

Utility Water / Process Water / Wastewater / Desalination

# Water filtration solutions



**EATON**

*Powering Business Worldwide*

# Eaton understands your filtration challenges

**A**s a global leader in filtration technology for all kinds of fluids, Eaton brings an unparalleled depth of engineering experience and breadth of product availability to bear on your unique set of water filtration challenges. Pre-packaged, one-size solutions definitely do not fit all, and Eaton water filtration experts know how to analyze your requirements and harness proven design technologies to create a system that meets your needs exactly.

Because Eaton engineers can draw on a broad range of products

and technologies to create component solutions, modules and systems that precisely meet your specific water filtration challenges, you can depend on Eaton to deliver solutions that are:

## **Effective**

Eaton water filtration systems are at work today consistently meeting EPA, FDA, USDA, cGMP and literally hundreds of other regulatory and process-specific requirements for utilities, process industries, and manufacturing facilities around the world.

## **Efficient**

Eaton water filtration systems are engineered to meet your challenges using the best available components and technologies selected and integrated to achieve an optimal solution and deliver the results you need.

## **Economical**

Eaton water filtration systems are always designed with your operating cost and profitability goals firmly in mind. The most effective and efficient solution to your needs always is the most economical solution in the long run.

## **Environmentally Responsible**

Eaton water filtration systems are part of our corporate commitment to being sustainable by design in everything we do. Good environmental stewardship is simply good business, for Eaton, for our customers and for the world.

Whatever your water filtration challenge may be, wherever in the world it's located, Eaton is ready to help you meet it with an effective, efficient, economical, and environmentally responsible solution specifically engineered for you.



# We put a half-century of experience to work solving them

## **Mining**

- Dust suppression
- Deep mine extraction
- Tailings recycle
- Storm water management

## **Pulp and paper**

- Whitewater filtration
- Wet end additives
- Surface treatment
- Clarified white water

## **Oil and gas**

- Injection water
- Produced water
- Hydraulic fracturing
- Oil sand - wastewater reuse

## **Fuel and petrochemical**

- Process water treatment

## **Metals milling and fabrication**

- Spray nozzle protection
- Scale removal
- Debris removal
- Equipment cooling
- Mechanical seal water

## **Marine**

- Ballast water treatment
- Sea water intake
- Grey and black water treatment
- Utility water

## **Food and beverage**

- Processing: cooling, dissolving, dispersing, diluting
- Washing and rinsing
- Steam generation

