

BoostPRO

Boosting the pressure for residential and small commercial needs

May 2009

STANDARD FEATURES

- Pentair PL Series fiberglass-reinforced thermoplastic pump or Aurora 320 Series single stage end suction pump
- Pump is close-coupled to a 110/220 volt, 1 phase, 60hz, 3500 RPM, ODP motor, from 1/3 to 2 HP
- Pentair glass-reinforced epoxy 20 gallon hydropneumatic pressure tank with air/water isolation
- Suction mounted check valve
- Copper piping
- Pressure switch
- Pressure relief valve
- Discharge pressure gauge
- System flow from 6 to 60 GPM
- Boost pressure 20 to 50 PSI
- Compact
- Lightweight
- Turnkey boost solution

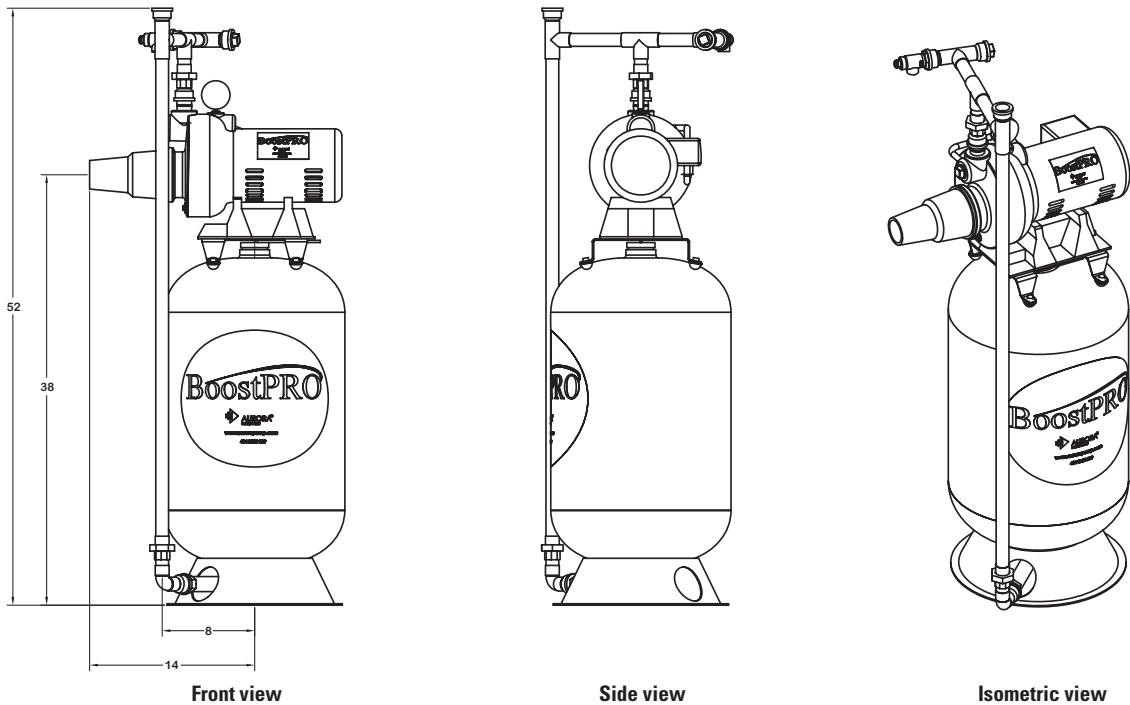


motralec

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The Simplex Booster System

The Aurora Pump Simplex Constant Speed Booster System is designed to meet residential, small commercial and industrial applications where city or well water pressure is not adequate. It is specifically tailored to fresh water applications in homes, small office buildings, small hotels, and other commercial and industrial locations with flow requirements of 60 GPM or less. This system offers simplicity with a single pump, motor, tank, pressure switch, pressure relief valve, check valve and copper piping.



