

# **Submittal Data Information**

101-066

# Plumb 'n' Plug® Domestic Hot Water Circulators

EFFECTIVE: February 14, 2	2014		SUPERSEDES: March 1, 2011
JOB EN	NGINEER	CONTRACTOR	REP
ITEM NO.	MODEL NO.		

#### **General Product Information:**

Taco Plumb n' Plug® (PNP) Circulators periodically recirculate hot water through the domestic water piping system to decrease the delivery time to outlet fixtures and reduce wasted water. These UL-listed units feature quiet, efficient operation and low power consumption. Self lubricating, with no mechanical seal and Taco's unique replaceable cartridge design, Plumb n' Plug® circulators are field serviceable and maintenance free. An optional Aquastat is available for constant circulation applications to maintain temperature between 95°F and 115°F.

#### Features:

- UL Listed
- Optional 95°F -115°F Aquastat Available
- Standard High Capacity Output
- Compact Design
- Quiet, Efficient Operation
- Direct Drive Low Power Consumption
- Unique Replaceable Cartridge Design Field Serviceable
- Self Lubricating
- No Mechanical Seal
- Unmatched Reliability Maintenance Free
- Sweat Connections Bronze
- Union & Threaded Connections Stainless Steel
- Flanged Stainless Steel

# Model Nomenclature:

BC - Bronze. ½" Sweat

B - Bronze, ¾" Sweat

ST - Stainless Steel, 3/4" FNPT

SC - Stainless Steel, Union Connection

SF - Stainless Steel, Flanged

PNP - Plumb n' Plug®

#### **Electrical Data:**

MODEL	VOLTS	Hz	Ph	AMPS	RPM	HP				
003-PNP				0.45						
005-PNP	115	00		0.54	3250	1/40				
006-PNP	7 115	60	ı	0.52	3230	/40				
006-PNP (IFC)				0.57						
Motor Type	Permanent Split Capacitor, Impedance Protected									

#### Performance Data:

Flow Range: 0 - 7 GPM (003), 0 - 19.5 GPM (005)

0 - 11.5 GPM (006)

Head Range: 0 - 4.5 Feet (003), 0 - 8.5 Feet (005)

0 - 9.5 Feet (006)

Minimum Fluid Temperature: 40°F (4°C) Maximum Fluid Temperature: 220°F (104°C) Maximum Working Pressure: 125 PSI

#### Materials of Construction:

#### CIRCULATOR:

Casing (Volute): Bronze or Stainless Steel

Stator Housing: Steel Cartridge: Stainless Steel Impeller: Non-Metallic Shaft: Ceramic

Bearings: Carbon

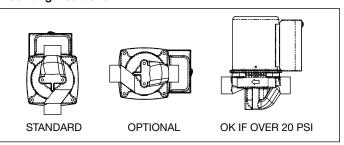
O-Ring & Gaskets: EPDM

#### INTEGRAL FLOW CHECK (IFC®):

Body & Plunger: Acetal Spring: Stainless Steel

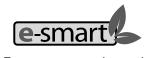
O-Ring: EPDM

#### **Mounting Positions:**







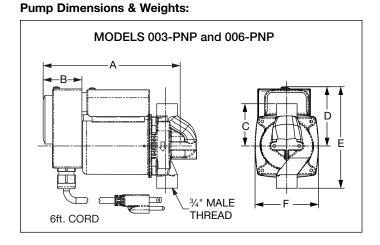


# **ANALOG TIMER OPTION:**

#### **Application:**

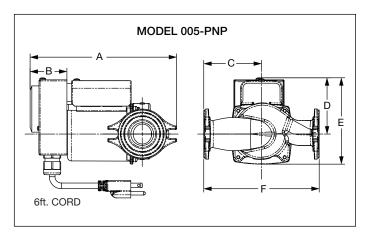
The Plumb n' Plug with analog timer will cycle the circulator during peak usage periods such as early morning or early evening. An optional aquastat is available for constant circulation applications to maintain temperature between 95°F and 115°F. The Taco 003 PNP is ideal for recirculation loops. Its design operating condition of 3 gpm at 3 feet of head helps to reduce erosion, corrosion and noise in system piping. Use the 003 PNP for systems up to 200 total feet (supply and return) of  $^3\!4$ " pipe. The Taco 005 and 006 PNP is designed for systems using 200-400 feet of  $^3\!4$ " pipe. Installation of isolation valves, pipe insulation and flow checks are recommended.

