Innovative Process Engineering. PLLC
Monument, CO 80132

Drawn by: Christopher Tracy
Checked by: Ron LeBlanc, PE
Date: June 8, 2023
Project: 23491
Project Address:
5490 Burgess Rd
County: El Paso
Client: Haven School
Revision Date:
Revision #

SITE PLAN

Property Details:

2000 GPD School
27.5 Acre property
Well Location Shown

Profile Pit Elevation and GPS coordinates:

PP1: 7125 feet : 39° 0'0.94"N, 104°43'41.61"W
PP2: 7127 feet : 39° 0'0.11"N, 104°43'41.69"W

STA Calculations:

2000 GALLONS PER DAY
SOIL TYPE 3A = 0.55 LTAR

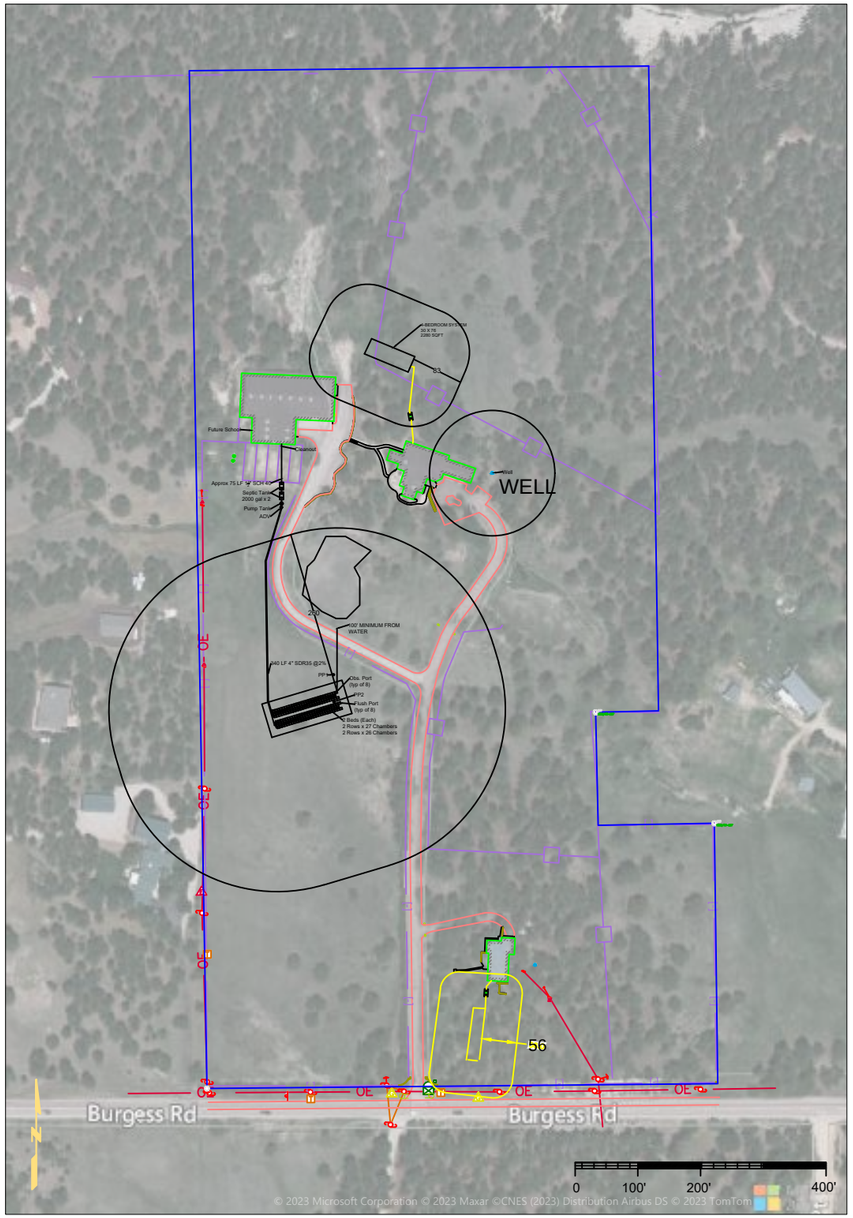
AREA = SEE MOUND WORKSHEET
FOR 12 SQFT QUICK4 CHAMBERS = 212

SPECIFICATIONS:

SEPTIC TANK; 2 x 2000 GALLON, PRECAST, INFILTRATOR SYSTEMS OR EQUAL.
PUMP TANK; 500 GALLON INFILTRATOR SYSTEMS, OR EQUAL
PUMP*;* ORENCO PF5010- 49 GPM @75' TDH
CONTROLLER; SJE RHOMBUS 112, OR EQUAL.

PIPING FROM RESIDENCE TO SEPTIC TANK; 4" SDR35
PIPING FROM PUMP TANK TO ADV, MANIFOLD AND LATERALS; 1 $\frac{1}{2}$" SCH40
DRILL ORIFICES 1/8 " 4'OC. ALTERNATING UP/DOWN.

FLOAT TREE FROM MANUFACTURER, OR ON SEPERATE RISER FROM DISCHARGE; ATTACHED WITH MANUFACTURER CLIPS OR ZIP-TIES.
DISCONNECT/UNION ON DISCHARGE LINE EXTENDING INTO RISER FOR ACCESS



GENERAL INSTALLATION NOTES:

CONSTRUCTION SHALL BE PER APPLICABLE LOCAL PLUMBING AND ELECTRICAL CODES.
LOT DIMENSIONS ARE APPROXIMATE.
INSTALL CLEANOUT WITHIN 5 FEET OF STRUCTURE.
INSTALL CLEANOUTS EVERY 100 FEET IN GRAVITY LINES
INSTALL CLEANOUTS IN GRAVITY LINES IF CHANGE OF DIRECTION EXCEED 135 DEGREES.
CONTRACTOR OR HOMEOWNER TO VERIFY ALL SETBACKS AND OBTAIN UTILITY CLEARANCES.
NEVER ALLOW RUNOFF ACROSS SOIL TREATMENT AREA (STA).
ADJUSTMENT OF LOCATIONS SHOWN IS PERMITTED, CHECK WITH ENGINEER FOR PRIOR APPROVAL.
LOCATE STA ON LEVEL TOPO - NOTIFY ENGINEER OF ELEVATION CHANGE FROM DESIGN.

GENERAL MAINTENANCE NOTES:

DESIGN AND PROPER INSTALLATION CANNOT GUARANTEE PROPER PERFORMANCE OF THE SYSTEM, GIVEN UNKNOWN USE AND FUTURE SITE CONDITIONS.
ONSITE WASTEWATER TREATMENT SYSTEMS ARE ONLY SUITED FOR DOMESTIC WASTE, INDUSTRIAL CHEMICALS WILL CAUSE PREMATURE FAILURE.
DO NOT ALLOW COOKING OILS, DRAIN CLEANER, OR EXCESS FOOD SOLIDS FROM GARBAGE DISPOSALS INTO OWTS.
SOME WATER TREATMENT SYSTEMS PRODUCE A WASTE STREAM THAT WILL CAUSE PREMATURE FAILURE.
DO NOT ALLOW ANY HOOFED ANIMAL OR VEHICULAR TRAFFIC OVER STA.
DO NOT PLANT TREES OR SHRUBS OVER STA.
DO NOT ALLOW RUNOFF OR SURFACE FLOW ACROSS STA.

SET DOSAGE FOR 175 GALLONS PER DOSE. SET PUMP OFF AT 3" ABOVE TOP OF PUMP.
SET PUMP ON AT 23" ABOVE TOP OF PUMP. SET ALARM FLOAT AT 4" ABOVE "PUMP ON"
EXCAVATE TO 12"; IMPORT 3 FEET SAND; PLACE CHAMBERS ON LEVELED SURFACE
FOLLOW MOUND WORKSHEET FOR INSTALLATION.
COVER WITH 12" ROCK FREE FILL.
MUST RUN 2 SEPARATE CONDUCTORS FROM RESIDENCE TO PANEL; ONE TO ALARM, ONE TO PUMP; SEPARATE BREAKERS IN PANEL.

*MUST CONTACT ENGINEER PRIOR TO EXCAVATION

COLORADO LICENSED
Ronald Paul LeBlanc
6/9/23
38312
PROFESSIONAL ENGINEER

Contact Information
Email: Ron@ipepllc.com
Telephone: 720-775-0076

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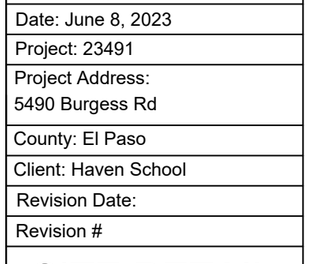
SITE DETAIL



SITE DETAIL SCALE:

1 INCH = 75 FEET
ON 11 X 17 PRINT

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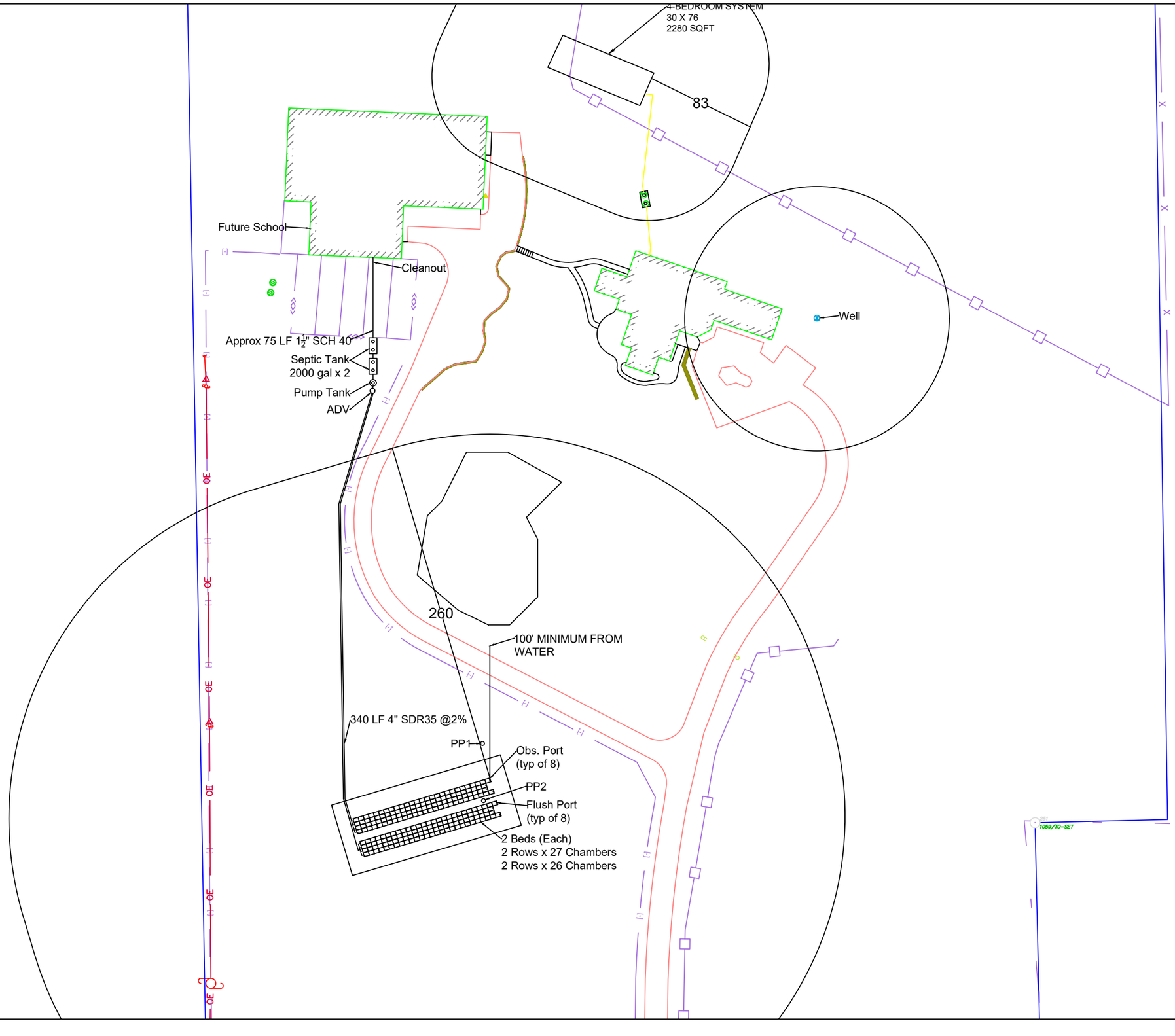


