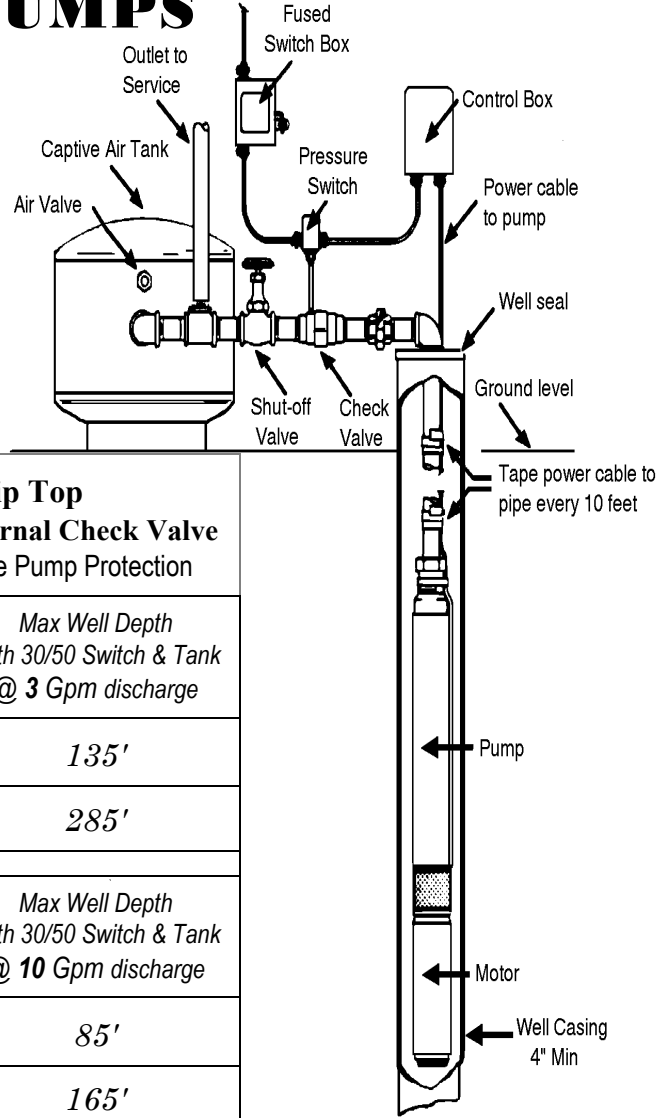


# Sta-Rite PUMPS

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



## Submersible Pumps

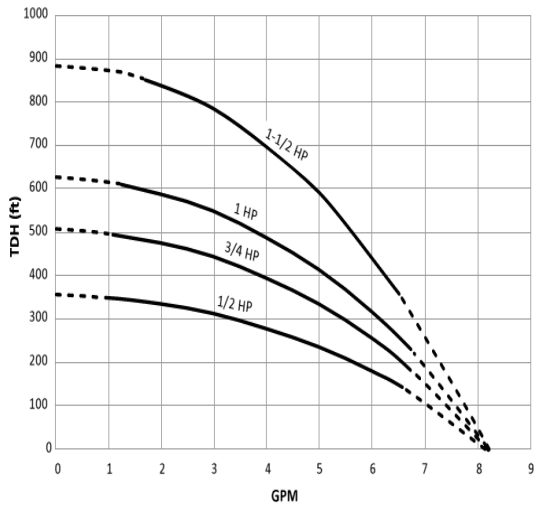
**Stainless Steel 4" Submersible Pump with 1 1/4" Fip Top**  
 3-Wire with ground 230 volt • 12 Month Warranty • With Internal Check Valve  
 \*Price Includes Control Box • \* Add Optional Pumptec™ for Ultimate Pump Protection

<b>SK-5gpm Series</b>			Total head @ 5 Gpm discharge	Max Well Depth With 30/50 Switch & Tank @ 3 Gpm discharge
4" Submersible Pumps				
<b>S5K05231</b>	\$ 630.00	1/2 HP	210' of Head	135'
<b>S5K07231</b>	750.00	3/4 HP	300' of Head	285'

