



ITT

Bulletin S-410C



## **Bell & Gossett® Domestic™ Centriflo® Series C35™ and C17™ Centrifugal Pumps**

- 3500 RPM Capacities to 300 gpm (1136 L/M)  
Heads to 220 Feet (658 kPa)
- 1750 RPM Capacities to 700 gpm (2650 L/M)  
Heads to 110 Feet (329 kPa)
- Style PF: Flange mount to any receiver  
(conversion kits available to mount  
Domestic™ pump on any receiver)
- Style PVF: Foot mounting for all other applications

*Engineered for life*

## CENTRIFLO® Centrifugal Pumps: – Efficient – Durable – Versatile

Domestic™ Centriflo® pumps are permanently aligned, close-coupled, and ready-to-run. They are as dependable as 100 years of experience can make them.

Centriflo® centrifugal pumps are basic components of much of our line of condensate-handling equipment: they are designed for the rigorous demands of this service. They are, therefore, suitable for many other types of service, including hot water heating, irrigation, evaporative condensers, cooling towers, air conditioning units, milk coolers, booster service, and many more.

Vertical mounting of styles PF and PVF saves floor space and gets the motor up above dirt and water. In addition, the style PF flange-mounted pumps can be simply bolted on any vertical flat

surface, such as coolant reservoir, eliminating suction piping completely. It is in this form that the Centriflo® centrifugal pump is used most often as a component of our products. Operating parts of styles PF and PVF are readily accessible for cleaning or inspection without disturbing piping connections.

Standard units feature bronze fitted construction, stainless steel shaft, end enclosed bronze impeller. The impellers have exceptionally smooth passages, are accurately machined, finished by hand to final diameter and balanced for top efficiency. Mechanical seals utilize carbon/ceramic seal faces and are designed to withstand temperatures to 250°F (121°C). This assures long life at the actual operating temperature.

## Construction Features of Domestic CENTRIFLO® Centrifugal Pumps

**VERTICAL MOUNTING**, puts motor above dirt and water – saves floor space.

**HEAVY DUTY BALL BEARING MOTOR**, provides quiet reliable operation.

**WATER SLINGER** prevents water from entering motor.

**MOTOR BRACKET**, close grained cast iron for accurate, permanent alignment.

**STAINLESS STEEL SHAFT** is corrosion resisting, has large diameter and short length minimizing deflection under load.

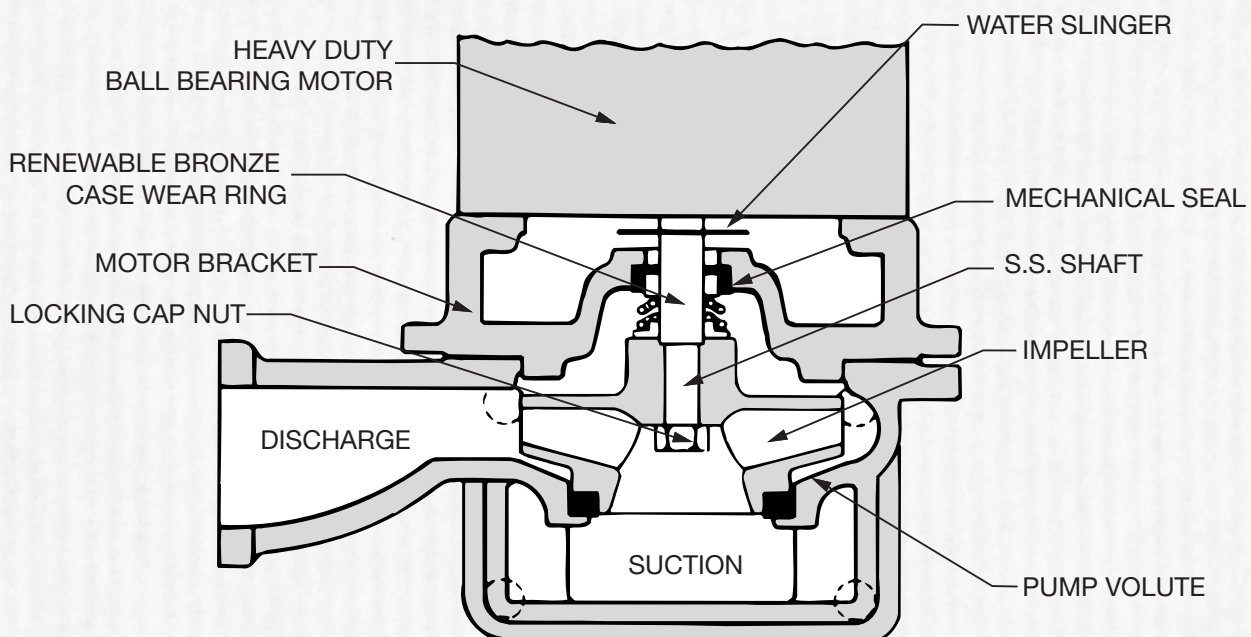
**AIR RELIEF CONNECTION** contributes to hydraulic balance and provides for lubrication of seal assembly.

