

3M Industrial Water Solutions

Meeting the challenges of industrial water management.



When it comes to managing industrial water filtration and separation, you need a partner with the expertise, processes and products to help you get it right.

Water is a critical, limited resource and we all share the responsibility to ensure it's available for future generations. Filtration and separation products from 3M help provide high-quality, cost-effective solutions for sustainable water management throughout your industrial operation.



Solutions for virtually every industry.

Every industry has its own unique water filtration and separation challenges. That's why 3M has a robust portfolio of industrial water solutions to help meet the environmental concerns, regulatory requirements and filtration needs of virtually every industry.

Power Generation | Automotive Assembly | Metalworking & Machining | Oil & Gas
Food & Beverage | Micro-electronics | Refining & Petrochem | Paints, Coatings & Inks

Common applications

Pre- & post- treatment for incoming water

This ubiquitous application requires filtration to protect down stream membranes and equipment from premature fouling. 3M offers industrial filter and gas management solutions to meet your incoming water treatment needs.

- ▶ 3M™ High Flow Series Filters
- ▶ 3M™ Micro-Klean™ RT Series Filters
- ▶ 3M™ Liqui-Cel™ Membrane Contactors (Dissolved O₂ & CO₂ removal)



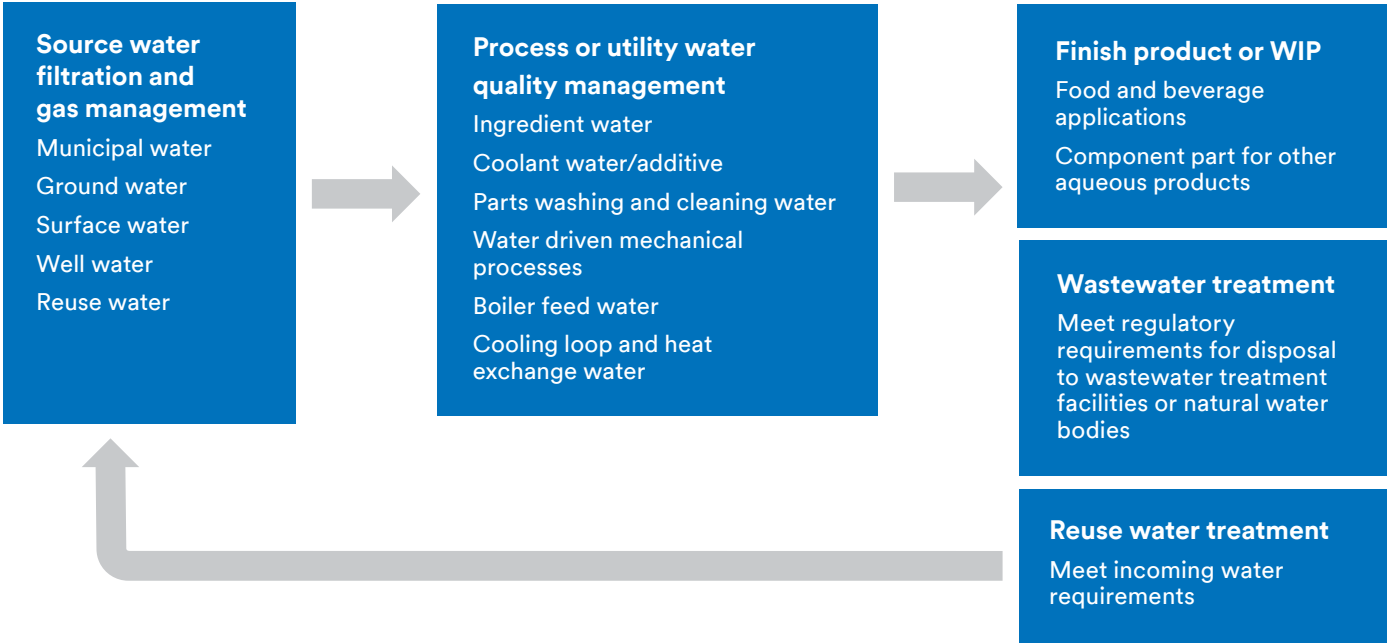
Boilers and other equipment

Boilers are susceptible to corrosion, fouling and scaling. 3M has filtration solutions designed to treat boiler feedwater to help reduce maintenance and equipment downtime.

