

## E3-M FILTRATION SYSTEM

INTEGRATED BYPASS, METER &  
DRAIN CONNECTION SYSTEM



The E3-M connection system is a metered option and 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 QUALITY OPTIMUM WORKING CONDITIONS†

A ratio of 1:3 silica vs total hardness will maintain silica in solution and optimize performance.

Cartridges may contain a very small amount of fines. After installation, flush the cartridges to drain for at least 60 minutes prior to use.

NOTE: ppm = mg/L; 1 ppm is 1000 ppb

Arsenic: < 50 ppb	Silica: < 25 ppm
Boron: < 100 ppb	Vanadium: < 7 ppb
Barium: < 100 ppb	Fluoride: < 0.5 ppm
Calcium: < 75 ppm	pH: 7.1
Hardness: < 250 ppm as CaCO <sub>3</sub>	T-alkalinity: N/A ppm as CaCO <sub>3</sub>
Magnesium < 30 ppm	Iron: < 250 ppb
Manganese: < 25 ppb	Phosphorus: < 5 ppb
Total dissolved solids: < 250 ppm	

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

Other water-based fluid solutions

# PIONEER® As

## PIONEER® As FILTRATION CARTRIDGE



The **PIONEER® As** utilizes an engineered binary mixed metal adsorption media (**ATOMUS® F11**) for the simultaneous reduction of both arsenic III and V from potable water in a non-backwashing filtration design for use in both residential and commercial point-of-entry (POE) applications. **PIONEER® As** meets or exceeds USEPA enforceable maximum contaminant level (MCL) regulations in public drinking water of 10 parts per billion (ppb) for arsenic in water systems.

**PIONEER® As** is the first-of-its-kind non-backwashing whole-house filtration solution that removes both forms of arsenic (III and V) and is certified to NSF/ANSI 53 Standard for service flow rates up to 7 gpm (26.50 lpm) for 125,000 gallons of certified filtration life. This technology is so advanced that there is no required converting of arsenic III to V prior to filtration, no air-oxidation control valves, and no backwashing! This innovative POE (point-of-entry) filtration system provides **FILTRATION EVERYWHERE TECHNOLOGY®**.

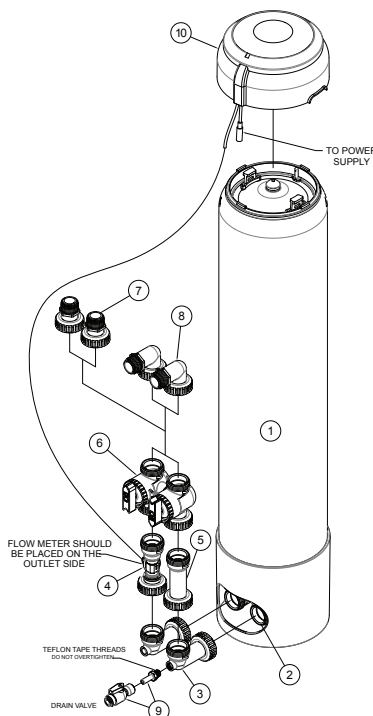
Powdered **ATOMUS® F11** media is used in the magenta series radial flow cartridge. The media is independently certified to NSF/ANSI Standard 61 and is more resistant to interference from silica, phosphorus and vanadium than other arsenic removal medias on the market today. Powder has more surface area than granular medias, which gives it the ability to address arsenic in a water stream in less than 30 seconds (versus 3 to 5 minutes with traditional granular media). Rapid kinetics is precisely what makes our unique, non-backwashing **ATOMUS® F11** technology possible.

**ATOMUS® F11** has been tested and proven to provide a maximum removal capacity and improved stability against pH upset to prevent possible desorption of bound arsenic both during use and in landfill conditions, ensuring successful evaluation against USEPA TCLP<sup>®</sup> and California Wet Tests solutions with an unparalleled, non-leachable arsenic bond.

The E3-M 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.

For best results: use with pre- and post-filtration product solutions, including pleated filters (orange/yellow series) and carbon blocks (blue series).

