

**3M** Science.  
Applied to Life.™

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 helps 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 | Purified and high purified water for pharmaceutical production**

### Common applications

#### Pre- & post- treatment for incoming water

This widespread 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 Contractors (Dissolved O<sub>2</sub> & CO<sub>2</sub> removal)



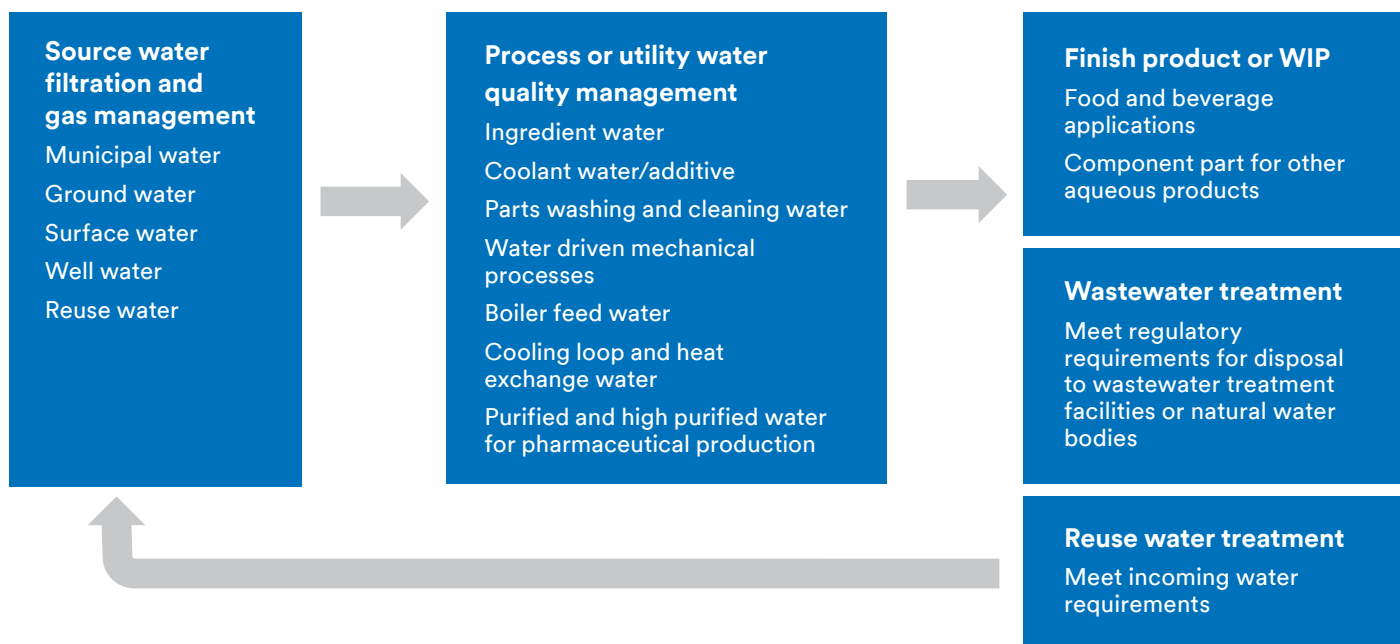
#### Boilers and other equipment

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 Contractors (Dissolved O<sub>2</sub> & CO<sub>2</sub> removal)
- ▶ 3M™ HFR Series Filters



# 3M Industrial Water Solutions



## Quality

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

## Cost-effective

High performance and long-lasting 3M industrial water solutions can help improve efficiency and profitability.

## 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.

### Filtration for rinsing and part washing

Reusing water for applications like rinsing and washing can help reduce overall water usage in your facility. 3M provides many different solutions to match your specific rinsing/washing needs.

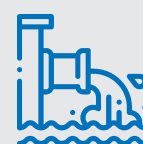
- ▶ 3M™ High Flow Series Filters
- ▶ 3M™ DF Series Filter Bags
- ▶ 3M™ 100/500/NB Series Filter Bags
- ▶ 3M™ Micro-Klean™ RT/D Series Filter Cartridges



### Wastewater and reuse

3M Industrial Water solutions offer filtration products designed to treat water to meet regulatory disposal requirements or make your wastewater a renewable incoming water source.

