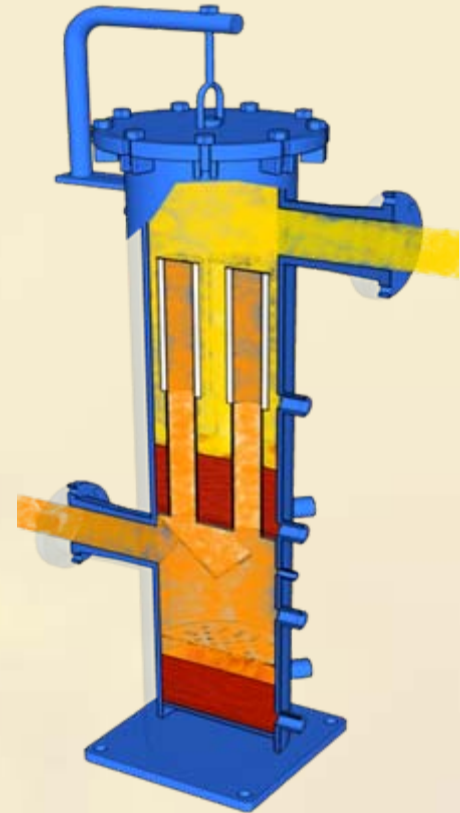


WWW.VELCONPROCESS.COM



Velcon Process
A Division of Velcon Filters, LLC
Chemflo Products • Performance Separations™

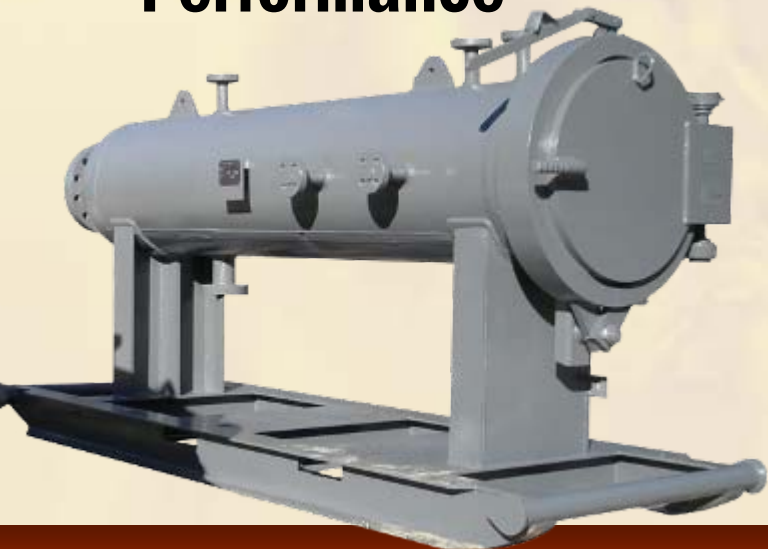
Gas Coalescers



CHEMFLO PRODUCTS • PERFORMANCE SEPARATIONS™

Why Partner with Velcon Process?

- **Velcon Process works with customers as Partners, not as a traditional vendor-supplier**
- **Focus on your Process Margins**
- **“Optimized” Products for Applications**
- **New Technology and Improved Performance**



Velcon Process Gas Products

- **Coalescer Elements and Systems**

Often called “Reverse Flow Coalescers” or “Vertical Coalescers”

- 0.1 μ m, 0.3 μ m and introducing 1 μ m, 5 μ m and 10 μ m
- Inside-out flow, often vertical systems

- **Pleated Filter-Separator Elements**

- Replace Filter Separator Depth tubes with Pleated, High Capacity Cartridge Elements

