

GRAVITY POWERED PRESSURE DOSING CALCULATOR FOR SEPTIC FIELDS

Before using this program read Guideline document

(updated March 22, 2019)

Project Name and Date : Example Jan. 2020

Designer: Sepp Tickfield ROWP

| SYSTEM INPUTS | |
|---|------|
| Static head (vertical) available at site (ft.) (Mid level in dosing tank to field inlet manifold) | 9.00 |
| Total number of orifices in field or section (max.150) | 67 |
| Diameter of orificies (inches) | 3/16 |
| Desired Squirt height (ft.) (Start with minimum) | 2.30 |
| Total length of transport pipe - dosing tank to field manifold <i>Include equiv. length of fittings (ft.): Pipe equiv. 90 elbow - 8' 45 elbow - 3' Coupling - 6'</i> | 85 |

| BASE SYSTEM | | |
|---|-------------|-------------|
| <i>(includes 30 ft. of transport pipe) (Refer to www.premierplastics.com for actual test results)</i> | | |
| Transport pipe diameter of base system | 2"Pipe | 3"Pipe |
| Static head required for squirt height (ft.) | 6.75 | 6.53 |
| <i>(Derived from experimental data)</i> | | |

| EXTENDED TRANSPORT PIPE (OVER 30 ft.) | |
|--|--------------|
| Total US gallons per minute (Reference only) | 45.44 |
| Diameter of extended transport pipe (inches) (try options) | 2.00 |
| Friction head loss - ft. per 100ft. (Reference only) | 3.96 |
| Friction head loss for extended transport pipe (ft.) | 2.18 |

| OUTPUT** | | |
|--|--------------------|--------------------|
| Transport pipe diameter of base system | 2"Pipe | 3"Pipe |
| Static head required for base system (ft.) (see above) | 6.75 | 6.53 |
| Friction head loss for extended transport pipe (ft.) (see above) | <u>2.18</u> | <u>2.18</u> |
| Total static head required for desired squirt height (ft.) | 8.93 | 8.71 |
| Net excess static head available (ft.) (-) negative (If not close to zero try another squirt height or pipe size (+/-)) <i>For maximum squirt height potential this number would be zero.</i> | +0.07 | +0.29 |

****Valid only for fully flooded (vented) flow in transport pipe**

This guideline was developed to the best of our knowledge and is not intended as a substitute for evaluation performed by a registered industry professional. Nominal accuracy: ± 15%



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| VOLUME OF DISCHARGE PIPING (US Gal.) | | | |
|--------------------------------------|--------------|-------------|--------|
| | Diam. (ins.) | Length(ft.) | Volume |
| Transport pipe | 2.00 | 85.00 | 13.89 |
| Lateral piping | 1.25 | 300.00 | 19.15 |

| RECOMMENDED MINIMUM DOSE (US Gal.) USING 3 INCH FLOUT FOR RESIDENTIAL PRESSURE FIELDS. | |
|--|-----------|
| | Min. Dose |
| 2 ins. diameter transport pipe: (2.0 x Transport volume) + (2.0 x Lateral volume) | 66 |
| OR | |
| 3 ins. diameter transport pipe: (3.0 x Transport volume) + (2.0 x Lateral volume) | 132 |

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For the record.

Daily Design Flow _____

Recommended Dose Vol. _____

Design Doses per Day _____

Recommended Dosing Tank Package:

Premier Plastics Model no. _____

Dose Counter Required? _____