Pump Selections *(reference catalog for pump curves and specifications.)*

PL SERIES

Model	Pump	HP	Switch	Discharge Pressure PSI			
				20	30	40	50
BP9-40	3 PL	.33 HP	30-50 PSI	9.5 GPM	9.2 GPM	9.0 GPM	5.8 GPM
BP9-50	5 PL	.5 HP	30-50 PSI	16.2 GPM	15.8 GPM	15.3 GPM	8.7 GPM
BP21-40	7 PL	.75 HP	30-50 PSI	21.3 GPM	21.0 GPM	20.7 GPM	13.2 GPM
BP21-50	10 PL	1 HP	30-50 PSI	26.3 GPM	26.2 GPM	26.2 GPM	21.3 GPM

*Jet pump working pressure limit is 75 PSI

321 SERIES PUMP

Note: 321 pumps will have a thermal relief valve

Model	Pump	HP	Switch	Discharge Pressure PSI			
				20	30	40	50
BP30-20	321 3/4x1x6A	.5 HP	10-65 PSI	30 GPM	NA	NA	NA
BP30-30	321 3/4x1x6A	1 HP	10-65 PSI	48.6 GPM	30 GPM	NA	NA
BP30-40	321 3/4x1x6A	1.5 HP	10-65 PSI	NA	49.6 GPM	30 GPM	NA
BP30-50	321 3/4x1x6A	2 HP	10-65 PSI	NA	59.9 GPM	50.7 GPM	30 GPM

*321 Series working pressure limit is 175 PSI

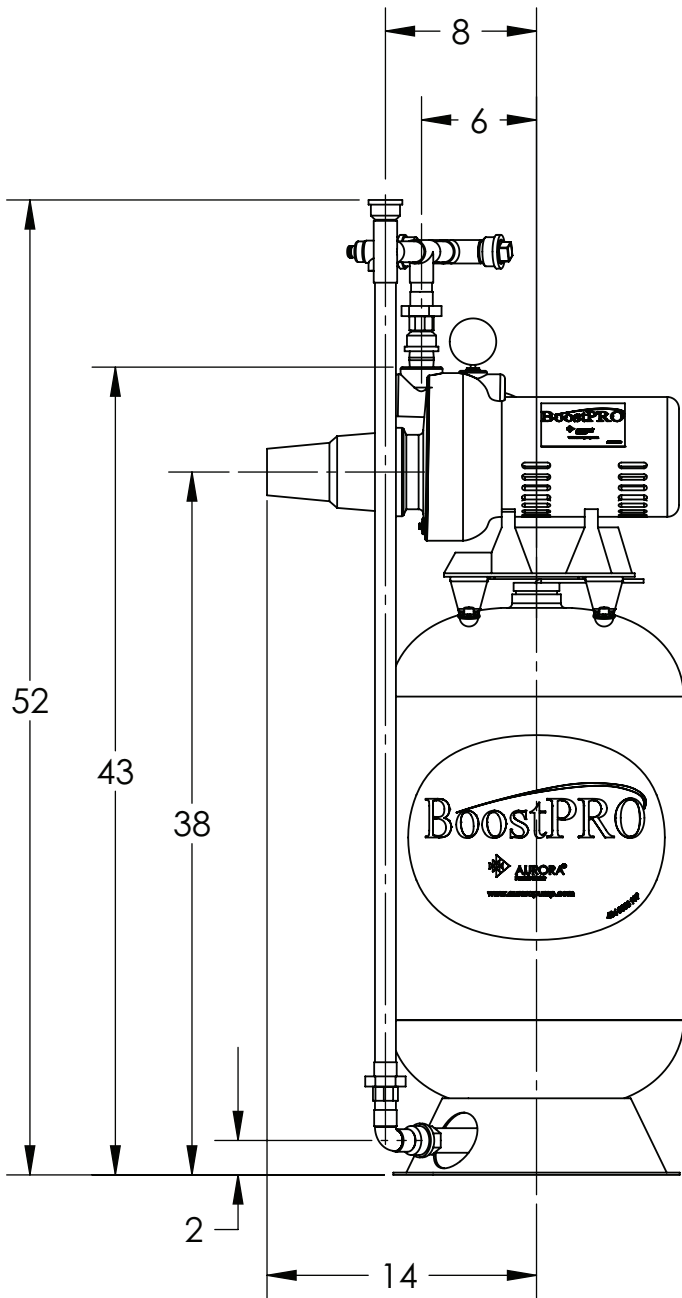
Pick pump based on maximum expected flow and boost required for installation.

