# **Bell & Gossett**<sup>®</sup>

SUBMITTAL

A-120G

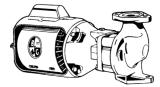
JOB:

REPRESENTATIVE:

ORDER NO.

UNIT TAG: ENGINEER: CONTRACTOR:

SUBMITTED BY:
APPROVED BY:



## Iron & Bronze<sup>\*</sup> Booster Pump

\*Where potable water is supplied, use a bronze pump.

#### DESCRIPTION

Bell & Gossett in-line three-piece booster pumps are designed for hydronic systems. Series 100 and HV are Listed with Underwriter's Laboratories.

#### CONSTRUCTION

Body: Cast Iron or Bronze

Seal: Mechanical, Carbon on Ceramic

Shaft: Carbon Steel, Heat Treated

#### **Pump and Motor Bearings:**

-All except PD-38 and PD-40: Bronze Sleeve, Oil Lubricated -PD-38 and PD-40: Ball Bearing, Permanently Lubricated

#### Coupler:

-All except PD38 and PD40: Flexible, Spring type

-PD38 and PD40: Flexible, sleeve type.

**Motor:** Bell & Gossett 1/12 hp thru 1-1/2 hp standard single and three phase drip-proof motors are Recognized under the Component Program of Underwriter's Laboratories, Inc. Bell & Gossett boosters with their respective Bell & Gossett manufactured standard 60 hertz single and three phase motors are Certified by CSA.

#### SCHEDULE

Maximum Working Pressure: 125 PSI (682 kPa) Maximum Operating Temperature: - Standard Seal: 225°F (107°C) continuous

**OPERATIONAL DATA** 

- Special Seals: 250°F (121°C) continuous (consult local B&G Representative) Maximum Motor RPM: 1750

> IMPELLER: PUMP MODEL NO. Series 100® Pump

Polypropylene\* or Brass

DATE:

DATE:

DATE:

BRONZE BODY Polypropylene\* or

Phenolic\* or Brass

Brass

 Series HV & 2
 Pher

 PR, 2-1/2, LD3
 Stee

 HD3, PD35, PD37
 Stee

 PD38 & PD40
 Cast

Phenolic\* or BrassPhenolSteel, Zinc Plated or BrassBrassSteel, Zinc Plated or BrassBrassCast Iron or BrassBrassCast Iron or BrassBrass

PD38 & PD40 Cast Iron or Brass Brass \* System temperatures above 225 °F (107 °C) require a brass impeller.



	FLANGE	**STANDARD 60 CYCLE CHARACTERISTICS				TICS		QUANTITY			
MODEL	SIZE NPT							Iron	Body	Bronze	e Body
NO.	INCHES	HP	PH	VOLTAGE <sup>*</sup>	F.L. AMPS	RPM	TAGGING INFORMATION	STD	BI	BI	NFI
Series 100	3/4, 1, 1-1/4 & 1-1/2	1/12	1	115	1.75	1725					
Series PR	3/4, 1, 1-1/4 & 1-1/2	1/6	1	115	1.9	1725					-
Series HV	1, 1-1/4 & 1-1/2	1/6	1	115	1.9	1725					
2	2	1/6	1	115	1.9	1725					
2-1/2	2-1/2	1/4	1	115	3.0	1725					-
LD3	3	1/4	1	115	3.0	1725					-
HD3	3	1/3	1	115/230	4.2/2.1	1725					-
PD-35S	3	1/2	1	115/230	5.2/2.6	1725					-
PD-35T	3	1/2	3	208-230/460	1.8-1.7/.85	1750					-
PD-37S	3	3/4	1	115/230	7.0/3.5	1725					-
PD-37T	3	3/4	3	208-230/460	2.45-2.4/1.2	1750					-
PD-38S	3	1	1	115/230	9.8/4.5	1725					-
PD-38T	3	1	3	208-230/460	3.4-3.4/1.7	1725					-
PD-40S	3	1-1/2	1	115/230	18.0/9.0	1725					-
PD-40T	3	1-1/2	3	208-230/460	4.8-4.8/2.4	1725					-
*Motors with special electrical characteristics are available on request at additional cost.											

\*1 PH Motors: Built-in overload protection

3 PH Motors: Overload protection must be provided

Bell & Gossett Booster Pumps equipped with a drip-proof motor are recommended for indoor use only.



