

3M™ ZVS & ZMS Series Sanitary Design Filter Housings

3M™ Sanitary Style ZVS and ZMS Series Filter Housings are designed for critical clarification and sterile filtration applications. Manufactured to strict quality standards and from high quality materials, the ZVS and ZMS Series Filter Housings meet the exacting requirements of the pharmaceutical, biotechnology, food & beverage and microelectronics industries. ZVS and ZMS Series Filter Housings are designed for liquid or gas service and can easily be cleaned-in-place (CIP), steamed-in-place (SIP) or hot water sanitized.

The 316L stainless steel in-line ZVS Series and T-line ZMS Series Filter Housings accept one Code 7 style filter element (226 double O-rings with locking tabs with a spear top) in 10 in., 20 in. or 30 in. length. All ZVS and ZMS Series Filter Housings are equipped with 1/2 in. sanitary vent and drain ports; vent and drain valves are available as optional accessories. The ZMS Series Filter Housing is also equipped with a 1-1/2 in. sanitary gauge port. The inlet and outlet connections are 1-1/2 in. sanitary fittings for the ZVS Series Filter Housing and 1 in. sanitary for the ZMS Series Filter Housing.

ZVS and ZMS Series Filter Housings are offered in a high quality polished surface finish for ease of cleaning. Wetted surfaces are electropolished to a 25 micro-inch Ra surface finish to help limit bacterial and particulate adhesion.

The bayonet cartridge interlock design allows easy cleaning, and the positive locking retention mechanism secures the filter cartridge even during back pressure surges. A 306 stainless steel clamp secures the housing base and dome permitting rapid filter change-outs. Each filter housing is hydrostatically tested to confirm pressure-rating performance. All housings are supplied with silicone gaskets that comply with CFR 21 requirements for direct food and drug contact.

Features & Benefits

316L Stainless Steel Construction

- Excellent corrosion resistance provides long term service

High Quality Surface Finish (25 micro-inch Ra Internal)

- Helps minimize bacterial/particulate adhesion

Housings Accommodate One 10 in., 20 in. or 30 in. Filter Cartridge

- Suitable for small to intermediate product batches and tank vent applications

Accepts Code 7 Style 226 Double O-ring Bayonet Lock Cartridge

- Cartridge locks into place providing secure installation even under back pressure conditions

Sanitary Design Vent and Drain (Optional Drain Valves Available)

- Easy to clean, helps limit cross contamination, no threaded parts in contact with process fluids

Clean-in-Place (CIP)/Steam-in-Place (SIP) Design

- Permits easy cleaning, sterilization or sanitization in place (*in-situ*)



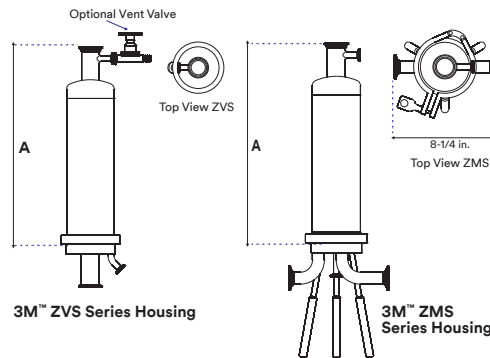
3M™ ZVS & ZMS Series Ordering Guide

Operating Parameters and Specifications

| Filter Model | Description | Part Number |
|--------------|---|-------------|
| 1ZMS1 | 10 in. Filter Sanitary T-line Housing | 7062801 |
| 1ZMS2 | 20 in. Filter Sanitary T-line Housing | 7062802 |
| 1ZMS3 | 30 in. Filter Sanitary T-line Housing | 7062803 |
| 1ZVS1 | 10 in. Filter Sanitary In-line Housing | 7062701 |
| 1ZVS2 | 20 in. Filter Sanitary In-line Housing | 7062702 |
| 1ZVS3 | 30 in. Filter Sanitary In-line Housing | 7062703 |
| Optional | 1/2 in. Sanitary: 8mm Barb Vent/Drain Diaphragm Valve | 6049401 |

PLEASE NOTE: The Ordering Guide above is for reference only. Please consult with your 3M Representative to determine the appropriate part number for your application.

Figure 1. ZVS Series (left) and ZMS Series (right) Filter Housing Dimensions



| Connections | |
|--|----------------------------|
| Inlet/Outlet — ZMS | 1 in. sanitary fitting |
| Inlet/Outlet — ZVS | 1-1/2 in. sanitary fitting |
| Vent Drain — ZMS and ZVS | 1/2 in. sanitary fitting |
| Gauge Port (ZMS T-line only) | 1-1/2 in. sanitary fitting |
| Filter Cartridge Style | |
| 1ZVS/1ZMS Housing: Code 7, double 226 O-ring with bayonet locking tabs and spear top | |
| Shipping Weight | |
| 1ZVS1/1ZMS1 | 11 lbs. (5 kg) |
| 1ZVS2/1ZMS2 | 16 lbs. (7 kg) |
| 1ZVS3/1ZMS3 | 20 lbs. (9 kg) |
| Maximum Allowable Working Pressure | |
| 150 psig (10.3 Bar) | |
| Maximum Temperature | |
| 212°F (100°C) | |
| Sterilization/Sanitization | |
| <i>In-situ</i> steam sterilization | 30 minutes @ 250°F (121°C) |
| Hot water sanitization | 30 minutes @ 176°F (80°C) |
| Dimensions | |
| 1ZVS1/1ZMS1 | 16-1/4 in. (413 mm) |
| 1ZVS2/1ZMS2 | 26 in. (660 mm) |
| 1ZVS3/1ZMS3 | 35-3/4 in. (908 mm) |

Product Selection and Use

Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. As a result, customer is solely responsible for evaluating the product and determining whether it is appropriate and suitable for customer's application, including conducting a workplace hazard assessment and reviewing all applicable regulations and standards (e.g., OSHA, ANSI, etc.). Failure to properly evaluate, select, and use a 3M product and appropriate safety products, or to meet all applicable safety regulations, may result in injury, sickness, death, and/or harm to property.

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Your local distributor:

3M Purification Inc.
3M Separation and Purification Sciences Division
400 Research Parkway
Meriden, CT 06450 USA

Phone 1-800-243-6894
1-203-237-5541
Web 3MPurification.com

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