## **Fine, specialty and bulk chemical**

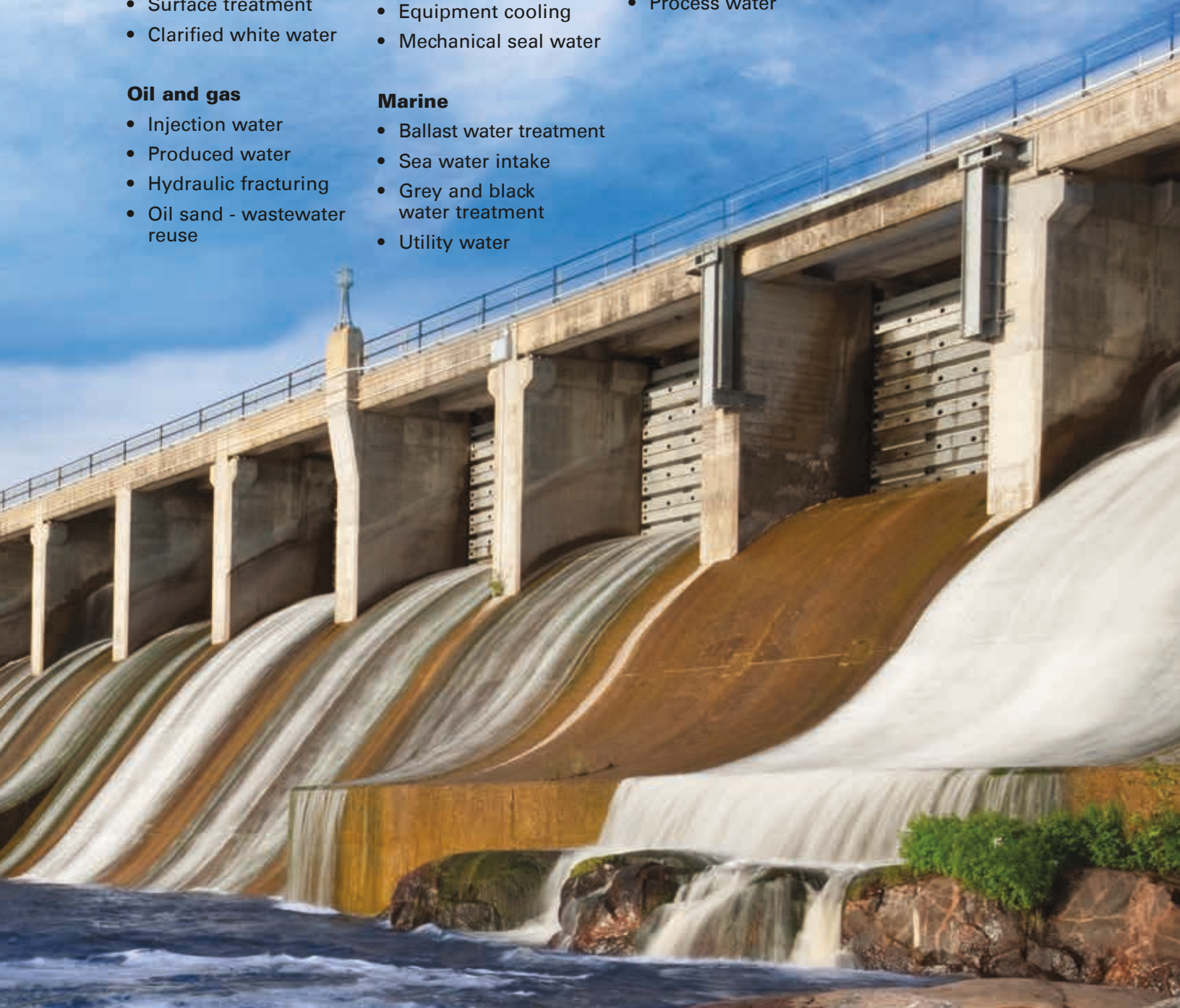
- Process water

## **Pharmaceutical and biotechnology**

- Process water
- Ultra-pure water

## **Power generation**

- Service water
- Cooling tower blowdown



Five 24" Eaton Model 2596 strainers with backwash assist pumps installed at a potable water treatment plant.



Model 90 strainers can be fabricated in carbon steel, stainless steel, Monel, Hastelloy 'C', and other materials. They can accommodate from 1" to 48" pipeline systems.

Model 52 synchronized butterfly valves minimize the effort of switching flow from one basket chamber to the other.



## A 2596 automatic self-cleaning strainer

Eaton's Model 2596 automatic self-cleaning strainer combines a compact, modular design with an automatic backwash system to give users a simple, low-maintenance, environmentally responsible solution that delivers the benefits of low energy consumption, no media disposal, and no emissions.



Model 2596 fabricated automatic self-cleaning pipeline strainers are available from 6" to 48" and special sizes upon request I/O sizes with continuous flow, simplified maintenance, worry-free operation and flow rates up to 35,000 gpm (7,949 m<sup>3</sup>/hr).

The 2" to 8" size strainers feature Eaton's Cenpeller™ technology, which directs liquid into a circular flow—making backwashing more efficient. Strainer elements available from 1/4" to 50 microns.



Model 2596 is also available in 10", 12", 14" and 16" sizes provides flow rates up to 6,500 gpm (1,476 m<sup>3</sup>/hr).

## S Pipeline strainers

Eaton's standard cast simplex, duplex, and Y pipeline strainers are available in cast iron, carbon steel, stainless steel and bronze. Custom-fabricated designs can be configured to meet virtually any combination of retention and flow rate, special alloys, unique piping connections, or extraordinary size requirements. Pipeline strainers meet ISO 9001:2008 quality management standards.

Eaton provides a full lineup of cartridges and filter bags for disposable media systems.



## B Bag filtration systems

Eaton offers more than 1,500 different bag filter configurations to deliver the exact performance required for virtually any combination of flow rate, particulate size, filtration level, and operating cost goals. All are engineered to provide optimum performance and maximum cost effectiveness in Eaton bag filter housings.

