

3M™ Water Filtration Products



Our Story

In a world becoming more focused on protecting the environment, sustainability awareness has escalated and is sweeping through businesses today. 3M Purification Inc. (3M Purification), a global leader in liquid filtration, is meeting the needs of the foodservice industry with the 3M™ Water Filtration Products High Flow Series. Through carbon block innovation, 3M Purification researchers have developed single cartridge systems that accomplish what was previously the job of a standard three- or four- 3M cartridge system; saving our Customers additional cost and labor fees associated with every cartridge change-out.

Under the High Flow Series umbrella, scale inhibitors used in the ICE Series and Brew Series products help to control the precipitation of the carbonates as hard lime scale. These products make up 56% of the High Flow Series systems and can be used to support LEED® (The leadership in Energy and Environmental Design) certification. LEED is a nationally accepted benchmark for design, construction, and operation of high performance green buildings.

3M Company's long standing commitment to sustainable development through environmental protection, social responsibility and economic progress has resulted in some of the following achievements:

2005 U.S EPA Climate Protection Award

2006 U.S EPA Clean Air Excellence Award

2005-2008 Energy Star Sustained Excellence Award for Four consecutive years

2009 member of United States Green Building Council (USGBC)

1990-2008 Environmental Progress:

95% reduction in absolute volatile air emissions

95% reduction in absolute U.S. Toxic Release Inventory releases

62% reduction in absolute greenhouse gas emissions

61% reduction in solid waste indexed to net sales

44% reduction in U.S. energy use indexed to net sales

"Sustainability is the responsibility of everyone. Together with customers, 3M hopes to continue to meet today's needs while allowing the next generation to meet its needs."

George W. Buckley, Chairman and CEO

3M is committed to providing innovative, cost-effective products that help protect people, equipment and our environment.

Featured Benefit

3M™ Water Filtration Products, Filter Monitor

Located within the literature sleeve of most 3M™ Water Filtration Products, this small yet effective monitor promotes cartridge replacement to help ensure proper product performance. Simply follow the monitor's instructions and adhere it to the cartridge. It's that simple!

- Visible display indicates when cartridge needs to be replaced
- Promotes consistent Recipe Quality Water™
- Easy to use



Dealer Network

Foodservice Products Certification Training

3M Purification Inc. offers educational classes designed to provide the tools necessary to recommend, size, install, and service water filtration and water treatment products in the foodservice environment.

The 3M Purification Certification Program consists of four levels. This is a sequential program, requiring completion of each level in succession.

Certification Level 1

Covers simple water chemistry, typical water-related problems, the basics of water filtration, and the application and sizing of filters in foodservice applications.



Certification Level 2

Teaches Point of Use (POU) water softening and scale reduction technology for foodservice applications.



Certification Level 3

Teaches the specifics of reverse osmosis systems.



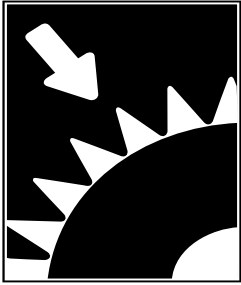
Certification Level 4

Concentrates on Point of Entry (POE) water treatment fundamentals; focusing on automatic backwashing filters and water softeners.



3M Purification Inc. invites you to join the growing network of Certified Foodservice Dealers. Contact your local 3M Purification Inc. distributor or Regional Manager for details on how to get involved with this program.

Water Filtration Technology



With revolutionary Integrated Membrane Pre-Activated Carbon Technology, (“I.M.P.A.C.T.”) media for superior throughput and cartridge life, the 3M™ Water Filtration Products High Flow Series of commercial foodservice products offers simple, effective and easy-to-install solutions that meet the volume, water clarity and maintenance expectations of restaurant owners, chain, fast food and convenience store operators, supermarkets, cafeterias, and institutions.

For cold beverages, brewed beverages, ice and specialty beverages, or any combination of applications, 3M Purification has options for you that include cyst and bacteria-reduction, as well as filters specially constructed for higher turbidity waters. 3M™ Water Filtration Products can help you lower capital and operating costs for your foodservice operation.