Desired Discharge Pressure _____ PSI - Suction Pressure _____ PSI = BoostPro System _____ PSI

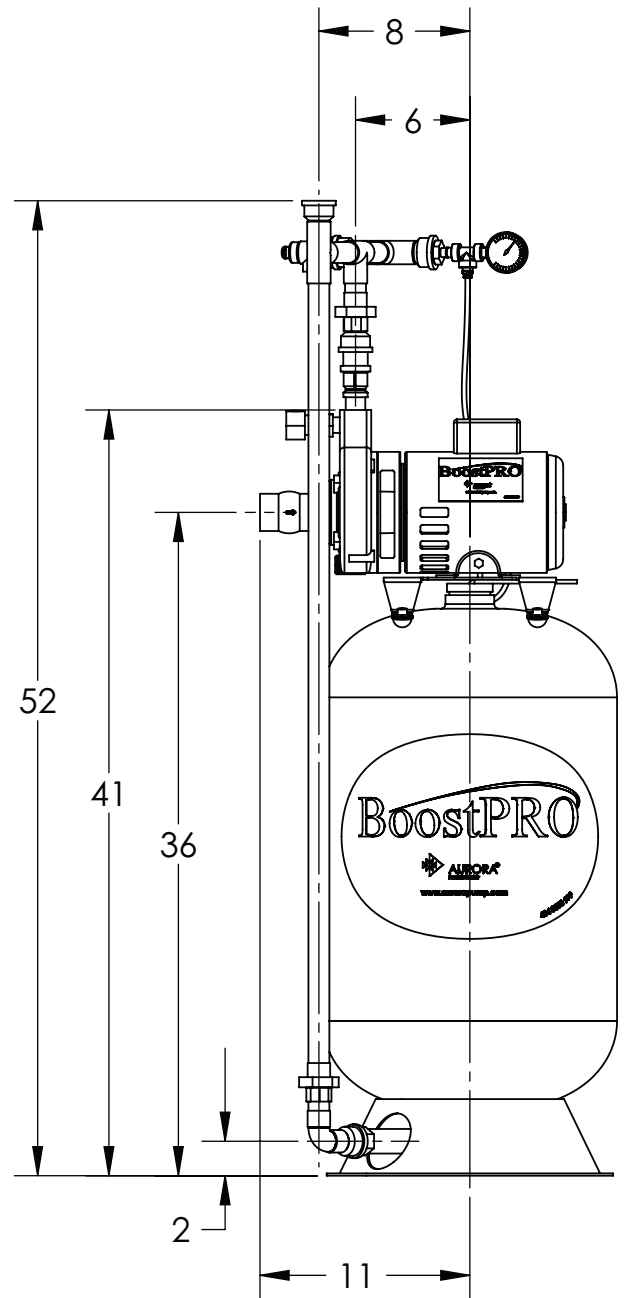
Subject to all local, state and national codes.

