

Pump Selection for a Pressurized System - Multiple Family Residence Project

Pray, MT Property / Drainfield Dosing Pump

Parameters

Discharge Assembly Size	2.00	inches
Transport Length	40	feet
Transport Pipe Class	40	
Transport Line Size	2.00	inches
Distributing Valve Model	None	
Max Elevation Lift	8	feet
Manifold Length	28	feet
Manifold Pipe Class	40	
Manifold Pipe Size	2.00	inches
Number of Laterals per Cell	10	
Lateral Length	72	feet
Lateral Pipe Class	40	
Lateral Pipe Size	1.00	inches
Orifice Size	1/8	inches
Orifice Spacing	5	feet
Residual Head	6	feet
Flow Meter	None	inches
'Add-on' Friction Losses	5	feet

Calculations

Minimum Flow Rate per Orifice	0.47	gpm
Number of Orifices per Zone	150	
Total Flow Rate per Zone	72.2	gpm
Number of Laterals per Zone	10	
% Flow Differential 1st/Last Orifice	5.7	%
Transport Velocity	6.9	fps

Frictional Head Losses

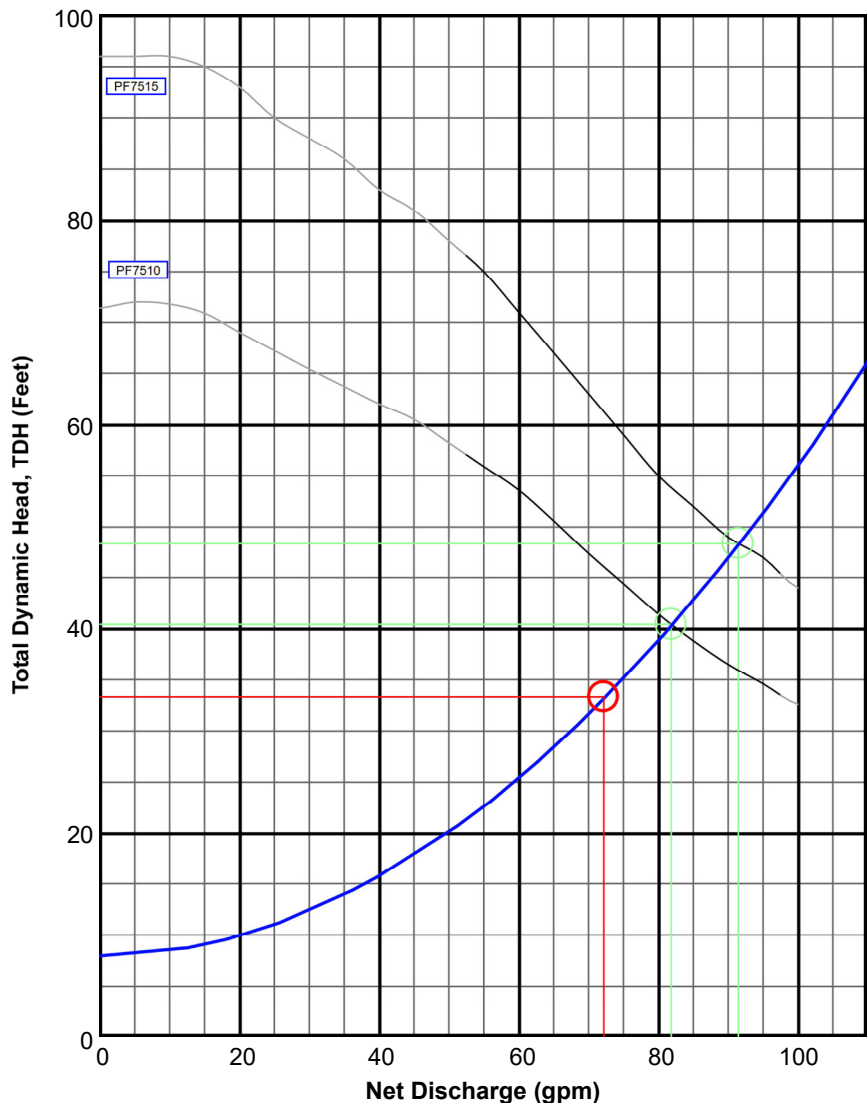
Loss through Discharge	10.4	feet
Loss in Transport	3.2	feet
Loss through Valve	0.0	feet
Loss in Manifold	0.6	feet
Loss in Laterals	0.9	feet
Loss through Flowmeter	0.0	feet
'Add-on' Friction Losses	5.0	feet

Pipe Volumes

Vol of Transport Line	6.9	gals
Vol of Manifold	4.9	gals
Vol of Laterals per Zone	32.3	gals
Total Volume	44.2	gals

Minimum Pump Requirements

Design Flow Rate	72.2	gpm
Total Dynamic Head	34.1	feet



Pipe Volumes

Vol of Transport Line	6.9	gals
Vol of Manifold	4.9	gals
Vol of Laterals per Zone	32.3	gals
Total Volume	44.2	gals

PumpData

PF7515 High Head Effluent Pump
75 GPM, 1-1/2HP
230V 1Ø 60Hz

PF7510 High Head Effluent Pump
75 GPM, 1HP
230V 1Ø 60Hz

Legend

System Curve:	—
Pump Curve:	—
Pump Optimal Range:	—
Operating Point:	○
Design Point:	○

