

Universal Biotube[®] Pump Vaults

Submittal
Data Sheet



Orengo Systems[®]
Incorporated
1-800-348-9843

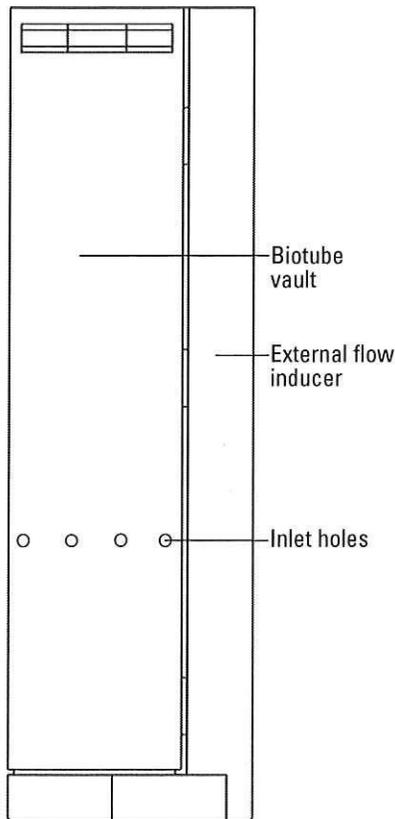
For use with Orengo 4" Submersible Effluent Pumps

Applications

Orengo Biotube Pump Vaults are used to filter effluent being pumped from septic tanks or separate dosing tanks in STEP systems and onsite wastewater disposal systems. Removes two-thirds of suspended solids, on average. When pumping from a single compartment tank or two compartment septic tank where both compartments are simultaneously drawn down during pumping, the discharge rate should not exceed approximately 40 gpm. Higher flow rates require a water-tight baffle or multiple tank arrangement, typically with an effluent filter in the primary tank.

General

The Orengo Biotube Pump Vault includes a molded polyethylene housing with an internal filter cartridge constructed of polypropylene and PVC. Schedule 80 PVC support pipes are included to suspend the vault in tank openings. The filter cartridge can be removed without pulling the pump or vault. Effluent enters through inlet holes around the perimeter of the Biotube vault and flows through the Biotubes to the external flow inducer. The external flow inducer accommodates one or two pumps. Orengo Biotube Pump Vaults are covered by US patents #4439323 and 5492635.