AURORA MODEL 7720 PUMPS

BoostPRO



PL SERIES

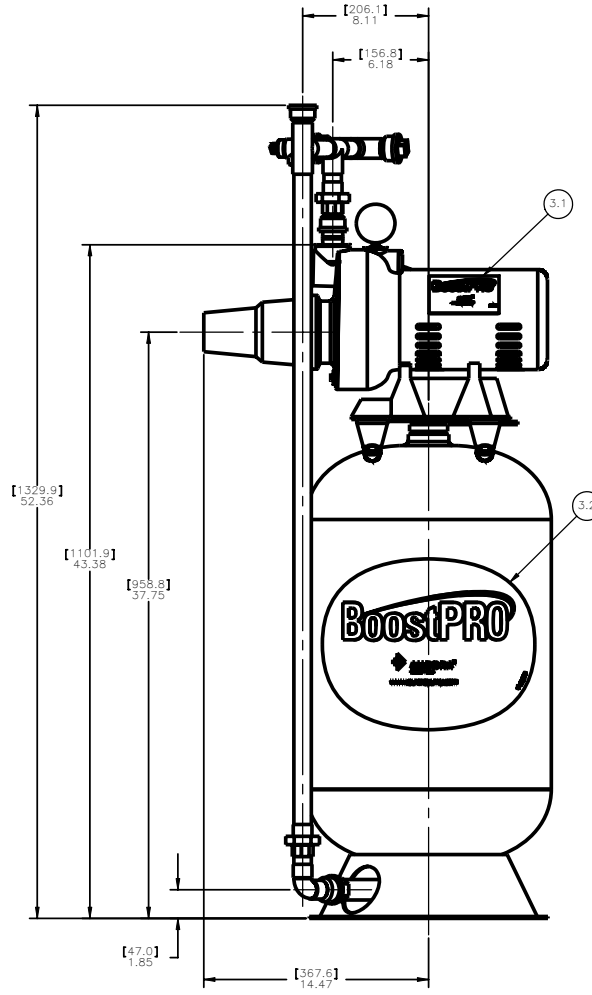


321 SERIES

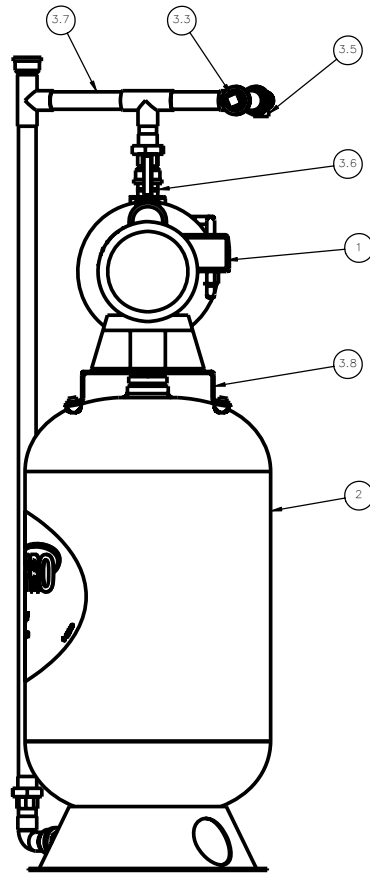
NOTES:

1. All dimensions in inches and may vary ± 2 ".
2. Not for construction unless certified.

636 0586 000



FRONT VIEW



SIDE VIEW



ISOMETRIC VIEW

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	SEE SELECTION TABLE	PUMPS AND SHALLOW WELL JET	1
2	SEE SELECTION TABLE	TANK	1
3	M1689-1	PARTS FOR BOOSTPRO WITH PL SERIES PUMP	1
3.1	484 0009 999	LABEL, BOOSTPRO PUMP	1
3.2	484 0008 999	LABEL, BOOSTPRO TANK	1
3.3	600 0006 190	1" NPT PIPE FITTINGS - SQ. HEAD PIPE PLUG	1
3.4	600 0911 190	1" X 3/4" PIPE FITTINGS - HEX BUSHING	1
3.5	896 5087 000	RELIEF VALVE, 3/4"	1
3.6	600 1107 190	1 X 1/2 LG PIPE FITTING, NIPPLE	1
3.7	520 0358 177	BOOSTPRO MANIFOLD ASSEMBLY	1
3.8	836 1708 999	PUMP MOUNT BRACKET AND VALVE EXTENSION	1
3.9	175 0006 999	SHIPPING CRATE (NOT SHOWN)	1
3.10	484 0011 000	INSTRUCTION SHEET (NOT SHOWN)	1

- NOTES:
1. ASSEMBLE ANY LOOSE COMPONENTS PER MANUFACTURERS INSTRUCTIONS.
 2. ASSEMBLE REMAINING COMPONENTS AS SHOWN.
 3. PLACE COMPLETED ASSEMBLY INTO SHIPPING CRATE AND BRACE FOR TRANSIT.
 4. ALL DIMENSIONS ARE REFERENCE ONLY.

SELECTION TABLE			
MODEL	PUMP AND MOTOR P/N	SHALLOW WELL JET P/N	TANK P/N
BP9-40	636 0574 644	636 0575 644	836 1707 999
BP9-40S	636 0574 644	636 0575 644	836 1710 999
BP9-50	636 0576 644	636 0577 644	836 1707 999
BP9-50S	636 0576 644	636 0577 644	836 1710 999
BP21-40	636 0578 644	636 0579 644	836 1707 999
BP21-40S	636 0578 644	636 0579 644	836 1710 999
BP21-50	636 0580 644	636 0581 644	836 1707 999
BP21-50S	636 0580 644	636 0581 644	836 1710 999