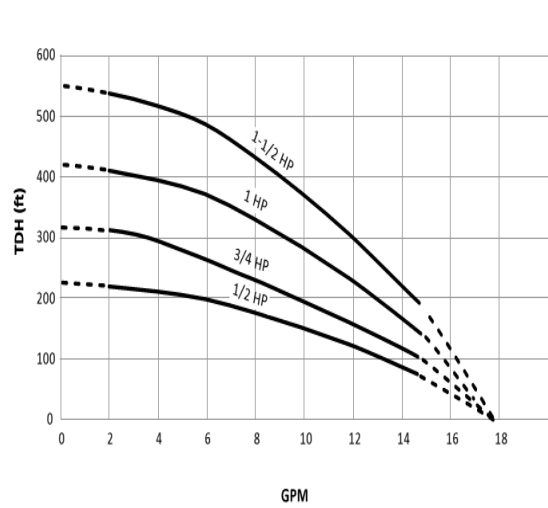
  

<b>SK-10gpm Series</b>			Total head @ 10 Gpm discharge	Max Well Depth With 30/50 Switch & Tank @ 10 Gpm discharge
4" Submersible Pumps				
<b>S10K07231</b>	\$ 648.00	3/4 HP	200' of Head	85'
<b>S10K10231</b>	795.00	1 HP	280' of Head	165'
<b>S10K15231</b>	1,095.00	1 1/2 HP	380' of Head	265'

**PUMP PERFORMANCE - 5 GPM**



**PUMP PERFORMANCE - 10 GPM**



## Control Boxes

1/2 HP	\$ 95.00
3/4 HP	100.00
1 HP	104.00
1 1/2 HP	166.00

## Franklin Pumptec Pump Protector

1/3-1 1/2 HP	\$ 320.00
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- Protect Against Dry Well
- Rapid Cycling
- High or Low Voltage

(PumpTec -V), - X

### FACTS ABOUT WATER

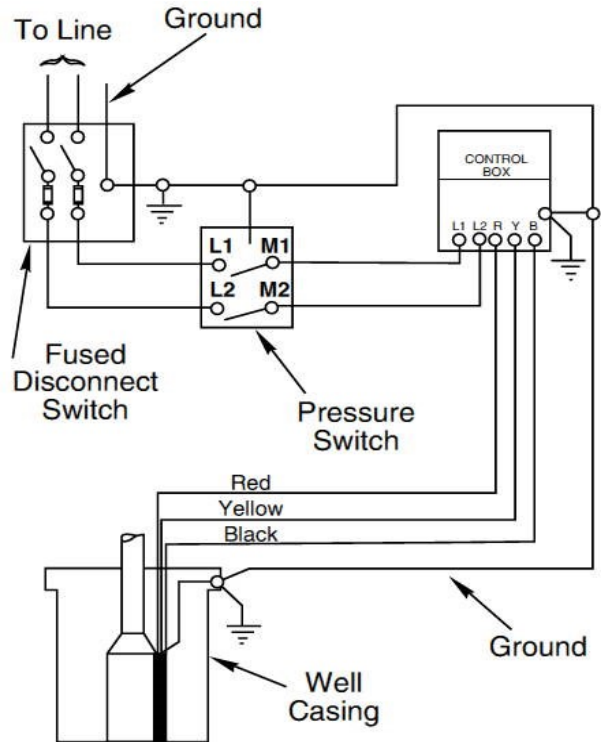
- 1 Foot of Head = .433 LB/sq.ft
- 2.31 Feet of Head = 1 LB/sq.ft
- 115.5 Feet of Head = 50 LB/sq.ft
- 1 Gal of fresh water = 8.333 lb.
- 1 cubic foot of water = 7.48 Gal = 62.33 lb.

Water expands 4.34% when heated from 40°F to 212°F. A 40 gal water heater will gain an extra 2/3 gal of water volume when heating water from 55°F to 120°F. 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 1 1/4" PVC pipe will give a **Dynamic-Head** of 39psi @ 10gpm.



$$1 \text{ HP} = 745.7 \text{ Watts} \quad 1 \text{ kW} = 1.341 \text{ HP}$$

$$I(\text{Current Draw}) = \text{HP} \times (745.7 \text{ Watts}) / V(\text{Volts})$$

**Water Line Storage Capacities**  
**Gallons per 100' = D<sup>2</sup>(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	1/2"	3/4"	1"	1 1/4"	1 1/2"	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

1/2"	3/4"	1"	1 1/4"	1 1/2"	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