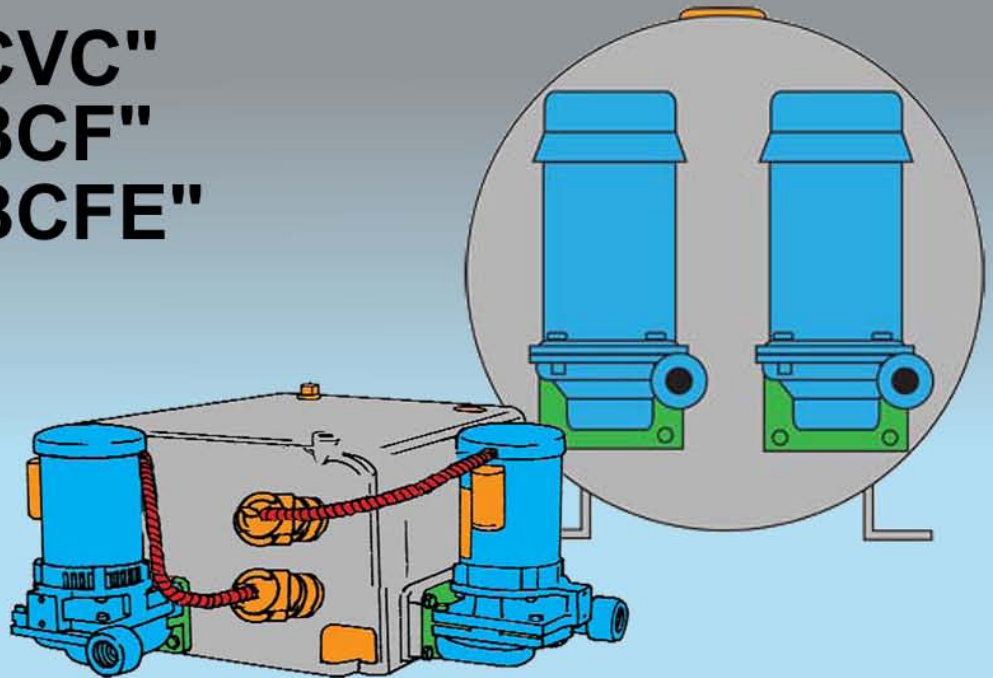


# FLO FAB



## Condensate & Boiler Feed Units

Series "CVC"  
"BCF"  
"BCFE"



[www.flofab.com](http://www.flofab.com)

Manufacturer of Pumps, Tanks, Heat Exchangers & Accessories  
for HVAC Market After-Sales Parts and Services

Condensate & Boiler Feed Units  
Series "CVC" - Condensate  
"BFC" - Boiler Feed  
"BCFE" - Elevated  
Boiler Feed

FLO FAB INC  
LAKE WORTH,  
FLORIDA, USA

The FLO FAB pumping systems described in this brochure are packaged units, completely assembled, wired and tested at the manufacturing plant. They are designed to provide maximum efficiency, reliability and easy maintenance in compact, space saving configurations.

Each unit is individually factory tested before shipment to assure that the product is ready for service when it is received. Testing includes verification of flow rate, pressure, amperage draw and cut-in/cut-out points of all components.

**Technical assistance.** Your FLO FAB representative has the expertise to assist you in selecting the pumping system most suitable for your application. He is backed by a team of engineers and application specialists who can develop the most efficient, energy saving pumping system for your specific requirements.