REV	ZONE	DATE	REVISION DESCRIPTION	BY	CHKD
C	ALL	06/15/08	ADD INSTRUCTION MANUAL	MAK	PO
B	ALL	01/08/08	REVISED TO MATCH ORDERING PROCESS	MAK	MAK
A	ALL	06/15/06	REVISED TO MATCH ORDERING PROCESS	MAK	MAK

CUSTOMER CONNECTIONS	
A	SUCTION CONNECTION: 1-1/4" F-NPT
B	DISCHARGE CONNECTION: 1" F-NPT
C	RELIEF LINE: 1/2" F-NPT
D	INCOMING ELECTRICAL: 115-230/1/60

Pentair Water Pump Division
North America Operations

DO NOT SCALE DRAWING

DATE: 10/31/08

SCALE: 1:4

PROJECT NUMBER: 636 0586 000

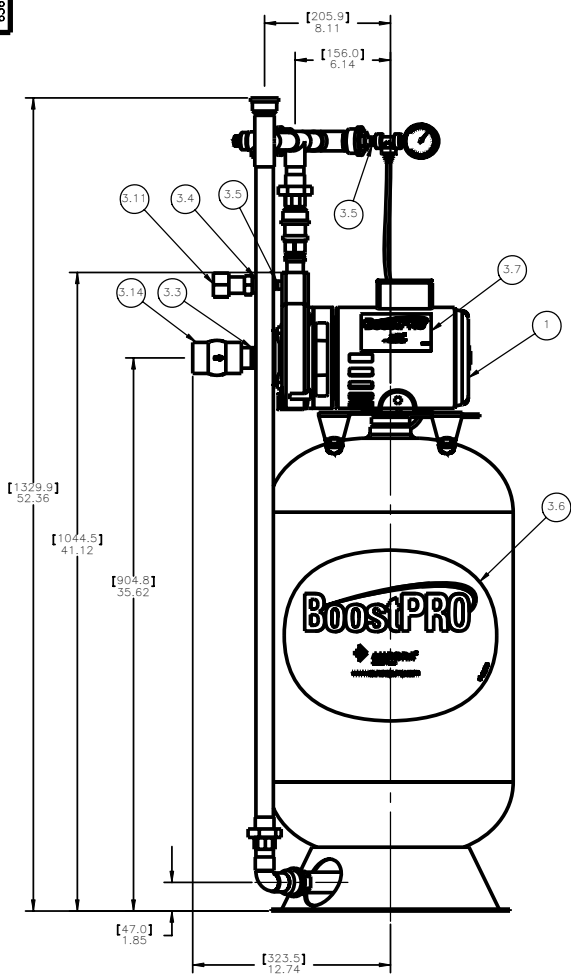
DESIGN BY: ADV

CHECKED BY: CEJ

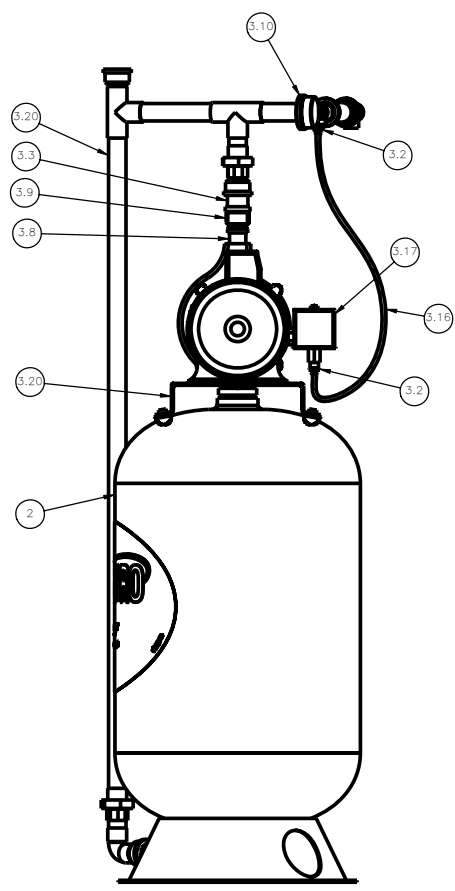
APPROVED BY: RAM

REV: 1

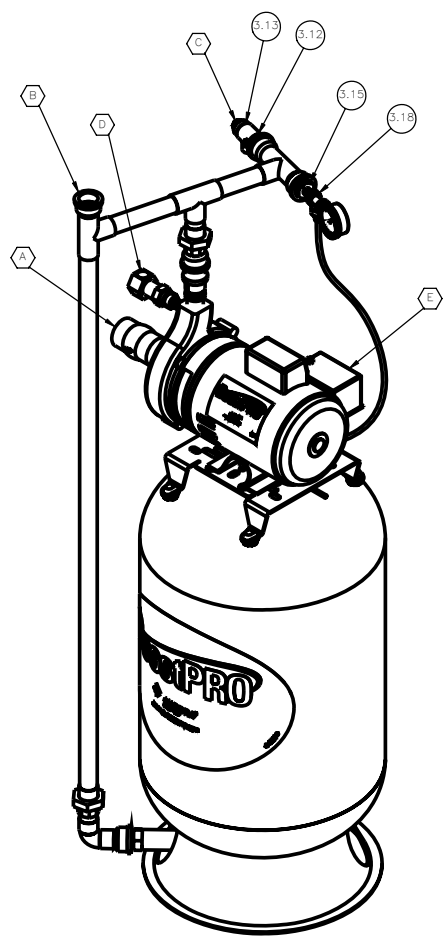
636 0594 000



FRONT VIEW



SIDE VIEW



ISOMETRIC VIEW

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	SEE SELECTION TABLE	SERIES 321 AURORA PUMP	1
2	SEE SELECTION TABLE	TANK	1
3	M1697-1	PARTS FOR BOOSTPRO WITH SERIES 321 PUMP	1
3.1	316 0468 999	ELECTRICAL FITTINGS, 1/2" CONDUIT LOCKNUT	2
3.2	868 4228 999	TUBE FITTING, ADAPTER 1/4"	2
3.3	600 1402 190	PIPE FITTING, 1" X 1.5" LONG NIPPLE	2
3.4	600 1005 190	1/2" X 1/4" PIPE FITTING, BANDED REDUCER	1
3.5	600 1103 190	1/4 X 7/8 LG. PIPE FITTING, NIPPLE	2
