

3M™ ZVS and ZMS Series Sanitary Design Filter Housing

3M™ ZVS and ZMS Series Sanitary Design 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 and 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 accept one code 7 style filter element (double 226 O-rings with locking tabs with a spear top) in 25.4 cm (10 in), 50.8 cm (20 in), 76.2 cm (30 in) or 101.6 cm (40 in) length. The 12.7 cm (5 in) housing accepts a single filter with double 226 O-rings and locking tabs with a flat top. All ZVS and ZMS Series Filter Housings are equipped with 1.3 cm (½ 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 3.8 cm (1½ in) sanitary gauge port. The inlet and outlet connections are 3.8 cm (1½ in) sanitary fittings for the ZVS Series Filter Housing and 2.5 cm (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. For less demanding operating conditions, ZVS and ZMS housings are also offered in a mechanically polished surface.

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 and 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 12.7 cm (5"), 25.4 cm (10"), 50.8 cm (20") 76.2 cm (30") or 101.6 cm (40") 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*)



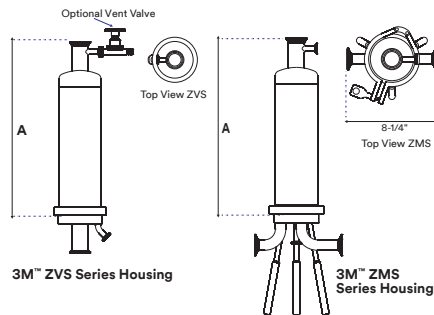
3M™ ZVS and ZMS Series Ordering Guide

Operating Parameters and Specifications

Filter Model	Description	Part Number, Electro-polished	Part Number, Mechanically Polished
1ZMS1	25.4 cm (10") Filter Sanitary T-line Housing	7062801	7062806
1ZMS2	50.8 cm (20") in Filter Sanitary T-line Housing	7062802	7062807
1ZMS3	76.2 cm (30") in Filter Sanitary T-line Housing	7062803	7062808
1ZMS4	101.6 cm (40") in Filter Sanitary T-line Housing	7062804	7062809
1ZMS5	12.7 cm (5") in Filter Sanitary T-line Housing	7062805	7062810
1ZVS1	25.4 cm (10") Filter Sanitary In-line Housing	7062701	7062707
1ZVS2	50.8 cm (20") in Filter Sanitary In-line Housing	7062702	7062708
1ZVS3	76.2 cm (30") in Filter Sanitary In-line Housing	7062703	7062709
1ZVS4	101.6 cm (40") in Filter Sanitary In-line Housing	7062704	7062710
1ZVS5	12.7 cm (5") in Filter Sanitary In-line Housing	7062705	7062711
Optional	1.27 cm (½") Sanitary: 8 mm 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	2.5 cm (1") sanitary fitting
Inlet/Outlet — ZVS	3.8 cm (1½") sanitary fitting
Vent Drain — ZMS and ZVS	1.3 cm (½") sanitary fitting
Gauge Port (ZMS T-line only)	3.8 cm (1½") sanitary fitting
Filter Cartridge Style	
25.4 cm–101.6 cm (10"–40") Housing: Code 7, double 226 O-ring with bayonet locking tabs and spear top	
12.7 cm (5") Housing: double 226 O-ring with bayonet locking tabs and flat top	
Shipping Weight A	
1ZVS1/1ZMS1	5 kg (11 lb)
1ZVS2/1ZMS2	7 kg (16 lb)
1ZVS3/1ZMS3	9 kg (20 lb)
1ZVS4/1ZMS4	11 kg (24 lb)
Maximum Allowable Working Pressure	
10.3 Bar (150 psig)	
Maximum Temperature	
100°C (212°F)	
Sterilization/Sanitization	
<i>In-situ</i> steam sterilization	30 minutes @ 121°C (250°F)
Hot water sanitization	30 minutes @ 80°C (176°F)
Dimensions A	
1ZVS1/1ZMS1	413 mm (16 ¼ in)
1ZVS2/1ZMS2	660 mm (26 in)
1ZVS3/1ZMS3	908 mm (35 ¾ in)
1ZVS4/1ZMS4	1162 mm (45 ¾ in)
1ZVS5/1ZMS5	273 mm (10 ¾ in)

Technical Information
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