

# Welcome to Complete Filtration Resources



USA UK Canada Mexico Brazil Panama Peru Ecuador **Philippines** Russia Netherlands Germany Poland Spain Iceland Ireland Morocco France

#### **Our History**

Complete Filtration Resources was founded in 1993 and is a well-established designer and manufacturer of skidded membrane filtration systems. We serve the food, dairy, pharmaceutical, chemical and industrial processing industries. Our experienced team can design, fabricate, install and startup your filtration project.

#### Why Use Complete Filtration Resources?

Choosing Complete Filtration Resources for your project lets you partner with the filtration supplier who is leading the way in cutting-edge filtration technology.

#### **One-Stop-Shop**

We design and manufacture a full line of components for our membrane systems. Together with our fabrication and installation partners around the world we can offer you a turn-key service which allows us to provide frames, tanks, heat exchangers, vessels and piping. We can also supply complete system assembly, controls and programming in house. The talent we've cultivated helps us to better serve you and it shows in everything we design, build and install.

#### **Research & Development**

We work with our customers to design and scale up the proper membrane system utilizing our extensive experience as well as our pilot testing units. The testing units are also used for process evaluation and solving separation problems. The development team at Complete Filtration Resources brings many years of experience in the application of membrane filtration technology. A successful process results from both careful pilot testing and the cumulative wisdom and experience of our process development team.

From design, fabrication and controls to installation, training and service—Complete Filtration Resources delivers for you.

Today's processing industries need a filtration system supplier who is experienced in the full spectrum of membrane filtration. One who is already established in your industry, is innovative and is cost effective—a supplier you can trust to handle the entire project. Complete Filtration Resources is the supplier who works within your budget and schedule to deliver the membrane filtration solution your plant needs.

## Cutting-edge Membrane Filtration Technology

Choosing Complete Filtration Resources for your project partners you with the filtration supplier who is leading the way in cutting-edge filtration technology.

## **Exponential Growth**

1993-2004

**Employees US Market Focus** 

2005-2010

First growth phase through standalone projects

Subsidiary Controls Division Formed

**Employees US Market Focus** 

#### 2010-2015

Employees US, South America & European Market Focus

Expansion Into Dairy Wastewater

Service Division Formed

#### 2016-Present

Employees US, South America & European Market Focus

Western US Engineering and Sales Support

Market Leader in Dairy Membrane Service & Supply

New Office + Warehousing

Partnership with Eurodia

## Start to Finish and Beyond We're Complete

We have all heard the phrase; "there is no "I" in TEAM". Here at Complete Filtration Resources, we have a deep understanding of what that can mean. Our team goes above and beyond to make sure that the "I" doesn't sneak in. Even though it is hard to measure the "Culture" of an organization, we have always felt that ours is special. Not only do we enjoy working together to make sure our customers are satisfied, we also take time to have a little fun. We take on the motto "Work Hard, Play Hard". Our people are an



asset to our business and they champion our success. They each bring a different skillset and knowledge to the table and we are so fortunate to have each and every one of them.



ONSITE



DEDICATED PROJECT MANAGEMENT



CONTINUOUS



EMPOWERED TEAM MEMBERS



POST PROJECT SERVICE + SUPPORT

## What is Crossflow Filtration?

Crossflow filtration is a process where product is separated through a porous membrane while the feed solution flows rapidly across the surface of the membrane.

