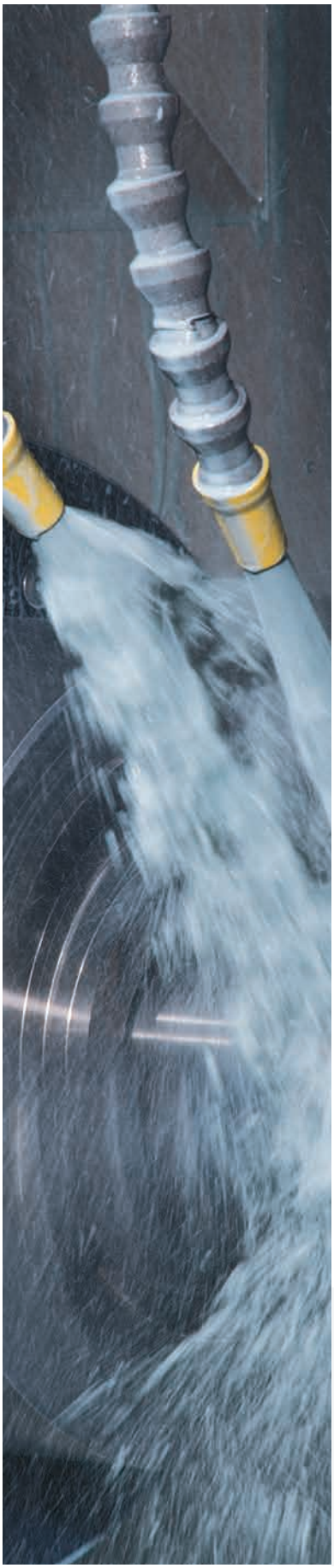
Donaldson®
Torit®

FILTRATION TECHNOLOGY

FOR MIST INDUSTRIES



MIST COLLECTION

For over 40 years, Donaldson has provided mist collection and filtration expertise into a range of mist-producing applications, including machining and metalworking. When an industrial process produces mist, a Donaldson® Torit® mist collector can:

- Provide cleaner air for workers
- Reduce exposure to hazardous mist fluids
- Aid compliance with indoor air quality standards
- Reduce maintenance costs
- Improve part quality
- Provide protection for electronics
- Aid in plant safety and housekeeping

With more than 75,000 mist collectors installed, Donaldson Torit has the expertise to provide a range of solutions for mist air quality, helping our customers to maintain safe and efficient operations.

ADDRESSING MIST CHALLENGES

Uncollected mist from industrial processes can cause slippery floors and collect on machines, walls, and ceilings, creating an unpleasant high-maintenance working environment. That's why Donaldson Torit developed a broad range of mist and smoke collectors to remove contaminants from the plant atmosphere.

WSO MIST COLLECTORS

The WSO mist collector with Donaldson's proprietary Synteq XP™ media provides high filtration efficiency, low pressure drop, and long filter life, in an easy maintenance package. The WSO design has several configurations such as machine mountable, stand mount, ducted cellular, and central system to meet your plant requirements. The WSO can be configured to collect water-soluble coolant, straight oil, or challenging oily smoke with a quick filter change.

DRYFLO® MMA & MMB MIST COLLECTORS

The Dryflo MMA and MMB are low-profile machine-mountable mist collectors that provide three stages of effective and efficient filtration with filters that are very easy to change. Dryflo MMA and MMB collectors are typically installed on CNC machines to collect machining oil mists.

MODULAR MEDIAFILTER™ MIST COLLECTORS

The Modular MediaFilter provides flexible, high performance mist collection for applications with both particles/swarf and mist, such as wet grinding, wet machining, rubber machining, die casting, brazing, and soldering. Available in vertical and horizontal models, Modular MediaFilter collectors are flexible to adapt to changing needs such as smoke, dust and fume filtration, saving the cost of a new filtration system.

MINI-MIST COLLECTOR

The Mini-Mist is a compact version of the Modular MediaFilter designed to collect coolant mists from CNC machining, EDM, grinding, turning, milling, and drilling operations. Compact Mini-Mist collectors are effective alone or can be integrated into larger machining operations.

CENTRIFUGAL MIST COLLECTORS

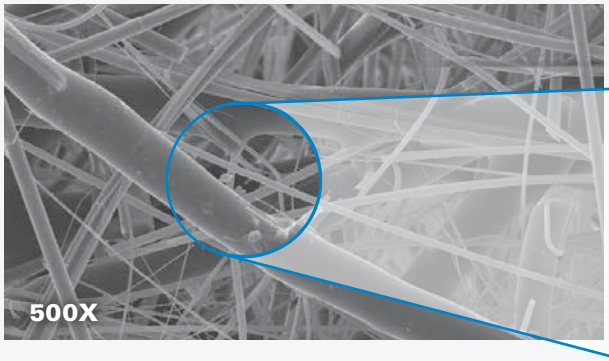
The Centrifugal is a compact, direct machine-mountable mist collector designed to collect, filter, and reclaim mist generated from machining centers using oil-based, synthetic, semi-synthetic, or water-soluble coolants.

