

# 3M™ ZVS & ZMS Series

## Sanitary 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 accept one code 7 style filter element (double 226 o-rings with bayonet locking tabs with a spear top) in 10", 30", or 40" length. The 5" housing accepts a single filter with double 226 o-rings and bayonet locking tabs with a flat top. All ZVS and ZMS series filter housings are equipped with 1/2" 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" sanitary gauge port. The inlet and outlet connections are 1 1/2" sanitary fittings for the ZVS series filter housing and 1" sanitary for the ZMS series filter housing.

ZVS and ZMS series filter housings offer the high quality electropolished surface finish for ease of cleaning. Wetted surfaces are further electropolished to a 10 micro inch Ra surface finish to help limit bacterial and particulate adhesion.

A bayonet cartridge interlock design allows easy cleaning, and a positive locking retention mechanism secures the filter cartridge even during back pressure surges. A 316L stainless steel clamp secures the housing base and dome permitting rapid filter change-outs. Each filter housing is hydrostatically tested to provide long term efficient operation even in demanding environments. 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 (10 micro inch R internal)

- Helps minimize bacterial/particulate adhesion

### Housings accommodate one 5", 10", 20" 30" or 40" filter cartridge

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

### Accepts code 7 style 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*)

### Designed to minimize product holdup volume

- Enables maximum recovery of product



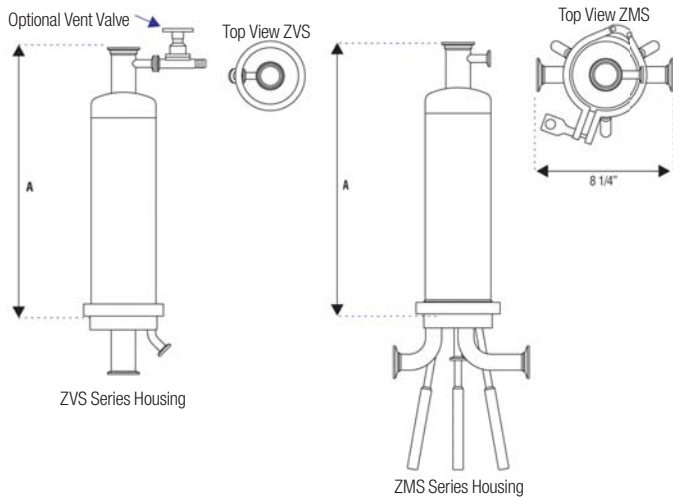
# 3M™ ZVS & ZMS Series Sanitary Filter Housings Ordering Guide

## Operating Parameters & Specifications

Filter Model	Description	Part Number
1ZMS1	10" filter sanitary T-line housing	7062801
1ZMS2	20" filter sanitary T-line housing	7062802
1ZMS3	30" filter sanitary T-line housing	7062803
1ZMS4	40" filter sanitary T-line housing	7062804
1ZMS5	5" filter sanitary T-line housing	7062805
1ZVS1	10" filter sanitary in-line housing	7062701
1ZVS2	20" filter sanitary in-line housing	7062702
1ZVS3	30" filter sanitary in-line housing	7062703
1ZVS4	40" filter sanitary in-line housing	7062704
1ZVS5	5" filter sanitary in-line housing	7062705
N/A	1/2 sanitary: 8 mm barb vent/drain diaphragm valve	6431131

Connections		
Inlet/Outlet	ZMS	1" sanitary fitting
	ZVS	1 1/2" sanitary fitting
Gauge Port (ZMS T-line only)		1 1/2" sanitary fitting
Filter Cartridge Style		
10" - 40" Housing: Code 7, double 226 o-ring with bayonet locking tabs and spear top		
5" Housing: double 226 o-ring with bayonet locking tabs and flat top		
Shipping Weight		
1ZVS1 / 1ZMS1		11 lbs.
1ZVS2 / 1ZMS2		16 lbs.
1ZVS3 / 1ZMS3		20 lbs.
1ZVS4 / 1ZMS4		24 lbs.
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 at 250°F (121°C)
Hot water sanitization		30 minutes at 176°F (80°C)
Dimensions		A
1ZVS1 / 1ZMS1		16"
1ZVS2 / 1ZMS2		26"
1ZVS3 / 1ZMS3		36"
1ZVS4 / 1ZMS4		46"
1ZVS5 / 1ZMS5		11 3/16"

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



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