

GENIE Liquid Block

Avenger 33M Retrofit



U.S. Patents 5,476,586; 7,097,693; 7,555,964

Applications

- ▶ Protection against liquids in gas sample conditioning systems containing an Avenger™ Model 33M
 - ▶ On-line and portable analyzers
 - ▶ GC's, Mass Specs, O₂, H₂S, Moisture, and others
- ▶ Spot, composite, or continuous methods

Benefits

- ▶ Superior analyzer protection
- ▶ Preserves Genie® investment
- ▶ Reduces maintenance costs
- ▶ Quick and easy installation

Features

- ▶ Genie® Membrane Technology™
- ▶ Low internal volume
- ▶ Positive shut-off
- ▶ Flow limiter
- ▶ Indirect maintenance indicator

Quick Study

The Liquid Block™ Model 33M retrofit is a hardware component for the Avenger™ Models 33 and 33M that provides the ultimate safe-guard against liquid damage to gas analyzers. It is installed in field mounted Avenger™ Models 33 and 33M to upgrade them with the Genie® Liquid Block™ feature, and little or no modification to existing sample systems is required. Liquid can be forced through any phase separation membrane when inadvertent circumstances cause excessive membrane differential pressure. The revolutionary Liquid Block™ limits flow when high membrane differential pressure occurs, and it completely valves off flow through the membrane to prevent liquid break-through from occurring in the presence of excess liquid. The Liquid Block™ will automatically reset itself once the excess liquid exits the Bypass.

Technical Specifications

Maximum pressure rating	1,000 psig
Maximum recommended supply pressure	Lowest possible pressure consistent with application
Maximum Liquid Block™ valve auto-reset pressure	85 psig* <small>*Slowly open the supply pressure so that the minimum differential pressure required to shut-off the Liquid Block™ is not met or exceeded.</small>
Maximum temperature	185 °F (85 °C) for Type 5 membrane 302 °F (150 °C) for Hi-Flow Backed membrane
Maximum recommended membrane flow rate (For higher flow rates contact the factory)	4,000 cc/min for Type 5 membrane 9,000 cc/min for Hi-Flow Backed membrane <small>*Maximum flow results in approximately 2 psi membrane differential pressure</small>
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 stainless steel / NACE compliant All other metal parts: stainless steel / NACE compliant Sealing material: Viton® standard Membrane: inert



An ISO 9001:2000 certified company



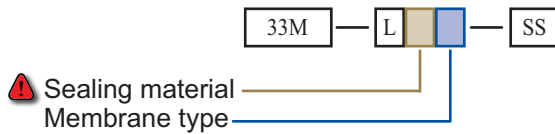
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Model Numbering & Additional Part Numbers

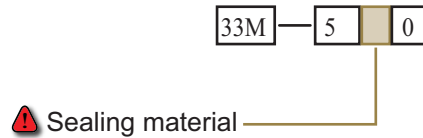
Your model number is determined by your specific needs. See choices below.

Sealing material ⚠	0 = Viton®	1 = Kalrez®	(other materials available upon request)
Membrane type	5 = Type 5	7 = Hi-Flow Backed	

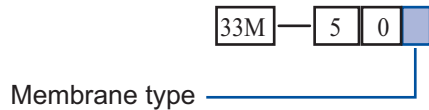
How to build the model number:



How to build the replacement o-ring kit number:



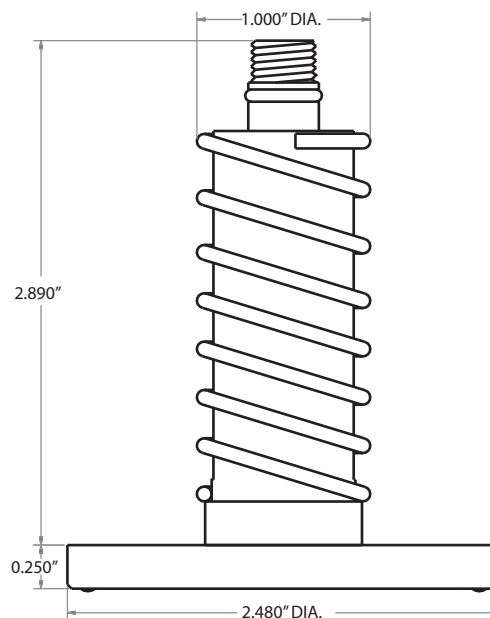
How to build the replacement membrane kit number:



⚠ We cannot recommend specific sealing materials due to the complex nature of sample stream compositions. Temperature and pressure also may be factors.
 ⚠ Unless specified otherwise, the product will ship with our standard sealing materials and materials of construction stated in the technical specifications section of the corresponding Product Sheet. ⚠ Please refer to www.dupontelastomers.com for sealing material recommendations and advice. It is the user's responsibility to specify the sealing materials and other materials of construction for their application.

Dimensions

Side View



Local Distributor:



An ISO 9001:2000 certified company

Manufacturer

A+ Corporation, LLC

41041 Black Bayou Road

Gonzales, LA 70737

Call for expert product application assistance:

Phone: (225)-644-5255 Website: www.geniefilters.com

Fax: (225)-644-3975 E-mail: sales@geniefilters.com

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