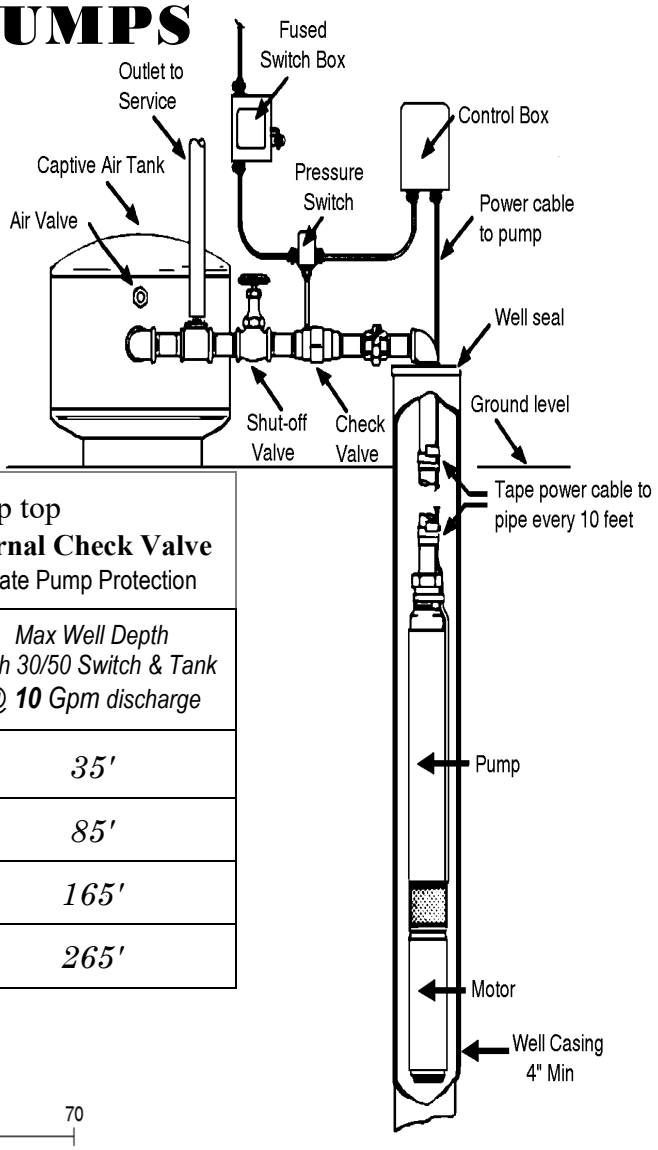
Sta-Rite Pumps

Conversion Factors

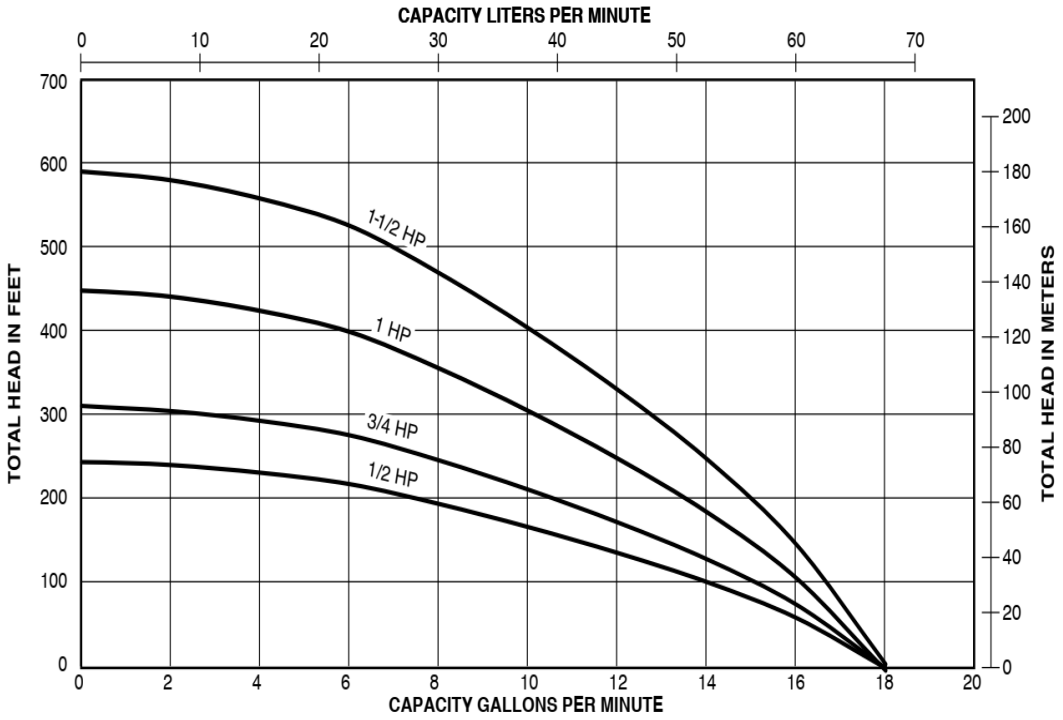
1 Foot of Head = .433 psi
1 psi = 2.31 Feet of Head
50 psi = 115 Feet of Head



Submersible Pumps

Stainless Steel 4″ Submersible Pump with 1¼″fip top
3-Wire with ground 230 volt ♦ 12 Month Warranty ♦ With Internal Check Valve
***Price Includes Control Box ♦** * Add Optional Pentek S"PP-233-1.5 for Ultimate Pump Protection

