

Oil Mist Eliminators

OE-158 / 158B



Oil Mist Eliminators

THE NEED

Large high speed rotating equipment - Gas and Steam Turbines and axial and centrifugal compressors - are the most widely used power sources in the world today. In either primary or stand-by power mode, they are reliable and cost effective, but require large volumes of mineral or synthetic oil for lubricating, cooling and sealing the bearings. When subjected to the temperature and mechanical forces of the bearings, large volumes of mist and vapour result, creating a visible plume from the lube oil vent. These airborne emissions are subject to increasingly stringent environmental laws and regulations at all government levels throughout the world.

In addition, owners and specifiers of high speed rotating equipment are recognising the need to control this oil mist emission for four primary reasons :

1. Environmental

There is a growing awareness both at work and at home that everyone must take responsibility for keeping our environment clean.

2. Economics

Any oil mist from the vent is lost forever. A reservoir venting 340 Nm³/h with a 100 ppm oil mist concentration will lose almost 380 litres of oil a year.

3. Maintenance

It is much easier to maintain a clean machine than a dirty one.

4. Safety

Oil mist and condensing vapour can settle on adjacent areas such as ladders, walk ways etc, creating slippery dangerous conditions.

THE CHALLENGE

Fugitive emissions are difficult to eliminate because the majority of oil droplets fall in the range of less than 1 micron in diameter. The traditional control technologies which have been used in the past include mesh pads, packed fibre bed filters, rotating drums and electrostatic precipitators (ESP's) The manufacturers of these technologies all claim at least 95 % efficiency.... some even go as high as 99%! That's the problem.

While all of these are satisfactory, for removing large oil droplets, they are totally inadequate for removing sub-micron emissions of 0.5 micron and smaller and therefore a clearly visible oil plume remains.

THE SOLUTION

The Dollinger Oil Mist Eliminator is a highly efficient dynamically engineered filtration system for source control of mist created by high speed rotating equipment. The product range includes both non-blower and blower assist models for positive and negative pressure lubricating oil systems.

THE DOLLINGER ADVANTAGES

1. Eliminates all visible oil plume

Complies with all environmental regulations. The Dollinger OME offers unequalled efficiency - 99.97 % of all droplets and particles 0.3 micron and larger; guaranteed less than 5ppm by weight oil mist carryover- providing unsurpassed reliability and performance in a simple, compact design.

2. Simple, efficient energy saving operation

Once installed, provides years of trouble free operation; also prevents undue power loss and maintenance by stopping mist from entering nearby air intake systems.

3. Maintenance Free

Depending on the dirt loading, has a filter element life up to five years.

4. Compact

Space-saving physical envelope and light -weight structure make it ideal in a crowded environment.

5. Quiet Operation

All models conform to OSHA standards and Directive 86/188/EEC.

6. Proven Performance

Years of demonstrated performance on gas turbine packages for power generation and on oil reservoir vents on large compressors.

SPECIAL ENGINEERED OPTIONS.....



OE-158 Non-Blower Model

For positive pressure lubricating oil systems

Technical Data

- Maximum operating temp: 175°C
- Maximum recommended operating temp: 82°C
- Minimum operating temp: -15°C

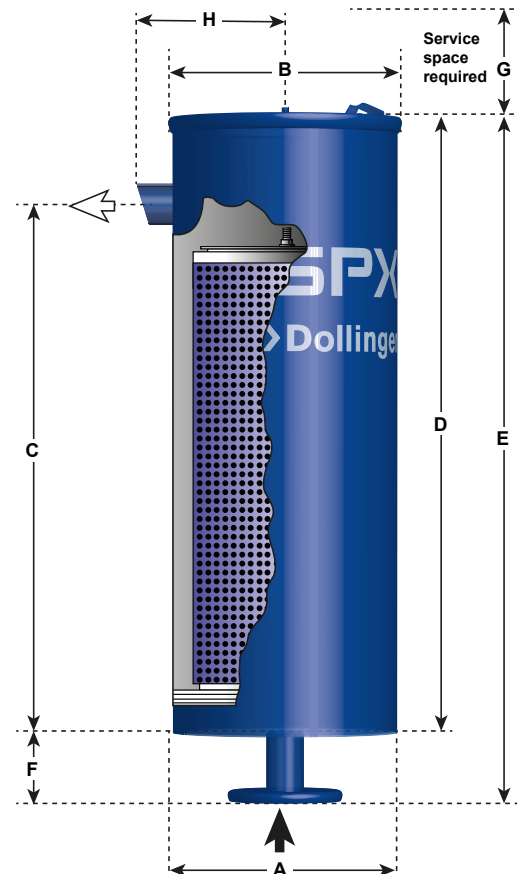
Element Differential Pressure

- Dry: 150 mm W.C.
- Fully saturated: 460 mm W.C.

Recommended Pressure Differential for

- Element change: 760 mm W.C.

DOLLINGER MODEL NUMBER	CAPACITY	CONNECTIONS	APPROXIMATE DIMENSIONS (MILLIMETRES)								
	FLOW (NM ³ /H)	SIZE (MM)	A	B	C	D	E	F	G	H	APPROX WT (KG)
OE-158-125	210	50	350	360	580	700	795	95	560	280	20
OE-158-200	340	80	350	360	760	890	990	100	710	280	45
OE-158-300	510	100	650	715	660	865	965	100	610	510	90
OE-158-500	850	150	650	715	1015	1220	1320	100	940	510	110
OE-158-1000	1700	200	1015	1080	1040	1220	1320	100	710	725	230



OE-158 Non-Blower Model

With positive pressure systems there is usually sufficient pressure in the reservoir to overcome the differential pressure (approx 460 mm W.C.) of our mist eliminator.

OE-158B Blower Assist Model

For negative pressure lubricating oil systems

Technical Data

- Maximum operating temp: 150°C
- Maximum recommended operating temp: 82°C
- Minimum operating temp: -15°C

Element Differential Pressure

- Dry: 150 mm W.C.
- Fully saturated: 460 mm W.C.

Recommended Pressure Differential for

- Element change: 760 mm W.C.

DOLLINGER MODEL NUMBER	CAPACITY	INLET		OUTLET
	FLOW (NM ³ /H)	SIZE (MM)	TYPE	SIZE (MM)
OE-158B-60	100	40	FLG	40
OE-158-125	210	50	FLG	50
OE-158-200	340	80	FLG	80
OE-158-300	510	100	FLG	100
OE-158-500	850	150	FLG	150
OE-158-1000	1700	200	FLG	200
OE-158B-1500	2500	250	FLG	250



OE-158B Blower Assist Models

Many gas turbines and turbo compressors are designed to operate with the lube oil reservoir maintained at a negative pressure (-25 to -100 mm W.C.). When installing an oil mist eliminator on such systems, a blower assist model is used to overcome the differential pressure of the the filter and, at the same time, keep the negative pressure in the reservoir under control.

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ISSUED 05/2012 SB-Dollinger OE158/158B-EN

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