Ultra-web: longer filter life, greater cost savings.

Nanotechnology optimises filtration performance.

Donaldson, a leading manufacturer of industrial dust collectors, has now after many years of research and supported experience taken the fundamental decision to use Ultra-Web® filter media for a broad scope of applications. Donaldson evaluates the use of this patented technology so highly that all Torit DCE dust collectors are equipped with Ultra-Web.

The new filter medium consists of nanofibres, which are made with an electrospinning process. This production method produces a very fine, continuous fibre of only 0.2 - 0.3 micron. From this again a resistant, web-like net with very fine interfibre spaces is formed which are clearly smaller than with conventional filter media.

This has the advantage that particles in the submicron and micro range are already held back on the filter surface and not only in the depth of the filter media. The result: the particles are more easily released and requires less pressure during self-cleaning. This increases the filter life.

At the same time the differential pressure of the nanofilter clearly rises more slowly than that of conventional filters, because the filters can be de-dusted more effectively. This again has positive effects on the operating costs and likewise increases the service life of the filter elements.

Comprehensive practical experience in different industries show that the new filters with their web-like nanofibre technology exhibit an up to two times longer filter life than conventional filters, which are made from pure cellulose or of a cellulose/ synthetic mixture. At the same time also clearly smaller particles are held back reliably: for dust particles of 1 micron Ultra-Web media ensures 40% better filtration efficiency, for dust particles of 0,5 micron even up to 58%. Thus at the same time the filtration is more thorough and more cost effective.

The Ultra-Web filters exhibit a retention rate of 99.9% on 0.2 - 2 micron dust particles and a retention rate of 99.999% on 0.5 micron dust particles. The media fulfils the highest industry standards and corresponds to the BIA classification M. The filter media is available in different qualities (among other things flame retardant) and in connection with different substrates (e.g. synthetic polyester media). This opens up a wide application area for this innovative media, which reaches from the classical dust collection over extraction of laser smoke as well as during the powder coating up to sensitive applications in the chemical and food industry.

Filters with the Ultra-Web nanofibre technology are now standard equipment included in all Donaldson Torit DCE dust collectors, and are also offered as replacement filters for the dust collectors of other manufacturers.

Donaldson Torit® DCE Australia
Freecall: 1800 503 878 **Fax:** +612 8713 1333
Email: toritdce@donaldsonfilters.com.au

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