Side view

Standard Models

PVU57-1819, PVU57-2419

Nomenclature

PVU □□ - □□ □□

Indicates inlet hole height: (inches)
13", 19" standard

Cartridge height = 18", 24" standard, 36"*

Vault height: 57", 66"-96" in 6" increments*

Universal Pump Vault

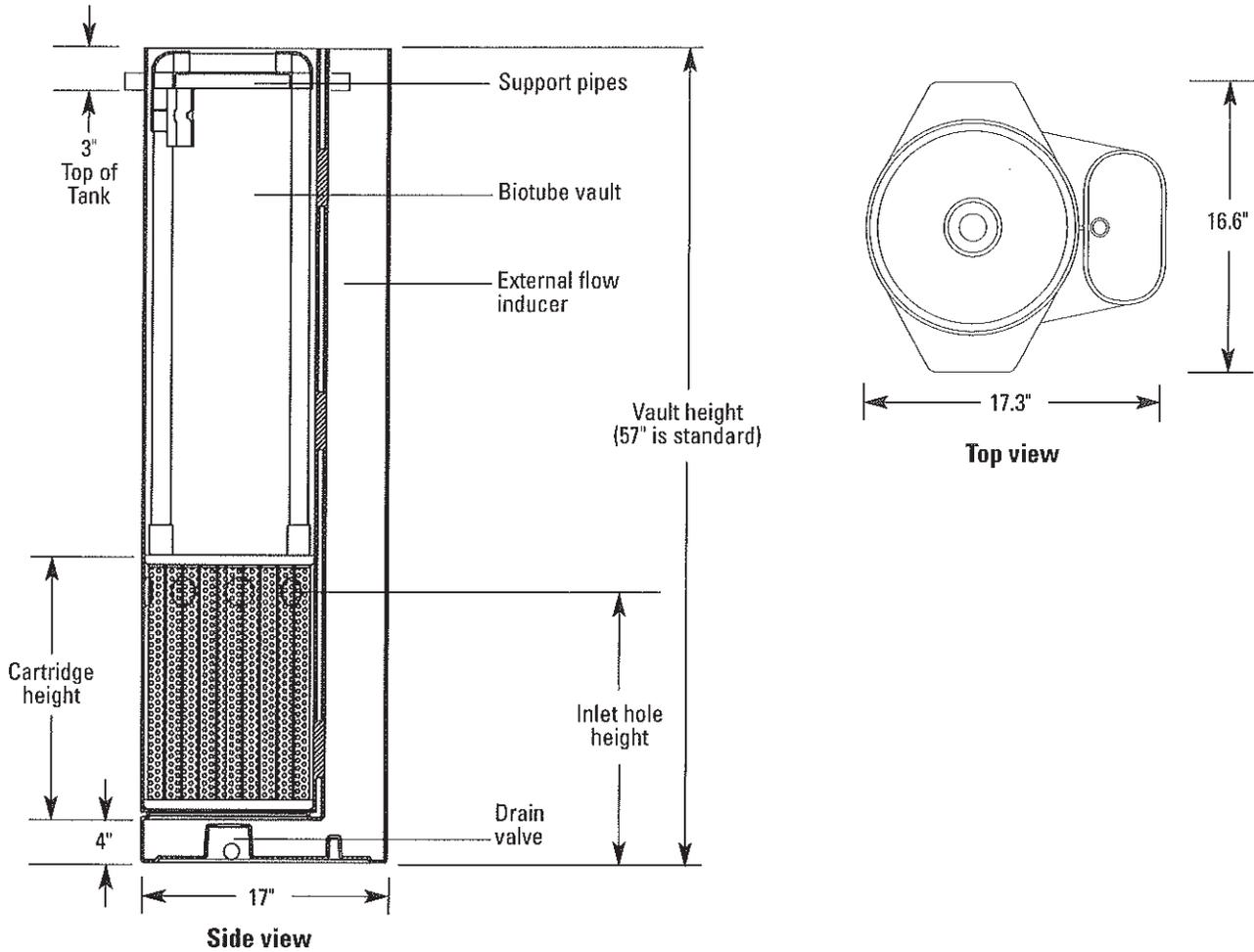
*36" cartridge height and vault height of 66"-96" in 6" inch increments available mid-2001

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Tank Access and Riser Diameter

Biotube Series	Tank Access Dia. (Minimum)	Tank Access Dia. (Recommended)	Riser Dia. (Minimum)
PVU w/Simplex Pump	19"	20"	24"
PVU w/Duplex Pumps	19"	20"	30"

Universal Biotube® Pump Vaults (continued)



Specifications

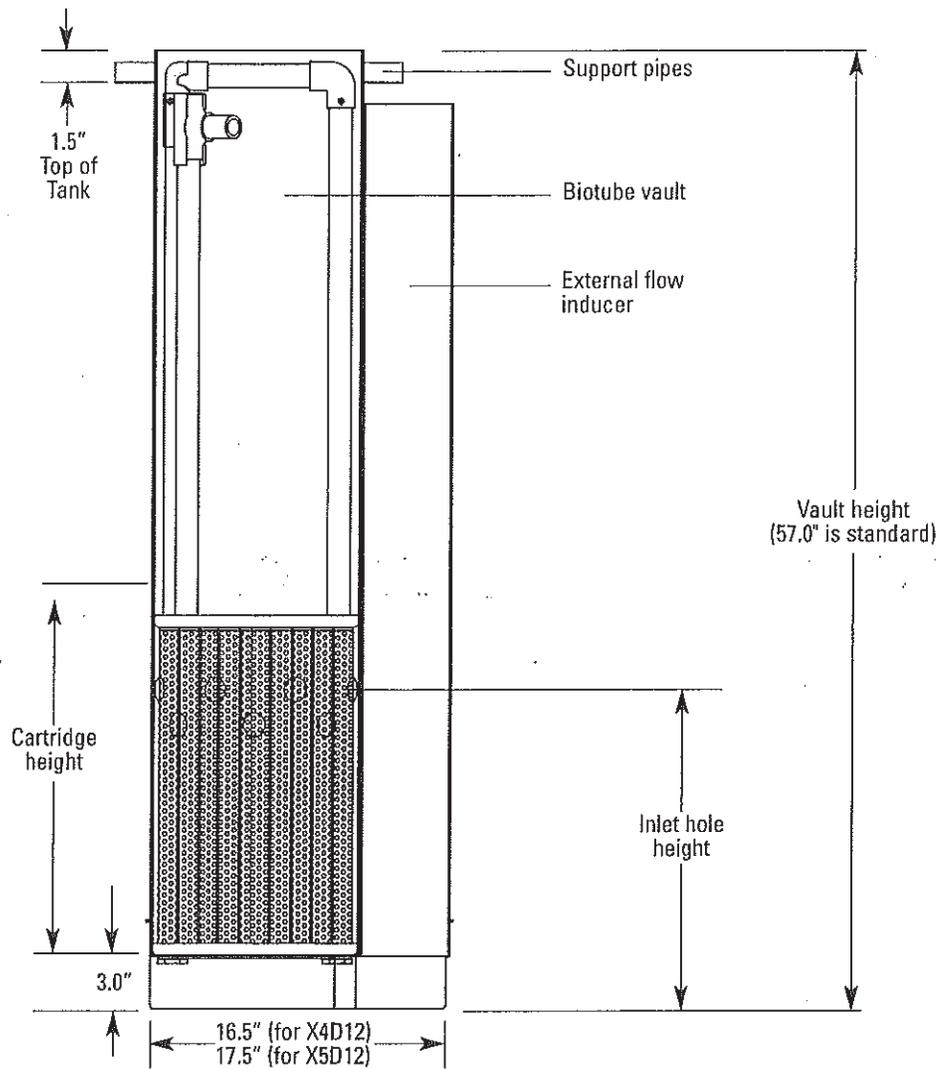
Model	PVU57-1819	PVU57-2419
Vault Height (in.)	57	57
Cartridge Diameter (in.)	12	12
Biotube Cartridge Height (in.)	18	24
Biotube Mesh Opening (in.)	0.125	0.125
Biotube Nominal Open Area (%)	30	30
Filter Surface Area (sq.ft.)	15.5	20.6
Inlet Hole Height* (in.)	19	19
Float Setting Range (from top of tank, in.)	29	23

