

Zeta Plus™ Model ZPB Sanitary Filter Housing



Zeta Plus™ Model ZPB sanitary filter housings provide the ultimate standard for totally-enclosed Zeta Plus cartridge filtration systems. Constructed from mirror polished 316L stainless steel, Zeta Plus ZPB filter housings meet the exacting sanitary quality standards of the pharmaceutical, food and beverage, fine chemical, and microelectronics industries.

Standard Zeta Plus ZPB filter housings accommodate from one to four 8", 12", or 16" diameter standard Zeta Plus filter cartridges to offer a wide choice of filter media area and flow rates.* Multiple cartridge housings can be user fitted with shorter center-posts to accommodate fewer cartridges.

3M Purification Inc. Zeta Plus filter housings are available in a wide range of customized formats, including certification to ASME and other code certifications, multi-cartridge, multi-round housings, and fully automated filter skids and carts. Consult 3M Purification Inc. for assistance on specialized Zeta Plus filter housings.

FEATURES	BENEFITS
<ul style="list-style-type: none"> ■ Totally enclosed depth-cartridge filtration with fast and easy cartridge change-out 	<ul style="list-style-type: none"> ■ Eliminates external contamination, edge leakage, loss of valuable product, and long tedious change-out times associated with plate and frame filter presses
<ul style="list-style-type: none"> ■ Positive spring-loaded cartridge sealing system 	<ul style="list-style-type: none"> ■ Provides optimal sealing compression to prevent filter bypass even under the most arduous process conditions
<ul style="list-style-type: none"> ■ Housings accommodate one to four 8", 12" or 16" cartridges 	<ul style="list-style-type: none"> ■ Suitable for small through large batch sizes and aqueous flows from 2 to 75 gpm (500 to 17,000 lph) per housing
<ul style="list-style-type: none"> ■ Internal & external mirror finish sanitary 316L stainless steel construction* 	<ul style="list-style-type: none"> ■ Reduces bacterial/particle adhesion
<ul style="list-style-type: none"> ■ User-friendly vertical design with sanitary connections 	<ul style="list-style-type: none"> ■ Requires minimum floor space and quickly dismantles for easy cleaning
<ul style="list-style-type: none"> ■ Optional sanitary bleed valve available 	<ul style="list-style-type: none"> ■ Provides easy venting

*Model ZPB housings will also accommodate Zeta Plus EXT cartridges with modification of internal parts. Consult 3M Purification Inc. for details.

HOUSING SPECIFICATIONS

Maximum Operating Pressure & Temperature	150 psig @ 212° F 10.3 bar @ 100° C
Materials of Construction:	
Base, dome, centerpost	316L stainless steel
Sealing system nut	Polypropylene
O-ring/gaskets*	Silicone
Inlet / Outlet Connections:	
8ZPB, 12ZPB1 & 12ZPB2	1 ½" sanitary
12ZPB3, 12ZPB4 & 16ZPB	2" sanitary
Pressure gauge connection	1 ½" sanitary
Bleed valve connection	½" sanitary
Finish:	
External finish	Electropolished to 10Ra
Internal finish	Electropolished to 10Ra

* alternative O-ring & gasket materials available - consult 3M Purification Inc..

ZETA PLUS FILTER CARTRIDGE CAPACITY

Housing Model	Cartridge Dimensions Nominal (inches/mm)		Number of Cartridges	Media Area (ft ² / m ²)
	Diameter	Height		
8ZPB1	8/203	6.6/170	1	2.8/0.26
8ZPB2			2	5.6/0.52
8ZPB3			3	8.4/0.78
8ZPB4			4	11.2/1.04
12ZPB1	12/305	10.75/270	1	16.4/1.5
12ZPB2			2	32.8/3.0
12ZPB3			3	49.2/4.5
12ZPB4			4	65.6/6.0
16ZPB1	16/410	10.75/270	1	34.7/3.2
16ZPB2			2	69.4/6.4
16ZPB3			3	104.1/9.6
16ZPB4			4	138.8/12.8

Recommended flow rates are based on ½ GPM /ft² of media installed. Actual flow rates may vary based on many factors such as medium type, temperature, viscosity and contamination level of the fluid being filtered, and housing connections.

Cartridge Sealing System

A spring-loaded sealing system (sealing nut shown below) provides optimal sealing compression to help prevent filter bypass even under the most arduous process conditions.



