



OIL
MIST



MCOS

Coalescence filter

MCOS is a filtration system designed to separate oil and smoke particles from the air in harsh work conditions, using the principle of coalescence

The polluted airflow passes through the multilayered glass fiber filter elements at low speed, where the real coalescence occurs. Crossing the increasingly thick layers of filtering media, the micro-particles of pollutants are agglomerated, reaching macroscopic dimensions.

Unlike traditional static filters, the coalescence filter does not work exclusively with clogging, as to percolate by gravity in the collection tank, significantly increasing the useful life of the filter.

Once the first filtering element has been passed, the airflow rises towards the next element at sufficiently low speed so as not to drag the smallest particles.

To ensure a higher level of purification, it is possible to add an additional absolute filtration stage (FFA), with an efficiency level of 99%.

The collected oil particles are expelled through a drainage tube positioned in the lower part of the filter.

Optional:

- ▶ Electrical panel with Start & Stop or VFD
- ▶ Absolute final filter (H11 or H13)
- ▶ Silencers
- ▶ DP Led

MCOS Mini

The new MCOS Mini has been developed in two versions:



MCOS-Mini-R

To be installed on top of the machine tool.



MCOS-Mini-G

To be installed on the ground and is equipped with a bin for the collection of oil.






Advantages

- ✓ **High efficiency**
 - ▶ 99,99% for particles larger than 1 μm
 - ▶ 99% for particles larger than 0,5 μm
 - ▶ 95% for particles larger than 0,2 μm
- ✓ **Modular System**
 - ▶ Standard version with 1 to 20 filter element
 - ▶ Standard version from 1000 m^3/h a 20000 m^3/h
- ✓ **Easy installation**
- ✓ **Customized solution**
- ✓ **Technical assistance and after-sales service**
- ✓ **Costs saving management and maintenance**

DP-LED Cyclic Timer with integrated DP control

On the filter is installed a 3-color LED stripe green, yellow red. The stripe is mounted on the front of the filter and allows the operator to have a clear view of the clogging state of the filters.

-  **GREEN LED** - Normal operating status
-  **YELLOW LED** - Pre-alarm status
-  **RED LED** - Clogged filters

What is the principle of coalescence?

The coalescence is the physical phenomenon through which the drops of liquid, the bubbles of an aeriform, or particles of a solid, come together to form larger entities.



Applications

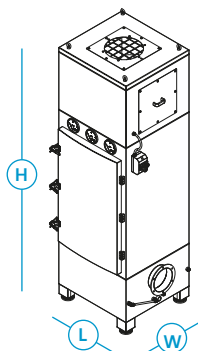
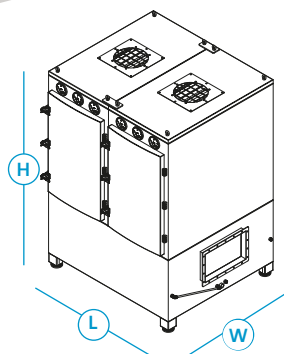
- ▶ CNC Machine Tools
- ▶ Lathes
- ▶ Boring
- ▶ Drilling
- ▶ Milling
- ▶ Adjustmets
- ▶ Broaching
- ▶ Printers
- ▶ Printers
- ▶ Threading, tapping
- ▶ Cutting with sawing machines
- ▶ Mechanical machining in general
- ▶ Application with oil presence
- ▶ Emulsion nebulization
- ▶ Nebulization of whole oil

Technical Specifications

MCOS S Series [without fan]

	AIRFLOW	FILTRATION STAGES				CONNECTIONS [mm]		DIMENSIONS [mm]			WEIGHT
HF Code	[m³/h]	1°	2°	3°*	N° of elements per filtration stage	In	Out	L	W	H	[kg]
MCOS01#S	2000	F7	F9	HEPA	1	Ø200	Ø300	730	685	1850	250
MCOS02#S	4000	F7	F9	HEPA	2	Ø300	Ø300	730	1280	2000	440
MCOS04#S	8000	F7	F9	HEPA	4	500x300	2x Ø300	1460	1280	2100	820
MCOS06#S	12000	F7	F9	HEPA	6	750 x 350	3x Ø300	2190	1280	2100	1250
MCOS08#S	16000	F7	F9	HEPA	8	800 x 400	4x Ø300	2920	1280	2200	1700
MCOS10#S	20000	F7	F9	HEPA	10	900 x 450	5x Ø300	3650	1280	2350	2200

*Optional H11 o H13



MCOS V Series [with fan]

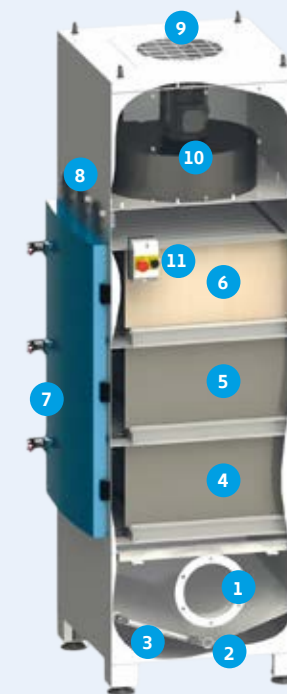
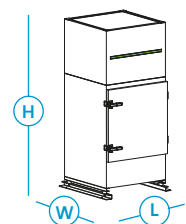
	AIRFLOW	STATIC PRESSURE	INSTALLED POWER	FILTRATION STAGES				CONNECTIONS [mm]		DIMENSIONS [mm]			WEIGHT
HF Code	[m³/h]	[Pa]	[kW]	1°	2°	3°*	N° of elements per filtration stage	In	Out	L	W	H	[kg]
MCOS01#V	2000	1850	2,2	F7	F9	HEPA	1	Ø200	Ø300	730	685	2350	330
MCOS02#V	4000	1750	5,5	F7	F9	HEPA	2	Ø300	Ø300	730	1280	2600	530
MCOS04#V	8000	2250	7,5	F7	F9	HEPA	4	500 x 300	405 x 362	1460	1280	2850	990

*Optional H11 o H13

MCOS Mini [with fan]

	AIRFLOW	STATIC PRESSURE	INSTALLED POWER	FILTRATION STAGES			CONNECTIONS [mm]	DIMENSIONS [mm]			WEIGHT
HF Code	[m³/h]	[Pa]	[kW]	1°	2°	N° of elements per filtration stage	In	L	W	H	[kg]
MCOS-Mini-R	1000	1400	1,1	F9 COAL-5m²	H12 - 10,5m²	1	Ø150	530	555	1255	75
MCOS-Mini-G*	1000	1400	1,1	F9 COAL-5m²	H12 - 10,5m²	1	Ø150	530	555	1565	90

*The oil collection bin with 30 lt capacity is included
Optional H13



- 1 Inlet flange
- 2 Liquid collector tank
- 3 Visual level
- 4 Coalescence filter F7
- 5 Coalescence filter F9
- 6 Absolute final filter (optional H11 or H13)
- 7 Filter installation door
- 8 Differential door
- 9 Outlet flange
- 10 Centrifugal fan
- 11 Start & Stop switch



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