#### Micro-Filtration (MF)

50,000 - .2μm

Feed-Water, Monovalent Ions, Multi-Valeant Ions, Sugars, Amino Acids, Proteins, Polysaccharides, Particulates, Colloids, Bacteria

Concentrate-Particulates, Colloids, Bacteria Permeate-Water, Monovalent Ions, Multi-Valeant Ions, Sugars, Amino Acids, Proteins, Polysaccharides

#### **Ultra-Filtration (UF)**

3,000-300,000 Dalton MWCO

**Feed**-Water, Monovalent Ions, Multi-Valeant Ions, Sugars, Amino Acids, Proteins, Polysaccharides, Particulates, Colloids, Bacteria

Concentrate-Proteins, Polysaccharides, Particulates, Colloids, Bacteria Permeate-Water, Monovalent Ions, Multi-Valeant Ions, Sugars, Amino Acids

#### Nano-Filtration (NF)

.1-10 Nanometer Pore Size

Feed-Water, Monovalent Ions, Multi-Valeant Ions, Sugars, Amino Acids, Proteins, Polysaccharides, Particulates, Colloids, Bacteria Concentrate- Some Monovalent Ions, Multi-Valeant Ions, Sugars, Amino Acids, Proteins, Polysaccharides, Particulates, Colloids, Bacteria

Permeate-Water, Some Monovalent Ions

#### Reverse Osmosis (RO)

.1 nanometer Pore Size

Feed-Water, Monovalent Ions, Multi-Valeant Ions, Sugars, Amino Acids, Proteins, Polysaccharides, Particulates, Colloids, Bacteria Concentrate-Monovalent Ions, Multi-Valeant Ions, Sugars, Amino Acids, Proteins, Polysaccharides, Particulates, Colloids, Bacteria Permeate-Water



## Sustainable Wastewater Treatment Solutions

Complete Filtration Resources prides itself on providing our customers with wastewater treatment systems that are sustainable, both from an environmental and economical perspective. We understand that each project's goals are unique. We custom engineer solutions to deliver the most economical process. Our treatment processes have been optimized to manage the unique challenges that are common when treating wastewater from food and beverage manufacturing.



**ANAEROBIC MBR** 



**AEROBIC MBR** 



**ENHANCED BIOLOGICAL PHOSPHORUS REMOVAL** 



**ULTRA-FILTRATION MEMBRANE SKIDS** 

#### **Dairy**

Milk Protein Isolate (MPI) Milk Protein Concentrates (MPC) Standardization Lactose Removal Microbial Reduction Casein Protein Separation

**Cheese Whey** Whey Protein Concentrates WPC35 - WPC85 Whey Protein Isolates (WPI) Demineralization Lactose Removal Microbial Reduction Fat Removal

#### Salt Brine Clarification

Water Re-Use (Polish) **RO** Permeate **Evaporator Condensate** Waste Streams

#### Vegetable, Meat, Fish, Egg And Beverage

Plasma Separation **Protein Concentration** Gelatin Concentration Fruit Juice Concentration De-alcholization Clarification Desalination Demineralization De-acidifying Plant Extracts Neutraceutical Concentration Yeast Removal Microbe Reduction

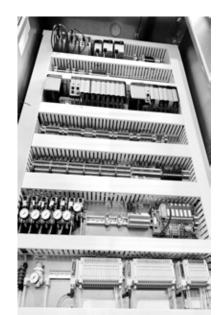
#### **Industrial**

Waste Water Treatment Caustic Reclamation Membrane Bio-reactors De-acidification Demineralization Desalination Glyphosate Purification Anaerobic Digesters

### **Replacement Membrane** Sales & Service

Complete Filtration Resources maintains close working relationships with component and membrane manufacturers around the world providing our customers the buying power and support they deserve. By purchasing membranes Complete Filtration Resources, your business will readily have access to our Technical Group for service and process support. That means you have the opportunity to receive site visits, phone and email support. We'll work with your plant to plan scheduled visits to confirm your systems are running at peak performance.





### **Controls & Automation**

With an in-house automation group you can be certain your system will operate as you desire. Our programming group has a wide variety of expertise utilizing differand HMI programming platforms. Our panel shop is UL508A certified and all wiring is completed in-house. We test our panels and skids in the shop before the equipment leaves to ease the start-up and installation process. We also have a group of skilled technicians who can assist with low voltage wiring and testing on-site if applicable.

#### **US CORPORATE OFFICE**

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