Innovative Process Engineering. PLLC
Monument, CO 80132

Drawn by: Christopher Tracy

Checked by: Ron LeBlanc, PE

Date: June 10, 2023

Project: 23491

Project Address:
5490 Burgess Rd

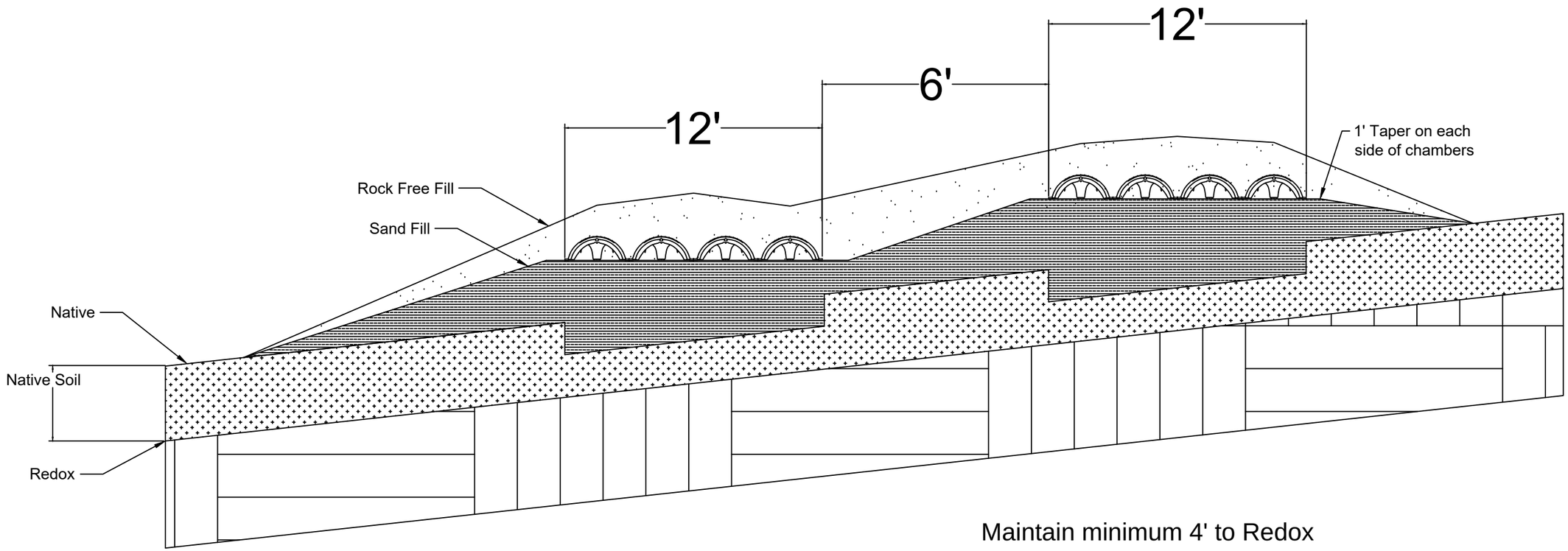
County: El Paso

Client: Haven School

Revision Date:

Revision #

SITE DETAIL



Maintain minimum 4' to Redox

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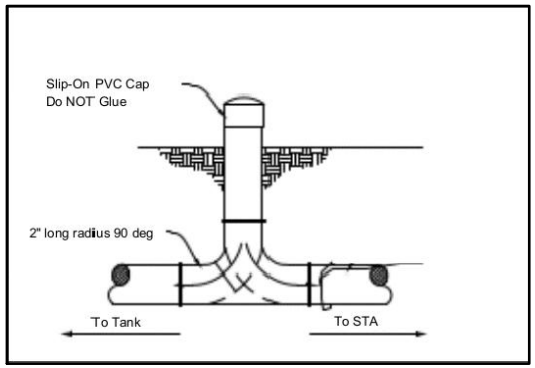
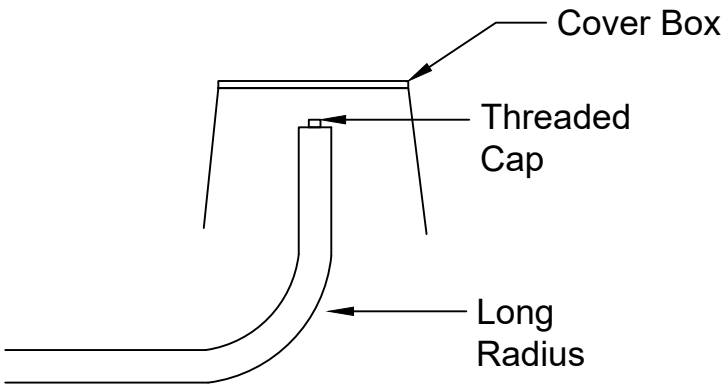


CLEANOUT DETAIL



FLUSHING PORT DETAIL

	Innovative Process Engineering, PLLC		Standard Details
	Monument, CO 80132	January 2022	

APPENDIX C

Mound Design Worksheet

Site Criteria

1. Soil Profile
   Type 3a

2. Slope: **3** %

3. This is a site for a proposed **N/A** bedroom home.

Step 1. Evaluate the quantity and quality of wastewater generated.

Residential flows: YES NO (If "No", Pretreatment and/or a design flow safety factor may be required)

Daily Flow = # of bedrooms x 150 gpd/bedroom for first 3 bedrooms; 75 gpd/bedroom for each additional bedroom. (Local requirements may also apply)

= (_____x 150) gpd
= **2000** gpd

Step 2. Evaluate the soil profile and site description for maximum soil loading rate and hydraulic linear loading rate.

Depth to Limiting Layer = 18"

Define Limiting Layer; **REDOX**

Using Tables 2 & 3 the soil loading rate (SLR) and linear loading rate (LLR) are selected.

Soil Loading Rate (SLR) = **0.55** gpd/ft^2 TL-3

Linear Loading Rate (LLR) = **9** gpd/lineal foot

Step 3. Select the sand fill loading rate; (From Figure 4)

Will "Preferred Sand" or "Secondary Sand" be used for this design? Therefore, the sand fill loading rate will be either (circle one): 1.0 gpd/ft^2. 0.8 gpd/ft^2.

Step 4. Determine the distribution cell width (A).

A = Linear Loading Rate ÷ Sand Fill Loading Rate
= **9.6** gpd/ft. ÷ **0.8** gpd/ft^2
= **12** ft.

Step 5. Determine the distribution cell length (B).

B = Design Flow ÷ Linear Loading Rate
= **2000** gpd ÷ **9.6** gpd/ft.
= **209** ft.

Note: Per Regulation 43, a one foot extension of the minimum final cover elevation is required around the entire perimeter of the mound prior to the allowable 3:1 slope. Therefore, the final cover over the distribution cell width will be two feet larger than the numbers calculated in steps 4 and 5; One foot extension on each of the four sides.

Step 6. Determine the minimum basal area width (A + I).

The soil infiltration width represents the width required to absorb the effluent into the natural soil.

A + I = Linear Loading Rate ÷ Soil (Basal) Loading Rate
= **9.6** gpd/ft ÷ **0.55** gpd/ft TL-3
= **17.5** ft.

Since A = **12** ft.; I = **17.5** – **12** = **5.5** ft. (Note: "I" will also be calculated based on side slope, which may result in a greater width requirement; See Step 10)

Step 7. Determine mound fill depth (C) at the upslope edge of the distribution cell.

The depth of fill (C) at the upslope edge of the distribution cell will be the fill required to elevate the base of the stone the required height above the limiting layer.

The required elevation above grade is **2** feet.

Step 8. Determine the mound fill depth (D) at the downslope edge of the distribution cell.

For a given slope, the following can be used:

D = C + % slope(A + 1) Note: express slope as decimal, i.e., 4% = 0.04
= **2** + **0.03** (**12** + **1**)
= **2.4** ft.

Step 9. Determine mound depths (E) and (F).

E = **1** ft. (total depth of distribution media)

F = **1** ft. (minimum amount of final cover, 1 foot beyond cell)

Step 10. Determine the downslope width (I).
Using a recommended side slope of 3:1 the calculations is as follows:

I = 3(D + E + F) x downslope correction factor

= 3(**2.39** + **1** + **1**)(**1.10**)

= **14.5** ft.

Step 11. Determine the upslope width (J).
Using a recommended side slope of 3:1 the calculations is as follows:

J = 3(C + E + F) x upslope correction factor

= 3(**2** + **1** + **1**)(**0.92**)

= **11.04** ft.

Step 12. Determine the end slope length (K).
Using a recommended side slope of 3:1 the calculations is as follows:

K = 3[(C+D)/2 +E +F]

$$= 3\left[\left(\frac{\mathbf{2} + \mathbf{2.4}}{2}\right) + \mathbf{1} + \mathbf{1}\right]$$

= **12.6** ft.

Step 13. Determine the overall width (W) and length (L) of the mound fill.

W = A + I + J

= **12** + **14.5** + **11.04**

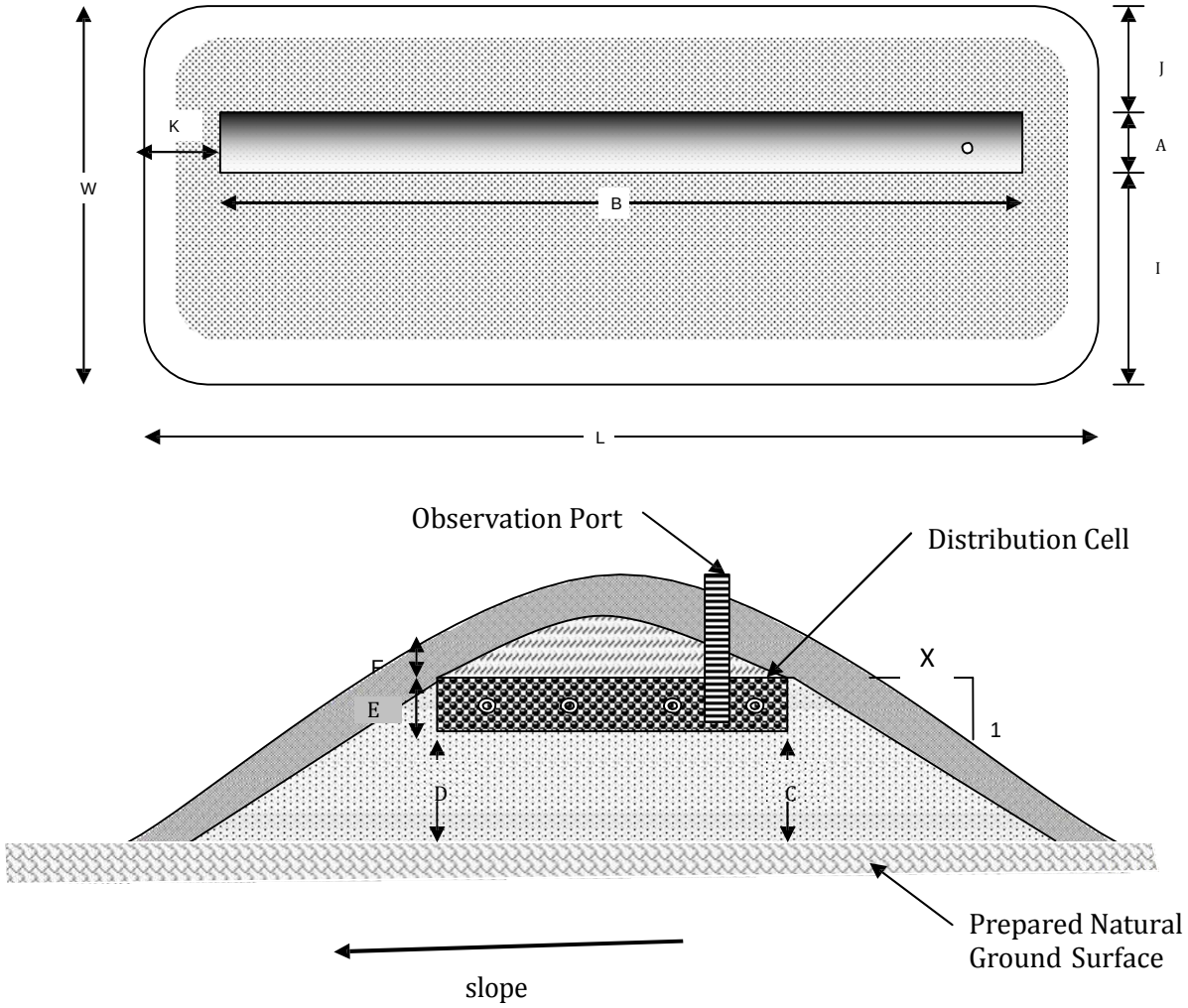
= **37.9** ft.