#### \_\_\_\_\_\_



#### **Analog Features:**

- 24 Hour Analog Timer
- 15 Minute ON/OFF intervals
- Easy-to-Use Clock Timer
- Factory installed 6' line cord



					AN	ALOG	TIMER									
MODEL	CONNECTION	Α		В			C		D	E		F		SHIP	WGT.	
MODEL	CONNECTION	IN.	mm	IN.	mm	IN.	mm	IN.	mm	IN.	mm	IN.	mm	LBS.	KG	
003-BC4-PNP	½" Sweat					21//8	54	01/								
003-B4-PNP	3/4" Sweat	<del></del> 17	404			23/16	56		77.8	51/4	134	35/16	84			
003-ST4-PNP	3/4" FNPT	71/4	184			2	51	31/16	//.8							
003-SC4-1PNP	Union					2 <sup>31</sup> / <sub>32</sub>	76			6	152					
005-SF2-PNP	SS Flanged	8 <sup>1</sup> / <sub>8</sub>	205	<b>1</b> 15/16	49	35/32	80	33/32	78.6	43/4	121	6%	162	7.0	3.2	
006-BC4-PNP	½" Sweat						21/8	54		1					]	
006-B4-PNP	3/4" Sweat	<del>-</del> 17	404			23/16	56	01/	77.8	5 <sup>1</sup> / <sub>4</sub>	134	25/	84			
006-ST4-PNP	3/4" FNPT	71/4	184			2	51	31/16				35/16				
006-SC4-1PNP	Union	,				2 <sup>31</sup> / <sub>32</sub>	76			6	152	1				

ANALOG TIMER with INTEGRAL FLOW CHECK (IFC)®															
MODEL	CONNECTION	Α		В		С		D		E		F		SHIP WGT.	
MODEL	CONNECTION	IN.	mm	IN.	mm	IN.	mm	IN.	mm	IN.	mm	IN.	mm	LBS.	KG
003-BC4-3PNP	½" Sweat					2 <sup>3</sup> / <sub>16</sub>	56	31/16	77.8	5 <sup>1</sup> / <sub>4</sub>	134	<b>3</b> <sup>5</sup> / <sub>16</sub>	84		
003-BC4-2PNP	3/4" Sweat				49	2716	00	3 716	77.8	574	134	37/16	84		
005-SF2-1PNP	SS Flanged	81//8	205	<b>1</b> 15/16		35/32	80	33/32	78.6	43/4	121	6 <sup>3</sup> / <sub>8</sub>	162	7.0	3.2
006-BC7-1PNP	½" Sweat					03/	F.C.	31/16	77.0	5 <sup>1</sup> / <sub>4</sub>	104	3 <sup>5</sup> / <sub>16</sub>	0.4	]	
006-BC7-PNP	3/4" Sweat					2 <sup>3</sup> / <sub>16</sub>	56	3 716	77.8	574	134	37/16	84		

## **DIGITAL TIMER OPTION:**

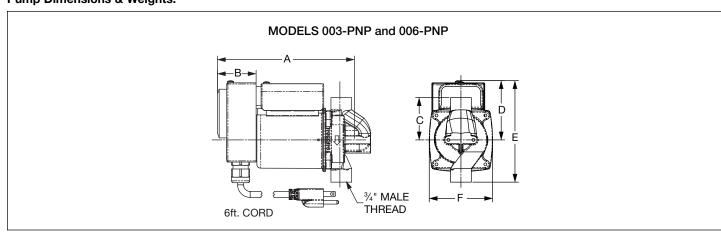
## **Application:**

The Plumb n' Plug with Digital Timer allows ON/OFF program settings to fit any homeowner's schedule. Multiple settings allow for different weekday/weekend run times. Run time intervals can be set as short as 1 minute to maximize energy savings. Easy-to-Use clockface and large LCD display make settings a snap. Its onboard capacitor retains settings in memory for up to 2,500 hours during power outages. An optional Aquastat is available for constant circulation applications to maintain temperature between 95°F and 115°F. Taco 003 PNP is ideal for recirculation loops. Its design operating condition of 3 gpm at 3 feet of head helps to reduce erosion and noise in system piping. Use the 003 PNP for systems up to 200 total feet (supply and return) of 3/4" pipe. Installation of isolation valves pipe insulation and flow checks are recommended.

