



# WSO MIST COLLECTORS



# The only Mist Collector you need

## Filter Solutions for oily Smoke

The Donaldson WSO mist collector provides filter solutions for oily smoke. The WSO uses revolutionary 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.

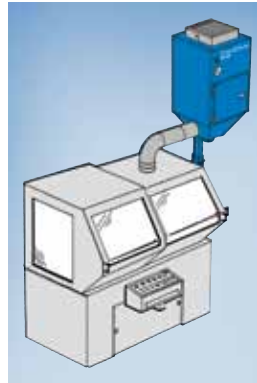


WSO 15 with optional 3<sup>rd</sup> stage HEPA filter

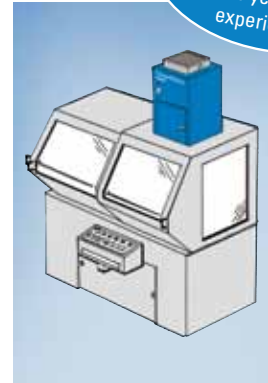
## The WSO Difference

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

More than  
**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

## Features and Benefits

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

## Easy Filter Maintenance

Simplified servicing means less maintenance time and cost



Differential pressure gauge(s) identifies filter maintenance



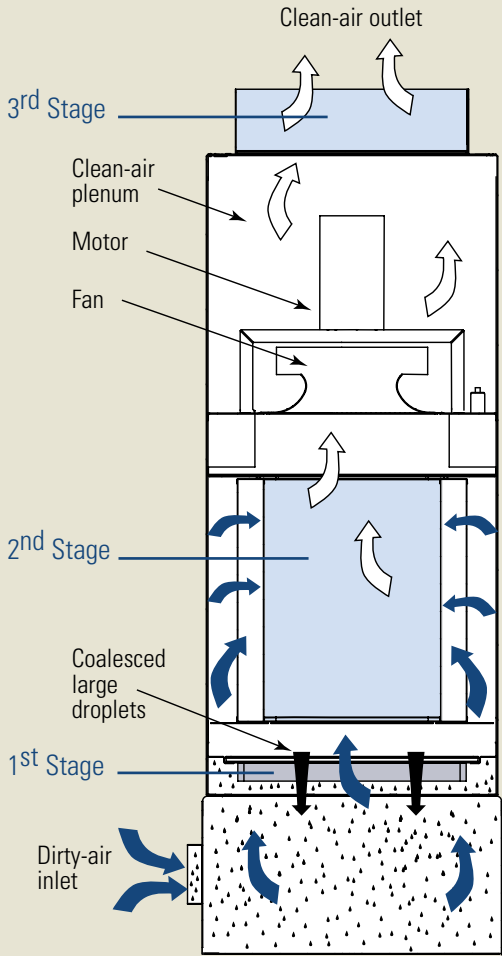
One pivot lever securely retains the primary filter element



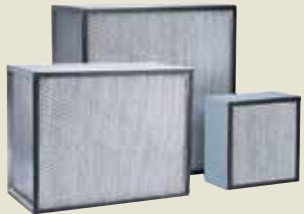
Filter is easily removed

# Versatile in Smoke Application

## Function Principle



## 3rd Stage: Final Filter (optional)



HEPA: 99.97 % efficient on 0.3 micron mist and smoke

## 2nd Stage: Primary Filter



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

## 1st Stage: Prefilter



High efficiency 1st stage for oily smoke



WSO application



WSO application

# 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



WSO filter shape

## Smoke Application

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



Smoke application

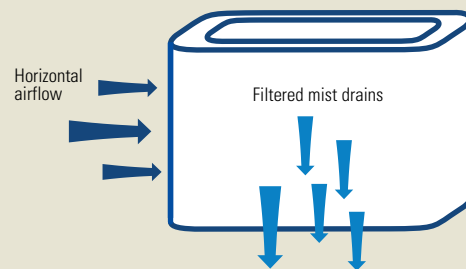
\*Stated efficiency typical for oily smoke applications using a HEPA final filter.