*May vary depending upon the configuration of the tank.

Materials of Construction:

Vaults:	Polyethylene
Biotube Cartridge:	Polypropylene/PVC
Float Stem:	Sch. 40 PVC
Support Pipe:	Sch. 80 PVC
Drain Valve:	Polypropylene

12" Biotube® Duplex Pump Vaults (continued)



Dimensions

Model	X_D1266-2424	X_D1272-2424	X_D1272-3636	X_D1284-2424	X_D1284-3636
Nominal Biotube Vault Diameter (in.)	12	12	12	12	12
Vault Height (in.)	66	72	72	84	84
Biotube Cartridge Height (in.)	24	24	36	24	36
Biotube Mesh Opening (in.)	0.125	0.125	0.125	0.125	0.125
Biotube Nominal Open Area (%)	30	30	30	30	30
Filter Surface Area (sq. ft.)	20.6	20.6	31	20.6	31
Inlet Hole Height* (in.)	24	24	36	24	36
Float Setting Range (from top of tank, inches)	34	40	28	52	40

*May vary depending upon the configuration of the tank.

12" Biotube[®] Simplex Pump Vaults

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Oreco Systems[®]
Incorporated
1-800-348-9843

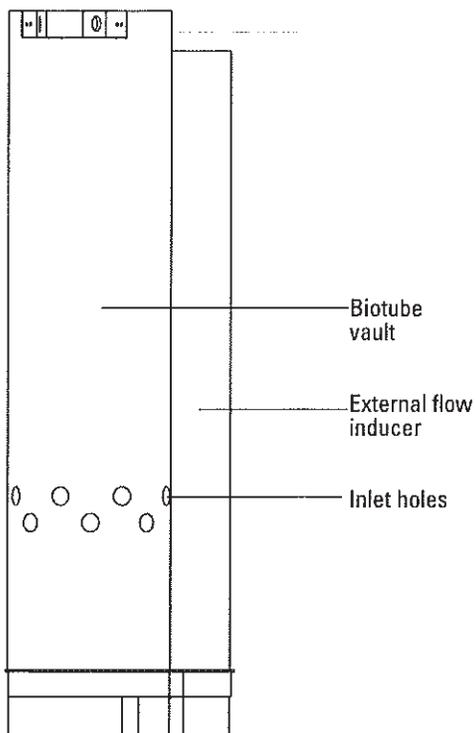
For use with one Oreco 4" Submersible Effluent Pump

Applications

Oreco 12" Pump Vaults are used to filter effluent being pumped from septic tanks or separate dosing tanks in STEP systems and on-site wastewater disposal systems. Removes two-thirds of suspended solids, on average. When pumping from a single compartment tank or two compartment septic tank where both compartments are simultaneously drawn down during pumping, the discharge rate should not exceed approximately 40 gpm. Higher flow rates require a watertight baffle or multiple tank arrangement, typically with an effluent filter in the primary tank.

