



MICROGUARD™ MEMBRANE FILTER CARTRIDGES

- Absolute 0.15 micron particle retention for bacteria and protozoan cyst reduction
- 99.9999% bacteria reduction (> 6 Log)
- 99.99% cyst reduction (> 4 Log)
- Combined carbon block and sediment pre-filtration for extended life and chlorine taste and odor reduction
- Utilizes patented* highly asymmetric polyethersulfone membrane with proprietary hydrophilic formulation for immediate wetting and high flow
- Double O-ring end cap seals for absolute sealing in PENTEK Seal-Safe™ 3G housings

The MicroGuard™ membrane filters provide reliable bacteria and protozoan cyst reduction for safer and cleaner drinking water without incorporating chemicals into the media or adding chemicals to the filtered water. The MicroGuard carbon block membrane cartridge, MG-10MCB, is uniquely designed with integral carbon block and sediment pre-filtration for the reduction of chlorine taste and odor and for providing extended life of the internal membrane element. This cartridge has 2.5 times greater filtration surface area than some anti-microbial carbon blocks and operates at a higher flow rate with lower pressure drop. This

makes the MG-10MCB ideal for Point-of-Use (POU) applications. The MicroGuard cartridges do not require USEPA registration and their effectiveness is not susceptible to common substances normally found in some waters, e.g., hydrogen sulfide (H₂S), natural organic matter (NOM) and total dissolved solids (TDS).

The MicroGuard triple-element cartridge, MG-10T, is uniquely constructed with three membrane elements integrally sealed into one common cartridge design. This unique design allows for higher flow rates and longer life while still providing bacteria and cyst reduction,

and is ideal for applications up to five gallons-per-minute. The life of the MG-10T can be extended using PENTEK carbon block or sediment pre-filtration options.

*U.S. Patent No. 5,240,862
EPA Est. No. 039861-WI-001
Not for sale in the USA or Canada.

NOTE: These cartridges are not intended for converting wastewater or raw sewage into drinking water.



DESCRIPTION, ADVANTAGES AND USAGE

Description and Dimensions:

MG-10MCB – Carbon-Block/Membrane, 10-inch nominal length microfilter (0.15 micron absolute rating). Maximum diameter: 2.875" (73 mm). Length: 10.233" (260 mm). Fits in Pentek 3G housings.

MG-10T – Triple Element Cartridge, 10-inch nominal length microfilter (0.15 micron absolute rating). Maximum diameter: 3.000" (76 mm). Length: 10.308" (262 mm). Fits in Pentek 3G housings.

Advantages of the MicroGuard™ filter technology

- Removes bacteria, cysts and other particles down to 0.15 micron in size
- Requires only normal water line pressure to operate
- No electrical power required (except for accessory pump, if needed for pressure)
- Protects even with power outages or intermittent power
- No waste water or brine/concentrate flushing
- Retains natural mineral content of water
- Protects against unexpected bacteria and cysts in the water system due to water main breaks, water treatment plant failure during floods and power outages
- High surface area and high tolerance to plugging
- Low pressure drop with high flow rate
- Protection not susceptible to common substances in water, such as hydrogen sulfide (H₂S), natural organic matter (NOM) and total dissolved solids (TDS)
- Bacteria and cyst removal does not rely on chemicals



MG-10T

Point-of-Use (POU) Applications

MG-10MCB

- Under sink, separate tap
- Countertop
- Water for –
 - oral care
 - food preparation
 - hand washing
 - sanitary applications
- Laboratories
- Pharmaceutical
- Photography/film
- Offices, restaurants
- Coffee makers

MG-10T

- In-line (cold water line)
- Beverage dispensing
- Water for –
 - oral care
 - food preparation
 - hand washing
 - sanitary applications
- Laboratories
- Pharmaceutical
- Photography/film
- Process water
- Offices, restaurants

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SPECIFICATIONS AND PERFORMANCE

Materials of Construction:

Membrane:	Polyethersulfone
Membrane assembly:	Polystyrene, epoxy resin
Carbon prefilter:	MG-10MCB with Fibredyne™ technology contains activated carbon with synthetic Polymeric fibers and binders
O-ring seals:	EPDM
End caps/body:	Polystyrene, excluding the bottom of the MG-10MCB which is polypropylene
Netting:	Polyolefin (10MCB only)

Recommended Operating Conditions:

Water Temperature Range:	40-140°F (4.4-60°C)
Pressure Differential:	115 psi (7.93 bar), max.
Storage Temperature Range:	35-104°F (4.4-40°C)
pH Range:	2-12
Operating Pressure Range:	30-115 psi (2.1-7.93 bar)
Water Turbidity:	< 1 NTU

Performance Specifications

Bacteria Reduction: > 99.9999% (> 6-Log), challenged with > 50,000,000 organisms per 100 mL.