- **Filter Separator Elements and Systems**

- Horizontal and Vertical and 1 μ m
- Outside-in flow

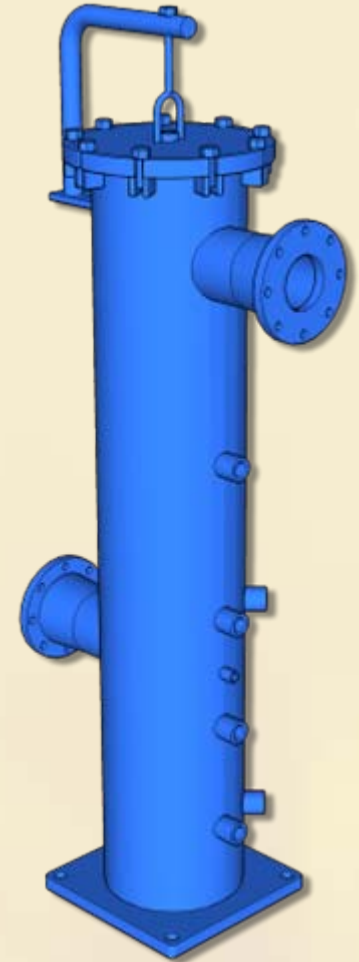
- **Mechanical Separators**

- Usually 5 μ m or 10 μ m
- Mist Eliminators, Cyclonic, Vanes, Mesh Pads, Re-Packs

Liquid-Gas Coalescers Applications

Liquid-Gas Coalescers are used in:

- **Natural Gas**
 - **Protect Screw & Reciprocating Compressors**
 - **Recover Lube Oil After Screw Compressors**
 - **Reciprocating Compressor Lube Oil Discharge**
 - **Coal Bed Methane**
 - **Protection of Sweetening and Dehydration Facilities**
 - **Protection of Catalysts and Mole Sieve Towers**
 - **Removal of Oil, Condensate and Water**
 - **Removal of Particulate and Aerosols**
- **Fuel Gas**
 - **Protect Gas Turbines and Engines**
 - **Protecting Burners at Steam Generators**
- **Industrial Gases**
 - **Acetylene, Hydrogen and other industrial gases**
 - **Instrument Air**



Velcon Process Coalescers

Efficiencies:

- 0.3 μ m
- 0.1 μ m

and introducing:

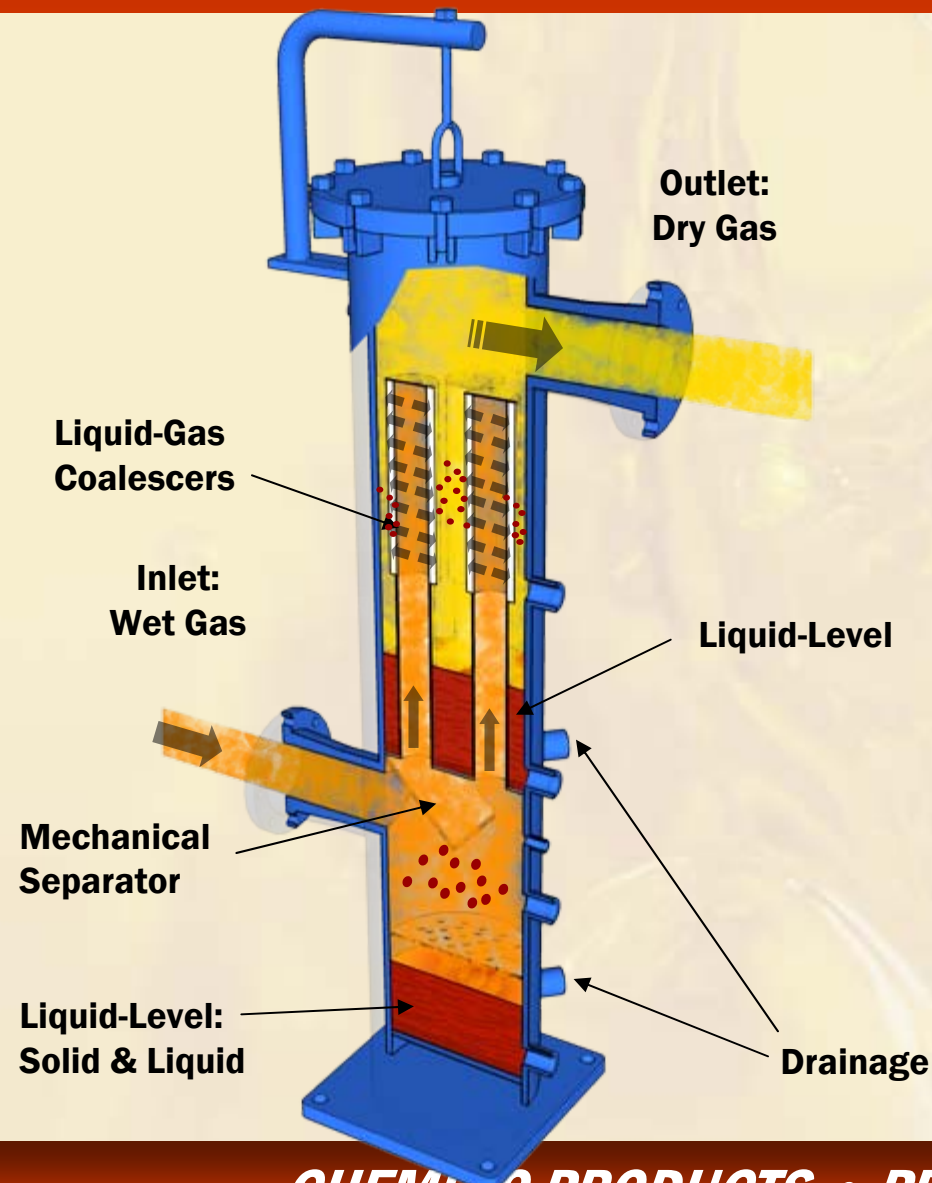
- 1 μ m
- 5 μ m
- 10 μ m



“Optimized” Medias available for :

- Sour gas
- Amine Carry-over
- Glycol Carry-over
- Contaminant Loadings

Vertical Gas Coalescer Vessel

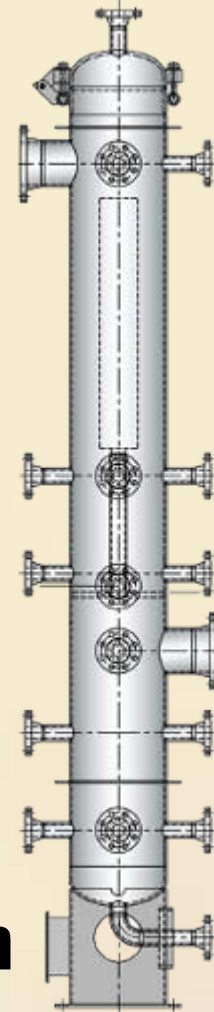


- **Inlet:** gas stream with contaminants enters the inlet
- **Lower Chamber:** removes bulk liquids and related solids from the Gas Stream
- **Filter Coalescing Section:** Gas travels into the upper section where finer Aerosol droplets are Coalesced and drain and removed
- **Outlet:** dry gas stream exits through outlet

“Reverse Flow Coalescer” Vessels

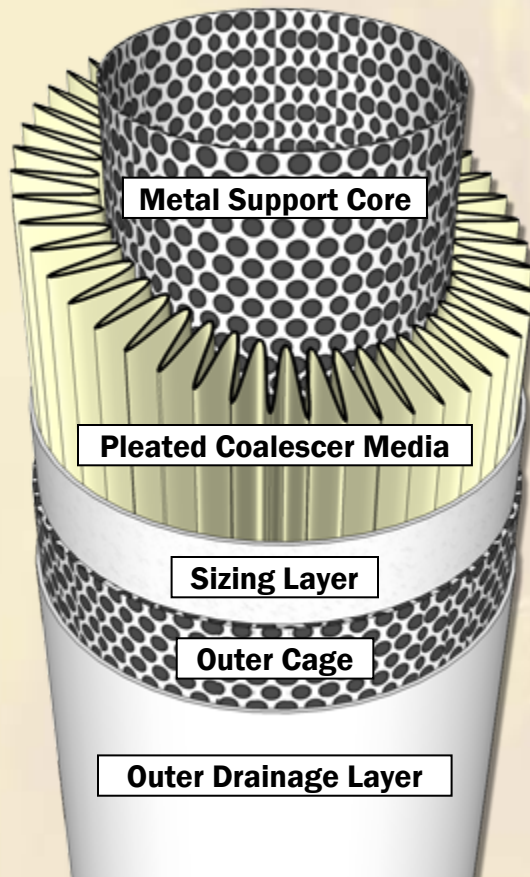
Typical Vertical Two Stage Coalescer

- Full Access Closure
- Two Separate compartments
- Level Controllers
- Level Gauges
- Differential Pressure Indicator
- Drains
- Vent
- Optional High Level Alarms and Shutdown



