

3M Purification

3M™ DC Housing



Features & Benefits

316L stainless steel construction

- Provides excellent corrosion protection for rugged, long-lasting service
- Designed to Australian Pressure Vessel Code AS1210 CL3 Hazard Level (AS4343)

Accepts varying length cartridges

- Allows use of 9 3/4" to 40" modular cartridges for greater flexibility

Individual spring seal assemblies

- Ensures positive seal and prevents bypass

V-Band Clamp - 5DCT

Swing bolt designs - 12DC and 22DC4

- Optimises cartridge change-out times

Removable cartridge posts

- Easy cleaning reduces maintenance

Housing drains located on dirty and clean chambers

- Allows full drainage of chambers for optimised filter change-out

Air Vent

- Allows venting before start-up and draining for safe filter operation

Pedestal cup fitting

- Allows for use of both DOE or SOE cartridges

Applications

Chemicals & Petrochemicals

Food & Beverage

Healthcare

Industrial Processes

Paint & Coatings

Industrial Water Treatment



DC Series Cartridge Filter Housings are constructed of durable 316L stainless steel and meet general-purpose industrial and commercial filtration needs. All wetted surfaces are stainless steel. External surfaces of these filter housings are mechanical electro-polished for easy maintenance.

The filter housings are available in a variety of sizes to accommodate from 5 to 88 filter cartridges (single length equivalents) with lengths to 40 inches (see Ordering Guide). The housing handles liquids at pressures and temperatures of up to 10 bar at 90°C/100°C, see Table 1.

Specifications

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

Cartridge Requirements

DC Series filter housings accept both single and multiple lengths of filter cartridges. Table 2 lists the number of filter cartridges for each model housing.

Flow Rates

Table 3 lists the maximum water flow rates in litre per minute (LPM) 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 optimises filter cartridge life.

Cartridge Seal Assemblies

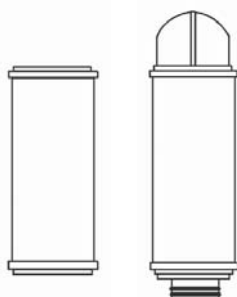
The 12DC & 22DC4 housings include spring seal assemblies (Picture 1) that permit the use of filter cartridges with single length equivalents of 9 3/4 to 40 inches.

5DCT models use pressure plate assemblies with individual spring and seal assemblies.

Standard housings are configured to accept double 222 open end style cartridges. To adapt the housing to accept single open end and double o-ring cartridges (with locating spear) remove the housing cartridge posts and the spring & seal assemblies. Replace the standard pressure plate and the centre rod with the SOE pressure plate and centre rod (order separately).



Picture 1:
Spring Seal Assembly
(Spacer cup available only
with 12DC model & 22DC4)



Double
Open-end
Cartridge Single
Open-end Cartridge
with Locating Spear

Table 1: Standard Model Specifications

Max. Operating Pressure & Temperature*	12DC & 22DC4 -10 bar @ 100°C 5DCT -10 bar @ 90°C (5DCT for aqueous solution only)
Flow Rate (LPM)	See Table 3
Connection Sizes	See Ordering Guide
Vent & Drain Connections	12DC & 22DC4 ½" NPT Vent, 1" NPT Drains 5DCT ¼" BSPF Vent, ¾" BSPF Drains
Cartridge Sizes	9¾"-40" modular cartridges, 1-2-3-4 high configurations
Standard Gasket (Nitrile) 5DCT Fluorocarbon (AK200049711) 5 DCT Nitrile (AK200049729) Vent Gauge Assembly	5DCT - Part no. AK200049729 12DC - Part no. AK200117450 22DC4 - Part no. AK200123664 5DCT - Part no. AK200046824 12DC & 22DC4 Part no. AK200118979
Options Gasket (5DCT, 12DC & 22DC4)	EPR, Silicone or Fluorocarbon

*Hazard Level (AS4343)

"E" - 5DCT

"D" - 12 DC4 & 22DC4

Table 2: Cartridge Requirements

Housing Model	Single Length Equivalent (9¾, 9 7/8 or 10") Cartridge Capacity
5DCT1	5
5DCT2	10
5DCT3	15
5DCT4	20
12DC4	48
22DC4	88

Table 3: Maximum Housing Flow Rate (Based on connection size)

Housing	Water (LPM)
5DCT	400
12DC	900
22DC4	1500



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 estimated plumbing dimensions. For critical installations request a certified drawing.