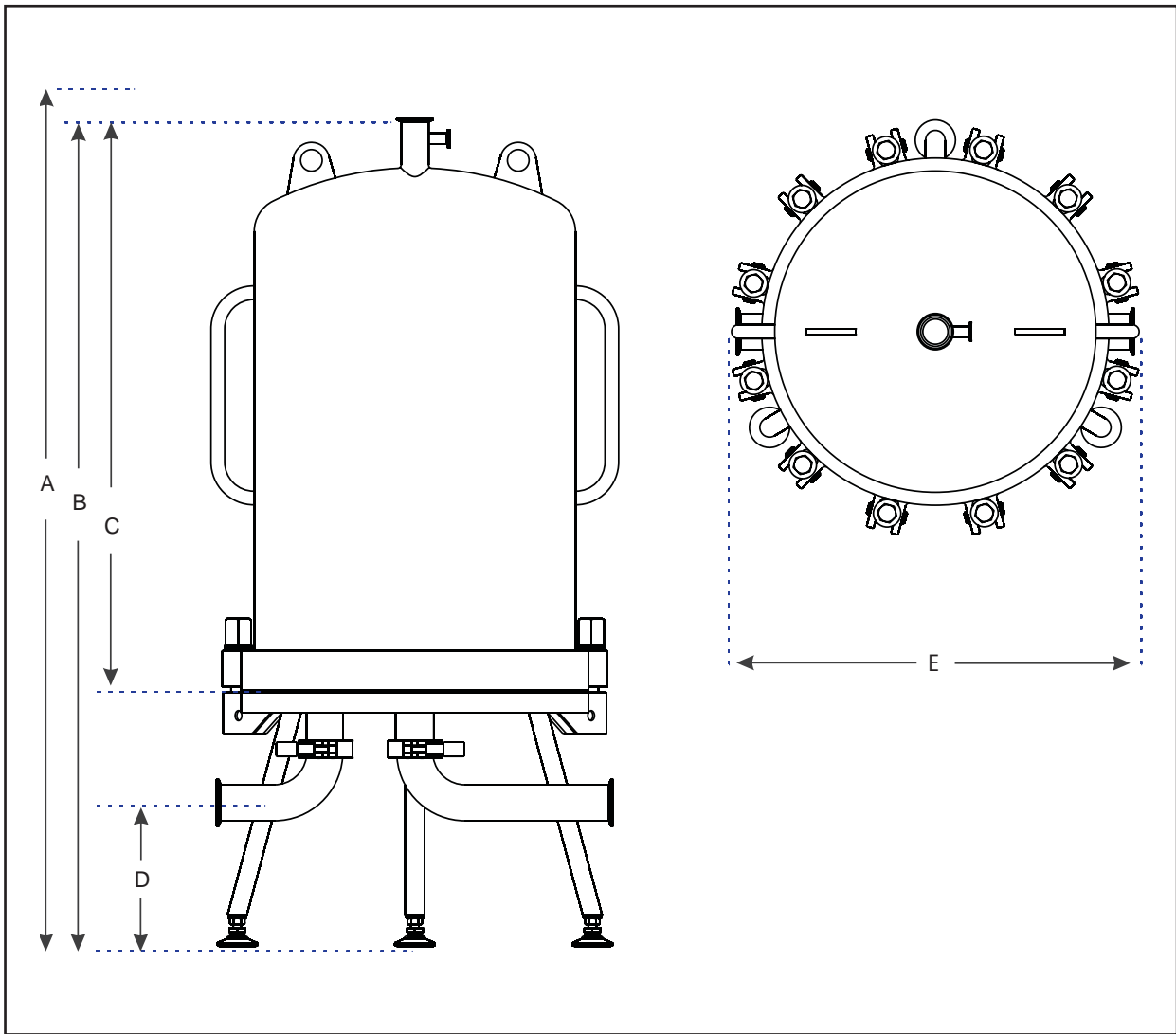
Filter Housing Flow Rates

Filter housing flow rates are dependent on the nature of the application. Variables such as filter media formulation and grade, temperature, viscosity, and the contamination level of the fluid all will dictate the ideal flow rate. Consult with 3M Purification Inc. representatives for ideal system rates for your application.

Zeta Plus Depth Filters

Zeta Plus depth filters are a family of filtration media composed of high surface area inorganic filter aids embedded in a cellulose fiber matrix. During the manufacturing process, molecules carrying a positive charge are chemically bonded to the matrix components, permanently forming an interconnected, rigid filter sheet with positively charged electrokinetic capture sites capable of retaining bacteria, endotoxins, haze components, cellular debris and submicronic contaminants to a level which mechanical screening alone cannot achieve. Zeta Plus filter cartridges are available in a variety of media formulations and retention ratings designed to meet the needs of the pharmaceutical, food and beverage, fine chemicals, and micro-electronics industries. For more information about Zeta Plus media choices, please contact 3M Purification Inc..