3.6	484 0008 999	LABEL, BOOSTPRO TANK	1
3.7	484 0009 999	LABEL, BOOSTPRO PUMP	1
3.8	600 1352 190	3/4" X 1 1/2" LG PIPE FITTING, NIPPLE	1
3.9	600 1010 190	1" X 3/4" PIPE FITTING, BANDED REDUCER	1
3.10	366 0034 649	GAUGE 100 PSI	1
3.11	896 4220 644	1/2" THERMAL RELIEF VALVE, 140° F	1
3.12	600 0911 190	1" X 3/4" PIPE FITTINGS, HEX BUSHING	1
3.13	896 5087 000	RELIEF VALVE, 3/4"	1
3.14	896 5053 999	CHECK VALVE, 1"	1
3.15	600 0802 190	1" X 1/4" NPT PIPE FITTING, HEX BUSHING	1
3.16	872 0212 999	TUBING 1/4" POLYETHYLENE-CLEAR	1
3.17	824 0579 000	SQUARE D MODEL 9013 FSG2J24, TYPE PRESSURE SWITCH	1
3.18	600 0504 190	PIPE FITTINGS, TEE 1/4"	1
3.19	520 0358 177	BOOSTPRO MANIFOLD ASSEMBLY	1
3.20	836 1708 999	PUMP MOUNT BRACKET AND VALVE EXTENSION	1
3.21	175 0006 999	SHIPPING CRATE (NOT SHOWN)	1
3.22	600 1105 387	1/2 X 1 1/8 LG PIPE FITTING, NIPPLE	1
3.23	484 0011 000	INSTRUCTION SHEET (NOT SHOWN)	1

- NOTES:
1. ASSEMBLE ANY LOOSE COMPONENTS PER MANUFACTURERS INSTRUCTIONS.
 2. MOUNT PRESSURE SWITCH TO PUMP USING 1/2" PIPE NIPPLE (6001105) AND LOCKNUTS (3160468).
 3. ASSEMBLE REMAINING COMPONENTS AS SHOWN.
 4. PLACE COMPLETED ASSEMBLY INTO SHIPPING CRATE AND BRACE FOR TRANSIT.
 5. ALL DIMENSIONS ARE REFERENCE ONLY.