Economical PROLINE™ 100 Series SE with eight bag capacity. QIK-LOCK™ feature makes changeouts quick and easy.



## T AFR, AFC and F-series tubular backwashing filters

Eaton's single, duo, and multiplex tubular backwashing filters eliminate the need for disposable media with an advanced clean-in-place technology that simplifies maintenance and reduces operating costs giving users a sustainable solution for the automatic removal of debris from water.

The AFR self-cleaning tubular backwash system features low micron retentions—reduces labor, replacement media, and media disposal costs.



## D DCF mechanically cleaned filters

Eaton's DCF-Series mechanically cleaned filters combine mechanical simplicity and low initial cost with a design that produces low differential pressure to reduce energy consumption.



DCF-1600 filter equipped with twin pneumatic drive cylinders.

## X MCF mechanically cleaned filters

Eaton MCF-824 Series mechanically cleaned filters use Eaton's magnetically coupled actuation technology to move the cleaning disc without a shaft or external seals. This minimizes the need for media changeout and associated product loss and disposal requirements, while simplifying access and reducing maintenance downtime.



MCF-824 filter uses magnets to control the cleaning disc.

## M MCS mechanically cleaned strainers

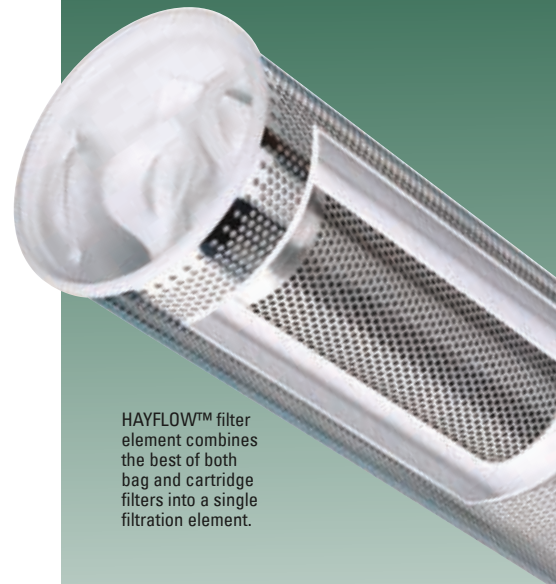
Eaton MCS-500 and MCS-1500 strainers use a unique magnetically coupled actuation technology to eliminate the need for dynamic seals. This produces an efficient, environmentally responsible, low purge volume solution for fresh water applications that minimizes both maintenance downtime and operating costs.



MCS-1500 strainer is perfect for high-capacity needs. Its magnetically coupled actuation eliminates the need for dynamic seals.

## C Cartridge filtration

Eaton nominal and absolute rated depth-type and Eaton membrane-type filter cartridges are engineered to deliver optimal performance in Eaton stainless steel and plastic filter housings across the full range of filtration applications, including difficult high purity water, food and beverage, and other critical process flow streams.



HAYFLOW™ filter element combines the best of both bag and cartridge filters into a single filtration element.

