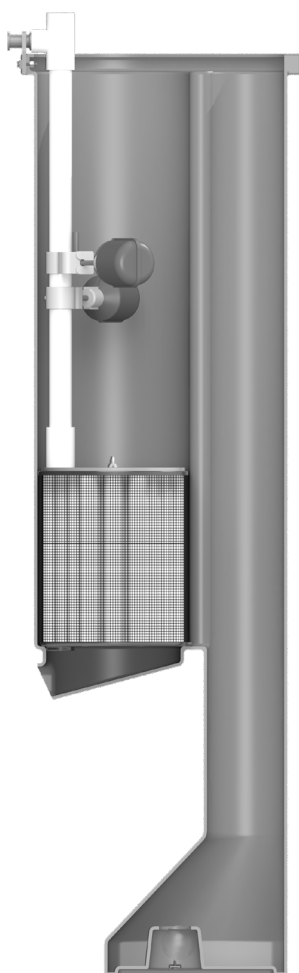


PVPM-Series Biotube® Pump Vaults

Applications

Orenco's patent-pending PVPM-Series Biotube Pump Vaults are ideal for liquid-only sewers or on-site systems in conjunction with Orenco's M-Series tanks. They house one or two Orenco 4in (100mm) high-head effluent pumps with flows up to 40gpm (2.5L/sec). These vaults are only for use with Orenco M-Series meander-type tanks.



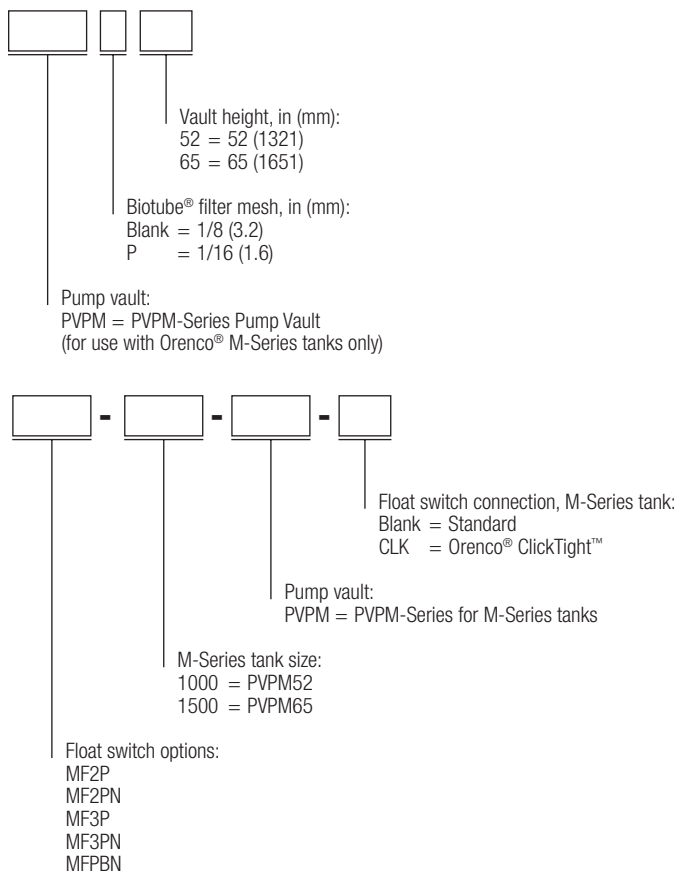
PVPM-Series Pump Vault, cross-sectional side view

General

The Orenco PVPM-Series Biotube pump vault includes a molded polyethylene housing and an internal Biotube filter cartridge constructed of polypropylene and PVC. The pump vault keeps sludge and scum away from the filter, pump, and float switches, while the filter removes particles 1/8in (3.2mm) or larger from the tank's clear zone. This reduces suspended solids by two-thirds, on average, and allows clear effluent to be discharged (see [Filter Facts, AFS-FT-1](#)). The passively self-cleaning design extends maintenance cycle intervals. The filter cartridge can be removed without pulling the pump or the vault. PVPM-Series vaults can accommodate one or two high-head effluent pumps.

For more information on float switches, see [Float Switch Assemblies Technical Data Sheet, NTD-GOP-FSA-1](#).

Product Code Diagram



Pump Vault

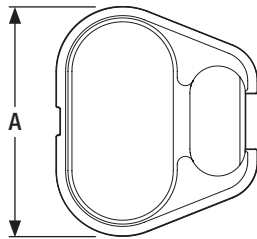
Orenco's patent-pending PVPM-Series Biotube pump vault is designed to be passively self-cleaning, reducing maintenance and service needs.

