Water
Management

Pump Calculations for Gary Smith
Iredell County Permit #111664

Pressure manifold: 6 lines @ ½" taps, 2 feet head.
=6 lines @ 7.11 gpm
=43 gpm

Supply line: 2" Sch.40 (minimum scour rate 20 gpm)

Elevation from pump tank water level to top of pressure manifold level: 12 feet.
Friction head 80 feet 2" Sch.40 @ 45gpm = 3 feet (3.77 ft head/100 linear ft).
Add 20% friction for fittings: 0.6 feet.

Total dynamic head: 16 feet

Pump to deliver **43 gpm @ 16 feet head.**

Dose: 2/3 - 3/4 of trench pipe volume.
Volume 4" pipe = 4(3.14)(12) cu. in./ft. @ 360 ft. = 54260 cu. in.
/231 cu.in./gal = 235 gallons

2/3 – ¾ of 235 gallons = dosing range: 157 – 176 gallons. **Select 173 gal.**

Vertical tank dose:
Tank inside dimensions: 50" x 100" = 5000 cu. in./in. water level = 21.6 gal
Select 8 in. @ 21.6 gal/in. = 173 gallons.

Hydromatic SHEF40 4/10 HP

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