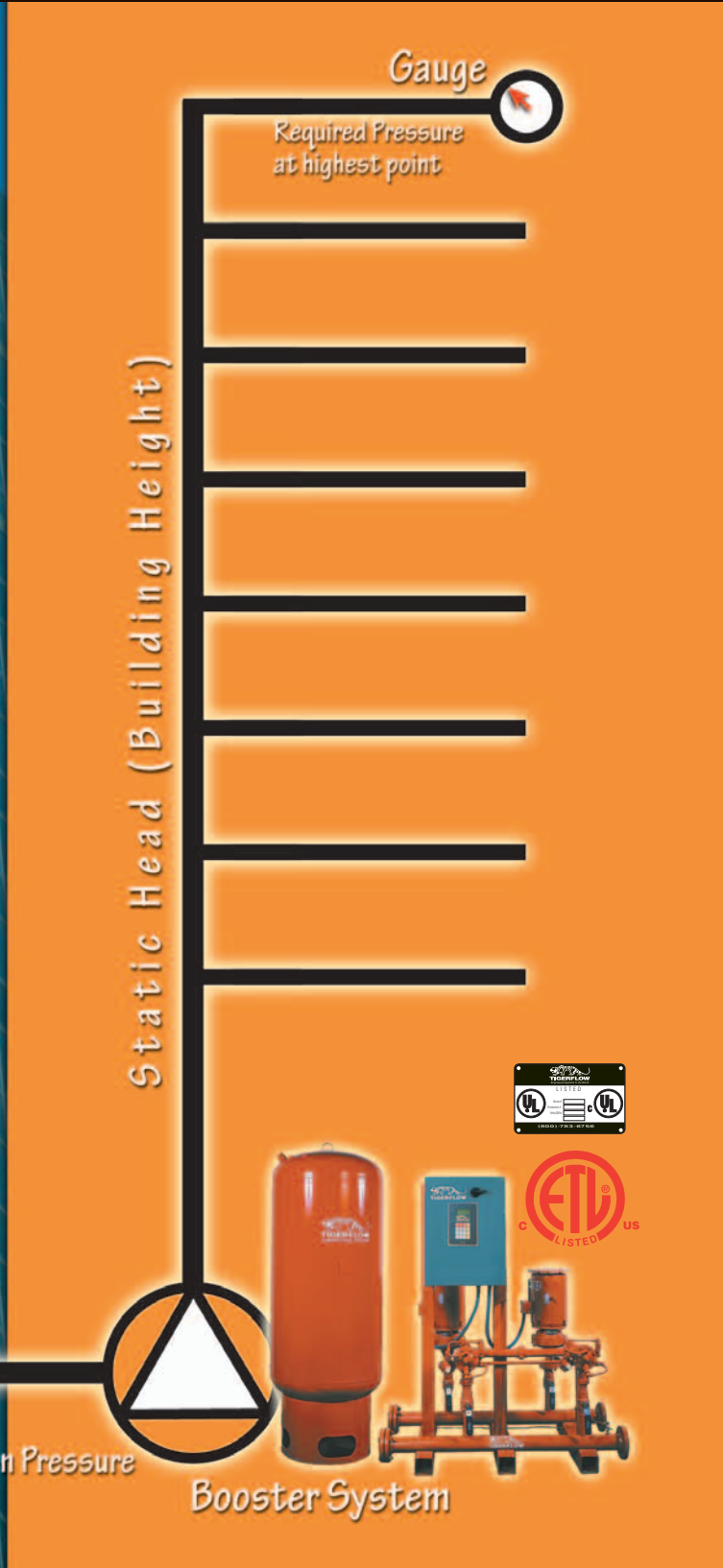




**TIGERFLOW**<sup>®</sup>  
*Engineered Systems to the World*

# Booster System Sizing Manual



Water Meter

Backflow Preventer

Suction Pressure

Booster System

# Booster System Sizing Manual



## I. Pressure Required:

- A.) Pressure Required at Highest Fixture..... \_\_\_\_\_ PSIG  
(Estimate 30-40 PSIG +/-, or specified requirement)
- B.) Static Head (Building Height)..... \_\_\_\_\_ PSI
- C.) Piping and System Friction Loss (10% of static head) ..... \_\_\_\_\_ PSI
- D.) Required System Processing (A+B+C)..... \_\_\_\_\_ PSI
- E.) Subtract Minimum Suction Pressure Available At Pump Station ..... (\_\_\_\_\_)PSI  
(Minimum suction pressure at street minus pressure drop through backflow prevention and/or water meter)
- F.) Subtotal (D - E) ..... \_\_\_\_\_ PSI
- G.) Internal Booster Station Loss ..... 5 PSI
- H.) Total Pump Boost (Differential) Pressure Required (F + G)..... \_\_\_\_\_ PSI
- I.) Convert Pump Boost PSI to TDH .....(PSI x 2.31= \_\_\_\_\_ Ft TDH)