New All Synthetic Liquid-Gas Coalescer

Velcon Process' New LG Liquid-Gas Coalescers are designed to remove aerosols and fine particulate contaminants from natural gas streams. The LG Liquid-Gas Coalescers utilizes proprietary, high performance **ALL SYNTHETIC** coalescing media in a pleated configuration to improve performance



- **High Performance Coalescing Media:**
 - Pleated Microfiber – LOWER DRY PRESSURE DROPS
 - Naturally hydrophobic/oleophobic microfibers – LOWER SATURATED (WET) PRESSURE DROPS
 - High Performance Microfiber Medias – SUPERIOR DIRT HOLDING
- **Applications:**
 - Lube Oil Recovery Systems
 - Reciprocating Compressor Discharge
 - Protecting Dehydration and Amine Systems
 - Turbines
 - Lean Burn Engines
- **Superior Contaminant Holding:**
 - Excellent for Coal Bed Methane (CBM)
 - High Liquid and Particulate Loadings

LG640 Sour Gas Coalescer

- **Synthetic Coalescer “Optimized” for Sour Natural Gas**
 - Remove aerosols and fine particulate contaminants from natural gas stream
 - Utilize proprietary, high performance polyester coalescing media in a pleated configuration that improves performance in severe applications
- **High Performance Synthetic Pleated Media**
 - Increased Separation Efficiencies
 - Superior Contaminate Handling Capacities
 - Excellent Performance in Low pH, High Contaminant Systems
- **Applications**
 - Sour Natural Gas
 - Removal of Hydrocarbons, Water and Particulate
 - Protection of Equipment and Catalysts
- **Product Performance**
 - Micron Rating: 0.3 μm
 - Removal Efficiency: up to 99.98%



Gas Coalescer Vessel Sizing

- **Flow – Annular Velocity, Media Flux Rate and Nozzles.**
Most commonly specified:
 - 0.5 or less psid dry dP
 - 2 psid saturated (wet) dP
- **Specific Gravity/Density**
- **% Contaminant/Liquid Loading**
 - Size for liquid hold up volume
- **Temperature and Pressure**
 - **Example: for LG640 All Synthetic Element 0.67 s.g. natural gas removing 100 ppmw condensate aerosol density 43.7 lb/cft**
 - 300 psi up to 7500 scfm
 - 150 psi up to 5000 scfm

Velcon Process' Pleated Filter-Separator



- **Replaces Filter-Separator Tubes**
- **Lower clean pressure drop**
- **Better filtration and coalescing efficiencies**
- **Available in 4.5", 5.5" & 6" outside diameter**
- **Available in lengths up to 72 inches**



Velcon Process' Pleated Filter-Separator



- **New 1 μ m (coalescer usually 0.3 μ m)**
- **Available in Inside-out and Outside-in Flow**
- **Combines Filter-Separator and Coalescer into one element, thus, doing the same job in one element**
- **Pleated coalescing media with higher dirt holding than rolled fiberglass tubes or polyester tubular filters**
- **Allows flexibility in media choice to optimize efficiency and greater chemical compatibility: Polyester, Nylon, Microfiberglass, and Metal Medias Available**