- ▶ 3M™ High Flow Series Filters
- ▶ 3M™ Micro-Klean™ RT Series Filters
- ▶ 3M™ Liqui-Cel™ Membrane Contactors (Dissolved O₂ & CO₂ removal)
- ▶ 3M™ HFR Series Filters



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Quality

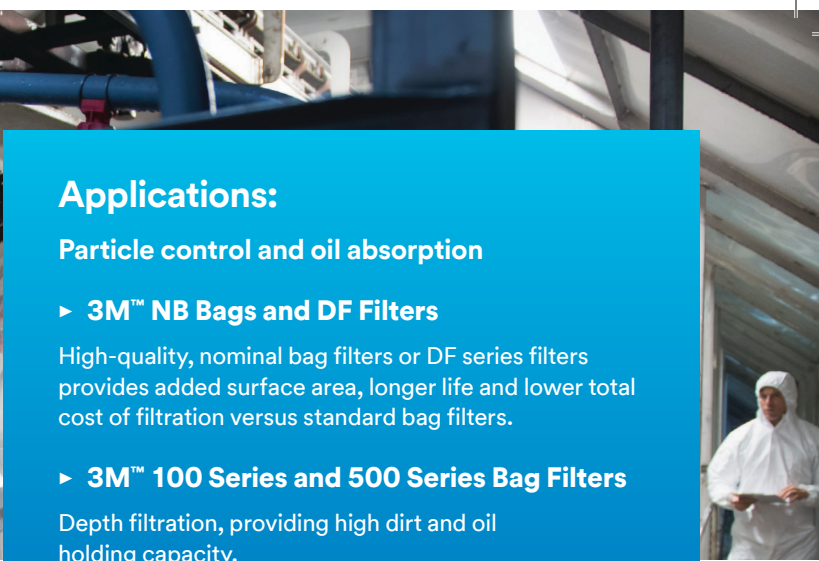
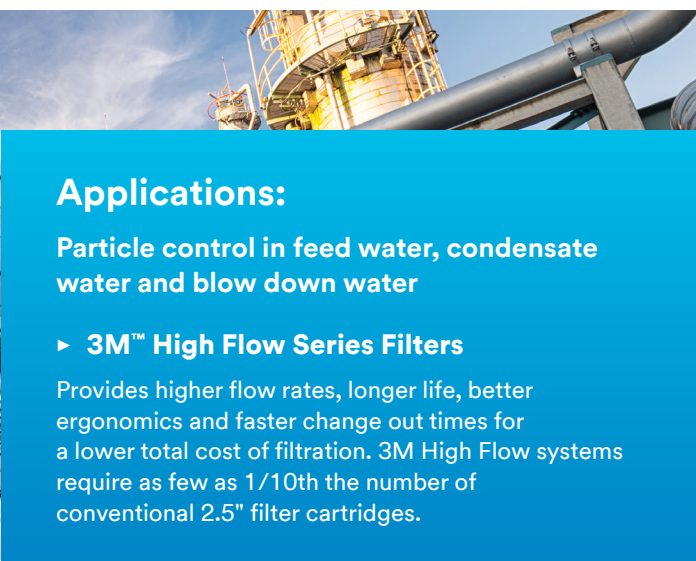
Industrial water solutions from 3M are designed with high-quality components to provide excellent filtration and separation performance.

Cost-effective

High performance and long-lasting 3M industrial water solutions can help improve efficiency—and your bottom line.

Sustainability

Water scarcity, corporate stewardship and regulatory requirements are impacting industrial operations. 3M offers a solution to meet your sustainability targets by helping use less and re-use more.



Solutions for steam & power generation

More power to your process.

Save on chemical treatment alternatives. Reduce corrosion. Get water and energy savings. 3M filtration and separation solutions can help you improve your power generation process and reap the benefits.

Applications:

Particle control in feed water, condensate water and blow down water

3M™ High Flow Series Filters

Provides higher flow rates, longer life, better ergonomics and faster change out times for a lower total cost of filtration. 3M High Flow systems require as few as 1/10th the number of conventional 2.5" filter cartridges.

