



Donaldson®  
FILTRATION SOLUTIONS



## WSO Mist Collectors

# The Only Mist Collector You Need



*WSO 15 with 3rd-stage HEPA filter*

▶ The new Donaldson WSO Mist Collector provides filter solutions for oily smoke. The WSO uses revolutionary new Synteq XP filter media engineered for superior draining, resulting in lower pressure drop and longer filter life.

▶ The WSO is ideal for lean work cells. As machining operations change, the WSO can be

modified with a simple filter change, leading to leaner operations, cost savings and cleaner plant air environment.

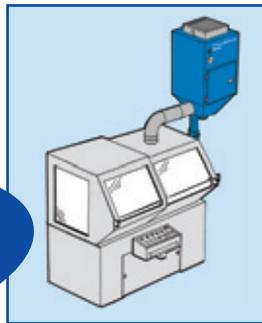
## WSO Offers:

- ▶ Solutions for thermally generated oil mist applications
- ▶ New! Advanced Synteq XP Media
- ▶ Cross-flow design for better drainage
- ▶ Energy savings
- ▶ Lower life cycle costs

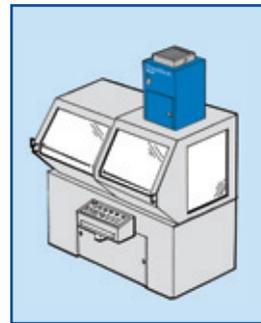
## The WSO Difference

▶ The WSO mist collector can be configured for floor- and machine mounted to meet your facility's requirements.

*75,000 + Mist Collectors Installed!  
Over 40 Years of Mist Experience!*



*WSO 15 floor-mounted stand with afterfilter on a horizontal machining center.*



*WSO 20 machine mounted with afterfilter mounted on a CNC.*

## Easy Filter Maintenance

Simplified servicing means less maintenance time and cost



*Differential pressure gauge(s) identifies filter maintenance*



*One pivot lever securely retains the primary filter element*



*Filter is easily removed*

# Outperforming Oblong Cartridges

## WSO Oblong Filter Shape Features

- ▶ Up to 45% more filter surface area than pocket filters and round cartridges
- ▶ Best fit in rectangular cabinet
- ▶ Lower pressure drop
- ▶ Longer filter life



## Smoke Application

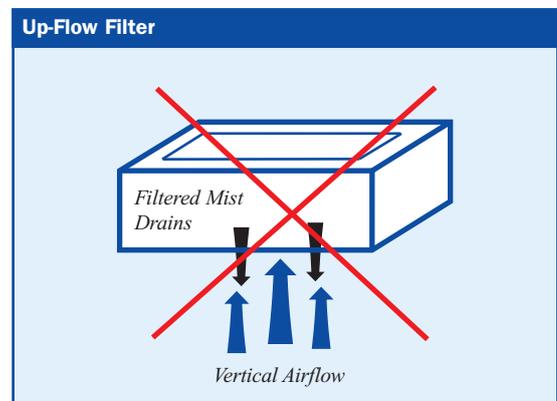
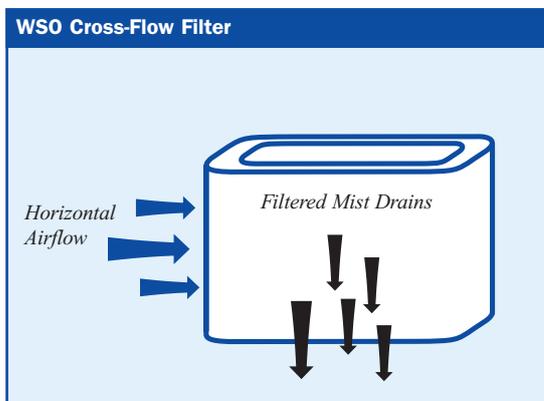
- ▶ Typical thermally generated oil mist particle size:
  - 0.07-1.2 micron
- ▶ Smallest aerosols from machining
- ▶ 99.97%\* removal efficiency



## Cross-Flow Filter Design for Better Drainage Means Longer Filter Life

- ▶ Dirty air flows horizontally through the walls of the WSO filter, perpendicular to drainage of collected

and coalesced mist. This design promotes optimum drainage, which extends filter life and returns collected coolant for re-use. Conventional mist collectors have an upflow design impeding drainage and causing short filter life.