**PERFORMANCE TESTED MECHANICAL SEAL**, selected for temperatures up to 250°F (121°C), assures long trouble-free life. Carbon and Ceramic faces assure long life compared to other softer materials.

**PUMP VOLUTE**, close grained cast iron.

**IMPELLER** is cast or forged bronze, high efficiency, enclosed type, mounted on motor shaft and firmly secured. It is hand finished and precision balanced for vibration free operation.

**BRONZE CASE WEAR RING** protects casing from wear – easily renewable.



## How to estimate pumping heads:

- Total length of discharge pipe and equivalent in pipe length of fittings at design flow, converted to feet head loss: ..... ft.
- Difference in elevation between pump suction and level in receiving vessel ..... ft.
- Pressure (if any) in receiving vessel ..... ft.
- Total discharge head required is sum of lines 1, 2, & 3 ..... ft.

## Series C35™ Quick Selection Chart (Based on 10' NPSHR Max.)

MAXIMUM CAPACITIES AT MOTOR HP (3500 RPM) AND APPLICABLE DISCHARGE PRESSURES										
HP	FT. TDH	34.6	46.2	57.7	69.3	92.4	115.5	138.6	173.2	208
	PSI (kPa)	15 (103)	20 (138)	25 (172)	30 (207)	40 (276)	50 (345)	60 (414)	75 (518)	90 (621)
1/3	GPM (L/M) Pump Model	22 (83) 609**	15 (57) 609**							
1/2	GPM (L/M) Pump Model	37 (140) 616	30 (114) 616	15 (57) 616**						
3/4	GPM (L/M) Pump Model	45 (170) 616	37 (140) 616	30 (114) 616	22 (83) 616**					
1	GPM (L/M) Pump Model	60 (227) 626	45 (170) 616	45 (170) 616	30 (114) 616	15 (103) 617*				
1 1/2	GPM (L/M) Pump Model	114 (424) 625	75 (284) 626	60 (227) 626	45 (170) 616	30 (114) 617	15 (103) 617*			
2	GPM (L/M) Pump Model	112 (424) 625	112 (424) 625	90 (341) 626	75 (284) 626	45 (170) 620	30 (114) 617	15 (103) 620*		
3	GPM (L/M) Pump Model	150 (568) 625	150 (568) 625	112 (424) 625	112 (424) 625	75 (284) 627	60 (227) 620	45 (170) 620	22 (83) 620*	
5	GPM (L/M) Pump Model			150 (568) 625	150 (568) 625	112 (424) 618	112 (424) 618	75 (284) 620	60 (227) 620	45 (170) 620
7 1/2	GPM (L/M) Pump Model					150 (568) 625	150 (568) 625	112 (424) 618	90 (341) 618	75 (284) 620
10	GPM (L/M) Pump Model							150 (568) 618	112 (424) 618	

CONSULT PERFORMANCE CURVES FOR HIGHER FLOW RATES WITH NPSHR ABOVE 10'.