- ▶ 3M™ High Flow Series Filters
- ▶ 3M™ 100/500/NB Series Filter Bags
- ▶ 3M™ DF Series Filter Bags
- ▶ 3M™ Liqui-Cel™ Membrane Contactors (ammonia removal)





## Solutions for steam & power generation

# More power to your process.

If you are looking to save on chemical treatment, reduce corrosion and get water and energy savings, 3M Filtration and Separation solutions can help you improve your power generation process and realise 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

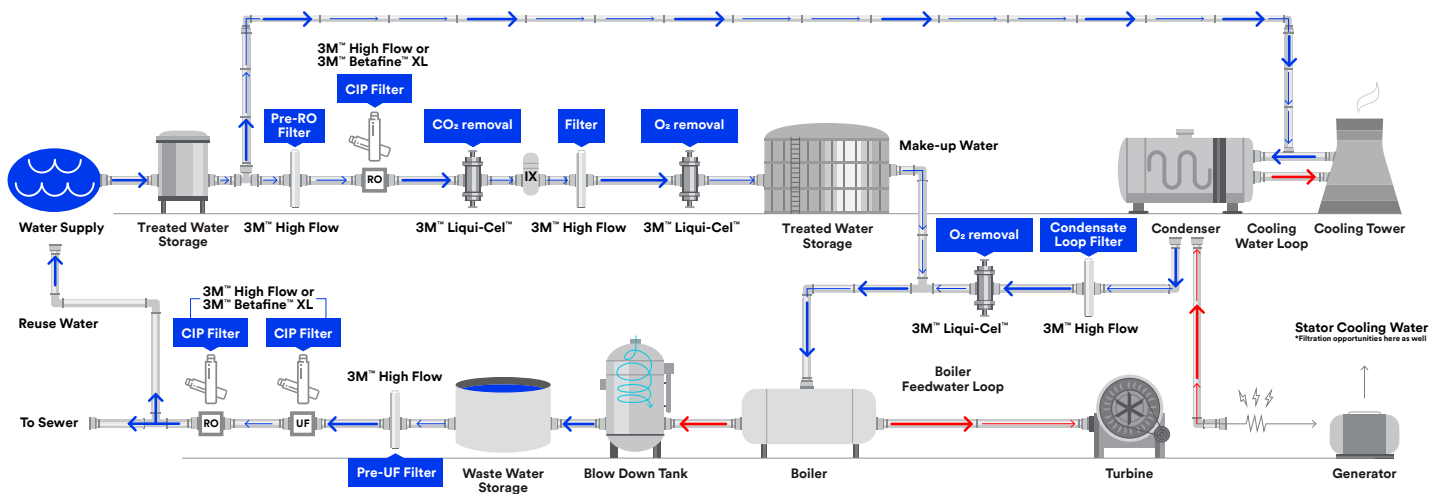
Rigid structure reduces potential for unloading as pressure drop increases compared to non-rigid filters. They are an excellent retrofit solution. Consider Micro-Klean D with cotton media for applications where polypropylene is not appropriate.

**O<sub>2</sub> reduction in boiler feed water and city heating systems and CO<sub>2</sub> 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.

## Process Map





## Applications:

### Particle control and oil absorption

#### ► 3M™ NB Bags and DF Filters

Either high-quality industry standard 3M NB series nominal bags filters or DF series filters (with added surface area), which provide longer life and 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 preparation area.

