

NEW Filter Media Efficiency Ratings

Per ISO 16889 Test Standards

ISO 16889 is the international standard for Multi-Pass Test to determine the efficiency (beta rating or beta ratio) and the dirt-holding capacity of the filter element.

- ☑ ISO 4572 is now replaced by ISO 16889.
- ☑ The test bench for ISO 16889 must have On-Line Automatic Optical Particle Counters (APC) calibrated using NIST (National Institute of Standards and Technology) certified calibration fluid. This includes added enhancements to APC's, to allow for better resolution, accuracy, repeatability and reproducibility.
- ☑ ISO 12103-A3 (ISO Medium, 5µm-80µm) Test Dust was selected as replacement dust for calibration and testing procedures. (In 1992, production of ACFTD ceased.)
- ☑ APC's are calibrated by passing a sample of calibrated fluid with a known particle size distribution and adjusting the millivolt level to match the known count distribution. The accuracy of ACFTD distribution and previous APC calibration procedure was questioned by industry, due to lack of traceability and certification.
- ☑ NIST used the Scanning Electron Microscope analysis and statistical analysis techniques to measure particle size distribution.
- ☑ Particle counts, upstream and downstream, are taken every minute of the test.
- ☑ Beta Ratios are reported with (c) to designate NIST traceability.

Media Number	Old Beta _x =75	New Beta _{x(c)} =200	New Beta _{x(c)} =1000
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Donaldson Synteq® Synthetic Media

No. ½	2µm	<4µm(c)	4µm(c)
No. 1	3µm	<4µm(c)	5µm(c)
No. 2	5µm	5µm(c)	8µm(c)
No. 2 ½	10µm	8.5µm(c)	11µm(c)
No. 3	15µm	11.5µm(c)	15µm(c)
No. 6	13µm	12µm(c)	15µm(c)
No. 9	22µm	16.5µm(c)	19µm(c)
No. 16	37µm	30µm(c)	35µm(c)
No. 20	40µm	32µm(c)	35µm(c)

Donaldson Cellulose Media

No. 3	16µm	15µm(c)	17µm(c)
No. 10	25µm	21µm(c)	25µm(c)
No. 15	35µm	28µm(c)	35µm(c)
No. 25	na	45µm(c)	na

Donaldson Wire Mesh Media

No. 44	45µm nominal		
No. 74	75µm nominal		
No. 149	150µm nominal		

Donaldson Filter Media

Choose Synteq® synthetic, natural fiber cellulose, or wiremesh to obtain exactly the cleanliness level you need.

See the differences in media in these close-up photos from the scanning electron microscope in which the media mat is magnified hundreds of times.

Donaldson-developed **Synteq® synthetic** filter media has smooth, rounded fibers for low resistance to fluid flow— making it ideal for synthetic fluids, water glycols, water/oil emulsions, HWCF, and petroleum-based fluids.

Our natural fiber **cellulose** media has larger, rougher fibers that provide very effective filtration for a wide variety of petroleum-base fluids.

Not pictured: **Wiremesh** media. Made of stainless steel for durability and long life, Donaldson wiremesh media is designed extra tough for environments where large, rough particulate needs to be filtered.