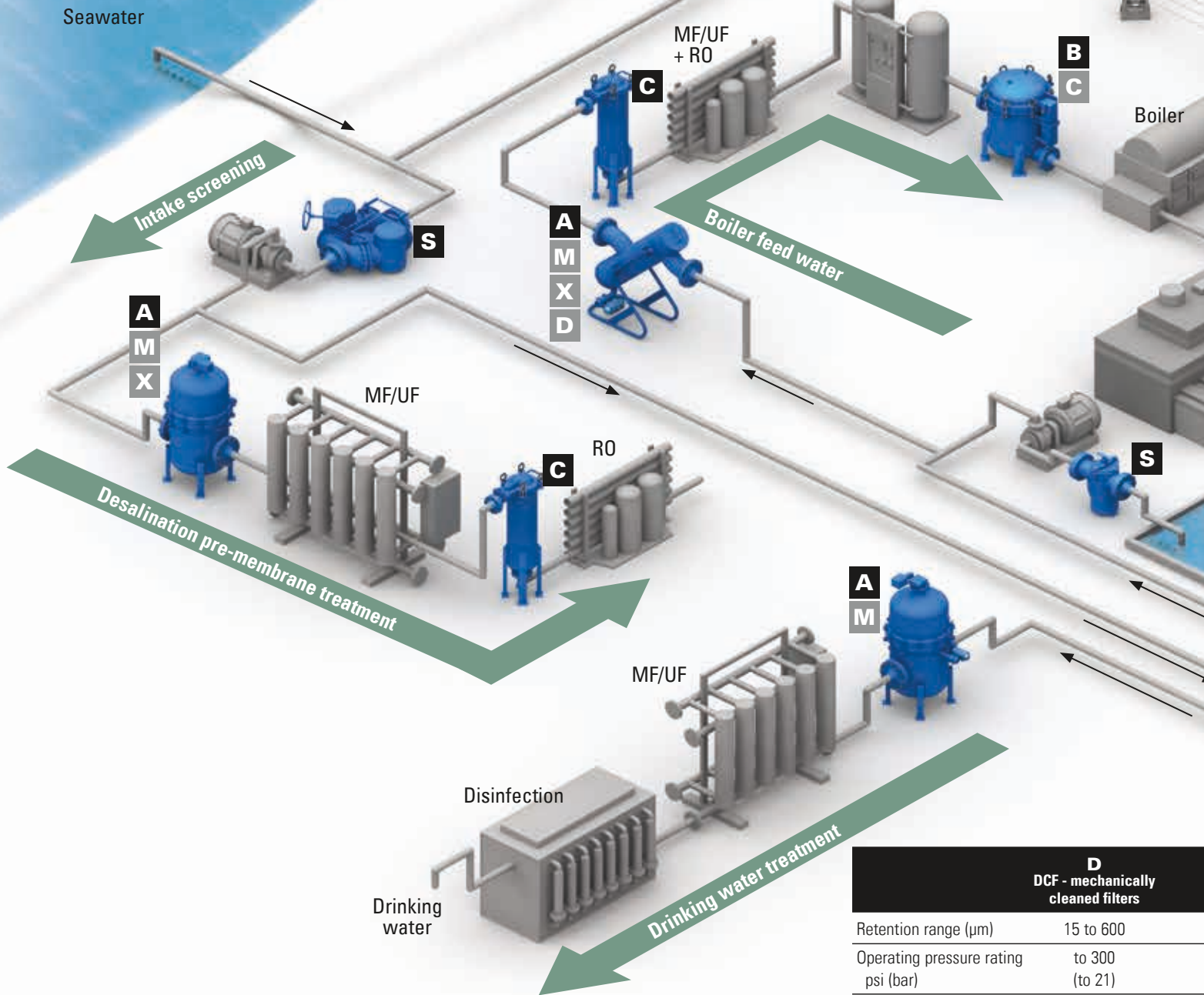
## Eaton services

- State-of-the-art water testing lab facility
- Long-term or short-term equipment rental
- Field service—inspections, start-up, repair, replacement, and maintenance
- Extensive network of manufacturer representatives and distributors
- Worldwide technical support
- Team of product specialists dedicated to providing application engineering