L = B + 2K

= **209** + 2(**12.6**)

= **234.2** ft.

The calculated dimensions may be summarized on the following plan view and cross section:



Mound Component Dimensions

A	Distribution cell width	**12**
B	Distribution cell length	**209**
C	Up slope fill depth under distribution cell	**2**
D	Downslope fill depth under distribution cell	**2.4**
E	Distribution cell depth	**1**
F	Depth of final cover	**1**
I	Distance from edge of distribution cell to downslope edge of fill	**14.5**
J	Distance from edge of distribution cell to up slope edge of fill	**11.04**
K	Distance from end of distribution cell to edge of fill	**12.6**
L	Overall mound fill length	**234.2**
W	Overall mound fill width	**37.5**
X	Proposed Side-Slope	**3:1**

Pump Selection for a Pressurized System - Single Family Residence Project

5490 Burgess Rd

Parameters

Discharge Assembly Size	2.00	inches
Transport Length Before Valve	5	feet
Transport Pipe Class	40	
Transport Line Size	1.50	inches
Distributing Valve Model	6402	
Transport Length After Valve	345	feet
Transport Pipe Class	40	
Transport Pipe Size	1.50	inches
Max Elevation Lift	5	feet
Manifold Length	9	feet
Manifold Pipe Class	40	
Manifold Pipe Size	1.50	inches
Number of Laterals per Cell	8	
Lateral Length	108	feet
Lateral Pipe Class	40	
Lateral Pipe Size	1.50	inches
Orifice Size	1/8	inches
Orifice Spacing	4	feet
Residual Head	5	feet
Flow Meter	None	inches
'Add-on' Friction Losses	0	feet

Calculations

Minimum Flow Rate per Orifice	0.43	gpm
Number of Orifices per Zone	112	
Total Flow Rate per Zone	48.9	gpm
Number of Laterals per Zone	4	
% Flow Differential 1st/Last Orifice	3.6	%
Transport Velocity Before Valve	7.7	fps
Transport Velocity After Valve	7.7	fps

Frictional Head Losses

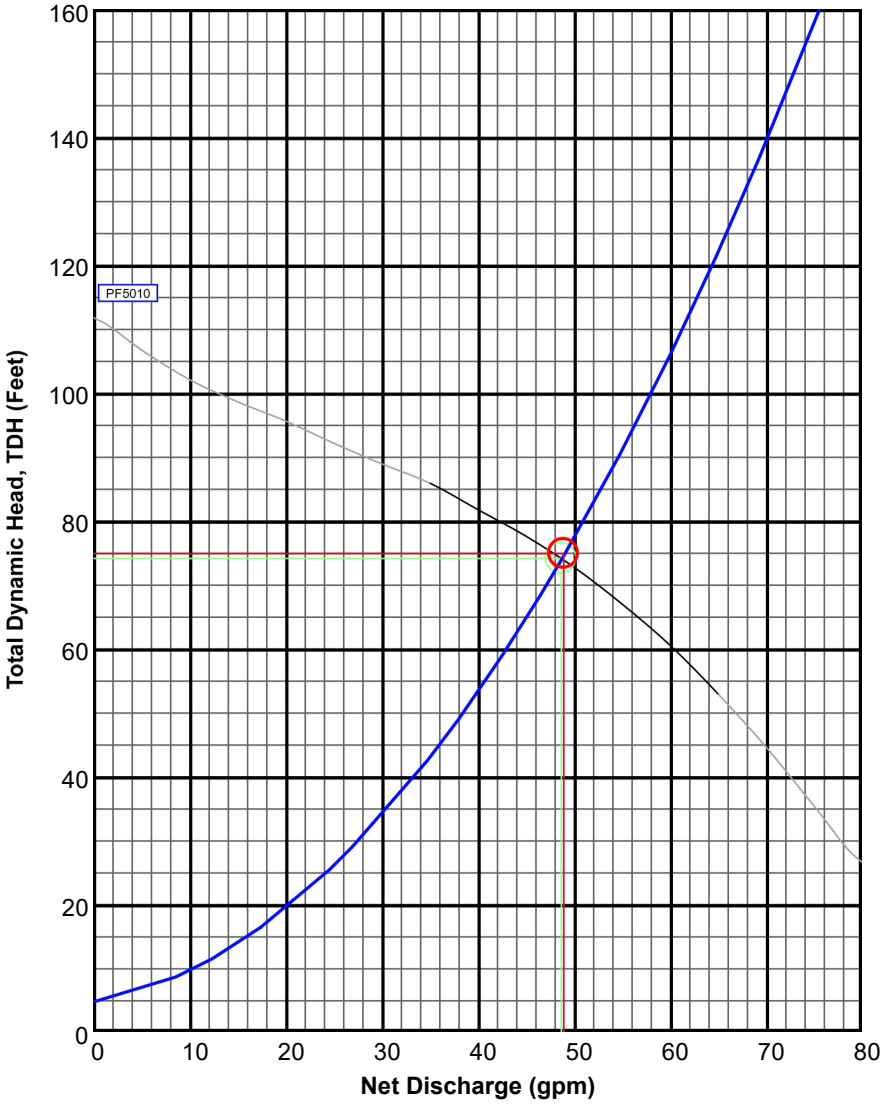
Loss through Discharge	4.8	feet
Loss in Transport Before Valve	0.6	feet
Loss through Valve	14.1	feet
Loss in Transport after Valve	44.7	feet
Loss in Manifold	0.3	feet
Loss in Laterals	0.4	feet
Loss through Flowmeter	0.0	feet
'Add-on' Friction Losses	0.0	feet

Pipe Volumes

Vol of Transport Line Before Valve	0.5	gals
Vol of Transport Line After Valve	36.5	gals
Vol of Manifold	0.9	gals
Vol of Laterals per Zone	45.7	gals
Total Vol Before Valve	0.5	gals
Total Vol After Valve	83.1	gals

equirements

	48.9	gpm
	74.9	feet



PumpData

PF5010 High Head Effluent Pump

50 GPM, 1HP

230V 1Ø 60Hz, 200/460V 3Ø 60Hz

Legend

System Curve:

Pump Curve:

Pump Optimal Range:

Operating Point:

Design Point:

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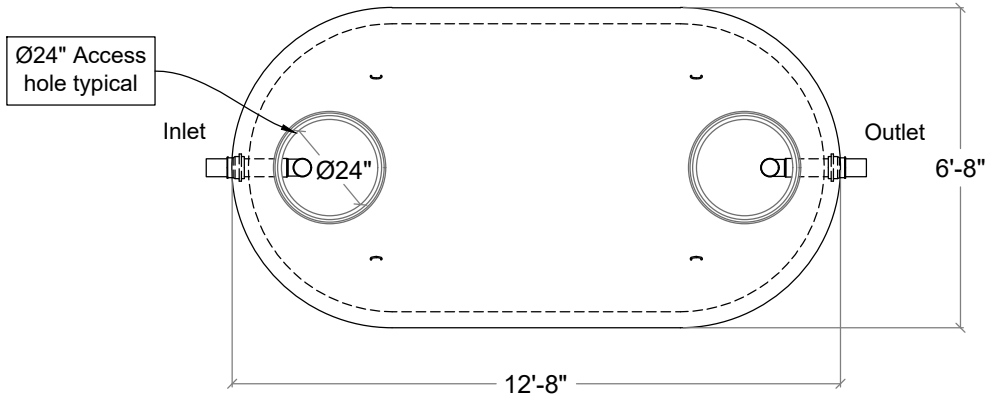
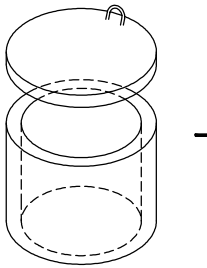
Orenco SYSTEMS
PROTECTING THE WORLD'S WATER

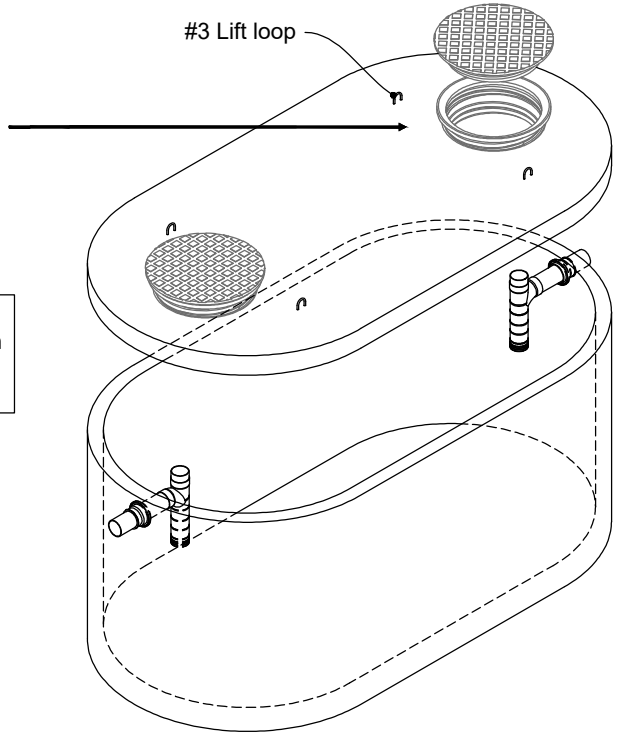
2000 Gal. Single Compartment Septic Tank

PLAN

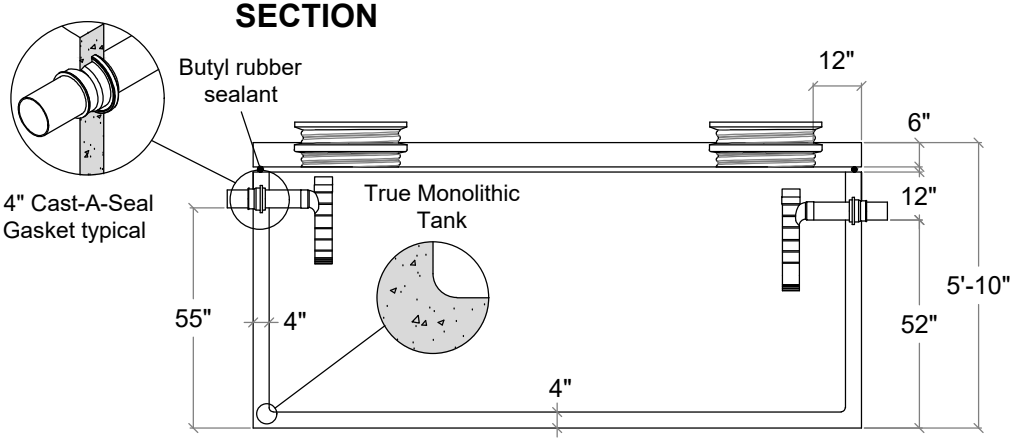




Optional concrete or other riser system available, see pages 100 - 101



SECTION



- Monolithic tank meets ASTM C-1227 Spec. for water and wastewater structures.
- Butyl rubber sealant meets Fed. Spec. SS-S-210A. (Provided with tank)
- All plumbing shown in diagram is 4" SDR 35. (Provided with tank)
- Follow standard practice for installation of underground precast concrete structures. (See page 2 for ASTM C-891 Summary)

Part #	Capacity (gallons)	Approximate Weights		
		Tank	Lid	Total
PCA-000-257	2000	11,690 lbs	5,145 lbs	16,835 lbs

Note: N.T.S.

FLXX® WATERTIGHT

Front Range Precast Concrete, Inc.

