



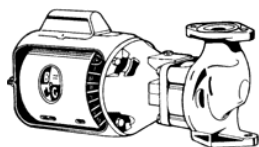
B105139LF

B&G

HWP-1 HOT WATER CIRCULATING PUMP

LF 1.5HP PDB40T CIRC PUMP 230/460V

JOB: UNIT TAG: ENGINEER: CONTRACTOR:	REPRESENTATIVE: ORDER NO. SUBMITTED BY: APPROVED BY:	DATE: DATE: DATE:
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Iron & Lead-Free[†] Bronze^{*} Booster Pump

^{*}Where potable water is supplied, use a lead-free[†] 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 Lead-Free[†] 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.

OPERATIONAL DATA

Maximum Working Pressure: 125 PSI (682 kPa)

Maximum Operating Temperature:

- Standard Seal: 225°F (107°C) continuous
- Special Seals: 250°F (121°C) continuous (consult local B&G Representative)

Maximum Motor RPM: 1750

IMPELLER:

PUMP MODEL NO.

Series 100® Pump

Series HV & 2

PR, 2-1/2, LD3

HD3, PD35, PD37

PD38 & PD40

IRON BODY

Polypropylene* or Lead-Free[†] Brass

Phenolic* or Lead-Free[†] Brass

Steel, Zinc Plated or Lead-Free[†] Brass

Steel, Zinc Plated or Lead-Free[†] Brass

Cast Iron or Lead-Free[†] Brass

BRONZE BODY

Polypropylene* or Lead-Free[†] Brass Phenolic* or Lead-Free[†] Brass

Lead-Free[†] Brass

Lead-Free[†] Brass

Lead-Free[†] Brass

^{*} System temperatures above 225 °F (107 °C) require a brass impeller.

[†] Contains less than 0.25% Lead content by weight on wetted surfaces.



SCHEDULE

MODEL NO.	FLANGE SIZE NPT INCHES	**STANDARD 60 CYCLE CHARACTERISTICS					TAGGING INFORMATION	QUANTITY			
		HP	PH	VOLTAGE [*]	F.L. AMPS	RPM		Iron Body		Bronze Body	
								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	1.8-1.7/1.85	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.

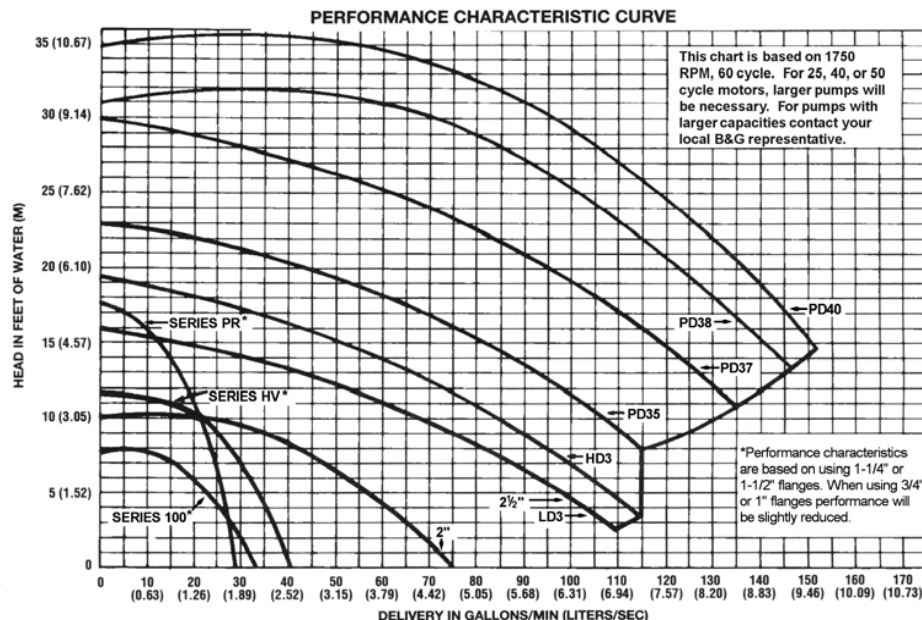
^{*}1 PH Motors: Built-in overload protection

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

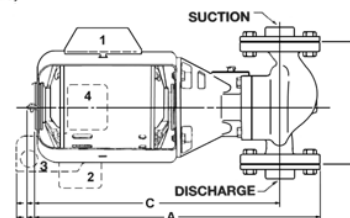
A-120H



MODEL NO.	FLANGE SIZE NPT INCHES	DIMENSIONS IN INCHES (MM)			APPROX. SHPG. WT. LBS. (Kg)	
		A	B	C	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.