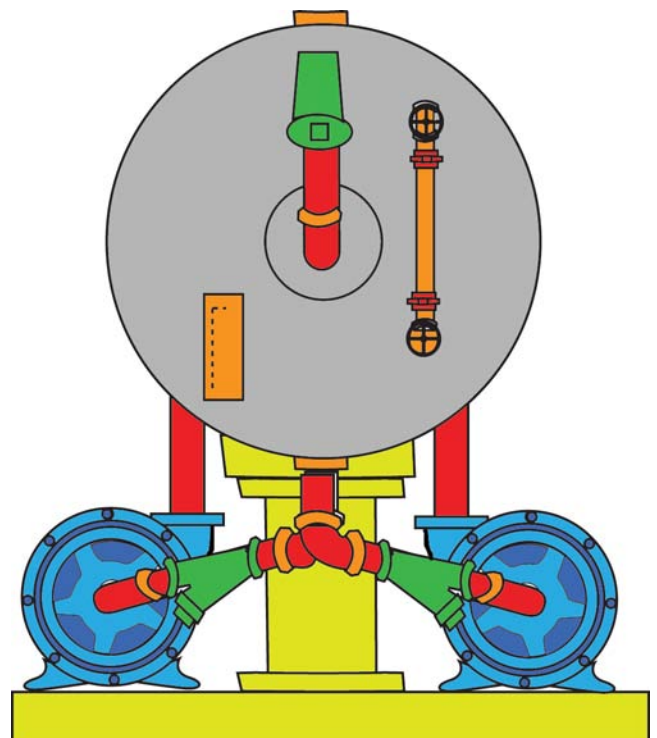
**Series BFC and BFCE boiler feed pumps** are used to pump and precisely control the condensate and make-up water required by the boiler(s) in low pressure steam applications. Pumping action is controlled by the fluid level in the boiler. They consist of a welded steel storage receiver equipped with make-up valve and one or more centrifugal pump(s) which are closed-coupled to an electric motor.

## BOILER FEED OR MAKE-UP PUMPS STANDARD EQUIPMENT

- 1) Float operated make-up valve.
- 2) Gauge glass and thermometer
- 3) Suction isolation Butterfly valve(s) (on BFCE units only)
- 4) Inlet strainer(s) - "Y" (on BFCE units only)
- 5) Metal flexible (on BFCE units only)

## OPTIONAL EQUIPMENT

- Control panels
- Make-up feeders - external type, or reverse acting float switch and solenoid valve type
- Solenoid operated make-up valve with float switch
- Magnesium corrosion inhibitor
- Three valve bypass and inlet strainer assembly
- Feedwater preheaters (Steam Injectors)
- Discharge pressure gauges
- Discharge check valves
- Discharge gate valves
- Discharge butterfly valves

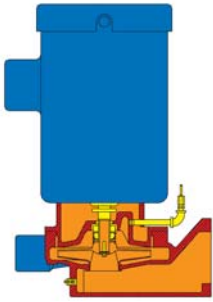


**DUPLEX (D-BFCE)  
ELEVATED BOILER FEED UNIT**



## FLO FAB CENTRIFUGAL PUMP SERIES GV

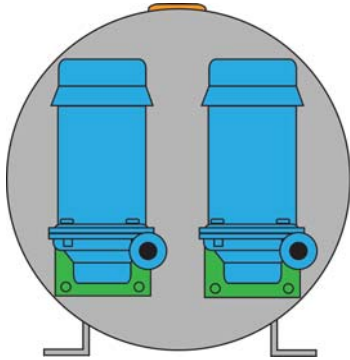
Vertically flange mounted centrifugal pumps are of bronze fitted construction with mechanical shaft seal for temperatures up to 250°F (up to 300°F also available). The pump is directly bolted to the receiver tank to provide a compact, efficient design. Seal area is automatically vented and flushed to the receiver to assure adequate lubrication at all times. Back pull-out design allows servicing without disturbing the piping. Bronze enclosed impellers are precision balanced for smooth, quiet operation. Each unit is factory assembled and tested prior to shipping.



**CENTRIFUGAL PUMP SERIES GV**

## RECEIVER TANK

Rugged steel or cast iron receivers for life-time service under the most severe conditions. Low return inlet to provide adequate drainage of radiators with low elevation. Available in 50, 70, 120, 210, 300 gallons sizes. Larger sizes are also available. Condensate receiver tanks are designed for gravity return systems only, and are not to be pressurized. Tank must be vented to atmosphere to prevent pressure build-up in the tank. Vent size shall be at least 1 1/4" diameter.