## TECHNICAL SCHEMATICS



### PART IDENTIFICATION

- ONE E3-M Filtration System/Housing
- In/Out Head for 1.050" Riser Pipe
- 90 Degree Vertical Elbow With/without Machined Drain Port
- Flow Meter Assembly With Cord
- Meter Spacer Assembly
- Bypass Manifold
- 1" MNPT Straight Connector
- 1" MNPT 90 Degree Elbow Connector
- 3/8" PEX Drain Valve Kit Assembly With Shut-off
- PCB Umbrella With Electronics Non-WIFI, Version 1

# SPECIFICATIONS AND PERFORMANCE DATA SHEET

ONE E3-M Name and Part Number	Size	Rated Capacity and Flow Rate	Arsenic Reduction %	Pressure Drop Spec
ONE E3-M System and PIONEER® As Filter				
ONE E3-M System CTA0840HBBKP0-06L00	8" x 40"	Arsenic Reduction 125,000 Gallons @ 7 GPM 473,177 Liters @ 26 lpm	As III: pH 6.5 = 98.3% As III: pH 8.5 = 96.6% As V: pH 6.5 = 99.1% As V: pH 8.5 = 99.0%	10 psi @ 7 GPM (26.5 lpm)

PIONEER® As—Arsenic III and V Removal Cartridge // PART NUMBER: CT-5020-0640RD-F11 // The model number of the system in which the filter component is to be used in is CTA0840HBBKP0-06L00.

## IMPORTANT

**DO NOT USE** extra lubricants, unapproved sealants and/or tools to tighten hand-tighten only parts. Use of tools other than hand-tighten only parts voids warranty. Testing was performed under standard laboratory conditions; actual performance may vary. Flush the system and change the filter as suggested. The contaminants or other substances removed or reduced by this water filter are not necessarily in all users' water.

This system has been tested for the treatment of water containing pentavalent and trivalent arsenic at concentrations of 0.050 mg/L or less. This system reduces both pentavalent arsenic (also known as As(V), As(+5), or arsenate) and trivalent arsenic (also known as As(III), As(+3), or arsenite) below EPA MCL. Please see the Arsenic Facts section of the Performance Data Sheet for further information.

## 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. Performance claims are based on a complete system, including a filter, housing, and connection to a pressurized water source. This filter must be operated according to the system's specifications in order to deliver the claimed performance. It is essential to follow operational, maintenance, and filter replacement requirements, as directed for each application, for this filter and system to perform correctly. Read the Manufacturer's Performance Data Sheet accompanying the system and change the filter as suggested. The contaminants or other substances removed or reduced by this water filter are not necessarily in all users' water.

Substance	Influent Challenge Concentration (mg/L)	Maximum Permissible Product Water Concentration (mg/L)
Arsenic (pentavalent)	0.050 ± 10%	0.01
Arsenic (trivalent)	0.050 ± 10%	0.01

## WARRANTY

**LIMITED LIABILITY:** ENPRESS LLC makes no warranties of any kind, expressed or implied, statutory or otherwise, and expressly disclaims all warranties of every kind concerning the product, including, without limitation, warranties of merchantability and fitness for a particular purpose, except that this product should be capable of performing as described in this product's data sheet. ENPRESS LLC's obligation shall be limited solely to the refund of the purchase price or replacement of the product proven defective, in ENPRESS LLC's sole discretion. Determination of suitability of this product for uses and applications contemplated by Buyer shall be the sole responsibility of Buyer. Use of this product constitutes Buyer's acceptance of this Limited Liability.

**Minimum Operating Temperature:** 34 °F / 1 °C  
**Maximum Operating Temperature:** 120 °F / 50 °C  
**Minimum Operating Pressure:** 20 psig / 1.38 bar  
**Maximum Operating Pressure:** 125 psig / 8.6 bar  
**Electrical Requirements:** Grounded and unswitched 115 V outlet and 3 AAA batteries

Filter Replacement Operating Instructions: **New cartridges must be flushed to drain for a minimum of 60 minutes prior to use.** System and installation to comply with federal, state, and local laws and regulations. Do not use with water that is microbiologically unsafe or unknown quality without adequate disinfection before or after the system. Manufactured from NSF/ANSI standard 61 and California Prop 65 Compliant raw materials.

