SELECTION OF CP BOSS CONSTANT PRESSURE BOOSTER SYSTEMS

TITLE:_____

CONTACT INFO:_____

DETERMINE FIELD CONDITIONS:

Suction Pressure _____psig (B)
(City Supply of Tank)
Total System Flow _____gpm
System Discharge Pressure _____psig (A)
Pump/Motor Speed ❑ 3600 rpm
Motor Enclosure ❑ ODP ❑ TEFC
Electrical Supply Information
Phase ❑ 1 ❑ 3
Voltage ❑ 115 ❑ 208 ❑ 230 ❑ 460

SYSTEM CONFIGURATION:

❑ Duplex ❑ Triplex

SELECT MANIFOLD/BASE PACKAGE:

Determine Manifold Size	GPM
2"	0 – 140 gpm
3"	141 – 300 gpm
4"	301 – 600 gpm
6"	601 – 1000 gpm

Suction/Discharge MANIFOLD SIZE:
❑ 2" Manifolds ❑ 3" Manifolds ❑ 4" Manifolds ❑ 6" Manifolds
Suction/Discharge MANIFOLD MATERIAL:
❑ Galvanized Steel ❑ Copper ❑ Stainless Steel

DETERMINE PUMP FLOW REQUIREMENTS:

Duplex: P1_____% Triplex: P1_____%
P2_____% P2_____%
P3_____%

DETERMINE REQUIRED FLOW PER PUMP IN GPM:

(Total System Flow x % for each Pump)
Duplex: P1_____ gpm Triplex: P1_____gpm
P2_____gpm P2_____gpm
P3_____gpm

DETERMINE PRV SIZE(S):

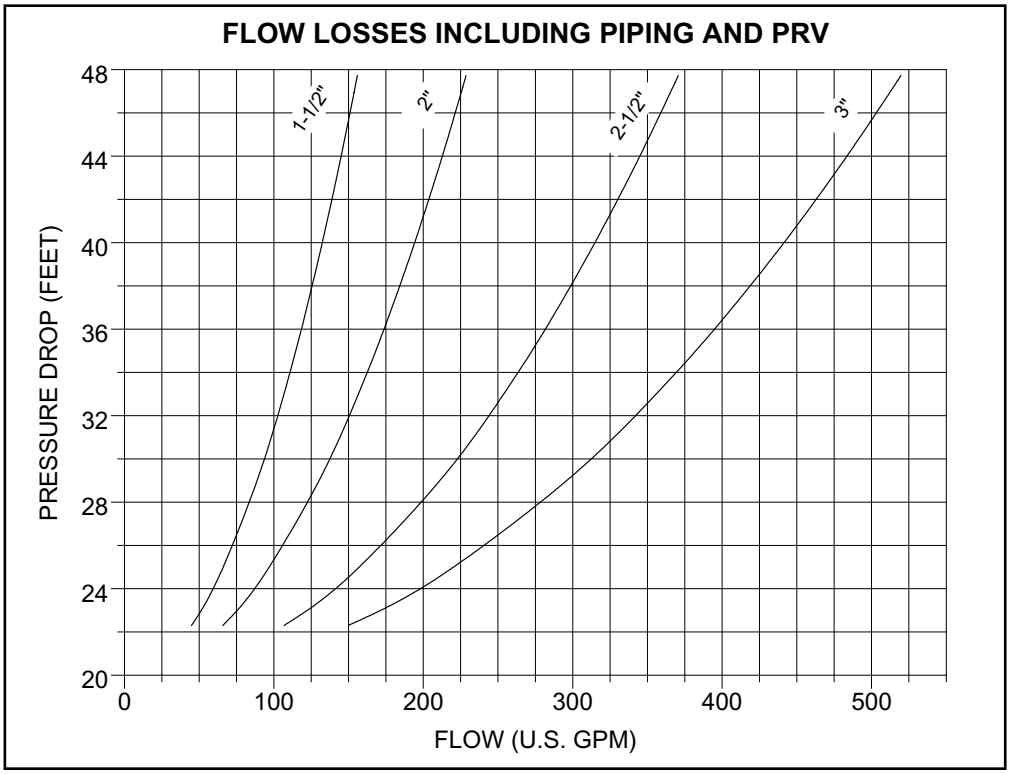
(PRV size is based on individual pump flows)

PUMP FLOW	0-110 GPM	111-191 GPM	192-280 GPM	281-435 GPM
PRV SIZE	1-1/2"	2"	2-1/2"	3"

Duplex: PRV1_____in. Triplex: PRV1_____in.
PRV2_____in. PRV2_____in.
PRV3_____in.