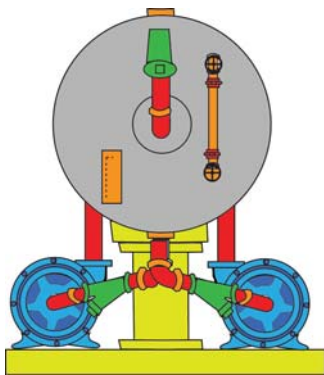
**DUPLEX (D-BFC) BOILER FEED UNIT**

## CONTROLS

Simplex (S-BFC or S-BFCE) systems are equipped with a heavy duty adjustable float switch and a stainless steel float and rod. Duplex (D-BFC or D-BFCE) systems are equipped with an electrical alternator for alternating the pumps and to start the second pump if the first one fails or when flow rate exceeds capability of one pump. For boiler feed service the float switch, which is set to close contacts at low level, operates a water make-up valve. Both float switches are two pole devices with double break contacts. Control panel and magnetic starter also available.

## MOTORS

Drip proof or TEFC NEMA standard 3450 RPM motors have dual ball bearings and threaded stainless steel shaft. All single phase motors have built-in thermal overload protection. All three phase motors must be installed with a magnetic starter which provides full overload protection. Failure to use proper starter and overload protectors will void warranty. Single phase motors thru 2Hp are 115 V or 230 V 60Hz (50 cycles also available) and 3Hp or more are 230 V only. Three phase motors are 230 V, 460 V or 575 V 60Hz (50 cycles also available).



**DUPLEX (D-BFCE)  
ELEVATED BOILER FEED UNIT**

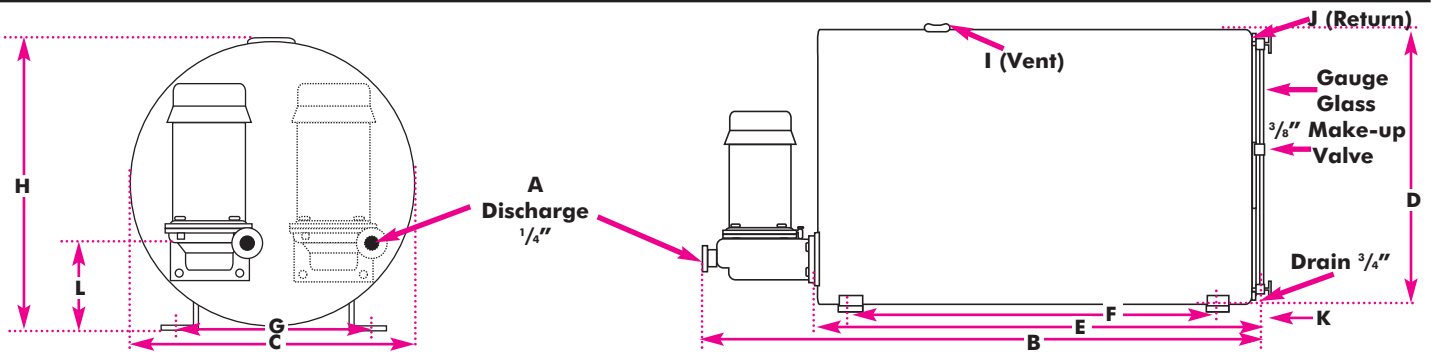
## BOILER FEED UNITS SERIES BFC

FLO FAB Series BFC boiler feed units are used to pump condensate and make-up water directly into the boiler(s). Pumping action is determined by a boiler mounted control which senses boiler water level requirements. Each boiler feed unit is equipped with a heavy duty make-up valve actuated by the position of its seamless float within the receiver. The mechanism is readily adjustable for various water levels. It is mounted on the end of the receiver and can be easily removed as a complete unit.

Simplex (S-BFC) or duplex (D-BFC) units are available with cylindrical welded steel receivers in 50, 70, 120, 210, 300 gallon capacities. Simplex (S-BFC) units are also available mounted on duplex receivers to provide the option for conversion to a duplex (D-BFC) unit at a future requirement. Standard equipment also includes a water level gauge glass and a stem thermometer. When ordering, specify model number and required voltage.