### NOTES:

- Water conditions outside of the above specified limits may lead to a shortened filtration life. Potential void of warranty if "optimum working conditions" and use of proper pre-filtration are not adhered to.
- Cartridges may contain a very small amount of fines. After installation, flush the cartridges to drain for at least 60 minutes prior to use.
- Micron ratings based on 85% or greater removal of a given particle size. Flush new cartridges until water runs clear prior to use.
- Cartridge life is based on gallon usage and water profile. It will vary by individual site based on water quality and usage.
- Information is believed to be reliable and is offered in good faith with no warranties or implied warranty or fitness for a particular use. Customer is responsible for ensuring compliance with applicable laws and regulations and determining whether use conditions and information in this document are appropriate for specific applications.

<sup>†</sup>Water with pH > 8 requires pH adjustment for best performance. Particularly for increased levels of silica and phosphate, ATOMUS® F11 arsenic removal media will often provide the most economical treatment when compared to other adsorptive arsenic removal medias.

<sup>^</sup>USEPA TCLP tested as non-hazardous waste safe for landfill, but due to variances in influent water quality, users are urged to perform independent verification of the non-hazardous character of spent media cartridges. Additionally, some states may have disposal criteria different from federal guidelines (TCLP). Notice: Information is believed to be reliable and is offered in good faith with no warranties or implied warranties or fitness for a particular use. Customer is responsible for determining whether use conditions and information in this document are appropriate for specific applications and for ensuring compliance with applicable laws and regulations.

## CERTIFICATIONS



The CTA0840BxP5-0yzzz system with CT-5020-0640RD-F11 cartridge is Certified by WQA and IAPMO R&T for Material Safety, Structural Integrity, and for the reduction of Trivalent and Pentavalent Arsenic.

The ENPRESS ATOMUS® F11 media inside this system is certified to NSF/ANSI 61 for Material Safety and NSF/ANSI 372 for Low Lead Content. 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.

## ARSENIC FACTS

Arsenic (As) is a naturally occurring contaminant found in many ground waters. It generally occurs in two forms (valences or oxidation states): pentavalent arsenic (also known as As(V), As(+5), and arsenate) and trivalent arsenic (also known as As(III), As(+3), and arsenite). In natural ground water, arsenic may exist as trivalent arsenic, pentavalent arsenic, or a combination of both. More information about arsenic and its toxicity can be found at the U.S. Environmental Protection Agency website at [www.epa.gov](http://www.epa.gov).

Arsenic does not generally impart color, taste, or smell to water; therefore, it can only be detected by a chemical analytical test. Public water supplies are required to monitor delivered water for arsenic (trivalent arsenic plus pentavalent arsenic) and the results are available to the public from the utility. Consumers using private water sources will need to make arrangements for testing. An arsenic test usually costs about \$15 to \$30, and it is recommended that the test be conducted by a certified laboratory. Local health departments or environmental protection agencies can help provide consumers with a list of certified laboratories. Some laboratories may also be able to analyze specifically for (speciate) the form(s) of arsenic present in a water sample if requested.

This system CTA0840HBBKP0-06L00 with Arsenic Removal Cartridge CT-5020-0640RD-F11 is designed to reduce arsenic (both pentavalent and trivalent forms of arsenic). This treatment system was tested under laboratory conditions as defined in NSF/ANSI 53 and was found to reduce 0.050 mg/L arsenic consisting of either pentavalent or trivalent arsenic in the test water to < 0.010 mg/L for 125,000 gallons of delivered water, the life of the system under standard testing conditions. Actual performance of the system may vary depending on specific water quality conditions at the consumer's installation. Following installation of this system, the consumer should have the treated water tested for arsenic to verify that arsenic reduction is being achieved and the system is functioning properly.

The arsenic removal component of this system must be replaced at the end of its useful life of 125,000 gallons. The replacement component, CT-5020-0640RD-F11, can be purchased from the original source of this system (retailer or distributor), from other sources of this treatment system, or directly from the manufacturer at [www.enpress.com](http://www.enpress.com) or (440) 510-0108.

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

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