PENTAIR

CP BOSS

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Constant Pressure Booster Systems

Capacities to 1200 GPM (272.5 M_3/HR)
Pressures to 175 psi (123 M)
Potable Water Application

Constant Pressure Pumping Introduction

CP Boss, Aurora's packaged constant pressure booster systems are designed to meet the ever increasing demand of variable flows in high-rise, commercial, municipal and industrial buildings. These PLC based systems are available in horizontal and vertical configurations. Easy to select and install, pre-engineered duplex and triplex units are available for quick delivery. Each system is performance tested for trouble free operation and ease of installation and start-up.

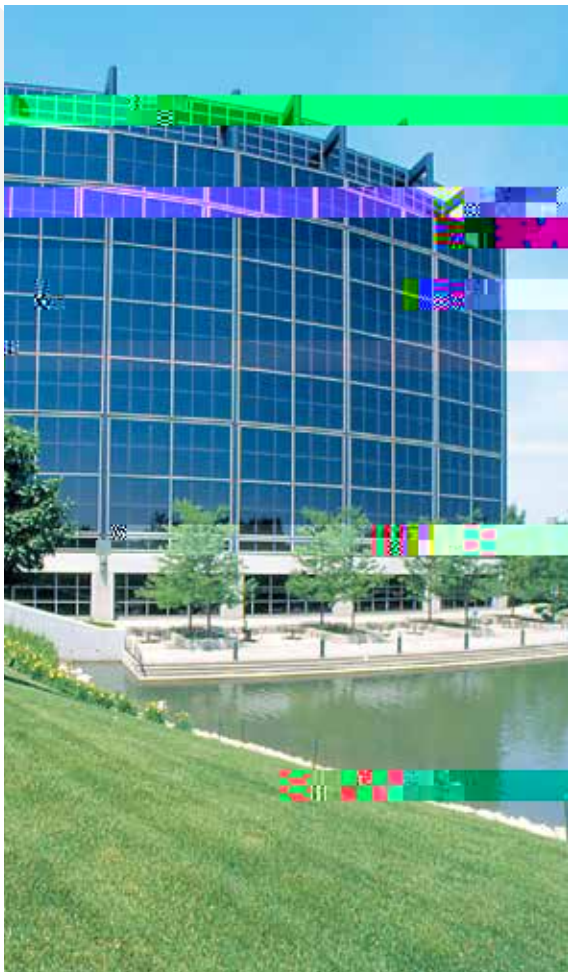
Feature Selector

Standard Features

- UL labeled pressure sensing control panel
- PLC pump sequence controller
- Duplex or triplex
- Vertical or horizontal configurations
- Cast iron, bronze fitted centrifugal pumps
- High efficiency motors
- Steel manifolds
- Complete factory test
- Pilot operated pressure regulating valves
- Maximum pressure up to 175 psi, maximum flows up to 1200 GPM
- Single source responsibility

Optional Features

- ASME rated steel bladder tank
- Galvanized, copper or stainless steel headers
- Vertical stackable pumps
- Special control panels



Packaged Constant Pressure Booster Systems described in this bulletin are used in offices and high rise buildings.

Completely Assembled

Pump and System Selection

All packaged booster systems have a desired discharge pressure and a given suction pressure from the city water system, or from a suction tank. Individual pump boost pressure is usually the system boost plus the friction losses within the booster system pipe, fittings, and pressure reducing valves. Individual pump flow is usually two equal sized pumps on a duplex system, and a percentage such as 20% + 40% + 40% = 100% for a triplex system. Determine the system flow and boost as well as individual pump flow and boost.

1) Total system flow in GPM_____

Determine required flow per pump in GPM

(Total system flow ÷ No. of pumps)

P1_____

P1_____

P1_____

2) Determine system manifold size

0 – 250 GPM 3”

0 – 450 GPM 4”

0 – 1200 GPM 6”

3) Determine pump head (TDH)

A: Desired pressure at system discharge manifold

_____psig

B: Minimum pump suction pressure_____psig

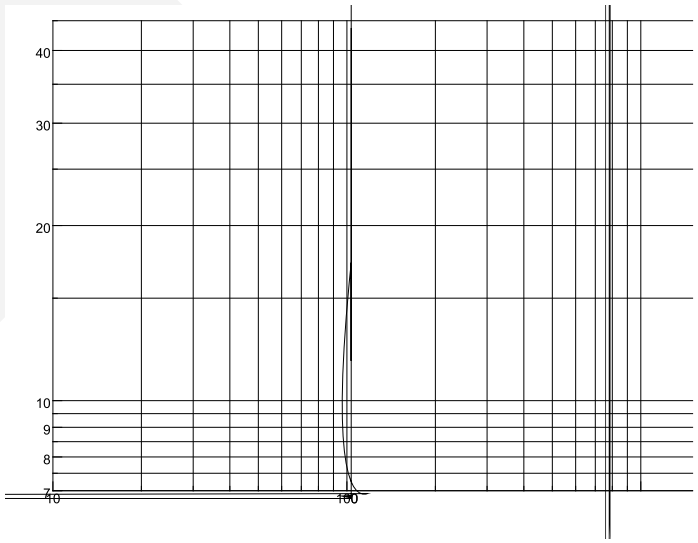
(City supply or tank)

Determine PRV size(s)

PUMP FLOW	50 GPM	70 GPM	110 GPM	150 GPM	275 GPM	400 GPM
PRV SIZE	1-1/4”	1-1/2”	2”	2-1/2”	3”	4”

C: Determine Flow Losses based on PRV Size_____Ft.

(See Chart Below)



Calculate Required Pump TDH: [A - B] x 2.31 + C

[(A)____psig -____(B) psig] x 2.31 +____(C) ft. =____ft.

Indivdual Pump Duty Points:

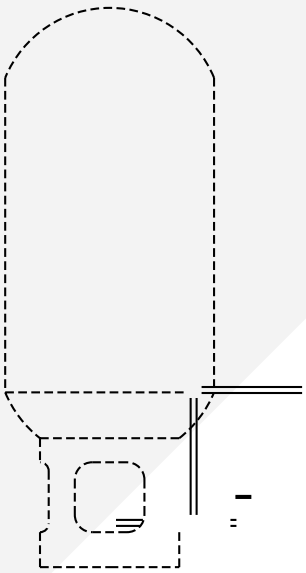
P1 _____GPM @_____ft. TDH

P2 _____GPM @_____ft. TDH

P3 _____GPM @_____ft. TDH

4) Select required pumps and motors using Aurora H2Optimize or the current Aurora Pump catalog

Model Diagrams



Model Diagrams