Figure 1: DC Series Configurations

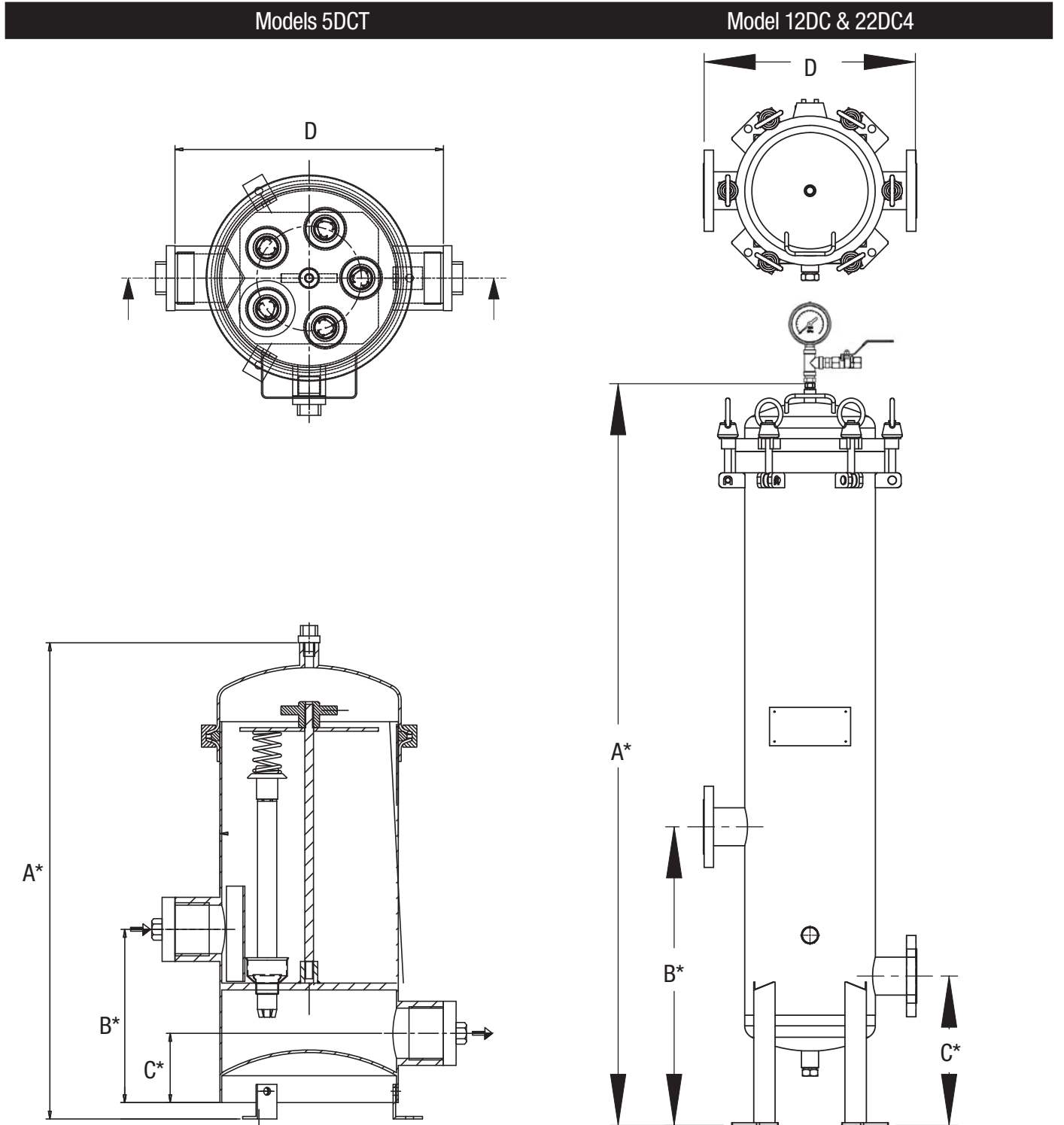


Table 4: Standard Model Dimensions

Housing Model	A* — mm	B* — mm	C* — mm	D — (mm)	Cartridge Removal Clearance — mm	Housing Weight — kg	Approx. Shipping Weight — kg
5DCT1	576	200	80	310	750	9.0	13.6
5DCT2	830				1250	11.3	15.9
5DCT3	1084				1750	13.1	18.1
5DCT4	1338				2250	15.0	20.4
12DC4	1723	700	350	500	2600	86.2	97.5
22DC4	1950	700	350	650	2600	227	250

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

DC Series Ordering Guide

DC Series Housing

Model (316SS)	Connection Type	Part Number
5DCT	Top cover clamp latch type SS304	AK200126428
5DCT1	2" BSP-F	AK200126360
5DCT2	2" BSP-F	AK200126378
5DCT3	2" BSP-F	AK200126386
5DCT4	2" BSP-F	AK200236394
12DC4	3" 150# RF FLG (ANSI B16.5)	AK200118987
22DC4	4" 150# RF FLG (ANSI B16.5)	AK200123656

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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