Electrical Box Arrangement for pumps with B&G Manufactured Motors

MODEL NO.	#1	#2	#3	#4
Series 100	115 & 230Volt 60Hz 1PH 110 & 220Volt 50Hz 1PH	-	-	-
Series HV, PR & 2	115 & 230Volt 60Hz 1PH 110 & 220Volt 50Hz 1PH	-	3PH	-
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.

Xylem Inc.
8200 N. Austin Avenue
Morton Grove, IL 60053
Phone: (847)966-3700
Fax: (847)965-8379
www.xyleminc.com/brands/bellgossett

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xylem
Let's Solve Water

Shop Drawing Submittal Review

Transmitted To: Cannon Design

Date: June 7, 2016

Attention: stl-cac@cannondesign.com

Contact Person / WTA Field Inspector:
Patrick Garner

Project Name: Webster University-**ISB**

Reviewed by: Mike Whitworth (WES)

Project No. WT 14127.01
WES 607

☐ UPS ☐ Courier ☒ **Email**

Copies	No.	Description
1 PDF	221119P01	(Submittal No.'s)
		(Cannon #221119-003) - (Paric #15051-) – (WES #607)
		➤ Domestic Water Specialties
		• Bradley Mixing Valves – TMV-1, TMV-2, TMV-3
		• Acorn Hose Station – HS-1
		• IPS Guy Gray – Coffee Maker Outlet Box – CM-1
		• IPS Guy Gray – Ice Maker Outlet Box – IM-1
		• IPS Guy Gray – Dish Washer Outlet Box – DW-1
		• J.R. Smith Wall Hydrant – WH-1
		• Bell & Gossett Hot Water Circulating Pump – HWP-1

***Remarks: See Submittal Review from Webb Engineering.**

c: Kevin Patel
Kpatel@cannondesign.com

☒ ***Reviewed**

☒ ***No Exceptions Taken**

☒ ***Rejected-See Remarks**

☒ ***Amend & Resubmit**

Corrections or comments made on shop drawings during this review do not relieve contractor from compliance with requirements of drawings and specifications. This check is only for review of general conformance with the design concept of project and general compliance with information given in contract documents. Contractor is responsible for: confirming and correlating all quantities and dimensions; selecting fabrication processes and techniques of construction; coordinating his work with that of all other trades; and performing his work in a safe and satisfactory manner.



1400 S. 3rd Street, Suite 201
St. Louis, Missouri 63104
Phone: (314) 588-0600
Fax: (314) 588-0604

Letter of Transmittal

To: wtashop@wmtao.com

From: Mike Whitworth

Date: June 05, 2016

Re: Webster University ISB

WES No: 607

☐ For your Files

☐ For Review

☐ Please Comment

☐ Please Reply

Item No.	Description	No. of Copies	Date
1	Shop Drawing Review – 22 1119 Domestic Water Piping Specialties	1	06-05-2016

•Signature: Mike Whitworth



1400 S. 3rd Street, Suite 201 • St. Louis, Missouri 63104 • 314.588.0600 • fax 314.588.0604

**WEBB
ENGINEERING
SERVICES INC.**

www.webb-engineering.com

The review of this submittal is limited to the general conformance with the designated design concept and intent of this project and with the general compliance of the information provided in the contract documents. All comments, remarks and notations made on the submittal(s) as a result of this review do not relieve the contractor from full compliance with requirements of the contract documents. Approval for a specific item shall not include approval of an assembly of which the item is not a component. The contractor is solely responsible for rough-in and installation confirming and correlating all quantities and dimensions; selecting fabrication processes and techniques of construction; coordination of this work with that of other trades on this project; and in a safe and satisfactory manner. All work shall be installed in full compliance with the manufacturer's recommendation, Federal, State and Local rules and regulation and the Authority Having Jurisdiction (AHJ) and applicable adopted codes and standards.