## II. Fixture Unit Table:

Fixture	Use	Fixture Units	No. of Fixtures	Total
Bathroom Group Flush Valve	Public	8		
Bathroom Group Flush Tank	Private	6		
Lavatory	Public	2		
Urinal-Flush Valve	Public	5		
Water Closet-Flush Valve	Public	10		
Water Closet-Flush Tank	Private	5		
Bathtub Public	Public	4		
Bathtub Private	Private	2		
Bathtub Immersion	Public	20		
Shower (Standard)	Public	4		
Sink-Kitchen	Public	4		
Sink-Kitchen	Private	2		
Sink-Services	Public	3		
Garbage Disposal	Public	3		
Garbage Disposal	Private	2		
Dishwasher	Public	6		
Dishwasher	Private	2		
Washing Machine	Public	4		
Washing Machine	Private	2		
Ice Machine	Public	1		
Steam Tables	Public	1		
Hose Connection-3/4"	Public	6		
<b>Total Fixture Units</b>				

### III. System Demand GPM Fixture unit to system GPM

TYPICAL SYSTEM GPM			
Fixture Units	Apts./ Office	Hotel/ Motel	Hospital/ School/ Prison
100	70	80	100
300	80	90	100
600	100	120	130
900	120	125	140
1200	140	150	160
1500	150	170	190
1650	170	180	200
1750	180	190	210
2000	190	200	220
2200	210	220	230
2500	220	240	260
3000	250	275	300
4000	300	350	375
5000	350	400	450
6000	400	450	500
7000	450	500	550
8000	500	550	600
10,000	550	600	650

### IV. Total System Demand (GPM):

- A) System Demand (Total Chart III)..... GPM
- B) Special Duty Demands..... GPM  
(Cooling Tower Makeup, etc.)
- C) Total Systems Demand ..... GPM

### V. Suggested System Capacity Splits (% of System GPM)

DUPLEX (0 - 300 GPM)	TRIPLEX: (301 - 3000+ GPM)
50 - 50	10-50-50
33 - 67	20-40-40
65 - 65	33-33-33
100 - 100	50-50-50

<b>Pump #1</b>
Size _____, _____ GPM@ _____'TDH _____ HP
<b>Pump #2</b>
Size _____, _____ GPM@ _____'TDH _____ HP
<b>Pump #3</b>
Size _____, _____ GPM@ _____'TDH _____ HP

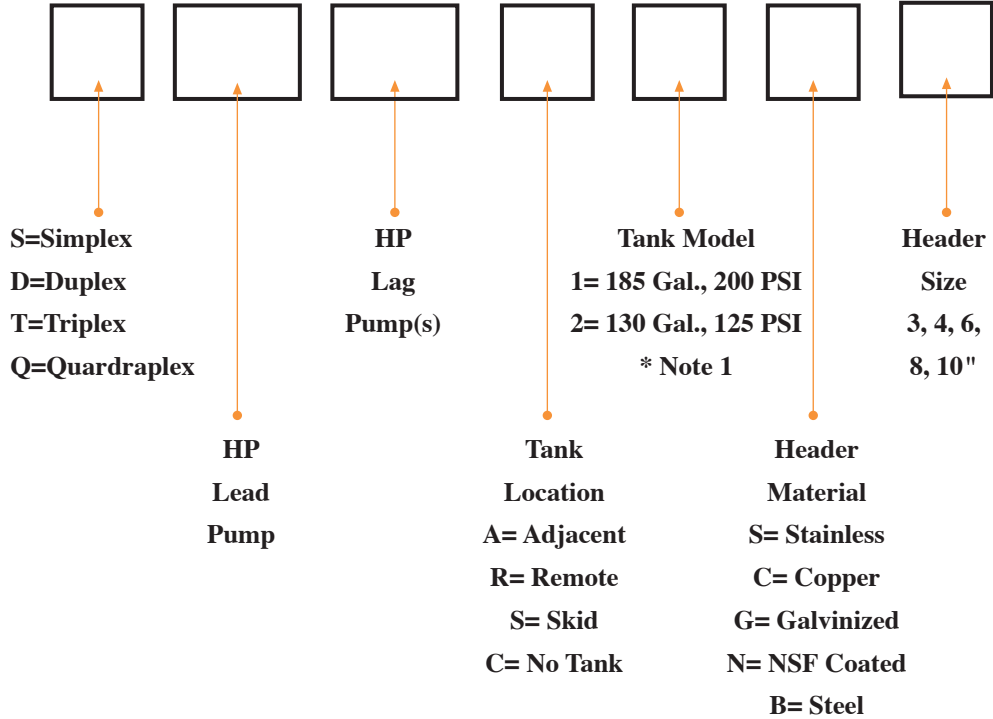
### VI. Maximum Flow Rate (GPM) Per Header Size:

Size	GPM
3"	300
4"	600
6"	1000
8"	1800
10"	2800





VII. System Model Number:



**\*Note 1**

Tanks are ASME Code, NB Stamped with an NSF-61 approved replaceable bladder, 100% drawdown, bottom fill connection, drain valve, pressure gauge and guard.



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