Filter Separator Elements

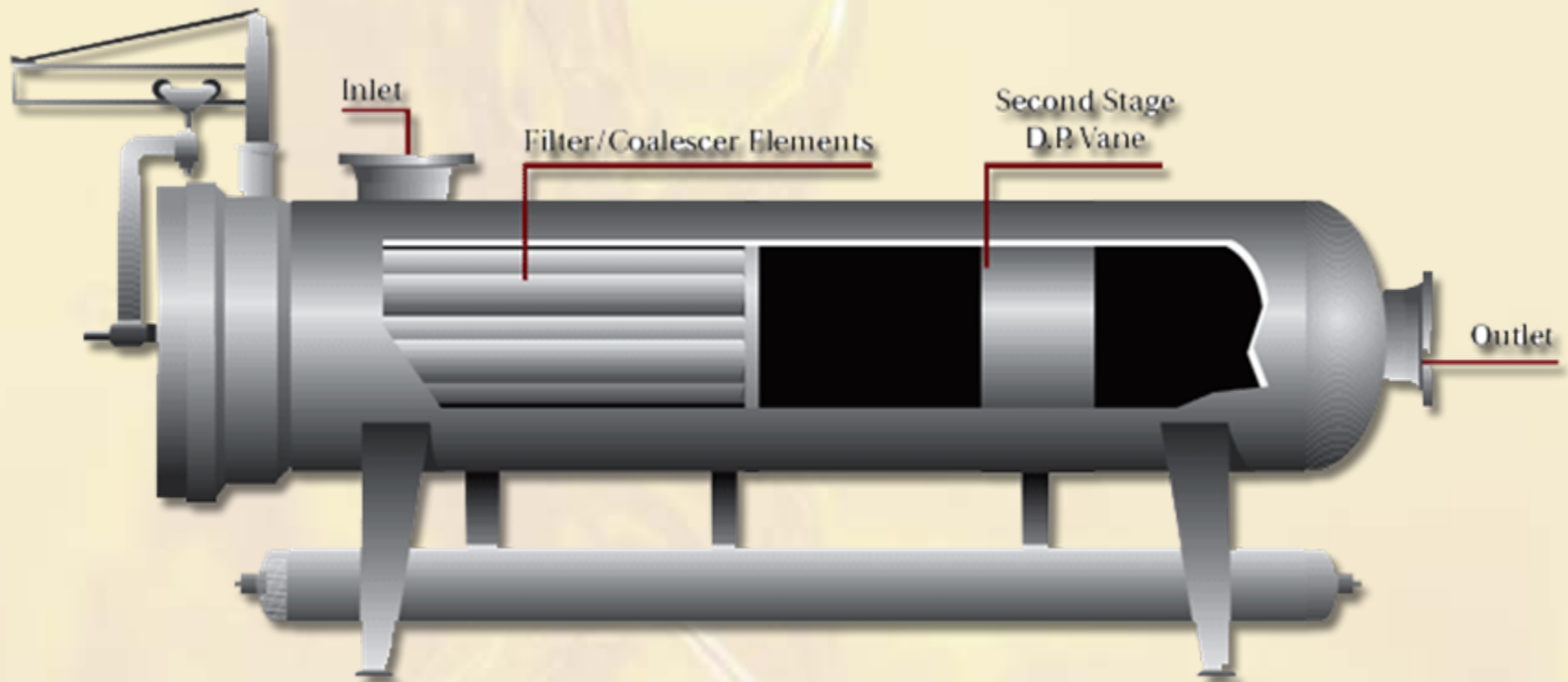
**Outside-in flow direction -
Usually 1um**

Benefits and Solutions:

- **Handle High and Variable Liquid Loadings**
- **More efficient than a Vane alone**
- **Best for bulk removal not high tolerance polishing**



Filter Separator Vessels



CFG336 and CFG372 Filter-Separator Elements



Velcon Process' CFG336 and CFG372 fiberglass elements are designed to remove aerosol contaminants and solid particulates from natural gas streams. These elements fit into Filter-Separator vessels.

- **Applications:**

- **Removes liquids and solids from natural gas applications**
- **Protect Reciprocating Compressors**
- **Protection of Engines, Catalysts, Compressors, Heat Exchangers, Dryers and Other Equipment**

- **Performance**

- **Improve Gas Quality**
- **Steel Core Construction**
- **Outer Cotton Sock**
- **Gasket Seal**

- **Product Performance**

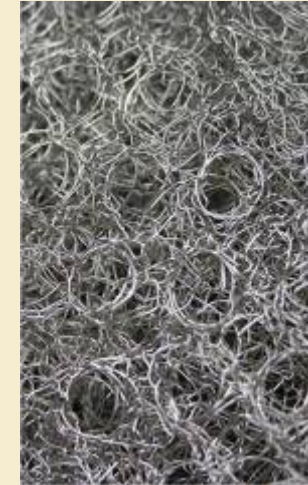
- **Micron Rating: 1 μ m**
- **Also available in CFG536, CFG324 Style**



Mechanical Separators

Equipment – usually 5 μ m or greater

- **Mist Eliminators**
 - Vanes
 - Mesh Pads
- **Cyclonic Separators**
- **Scrubbers**
- **Knock-out Drums/Slug Catchers**



Vanes and Cyclonic Separators are excellent in 2-stage systems