5901 Dexter Street, Unit 102, Commerce City, CO 80022

Phone (303) 442-3207 - (800) 783-3207 - Fax (303) 442-3209

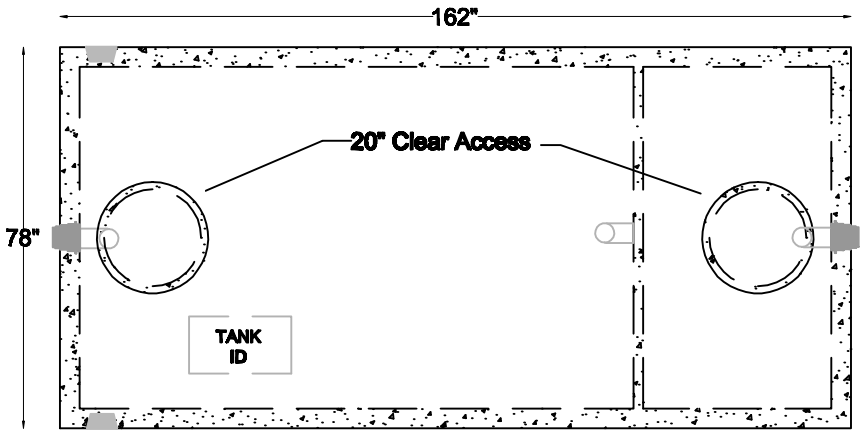
www.flxx.com

2000 Gallon Top Seam - 2CP

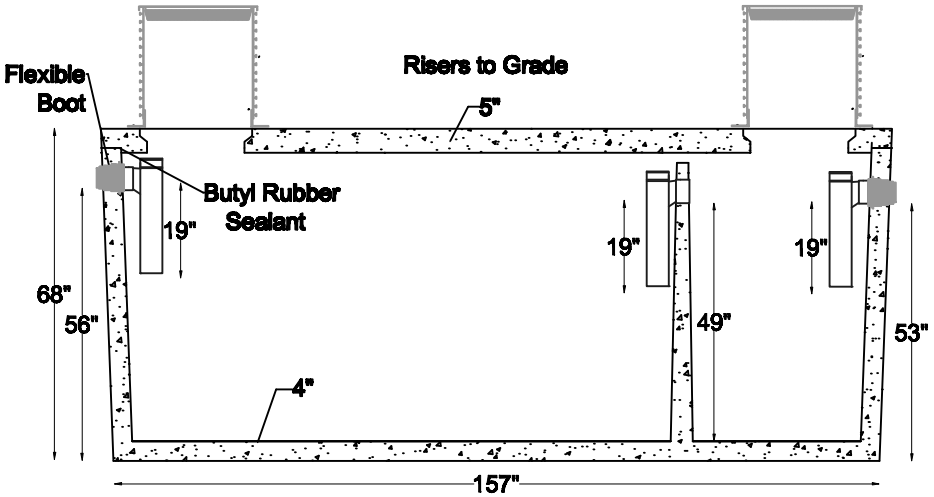
Item #
2000T-2CP

DESIGN NOTES
- Design per performance test per ASTM C1227
- Top surface area 87.75 ft²
- f'c @ 28 days; concrete = 6,000 PSI Min.

Installation:
- Tank to be set on 5" min. sand bed or pea gravel
- Tank to be backfilled uniformly on all sides in lifts less than 24" and mechanically compacted
- Excavated material may be used for backfill, provided large stones are removed
- Excavation should be dewatered and tank filled with water prior to being put in service for installation with water table less than 2' below grade
- Meets C1644–06 for resilient connectors
- Inlet and Outlet identified above pipe
- Delivered complete with internal piping
- 4' Maximum bury depth



Top View



Section View

ALLOWABLE BURY (Based on Water Table)	
WATER TABLE	ALLOWABLE EARTH FILL
0' – 0"	3' – 0"
1' – 0"	3' – 0"
2' – 0"	4' – 0"
3' – 0"	4' – 0"
DRY	4' – 0"

Digging Specs	Invert		Dimensions			Net Capacity			Net Weight		
15' Long x 8' Wide	Inlet	Outlet	Length	Width	Height	Inlet Side	Outlet	Total	Lid	Tank	Total
56" below inlet	56"	53"	162"	78"	68"	1559 gal	507 gal	2066 gal	5420 lbs	15530 lbs	20950 lbs

VALLEY PRECAST, Inc.
Buena Vista, Colorado

Phone: 719-395-6764
Fax: 719-395-3727
Website: www.valleyprecast.com
Email: frontdesk@valleyprecast.com

INFILTRATOR® tanks

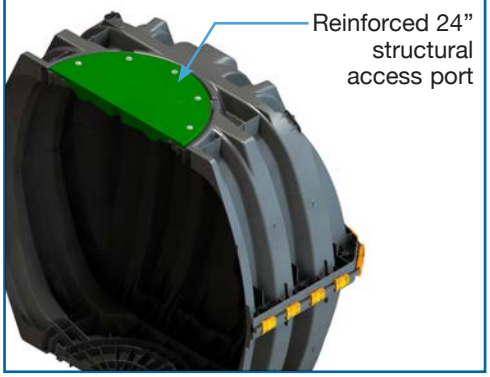
IM-540

The Infiltrator IM-540 is a lightweight strong and durable septic/pump tank. This watertight tank design is offered with Infiltrator's line of custom-fit risers and heavy-duty lids. Infiltrator injection molded tanks provide a revolutionary improvement in plastic tank design, offering long-term exceptional strength and watertightness.

Features & Benefits

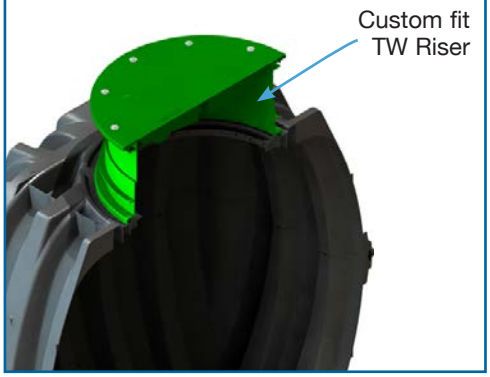
- Strong injection molded polypropylene construction
- Lightweight plastic construction and inboard lifting lugs allow for easy delivery and handling
- Integral heavy-duty green lids that interconnect with TW™ risers and pipe riser solutions
- Structurally reinforced access ports eliminate distortion during installation and pump-outs
- Reinforced structural ribbing offers additional strength
- Can be installed with 6" to 48" of cover
- Can be pumped dry during pump-outs
- Suitable for use as a pump tank or rainwater (non-potable) tank
- No special installation, backfill or water filling procedures are required
- No special water filling requirements are necessary
- The tank may be backfilled with suitable native soil. See installation instructions for guidance.

TANK CUTAWAY



MID-SEAM CUTAWAY

RISER CUTAWAY



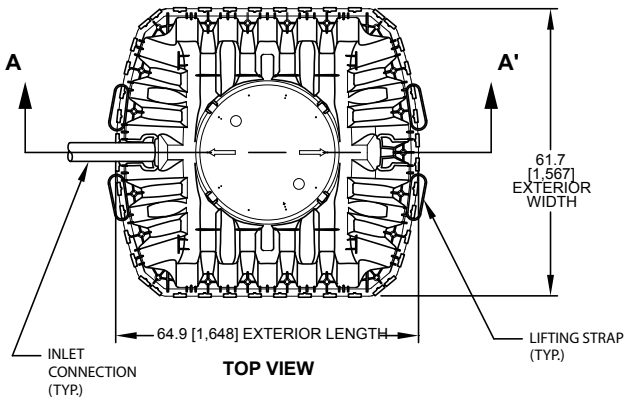
IM-540 General Specifications and Illustrations

The IM-540 is an injection molded two piece mid-seam plastic tank. The IM-540 injection molded plastic design allows for a mid-seam joint that has precise dimensions for accepting an engineered EPDM gasket. Infiltrator's gasket design utilizes technology from the water industry to deliver proven means of maintaining a watertight seal. The two-piece design is permanently fastened using a series of non-corrosive plastic alignment dowels and locking seam clips. The IM-540 is assembled and sold through a network of certified Infiltrator distributors.

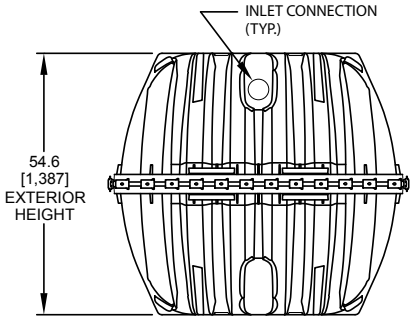
Must be backfilled and installed in accordance with Infiltrator Water Technologies, Infiltrator IM-Series Septic Tank General Installation Instructions and for shallow ground water conditions reference the Infiltrator IM-Series Tank Buoyancy Control Guidance.

Please visit www.infiltratorwater.com/images/pdf/ManualsGuides/TANK01.pdf for the latest information.

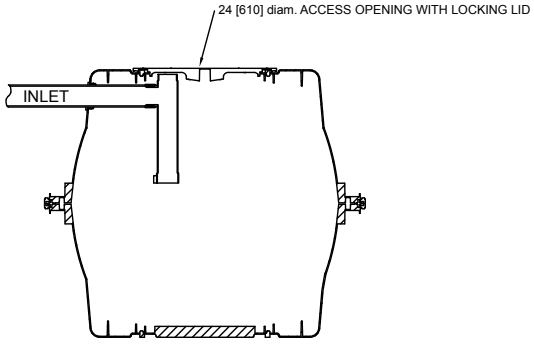
IM-540	
Total Capacity	552 gal (2090 L)
Length	64.9" (1648 mm)
Width	61.7" (1567 mm)
Height	54.6" (1387 mm)
Maximum Burial Depth	48" (1219 mm)
Minimum Burial Depth	6" (152 mm)
Maximum Pipe Diameter	4" (100 mm)
Weight	169 lbs (77 kg)



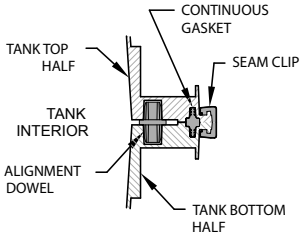
TOP VIEW



END VIEW



SECTION A- A'



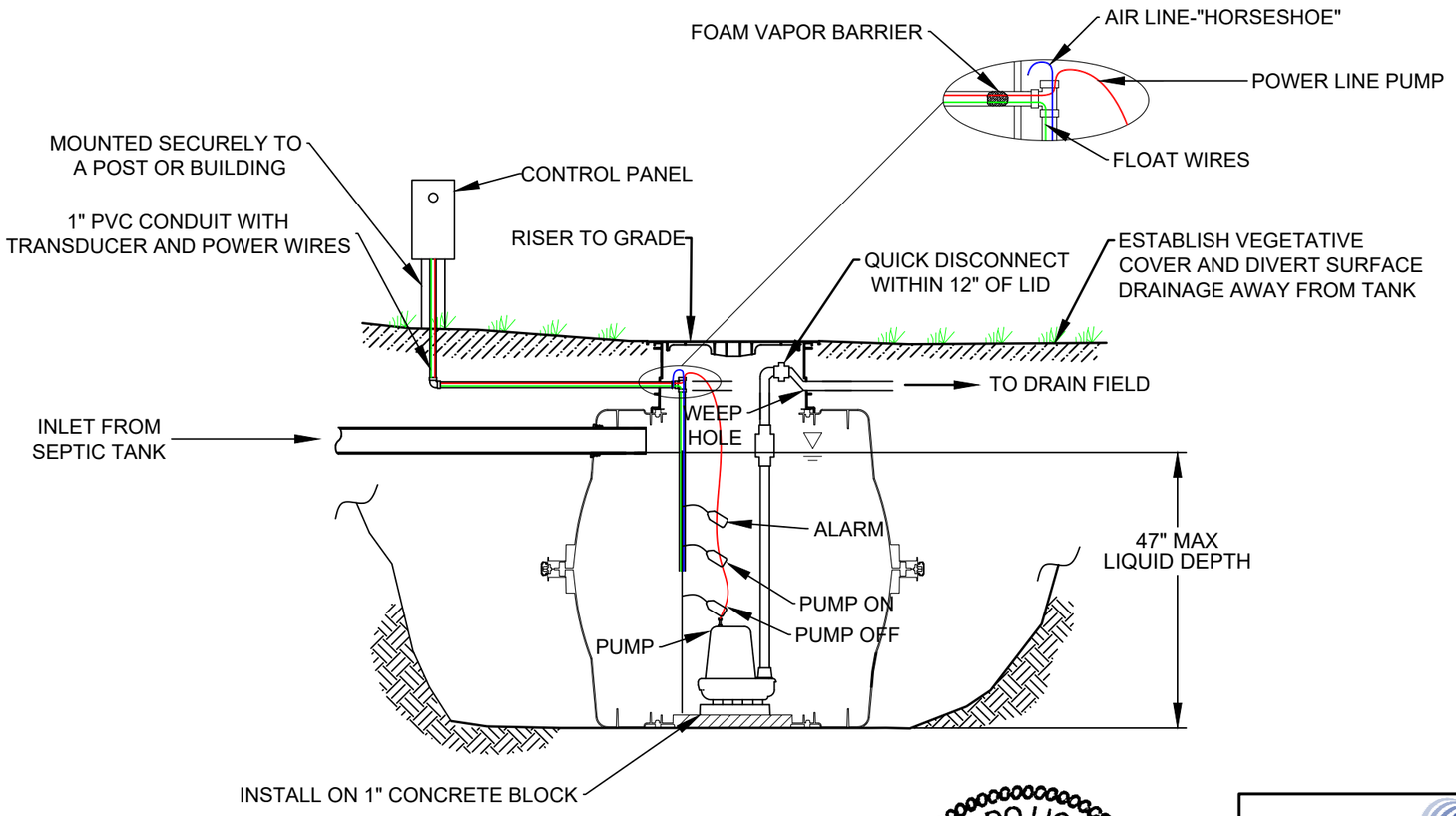
MID-HEIGHT SEAM
SECTION DETAIL

INFILTRATOR®
water technologies

4 Business Park Road
P.O. Box 768
Old Saybrook, CT 06475
860-577-7000 • Fax 860-577-7001
1-800-221-4436
www.infiltratorwater.com

IM11 1116

INFILTRATOR SYSTEMS INC.
IM-540 PUMP TANK WITH
DEMAND DOSE
TYPICAL TANK DETAIL



NOTES:

1. Float settings are in each individual design for a specified dosage volume.
2. Transducers may be used in place of floats.
3. Orenco Biotube may be used where it will fit.