**NOTE:** Larger units available on request.

Receiver Size	Unit Type	B	C	D	E	F	G	H	I	J	K	L
50 Gallons	S-BFC	49"	22"	22"	37"	33"	18"	21"	2"	2"	4"	7 <sup>3</sup> / <sub>16</sub> "
	D-BFC	1244.6 mm	558.8 mm	558.8 mm	939.8 mm	838.2 mm	457.2 mm	533.4 mm	50.8 mm	50.8 mm	101.6 mm	182.9 mm
70 Gallons	S-BFC	47"	24"	24"	37"	31"	22"	25"	2"	2"	4"	6 <sup>7</sup> / <sub>8</sub> "
	D-BFC	1193.8 mm	609.6 mm	609.6 mm	939.8 mm	787.4 mm	558.8 mm	635 mm	50.8 mm	50.8 mm	101.6 mm	172.7 mm
120 Gallons	S-BFC	56"	28"	28"	46"	40"	26"	29"	2 <sup>1</sup> / <sub>2</sub> "	2 <sup>1</sup> / <sub>2</sub> "	4"	6 <sup>3</sup> / <sub>8</sub> "
	D-BFC	1422.4 mm	711.2 mm	711.2 mm	1168.4 mm	1016 mm	660.4 mm	736.6 mm	63.5 mm	63.5 mm	101.6 mm	162.6 mm
210 Gallons	S-BFC	81"	30"	30"	71"	65"	28"	31"	2 <sup>1</sup> / <sub>2</sub> "	2 <sup>1</sup> / <sub>2</sub> "	4"	6 <sup>3</sup> / <sub>8</sub> "
	D-BFC	2057.4 mm	762 mm	762 mm	1803.4 mm	1651 mm	711.2 mm	787.4 mm	63.5 mm	63.5 mm	101.6 mm	162.6 mm
300 Gallons	S-BFC	82"	36"	36"	72"	60"	32"	39"	3"	3"	6"	6 <sup>3</sup> / <sub>8</sub> "
	D-BFC	2082.8 mm	914.4 mm	914.4 mm	1828.8 mm	1524 mm	812.8 mm	990.6 mm	76.2 mm	76.2 mm	152.4 mm	162.6 mm



Dimensions not to be used for construction unless prints is certified by factory.

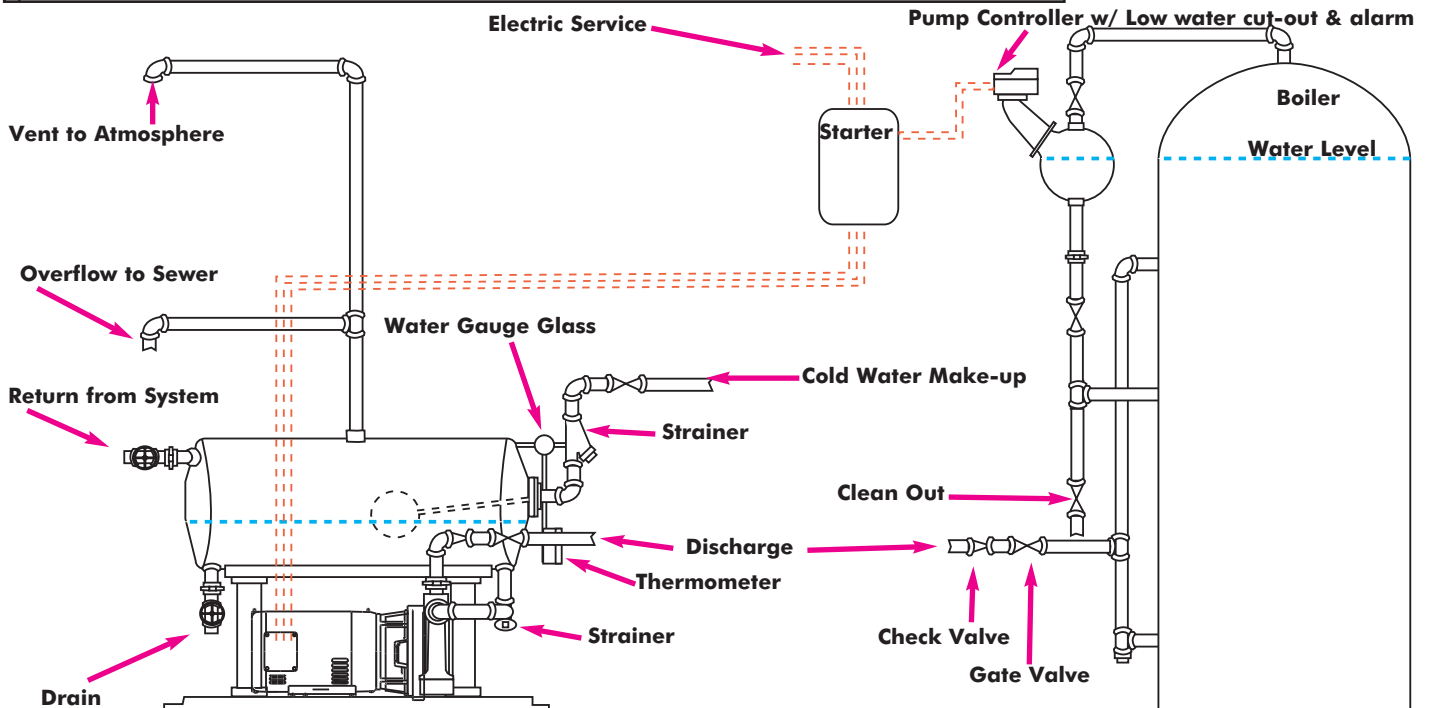
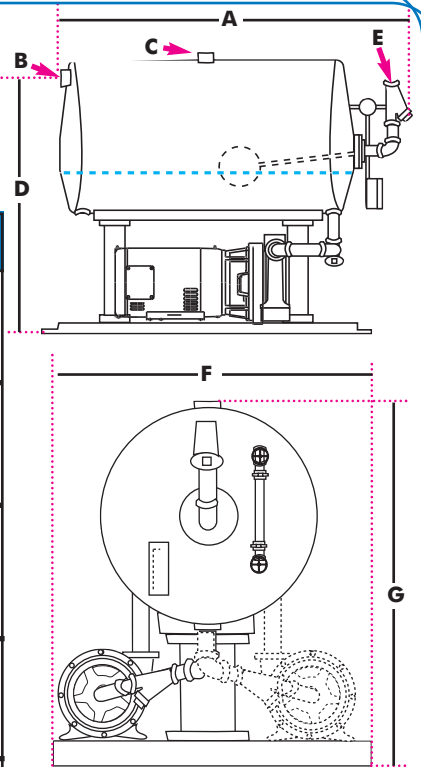