PROJECT NAME: Webster University ISB
LOCATION: St. Louis Missouri
CLIENT PROJ. NO.: N/A
WES PROJ. NO.: 607
221119
Domestic Water Piping
SPEC SECTION: Specialties
SUBMITTAL ITEM: See Below -

CONTRACTOR: Deluca Plumbing, LLC
CTR. SUBMITTAL # 22 1119-003
SUBMITTAL DATE: May 25, 2016
DATE RECEIVED: May 26, 2016
RECEIVED VIA: E-Mail
RECEIVED FROM: WTA
DATE RETURNED: JUNE 05, 2016
RETURNED VIA: E-MAIL
RETRURNED TO: WTASHOP@WMTAO.COM

STATUS KEY:

NEC	MCN	AAR	REJ	REV	NO EXCEPTION TAKEN	
					MAKE CORRECTIONS NOTED, NO RESUBMITTAL:	
					AMEND AND RESUBMIT	
					REJECTED, SEE REMARKS:	
					REVIEWED ONLY	
					ITEM	REMARKS
X					Thermostatic Mixing Valve – TMV-1 Bradley Model S59-3130-B-P	
		X			Thermostatic Mixing Valve – TMV-2 Bradley Model X	Submitted cut sheet is not for TMV-2, cut sheet is for Pedestal-Mounted Eyewash Fixture
X					Thermostatic Mixing Valve – TMV-3 Bradley Model S19-2000-B	
X					Hose Station – HS-1 ACORN Model 8156-SSLF	
X					Coffee Maker Outlet Box – CM-1 IPS Guy Gray Model MDWB1AB	
X					Ice Maker Outlet Box – IM-1 IPS Guy Gray Model MIB1HAAB	



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	X			Dish Washer Outlet Box – DW-1 IPS Guy Gray Model MDWB1AB	
		X	X	Wall Hydrant – WH-1 J. R. Smith Model 5518	Provide non-freeze wall hydrant as specified.
X				Hot Water Circulating Pump – HWP-1 Bell & Gossett Model PD-40T	

REVIEWED BY: Michael R. Whitworth DATE: June 05, 2016

THESE COMMENTS ARE TO BE ATTACHED TO ALL COPIES OF THE SHOP DRAWING REFERENCED ABOVE.



77 Westport Plaza
Suite 250
St. Louis, MO 63146

TRANSMITTAL

No. 15051-0049

Paric Corporation

PROJECT: Webster University Interdisciplinary Science Building

DATE: 05/25/2016

TO: Cannon Design
1100 Clark Ave
St Louis MO 63102

RE: Domestic water Specialties product data

ATTN: Kelvin Patel

JOB: 15051

WE ARE SENDING:		SUBMITTED FOR:	ACTION TAKEN:
☐ Shop Drawings		☒ Approval	☒ Approved as Submitted
☐ Letter		☐ Your Use	☐ Approved as Noted
☐ Prints		☐ As Requested	☐ Returned After Loan
☐ Change Order		☐ Review and Comment	☐ Resubmit
☐ Plans			☐ Submit
☐ Samples		SENT VIA:	☐ Returned
☐ Specifications		☐ Attached	☐ Returned for Corrections
☒ Other: Product Data		☐ Separate Cover Via:	☐ Due Date:

Item	Package	Code	Rev.	Copies	Date	Description	Status
Submittal		221119-003	1		05/25/2016	Domestic water Specialties product data	Submitted

NOTES:

CC: Paric Corporation, Kathy Bathe

Project Coordinator: Paric Corporation, Kathy Bathe

Signed: _____
Devin Gates

Shop Drawing Submittal

Project Name: WEBSTER ISB

Specification # **221119-01**

Specification Description: Domestic Water Specialties
TMV
Hot Water Return Pumps
Service Boxes
Hydrants

Date: 05-23-16

General Contractor / Construction Manager: PARIC

ARCHITECT: KWA

ENGINEER: William Tao

Contractor: DeLuca Plumbing, L.L.C.
8465 Delport Drive
St. Louis, MO 63114

Supplier: FERGUSON

Manufacturer: Various

Reviewed & Approved by: DeLuca Plumbing 05-23-16

Action: Forward to GC/CM for Review & Approval

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