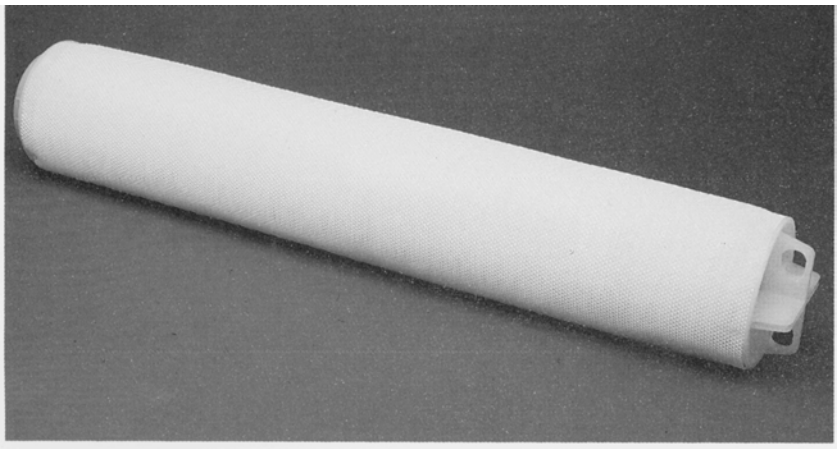
High Flow Filter Cartridges
Series 740B30

Creative Answers Shaping Cleaner Environments

Technical Data



Features, Advantages and Benefits

The 3M™ High Flow Filter Cartridge 740B30, which incorporates the patented radial pleat, puts an extraordinary amount of surface area into a single cartridge. This results in the following:

- High loading capacity for long life and lower cost filtration.
- Fewer cartridges for fewer change-outs and lower labor cost.
- Fewer seals, reduced risk of bypass resulting in high quality filtration .
- Extremely low disposal costs, less than a tenth of some cartridges.

Double O-ring seals in a variety of material options means:

- Extremely low risk of bypass for high quality fluids.
- No loose parts to assemble for easy installation, thus less labor cost.
- Also, no springs and caps to lose reduces the risk of bypass.
- Broad chemical compatibility for many applications.
- Convenient handle for easy manual or mechanical removal.

Materials of Construction

Filter Media:

Meltblown polypropylene microfiber filter media provides high particle removal efficiency for high quality filtration with broad chemical compatibility.

No silicone is intentionally used in materials of construction or in manufacturing.

The raw materials composing these filters are FDA compliant according to CFR Title 21.

O-rings:

Product Number	Material
7010	FDA Buna N (standard)
7011	Ethylene Propylene Rubber
7012	PTFE encapsulated Silicone
7013	FDA Silicone
7014	Fluoroelastomer

Applications

Prefilters or final filters for:

- Acids and bases
- Amines
- Carbon beds
- Completion fluids
- Deep wells
- Desalination
- DI resins
- EDM fluids
- Glycol
- Groundwater clean-up
- Laundry water
- Machine coolants
- Magnetic media
- Makeup water
- Organic solvents
- Photo chemicals
- Plating solutions
- RO membranes
- Storm water
- UF membranes
- Wastewater
- Waterflood
- Workover fluids

Performance Data

Loading Capacity

Product Number	742B	743B	744B	745B	746B	747B	748B	749B
Pounds at 30 gpm	8.9	13.4	13.3	13.3	13.7	16.1	17.3	17.5
Kilograms at 7 cu m/hr	4.0	6.1	6.0	6.0	6.2	7.3	7.8	7.9

Loading: *The data above shows typical loading capacities of the different micron rated filters. Loading capacity is determined by challenging a filter with a dispersion of silica test dust in water at the recommended flow rate. Pressure drop is monitored and testing is terminated at 50 psid (3.4 bar). (742B is terminated at 35 psid– 2.4 bar.) The loading capacity reported is the dry weight gain of the cartridge.*

Particle Removal Efficiency (microns)

Product Number	742B	743B	744B	745B	746B	747B	748B	749B
Efficiency @ 99%	1	2	5	10	15	25	40	70
Efficiency @ 95%	0.9	1.1	2.5	8	9	13	24	43
Efficiency @ 90%	0.8	0.9	1.7	6	8	10	19	35
Efficiency @ 75%	<0.7	0.7	1.5	3.5	6	8	13	24
Efficiency @ 50%	<0.7	<0.7	1.1	1.5	4.0	4.5	8	14

Efficiency: *The 3M™ High Flow Filter Cartridges are rated using a silica test challenge in water at 30 gpm (6.8 cu m/hr). The results reported are typical initial efficiencies taken within ten minutes of the start of the test. For more information on how 3M conducts its filter efficiency testing, please contact Filtration Products Technical Service at 1-800-648-3550 .*

Clean Pressure Drop Versus Flow Rate (psid)

Product Number	742B	743B	744B	745B	746B	747B	748B	749B
Δp @ 10 gpm	0.3	0.2	0.1	0.1	0.1	0.05	0.05	0.04
Δp @ 20 gpm	0.7	0.5	0.2	0.2	0.1	0.11	0.10	0.08
Δp @ 30 gpm	1.0	0.9	0.4	0.3	0.2	0.21	0.18	0.15
Δp @ 40 gpm	1.3	1.1	0.6	0.4	0.4	0.30	0.25	0.20

Pressure Drop: *The 3M High Flow Filter Cartridges have low initial pressure drop (Δp) in water as the chart indicates. The chart does not include the pressure drop of the vessel.*

Product Specifications

Micron Ratings:

Product Number	Initial Efficiency
742B30	1 micron @ 99%
743B30	2 micron @ 99%
744B30	5 micron @ 99%
745B30	10 micron @ 99%
746B30	15 micron @ 99%
747B30	25 micron @ 99%
748B30	40 micron @ 99%
749B30	70 micron @ 99%

Dimensions (Nominal):

Outer Diameter:
6.5 inches 16.5 cm

Inside Diameter:
1.6 inches 4 cm

Length:
28.75 inches 73.0 cm

226 O-ring Inside Diameter:
2 inches 5 cm

226 O-ring Thickness:
0.14 inches 0.35 cm

Operating Condition:

Maximum Operating Temperature:
160F 70C

Recommended Flow: (in water)
30 gpm 6.8 cu m/hr

Suggested Maximum Flow: (in water)
742B30-743B30 – 45 gpm 10 cu m/hr
744B30-749B30 – 60 gpm 14 cu m/hr

Suggested Maximum Differential Pressure:

742B30	35 psid	2.4 bar
743B30 - 749B30	50 psid	3.4 bar

Disposal of used filters must comply with applicable federal, state and local laws and regulations.

Order Information

To order contact your local 3M Filtration Products distributor or call toll free 1-800-648-3550.

3M
Filtration Products
3M Center, Building 60-1S-16
St. Paul, MN 55144-1000
800-648-3550

 70-0708-1755-9