SK-10gpm Series 4" Submersible Pumps			*Total head @ 10 Gpm discharge*	*Max Well Depth With 30/50 Switch & Tank @ 10 Gpm discharge*
S10K05231	$ 916.00	½ HP	*100' of Head*	*35'*
S10K07231	1,076.00	¾ HP	*200' of Head*	*85'*
S10K10231	1,360.00	1 HP	*280' of Head*	*165'*
S10K15231	1,844.00	1½ HP	*380' of Head*	*265'*



Control Boxes

½ HP	$ 171.00
¾ HP	180.00
1 HP	188.00
1½ HP	295.00

Pentek SPP-233-1.5 Pump Protector

1/3-1½ HP	$ 565.00

♦Protect Against Dry Well
♦Rapid Cycling
♦High or Low Voltage

Facts About Water

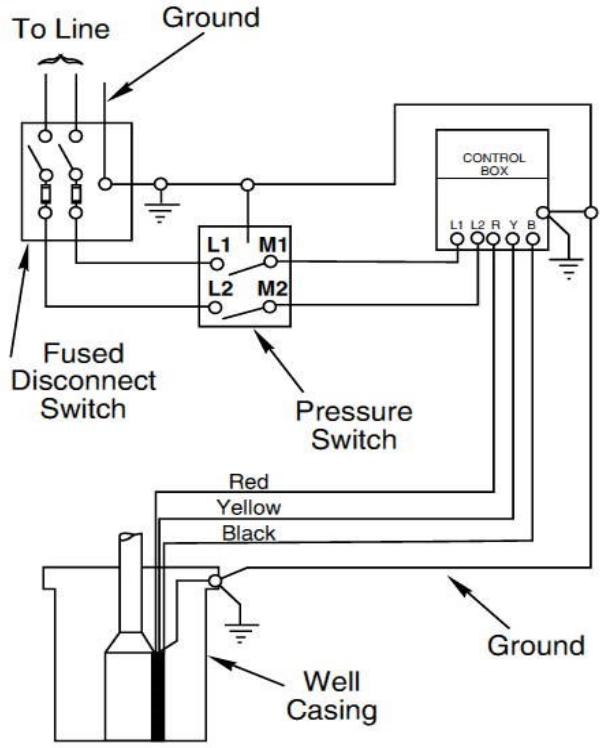
1 Foot of Head = .433 *psi*
2.31 Feet of Head = 1 *psi*
115.5 Feet of Head = 50 *psi*
1 Gal of fresh water = 8.333 lb.
1 cubic foot of water = 7.48 Gal = 62.33 lb.

Water expands 4.34% when heated from 40ºF to 212ºF.
A 40 gal water heater will gain an extra ⅔ gal of water volume when heating water from 55ºF to 120ºF.
If a house has a check valve on the incoming cold-water line, a small expansion tank might be needed to prevent the P&T valve from continuously opening.

The Static-Head of a water system equals the height difference between a water tank or pump and the faucet in the house.

The **Dynamic-Head** of a water system equals the **Static-Head** minus the **Friction-Loss** in the piping, fittings, and valves.

A 1000' run of 1" PVC pipe from a water tank 100' higher than the house will have a **Static-Head** of 43psi. The **Dynamic-Head** will be less than 29psi @ 10gpm. Using 1¼" PVC pipe will give a **Dynamic-Head** of 39psi @ 10gpm.



1 **HP** = 745.7 **Watts** 1 **kW** = 1.341 **HP**
I(Current Draw) = **HP x** (745.7 Watts) / **V**(Volts)

Water Line Storage Capacities

Gallons per 100' = D^2(Pipe Diameter Inches) **x 4.085**

e.g. 100' of 1" water line holds 4.085gal of water.

Friction Loss per 100' of PVC Pipe
Pounds / Sq. Inch

GPM	½"	¾"	1"	1¼"	1½"	2"
1	.43	.12				
2	.86	.24	.13	.04	.01	
5	4.87	1.36	.39	.12	.06	.02
7	8.95	2.49	.72	.21	.10	.04
10	17.03	4.74	1.37	.40	.20	.07
15	↘	10.06	2.90	.85	.43	.14
20		17.13	4.94	1.45	.74	.25
25		↘	7.45	2.18	1.12	.37
30			10.46	3.06	1.57	.52
35			13.91	4.07	2.09	.70
40			↘	5.22	2.68	.89
45	*Use Next Pipe Size*			6.49	3.33	1.11
50				7.88	4.04	1.35
60				↘	5.67	1.89
80					9.68	3.22
100					14.61	4.87

Friction Loss per 100' of Poly Pipe
Pounds / Sq. Inch

½"	¾"	1"	1¼"	1½"	2"	GPM
.56	.15					1
1.84	.48	.15	.04			2
9.04	2.38	.76	.21	.10		5
13.00	3.70	1.20	.32	.18	.05	7
30.95	8.08	2.56	.69	.33	.10	10
↘	16.58	5.25	1.42	.68	.21	15
	↘	8.69	2.36	1.13	.34	20
		12.92	3.50	1.67	.51	25
		↘	4.82	2.31	.70	30
			6.36	3.03	.92	35
			8.08	3.84	1.17	40
Use Next Pipe Size			10.02	4.76	1.44	45
			↘	5.76	1.73	50
				7.97	2.42	60
				↘	4.02	80
					6.00	100