COLORADO LICENSED
Ronald Paul LeBlanc
6/9/23
38312
PROFESSIONAL ENGINEER

Modified By Ron LeBlanc, PE

INFILTRATOR systems inc.

INFILTRATOR SYSTEMS INC.
4 Business Park Rd. Old Saybrook, CT 06475
(800) 221-4436

IM-540 PUMP TANK
WITH AQUAWORX
SECTION VIEW

Drawn by: DGC		Date: 04/04/2014
Scale: NOT TO SCALE	Checked by: DFH	Sheet: 1 of 1

Orenco SYSTEMS

Technical Data Sheet

PF Series 60-Hz, 4-inch (100-mm) Submersible Effluent Pumps

Applications

Our 4-inch (100-mm) Submersible Effluent Pumps are designed to transport screened effluent (with low TSS counts) from septic tanks or separate dosing tanks. All our pumps are constructed of lightweight, corrosion-resistant stainless steel and engineered plastics; all are field-serviceable and repairable with common tools; 60-Hz PF Series models are CSA certified to the U.S. and Canadian safety standards for effluent pumps, meeting UL requirements.

Orenco's Effluent Pumps are used in a variety of applications, including pressurized drainfields, packed bed filters, mounds, aerobic units, effluent irrigation, effluent sewers, wetlands, lagoons, and more. These pumps are designed to be used with a Biotube® pump vault or after a secondary treatment system.

C US
LR80980
LR2053896

Powered by
Franklin Electric

Features/Specifications

To specify this pump for your installation, require the following:

- Minimum 24-hour run-dry capability with no deterioration in pump life or performance*
- Patented 1⁄8-inch (3-mm) bypass orifice to ensure flow recirculation for motor cooling and to prevent air bind
- Liquid end repair kits available for better long-term cost of ownership
- TRI-SEAL™ floating impeller design on 10, 15, 20, and 30 gpm (0.6, 1.0, 1.3, and 1.9 L/sec) models; floating stack design on 50 and 75 gpm (3.2 and 4.7 L/sec) models
- Franklin Electric Super Stainless motor, rated for continuous use and frequent cycling
- Type SOOW 600-V motor cable

** Not applicable for 5-hp (3.73 kW) models*

Standard Models

See specifications chart, pages 2-3, for a list of standard pumps. For a complete list of available pumps, call Orenco.

Product Code Diagram

PF [50] [10] [1] [2] [ ] - [ ]

Cord length, ft (m):‡
Blank = 10 (3) 20 = 20 (6)
30 = 30 (9) 50 = 50 (15)

Check valve:
Blank = no internal check valve
CV = internal check valve†

Voltage, nameplate:
1 = 115* 200 = 200
2 = 230 4 = 460

Frequency:
1 = single-phase 60 Hz
3 = three-phase 60 Hz

Horsepower (kW):
03 = ⅓ hp (0.25) 05 = ½ hp (0.37)
07 = ¾ hp (0.56) 10 = 1 hp (0.75)
15 = 1½ hp (1.11) 20 = 2 hp (1.50)
30 = 3 hp (2.24) 50 = 5 hp (3.73)

Nominal flow, gpm (L/sec):
10 = 10 (0.6) 15 = 15 (1.0)
20 = 20 (1.3) 30 = 30 (1.9)
50 = 50 (3.2) 75 = 75 (4.7)

Pump, PF Series

* ½-hp (0.37kW) only
† Available for 10 gpm (0.6 L/sec), 1/2 hp (0.37 kW) only
‡ Note: 20-ft cords are available only for single-phase pumps through 1½ hp

Specifications

Pump Model	Design gpm (L/sec)	Horsepower (kW)	Phase	Nameplate voltage	Actual voltage	Design flow amps	Max amps	Impellers	Discharge size and material [1]	Length, in. (mm)	Min. liquid level, [2] in. (mm)	Weight, [3] lb (kg)	Rated cycles/day
PF100511	10 (0.6)	0.50 (0.37)	1	115	120	12.7	12.7	6	1 ¼ in. GFP	23.0 (660)	16 (406)	26 (12)	300
PF100511CV	10 (0.6)	0.50 (0.37)	1	115	120	12.7	12.7	6	1 ¼ in. GFP	23.0 (660)	16 (406)	26 (12)	300
PF100512	10 (0.6)	0.50 (0.37)	1	230	240	6.3	6.3	6	1 ¼ in. GFP	23.0 (660)	16 (406)	26 (12)	300
PF10053200	10 (0.6)	0.50 (0.37)	3	200	208	3.8	3.8	6	1 ¼ in. GFP	23.0 (660)	16 (406)	26 (12)	300
PF100712 [4, 5]	10 (0.6)	0.75 (0.56)	1	230	240	8.3	8.3	8	1 ¼ in. GFP	25.9 (658)	17 (432)	30 (14)	300
PF10073200 [4, 5]	10 (0.6)	0.75 (0.56)	3	200	208	5.1	5.2	8	1 ¼ in. GFP	25.4 (645)	17 (432)	31 (14)	300
PF101012 [5, 6]	10 (0.6)	1.00 (0.75)	1	230	240	9.6	9.6	9	1 ¼ in. GFP	27.9 (709)	18 (457)	33 (15)	100
PF10103200 [5, 6]	10 (0.6)	1.00 (0.75)	3	200	208	5.5	5.5	9	1 ¼ in. GFP	27.3 (693)	18 (457)	37 (17)	300
PF102012 [5, 6, 7, 8]	10 (0.6)	2.00 (1.49)	1	230	240	12.1	12.1	18	1 ¼ in. SS	39.5 (1003)	22 (559)	48 (22)	100
PF102032 [5, 6, 8]	10 (0.6)	2.00 (1.49)	3	230	240	7.5	7.6	18	1 ¼ in. SS	37.9 (963)	20 (508)	44 (20)	300
PF10203200 [5, 6, 8]	10 (0.6)	2.00 (1.49)	3	200	208	8.7	8.7	18	1 ¼ in. SS	37.9 (963)	20 (508)	44 (20)	300
PF150311	15 (1.0)	0.33 (0.25)	1	115	120	8.7	8.8	3	1 ¼ in. GFP	19.5 (495)	15 (380)	23 (10)	300
PF150312	15 (1.0)	0.33 (0.25)	1	230	240	4.4	4.5	3	1 ¼ in. GFP	19.5 (495)	15 (380)	23 (10)	300
PF200511	20 (1.3)	0.50 (0.37)	1	115	120	12.3	12.5	4	1 ¼ in. GFP	22.3 (566)	18 (457)	25 (11)	300
PF200512	20 (1.3)	0.50 (0.37)	1	230	240	6.4	6.5	4	1 ¼ in. GFP	22.5 (572)	18 (457)	26 (12)	300
PF20053200	20 (1.3)	0.50 (0.37)	3	200	208	3.7	3.8	4	1 ¼ in. GFP	22.3 (566)	18 (457)	26 (12)	300
PF201012 [4, 5]	20 (1.3)	1.00 (0.75)	1	230	240	10.5	10.5	7	1 ¼ in. GFP	28.4 (721)	20 (508)	33 (15)	100
PF20103200 [4, 5]	20 (1.3)	1.00 (0.75)	3	200	208	5.8	5.9	7	1 ¼ in. GFP	27.8 (706)	20 (508)	33 (15)	300
PF201512 [4, 5]	20 (1.3)	1.50 (1.11)	1	230	240	12.4	12.6	9	1 ¼ in. GFP	34.0 (864)	24 (610)	41 (19)	100
PF20153200 [4, 5]	20 (1.3)	1.50 (1.11)	3	200	208	7.1	7.2	9	1 ¼ in. GFP	30.7 (780)	20 (508)	35 (16)	300
PF300511	30 (1.9)	0.50 (0.37)	1	115	120	11.8	11.8	3	1 ¼ in. GFP	21.3 (541)	20 (508)	28 (13)	300
PF300512	30 (1.9)	0.50 (0.37)	1	230	240	6.2	6.2	3	1 ¼ in. GFP	21.3 (541)	20 (508)	25 (11)	300
PF30053200	30 (1.9)	0.50 (0.37)	3	200	208	3.6	3.6	3	1 ¼ in. GFP	21.3 (541)	20 (508)	25 (11)	300
PF300712	30 (1.9)	0.75 (0.56)	1	230	240	8.5	8.5	5	1 ¼ in. GFP	24.8 (630)	21 (533)	29 (13)	300
PF30073200	30 (1.9)	0.75 (0.56)	3	200	208	4.9	4.9	5	1 ¼ in. GFP	24.6 (625)	21 (533)	30 (14)	300
PF301012 [4]	30 (1.9)	1.00 (0.75)	1	230	240	10.4	10.4	6	1 ¼ in. GFP	27.0 (686)	22 (559)	32 (15)	100
PF30103200 [4]	30 (1.9)	1.00 (0.75)	3	200	208	5.8	5.8	6	1 ¼ in. GFP	26.4 (671)	22 (559)	33 (15)	300
PF301512 [4, 5]	30 (1.9)	1.50 (1.11)	1	230	240	12.6	12.6	8	1 ¼ in. GFP	32.8 (833)	24 (610)	40 (18)	100
PF30153200 [4, 5]	30 (1.9)	1.50 (1.11)	3	200	208	6.9	6.9	8	1 ¼ in. GFP	29.8 (757)	22 (559)	34 (15)	300
PF301534 [4, 5]	30 (1.9)	1.50 (1.11)	3	460	480	2.8	2.8	8	1 ¼ in. GFP	29.5 (685)	22 (559)	34 (15)	300
PF302012 [5, 6, 7]	30 (1.9)	2.00 (1.49)	1	230	240	11.0	11.0	10	1 ¼ in. SS	35.5 (902)	26 (660)	44 (20)	100
PF30203200 [5, 6]	30 (1.9)	2.00 (1.49)	3	200	208	9.3	9.3	10	1 ¼ in. SS	34.0 (864)	24 (610)	41 (19)	300
PF303012 [5, 6, 7, 8]	30 (1.9)	3.00 (2.23)	1	230	240	16.8	16.8	14	1 ¼ in. SS	44.5 (1130)	33 (838)	54 (24)	100
PF303032 [5, 6, 8]	30 (1.9)	3.00 (2.23)	3	230	240	10.0	10.1	14	1 ¼ in. SS	44.3 (1125)	27 (686)	52 (24)	300
PF305012 [5, 6, 7, 8]	30 (1.9)	5.00 (3.73)	1	230	240	25.6	25.8	23	1 ¼ in. SS	66.5 (1689)	53 (1346)	82 (37)	100
PF305032 [5, 6, 8]	30 (1.9)	5.00 (3.73)	3	230	240	16.6	16.6	23	1 ¼ in. SS	60.8 (1544)	48 (1219)	66 (30)	300
PF30503200 [5, 6, 8]	30 (1.9)	5.00 (3.73)	3	200	208	18.7	18.7	23	1 ¼ in. SS	60.8 (1544)	48 (1219)	66 (30)	300
PF500511	50 (3.2)	0.50 (0.37)	1	115	120	12.1	12.1	2	2 in. SS	20.3 (516)	24 (610)	27 (12)	300
PF500512	50 (3.2)	0.50 (0.37)	1	230	240	6.2	6.2	2	2 in. SS	20.3 (516)	24 (610)	27 (12)	300
PF500532	50 (3.2)	0.50 (0.37)	3	230	240	3.0	3.0	2	2 in. SS	20.3 (516)	24 (610)	28 (13)	300
PF50053200	50 (3.2)	0.50 (0.37)	3	200	208	3.7	3.7	2	2 in. SS	20.3 (516)	24 (610)	28 (13)	300
PF500534	50 (3.2)	0.50 (0.37)	3	460	480	1.5	1.5	2	2 in. SS	20.3 (516)	24 (610)	28 (13)	300
PF500712	50 (3.2)	0.75 (0.56)	1	230	240	8.5	8.5	3	2 in. SS	23.7 (602)	25 (635)	31 (14)	300
PF500732	50 (3.2)	0.75 (0.56)	3	230	240	3.9	3.9	3	2 in. SS	23.7 (602)	25 (635)	32 (15)	300

Specifications, cont.