## Series C17™ Quick Selection Chart (Based on 10' NPSHR Max.)

MAXIMUM CAPACITIES AT MOTOR HP (1750 RPM) AND APPLICABLE DISCHARGE PRESSURES						
HP	FT. TDH	34.6	46.2	57.7	69.3	92.4
	PSI (kPa)	15 (103)	20 (138)	25 (172)	30 (207)	40(276)
1/3	GPM (L/M) Pump Model	12 (45) 650*				
1/2	GPM (L/M) Pump Model	22 (83) 650	12 (45) 650*			
3/4	GPM (L/M) Pump Model	45 (190) 650	30 (114) 650	12 (45) 650*		
1	GPM (L/M) Pump Model	60 (229) 651	45 (170) 650	22 (83) 650		
1 1/2	GPM (L/M) Pump Model	90 (341) 651	75 (284) 673	60 (227) 673	37 (140) 673*	
2	GPM (L/M) Pump Model	140 (530) 654	112 (424) 673	90 (341) 673	6 (227) 673	
3	GPM (L/M) Pump Model		180 (681) 654	112 (424) 673	112 (424) 673	
5	GPM (L/M) Pump Model		260 (984) 654	180 (631) 654	180 (631) 654	
7 1/2	GPM (L/M) Pump Model		340 (1287) 665	340 (1287) 658	260 (984) 659	180 (681) 659
10	GPM (L/M) Pump Model		625 (2366) 665	550 (2082) 665	425 (1609) 665	260 (984) 659
15	GPM (L/M) Pump Model		810 (3068) 665	600 (2271) 665	600 (2271) 665	445 (1609) 665

CONSULT PERFORMANCE CURVES FOR HIGHER FLOW RATES WITH NPSHR ABOVE 10'.

\*Orificed pump discharge

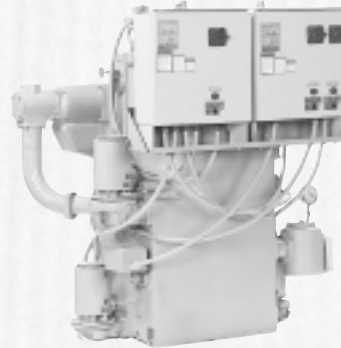
\*\*Maximum condensate temperature: 209°F (98°C) 3500 RPM only.



## Centriflo® Pumps are components of these products. . .

Domestic Pump™ utilizes the Centriflo® Style PF Pumps as basic components of the products illustrated. Domestic™ Pump's excellent condensate handling reputation originates from the reliability and performance of the Centriflo® Style PF Pumps. The Series VCD (VCD, VLR, VL, MJ) utilize the Centriflo® Style PF Pumps as the only moving part in the Multijet™ Vacuum, producing system. The Domestic Pump™ Series CC, CS, CM, etc condensate pumping package utilize the Centriflo® Style PF Pump's low suction velocity and generous, smooth-surfaced impeller passages for quiet, reliable condensate return service.

Domestic™ Series VLR™



Domestic™ Series VCD™



Domestic™ Series CC™

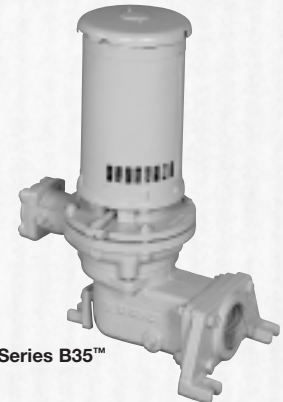
## Domestic™ 2' NPSH Centrifugal Pumps

Many of the Centriflo® Style PF Pumps perform excellent for pumping liquids at elevated temperatures (see\*\* duty points). For all other duty points that require a 2' Net Positive Suction Head (NPSH) pump, Domestic Pump™ offers the Series B35™ 2-stage pump, its high pressure counterpart, the Series DB, and the horizontal Series HB35™ and HB17™ pumps. All pumps are designed and rated at 2' NPSH. Consult the Series B35™ pump bulletin for construction and capacity ranges.

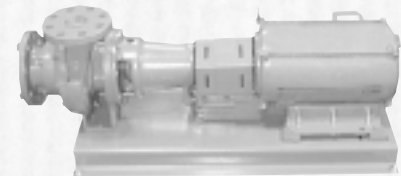
Series HB-35™ or HB™



Series B35™



Series DB™



Series DB-F™

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