

**EASY REPLACEMENT**  
No Tools Means No Tools!



**FOR BEST RESULTS:**  
Use with pre- and post-filtration product solutions, including pleated filters (orange/yellow series) and carbon blocks (blue series).

# PIONEER<sup>®</sup> OX

## PIONEER<sup>®</sup> OX FILTRATION CARTRIDGES

**PIONEER<sup>®</sup> OX** features ENPRESS **ATOMUS<sup>®</sup> MD1** inside technology, a proprietary filtration media solution for the water treatment industry specifically designed to simultaneously oxidize and adsorb organic and inorganic contaminants along with heavy metals that could be present in water. This patented and proprietary chemistry creates a unique oxidative media that does not add residuals to the water stream or create harmful disinfectant byproducts. Unlike typical oxidation agents, such as ozone, chlorine, peroxide, citric acid, or bromine, **ATOMUS<sup>®</sup> MD1** is a “solid state” oxidizing agent. Overall system simplification is paramount in the usage of **ATOMUS<sup>®</sup> MD1**, eliminating an Airdraw or standard control valve head, the use of salt, or oxidation agents for regeneration.

With fast kinetics and EBCT (empty bed contact time) from 1–5 minutes depending on the agent that requires oxidation, **PIONEER<sup>®</sup> OX** can eliminate from water many difficult contaminants, including but not limited to:

- Hydrogen sulfide
- Color/tannin/organics
- Total organic carbon (TOC)
- Iron and manganese

And the potential removal of:

- Radium
- Phosphate
- Silica
- Lead
- Uranium
- Chromium
- Copper
- Zinc
- Arsenic
- Legionella
- Iron bacteria
- Fluoride, +more!

ENPRESS **PIONEER<sup>®</sup> OX** filtration cartridges are designed to provide an effective filtration solution for the reduction of sulfur, iron, manganese, color/tannins/organics and heavy metals from water, with service flow rates up to 15 gpm (56.8 lpm). This cartridge provides a simple and easy solution to the removal of these dissolved contaminants, greatly improving the taste of water. This cartridge will help to eliminate the orange and brown stains often found in sinks, toilets, tubs and other plumbing fixtures. It also reduces the possibility of damage to pipes and water heaters.

The E3 Cartridge Tank utilizes ENPRESS' patented industry-exclusive liner and no-tools-necessary snap ring design. Full radial seal top and bottom caps make replacement simple and allow for easy access and removal of the internal filtration solution.

Lightweight and cost effective with multiple configuration options, from high flow commercial/industrial applications to stand-alone residential point-of-entry (POE) installations for city and well water applications, this is the filtration solution of the future—100% non-metallic!

**PIONEER<sup>®</sup> OX magenta series filters are available in the following configuration:**

**CT-5020-0640RD-MD1:** Oxidation and adsorption removal cartridge with **ATOMUS<sup>®</sup> MD1** inside

### APPLICATIONS

Ideal for residential, food service, rental fleets, commercial and industrial applications

Make-up water, RO pre-filtration, cooling towers, chill water loops

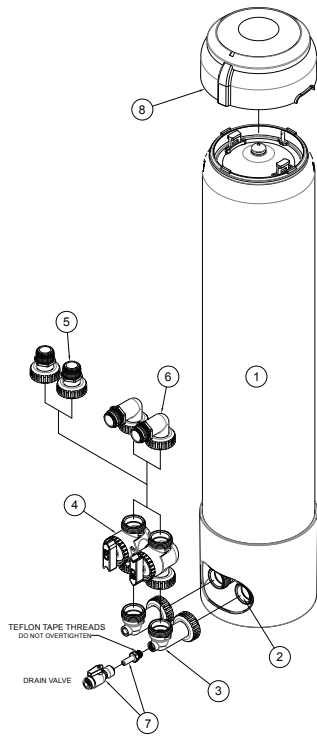
Process water (turbidity, particulate, colloidal suspensions)

Reduction of unwanted bad taste and odor from potable drinking water

Reduction in frequency of replacing common 2½" or 4½" housings (bigger is better)