# FLO FAB Elevated Boiler Feed Units Series BFCE

## ELEVATED BOILER FEED UNITS SERIES BFCE

All the same features as the regular boiler feed units series BFC. The BFCE also includes suction isolation butterfly valve(s), inlet "Y" strainer(s) and metal flexible(s) at pump inlet(s). The elevated boiler feed units series BFCE may be an option for small space location that requires special installation. The pump(s) and motor(s) are installed beside or under the tank instead of at the end(s) for a more compact, shorter design.

Receiver Size	Unit Type	A	B	C	D	E	F	G
50 Gallons	S-BFCE	44"	2"	2"	45"	3/4"	36"	50"
	D-BFCE	1117.6 mm	50.8 mm	50.8 mm	1143 mm	19.05 mm	914.4 mm	1270 mm
70 Gallons	S-BFCE	44"	2"	2"	47"	3/4"	36"	52"
	D-BFCE	1117.6 mm	50.8 mm	50.8 mm	1193.8 mm	19.05 mm	914.4 mm	1320.8 mm
120 Gallons	S-BFCE	53"	2 1/2"	2 1/2"	50"	3/4"	36"	56"
	D-BFCE	1346.2 mm	63.5 mm	63.5 mm	1270 mm	19.05 mm	914.4 mm	1422.4 mm
210 Gallons	S-BFCE	78"	2 1/2"	2 1/2"	52"	3/4"	36"	58"
	D-BFCE	1981.2 mm	63.5 mm	63.5 mm	1320.8 mm	19.05 mm	914.4 mm	1473.2 mm
300 Gallons	S-BFC	79"	3"	3"	66"	3/4"	42"	72"
	D-BFC	2006.6 mm	76.2 mm	76.2 mm	1676.4 mm	19.05 mm	1066.8 mm	1828.8 mm