Pump Model	Design gpm (L/sec)	Horsepower (kW)	Phase	Nameplate voltage	Actual voltage	Design flow amps	Max amps	Impellers	Discharge size and material [1]	Length, in. (mm)	Min. liquid level, [2] in. (mm)	Weight, [3] lb (kg)	Rated cycles/day
PF50073200	50 (3.2)	0.75 (0.56)	3	200	208	4.9	4.9	3	2 in. SS	23.1 (587)	26 (660)	32 (15)	300
PF500734	50 (3.2)	0.75 (0.56)	3	460	480	1.8	1.8	3	2 in. SS	34.8 (884)	25 (635)	31 (14)	300
PF501012	50 (3.2)	1.00 (0.75)	1	230	240	10.1	10.1	4	2 in. SS	27.0 (686)	26 (660)	35 (16)	100
PF50103200	50 (3.2)	1.00 (0.75)	3	200	208	5.7	5.7	4	2 in. SS	26.4 (671)	26 (660)	39 (18)	300
PF501034	50 (3.2)	1.00 (0.75)	3	460	480	2.2	2.2	4	2 in. SS	26.4 (671)	26 (660)	39 (18)	300
PF501512[4]	50 (3.2)	1.50 (1.11)	1	230	240	12.5	12.6	5	2 in. SS	32.5 (826)	30 (762)	41 (19)	100
PF50153200[4]	50 (3.2)	1.50 (1.11)	3	200	208	7.0	7.0	5	2 in. SS	29.3 (744)	26 (660)	35 (16)	300
PF503012 [4, 5, 7, 8]	50 (3.2)	3.00 (2.23)	1	230	240	17.7	17.7	8	2 in. SS	43.0 (1092)	37 (940)	55 (25)	100
PF50303200 [4, 5, 8]	50 (3.2)	3.00 (2.23)	3	200	208	13.1	13.1	8	2 in. SS	43.4 (1102)	30 (762)	55 (25)	300
PF503034 [4, 5, 8]	50 (3.2)	3.00 (2.23)	3	460	480	5.3	5.3	8	2 in. SS	40.0 (1016)	31 (787)	55 (25)	300
PF505012 [5,6,7,8]	50 (3.2)	5.00 (3.73)	1	230	240	26.2	26.4	13	2 in. SS	65.4 (1661)	55 (1397)	64 (29)	100
PF505032 [5,6, 8]	50 (3.2)	5.00 (3.73)	3	230	240	16.5	16.5	13	2 in. SS	59.3 (1506)	49 (1245)	64 (29)	300
PF751012	75 (4.7)	1.00 (0.75)	1	230	240	9.9	10.0	3	2 in. SS	27.0 (686)	27 (686)	34 (15)	100
PF751512	75 (4.7)	1.50 (1.11)	1	230	240	12.1	12.3	4	2 in. SS	33.4 (848)	30 (762)	44 (20)	100

1 GFP = glass-filled polypropylene; SS = stainless steel. The 1 ¼-in. NPT GFP discharge is 2 7⁄8 in. octagonal across flats; the 1 ¼-in. NPT SS discharge is 2 1⁄8 in. octagonal across flats; and the 2-in. NPT SS discharge is 2 7⁄8 in. hexagonal across flats. Discharge is female NPT threaded, U.S. nominal size, to accommodate Orenco® discharge hose and valve assemblies. Consult your Orenco Distributor about fittings to connect hose and valve assemblies to metric-sized piping.

2 Minimum liquid level is for single pumps when installed in an Orenco Biotube® Pump Vault or Universal Flow Inducer. In other applications, minimum liquid level should be top of pump. Consult Orenco for more information.

3 Weight includes carton and 10-ft (3-m) cord.

4 High-pressure discharge assembly required.

5 Do not use cam-lock option (Q) on discharge assembly.

6 Custom discharge assembly required for these pumps. Contact Orenco.

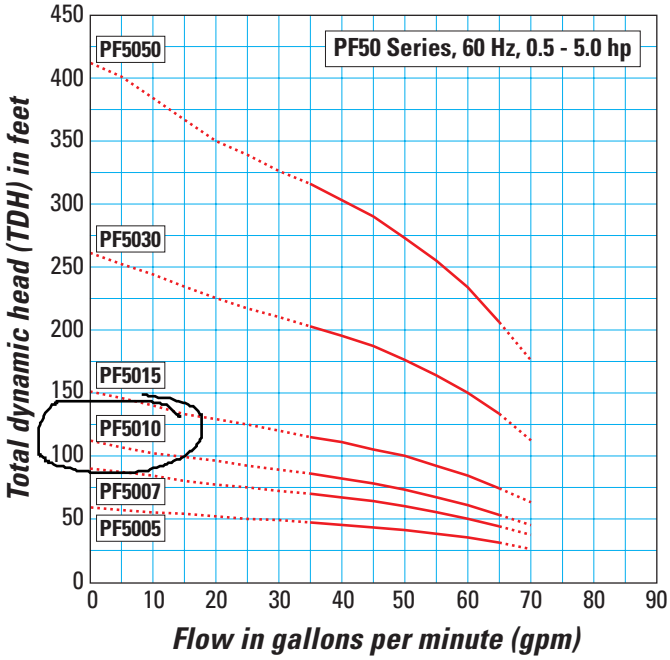
7 Capacitor pack (sold separately or installed in a custom control panel) required for this pump. Contact Orenco.

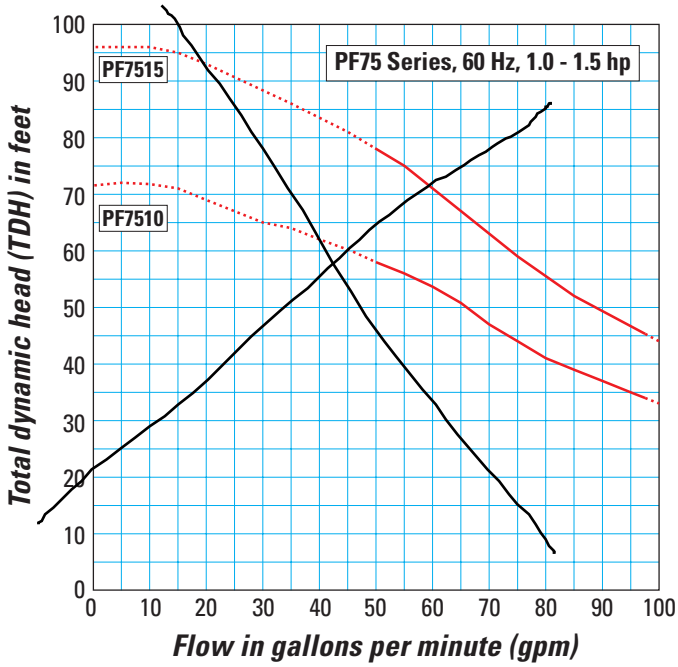
8 Torque locks are available for all pumps, and are supplied with 3-hp and 5-hp pumps.

Materials of Construction

Discharge	Glass-filled polypropylene or stainless steel
Discharge bearing	Engineered thermoplastic (PEEK)
Diffusers	Glass-filled PPO (Noryl GFN3)
Impellers	Celcon® acetal copolymer on 10-, 20, and 30-gpm models; 50-gpm impellers are Noryl GFN3
Intake screen	Polypropylene
Suction connection	Stainless steel
Drive shaft	7/16 inch hexagonal stainless steel, 300 series
Coupling	Sintered stainless steel, 300 series
Shell	Stainless steel, 300 series
Motor	Franklin motor exterior constructed of stainless steel. Motor filled with deionized water and propylene glycol for constant lubrication. Hermetically sealed motor housing ensures moisture-free windings. All thrust absorbed by Kingsbury-type thrust bearing. Rated for continuous duty. Single-phase motors and 200 and 230 V 3-phase motors equipped with surge arrestors for added security. Single-phase motors through 1.5 hp (1.11 kW) have built-in thermal overload protection, which trips at 203-221˚ F (95-105˚ C).

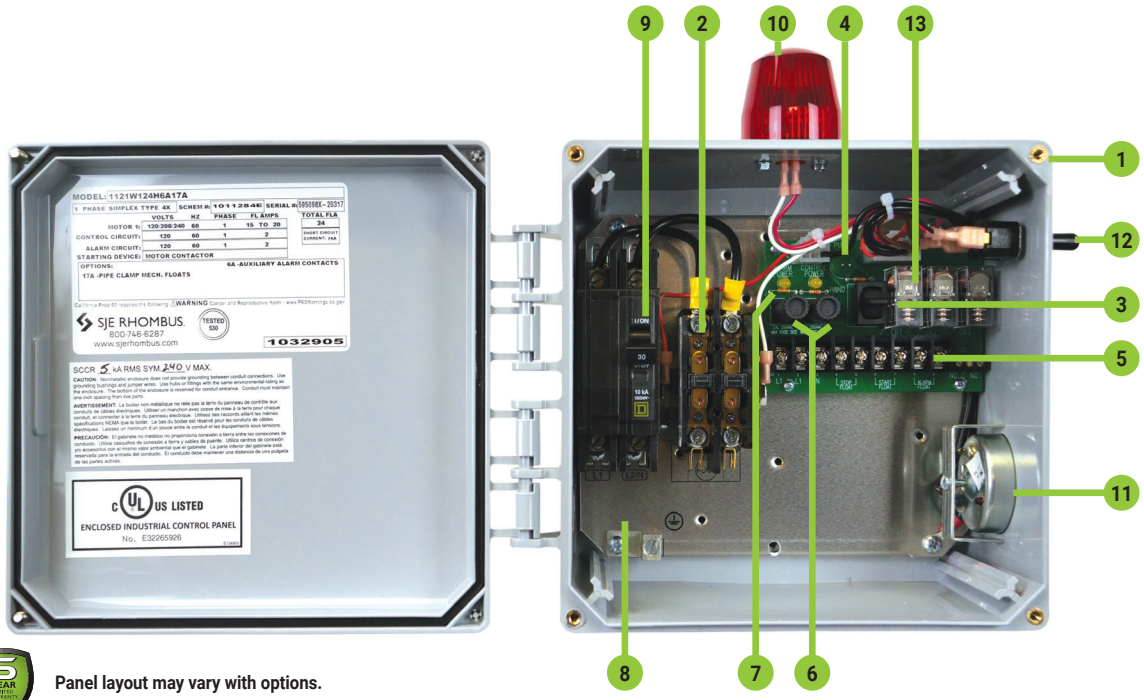
Pump Curves, cont.





MODEL 112 CONTROL PANEL

Single Phase, Simplex Motor Contactor Control



c UL us LISTED

5 YEAR LIMITED WARRANTY

Panel layout may vary with options.

The Model 112 control panel provides a reliable means of controlling one 120, 208, or 240 VAC single phase pump in pump chambers, sump pump basins, irrigation systems and lift stations. Two control switches activate a magnetic motor contactor to turn the pump on and off. If an alarm condition occurs, an additional alarm switch activates the audio/visual alarm system.