3M™ Micro-Klean™ RT and D Series Filters

Rigid structure reduces potential for unloading as pressure drop increases compared to compressible filters. They are an excellent retrofit solution. Consider Micro-Klean D with cotton media for applications where polypropylene is not appropriate.

O₂ reduction in boiler feed water and city heating systems and CO₂ reduction in make-up water

3M™ Liqui-Cel™ Membrane Contactors

Reduces frequency of anion-exchange bed regeneration and chemicals. Easier capacity upgrading, increased operation flexibility (ramp up/down timing) and reduces or displaces chemical methods.

Solutions for automotive assembly

Remove unwanted particles.

Rev up your assembly process with 3M industrial water solutions. From pretreatment to electrodeposition, we have the filtration products you need to streamline your operation and reduce rework. Filtration is used through out the automotive washing and painting process.

Applications:

Particle control and oil absorption

3M™ NB Bags and DF Filters

High-quality, nominal bag filters or DF series filters provides added surface area, longer life and lower total cost of filtration versus standard bag filters.

3M™ 100 Series and 500 Series Bag Filters

Depth filtration, providing high dirt and oil holding capacity.

Particle classification

3M™ Betapure™ AU Filters

Often used in the paint kitchen—more limited in E-coat. May be OEM specific.

Particle control in water treatment and particle removal water reuse

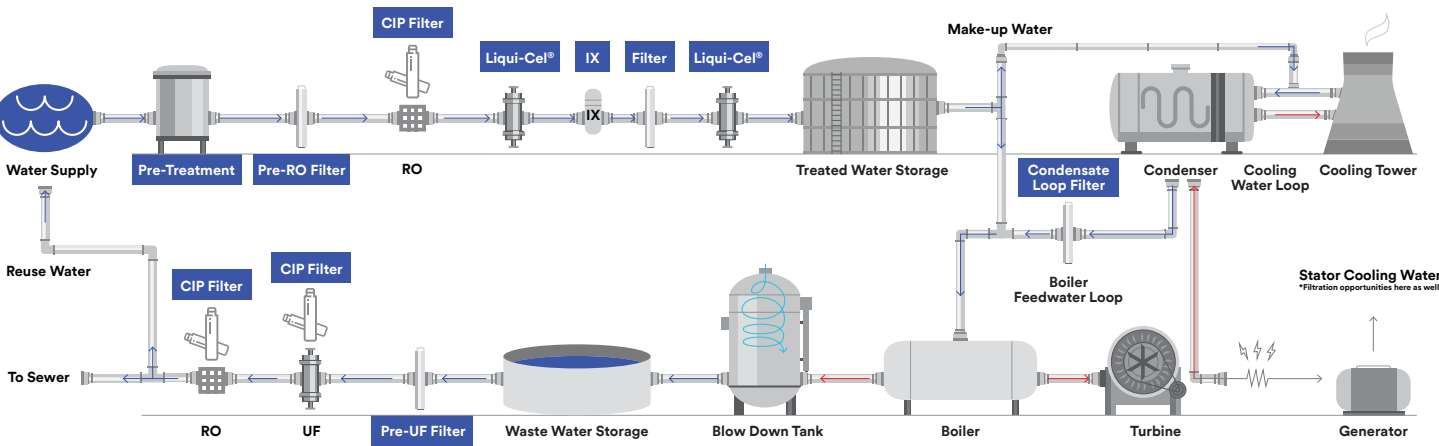
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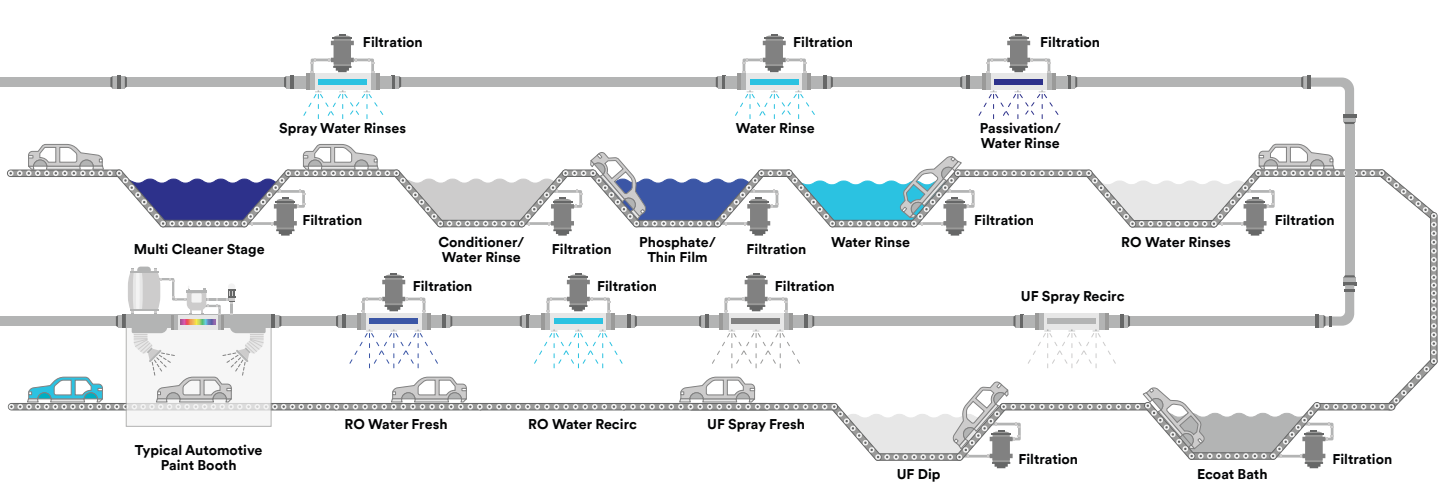
3M™ Liqui-Flux™ Membrane Module