Materials of Construction

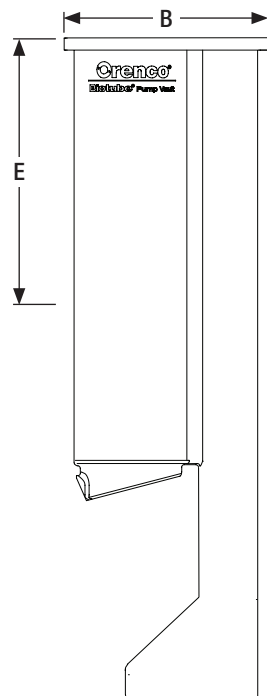
Vault body	Polyethylene
------------	--------------

Dimensions, in (mm)

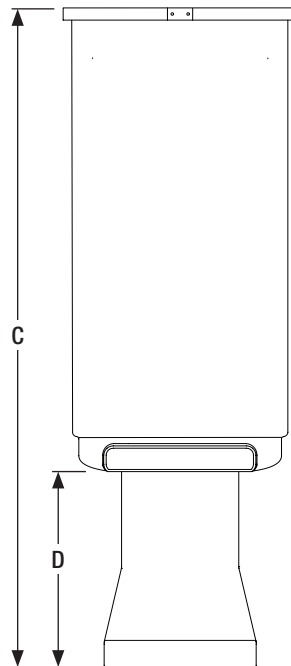
	PVPM52	PVPM65
A	18.50 (470)	18.50 (470)
B	15.94 (405)	15.94 (405)
C	52.50 (1334)	65.50 (1664)
D Inlet height	15.88 (403)	15.20 (386)
E Lowest float switch setting point	19.25 (489)	33.75 (857)



PVPM-Series Pump Vault, side view



PVPM-Series Pump Vault, side view



PVPM-Series Pump Vault, front view

Biotube Filter

The Orenco PVPM-Series Biotube filter is designed for effective filtration of effluent and passive self-cleaning for long cleaning intervals.

Materials of Construction

End plates	Dicyclopentadiene (DCPD)
Filter tubes	Polypropylene
Handle assembly	Sch. 40 PVC
Screws	Stainless steel

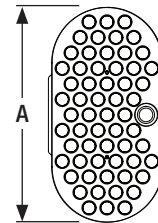
Dimensions

A	16.50 (419)
B	10 (254)

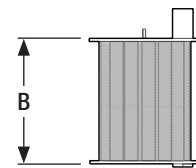
Performance

Biotube mesh, in (mm)*	0.125 (3)
Total filter flow area, ft ² (m ²)	4 (0.37)
Total filter surface area, ft ² (m ²)	14 (1.30)

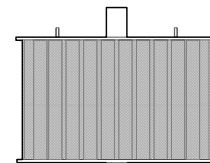
*0.062in (1.6mm) filter mesh available



Biotube Filter Cartridge, top view



Biotube Filter Cartridge, side view



Biotube Filter Cartridge, front view

Float Switches

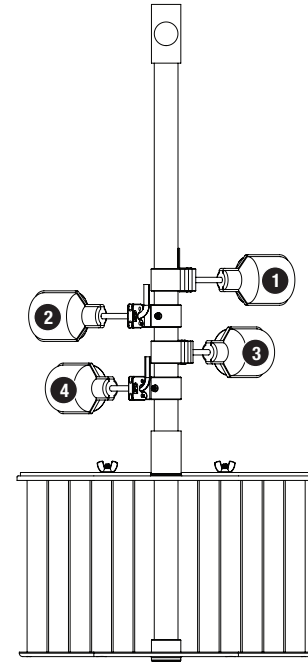
Float switches are UL listed and CSA certified for use in water or sewage. To simplify accessing and servicing, the float switch assembly has been incorporated into the Biotube filter handle.

Materials of Construction

Float collar	ABS
Float cord	Flexible 2 conductor (UL, CSA) SJOW; CPE cord jacket with EPDM insulated conductors
Float housing	Impact resistant, noncorrodible polypropylene for use in liquids up to 140°F (60°C)

Specifications

Float Switch	State	Type
B	Normally open	Mechanical
N	Normally closed	Mechanical
P	Normally open	Mechanical



Biotube filter cartridge with handle and float switches
(Float switch order shown)

Float Switch Settings

Float switches are listed in order from the top, with 1 being the closest to the top. Distance is measured from the top of the tank to the center of the float switch collar.

M1000 Float Switch Distance Setting Options, in (mm)

	1	2	3	4
MF2P	12 (305)	14 (356)	N/A	N/A
MF2PN	12 (305)	14 (356)	16 (406)	N/A
MF3P	12 (305)	14 (356)	16 (406)	N/A
MF3PN	12 (305)	14 (356)	16 (406)	18 (457)
MFPBN	12 (305)	15.5 (394)	17.5 (445)	N/A

M1500 Float Switch Distance Setting Options, in (mm)

	1	2	3	4
MF2P	13 (330)	15 (381)	N/A	N/A
MF2PN	13 (330)	15 (381)	17 (432)	N/A
MF3P	13 (330)	15 (381)	17 (432)	N/A
MF3PN	13 (330)	15 (381)	17 (432)	19 (483)
MFPBN	13 (330)	16.5 (419)	18.5 (470)	N/A