

AVENGER™ 33M

Particulate & Coalescing Filter

High performance filters providing the utmost flexibility for coalescing/particulate filtration needs!

The Avenger™ 30M Series Filters provide sample conditioning and analyzer protection by using a disposable filter element to remove solids and liquid droplets from gas sample streams. Genie® Membrane Technology™ with Liquid Block™ can be added as an option to the 30 Series filters, in addition to the disposable filter element. The use of Genie® Membrane Technology™ in these filters will remove 100% of entrained liquid, including aerosols, from the sample stream. The Liquid Block™ will completely valve off flow through the membrane to prevent liquid break-through from occurring in the presence of excess liquid. The Avenger™ 30 Series sample filters are easy to install and maintain, especially in heated, densely populated cabinets. The uniquely designed filter housing allows service to the filter element/membrane by simply removing the bowl without disassembly of the fittings.

The Avenger™ Model 33M is the same size as the Model 33, and contains Genie® Membrane Technology™. The Liquid Block™ is an option for this model. When compared to the Models 38 and 38M, the Model 33M is larger in size and internal volume, making it better suited for applications requiring higher flow rates or containing larger amounts of contaminants than the Models 38 and 38M can handle.



Product Brief

Applications

- Continuous sampling in any process industry including natural gas, petrochemical, and oil refining
- Coalescing liquid droplets
- Particulate removal from gas sample streams

Benefits

- Analyzer protection against liquid droplets and micron/submicron size particles
- Quick and easy installation and maintenance
- Multiple porting configurations

Features

- Genie® Membrane Technology™
- Liquid Block™
- 5 ports
- Horizontal mounting
- All primary connection ports on filter head

Technical Specifications

Maximum pressure rating	1,000 psig (68.9 barg)
Maximum Liquid Block™ valve auto-reset pressure	85 psig (5.8 barg) Slowly open the supply pressure so that the minimum differential pressure required to shut off the Liquid Block™ is not met or exceeded
Maximum temperatures	Type 6 membrane: 185°F (85°C) *Type 7 membrane: 300°F (149°C) * Actual limit depends on sealing material chosen. Refer to Temperature Range Comparison Chart.
Maximum Recommended Flow Rate Results in approx. 2 PSI pressure differential. For higher flow rates, contact the factory.	Type 6 Best Rejection: 4.7 SLPM (10 SCFH) Type 7 Highest Temps: 13 SLPM (27 SCFH)
Element size	Outside Diameter: ~ 1.4" Inside Diameter: ~ 1.0" Length: ~ 2.5"
Port sizes	Inlet, Outlet, & Bypass: 1/2" female NPT Gauge: 1/4" female NPT
Number of ports	5
Internal volume	200 cc
Wetted materials	Machined parts: 316/316L stainless steel / ISO 15156-3 compliant All other metal parts: stainless steel / ISO 15156-3 compliant Sealing material: User defined Membrane: inert

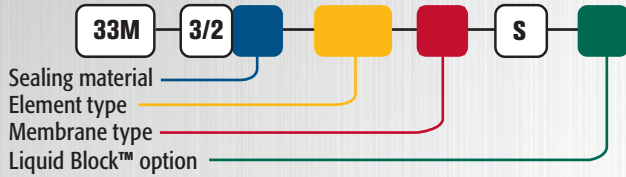


Model Numbering & Additional Part Numbers

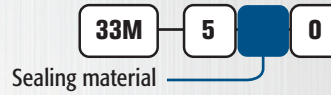
Your model number is determined by your specific needs. Choose options below.

Sealing material	0 = Fluoroelastomer	1 = Perfluoroelastomer	(other materials available upon request)
Element type	07CFS = 0.1 micron coalescer fluorocarbon	SS10 = 10 micron stainless steel	
Membrane type	6 = Better Rejection; Rejects ALL types of liquids from vapor	7 = Highest Temps; Rejects ONLY high surface tension liquids	
Liquid Block™	Blank = No Liquid Block™	L = Liquid Block™	
Mounting bracket accessory	Part # 33-509SS (sold separately)		

How to build the model number:



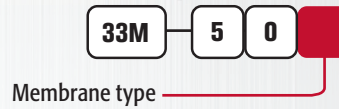
How to build the replacement o-ring kit number:



How to build the replacement filter element number:



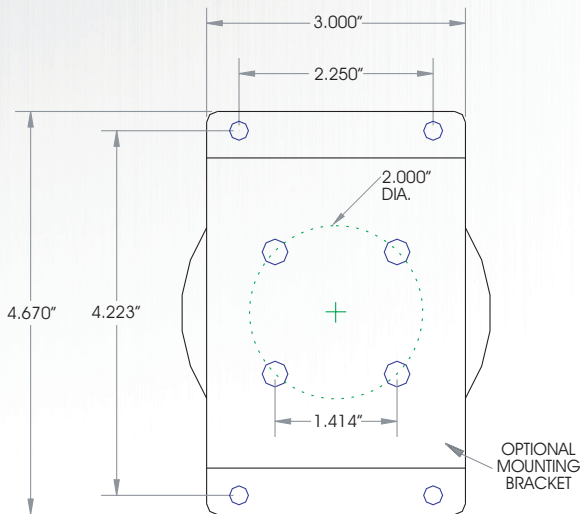
How to build the replacement membrane kit number:



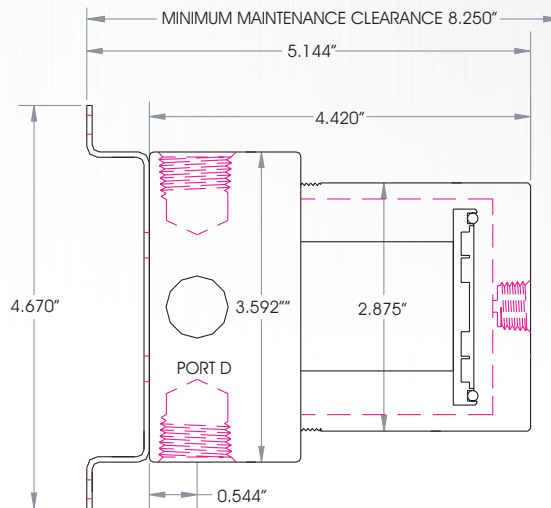
Replacement filter and membrane kits contain 5 each. O-ring replacement kit contains all assembly o-rings.

Dimensions

Back View



Side View



Analytically Correct™ sample systems, sample conditioning components, and revolutionary gas and liquid sampling technology.



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