#### **Digital Features:**

- Digital Timer 7 Day Programmable
- Large LCD Display
- Easy-to-Use Program Buttons
- ON/OFF Intervals as short as 1 Minute
- 2,500 Hour Capacitor Backup, Saves Settings

#### **Pump Dimensions & Weights:**



					DIG	ITAL T	IMER									
MODEL	CONNECTION	Α		В		С		D		E		F		SHIP WGT.		
MIODEL	CONNECTION	IN.	mm	IN.	mm	IN.	mm	IN.	mm	IN.	mm	IN.	mm	LBS.	KG	
003-BC4-8PNP	½" Sweat					21/8	54									
003-B4-2PNP	3/4" Sweat					2 <sup>3</sup> / <sub>16</sub>	56			5 <sup>1</sup> / <sub>4</sub>	134					
003-ST4-2PNP	3/4" FNPT					2	51									
003-SC4-3PNP	Union	71/4	184	1 15/16	49	2 <sup>31</sup> / <sub>32</sub>	76	3 <sup>1</sup> / <sub>16</sub>	78	6	152	3 <sup>5</sup> / <sub>16</sub>	84	7.0	3.2	
006-BC4-4PNP	½" Sweat	1 /4	104	I /16		45	21/8	54	3/16	/ 0			3/16	04	7.0	3.2
006-B4-2PNP	3/4" Sweat					2 <sup>3</sup> / <sub>16</sub>	56			5 <sup>1</sup> / <sub>4</sub>	134					
006-ST4-2PNP	3/4" FNPT					2	51									
006-SC4-3PNP	Union					231/32	76			6	152					

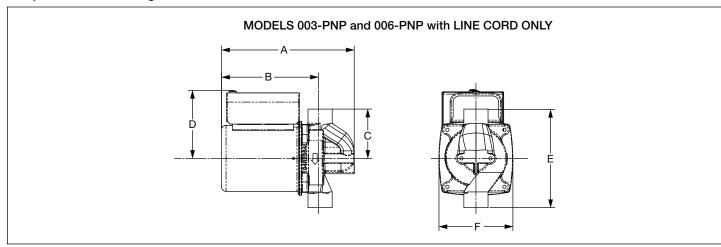
	DIGITAL TIMER with INTEGRAL FLOW CHECK (IFC)®														
MODEL	CONNECTION	Α		В		С		D		E		F		SHIP WGT.	
MIODEL	CONNECTION	IN.	mm	IN.	mm	IN.	mm	IN.	mm	IN.	mm	IN.	mm	LBS.	KG
003-BC4-11PNP	½" Sweat								⁄16 78			35/16	84	7.0	0.0
003-BC4-10PNP	3/4" Sweat	8 <sup>1</sup> / <sub>8</sub>	005	<b>1</b> <sup>15</sup> / <sub>16</sub>	49	2 <sup>3</sup> / <sub>16</sub>	56	3 <sup>1</sup> / <sub>16</sub>		51/4	134				
006-BC7-5PNP	½" Sweat	0/8	205	I 716	49	2716	36	<b>3</b> /16							3.2
006-BC7-4PNP	3/4" Sweat														

# LINE CORD ONLY OPTION:

# Application:

For recirculation systems setup for constant circulation or with an optional aquastat control, use Plumb n' Plug® with line cord only. Simply plumb it in and plug it in. Taco 003 PNP is ideal for recirculation loops. Its design operating condition of 3 gpm at 3 feet of head helps to reduce erosion and noise in system piping. Use the 003 PNP for systems up to 200 total feet (supply and return) of  $^3\!4$ " pipe. Installation of isolation valves, pipe insulation and flow checks are recommended.

