

Flow = 7.5 GPM Delta Z = 231 ft

Material: Galvanized CS, Sched 40 Above Ground, 1.5" HDPE Below Ground

DIA 1.5 inch

Area 0.0141377 ft²

Velocity = 1.18 fps

		Unit Le	Qty	Le
Pipe			1	50
Elbow	90 deg LR	4.03	10	40.3
	45 deg SR	2.15	0	0
	Weld r/d = 1	0		0
	Weld r/d = 2	0		0
	Miter 45 deg	0		0
	Miter 90 deg	0		0
	Tee Thru	2.68	4	10.72
	Branch	8.05	2	16.1
	Bend Close Return	6.71		0
	Valve Gate	1.07	3	3.21
	Swing Check	13.4	1	13.4
	Angle	20.1		0
	Globe	45.6		0
	Butterfly	0		0
Total				134

HDPE Pipe

SDR 11.0

Head Loss 3.64 PSI
8 ft

from CHD: f = 0.51 ft/cft

hf = 0.7 ft

P1/rho = -10 ft
P2/rho = 0 ft
v1/2gc = 0 ft
v2/2gc = 0 ft
hE = 0 ft

hA = (P1-P2/rho) + (v2² - v1²)/2gc + (z2-z1) + hE + hf

hA = 241.7 ft + 8 ft = 250.1 ft
SF 1.15

TDH = 288 ft

Eff = 0.65 <----- ASSUMED 65% EFFICIENCY
BHP = 0.84 HP = 625 Watts