

TERRY

Calculated Maximum Flow Line Depth For Septic System

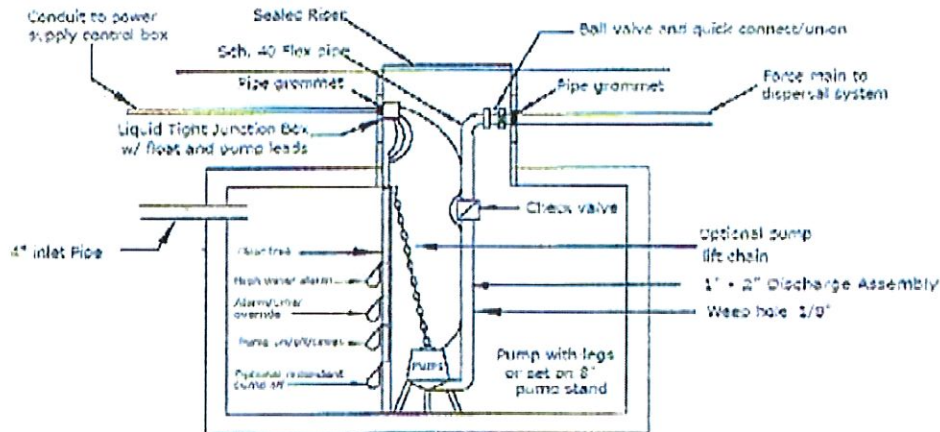
MAXIMUM DEPTH

	Flow		
Sewer Outlet	3.000 GE 2.9		
Septic Tank	3.400 GE 2.8	PUMP & ALARM	
Distribution Box	2.900 GE 2.9		

	START		CENTER		END	
	Ground	Flow	Ground	Flow	Ground	Flow
Line 1	2.900	4.400	2.900	4.442	2.900	4.483
Line 2	2.900	4.400	2.900	4.442	2.900	4.483
Line 3	2.800	4.300	2.760	4.342	2.900	4.383
Line 4	2.700	4.200	2.700	4.242	2.800	4.283

Standard Pump / Dose Calculation Worksheet

Pump Tank



To calculate Gallons per minute:

- Gallons per day ÷ loading rate 1020 sq ft. (Example: 370 gpd ÷ .75 = 493.33 or 494 sq. ft)
- Square footage required for system x dose rate. Specify Dose Rate .15 gal/ sq. ft (Max dose rate is .25 gal/ sq.ft.)
(Example: 494 sq. ft x .15 gal/sq.ft = 74.1 gal dose) 153 gal per dose.
- Take dose rate and ÷ by number of minutes for pump run time = 15 gpm calculated. Recommended minimum pump run time is 2 minutes. Calculated pump run time 10 minutes per dose. Check manufacturer for best optimal run duration.
(Example: 74.1 gal/dose ÷ 4 minutes = 18.53 or 19 gpm)

To calculate Total Head:

- Ground elevation of distribution device 2.9 - (minus) Ground elevation pump/ dose tank 3.4 = .5
+ "Pump off" elevation in dose chamber / tank to ground (typically 4.25 ft) 4.75 = (Elevation / Static Head)
- Distance to be pumped 20' Pipe Size: 2". Calculate Friction Loss (Use Table on back of page)
.45 Friction loss.
- Add additional headloss for distribution device if not using d-box: N/A. Attach calculation sheet for the device.
- Total Head (TDH) 5.2. (Elevation / Static Head) + Friction Loss + Distribution device (if needed) = Total Head

Pump Selected (brand, model) Zeller BN 153 Attach pump curve and spec sheet.

Alarm Selected (brand, model) Zeller D 0623 Attach spec sheet.

Calculate Drawdown: Maintain enough effluent to cover the pump.

Length" x Width" x 1" ÷ 231 = Gallons per inch (Example 72" x 16" x 1" = 1152³ inches ÷ 231 = 4.98 or 5 gals/ inch)

Drawdown: 5.5 gallons per inch in tank. Drawdown in inches per dose 28"

Set pump float and alarm float. (Maintain a minimum of 1 inch difference between the pump "on/off" float and the alarm float.)

NOTE: Gallons per inch may vary between tanks/pump chambers by different manufacturers.