## Eaton quality standards

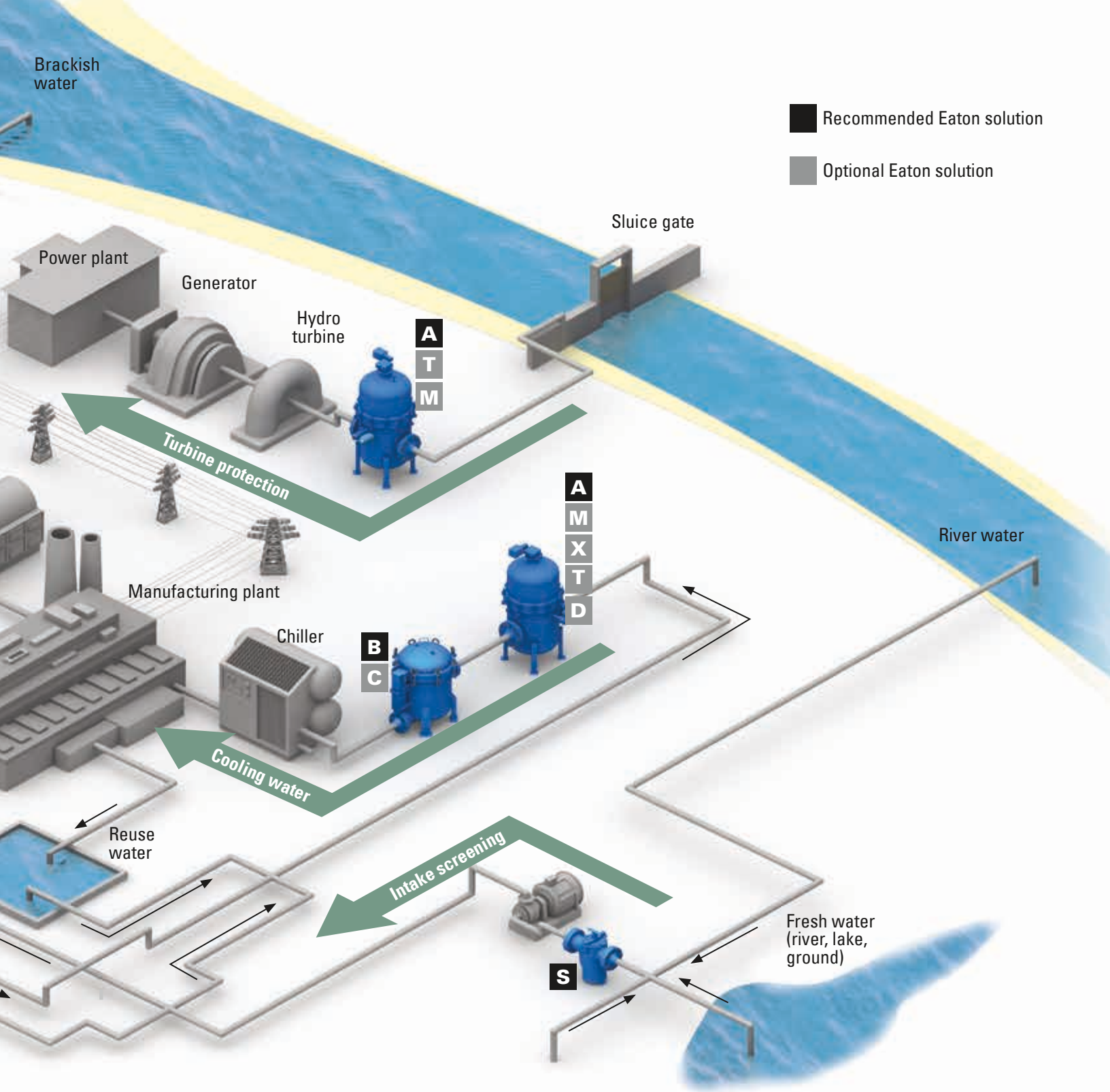
- ISO 9001:2008 quality management
- ISO 14001:2004 environmental management
- European standards DIN/DE/PED
- Canadian Registration Number (CRN)
- GB-150 (China)

# Eaton water filtration solutions



	<b>D</b> DCF - mechanically cleaned filters
Retention range (µm)	15 to 600
Operating pressure rating psi (bar)	to 300 (to 21)
Flow rate at 100µm gpm (m <sup>3</sup> /hr)	to 200 (to 45.4)
Temperature* °F (°C)	to 350 (to 177)

\* Dependent on elastomer seal selection



### Key to Eaton filters and strainers

<b>X</b> MCF-324 filters	<b>M</b> MCS - mechanically cleaned strainers	<b>A</b> 2596 - automatic self-cleaning strainer	<b>B</b> Filter bags & bag filter housings	<b>C</b> Cartridges	<b>T</b> AFC, AFR, F tubular backwash	<b>S</b> Standard & fabricated pipeline strainers
15 to 1,125	15 to 1,140	25 to 3,000	.45 absolute to 800	.03 to 150	1 to 1,700	38 to 12,700
to 150 (to 10.5)	to 150 (to 10.5)	to 275 (to 18.7)	to 150 (to 10.5)	NA	to 1,000 (to 69)	to 1,480 (102)
to 180 (to 40)	to 1,100 (to 250)	to 35,000 (to 7,949)	to 4,500 (to 1,021)	NA	to 3,000 (to 681)	to over 40,000 (to over 9,000)
to 180 (to 82)	to 180 (to 82)	to 150 (to 66)	to 500 (to 260)	to 752 (to 400)	to 350 (to 177)	450 (232)

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