Save water and chemistry through this ultra-filtration technology—paired with a protective pre-filter.

Process Map



Process Map





Solutions for metalworking and parts washing

Quality water for every part of your process.

Whether you need a cooling filtration solution for cutting, stamping or molding parts or an efficient solution to filter water for parts washing, there's a 3M industrial water solution for your circular system. Removing debris that can cause process issues and keeping washing water reusable longer can help reduce waste and add efficiency.

Applications:

Particle control

► 3M™ High Flow Series Filters (coolant water)

Provides higher flow rates, longer life, better ergonomics, and faster change out times for a lower total cost of filtration. 3M High Flow systems require as few as 1/10th the number of conventional 2.5" filter cartridges.

► 3M™ NB Bag and DF Series Filter

High-quality, nominal bag filters or DF series filters provides added surface area, longer life and lower total cost of filtration versus standard bag filters.

► 3M™ Micro-Klean™ RT and D Series Filters

Features consistent particle capture, large surface area and rigid design. Micro-Klean D series filters cotton media version provides a higher temperature range.

Solutions for oil & gas

Reinject confidence into your operation.

From upstream and midstream produced water treatment and recycling in your drilling and fracking operations to reduce the need for “fresh” water sources, to offshore filtration and gas management to downstream amine and end product—3M has the right filtration solution for you.

Applications:

