



**AFR Tubular Backwash**  
Powerful performance. Compact footprint.

The Eaton AFR Series replaces an 8-station multiplex tubular system in only a one-square-meter footprint. Designed for continuous use, the AFR delivers high-flow filtration of water and water-like substances at retentions as low as 1 micron.



**QIC-LOCK™ MAXILINE™**  
VMBF SE Multi-Bag Filter Housing.

User friendly and cost effective, this housing is ideal for high volume applications demanding frequent bag change-outs. Ideal for batch process runs and high dirt load applications. The QIC-LOCK mechanism ensures simple and safe operation with minimal downtime.



**DCF Self-Cleaning Filters**  
Continuous, non-stop filtration for improved ROI.

The DCF series of mechanically cleaned filters addresses environmental pressures, loss of valuable product and operator safety. DCF systems are offered in thousands of configurations and at a wide range of retention levels to achieve your specific goals.



**MCF**  
Magnetically coupled, self cleaning filter.

This innovative design is driven by a magnetically coupled cleaning disc. This actuation method eliminates the need for lid thru-holes and their associated seals. Designed for the most challenging process liquids the MCF features the fastest cleaning action of the mechanically cleaned family.

# Ethanol Process Solutions

## Engineered to Work for You.

**Gas/Liquid Separators**  
Removes +99% of moisture and solid particles 10 microns and larger.

With no moving parts to wear out, Eaton's Type T Gas/Liquid separator works with air, gas, and steam processes. Eaton's exclusive Vortex Containment Plate (VCP) ensures that moisture and solids cannot be re-entrained.



**Model 53BTX**  
No-hassle strainer basket servicing.

This ball type duplex basket strainer removes dirt and debris from pipelines and protects sensitive system components. With a patented diverter cartridge, the Model 53BTX assures leak-tight isolation of the basket chamber during cleaning.



**Model 91 Tee Strainers**  
Very compact, low-profile design.

Unlike most strainers, the compact Model 91 can be used in both vertical and horizontal installations where a very low pressure drop is needed. Ideal for pump protection, the strainer screen is easily removed and does not require the strainer vessel to be drained.



**Model 2596**  
Automatic Self-Cleaning Strainer.

The 2596 Strainer is designed for the continuous removal of entrained solids from water and water-like liquids in pipeline systems for plant services. Applications include cooling, process and fire protection.



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Liquid Filtration Solutions for the Ethanol Industry

Bags and Housings  
Gas/Liquid Separators  
Mechanically Cleaned Filters  
Strainers  
Tubular Backwashing Filters

### What's Your Filtration Strategy?

**Optimize your results.**  
Bag filtration systems?  
Mechanically cleaned? Tubular backwash? Pipeline strainers?  
Selecting the right filter for the right application can make all the difference in the world when it comes to manufacturing a better, more profitable product. However, since each facility has its own unique challenges, there are many factors to consider when choosing filtration.

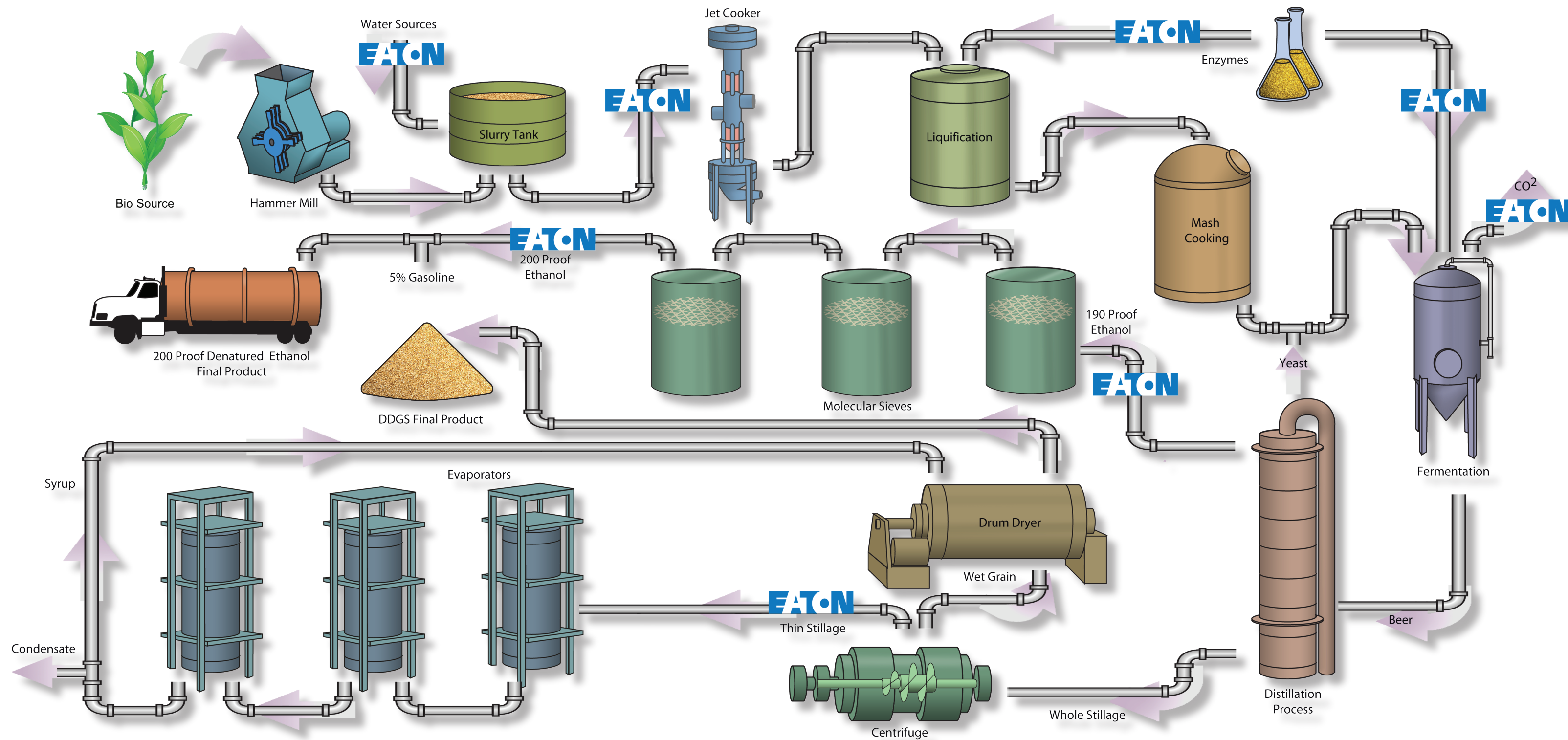
**Tell us your challenges.**  
Eaton's ethanol filtration experts are trained to evaluate your process and recommend the best options to help you improve performance. From the filtration of your water source to final load out of your product, Eaton can help you achieve a more efficient process, better cost savings and an improved overall product.