DETERMINE SYSTEM/PIPING/PRV FLOW LOSSES:

C: Determine Flow Losses based on PRV size:_____FT.



(See Chart Below)

Duplex: P1 Flow Losses_____Ft (C1) Triplex: P1 Flow Losses_____Ft (C1)
P2 Flow Losses_____Ft (C2) P2 Flow Losses_____Ft (C2)
P3 Flow Losses_____Ft (C3)

CALCULATE REQUIRED PUMP TDH: [(A - B) X 2.31] + C

A: Required System Discharge Pressure (From Field Conditions)
B: System Suction Pressure (From Field Conditions)
C: (1,2,3): Flow Losses (From Chart Above)

P1 [(A)_____PSIG - (B)_____PSIG] x 2.31 + (C1)_____Ft. = _____Ft.
P2 [(A)_____PSIG - (B)_____PSIG] x 2.31 + (C2)_____Ft. = _____Ft.
P3 [(A)_____PSIG - (B)_____PSIG] x 2.31 + (C3)_____Ft. = _____Ft.

Individual Pump Duty Points:

P1 _____GPM @_____Ft. TDH
P2 _____GPM @_____Ft. TDH
P3 _____GPM @_____Ft. TDH

TANK SELECTION & MOUNTING OPTIONS:

Select the tank size required:

❑ 120-132 gallon ❑ 158-165 gallon ❑ 211-220 gallon

Select tank pressure:

❑ 125 ❑ 175

Tank mounting:

❑ Remote (by others) ❑ Factory mounted on system base

PUMP & MOTOR SELECTION:

Select required pumps from the CP Boss Bulletin. Curves are available from the 390 section of the Aurora Pump catalog or H2Optimize.

CONTROL PANEL SELECTION:

Control Panel Configuration:

❑ Duplex ❑ Triplex

Controller Phase:

❑ 1 ❑ 3

Controller Voltage:

❑ 115 ❑ 208 ❑ 230 ❑ 460

Pump Horsepower Requirements:

Duplex: P1_____HP Triplex: P1_____HP
P2_____HP P2_____HP
P3_____HP

Pump Sequencing:

❑ Pressure Sensing ❑ Flow Sensing ❑ Current Sensing

Control Panel Options

❑ A High System Pressure Switch & Light
❑ B High Suction Pressure Switch & Light
❑ C Low System Pressure Switch & Light
❑ D Three Phase Lightning Arrestor
❑ E O/L Trip Light (alarm w/silence PB Std)
❑ F Failure to Start Light
❑ G Circuit Breakers in Place of Fuses
❑ H Individual Motor Disconnects
❑ J NEMA 4 Enclosure
❑ K NEMA 12 Enclosure
❑ L PLC Display Module

Control Panel Options Cont.

- ❑ M PLC Computer Link Cable
- ❑ N PLC Memory Cartridge
- ❑ P Lead/Lag Manual Selector Switch
- ❑ Q Remore Alarm Contacts
- ❑ R Space Heater with Thermostat
- ❑ T Tank Pressure Switch
- ❑ W Elapsed Time Meter
- ❑ X Pressure Transducer
- ❑ Z PLC Real Time Clock

SYSTEM TESTS:

Standard Factory Test: All CP Boss systems are factory tested to assure proper sequencing to meet the design flows and pressure.

OPTIONAL FACTORY TESTS

❑ Certified Test ❑ Witness Test

SYSTEM DIMENSIONS:

Dimension Page_____(from catalog)