# Boiler Feed Unit Selection Tables (3450 RPM)



IDENTIFICATION: \_\_\_\_\_ VOLTS / \_\_\_\_\_ HP / \_\_\_\_\_ HZ

\* USING CLOSED COUPLED SERIES GV6 OR SERIES 1000 PUMPS

SERIES  BFC OR  BFCE 3450 RPM

**MODEL SPECIFICATIONS**

EX: **D** - **CVC** - **1010** - **15**

**S** = SIMPLEX  
**D** = DUPLEX

**UNIT TYPE**  
**CVC** = CONDENSATE  
**BFC** = BOILER FEED  
**BFCE** = ELEVATED BOILER FEED

**RECEIVER SIZES**

**EDR & PSI**  
EX: E.D.R.=10,000 (10)  
PSI = 10

**ENGINEERING EQUIVALENTS**

1,000 SQ. FT. E.D.R. = 240,000 BTU /HR.  
1,000 SQ. FT. E.D.R. = 247 LBS WATER EVAP. /HR.  
1,000 SQ. FT. E.D.R. = 1/2 GAL WATER EVAP /MIN.

1 SQ. FT. E.D.R. = 240 BTU /HR. (STEAM)  
1 SQ. FT. E.D.R. = 1/4 LBS WATER EVAP. /HR.

1 BOILER HP = 33,475 BTU /HR. (STEAM)  
1 BOILER HP = 34.5 LBS WATER EVAP. /HR. (212°F)  
1 BOILER HP = .069 GAL WATER EVAP. /MIN.  
1 BOILER HP = 140 SQ. FT. E.D.R. (STEAM)  
1 BOILER HP = 222 SQ. FT. E.D.R. (WATER)

1 US GALLON = 231 CU. INCHES

1 LBS = 2.31 FT. OF WATER

Unit Model Number	Boiler Hp E.D.R (sq. ft) BTUH (1000's)	Pump USGPM	Tank Capa. Gallons	Pump Disch Press. PSI	3450 RPM	
					Motor Hp	Pump Motor Models
<input type="checkbox"/> Simplex <input type="checkbox"/> Duplex						
BFC - 0210				10	1/4	GV6
BFC - 0215	Hp 14	3	15	15	1/3	GV6
BFC - 0220				20	1/2	GV6
BFC - 0230				30	1/2	GV6
BFC - 0240	EDR 2,000	3	15	40	3/4	GV6
BFC - 0250				50	1	GV6
BFC - 0255				55	1 1/2	GV6
BFC - 0270	BTUH 490	3	15	70	--	--
BFC - 0280				80	--	--
BFC - 0290				90	--	--
BFC - 02100				100	--	--
BFC - 0410				10	1/4	GV6
BFC - 0415	Hp 29	6	15	15	1/3	GV6
BFC - 0420				20	1/3	GV6
BFC - 0430				30	1/2	GV6
BFC - 0440	EDR 4,000	6	15	40	3/4	GV6
BFC - 0450				50	1	GV6
BFC - 0455				55	1 1/2	GV6
BFC - 0470	BTUH 990	6	15	70	--	--
BFC - 0480				80	--	--
BFC - 0490				90	--	--
BFC - 04100				100	--	--
BFC - 0610				10	1/3	GV6
BFC - 0615	Hp 43	9	15	15	1/3	GV6
BFC - 0620				20	1/3	GV6
BFC - 0630				30	1/2	GV6
BFC - 0640	EDR 6,000	9	15	40	3/4	GV6
BFC - 0650				50	1	GV6
BFC - 0655				55	1 1/2	GV6
BFC - 0670	BTUH 1,480	9	15	70	--	--
BFC - 0680				80	--	--
BFC - 0690				90	--	--
BFC - 06100				100	--	--
BFC - 0810				10	1/3	GV6
BFC - 0815	Hp 57	12	15	15	1/3	GV6
BFC - 0820				20	1/3	GV6
BFC - 0830				30	3/4	GV6
BFC - 0840	EDR 8,000	12	15	40	1	GV6
BFC - 0850				50	1 1/2	GV6
BFC - 0855				55	1 1/2	GV6
BFC - 0870	BTUH 1,975	12	15	70	--	--
BFC - 0880				80	--	--
BFC - 0890				90	--	--
BFC - 08100				100	--	--

Dimensions not to be used for construction unless prints is certified by factory.