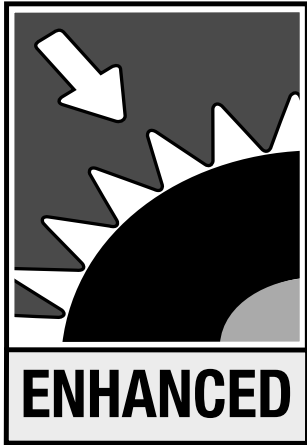


The High Flow Series Provides

| | |
|----------------------|---|
| Economy | <ul style="list-style-type: none"> • Single-cartridge flow rates and capacities previously available only with three- or four-cartridge systems. • Up to 12 month cartridge life for cartridges with Integrated Membrane Pre-Activated Carbon Technology (“I.M.P.A.C.T.”) media. • Multi-stage filtration reduces the need for a separate prefilter. |
| Ease | <ul style="list-style-type: none"> • Fast and easy cartridge change-outs with SQC — Sanitary Quick Change — encapsulated cartridge design. • No requirement for pre-activation of the media. • Direct or easily-adaptable connections to existing plumbing lines with NPT horizontal inlet and outlet ports. |
| Certification | <ul style="list-style-type: none"> • FDA CFR-21 and/or NSF Standard 42 compliant materials. • Certification to NSF Standard 53 for cyst reduction and reduction of 99.99 percent of water-borne bacteria* when using Enhanced Integrated Membrane Pre-Activated Carbon Technology (“I.M.P.A.C.T.”) media. • No exposure to contaminated media. |
| Performance | <ul style="list-style-type: none"> • Recipe Quality Water™ for all commercial foodservice applications, including cold beverages, ice and all brewed beverages. • Combined sediment, cyst, water-borne bacteria and scale reduction with chlorine taste and odor reduction in a single cartridge from our innovative Enhanced Integrated Membrane Pre-Activated Carbon Technology (“I.M.P.A.C.T.”) media. • Reduction of sediment and abrasive hard particles helps to extend the life of pumps, valves, o-rings, and seals. • Compact manifold systems to simultaneously service multiple applications. |

* As tested with *E.coli* ATCC (11229). Tested and verified by manufacturer’s laboratory.

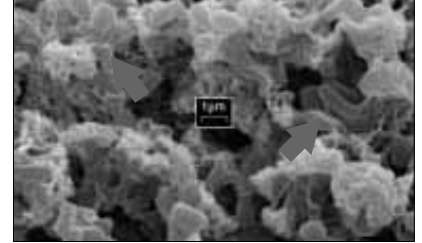
Water Filtration Technology



3M™ Water Filtration Products High Flow Series uses revolutionary **Integrated Membrane Pre-Activated Carbon Technology** (“I.M.P.A.C.T.”) for superior cartridge life and economy. A single filter can accomplish what was previously the job of a three- or four-cartridge system.

The **Integrated Membrane Pre-Activated Carbon Technology** (“I.M.P.A.C.T.”) media package combines a pharmaceutical-grade microporous membrane and a pre-activated carbon block in a single cartridge to dramatically reduce pressure drop and practically eliminate the need for pre-filtration. The integrated membrane provides superior sediment holding capabilities while reducing *Cryptosporidium* and

Over 99.99% of *E.coli* bacteria are reduced by the nylon pharmaceutical-grade membrane.

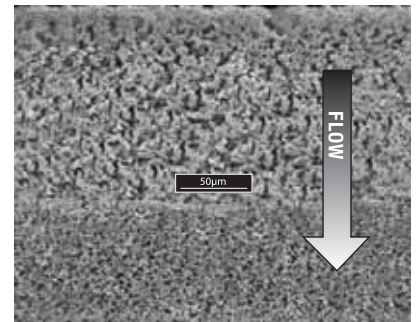


Giardia cysts¹ and over 99.99 percent of all water-borne bacteria.² Pre-activation of the carbon media is not required.

