# 3M™ 740B Series
High Throughput Filter Cartridges

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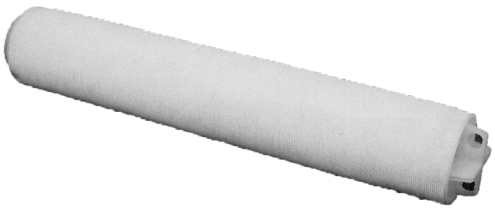

## Features, Advantages & Benefits

**3M™ 740B series high throughput filter cartridge, which incorporates the 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 by pass 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 by pass for high quality fluids.
- No loose parts to assemble for easy installation, thus less labor cost.
- No springs and caps to lose reduces the risk of by pass.
- Broad chemical compatibility for many applications.
- Convenient handle for easy manual or mechanical removal.

## Applications

| | | |
|---|---|---|
| **Prefilters or Final Filters for:** | Acids and bases | Machine coolants |
| | Amines | Makeup water |
| | Carbon beds | Organic solvents |
| | Completion fluids | Photo chemicals |
| | Deep wells | Plating solutions |
| | Desalination | RO membranes |
| | DI resins | Storm Water |
| | EDM Fluids | UF membranes |
| | Glycol | Wastewater |
| | Groundwater clean-up | Waterflood |
| | Laundry water | Workover fluids |

### Materials Of Construction

**Filter Media:**

Melt blown 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 ac cording to CFR Title 21.

**O-rings:**

| Model Number Material | Material |
|---|---|
| 7010 | FDA Buna N (standard) |

Other O-rings are available, please consult factory

### Performance Data

**Loading Capacity**

| Model Number | 742B | 743B | 744B | 745B | 746B | 747B | 748B | 749B |
|---|---|---|---|---|---|---|---|---|
| Pounds at 40 gpm | 16.1 | 21 | 23.5 | 23.8 | 23.5 | 24 | 24 | 24 |
| Kilograms at 9 cu m/hr | 7.3 | 9.5 | 10.7 | 10.8 | 10.7 | 11 | 11 | 11 |

***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). 3M 742B series is terminated at 35 psid (2.4 bar). The loading capacity reported is the dry weight gain of the bag.*

**Particle Removal Efficiency (microns)**

| Model 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 @ 70% | <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:***

*3M 740B series high throughput filter cartridges are rated using a silica test challenge in water at 40 gpm (9 cu m/hr). The results reported are typical initial efficiencies taken within ten minutes of the start of the test.*

### Clean Pressure Drop Versus Flow Rate (psid)

| Model Number | 742B | 743B | 744B | 745B | 746B | 747B | 748B | 749B |
|---|---|---|---|---|---|---|---|---|
| $\Delta p$ Dp @ 20 gpm | 0.6 | 0.4 | 0.2 | 0.1 | 0.1 | 0.1 | 0.08 | 0.06 |
| $\Delta p$ Dp @ 40 gpm | 1.1 | 0.8 | 0.4 | 0.3 | 0.2 | 0.2 | 0.16 | 0.13 |
| $\Delta p$ Dp @ 60 gpm | 2.2 | 1.1 | 0.5 | 0.4 | 0.3 | 0.3 | 0.25 | 0.20 |
| $\Delta p$ Dp @ 80 gpm | 2.9 | 1.5 | 0.7 | 0.6 | 0.4 | 0.4 | 0.33 | 0.27 |

***Pressure Drop:***

*The 3M™ 740B series high throughput filter cartridges have low initial pressure drop ($\Delta p$) in water, as the table indicates. The table does not include the pressure drop of the vessel.*

### Operating Conditions

| | |
|---|---|
| Maximum Operating Temperature | 160° F (70° C) |
| Recommended Flow (in water) | 40 gpm( 9 cu m/hr) |
| Maximum Flow (in water): | |
| 742B & 743B | 60 gpm (14 cu m/hr) |
| 744B - 749B | 80 gpm (18 cu m/hr) |
| Maximum Differential Pressure: | |
| 742B | 35 psid (2.4 bar) |
| 743B - 749B | 50 psid (3.4) bar |

***Disposal:***

*Disposal of used filter bags must comply with applicable federal, state and local laws and regulations.*

### Clean Pressure Drop Versus Flow Rate (psid)

| Model Number | Micron Rating Initial Efficiency | Part Number | NSF/ANSI Standard 61 | Length | Outer Diameter | Cartridges per Case |
|---|---|---|---|---|---|---|
| 742B | 1 micron @ 99% | 70-0708-1552-0 | See NSF note below | 39 in (100 cm) | 6.5 in (16.5 cm) | 1 |
| 743B | 2 micron @ 99% | 70-0702-3124-9 | | | | |
| 744B | 5 micron @ 99% | 70-0702-3125-6 | | | | |
| 745B | 10 micron @ 99% | 70-0702-3126-4 | | | | |
| 746B | 15 micron @ 99% | 70-0702-3127-2 | | | | |
| 747B | 25 micron @ 99% | 70-0706-2356-9 | No | | | |
| 748B | 40 micron @ 99% | 70-0706-2357-7 | | | | |
| 749B | 70 micron @ 99% | 70-0706-2358-5 | | | | |




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Component

3M™ 740B Series 742B, 743B, 744B, 745B, and 746B are tested and certified by NSF International against NSF/ANSI Standard 61 for material requirements only.

Your Local Distributor:



70-0708-1290-7 REV 1111b