



VORTEX

MIST FILTRATION SYSTEMS

Edge Technologies' **Vortex Series** offers two distinct mist filtration solutions for both water-soluble coolant and cutting oil.

The **Vortex AF** line is extremely effective with water-based coolant mist.

The **Vortex OS** line is the perfect solution for filtering the more demanding cutting-oil mist and smoke in sliding headstock CNC lathes and screw machines.



VORTEX Mist Filtration Systems

VORTEX COOLANT MIST FILTRATION SYSTEMS

Why the Vortex AF Series?

- Highly effective centrifugal impaction filtration
- 3-stage separation-filtration process
- 99.97% filtering efficiency as measured by MPPS method using a final stage E12 HEPA filter
- Minimal maintenance-filter changing
- Compact design
- Recycles coolant back to the holding tank
- Low power consumption

Vortex Series Features

- Easy access for 1st-Stage filter removal
- Choice of mounts: machine, stand, or ceiling
- Airflow capacities from 475 to 1700 CFM
- Designed for working envelopes from <215 to 1130 cubic feet
- Choice of independent or machine power supply



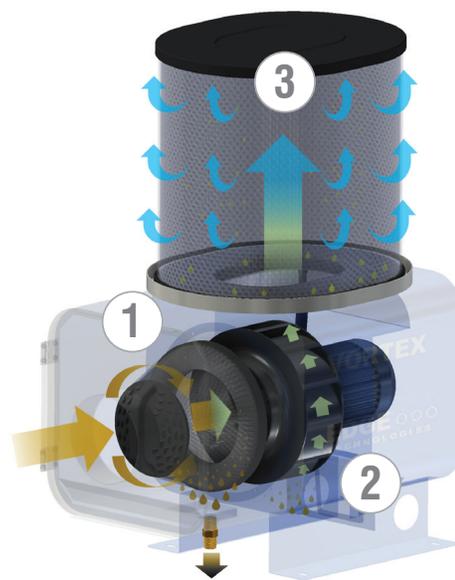
**Effectively Removes
99.97% Water Soluble
Coolant Mist**



1st-Stage Separation: The coolant mist airstream initially collides with the fish scale profile coalescing the mist into larger droplets. Then, through a wind shear effect with the 70-degree, self-draining mesh filter, additional smoke and particles greater than 2 microns ($2\mu\text{m}$) are captured.



1st-Stage Filter: Patented 70-degree conical mesh filter featuring an innovative fish scale profile on the leading edge and a synthetic mesh overlay. A built-in handle makes maintenance easy on this washable element.



Coolant Drain Outlet: Precipitated droplets are collected and returned to the coolant tank.



2nd-Stage Separation: The efficient centrifugal impeller fan located in the 2nd chamber provides highly efficient system airflow at low running noise and continues the separation process.



3rd-Stage E12 HEPA After-Filter: Finishes the air purification to a 99.97% filtering efficiency by capturing all particles greater than .3 microns ($.3\mu\text{m}$) before releasing the purified air back into the plant.



Easy-to-Read Gauge: Indicates normal operation and when filter elements need maintenance.

VORTEX OIL MIST FILTRATION SYSTEMS

Why Vortex OS-550?

- Multi-Stage progressive filtration
- High-efficiency fiber-bed filter
- Filters down to $.3\mu\text{m}$ particle size using final-stage HEPA filter
- Small 15"x15" footprint
- Recycles oil and drains back into cnc machine sump
- Low operating cost
- Low maintenance
- Clean air!

Vortex OS-550 Series Features

- Easy access for 1st & 2nd-Stage filter removal
- Choice of mounts: machine, stand, wall, or ceiling
- Airflow capacities from 500 - 600 CFM



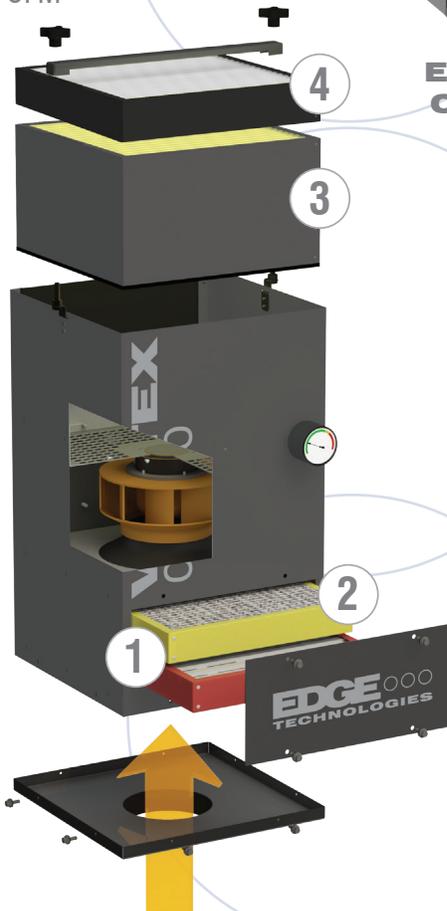
Effectively Eliminates Oil mist, smoke, and fine particles