General

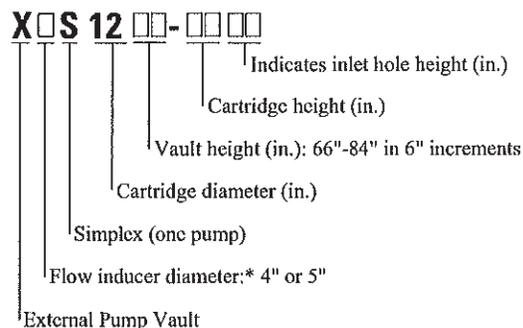
Oreco 12" Biotube Pump Vaults are composed of PVC cylindrical vaults with an ABS base, a Biotube filter cartridge, and two support pipes to suspend the vault in tank openings. The filter cartridge can be removed without pulling the pump or vault. Effluent enters through inlet holes around the perimeter of the Biotube vault and flows through the Biotubes to the external flow inducer. Oreco Biotube Pump Vaults are covered by US patents #4439323 and 5492635.



Standard Models

X4S1266-2424, X5S1266-2424, X4S1272-2424, X5S1272-2424,
X4S1272-3636, X5S1272-3636, X4S1284-2424, X5S1284-2424,
X4S1284-3636, X5S1284-3636.

Nomenclature

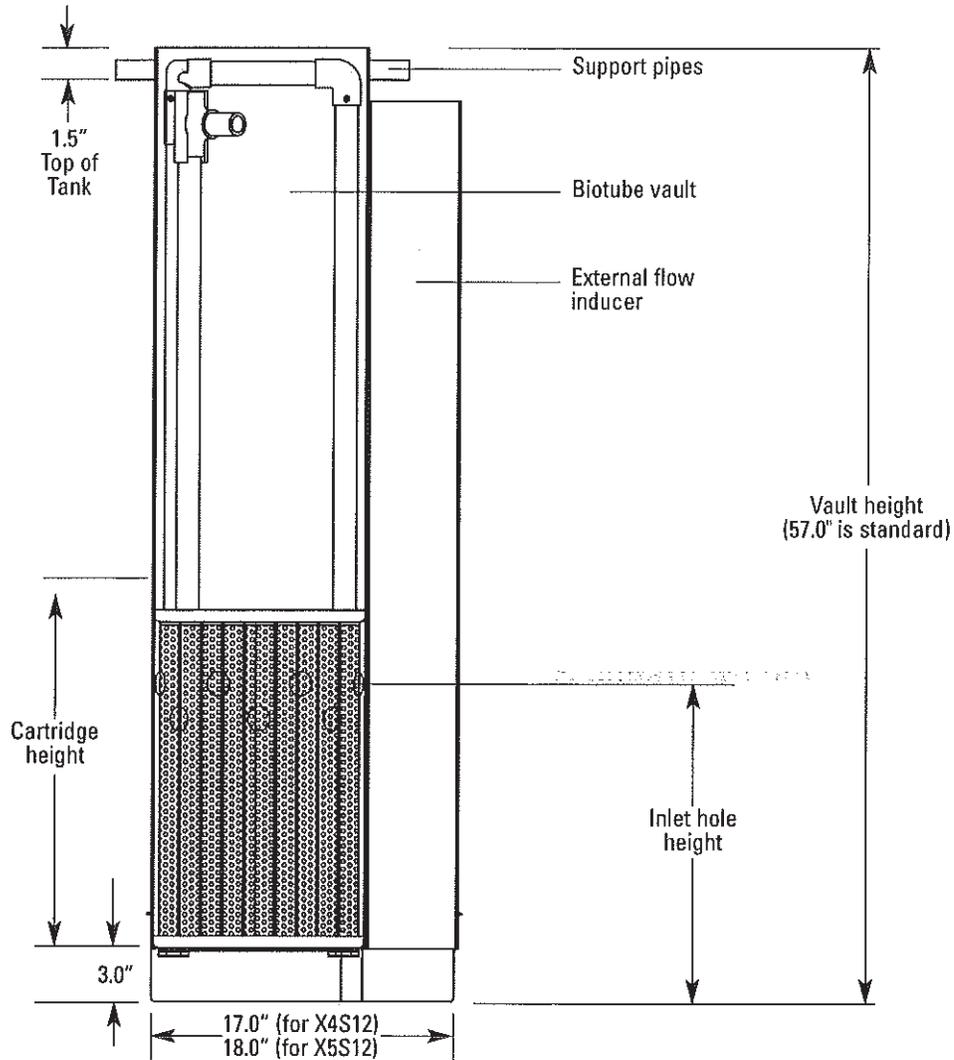


*Turbine Effluent Pumps with flow rates 40 gpm and under can be housed in a 4" flow inducer; pumps with flow rates over 40 gpm should be housed in a 5" flow inducer.