\*Stated efficiency typical for oily smoke applications using a HEPA final filter.

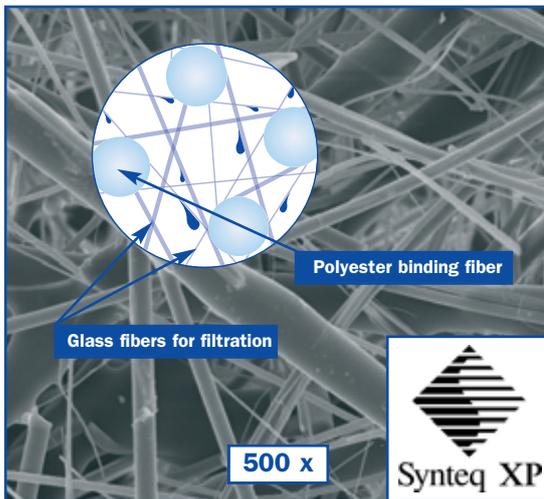
# New Advanced Filter Media for Mist

▶ Patent-pending Synteq XP is a revolutionary new media for mist collection that provides high efficiency, low operating pressure drop, and long filter life when compared to traditional media.

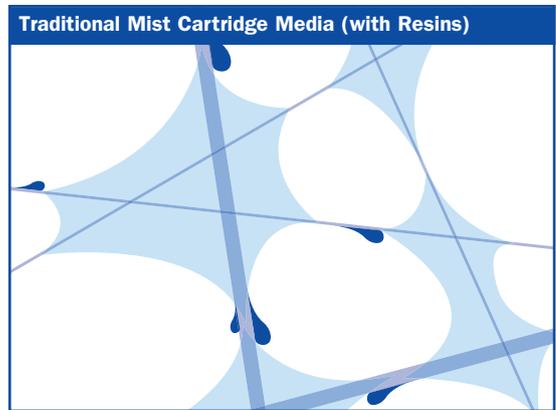
▶ This photo from our Scanning Electron Microscope shows why Synteq XP technology provides superior performance on mist collection applications.

## New Synteq XP Media with Resin-Free, Binding Fibers

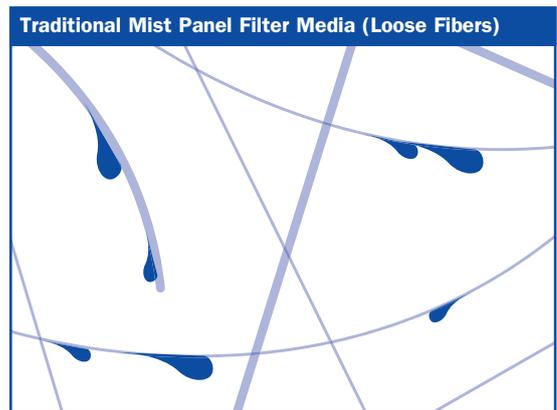
- ▶ Engineered blend of small & large fibers, with proprietary, resin-free bonding system
- ▶ Small fibers are scientifically proven to increase efficiency
- ▶ Large fibers provide structural support & clear drain channels
- ▶ Proprietary bonding system stabilizes pore structure for optimum performance



▶ HOW: The surface of this special binding fiber is softened with heat just enough to make it bond to the surrounding glass fibers. No webbing, no blocked pores.