OPTIONAL FEATURE

- 34" (86.36 cm) Panel Mounting Post (Factory Installed). Includes Simplex Installation Kit (Enclosure upsized to 10" x 8" x 6" (25.4 x 20.32 x 15.24 cm). Max. Enclosure size 14" x 12" x 6" (35.56 x 30.48 x 15.24 cm)

COMPONENTS

1. Choice of NEMA 1 (steel for indoor use), or NEMA 4X (ultraviolet stabilized thermoplastic with removable mounting feet for outdoor or indoor use) enclosure; enclosure measures 8 x 8 x 4 inches (20.32 x 20.32 x 10.16 cm)
2. Magnetic motor contactor
3. HOA switch for manual pump control (mounted on circuit board)
4. Green pump run indicator light (mounted on circuit board)
5. Float switch terminal block (mounted on circuit board)
6. Alarm and control fuses (mounted on circuit board)
7. Alarm and control power indicators (mounted on circuit board)
8. Ground lug
9. Circuit breaker (optional)
10. Red LED beacon provides 360° visual check of alarm condition - Note: NEMA 1 style utilizes a door mounted indicator in lieu of a beacon
11. Alarm horn provide audible warning of alarm condition (83 to 85 decibel rating) - Note: NEMA 1 style utilizes an internally mounted buzzer in lieu of horn
12. Exterior alarm test/normal/silence switch allows horn to be silenced in an alarm condition; alarm automatically resets once alarm condition has been cleared
13. Horn silence relay (mounted on circuit board)

Note: Options, voltage, and amp range selected may change enclosure size and component layout.

Note: Other options available.

Note: Schematic/Wiring Diagram and Pump Specification Label are located inside the panel.

SJE RHOMBUS®

9500065K Rev 12/21

Model 112 - Single phase, simplex motor contactor control.

112	1	W	1	2	4	H/E	
CONTROL PANEL	ALARM PACKAGE	ENCLOSURE RATING	STARTING DEVICE	PUMP FULL LOAD AMPS	PUMP DISCONNECTS	FLOAT SWITCH APPLICATION	OPTIONS (LISTED BELOW)

CONTROL PANEL	✓	112	Single Phase Simplex	
ALARM PACKAGE		0	Select Options or No Alarm Package	
		1	Alarm Package (includes test/normal/silence switch, fuse, red light, horn & float)	
ENCLOSURE RATING		I	Indoor, NEMA 1 (metal)	
		W	Weatherproof, NEMA 4X (engineered thermoplastic)	
STARTING DEVICE		1	Magnetic Motor Contactor 120/208/240V	
		9	Magnetic Motor Contactor, 120V only	
PUMP FULL LOAD AMPS		0	0 - 7 FLA	
		1	7 - 15 FLA	
		2	15 - 20 FLA	
		3	20 - 30 FLA (Enclosure Upsize Required)	
PUMP DISCONNECTS		0	No Pump Disconnect	
		4	Circuit Breaker 120V (select STARTING DEVICE option 9 above)	
			Circuit Breaker 120/208/240V (select STARTING DEVICE option 1 above)	
FLOAT SWITCH APPLICATION		H	Floats - Pump Down (select Option 17 below)	
		L	Floats - Pump Up (select Option 17 below)	
		E	EZconnex® Float Switch System (select Option 33 or 34 below)	with Alarm Package
				without Alarm Package
		X	No Floats	with Alarm Package
				without Alarm Package

PRICING WORKSHEET

Model 112 Base Price	
Alarm Package	
Enclosure Rating	
Starting Device	
Pump Full Load Amps	
Pump Disconnects	
Float Switch Application	
Total Options	
Enclosure Upsize	
TOTAL LIST PRICE	

ENCLOSURE UPSIZE: If you selected 3 or more of the ◆ options or one ◆◆ option, **add a one-time charge** for enclosure upsize.

	OPTIONS	DESCRIPTION	
	1A	Red Beacon Only / No Audio (must select Option 1E if floats included)	
	1C	Horn Only / No Visual (must select Option 1E if floats included)	
	1E	Alarm Float	
	3A	Alarm Flasher	
	3B ◆	Manual Alarm Reset	
	4A ◆◆	Redundant Off (must also select Option 4D if floats are required)	
	4B ◆◆	Red Redundant Off Indicator and Alarm (must also select Option 4A)	
	4D	Redundant Off Float (must also select Option 4A and Option 17)	
	5A ◆	Thermal Cutout/Heat Sensor Auto Reset (for pumps with thermal switch leads)	
	5E ◆◆	Seal Failure Circuit & Red Indicator (2 wire)	
	6A	Auxiliary Alarm Contact, Form C	
X	8A ◆	Elapsed Time Meter	
X	8C ◆	Event (Cycle) Counter	
	9_A ◆◆	Pump Overload - Specify Amperage after Number 9 Followed by Letter "A" Example: 912A = 12 amp pump	0 - 25 FLA
			25 - 30 FLA
	10E	Lockable Latch - NEMA 4X	
		Lockable Latch - NEMA 1	
	10F ◆	Lightning Arrestor (must select pump circuit breaker)	
	10K ◆	Anti-condensation Heater	
	10P ◆◆	Panel Mounting Post - Factory Installed, Includes Simplex Installation Kit (Enclosure Upsized to 10x8x6, Max 14x12x6)	
	11C	Additional NEMA 1 Remote Alarm Panel (must select Option 6A)	
	11D	Additional NEMA 4X Remote Alarm Panel (must select Option 6A)	
	14B ◆◆	Main Disconnect (rotary style, mounted through door, non-fused, padlockable in the OFF position, door interlock in the ON position (must select Circuit Breaker)	0 - 20 FLA
			20 - 30 FLA

■ EZconnex® mechanically-activated, narrow angle float switches with quick release connections

	OPTIONS	DESCRIPTION
	15A ◆◆	Control / Alarm Circuit Breaker
	16A	10' Cord in Lieu of 20' Cord (per Float)
	16B	15' Cord in Lieu of 20' Cord (per Float)
	16C	30' Cord in Lieu of 20' Cord (per Float)
	16D	40' Cord in Lieu of 20' Cord (per Float)
	17A	SJE SignalMaster® / Pipe Clamp (per Float) - Mechanical
	17B	SJE SignalMaster® / Externally Weighted (per Float) - Mechanical
	17C	Sensor Float® / Internally Weighted (per Float) - Mercury
	17D	Sensor Float® / Externally Weighted (per Float) - Mercury
	17E	Sensor Float® Mini / Pipe Clamp (per Float) - Mercury
	17F	Sensor Float® Mini / Externally Weighted (per Float) - Mercury
	17J	Sensor Float® / Pipe Clamp (per Float) - Mercury
	19T	TOA (Test/Off/Automatic) Switch and Pump Run Light through Door Mounted
	19U	HOA (Hand/Off/Automatic) Switch and Pump Run Light through Door Mounted
	19X	Door Mounted Pump Run Indicator
	21A	SJE PumpMaster® in Lieu of ON/OFF Switches - Mechanical
	21B	SJE PumpMaster® Plus in Lieu of ON/OFF Switches - Mechanical
	21C	Super Single® in Lieu of ON/OFF Switches - Mercury
	21D	Double Float® in Lieu of ON/OFF Switches - Mercury
	21M	Double Float® Master in Lieu of ON/OFF Switches – Mechanical
	33D ■	EZconnex® 3-Port, 25', with 10' Floats (3) / Pipe Clamp
	33E ■	EZconnex® 3-Port, 50', with 10' Floats (3) / Pipe Clamp
	33G ■	EZconnex® 3-Port, 25', with 20' Floats (3) / Pipe Clamp
	33H ■	EZconnex® 3-Port, 50', with 20' Floats (3) / Pipe Clamp
	34D ■	EZconnex® 4-Port, 25', with 10' Floats (3) / Pipe Clamp, Sealing Plug
	34E ■	EZconnex® 4-Port, 50', with 10' Floats (3) / Pipe Clamp, Sealing Plug
	34G ■	EZconnex® 4-Port, 25', with 20' Floats (3) / Pipe Clamp, Sealing Plug
	34H ■	EZconnex® 4-Port, 50', with 20' Floats (3) / Pipe Clamp, Sealing Plug

Part #	Pre-configured Panels for Easy Ordering
1019840	1121W114H17A
1020094	1121W114H6A17A

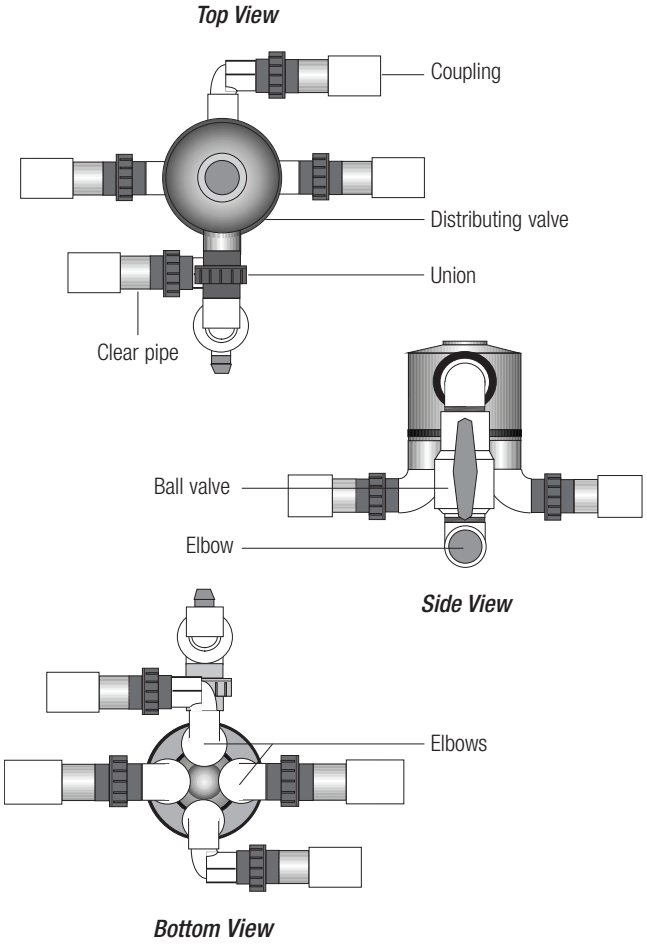
Orenco® SYSTEMS

Technical Data Sheet

Distributing Valves

Applications

Automatic Distributing Valve Assemblies are used to pressurize multiple zone distribution systems including textile filters, sand filters and drainfields.



General

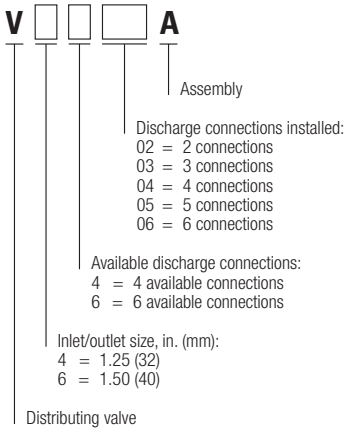
Orenco's Automatic Distributing Valve Assemblies are mechanically operated and sequentially redirect the pump's flow to multiple zones or cells in a distribution field. Valve actuation is accomplished by a combination of pressure and flow. They allow the use of smaller horsepower pumps on large sand filters and drainfields. For example, a large community drainfield requiring 300 gpm (18.90L/sec) can use a six-line valve assembly to reduce the pump flow rate requirement to only 50 gpm (3.14L/sec).

Orenco only warrants Automatic Distributing Valves when used in conjunction with High-Head Effluent Pumps with Biotube® pump vaults to provide pressure and flow requirements, and to prevent debris from fouling valve operation. An inlet ball valve, a section of clear pipe, and a union for each outlet are provided for a complete assembly that is easy to maintain and monitor. Ideal valve location is at the high point in the system. Refer to Automatic Distributing Valve Assemblies (NTP-VA-1) for more information.

Standard Models

V4402A, V4403A, V4404A, V4605A, V4606A, V6402A, V6403A, V6404A, V6605A, V6606A.