Materials of Construction:

Vaults:	PVC
Biotube Cartridge:	Natural polypropylene
Base:	ABS
Float Stem:	Sch. 40 PVC
Support Pipe:	Sch. 80 PVC
Drain Port Flapcheck:	Neoprene rubber

12" Biotube® Simplex Pump Vaults (continued)

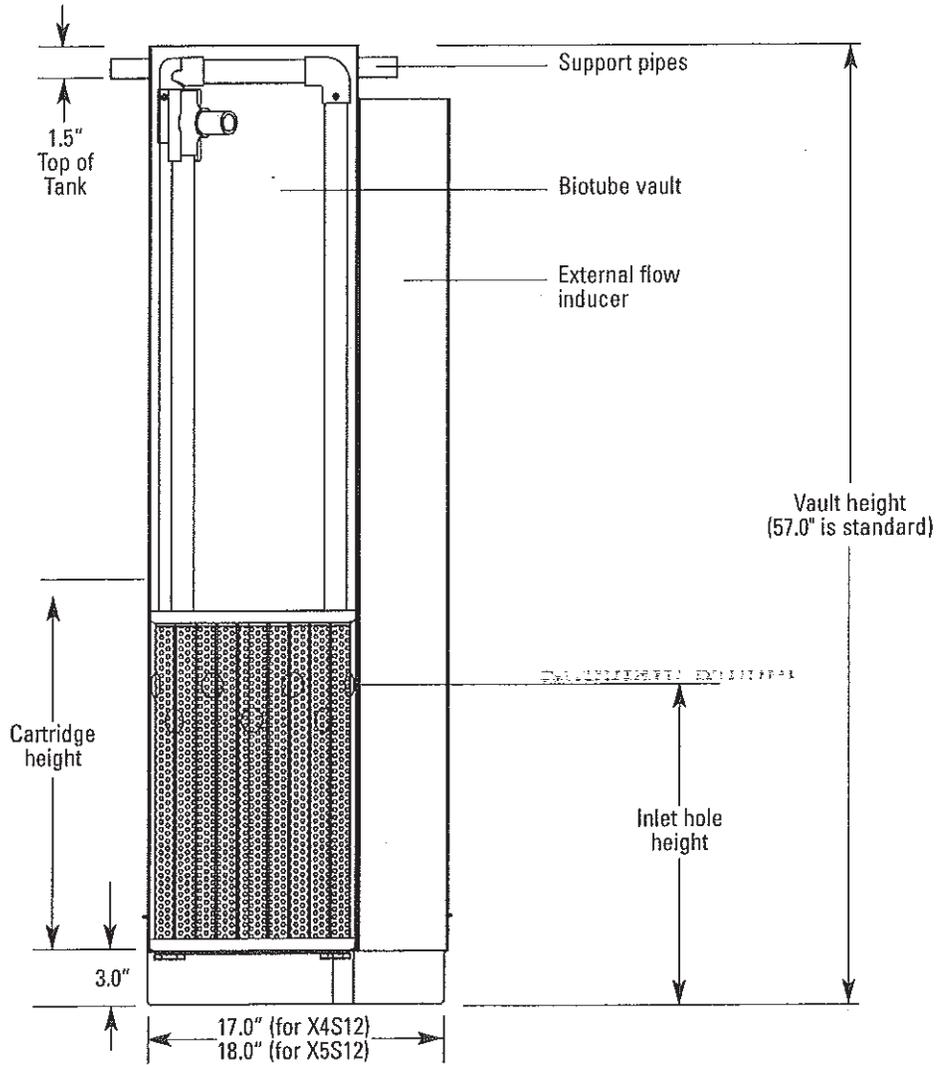


Dimensions

Model	X_S1266-2424	X_S1272-2424	X_S1272-3636	X_S1284-2424	X_S1284-3636
Nominal Biotube Vault Diameter (in.)	12	12	12	12	12
Vault Height (in.)	66	72	72	84	84
Biotube Cartridge Height (in.)	24	24	36	24	36
Biotube Mesh Opening (in.)	0.125	0.125	0.125	0.125	0.125
Biotube Nominal Open Area (%)	30	30	30	30	30
Filter Surface Area (sq. ft.)	20.6	20.6	31	20.6	31
Inlet Hole Height* (in.)	24	24	36	24	36
Float Setting Range (from top of tank, inches)	34	40	28	52	40

*May vary depending upon the configuration of the tank.