Other water-based fluid solutions

# TECHNICAL SCHEMATICS



## PART IDENTIFICATION

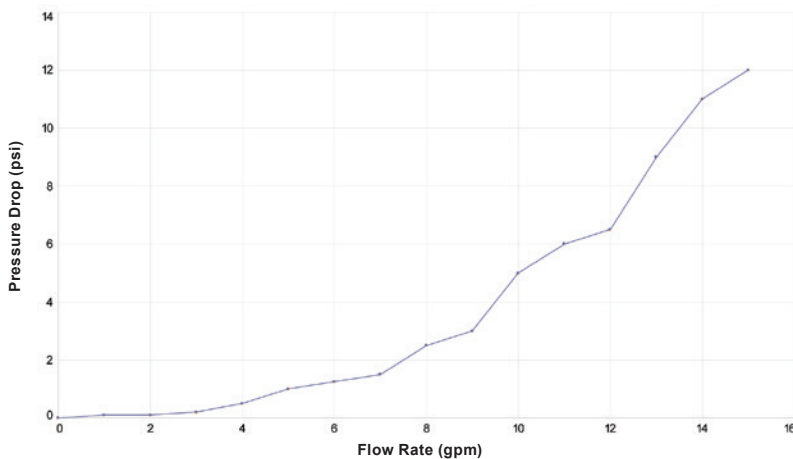
1. ONE-E3 Filtration System/Housing
2. In/Out Head for 1.050" Riser Pipe
3. 90 Degree Vertical Elbow With/without Machined Drain Port
4. Bypass Manifold
5. 1" MNPT Straight Connector
6. 1" MNPT 90 Degree Elbow Connector
7. 3/8" PEX Drain Valve Kit Assembly With Shut-off
8. PCB Umbrella Without Electronics

## APPROXIMATE LIFE OF SYSTEM

IRON LEVEL IN WATER	TOTAL GALLONS OF WATER USED	250 GPD (4 PEOPLE)	125 GPD (2 PEOPLE)	75 GPD (1 PERSON)
3 ppm	57,200 gal	228.8 days	457.6 days	915.2 days
2 ppm	88,000 gal	352 days	704 days	1,408 days
1 ppm	176,000 gal	704 days	1,408 days	2,816 days
0.5 ppm	352,000 gal	1,408 days	2,816 days	N/A

# FILTER PERFORMANCE\*

E3—PIONEER® OX Cartridge Flow Performance



# E3 FILTRATION SYSTEM

## INTEGRATED BYPASS, METER & DRAIN CONNECTION SYSTEM



The E3 connection system is available to use with all POE (point-of-entry) filters.

# EASY REPLACEMENTS

## NO TOOLS REQUIRED

1. PRESS THE RED PRESSURE RELIEF VALVE TO UNSEAT THE RING



2. REMOVE SNAP RING



3. LIFT TOP CAP



## WATER CHEMISTRY AND LIMITATIONS

Color/Tannin: < 50 color units	H2S: Up to 10 ppm
Iron, Ferrous: Up to 3 ppm	pH Range: 5.5–9.5
Flow Rates: Up to 15 gpm	Alkalinity: < 120 ppm
Hardness: < 140 ppm (8 gpg)	Manganese: Up to 2 ppm
Temperature: 41–140 °F	

### NOTES:

- Water conditions outside of the above specified limits may lead to a shortened filtration life.
- Cartridges may contain a very small amount of fines. After installation, flush the cartridges for at least 10 minutes prior to use.
- A ratio of 1:3 silica vs total hardness will maintain silica in solution and optimize performance.
- \*Performance claims are based on independent lab results and manufacturer's internal test data. Actual performance is dependent on influent water quality, flow rates, system design and applications. Your results may vary. Micron ratings based on 85% or greater removal of a given particle size. Flush new cartridges until water runs clear prior to use. Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

System installation and cartridge disposal to comply with federal, state, and local laws and regulations.

**USEPA TCLP and WET Approved:** Engineered and proven to provide maximum removal capacity and improved stability against pH upset to prevent possible desorption of bound contaminants both during operation and in landfill conditions. This ensures successful evaluation against USEPA TCLP and California WET Tests, with our unparalleled, non-leachable bond.



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For more information, visit [enpress.com](http://enpress.com) or [onefiltration.com](http://onefiltration.com)

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