ADVANCED FILTER MEDIA

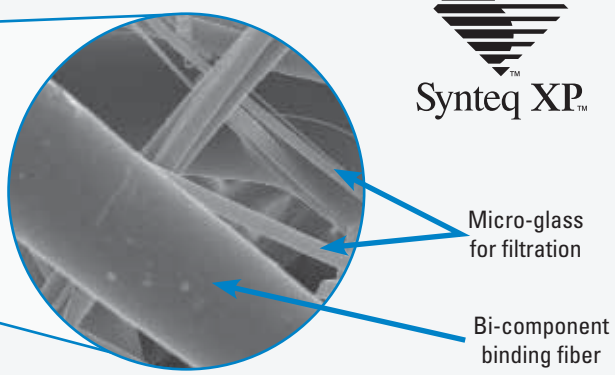
Matching the right mist solution with specific application requirements is critical for ensuring performance. Donaldson uses a range of filter media technologies and has dedicated expertise to appropriately apply them.

SYNTEQ XP™ MEDIA TECHNOLOGY

Proprietary Synteq XP Media is engineered with a blend of small and large fibers with a resin-free bonding system. The small fibers are proven to increase filtration efficiency, while the larger fibers provide structural support and clear drain channels. The result is superior performance and longer filter life in the most challenging applications. Synteq XP is used in our WSO collectors and is also available for many other brands.



During the media manufacturing process, the surface of the binding fiber is heat fused to make it bond to the surrounding micro-glass – no resin webbing to block pores.



HIGH LOFT FIBERGLASS MEDIA

High loft fiberglass media is a good choice when there is a large amount of swarf in the mist, or when the mist is waxy, sticky, or excessively dirty. Typically applied in surface grinding, brazing, die casting, or soldering operations, high loft fiberglass has great loading characteristics for solid particulate yet still allows the collected mist to drain. Filters made from high loft fiberglass are available in 65% or 95% ASHRAE efficiency levels.