12" Biotube® Simplex Pump Vaults (continued)



Dimensions

Model	X_S1266-2424	X_S1272-2424	X_S1272-3636	X_S1284-2424	X_S1284-3636
Nominal Biotube Vault Diameter (in.)	12	12	12	12	12
Vault Height (in.)	66	72	72	84	84
Biotube Cartridge Height (in.)	24	24	36	24	36
Biotube Mesh Opening (in.)	0.125	0.125	0.125	0.125	0.125
Biotube Nominal Open Area (%)	30	30	30	30	30
Filter Surface Area (sq. ft.)	20.6	20.6	31	20.6	31
Inlet Hole Height* (in.)	24	24	36	24	36
Float Setting Range (from top of tank, inches)	34	40	28	52	40

*May vary depending upon the configuration of the tank.

12" Biotube[®] Duplex Pump Vaults

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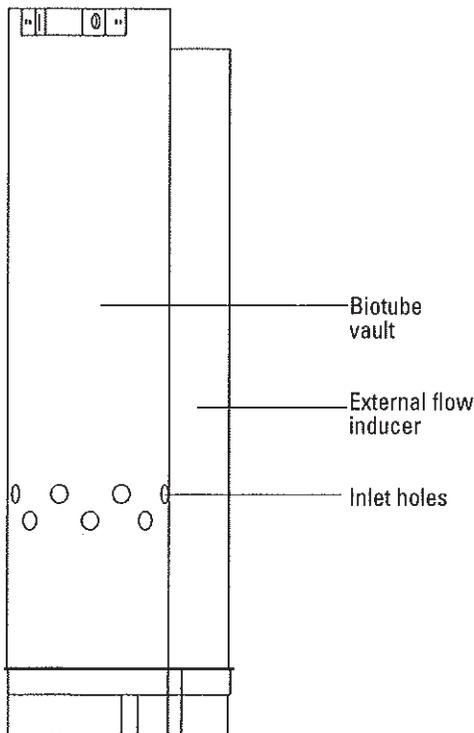
For use with two Orencia 4" Submersible Effluent Pumps

Applications

Orencia 12" Pump Vaults are used to filter effluent being pumped from septic tanks or separate dosing tanks in STEP systems and on-site wastewater disposal systems. Removes two-thirds of suspended solids, on average. When pumping from a single compartment tank or two compartment septic tank where both compartments are simultaneously drawn down during pumping, the discharge rate should not exceed approximately 40 gpm. Higher flow rates require a water-tight baffle or multiple tank arrangement, typically with an effluent filter in the primary tank.

General

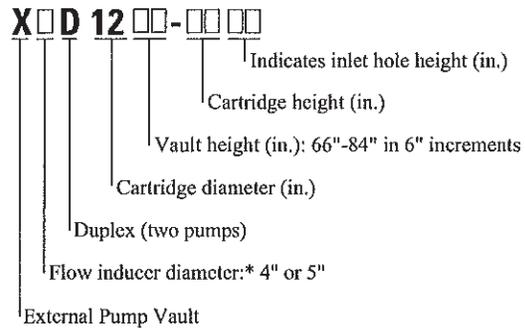
Orencia 12" Biotube Pump Vaults are composed of PVC cylindrical vaults with an ABS base, a Biotube filter cartridge, and two support pipes to suspend the vault in tank openings. The filter cartridge can be removed without pulling the pump or vault. Effluent enters through inlet holes around the perimeter of the Biotube vault and flows through the Biotubes to the external flow inducers. Orencia Biotube Pump Vaults are covered by US patents #4439323 and 5492635.



Standard Models

X4D1266-2424, X5D1266-2424, X4D1272-2424, X5D1272-2424, X4D1272-3636, X5D1272-3636, X4D1284-2424, X5D1284-2424, X4D1284-3636, X5D1284-3636.