## Cross-flow Filter Design for better Drainage means longer Filter Life

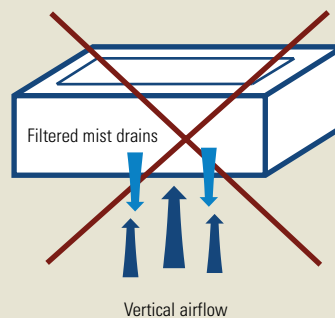
Dirty air flows horizontally through the walls of the WSO filter, perpendicular to drainage of collected and coalesced mist.

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.

### WSO cross-flow Filter



### Up-flow Filter



# Advanced Filter Media for Mist

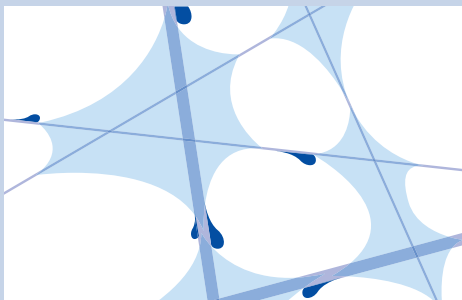
Synteq® XP is a revolutionary media for mist collection that provides high efficiency, low operating pressure drop, and long filter life when compared to traditional media.

The right photo from our Scanning Electron Microscope shows why Synteq® XP technology provides superior performance on mist collection applications.

## Synteq® XP Media with resin-free, binding Fibers

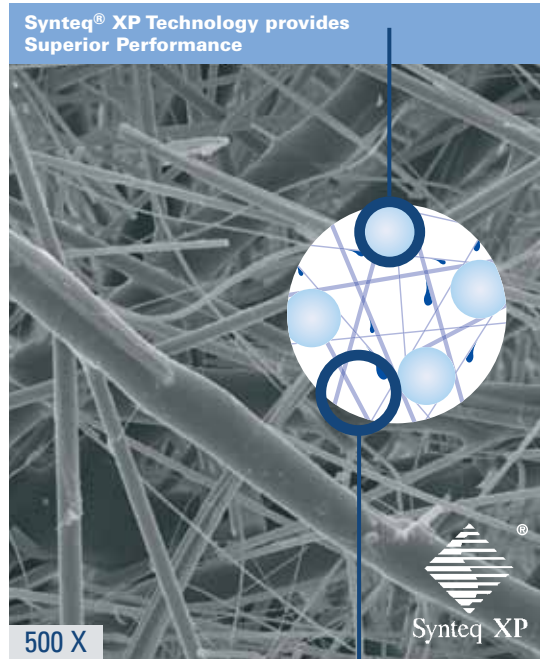
- Engineered blend of small and large fibers, with proprietary, resin-free bonding system
- Small fibers are scientifically proven to increase efficiency
- Large fibers provide structural support and clear drain channels
- Proprietary bonding system stabilizes pore structure for optimum performance

### Traditional Mist Cartridge Media (with Resins)



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

Polyester binding fiber



Glass fiber for filtration

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.

### Traditional Mist Panel Filter Media (Loose Fibers)



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

# Always at your disposal

## Service with the highest Standards

Our service is always nearby. With our technical service and support network throughout Europe, we can routinely service your production systems as well as provide on-site support whenever needed.

With one of Donaldson's service centers you receive quick and cost-effective competent services for all filtration applications from one source.



## Consulting

Total Filtration Service offers a range of services to help you determine current production efficiencies, identify areas for improvement and tailor a service program to your needs.

## Inspection & Maintenance

Our service experts identify cost-effective measures for process optimisation, quality improvement and energy savings. They conduct emission measurements, leakage detection and comprehensive quality checks and not only carry out the replacement of your filter elements, but also determine the right point in time – we therefore contribute to the efficiency of your production.

**Donaldson**  
**Torit® DCE®**

Dust and Fume Removal · Oil Mist Separation



**Donaldson**  
FILTRATION SOLUTIONS

### Total Filtration Management

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

### 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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