ITEM	CUSTOMER CONNECTIONS
A	SUCTION CONNECTION 1" F-NPT
B	DISCHARGE CONNECTION 1" F-NPT
C	RELIEF LINE 1/2" F-NPT
D	THERMAL RELIEF 1/8" F-NPT
E	INCOMING ELECTRICAL 115-230/1/60

SELECTION TABLE				TANK P/N	
MODEL	PUMP AND MOTOR P/N	TANK P/N			
BP30-20	636 0582 644	836 1707 999			
BP30-20S	636 0582 644	836 1710 999			
BP30-30	636 0583 644	836 1707 999			
BP30-30S	636 0583 644	836 1710 999			
BP30-40	636 0584 644	836 1707 999			
BP30-40S	636 0584 644	836 1710 999			
BP30-50	636 0585 644	836 1707 999			
BP30-50S	636 0585 644	836 1710 999			

DATE	03/11/08	BY	RAM
SCALE	1:4	APPROVED BY	RAM
DRAWING		DATE	03/11/08
PART NUMBER	D	REV	000

COMPANY CONFIDENTIAL INFORMATION	REVISION	DATE	DESCRIPTION
	1	03/11/08	REVISED TO MATCH CUSTOMER PROCESS
	2	03/11/08	REVISED TO MATCH CUSTOMER PROCESS
	3	03/11/08	REVISED TO MATCH CUSTOMER PROCESS
	4	03/11/08	REVISED TO MATCH CUSTOMER PROCESS

DO NOT SCALE	DATE	03/11/08	BY	RAM
DRAWING		DATE	03/11/08	APPROVED BY
PART NUMBER	D	REV	000	RAM

Pentair Water Pump Division
North America Operations

BOOSTPRO W/ AURORA PUMP

BoostPRO

Installation and Instruction Manual



The Aurora Pump BoostPRO is designed to boost existing water supply pressure to an acceptable level using simple technology without the need for a control panel with starter.

CAUTION

Please read prior to installing.

- Install in a restricted area away from children.
- With all water systems there is a risk of flooding so take precautions and follow all instructions.
- Pressure generated by this system can cause injury if there is a loose component that becomes airborne. Make sure all connections are secure. Make sure pressure limits of the system are not exceeded.
- Do not run this pump without water inside or damage to the mechanical seal may occur.
- Water with solids, rust particles, scale, or sand can cause pump seal failure.
- If the pump runs at no flow, water in the pump can become very hot and can be hazardous to personnel.
- Locate this system in an area free from risk of freezing.
- Use of a ground-fault circuit interrupter (GFCI) can reduce the risk of injury through electrical shock.
- All piping should be supported independently from the BoostPRO.
- Do not exceed the working pressure of the pump.

INSTALLATION

CAUTION: ALL ELECTRICAL CONNECTIONS SHOULD BE MADE BY QUALIFIED PERSONNEL IN ACCORDANCE WITH ALL PREVAILING LOCAL AND NATIONAL ELECTRICAL CODES.

1. Examine the system for completeness and damage and correct any deficiencies.
2. Locate the BoostPRO in an area that is convenient to existing supply water piping.
3. Locate the tank on a flat floor, preferably concrete that is level and relatively smooth so that it is stable. The weight of water in the tank will negate the need for any bolting or adhesion to the floor. The BoostPRO may be located on an elevated concrete pad to allow any water to quickly drain away from the tank.
4. With no water pressure applied, check the air charge pressure in the tank using a standard tire pressure gauge. Adjust this pressure to 2 PSI less than the desired short/cut-in pressure of the system. For example, if the pressure switch has a 30-50 PSI rating, the air charge would be 28 PSI.
5. Shut off all water supply valves. Interrupt the piping and connect the water supply to the pump suction. Connect the discharge of the BoostPRO to the service water connection of the building.
6. Connect power to the pressure switch located on the BoostPRO, consisting of 220 volts single phase, 60 Hertz. Connect power per the latest NEC and local codes.
7. After all piping and electrical connections are secure, open the inlet shut off valve and any outlet shut off valve, if equipped. Purge all air from the pump and piping.

NOTE: If the system has a bronze-fitted cast iron pump, then the pressure switch will need to be adjusted. Open the pressure switch cover and set the differential to minimum. Set the high pressure to the desired pressure. Return to the tank air pressure to set up for best efficiency. Replace the cover.



AURORA[®]
Pentair Water

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