Nomenclature

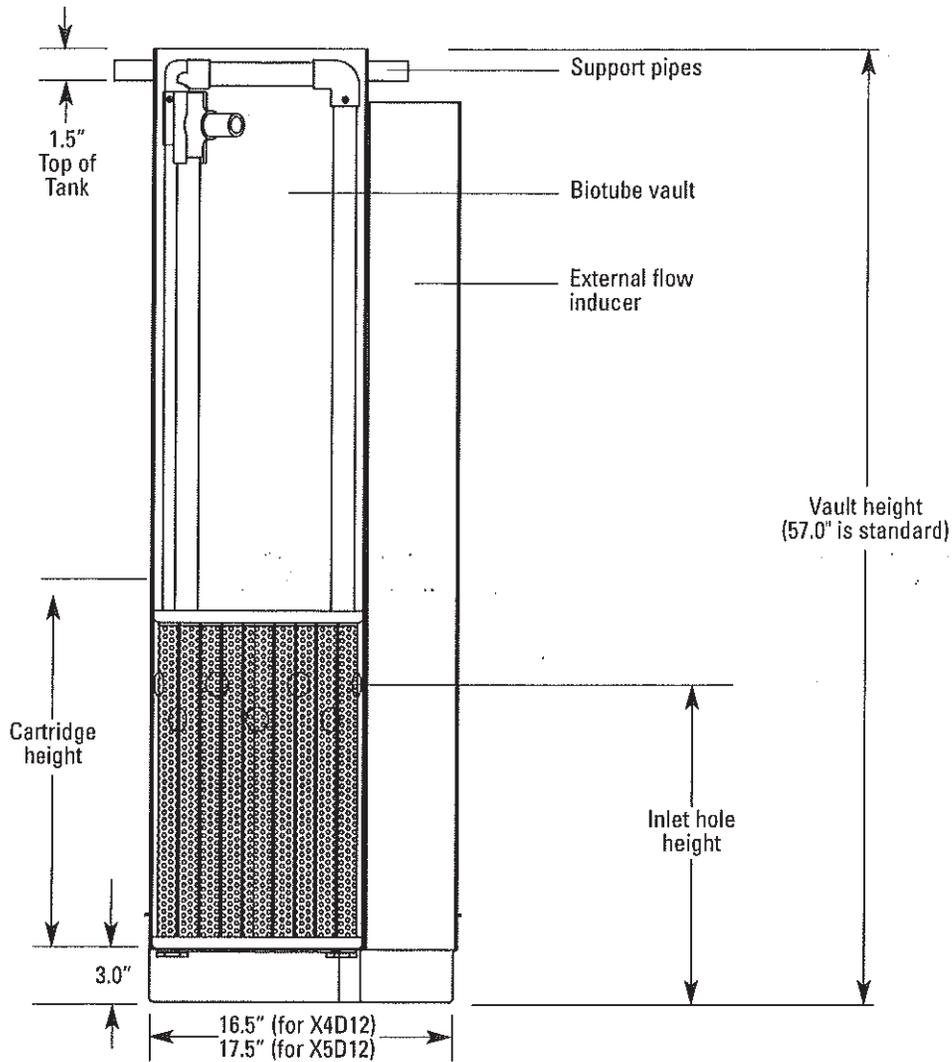


*Turbine Effluent Pumps with flow rates 40 gpm and under can be housed in a 4" flow inducer; pumps with flow rates over 40 gpm should be housed in a 5" flow inducer.

Materials of Construction:

Vaults:	PVC
Biotube Cartridge:	Natural polypropylene
Base:	ABS
Float Stem:	Sch. 40 PVC
Support Pipe:	Sch. 80 PVC
Drain Port Flapcheck:	Neoprene rubber

12" Biotube® Duplex Pump Vaults (continued)