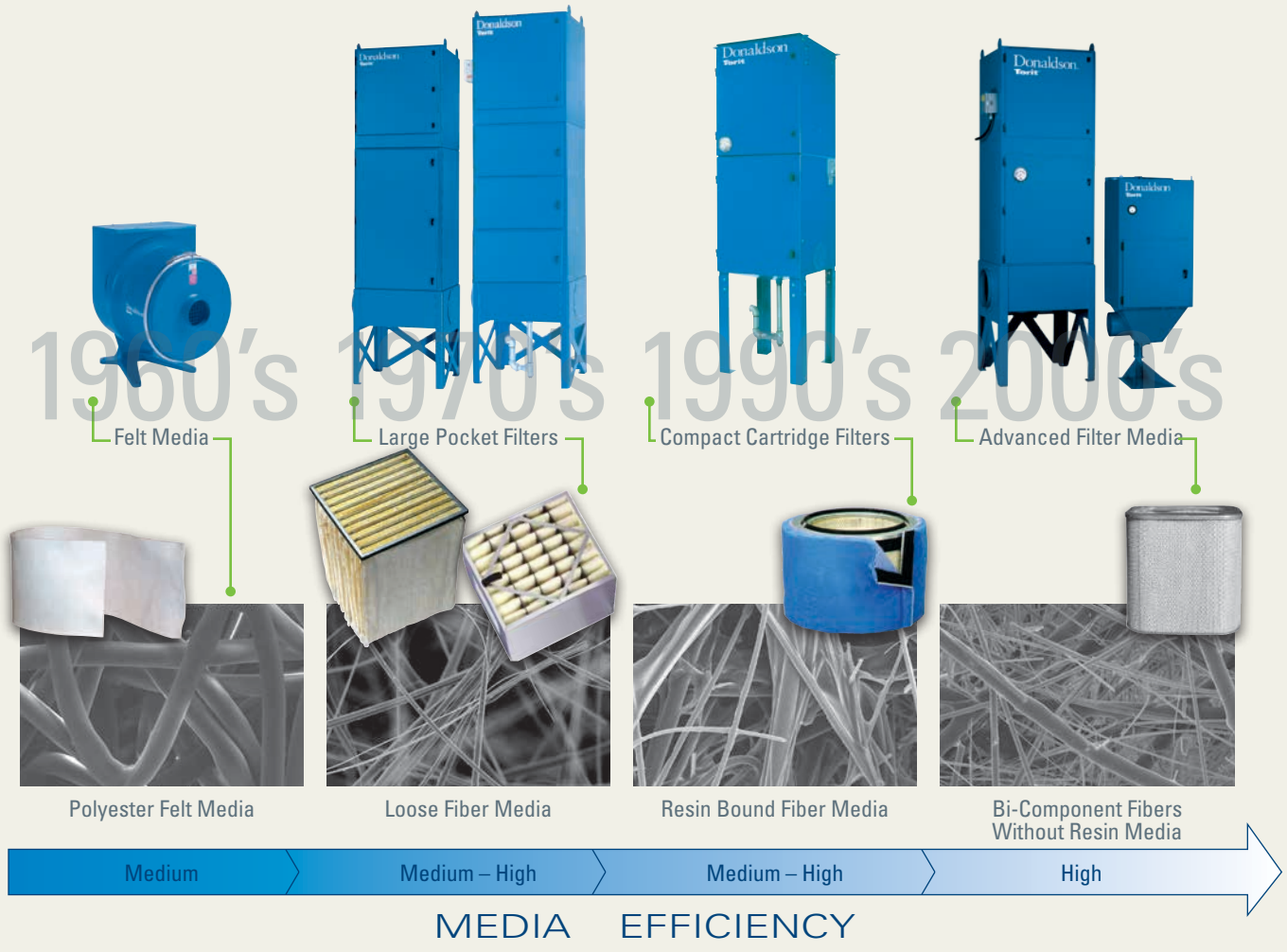
95% DOP FILTERS

95% DOP filters are often used as afterfilters to improve the efficiency of the primary mist collection system. They remove 95% of particles/mist droplets 0.3 microns in size, have good holding capacity, and meet most emission standards.

HEPA AFTERFILTERS

HEPA afterfilters remove 99.97% of particles/mist droplets 0.3 microns in size, and are used in conjunction with a primary mist collection system when there are critical efficiency specifications or when workers are directly exposed to the discharge air from the mist collection system.

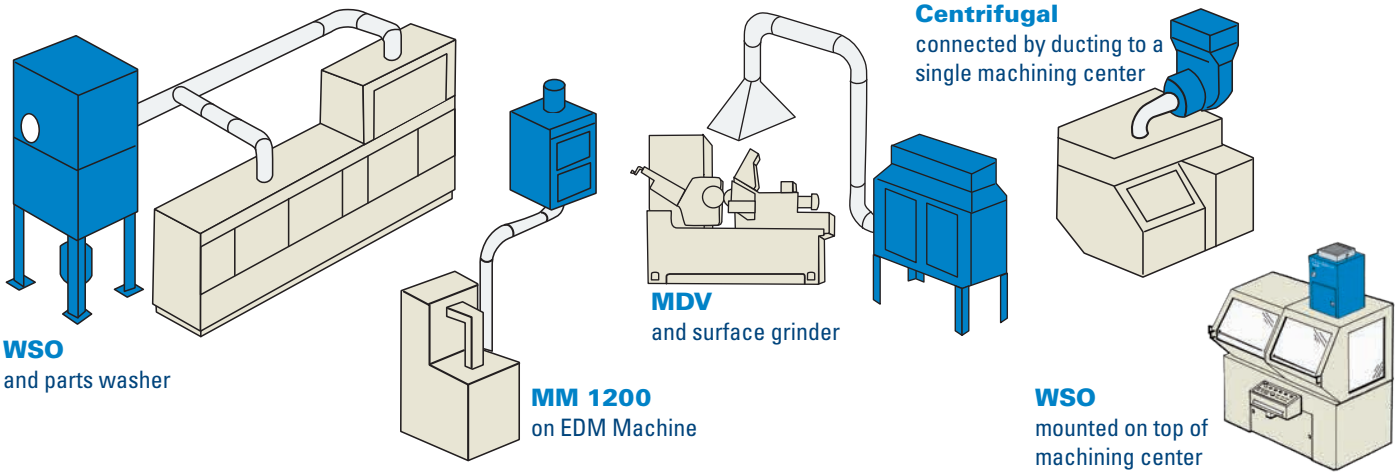
FILTER MEDIA EVOLUTION



COMPREHENSIVE OFFERING OF A VARIETY OF BRANDS

Using Donaldson Torit replacement filters can significantly improve the performance of existing mist collectors. Uniquely engineered for longer life and higher efficiency, Donaldson Torit replacement elements are the most cost-effective choice for many collector brands. In-stock elements ship within 24 hours making Donaldson Torit the best, most reliable source for high performance filter elements.