### Iron & Bronze Booster Pump Submittal

PERFORMANCE CHARACTERISTIC CURVE 35 (10.67) This chart is based on 1750 RPM, 60 cycle. For 25, 40, or 50 cycle motors, larger pumps will be necessary. For pumps with 30 (9.14) larger capacities contact your local B&G representative 25 (7.62) HEAD IN FEET OF WATER (M) 20 (6.10) SERIES PD38 15 (4.57) SERIES HV 10 (3.05) PD3 Performance characteristics are based on using 1-1/4" or 1-1/2" flanges. When using 3/4 5 (1.52) or 1" flanges performance will SERIE I D' be slightly reduced. Π 60 70 80 90 100 110 120 130 140 150 160 170 (3.79) (4.42) (5.05) (5.68) (6.31) (6.94) (7.57) (8.20) (8.83) (9.46) (10.09) (10.73) 10 20 30 40 50 (0.63) (1.26) (1.89) (2.52) (3.15) DELIVERY IN GALLONS/MIN (LITERS/SEC)

	FLANGE	DIMENSIONS IN INCHES (MM)			APPROX. SHPG. WT. LBS. (Kg)		
MODEL NO.	SIZE NPT INCHES	Α	В	с	IRON BODY	BRONZE BODY	
Series 100	3/4, 1, 1-1/4 & 1- 1/2	14-7/8 (378)	6-3/8 (162)	12-3/4 (324)	20 (9)	21 (10)	
Series PR	3/4, 1, 1-1/4 & 1- 1/2	15-1/4 (387)	8-1/2 (216)	12-3/4 (324)	30 (14)	32 (15)	
Series HV	1, 1-1/4 & 1- 1/2	15-3/8 (391)	8-1/2 (216)	13 (330)	28 (13)	30 (14)	
2	2	16-5/8 (422)	8-1/2 (216)	14 (356)	36 (16)	39 (18)	
2-1/2	2-1/2	17-1/4 (438)	10 (254)	14 (356)	54 (24)	58 (26)	
LD3	3	17-1/4 (438)	10 (254)	14 (356)	53 (24)	57 (26)	
HD3	3	17-1/2 (444)	10 (254)	14-1/4 (362)	55 (25)	59 (27)	
PD-35S	3	20-1/4 (514)	12 (305)	16-7/8 (429)	75 (34)	80 (36)	
PD-35T	3	20-1/4 (514)	12 (305)	16-7/8 (429)	75 (34)	80 (36)	
PD-37S	3	20-1/4 (514)	12 (305)	16-7/8 (429)	75 (34)	80 (36)	
PD-37T	3	20-1/4 (514)	12 (305)	16-7/8 (429)	75 (34)	80 (36)	
PD-38S	3	22-11/16 (576)	14-1/2 (368)	18-15/16 (481)	128 (58)	138 (63)	
PD-38T	3	23-15/16 (608)	14-1/2 (368)	20-3/16 (513)	125 (57)	135 (61)	
PD-40S	3	24-3/4 (629)	14-1/2 (368)	21 (533)	130 (59)	140 (64)	
PD-40T	3	21-7/8 (556)	14-1/2 (368)	18-1/8 (460)	127 (58)	137 (62)	

Dimensions are subject to change.

Not to be used for construction purposes unless certified.

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Electrical Box Arrangement for pumps with B&G Manufactured Motors

MODEL				
NO.	#1	#2	#3	#4
Series 100	115 & 230Volt 60Hz 1PH	_	_	_
Oches 100	110 & 220Volt 50Hz 1PH			
Series HV, PR & 2	115 & 230Volt 60Hz 1PH	_	3PH	_
Series IIV, I IV & 2	110 & 220Volt 50Hz 1PH		0111	
2-1/2", LD3 & HD3	-	1PH	-	-
PD35 & PD37	-	-	ALL	-
PD38 & PD40	_	-	-	ALL

#### **TYPICAL SPECIFICATIONS**

The Contractor shall furnish and install In-The-Line pumps as illustrated on the plans and in accordance with the following specifications:

1. The pumps shall be of the horizontal, oil-lubricated type. (Except PD-38, PD-40 are permanently lubricated) Specifically designed and guaranteed for quiet operation. Suitable for 125# (862 kPa) working pressure.

2. The pumps shall have a ground and polished steel shaft with a hardened integral thrust collar. The shaft shall be supported by two horizontal sleeve bearings designed to circulate oil. (Except PD-38, PD-40 are grease lubricated ball bearing design) The pumps are to be equipped with a mechanical seal with carbon seal face rotating against a ceramic seat. The motor shall be non-overloading at any point on pump curve.

3. The motor shall be of the drip-proof, sleeve-bearing, (Except PD-38, PD-40 are ball bearing) quiet operating, rubber-mounted construction. Motors shall have built-in thermal overload protectors. (Exception - PD models with 3-phase motors, see paragraph 4.)

4. For PD models with 3-phase motors, add the following: The Contractor shall furnish and install a magnetic starter for each booster pump with at least two thermal overload protectors. The starter shall be equipped with manual reset buttons.

All Units must be ITT Bell & Gossett Model No. \_\_\_\_\_, or approved equal with capacity of \_\_\_\_\_GPM at \_\_\_\_ft. head when directly driven through a self aligning flexible coupling by an oil lubricated motor, \_\_\_\_\_volts \_\_\_\_cycle\_\_\_phase.



**Bell & Gossett** 

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