is regulated by a throttle valve on its inlet pipe to match the gas flow from the engine or engines.

INSTALLATION

The flexible mounted separator, the throttle valves and a safety switch are mounted on a steel frame module. Since the processed gas may be explosive, all components inside the separator are made of spark-proof material.

Installation is a straightforward procedure for all engine types and has no impact on crankcase pressure.

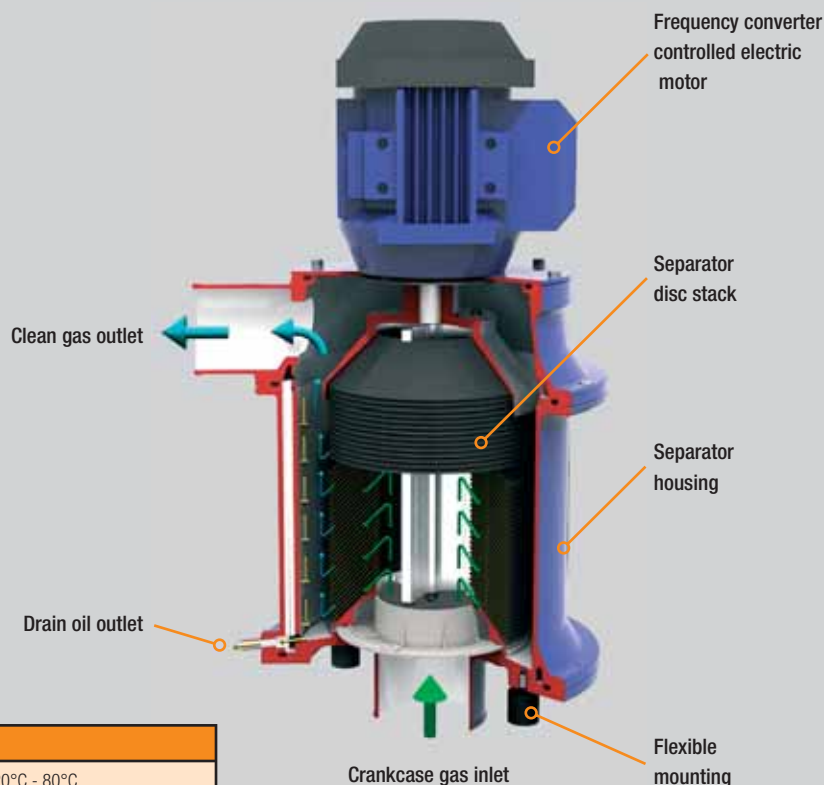
PRODUCT AT A GLANCE

Removal of oil particles from the engine crankcase ventilation gas on diesel and gas engines. The purified gas is released into the open air.

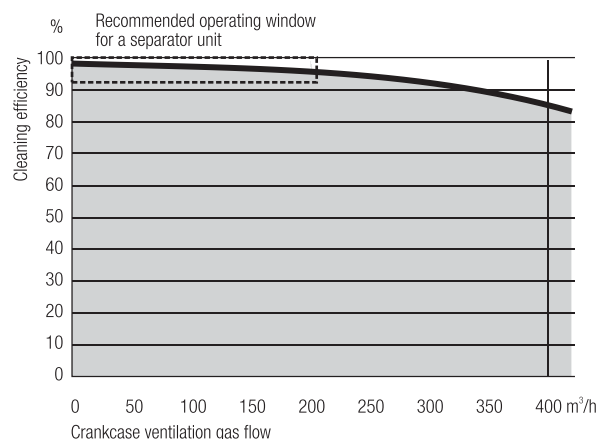
The Oil Mist Separator module can be fitted at installations with the following engine types: Wärtsilä Vasa 32 and 32LN engines; Wärtsilä 20, 32, 32DF, 34SG, 46 and 50DF engines.

See overleaf for technical data

TECHNICAL DATA



Oil Mist Separator



Cleaning efficiency

Performance		
Capacity:	Up to 400 m3N/h per unit	Inlet gas temperature: 20°C - 80°C
Cleaning efficiency:	abt. 98% at a flow rate of 150 m3N/h (20V34SG)	
	95% at a flow rate of 210 m3N/h (9L46)	
	93% at a flow rate of 322 m3N/h (12V46)	
	83% at a flow rate of 420 m3N/h (18V46)	
Standards and protection classes		
Safety standard:	EN 292, Safety of machinery	Piping standard: EN 13480
Enclosure class:	IP54 + drip water safe	
Emissions		
Heat dissipation:	About 2 kW	Noise: Max. 80 dB(A)
Vibration:	Less than 28 mm/s (RMS)	
Site requirements		
Space requirements:	About 2 m total height (i.e. about 0.8 m service space above the module)	Flatness tolerance: 10 mm
Vibration resistance:	Max. 20 mm/s	Temperature: Separator: 0°C – 65°C Electrical cabinet: 0°C – 30°C
Humidity:	Must not be exposed to water	
Electrical system		
Operating voltage:	Three phase 380 - 480 VAC	Frequency: 50 or 60 Hz
Power consumption:	Max. 1.5 kW	Frequency converter: ABB ACS 140 2.2 kW
Cabling:	4 wires, L1, L2, L3, PE	
Separator		
Power:	1.5 kW electric motor with heavy duty bearing and bearing housing	Speed: 7200 rpm
Number of discs:	185	Housing: Aluminum casting

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