

Donaldson Filter Media Efficiency Ratings per ISO 16889 Test Standards

ISO 16889 is the international standard for Multi-Pass Testing to determine the efficiency (beta rating or beta ratio) and the dirt-holding capacity of the filter. It replaced the ISO 4572 test standard.

Donaldson filter media has been re-tested per the new standard and the current beta ratios are shown at right. New beta ratios are shown at 200 and 1000, with a (c) to indicate test adherence to the ISO 16889 standard and traceability to NIST test dust.

Fluid to be Filtered Recommended Media

Petroleum-based.....	Synteq or Cellulose
Phosphate Ester	DT Synteq
Diester	Synteq
Water Glycol	DT Synteq
Water-Oil Emulsion	Synteq
Biodegradable Fluid	Synteq
HWCF (high water content fluids)	Synteq
Coarse Filtration.....	Wire Mesh

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Media Number	FORMER Rating Beta _x =75 per ISO 4572	NEW Rating Beta _{x(c)} =200 per ISO 16889	NEW Rating Beta _{x(c)} =1000 per ISO 16889
Donaldson Synteq™ Synthetic Media			
No. ½	2 µm	<4 µm _(c)	<4 µm _(c)
No. 1	3 µm	4 µm _(c)	5 µm _(c)
No. 2	5 µm	5 µm _(c)	9 µm _(c)
No. 2½	10 µm	8 µm _(c)	10 µm _(c)
No. 3	10 µm	8 µm _(c)	10 µm _(c)
No. 4	10 µm	8 µm _(c)	10 µm _(c)
No. 6	13 µm	10 µm _(c)	13 µm _(c)
No. 7	22 µm	18 µm _(c)	33 µm _(c)
No. 9	22 µm	18 µm _(c)	23 µm _(c)
No. 16	37 µm	16 µm _(c)	22 µm _(c)
No. 20	40 µm	>50 µm _(c)	>50 µm _(c)
Donaldson DT Synteq Synthetic Media			
DT 2µm	N/A	<4 µm _(c)	<4 µm _(c)
DT 5µm	N/A	4 µm _(c)	5 µm _(c)
DT 8µm	N/A	6 µm _(c)	8 µm _(c)
DT 14µm	N/A	10 µm _(c)	14 µm _(c)
DT 25µm	N/A	20 µm _(c)	25 µm _(c)
Donaldson Cellulose Media			
No. 3	16 µm	18 µm _(c)	24 µm _(c)
No. 10	25 µm	19 µm _(c)	23 µm _(c)
No. 20	35 µm	>40 µm _(c)	>40 µm _(c)
No. 25	N/A	32 µm _(c)	>40 µm _(c)
Donaldson Wire Mesh Media			
No. 44	45 µm nominal	325 mesh	N/A
No. 74	75 µm nominal	200 mesh	N/A
No. 149	150 µm nominal	100 mesh	N/A
Donaldson Water Absorbing Media			
WA	N/A	>30 µm(c)	>30 µm(c)