Product Code Diagram



Materials of Construction

All Fittings	Sch. 40 PVC per ASTM specification
Unions	Sch. 80 PVC per ASTM specification
Ball Valve	Sch. 40 PVC per ASTM specification
Clear Pipe	Sch. 40 PVC per ASTM specification

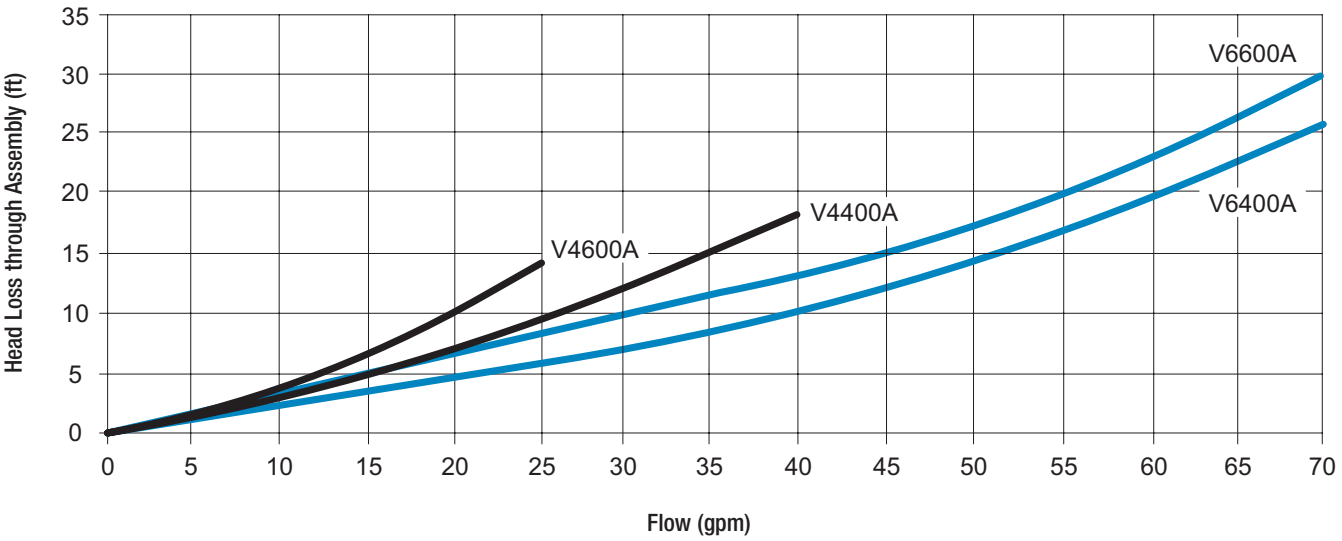
Specifications

Model	Inlet Size, in. (mm)	Outlets Size, in. (mm)	Flow Range, gpm (L/sec)	Max Head, ft (m)	Min. Enclosure*
V4402A	1.25 (32)	1.25 (32)	10 – 40 (0.63 – 2.52)	170 (51.816)	VB1217
V4403A	1.25 (32)	1.25 (32)	10 – 40 (0.63 – 2.52)	170 (51.816)	VB1217
V4404A	1.25 (32)	1.25 (32)	10 – 40 (0.63 – 2.52)	170 (51.816)	VB1217
V4605A	1.25 (32)	1.25 (32)	10 – 40 (0.63 – 2.52)	170 (51.816)	RR2418
V4606A	1.25 (32)	1.25 (32)	10 – 40 (0.63 – 2.52)	170 (51.816)	RR2418
V6402A	1.50 (38)	1.50 (38)	15 – 100 (0.95 – 6.31)	345 (105.16)	RR2418
V6403A	1.50 (38)	1.50 (38)	15 – 100 (0.95 – 6.31)	345 (105.16)	RR2418
V6404A	1.50 (38)	1.50 (38)	15 – 100 (0.95 – 6.31)	345 (105.16)	RR2418
V6605A	1.50 (38)	1.50 (38)	15 – 100 (0.95 – 6.31)	345 (105.16)	RR2418
V6606A	1.50 (38)	1.50 (38)	15 – 100 (0.95 – 6.31)	345 (105.16)	RR2418

** When using an enclosed basin, choose the next larger-sized diameter.*

Table 1. Automatic Distributing Valve Assembly Headloss Equations

Model Series	Equation	Operating Range, gpm (L/sec)
V4400A	$H_L = 0.085 \times Q^{1.45}$	10 - 40 (0.63 – 2.52)
V4600A	$H_L = 0.085 \times Q^{1.58}$	10 - 25 (0.63 – 1.57)
V6400A	$H_L = 0.0045 \times Q^2 + 3.5 \times (1 - e^{-0.060})$	15 - 70 (0.95 – 4.42)
V6600A	$H_L = 0.0049 \times Q^2 + 5.5 \times (1 - e^{-0.10})$	15 - 70 (0.95 – 4.42)



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INFILTRATOR®
water technologies

Quick4™ CHAMBER SYSTEMS

The **Quick4® Standard** Chamber

Quick4® Series

Quick4 Standard with MultiPort EndCap

The Quick4® Standard Chamber fits in a 36” wide trench and is ideal for curved or straight systems. It features the patent-pending Contour Swivel Connection™ which permits turns up to 15°, right or left. The MultiPort™ endcap allows multiple piping options and eliminates pipe fittings. The chamber’s four-foot length provides optimal installation flexibility.

Chamber Benefits:

- Advanced contouring connections swivel up to 15°, right or left
- Latching mechanism allows for quick installation
- Four-foot chambers are easy to handle and install
- The Quick4 Standard Chamber supports wheel loads of 16,000 lbs/axle with only 12” of cover
- Certified by the International Association of Plumbing and Mechanical Officials (IAPMO)

MultiPort Endcap Benefits:

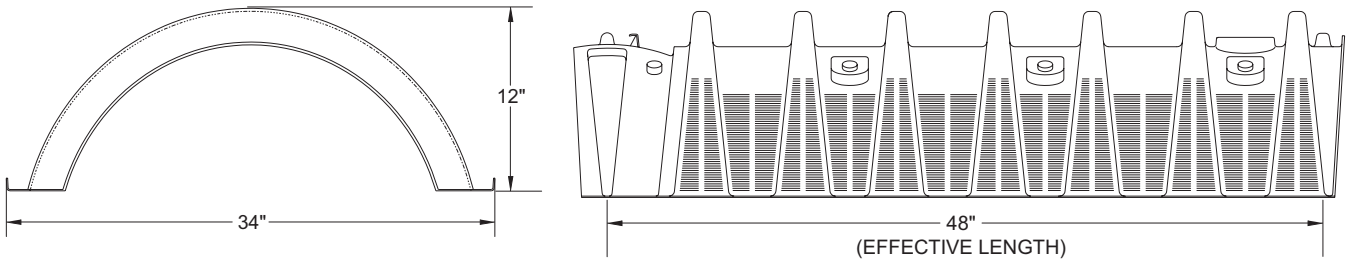
- Tear-out seals on inlet ports provide a tight fit to the pipe
- Eight molded-in inlets/outlets allow for maximum piping flexibility
- Eliminates pipe fittings
- Fits on either end of the Quick4 Standard Chamber

APPROVED in _____

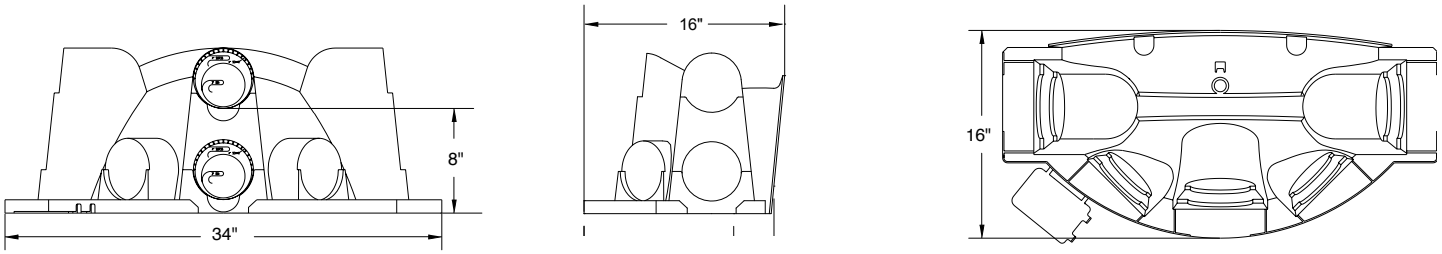
Quick4® Series

Because installations are faster with Quick4 chambers, you save on heavy equipment operation and labor.

Quick4 Standard Chamber

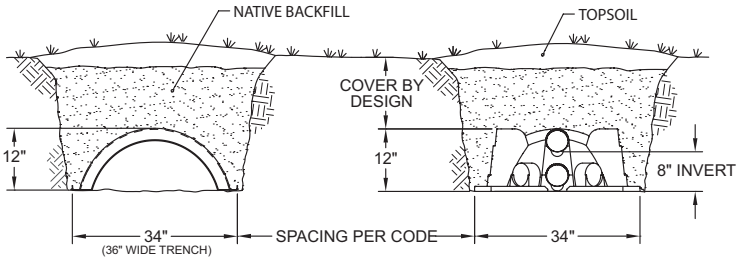


MultiPort EndCap



FRONT VIEW SIDE VIEW TOP VIEW

Typical Trench View



Quick4® Standard Chamber Specifications	
Size	34”W x 53”L x 12”H (864 mm x 1346 mm x 305 mm)
Effective Length	48” (1219 mm)
Louver Height	8” (203 mm)
Storage Capacity	43 gal (163 L)
Invert Height	8” (203 mm)

INFILTRATOR WATER TECHNOLOGIES, LLC (“INFILTRATOR”)
Infiltrator Water Technologies, LLC STANDARD LIMITED Drainfield WARRANTY

(a) The structural integrity of each chamber, endcap, EZflow expanded polystyrene and/or other accessory manufactured by Infiltrator (“Units”), when installed and operated in a leachfield of an onsite septic system in accordance with Infiltrator’s instructions, is warranted to the original purchaser (“Holder”) against defective materials and workmanship for one year from the date that the septic permit is issued for the septic system containing the Units; provided, however, that if a septic permit is not required by applicable law, the warranty period will begin upon the date that installation of the septic system commences. To exercise its warranty rights, Holder must notify Infiltrator in writing at its Corporate Headquarters in Old Saybrook, Connecticut within fifteen (15) days of the alleged defect. Infiltrator will supply replacement Units for Units determined by Infiltrator to be covered by this Limited Warranty. Infiltrator’s liability specifically excludes the cost of removal and/or installation of the Units.

(b) THE LIMITED WARRANTY AND REMEDIES IN SUBPARAGRAPH (a) ARE EXCLUSIVE. THERE ARE NO OTHER WARRANTIES WITH RESPECT TO THE UNITS, INCLUDING NO IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE

(c) This Limited Warranty shall be void if any part of the chamber system is manufactured by anyone other than Infiltrator. The Limited Warranty does not extend to incidental, consequential, special or indirect damages. Infiltrator shall not be liable for penalties or liquidated damages, including loss of production and profits, labor and materials, overhead costs, or other losses or expenses incurred by the Holder or any third party. Specifically excluded from Limited Warranty coverage are damage to the Units due to ordinary wear and tear, alteration, accident, misuse, abuse or neglect of the Units; the Units being subjected to vehicle traffic or other conditions which are not permitted by the installation instructions; failure to maintain the minimum ground covers set forth in the installation instructions; the placement of improper materials into the system containing the Units; failure of the Units or the septic system due to improper siting or improper sizing, excessive water usage, improper grease disposal, or improper operation; or any other event not caused by Infiltrator. This Limited Warranty shall be void if the Holder fails to comply with all of the terms set forth in this Limited Warranty. Further, in no event shall Infiltrator be responsible for any loss or damage to the Holder, the Units, or any third party resulting from installation or shipment, or from any product liability claims of Holder or any third party. For this Limited Warranty to apply, the Units must be installed in accordance with all site conditions required by state and local codes; all other applicable laws; and Infiltrator’s installation instructions.

(d) No representative of Infiltrator has the authority to change or extend this Limited Warranty. No warranty applies to any party other than the original Holder. The above represents the Standard Limited Warranty offered by Infiltrator. A limited number of states and counties have different warranty requirements. Any purchaser of Units should contact Infiltrator’s Corporate Headquarters in Old Saybrook, Connecticut, prior to such purchase, to obtain a copy of the applicable warranty, and should carefully read that warranty prior to the purchase of Units.

INFILTRATOR® water technologies

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Contact Infiltrator Water Technologies’ Technical Services Department for assistance at 1-800-221-4436