

# 3M Purification

## 3M™ 1B1 and 1B2

### Series Filter Housing



Three-piece housings featuring center post construction, offer a choice of either cast iron and steel or 304 stainless steel as the materials construction. The 3M™ 1B1 and 1B2 series filter housings have flow rates of up to 60.5 lpm, and accept working pressures and temperatures up to 1200 kPa at 121°C. The 3M 1B1 and 1B2 series filter housings are available as one- or two-high cartridge models.

### Standard Model Specifications

Table 1 lists standard specifications for 3M 1B1 and 1B2 series filter housings. On Table 1, note that Maximum Operating Pressure is the rating from the housing only. Actual filter operating temperature depends on temperature capability of the filter cartridge.

### Design

All models are available with or without a cartridge bypass valve (200 kPa). The 3M 1B2 series filter housing, equipped with the cartridge bypass valve, is available only in cast iron and steel.

### Options

Mounting Bracket; order separately part number 70020002195.

Table 1. Specifications

Operating Data	1B1	1B2
Maximum Operating Pressure & Temperature	1200 kPa @ 121°C	
Flow Rate	See Table 2	
Basic Materials of Construction		
Head & Cover	Cast Iron & Steel	
Shell	Steel & Stainless Steel	
Centering Clip		
Center post		
Cap Nut Gasket	Fiber	
Connection Sizes		
Inlet/Outlet	¾" NPT	¾" NPT
Cartridge Capability	The models are available in one- or two-high configurations. See "Applicable Filter Cartridges" for a list of the cartridges used by the units.	
Cartridge Capability	Mounting bracket kit; order separately, 70020002195. Head Gaskets are available in Neoprene, Fluorocarbon, PTFE, EPR, Rubber and Aramid Fiber; order separately.	

### Features & Benefits

#### Rugged cast iron and steel or long-wearing 304 stainless steel

- Provides broad process compatibility

#### Mounting Pads Drilled and Tapped on housing head

- Easily installed using optional bracket

#### Design-Three-piece housing

- Quick, Clean, and Convenient Cartridge Change-out

#### Center post construction

- Quick and easy cartridge change-out

### Applicable Filter Cartridges

#### Betapure™ AU Series

#### Betafine DPT™ Series

#### 3M™ Activated Carbon Series

#### Micro-Klean™ D Series

#### Micro-Klean™ RB Series



### Cartridge Requirements

The 3M™ 1B1 series filter housing uses one filter cartridge; the 3M™ 1B2 series filter housing uses two filter cartridges. See “Applicable Filter Cartridges” for a list of the cartridges used by the units.

### Standard Model Dimensions

Table 2 gives dimensions in inches and shipping weight in pounds for the 3M™ 1B1 and 1B2 series filter housings. To find a dimension, locate the model in the left column and the selected dimensions symbol (A-G) in the top row. The square where the row and column meet is the selected dimension.

