

3M™ DC Series Filter Housings

3M™ DC series filter housings, constructed of durable 316 stainless steel, meet general-purpose industrial and commercial filtration needs. All wetted welded surfaces are stainless steel. External surfaces of these filter housings are electro-polished for a consistent, easy care finish.

The 5DC housing handles liquids at pressures and temperatures of up to 150 psig(10.3 bar) at 250°F (121°C)

Specifications

Table 1 gives standard model specifications for 3M DC series filter housings. Note that maximum operating pressure and temperature is the rating for the housing only. Actual housing process operating temperature depends on temperature and chemical capability of the filter cartridge and gasket used in the housing.

Cartridge Requirements

3M DC series filter housings accept both single and multiple length filter cartridges. Table 2 lists the number of filter cartridges for each model housing.

Features & Benefits

316 stainless steel construction.

- Provides excellent corrosion protection for rugged, long-lasting service.

Accepts varying length cartridges.

- Allows use of 9¾" to 10" modular cartridges for greater flexibility.

Shouldered seal plates.

- Solid fit into cartridge core for a positive seal and helps prevent bypass.

V-Band Clamp and Swing bolt designs.

- Optimizes cartridge change-out.

Removable cartridge posts.

- Easy cleaning reduces maintenance.

Housing drains located on dirty and clean chambers.

- Allows full drainage of chambers for optimized filter change-out.

Air Vent.

- Allows venting before start-up and draining for more efficient filter operation.

Pedestal cup fitting.

- Allows for use of both DOE or SOE cartridges.

FDA Compliant.

- Compatible in applications requiring direct food contact in food and beverage processing per 21 CFR.



Applications

Chemicals & Petrochemicals

Food & Beverage

Healthcare

Industrial Processes

Paint & Coatings

Industrial Water Treatment

Flow Rates

Table 3 lists the maximum water flow rates in gallons per minute (GPM) for each model filter housing.

Use the data in Table 3 only as a guide in establishing the maximum housing flow capacity; do not use it for filter sizing. Once a flow rate for a selected cartridge is known, use Table 3 to check whether the housing's flow rate falls within the recommended guidelines.

When sizing a filter, the amount of contaminant load needs to be considered in addition to the flow rate and desired pressure drop. Low initial pressure drop enhances filter cartridge life.

Cartridge Seal Assemblies

5DC models use pressure plate assemblies that permit the use of filter cartridges with single length equivalents of 9 3/4 to 10 inches.

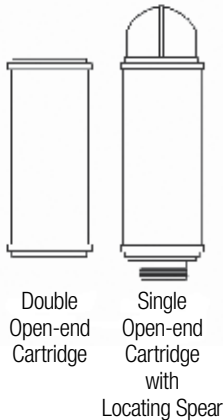
Standard housings are configured to accept double open end style cartridges. To adapt the housing to accept single open end, double o-ring cartridges with locating spear, remove the housing cartridge posts and the spring & seal assemblies. Replace the standard pressure plate and the center rod with the SOE pressure plate and center rod (order separately).

Standard Model Dimensions

To find a selected dimension, refer to Table 4 to locate the model in the left column and the selected dimension symbol (A-D) in the top row. These dimensions can be used for rough plumbing. For critical installations, request a certified drawing.



Picture 1: Spring & Seal Assembly



Double
Open-end
Cartridge

Single
Open-end
Cartridge
with
Locating Spear

Table 1: Standard Model Specifications

Max. Operating Pressure & Temperature*	150 psi @ 250°F (10.3 bar @ 121°C)
Flow Rate (GPM)	See Table 3
Connection Sizes	See Ordering Guide
Vent & Drain Connections	1/4" NPT Vent, 3/4" NPT Drains
Cartridge Sizes	9 3/4"-10" modular cartridges, 1-, 2-, 3-, or 4-high configurations
Standard Cover Gasket	Nitrile
Options	Cover gasket is available in EPR, Fluorocarbon or Silicone
Hinged Design	5DC - Clamp Housing Type

Table 2: Cartridge Requirements

Housing Model	Single Length (9 3/4 9 7/8, or 10") Cartridge Capacity
5DC4	20

Table 3: Maximum Housing Flow Rate

Housing	Water (GPM/LPM)
5DC	105/397

Figure 1: 3M™ DC Series Configurations

Models 5DC

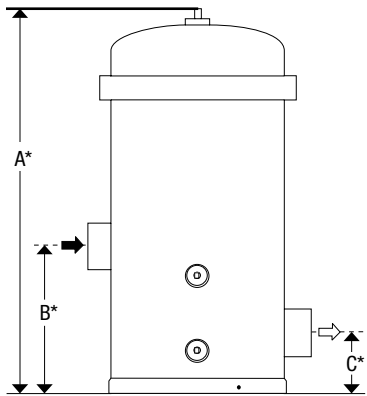
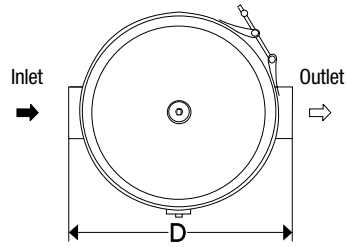


Table 4: Standard Model Dimensions

Housing Model	A* (in / mm)	B* (in / mm)	C* (in / mm)	D (in / mm)	Cartridge Removal Clearance (in / mm)	Housing Weight (lbs / kg)	Approx. Shipping Weight (lbs / kg)
5DC4	49 1/2 / 1257.3	6 3/4 / 171.4	2 7/8 / 73	12 / 304.8	86 / 2184.4	33 / 15.0	45 / 20.4

*Add 3/4" for leg installation on 5DC housings

3M™ DC Series Filter Housing Ordering Guide

3M™ DC Series Filter Housing

Model (304L SS)	Connection Type	Catalog Number
5DC4	2" NPT (Male per ASME B1.20.1)	4808804

Optional Kit for Single Open End Cartridge Use

Kit Part Number	Fits Housing Model
9885502	5DC

All units supplied with center rods, posts, pressure plates, spring & seal assemblies for double opened ended (DOE) style cartridges. To convert units to use single open ended (SOE) style cartridges, order the appropriate optional kit.

Gasket Ordering Guide*

Housing Model	Nitrile	EPR	Fluorocarbon	Silicone
5DC	3792031	3756437	3756434	3756440

Supplied with Nitrile vessel gasket. Ethylene Propylene Rubber (EPR); Fluorocarbon or Silicone.

* All gasket materials are FDA compliant

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 INC. 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.

3M PURIFICATION INC. MAKES NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED INCLUDING WITHOUT LIMITATION ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE HEREUNDER WITH RESPECT TO INFORMATION OR THE PRODUCT TO WHICH INFORMATION REFERS.

Limitation of Liability

3M Purification Inc. will not be liable for any loss or damage arising from the use of the Product(s), whether direct, indirect, special, incidental, or consequential, regardless of the legal theory asserted, including warranty, contract, negligence or strict liability. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation may not apply to you.



3M Purification Inc.
 400 Research Parkway
 Meriden, CT 06450
 U.S.A.
 Phone (800) 243-6894
 (203) 237-5541
 Fax (203) 630-4530
www.3Mpurification.com

Your Local Distributor:

Please recycle. Printed in U.S.A.
 3M is a trademark of 3M Company.
 © 3M 2013. All rights reserved.
 70020187574 REV 0813