**Scientific lab analysis.**  
Our Application Development Lab offers a fully controlled test environment in which your process fluids can be evaluated. Using a variety of filtration media under conditions that simulate your actual application, our technicians can pinpoint key contaminants and identify the best filtration options to help you achieve your goals.

Visit us at [www.filtration.eaton.com](http://www.filtration.eaton.com) today.



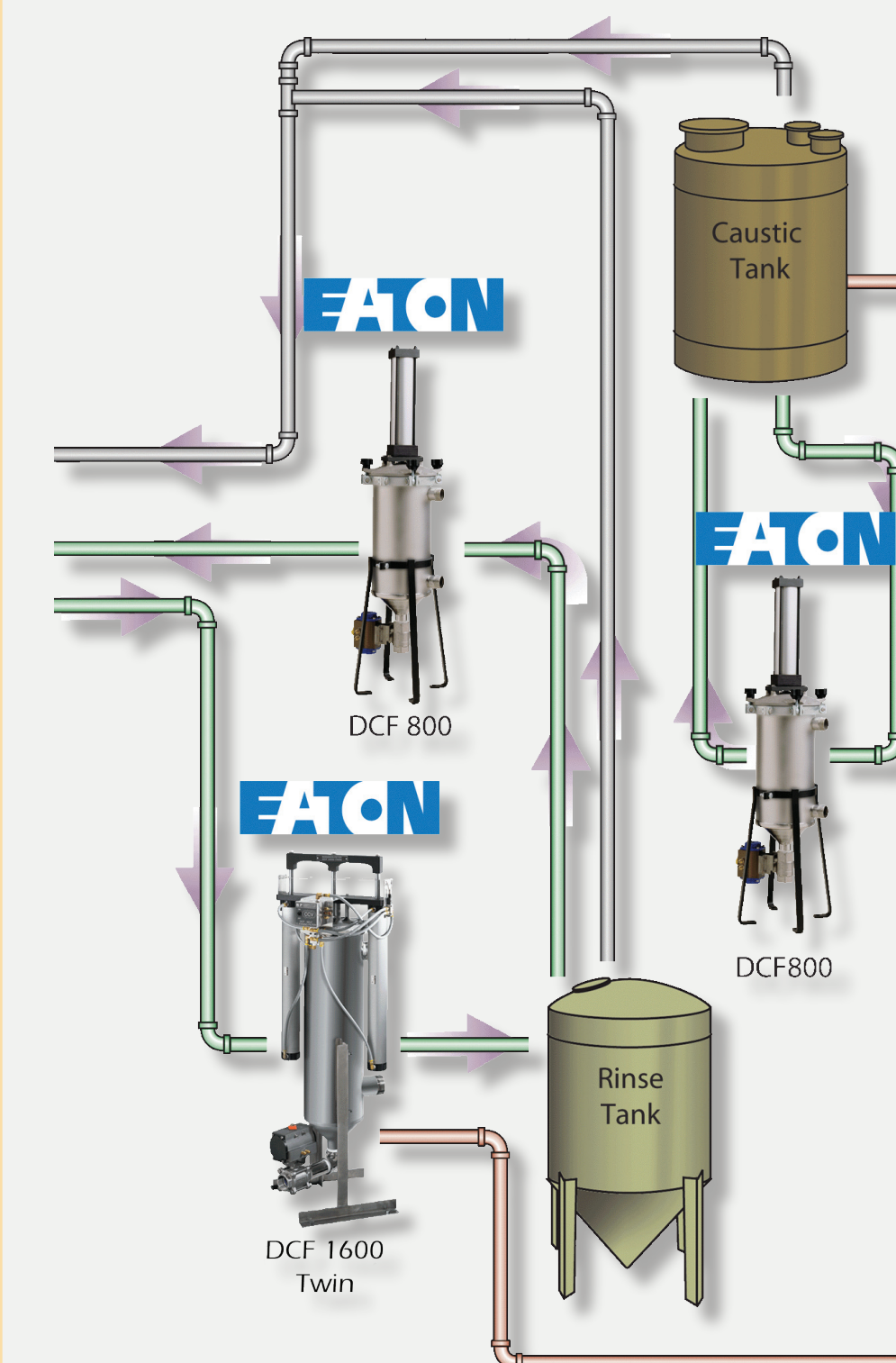
# Discover a Better Ethanol Process — with Strategic Liquid Filtration Placement from Eaton.



