

3M™ 1B Series Filter Housing Specifications

The 3M™ 1B Series Filter Housings are three-piece all metal housings with a center-rod, intended for general industrial filtration needs. They are offered in Steel/Carbon Steel or Stainless Steel construction. The 3M 1B series filter housings are available as one or two high cartridge models. The housing is also offered in a version for use with gases to a maximum pressure of 150 psi (10 barg) @ 250 °F (121 °C).



Product Benefits:

- Available in cast iron and steel or 304 Stainless steel
- Provides broad process compatibility
- Mounting Pads Drilled and Tapped on housing head
- Easily installed using optional bracket
- Three-piece housing with center post
- Separate components eases cleaning between operations
- Quick and easy cartridge change-out

Table 1. Standard Model Specifications

Operating Data	1B	1B1G
Maximum Operating Pressure and Temperature	175 psig (12 barg) @ 250 °F (121 °C)	150 psig (10 barg) @ 250 °F (121 °C)
Note: The maximum operating pressure is the rating for the housing only. The actual operating temperature depends on the temperature capability of the filter cartridge.		
Flow Rate	See Table 3	See Table 3
Materials of Construction		
Head and Cover	Cast iron or stainless steel	Cast iron
Shell	Steel or stainless steel	Steel
Centering Clip		
Center Post		
Cap Nut Gasket	Fiber	Fiber
Connection Sizes		
Inlet/Outlet	3/4" NPT	3/4" NPTF
Cartridge Capability	The models are available in one- or two-high configurations. See "Applicable Filter Cartridges".	Uses one filter cartridge 4.875" (124 mm) long.
Options	Mounting bracket kit, complete with self-tapping screws; order separately, 35581-01. Head Gaskets are available in Fluorocarbon, PTFE, Rubber and Aramid Fiber; order separately.	

3M™ 1B Series Filter Housings

Cartridge Requirements

1B1 Models hold a single cylindrical Double Open End (DOE) filter cartridge 9.75" (248 mm) long x 2.6" (66 mm) outer diameter x 1" (25 mm) inner diameter. 1B2 Models hold a single 19.5" (496 mm) long DOE filter cartridge and the 1B1G holds a single 4.875" (124 mm) long DOE filter cartridge.

Applicable Filter Cartridges:

- 3M™ Micro-Klean™ Series Products
- 3M™ Betapure™ Series Products
- 3M™ Betafine™ Series Products
- 3M™ Activated Carbon Series Products

Table 2. Standard Model Dimensions

Housing Model	A	B	C	Shipping Weight
1B1	12 7/8" (327 mm)	11 1/4" (286 mm)	4 1/4" (108 mm)	9.5 lbs (4.3 kg)
1B1G	12" (304.8 mm)	11 1/4" (286 mm)	4 3/16" (106 mm)	9 lbs (4.1 kg)
1B2	22 5/8" (576 mm)	21" (533 mm)	4 3/16" (106 mm)	10 lbs (4.5 kg)

Flow Rates

Table 3 lists the maximum recommended liquid flow rates in gallons per minute (gpm) and liters per minute (lpm) for the 3M 1B series filter housings. Use the data in Table 3 only as a guide to establish housing flow capability; do not use it for filter sizing. Proper filter sizing is determined based upon the fluid parameters (viscosity, contaminant type and loading), required flow rate, required filter life and the performance characteristics of the selected filter cartridge. Once you know the flow rate for a selected cartridge, the table should be used to confirm that the maximum recommended flow is not exceeded.

Table 4 lists the gas flow rates at various line pressures for the 1B1G housing.

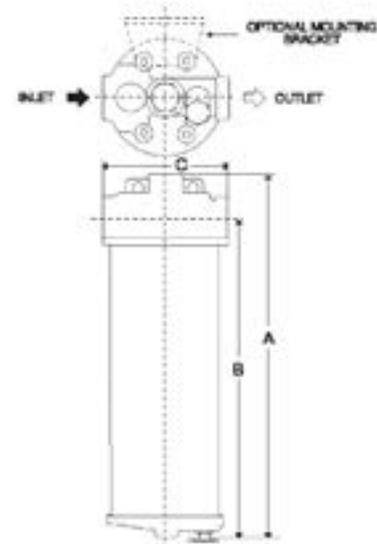


Table 3. Maximum Recommended Flow Rate -- GPM (LPM)

Housing Model	Inlet/Outlet	Water	15 CPS	35 CPS	70 CPS	130 CPS	200 CPS
1B	3/4"	16 (60 lpm)	14 (53 lpm)	13 (49 lpm)	12 (46 lpm)	10 (38 lpm)	8 (30 lpm)

Table 4. 1B1G -- Standard Cubic Feet Per Minute (SCFM) Gas Flow Rates @ 1 psid (0.07 barg) pressure drop

Housing Model	Inlet/Outlet	50 psig (3.5 barg)	75 psig (5.2 barg)	100 psig (6.9 barg)	125 psig (8.6 barg)
1B1G	3/4"	47 (1300 slpm)	55 (1600 slpm)	62 (1800 slpm)	70 (2000 slpm)

Replacement Parts List

Description	Material	Quantity per Housing	Part Number 1B Model	Available for Purchase
Head with Bypass	Cast Iron	1	34119-34	
Head without Bypass	304 S.S.		64896-34	
Head for Bypass	Cast Iron		34117-34	
Cover Assembly	Cast Iron		34236-01	
	304 S.S.		34236-03	
Centering Clip	Steel		34241-31	
	316 S.S.		34241-34	Yes
Center post, 1B1	Steel		34238-32	
	316 S.S.		34238-38	Yes
Center post, 1B2	Steel		34238-33	Yes
	303 S.S.		34238-39	
Shell, 1B1	Steel		34237-32	
	304 S.S.		34237-38	
Shell 1B2	Steel		34237-33	Yes
	304 S.S.		34237-39	
Cap Nut	Steel		34242-31	
	304 S.S.		34242-33	Yes
Cap Nut Gasket	Fiber	32240-46	Yes	
Shell Gasket, Standard	Buna N	2	34239-48	Yes
Shell Gasket, Other materials	Rubber & Aramid Fiber		34239-50	Yes
	Neoprene		34239-51	
	Fluorocarbon		34239-49	Yes
	PTFE		34239-41	Yes
	EPR		34239-75	
Bypass Gasket	Copper & Aramid Fiber		26926-31	Yes
Screw	Brass	1	23370-31	
Ball	Steel		32062-32	
Spring, 30 psid	Steel		32167-32	
Mounting Bracket	Steel		35581-01	
Relief Valve 10# Spring Kit	Steel	1	67363-03	
1BG Petcock	Steel	1	34249-32	

3M 1B Series Filter Housing Ordering Guide

Housing Model	Basic Catalog Number	Inlet/Outlet NPT	Housing Material
1B1	40292-11	3/4"	Cast Iron & Steel
1B1G	40282-11		304 S.S.
1B1	40294-11		Cast Iron & Steel
1B2	40292-12	3/4"	304 S.S.
1B2	40294-12		Cast Iron & Steel

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