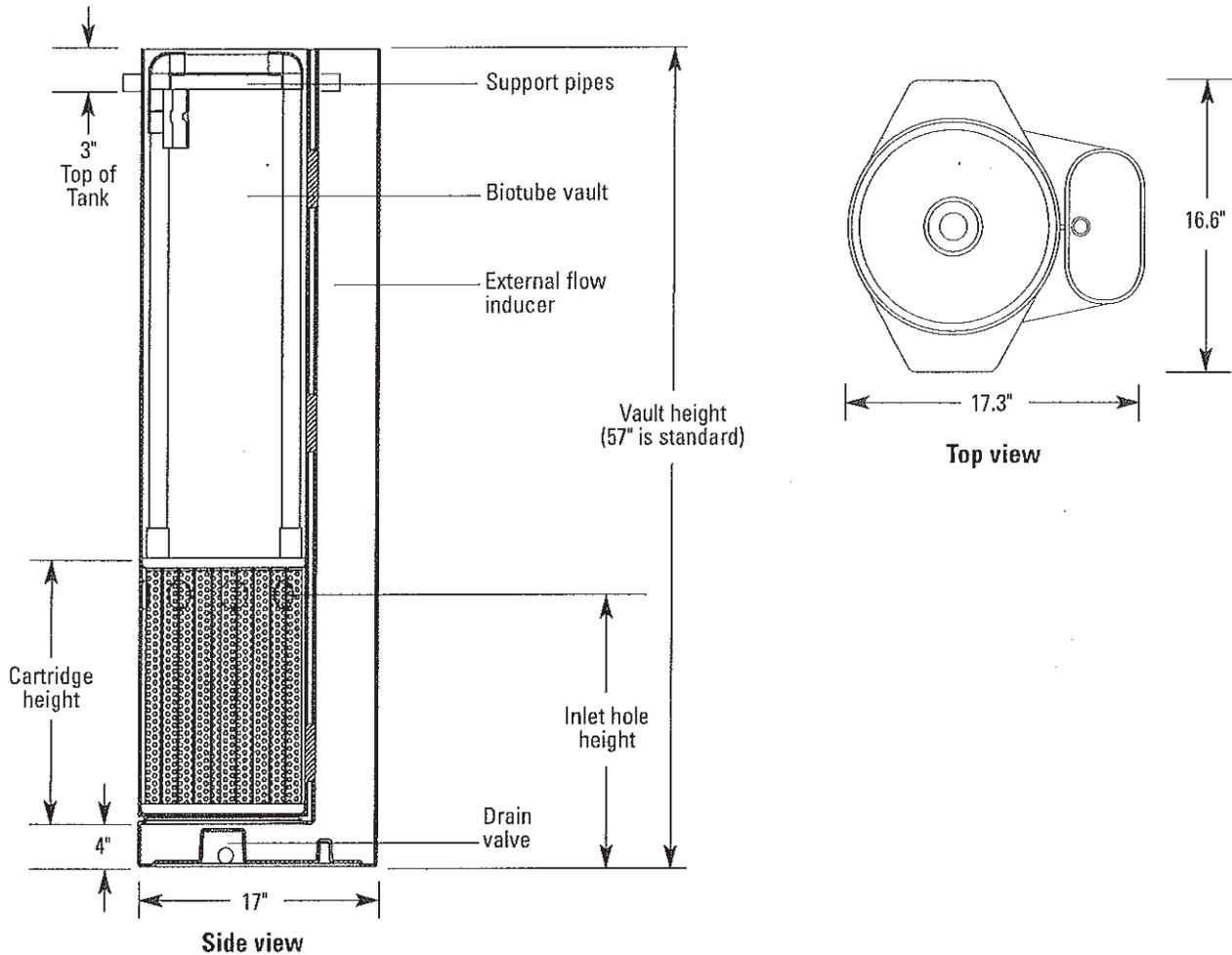


Dimensions

Model	X_D1266-2424	X_D1272-2424	X_D1272-3636	X_D1284-2424	X_D1284-3636
Nominal Biotube Vault Diameter (in.)	12	12	12	12	12
Vault Height (in.)	66	72	72	84	84
Biotube Cartridge Height (in.)	24	24	36	24	36
Biotube Mesh Opening (in.)	0.125	0.125	0.125	0.125	0.125
Biotube Nominal Open Area (%)	30	30	30	30	30
Filter Surface Area (sq. ft.)	20.6	20.6	31	20.6	31
Inlet Hole Height* (in.)	24	24	36	24	36
Float Setting Range (from top of tank, inches)	34	40	28	52	40

*May vary depending upon the configuration of the tank.

Universal Biotube® Pump Vaults (continued)



Specifications

Model	PVU57-1819	PVU57-2419
Vault Height (in.)	57	57
Cartridge Diameter (in.)	12	12
Biotube Cartridge Height (in.)	18	24
Biotube Mesh Opening (in.)	0.125	0.125
Biotube Nominal Open Area (%)	30	30
Filter Surface Area (sq.ft.)	15.5	20.6
Inlet Hole Height* (in.)	19	19
Float Setting Range (from top of tank, in.)	29	23

*May vary depending upon the configuration of the tank.

Materials of Construction:

Vaults:	Polyethylene
Biotube Cartridge:	Polypropylene/PVC
Float Stem:	Sch. 40 PVC
Support Pipe:	Sch. 80 PVC
Drain Valve:	Polypropylene