Reduce scale formation, cysts, bacteria, sediment, and chlorine taste and odor with convenience and superior performance. Stop wasting time and money on messy sump systems. A single HF90 cartridge delivers over 864,000 8-oz cups of coffee, 432,000 16-oz soft drinks (in a 22-oz cup), or 216,000 pounds of ice (25 gallons at 100 lbs of ice) at a flow of up to 5 gallons per minute (gpm), providing Recipe Quality Water™ while reducing filtration costs.

Two-Zone Membrane

Large particles are captured in the top zone and smaller particles in the bottom zone of the graded density microporous nylon membrane, providing superior cartridge sediment-holding capacity.



Enhanced High Flow HF90 Cartridge Bacteria Membrane

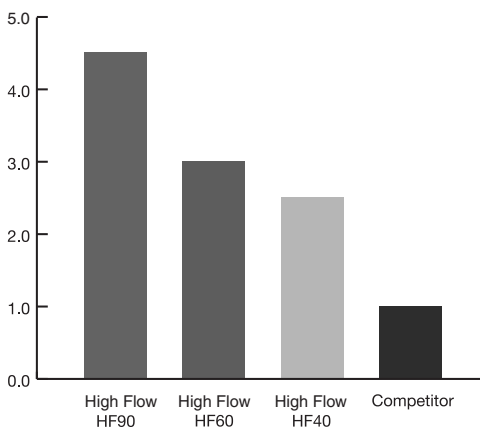


Competitor

Surface Area

Enhanced High Flow cartridges with **Integrated Membrane Pre-Activated Carbon Technology** (“I.M.P.A.C.T.”) have nearly 6 times the surface area for improved sediment filtration, reduced pressure drop and longer cartridge life than competitive pre-coat cartridges.

Cartridge Gram Life



Cartridge Throughput

Enhanced High Flow cartridges with **Integrated Membrane Pre-Activated Carbon Technology** (“I.M.P.A.C.T.”) show higher throughputs and longer lifetimes. In side-to-side tests conducted with a surrogate plugging agent to a 25% loss in flow rate, a single HF90 cartridge averaged over 4.5 times the sediment holding capacity of competitive pre-coat cartridges.

1 NSF Standard 53

2 As tested with *E.coli* ATCC (11229).

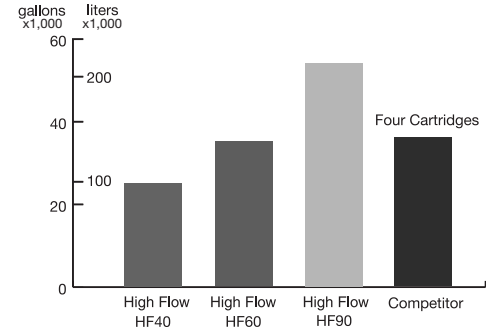
Water Filtration Technology

Chlorine Capacities

The high chlorine taste and odor reduction capacities* for High Flow cartridge filters with Integrated Membrane Pre-Activated Carbon Technology (“I.M.P.A.C.T.”) help assure that a single HF90 cartridge out-performs a four-cartridge competitive system**.

* at an average of 96+% reduction

** 4 competitive pre-coat cartridges each with 9,000 Gal. (34,000 Lit.) chlorine taste and odor reduction capacity



Nylon-Membrane Bacterial Reduction

| Bacteria | Percent Reduction Achieved |
|----------------------|----------------------------|
| <i>E.coli</i> | >99.9989 |
| <i>P.fluorescens</i> | >99.9999 |

Testing results for cartridge filters with ten (10) square feet (0.93 square meters) of pleated 3M™ Water Filtration Products High Flow Series nylon membrane challenged with ten (10) liters of water containing organisms at $>10^5$ cfu/ml.

Cartridge Cutaway

- 1 Polypropylene housing.
- 2 Enhanced media with pleated membrane design helps provide cyst and bacteria protection and superior sediment holding capabilities with minimal pressure drop.
- 3 Carbon block technology has more than four times the chlorine taste and odor reduction capacity of competitive pre-coat filters. Bacteriostatic and bacteria inhibition agent included for improved hygiene.
- 4 Enhanced pleated membrane has six (6) times the surface area of competitor (see Surface Area diagram on previous page).
- 5 Enhanced cartridges feature a 5 micron pre-filter wrap.