### Particle control in water treatment and particle removal water reuse

#### ► 3M™ High Flow Series Filters

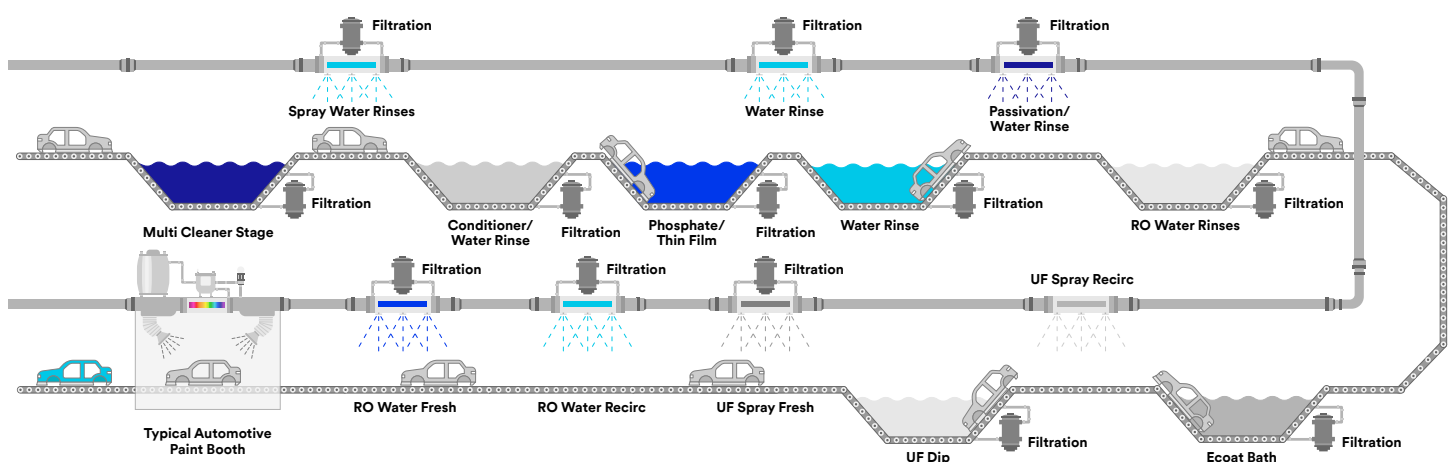
Provides higher flow rates, longer life, better ergonomics, and faster change out times for a lower total cost of filtration. 3M High Flow systems require as few as 1/10th the number of conventional 2.5" filter cartridges.

## 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.

## Process Map





## 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**  
Either high-quality industry standard 3M NB series nominal bags filters or DF series filters (with added surface area), which provide longer life and total cost of filtration versus standard bag filters.
- ▶ **3M™ Micro-Klean™ RT and D Series Filters**  
Micro-Klean RT features consistent particle capture, large surface area and rigid design. Micro-Klean D series filters (cotton media version) provides a higher temperature and chemical resistance capabilities.

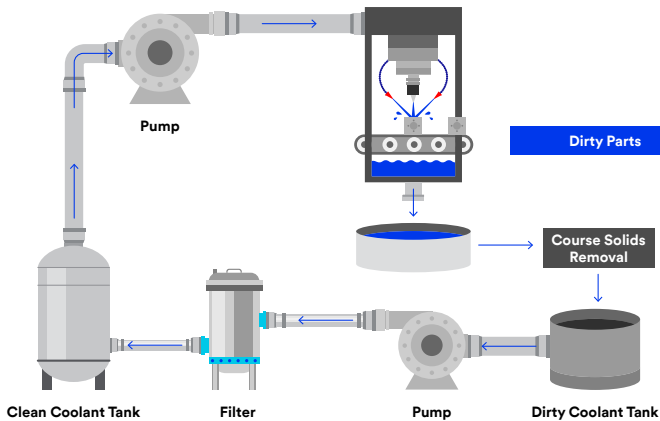
## Solutions for metalworking and parts washing

# Quality water for every part of your process.

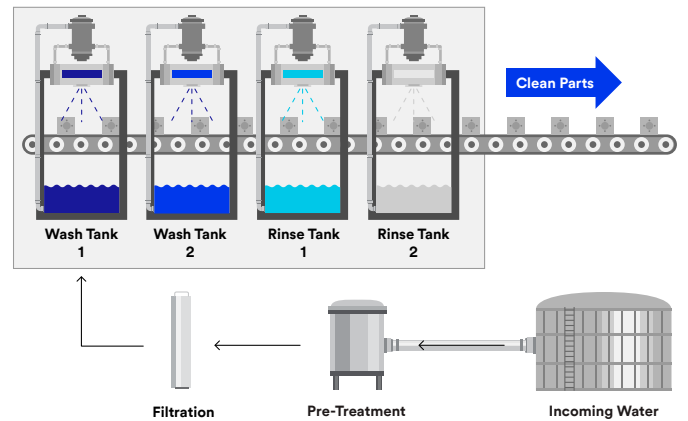
Whether you need a cooling filtration solution for cutting, stamping or molding parts or an efficient solution to filter water for parts washing, there's a 3M industrial water solution for your circular system. Removing debris that can cause process issues and keeping washing water reusable longer can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

## Process Map

Metal Working Machine Cooling Process



Parts Washing





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**

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 Filters**

Either high-quality industry standard 3M NB series nominal bags filters or DF series filters (with added surface area), which provide longer life and total cost of filtration versus standard bag filters.