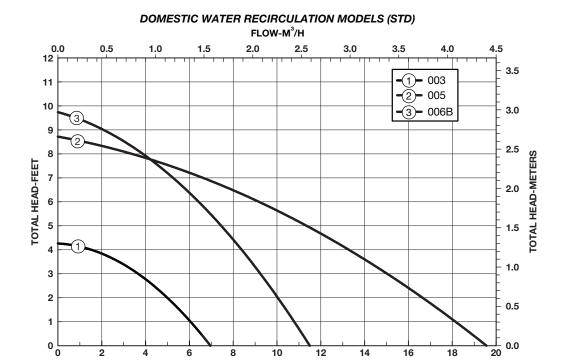
# **Pump Dimensions & Weights:**



	LINE CORD ONLY														
MODEL	CONNECTION	Α		В		С		D		E		F		SHIP WGT.	
MODEL		IN.	mm	IN.	mm	IN.	mm	IN.	mm	IN.	mm	IN.	mm	LBS.	KG
003-BC4-4PNP	½" Sweat	5½	130	4½	105	2 <sup>3</sup> / <sub>16</sub>	56			413/32	112				
003-B4-1PNP	3/4" Sweat	5½	130	4½	105	21//8	54			41/4	108		84	6.5	
003-ST4-1PNP	3/4" FNPT	55%	143	4 <sup>7</sup> / <sub>8</sub>	124	2	51				102				
003-SC4-2PNP	Union	55/32	131	411/32	110	2 <sup>31</sup> / <sub>32</sub>	76	3 <sup>1</sup> / <sub>16</sub>	78	5 <sup>15</sup> / <sub>16</sub>	151	<b>3</b> <sup>5</sup> ⁄16			0.0
006-BC4-2PNP	½" Sweat	5½	130	4½	105	2 <sup>3</sup> / <sub>16</sub>	56	3/16		4 <sup>13</sup> / <sub>32</sub> 4 <sup>1</sup> / <sub>4</sub> 4 5 <sup>15</sup> / <sub>16</sub>	112	3 /16			2.9
006-B4-1PNP	3/4" Sweat	5½	130	4½	105	21//8	54				108				
006-ST4-1PNP	3/4" FNPT	55//8	143	47//8	124	2	51				102				
006-SC4-2PNP	Union	<b>5</b> <sup>5</sup> / <sub>32</sub>	131	411/32	110	2 <sup>31</sup> / <sub>32</sub>	76				151				

	LINE CORD ONLY with INTEGRAL FLOW CHECK (IFC)®															
MODEL	CONNECTION	Α			В		С		D		E		F		SHIP WGT.	
MIODEL	CONNECTION	IN.	mm	IN.	mm	IN.	mm	IN.	mm	IN.	mm	IN.	mm	LBS.	KG	
003-BC4-7PNP	½" Sweat	6				23/16	56	2 <sup>15</sup> / <sub>16</sub>	⁄ <sub>16</sub> 75	43//8	111	35/16	84			
003-BC4-6PNP	3/4" Sweat		152	4 <sup>7</sup> /8	124									6.5	0.0	
006-BC7-3PNP	½" Sweat		152	4 /8	124		36	2 /16						6.5	2.9	
006-BC7-2PNP	3/4" Sweat															

# PERFORMANCE FIELD INFORMATION (60 Hz)



## **DOMESTIC WATER RECIRCULATION MODELS (IFC)**

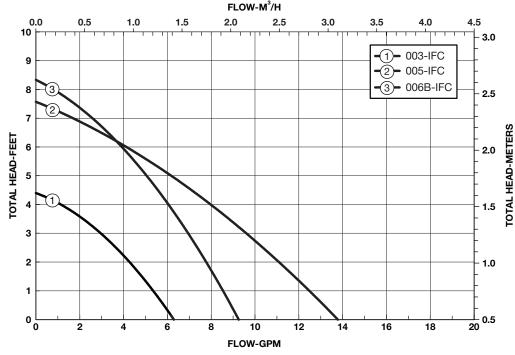
10

FLOW-GPM

12

14

16



# Do your best work.®