Organism: *Brevundimonas diminuta* (0.2 micron in size).

Method: modified USEPA Guide Standard and Protocol for Water Purifiers, 1987

Cyst Reduction: > 99.95% (> 3.3-Log), challenged with > 50,000 microspheres per mL.

Method: NSF/ANSI Standard 53, surrogate cyst procedure using 3.0 micron latex microspheres.

NOTE: Feed level limits reduction claim for cysts to no greater than 99.95% (3.3-Log) reduction.

Recommended Flow Rate:

MG-10MCB:	1 GPM
MG-10T:	3 GPM

Initial ΔP (psi) @ Flow Rate (gpm): Estimated Capacities**:

MG-10MCB:	11 psid @ 1 GPM (0.76 bar @ 3.8 LPM)	MG-10MCB: 200-600 gallons (750-2,300 L)
MG-10T:	13 psid @ 3 GPM (0.9 bar @ 11.4 LPM)	MG-10T: 600-1,800 gallons (2,300-6,800 L)



MG-10MCB

** Capacities may vary depending on local water quality, type of pre-filtration and acceptable minimum flow rate.

WARNING: Do not use on water that may be contaminated by untreated surface water, water that may be contaminated by human or animal sewage or other wastewater. These cartridges are not intended for reducing pathogenic (disease-causing) virus particles, if present in the water, to below safe levels.

These cartridges are intended for use on visually clear water.

Product features are subject to change by Pentair Water at any time without notice.

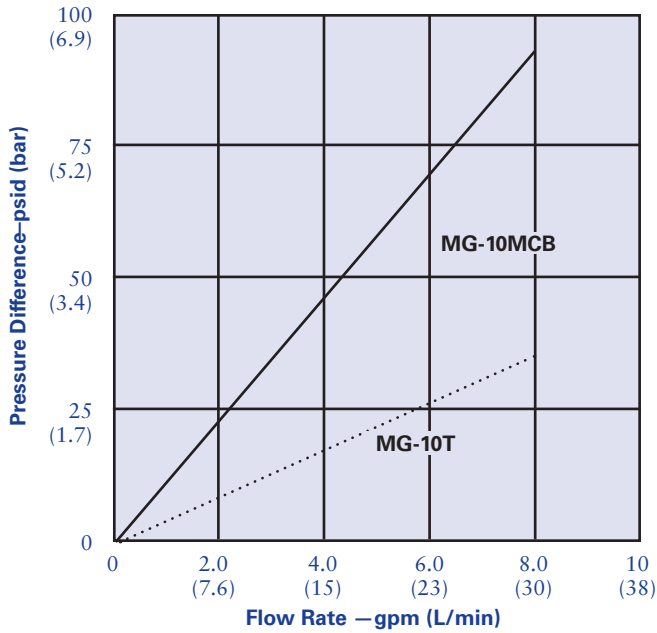
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MICROGUARD™ SERIES

Microfilter Membrane Cartridges



Net Pressure Drop vs. Flow Rate (water)



Cartridge Specifications and Product Information

Model	Description	Maximum Length	Maximum Diameter	Micron Rating	Notes
MG-10MCB	Carbon Block/ Membrane	10.233" (260 mm)	2.875 (73 mm)	0.15 absolute rating	Fits Pentek 3G Housing
MG-10T	Triple Element (membrane only)	10.308" (262 mm)	3.0 (76 mm)	0.15 absolute rating	Fits Pentek 3G Housing

Recommended pre-filtration for the MG-10T and MG-10MCB membrane-only cartridges: HEP-1-3.1-10, EP-10, CBC-10 or PD-1-934

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