

Table 3.1 Water Handling Unit Estimations

Description			
ID = Inner Diameter		Rounded Values	
Used in			
U.S. Measure			
Field Estimations			
GOOD TO MEMORIZE			
ID = Inner Diameter			
Volume (Capacity)		U.S. Measure	
Volume (Capacity)			
One hose length			
1-1/2-in ID x 100 ft		9 gal	9.2 gal
1-in ID x 100 ft		4 gal	4.1 gal
3/4-in ID x 50 ft		1 gal	1.2 gal
5/8-in ID x 50 ft		1 gal	0.8 gal
		Weight	Weight
1 gal of water at 20°C		8 lb	8.3 lb
		Pressure	Pressure
1 ft of water head (1 in ² column of water)			0.5 psi

Atmospheric pressure	15 psi @ sea level	14.7 psi @ sea level
1,000 ft increase in elevation	0.5 psi decrease in atmospheric pressure	0.5 psi decrease in atmospheric pressure
	Draft (lift)	Draft (lift)
1 in of mercury	1 ft	1.134 ft
1,000 ft increase in elevation	1 ft loss	1 ft loss
Maximum theoretical lift	34 ft	33.9 ft
Maximum attainable lift with 20 hp pump	29 ft	29.4 ft
Maximum practical attainable lift	27 ft	22.4 ft

* Pump lift varies with pump efficiency, which decreases proportionately to the hours of use.