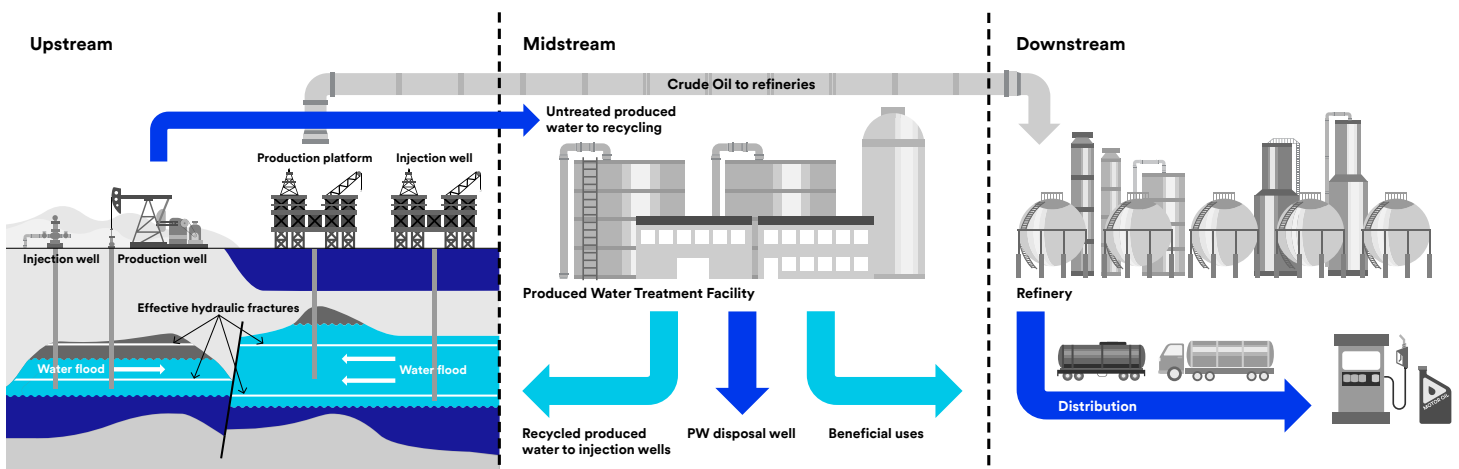
► **3M™ 700 Series Bag Filters**

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



**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.

**Warranty, Limited Remedy, and Disclaimer:**

Unless a different warranty is expressly identified on the applicable 3M product literature or packaging (in which case such express warranty governs), 3M warrants that each 3M product meets the applicable 3M product specification at the time 3M ships the product. 3M MAKES NO OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ARISING OUT OF A COURSE OF DEALING, CUSTOM, OR USAGE OF TRADE. If a 3M product does not conform to this warranty, then the sole and exclusive remedy is, at 3M's option, replacement of the 3M product or refund of the purchase price.

**Limitation of Liability:**

Except for the limited remedy stated above, and except to the extent prohibited by law, 3M will not be liable for any loss or damage arising from or related to the 3M product, whether direct, indirect, special, incidental, or consequential (including, but not limited to, lost profits or business opportunity), regardless of the legal or equitable theory asserted, including, but not limited to, warranty, contract, negligence, or strict liability.

**3M Separation and Purification Sciences Division**

3M United Kingdom PLC	3M Ireland Ltd
3M Centre, Cain Road	The Iveagh Building
Bracknell RG12 8HT	The Park, Carrickmines
Berkshire	Dublin 18
+44(0) 845 6025 237	+353 (01) 280 3555

© 3M 2022. All rights reserved.

3M, 3M Science. Applied to Life, Betapure, Micro-Klean, Liqui-Cel and Liqui-Flux are trademarks of 3M Company. Please recycle.