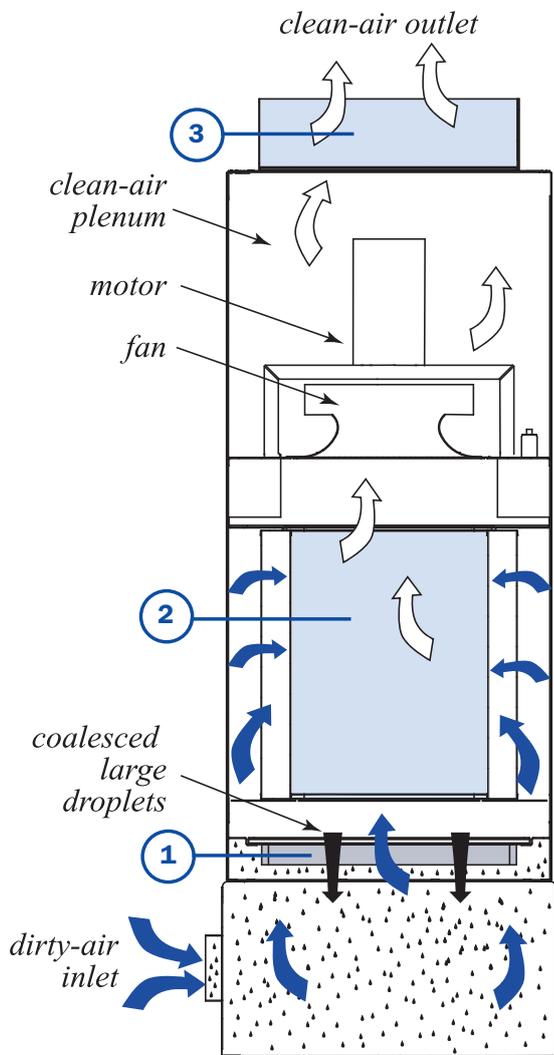


- ▶ Made with resins to bond fibers
- ▶ Resins reduce air pathways and block drainage

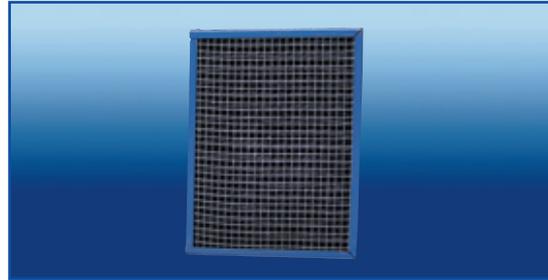


- ▶ Four-layer media structure without fiber bonding
- ▶ Fibers sag under weight of oil
- ▶ Fiber movement creates larger holes that pass oil

# Versatile in Smoke Application



## ① 1st Stage: Prefilter



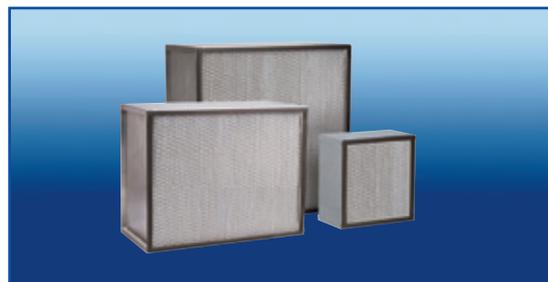
*High Efficiency 1st Stage for oily smoke*

## ② 2nd Stage: Primary Filter



*Synteq XP for smoke from machining. Highest efficiency for challenging applications.*

## ③ 3rd Stage: Final Filter



*HEPA: 99.97% efficient on 0.3 micron mist & smoke*

# Donaldson. *And everything just got better.*

## Total Filtration Management

▶ Donaldson offers a wide variety of solutions to reduce your energy costs, improve your productivity, guarantee production quality and help preserve the environment.

**Compressed Air Filtration, Sterile Filtration, Process Filtration, Refrigerant Drying, Adsorption Drying, Condensate Drains, Condensate Purification Systems, Water Chillers, Air/Oil Separation, Dust and Fume Removal, Process Air and Gas Processing, Oil Mist Separation, Industrial Hydraulics**

## Total Filtration Service

▶ A comprehensive range of services especially designed to keep your production at peak performance and at the lowest total cost of ownership.

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