STANDARD MODEL WEIGHTS & DIMENSIONS

Housing Model	Dome Weight		Dimensions									
			A		B		C		D		E	
	lbs	kg	Clearance Required		Height of Housing		Height of Dome		Height of Flange		Width	
		inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	
8ZPB1	26	12	37	940	24 1/4	616	13 1/4	337	5 7/8	149	11 3/4	299
8ZPB2	34	15	50	1270	31	787	20	508				
8ZPB3	41	19	63	1600	37 3/4	958	26 1/2	673				
8ZPB4	48	22	76	1930	44 1/2	1130	33 1/4	845				
12ZPB1	46	21	53	1346	33 3/4	857	20	508	7 7/8	200	15 3/4	400
12ZPB2	62	28	76	1930	45 1/4	1143	31 1/2	800				
*12ZPB3	77	35	98	2489	56 1/4	1422	42 1/2	1080				
*12ZPB4	90	41	117	2972	65 1/2	1665	52	1320	7 7/8	200	21 5/8	549
*16ZPB1	86	39	55	1397	34 5/8	879	20 3/4	528				
*16ZPB2	108	49	78	1981	46	1168	32	812				
*16ZPB3	130	59	100	2540	57	1447	43 1/8	1095				
*16ZPB4	147	67	118	2997	66 3/8	1685	52 1/2	1333				

Dimensions are for rough plumbing estimates only; for other details, please contact 3M Purification Inc.

*Models include lifting lugs on the dome.

Model ZPB Housing Ordering Guide	
HOUSING MODEL	ORDER CATALOG NUMBER
8ZPB1	4547501
8ZPB2	4547502
8ZPB3	4547503
8ZPB4	4547504
12ZPB1	4547301
12ZPB2	4547302
12ZPB3	4547303
12ZPB4	4547304
16ZPB1	4547601
16ZPB2	4547602
16ZPB3	4547603
16ZPB4	4547604

Recommended Accessories	
Description	Part Number
Bleed/Drain Valve: ½" sanitary bleed valve	6431131
System Check Valves: 1 ½" sanitary check valve	6431032
2" sanitary check valve	6431031

Applications Support - SASS

3M Purification Inc.'s Scientific Applications Support Services (SASS) is staffed by scientists and engineers, with state-of-the-art laboratory facilities. SASS staff, familiar with pharmaceutical, food and beverage, fine chemicals, and micro-electronics filtration and separations, work closely with customer applications to recommend the most effective and economical 3M Purification Inc. filtration system.

Model ZPB Housing Integrated Systems

ZPB Model filter housings are available as complete sanitary systems including piping, valves, pressure gauges, optional feed loops, C.I.P. capabilities and skid mounted mobile systems for single source system solutions. For more information, please contact your local 3M Purification Inc. distributor.

Important Notice

3M Purification Inc. MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Since a variety of factors can affect the use and performance of a 3M Purification Inc. product in a particular application, some of which are uniquely within the user's knowledge and control, user is responsible for determining whether or not the 3M Purification Inc. product is fit for a particular purpose and suitable for user's method of application.

Limitation of Remedies and Liability

If the 3M Purification Inc. product is proved to be defective, THE EXCLUSIVE REMEDY, AT 3M PURIFICATION INC.'S OPTION, SHALL BE TO REFUND THE PURCHASE PRICE OR TO REPAIR OR REPLACE THE DEFECTIVE PRODUCT. 3M Purification Inc. shall not otherwise be liable for loss or damages, whether direct, indirect, special, incidental or consequential, regardless of the legal theory asserted, including, but not limited to, contract, negligence, warranty or strict liability.

Warranty

Seller warrants its equipment against defects in workmanship and material for a period of 12 months from date of shipment from the factory under normal use and service and otherwise when such equipment is used in accordance with instructions furnished by Seller and for purposes disclosed in writing at the time of purchase, if any. Any unauthorized alteration of modification of the equipment by Buyer will void this warranty. Seller's liability under this warranty shall be limited to the replacement or repair, F.O.B., point of manufacture, of any defective equipment or part which, having been returned to the factory,

transportation charges prepaid, has been inspected and determined by Seller to be defective. THIS WARRANTY IS IN LIEU OF ANY OTHER WARRANTY, EITHER EXPRESSED OR IMPLIED, AS TO DESCRIPTION, QUALITY, MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE OR USE, OR ANY OTHER MATTER. Under no circumstances shall Seller be liable to Buyer or any third party for any loss of profits or other direct or indirect costs, expenses, losses or consequential damages arising out of or as a result of any defects in or failure of its products or any part or parts thereof or arising out of or as a result of parts or components incorporated in Seller's equipment but not supplied by the Seller.



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

Please recycle. Printed in U.S.A.
3M is a trademark of 3M Company.
Zeta Plus is a trademark of 3M Company used under license.
© 2011 3M Company. All rights reserved.
70-0201-8762-4 REV 0411b