TYPICAL APPLICATIONS



WSO
and parts washer

MM 1200
on EDM Machine

MDV
and surface grinder

Centrifugal
connected by ducting to a single machining center

WSO
mounted on top of machining center

WSO on Oil Mist
20,000 cfm (33,973 m³/h)

WSO on Smoke - Cold Forming
1,200 cfm (2,038 m³/h)

WSO on Water Mist - Horizontal Grinder
850 cfm (1,444 m³/h)

MODULAR MEDIAFILTER™ on Grinding
2,000 cfm (3,397 m³/h)

WSO MIST COLLECTOR PLUS CYCLONE EQUAL A WINNING COMBINATION AT 80/20® INC.

INDUSTRY: Industrial manufacturing

PROBLEM: Aluminum turnings and mist slow productivity and damage products

SOLUTION: A Donaldson® Torit® Cyclone Dust Collector and WSO Mist Collector to capture by-products and mist during routing process

WSO 25-2 MIST COLLECTOR

Headquartered in an 140,000 square foot facility in Columbia City, Indiana, 80/20® Inc. is the one-stop resource for more than 6,500 aluminum modular framing systems and accessories. Known for the first Industrial Erector Set®, 80/20 Inc. designs, manufactures and assembles standard and custom-built solutions for machine frames, guarding, enclosures, displays, workstations and more.

To create the range of 80/20 solutions, T-slotted aluminum frames are custom cut on-site using high-speed saws and routers. During the routing process, dust, mist and aluminum by-products, called turnings, are generated. These need to be captured and filtered into the scrap aluminum recycling stream. "We immediately contacted Donaldson Torit," said Mike Downam, maintenance facility manager at 80/20. "We needed a filtration solution that included a vacuum strong enough to pick up the turnings and collect the mist generated from the water-soluble coolant used to cool down the cutting tools during the routing process. If not removed quickly, the turnings will damage the frame, not to mention the mess the dust and mist can leave on the shop floor."

The Donaldson Torit Solution

Two Donaldson Torit solutions were combined to meet 80/20's filtration needs: A Model 24 Cyclone Dust Collector was installed to capture the aluminum turnings, and a WSO 25-2 Mist Collector to remove the water-soluble mist.

The Cyclone Dust Collector is a mechanical separator that uses centrifugal force to remove large and high-volume particulate formed in industrial manufacturing. For 80/20, an abrasion-resistant coating was put on the interior of the Cyclone to protect it as the turnings were removed. The collector's legs were also extended to accommodate a Donaldson Torit 10AN rotary valve.

> "We couldn't be more pleased with the filtration solution Donaldson recommended."
>
> **Mike Downam,**
> **80/20 Inc.**

Uncollected coolant can cause slippery floors and collect on machines, walls and ceilings, creating an unpleasant, high-maintenance working environment. To remove the mist generated from water-soluble coolant, a WSO Mist Collector with a water-soluble filter was ducted into the 80/20 central system. The versatile WSO provides three filtering solutions for the three mist categories: water-soluble coolants, straight oil and oily smoke. It can be modified with a simple filter change, leading to leaner operations, cost savings and a cleaner plant floor. The WSO also employs Donaldson's revolutionary Synteq XP™ Media Technology engineered to provide superior draining, which results in lower pressure drop and longer filter life.

"We couldn't be more pleased with the filtration solution Donaldson recommended," continued Downam. "Installing the WSO and [Cyclone] dust collector allows us to more efficiently create our customers' framing systems in a clean, safe environment."

The two Donaldson Torit solutions were installed in early 2009 and have been running stable at 2 "wg, 16 hrs/day, 5 days/week. 80/20 has also installed Donaldson Torit filtration solutions on the factory's saws.

Industry-Leading Technology

- Advanced filtration technology for optimal performance
- Reduced energy consumption and cost of ownership
- Advanced design and testing capabilities

The Most Filters and Parts

- For every brand and style of collector
- Wide range of filtration media for any application
- 90,000 filters and parts in stock and ready to ship

Unparalleled Support

- Live technical specialists
- Comprehensive pre- and post-sale support
- 40 manufacturing plants and 14 distribution centers worldwide

Significantly improve the performance of your collector with genuine Donaldson Torit replacement filters and parts.

Important Notice
Many factors beyond the control of Donaldson can affect the use and performance of Donaldson products in a particular application, including the conditions under which the product is used. Since these factors are uniquely within the user's knowledge and control, it is essential the user evaluate the products to determine whether the product is fit for the particular purpose and suitable for the user's application. All products, product specifications, availability and data are subject to change without notice, and may vary by region or country.

Donaldson.

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