

AURORA 770 CP BOSS

SELECTION DATA

Section 770 Page 71
Dated August 2002

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 ☐ 1800 rpm
Motor Enclosure ☐ ODP ☐ TEFC
Electrical Supply Information
Voltage ☐ 208 ☐ 230 ☐ 460

SYSTEM CONFIGURATION:

☐ Duplex ☐ Triplex

PUMP ORIENTATION:

☐ Horizontal ☐ Vertical

SELECT MANIFOLD/BASE PACKAGE:

Determine Manifold Size	Duplex	Triplex
3"	0 – 250 gpm	0 – 250 gpm
4"	251 – 450 gpm	251 – 450 gpm
6"	451 – 800 gpm	451 – 1200 gpm

Suction/Discharge MANIFOLD SIZE:

☐ 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

AURORA 770 CP BOSS

SELECTION DATA

DETERMINE PRV SIZE(S):

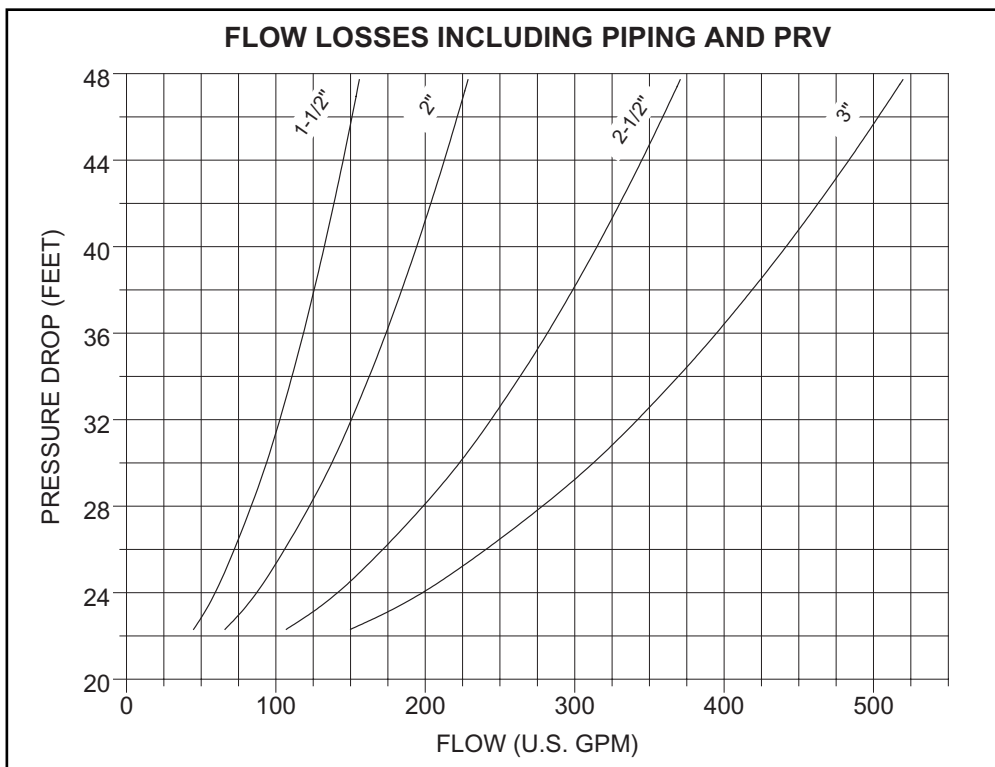
(PRV size is based on individual pump flows)

PUMP FLOW	≤ 80 GPM	≤ 150 GPM	≤ 250 GPM	≤ 400 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.



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)

AURORA 770 CP BOSS

SELECTION DATA

Section 770 Page 73

Dated August 2002

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 340 section of the Aurora Pump catalog or H2Optimize.

CONTROL PANEL SELECTION:

Control Panel Configuration:

☐ Duplex ☐ Triplex

Controller Voltage:

☐ 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 Remote 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)