1st-Stage Separation: The innovative 1st stage mechanical element separates up to 90% of the oil mist and swarf. The smooth metal surfaces quickly drains fluid back to the sump.



2nd-Stage Separation: The 2nd stage de-mister element supports the 1st stage to ensure up to 95% of the mist and swarf are removed with washable filters.



3rd-Stage Fiber Filter: 3rd stage Fiber Bed mist filter is depth loading that captures small mist particles. MERV 15* filter rating.

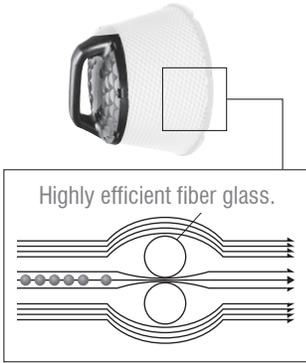


4th-Stage HEPA Filter: 4th stage HEPA Filter captures sub-micron mist, smoke and bacteria. Efficiency 95% @ $0.3\mu\text{m}$ is standard.

VORTEX Mist Filtration Systems



VORTEX COOLANT MIST FILTRATION SYSTEMS



Filtering coolant mist particle $\geq 2\mu\text{m}$

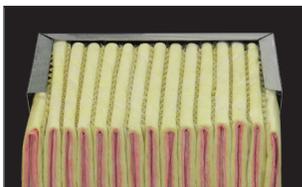
Intercepting Filtration Designed with multi-layer filtration to thoroughly capture fine particles. Interception capability is over $2\mu\text{m}$.

Unique Design Multi-layer stainless steel mesh filtration element is cleanable for re-use.



Technical Data Vortex AF								
Model	Suitable Cabin Size (CF Cubic Feet)	Air Flow (PER MIN)	Static Pressure	Sound Level (db) A	Power Supply	Power Consumption	Weight	Inlet Port
AF-10P	< 215 CF (<6 CM)	475 CF (13.5 CM)	.152 PSI (1.05 kPa)	68	220 V / 60 Hz	.27 HP (0.2 kW)	93 lb (42.1kg)	6" (150 mm)
AF-20P	< 425 CF (<12 CM)	725 CF (20.5 CM)	.200 PSI (1.38 kPa)	73	220 V / 60 Hz	.53 HP (0.4 kW)	104 lb (47.1kg)	6" (150 mm)
AF-30P	< 850 CF (<24 CM)	1150 CF (32.5 CM)	.239 PSI (1.65 kPa)	74	220 V / 60 Hz	1.00 HP (0.75 kW)	143 lb (64.8kg)	8" (200 mm)
AF-40PL	< 1130 CF (<32 CM)	1700 CF (48.5 CM)	.282 PSI (1.95 kPa)	75	220 V / 60 Hz	1.54 HP (1.15 kW)	176 lb (79.8kg)	10" (250 mm)

VORTEX OIL MIST FILTRATION SYSTEMS



3rd-Stage Fiber Filter



4th-Stage HEPA Filter

Filtering oil mist particle $\geq .3\mu\text{m}$

- Fiber bed filters have a large surface area (ft²) of filter-media. Each pleat contains two (2) layers with a total combined surface area of 60 sq. ft.
- Fiberglass is better at attracting oil mist particles than polypropylene or other synthetic media.
- High filtering efficiency with final-stage HEPA filter.



Technical Data Vortex OS									
Model	Air Flow (PER MIN)	Machine Tool Enclosure	Motor	Voltage (amps)	Temperature	Weight	Length x Width x Height	Inlet Connection	Sound
OS-550	500-600 cfm	Up to 200 ft ³	0.75 hp	230/3/60 (1.57) 460/3/60 (0.95)	160°F / 70°C	75 lbs.	15"x15"x30"	6" Ø	68 dB(a)

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