Particle control

► 3M™ High Flow Series Filters

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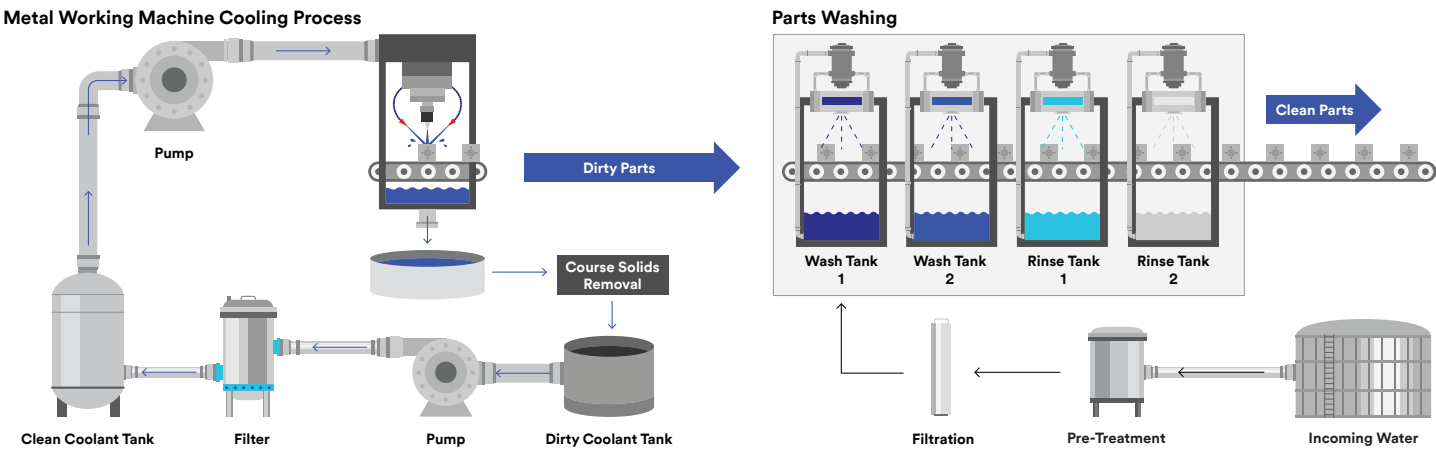
► 3M™ 700 Series Bag Filters

Paint, high efficiency, dirt hold capacity and oil absorption.

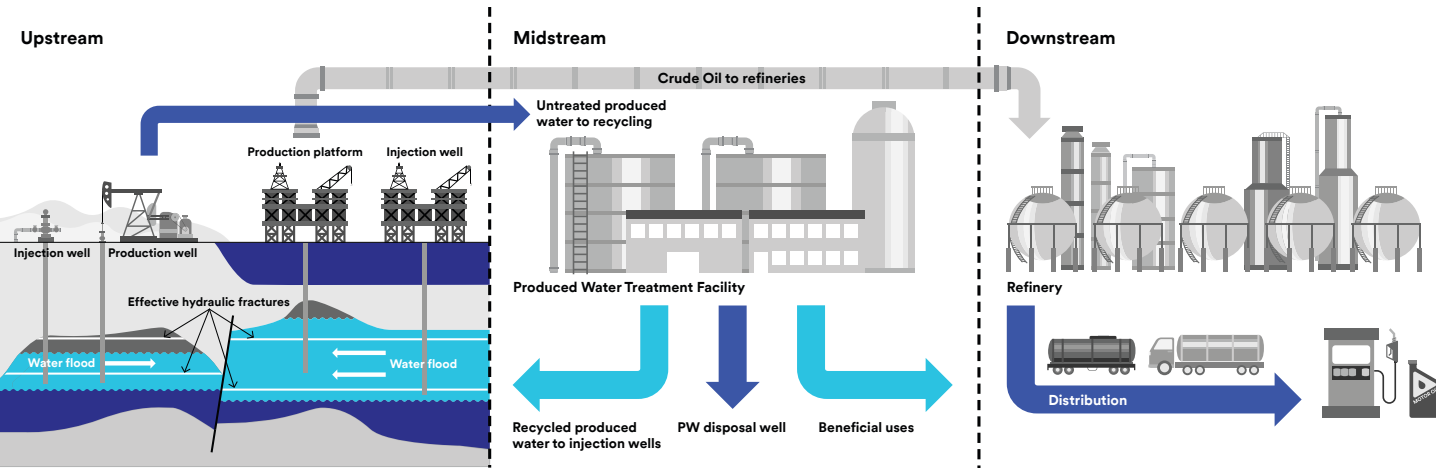
► 3M™ Liqui-Cel™ Membrane Contactors

Ideal water management tools for the oil and gas industry. They precisely calibrate dissolved gasses in water for efficient water-pumping at onshore and offshore extraction sites.

Process Map



Process Map



Product Selection and Use:

Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. As a result, customer is solely responsible for evaluating the product and determining whether it is appropriate and suitable for customer's application, including conducting a workplace hazard assessment and reviewing all applicable regulations and standards (e.g., OSHA, ANSI, etc.). Failure to properly evaluate, select, and use a 3M product and appropriate safety products, or to meet all applicable safety regulations, may result in injury, sickness, death, and/or harm to property.

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