For more information on filtration for the ethanol industry, call (800) 656-3344 today.

## Get More Out Of Your Caustic Chemicals With Our Clean-In-Place Loop Solution.

Using Eaton's DCF filtration technology, you can continuously clean your caustic chemicals and achieve optimum performance without increasing labor costs or exposure to hazardous materials.



### Reduce Caustic Consumption

- Remove spent process waste automatically
- Reduce caustic consumption automatically
- Continuous debris removal for improved caustic wash effectiveness

### Reduce Process Downtime

- Prevent plugging of heat exchangers, spray balls, nozzles and showers
- Designed to handle upset conditions
- DCF filters offer robust construction, featuring all wetted materials in 316 stainless steel

### Reduce Human Interaction

- All functions automatic and controllable
- Designed for uninterrupted 24/7 operation
- OSI control language capable

## Eaton — Your Manufacturing Business Partner for Customized Filtration Options.

At Eaton, we're dedicated to learning your business as if it were our own. Why? Because we want to be more than just a supplier of superior filtration equipment — we want to be a valuable member of your manufacturing team.

### Water Source

Starting with quality water is one of the best ways to increase efficiency and maintain product quality. Plus, the more dirt, scale and sand you remove at the source, the less you have to deal with it inside the plant. Depending on your current water quality, Eaton offers these filtration choices:

- AFR Tubular Backwash
- Multi-Bag Filters
- 2596 Automatic Strainers

### Post Slurry Tank

Filtering immediately after the slurry tank allows you to

remove debris that may cause bigger problems downstream. Debris at this location can range from oversized particles in the slurry to agglomerates that may reduce the effectiveness of the jet cooker. For this process, we recommend:

- Multi Bag Filters
- Self Cleaning Filters
- Cast/Fabricated Strainers

### Enzymes

The use of enzymes is critical in the ethanol process. However, unwanted biosolids can endanger their efficiency. Proper filtration can help ensure maximum potency before you send them to liquification and fermentation. For this vital application, we suggest the following filtration options:

- Single or Dual Bag Filters
- Simplex Strainers
- Mechanically Cleaned

### CO<sub>2</sub> Recovery

When it comes to capturing CO<sub>2</sub> from your process, you

can depend on Eaton's Wright-Austin Gas/Liquid Separator. Capable of removing 99% of entrained liquid or particulate matter 10 micron or larger.

- Available in a wide variety of materials of construction
- For both vertical or horizontal piping configurations
- Simple design — most models have no moving parts

### 190 Proof Ethanol

Entrained solids reduce the effectiveness of the molecular sieves. To protect this equipment, place a filter/strainer in this location to remove unwanted material down to the smallest micron ranges. We have a number of low cost filters and strainers available to help ensure your molecular sieves are operating at maximum efficiency.

- Single or Duplex Bag Filter
- Self Cleaning Filters

### 200 Proof and Denatured Ethanol

To ensure product purity and integrity before it goes to the customer, Eaton recommends using a high efficiency bag filter with a very tight micron retention. This is easily and economically accomplished with the following products:

- Multi Bag Filter
- Single or Duplex Bag Filter

### Thin Stillage

While the centrifuge separates the majority of debris from the process, a second finer filtration process ensures that oversize particles do not enter the evaporators. In this application, Eaton suggests a number of inexpensive or automatic systems.

- Single or Duplex Bag Filter
- Multi Bag Filter
- Self Cleaning Filters

For more information, call 800-656-3344. Or, visit us online at [www.filtration.eaton.com](http://www.filtration.eaton.com) today.

