



***BURGESS-MANNING***

**SERIES 3900  
ULTRASEP COALESCING FILTER SEPARATOR**



# SERIES 3900 ULTRASEP COALESCING FILTER SEPARATOR

The Burgess-Manning Ultrasep Coalescing Filter Separator provides the maximum possible separation, down to 0.3 microns of both liquid and solid particles from a gas stream with a 100% turndown ratio. To obtain this separation efficiency Burgess-Manning uses a two stage process. The primary stage knocks out the bulk of the incoming liquids and solids which increases the life of the coalescing filters in the final stage. The coalescing filters remove the sub-micron particles.



3900V

## TYPICAL APPLICATION

The Ultrasep Coalescing Filter Separator is intended for use in applications where near complete removal of all entrained particles is required. Such applications include:

- **Combustion Turbines** – protects the injection nozzles from contaminants in the fuel gas
- **Gas Compressors** – used upstream to protect the compressor, and on the outlet to remove lubricating oil and protect downstream equipment
- **Dessicant Bed or Molecular Sieve** – protects the media from contamination
- **Dehydration Towers** – captures TEG (Triethylene Glycol) carryover
- **Instrumentation, Meters and Analyzers** – protects sensitive equipment from corrosion and fouling
- **Landfill Gas** – contaminants are removed from landfill gas before entering power generation equipment
- **Atmospheric Exhaust** – removes contaminants regulated by the EPA before exhausting to atmosphere
- **Reboilers and Line Heaters** – removes contaminants from fuel
- **Membrane Separators** – protects expensive membrane separation media from contaminants

## PRINCIPLE OF OPERATION

The Ultrasep Coalescing Filter Separator consists of a primary lower separation section, and final upper separation section.

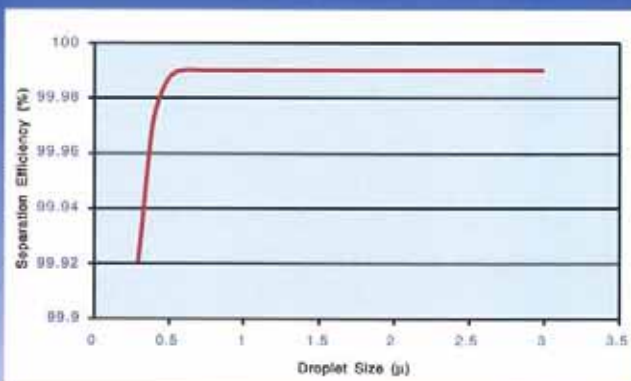
The lower section consists of one of the following:

- *Proprietary centrifugal knockout baffle (standard) which removes the bulk of incoming liquids and solids. This baffle is capable of handling large slugs of liquid and large solids.*
- *Patented Vane Mist Eliminator: Used in applications where there is a considerable amount of fine mist, but few solids present.*
- *Multicyclone Tubes: Used in applications where there is a large amount of fine particulate.*

The upper separation section consists of high efficiency elements mounted on individual tube risers. The gas and entrained particles flow through these specially designed elements from the inside to the outside. As the gas passes through the filter, the small liquid droplets impact on the media and combine, coalescing into larger droplets which will "weep" from the outer layer of the element, and drain down the filter to the bottom of the coalescer section. The solid particles will be trapped within the filter media. The clean gas then exits through the outlet located above the filter elements.



## BURGESS-MANNING ULTRASEP PERFORMANCE



## SEPARATION EFFICIENCY

Burgess-Manning's standard Ultrasep element has an efficiency of 99.98% of liquid and solid particles 0.3 microns and larger. The separation efficiency of the Ultrasep Coalescing Filter Separator is dependent upon the coalescing element used for each application.

## DESIGN SPECIFICATIONS

- Designed and Stamped to ASME Pressure Vessel code
- Available in sizes starting at 6" nominal diameter
- Custom designed for any application
- Available in carbon steel, stainless steel and alloy materials
- Filter access through several styles of full or reduced opening closures

Home Office:  
227 Thorn Avenue  
Orchard Park, NY 14127 USA

Phone: 716-662-6540  
Fax: 716-662-6548  
Website: [www.burgess-manning.com](http://www.burgess-manning.com)  
E-mail: [info@nitram.com](mailto:info@nitram.com)



3900VB

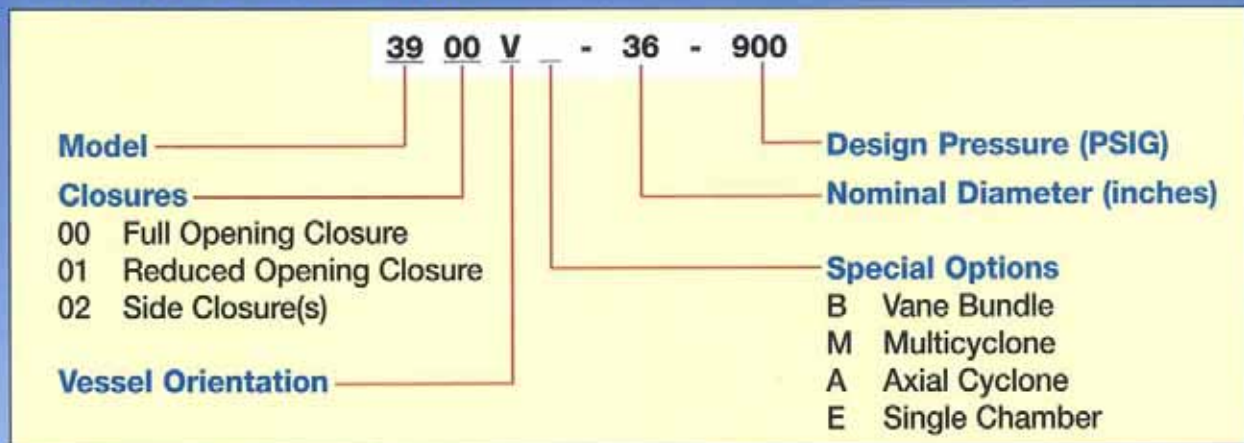


3900VM



3900VE

## MODEL NUMBER DESIGNATION



**BURGESS-MANNING**

Home Office:  
 227 Thorn Avenue  
 Orchard Park, NY 14127 USA  
 Phone: 716-662-6540  
 Fax: 716-662-6548  
 Website: [www.burgess-manning.com](http://www.burgess-manning.com)  
 E-mail: [info@nitram.com](mailto:info@nitram.com)

Please visit us online at [www.burgess-manning.com](http://www.burgess-manning.com) for the latest developments, product information, online ordering, complete list of offices, representatives and agents in the USA and throughout the world.