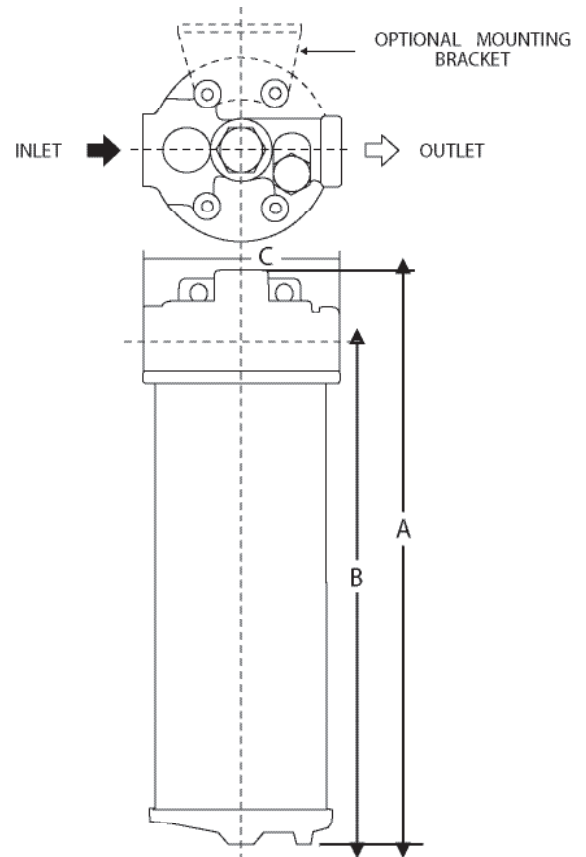
**Table 2. Dimensions**

Housing Model	A	B	C	Shipping Weight
1B1	327 mm	286 mm	108 mm	4.5 kg
1B1 with return valve	327 mm	286 mm	108 mm	5.5 kg
1B2	575 mm	534 mm	108 mm	5.0 kg
1B2 with return valve	575 mm	534 mm	108 mm	6.0 kg

### Housing Flow

Table 3 lists the maximum recommended flow rates in litres per minute (lpm) for the 3M 1B1 and 3M 1B2 series filter housings. Use the data on Table 3 only as a guide to establish housing flow capability; do not use it for filter sizing. Once you know the flow rate for a selected cartridge, then use the table to check that the flow rate falls within the recommended guidelines.

Remember to take into account the amount of contaminant to be removed when selecting a filter.



**Figure 1. 3M™ 1B1 and 1B2 Series Filter Housings**

**Table 3. Flow Rates**

Housing Model	Inlet/Outlet	Water	80 SSU	150 SSU	300 SSU	600 SSU	1000 SSU
1B1	3/4"	60.5	52.9	49.1	45.3	37.8	30.2
1B2	3/4"	60.5	52.9	49.1	41	37.8	30.2

### Replacement Parts List

3M Purification can order replacement parts for your convenience. To order, specify a description of the item, its material, the quantity desired, and the part number. An (S) next to any part description indicates that 3M Purification suggests ordering a spare when you place your order. Table 4 gives complete ordering information.

Description	Material	Quantity	Part Number 1B Model
Shell Gasket (S), Optional	Rubber & Aramid Fiber	2	70020085786
	Neoprene		70020085802
	Fluorocarbon		70020085810
	PTFE		70020085794
	EPR		70020085778
Bypass Gasket (S)	Copper & Aramid Fiber		70020085828

# 3M™ 1B1 and 1B2 Series Filter Housing Ordering Guide

Plant Code 01

Product Code 02

Housing Model	Basic Catalog Number	Inlet/Outlet NPT	Housing Material
1B1	70020105980 without bypass	3/4"	Cast Iron & Steel
1B1	70020106020 with bypass*		Cast Iron & Steel
1B1	70020106004 without bypass		304 S.S.
1B2	70020105998 without bypass		Cast Iron & Steel
1B1	70020106038 *with bypass		Cast Iron & Steel
1B2	70020106012 without bypass		304 S.S.

\*Cartridge bypass valve set for 30 psid setting.  
Mounting bracket 70020002195, order separately.

**Important Notice**

The information described in this literature is accurate to the best of our knowledge. A variety of factors, however, can affect the performance of the Product(s) in a particular application, some of which are uniquely within your knowledge and control. INFORMATION IS SUPPLIED UPON THE CONDITION THAT THE PERSONS RECEIVING THE SAME WILL MAKE THEIR OWN DETERMINATION AS TO ITS SUITABILITY FOR THEIR USE. IN NO EVENT WILL 3M PURIFICATION BE RESPONSIBLE FOR DAMAGES OF ANY NATURE WHATSOEVER RESULTING FROM THE USE OF OR RELIANCE UPON INFORMATION. It is your responsibility to determine if additional testing or information is required and if this product is fit for a particular purpose and suitable in your specific application.

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