# FLO FAB Boiler Feed Unit Selection Tables (3450 RPM)

IDENTIFICATION: \_\_\_\_\_ VOLTS / \_\_\_\_\_ Hp / \_\_\_\_\_ Hz

\* USING CLOSED COUPLED SERIES GV6 OR SERIES 1000 PUMPS

SERIES  BFC OR  BFCE 3450 RPM

SERIES  BFC OR  BFCE 3450 RPM

Unit Model Number	Boiler Hp	Pump USGPM	Tank Capa. Gallons	Pump Disch Press. PSI	3450 RPM		Unit Model Number	Boiler Hp	Pump USGPM	Tank Capa. Gallons	Pump Disch Press. PSI	3450 RPM					
					Motor Hp	Pump Motor Models						Simplex <input type="checkbox"/>	Duplex <input type="checkbox"/>	E.D.R (sq. ft)	BTUH (1000's)	Motor Hp	Pump Motor Models
BFC - 1010	Hp 72	15	15	10	1/3	GV6	BFC - 3010	45	35	10	--	--					
BFC - 1015				15	1/3	GV6	BFC - 3015			15	1/2	GV6					
BFC - 1020				20	1/3	GV6	BFC - 3020			20	1/2	GV6					
BFC - 1030				30	3/4	GV6	BFC - 3030			30	1	GV6					
BFC - 1040				40	3/4	GV6	BFC - 3040			40	1 1/2	GV6					
BFC - 1050				50	1 1/2	GV6	BFC - 3050			50	2	GV6					
BFC - 1055				55	1 1/2	GV6	BFC - 3055			55	2 1/2	610A					
BFC - 1070				70	--	--	BFC - 3070			70	2 1/2	810A					
BFC - 1080				80	--	--	BFC - 3080			80	10	810A					
BFC - 1090				90	--	--	BFC - 3090			90	10	810A					
BFC - 10100	100	--	--	BFC - 30100	100	10	810A										
BFC - 1510	Hp 108	22 1/2	25	10	1/3	GV6	BFC - 4010	60	50	10	--	--					
BFC - 1515				15	1/3	GV6	BFC - 4015			15	--	--					
BFC - 1520				20	1/2	GV6	BFC - 4020			20	1	GV6					
BFC - 1530				30	3/4	GV6	BFC - 4030			30	1 1/2	GV6					
BFC - 1540				40	1	GV6	BFC - 4040			40	2	GV6					
BFC - 1550				50	1 1/2	GV6	BFC - 4050			50	2	GV6					
BFC - 1555				55	1 1/2	GV6	BFC - 4055			55	2 1/2	610A					
BFC - 1570				70	2 1/2	810G	BFC - 4070			70	2 1/2	810A					
BFC - 1580				80	10	810G	BFC - 4080			80	10	810A					
BFC - 1590				90	20	1020A	BFC - 4090			90	10	810A					
BFC - 15100	100	25	1020A	BFC - 40100	100	15	810A										
BFC - 2010	Hp 143	30	25	10	1/3	GV6	BFC - 5010	75	70	10	--	--					
BFC - 2015				15	1/3	GV6	BFC - 5015			15	--	--					
BFC - 2020				20	1/2	GV6	BFC - 5020			20	--	--					
BFC - 2030				30	3/4	GV6	BFC - 5030			30	3	615J					
BFC - 2040				40	1	GV6	BFC - 5040			40	5	610A					
BFC - 2050				50	1 1/2	GV6	BFC - 5050			50	5	610A					
BFC - 2055				55	2	GV6	BFC - 5055			55	2 1/2	815G					
BFC - 2070				70	2 1/2	810A	BFC - 5070			70	2 1/2	810A					
BFC - 2080				80	10	810A	BFC - 5080			80	10	810A					
BFC - 2090				90	10	810G	BFC - 5090			90	15	810A					
BFC - 20100	100	15	810G	BFC - 50100	100	15	810A										
BFC - 2510	Hp 179	37 1/2	35	10	1/3	GV6	BFC - 6510	97 1/2	70	10	--	--					
BFC - 2515				15	1/2	GV6	BFC - 6515			15	--	--					
BFC - 2520				20	1/2	GV6	BFC - 6520			20	--	--					
BFC - 2530				30	1	GV6	BFC - 6530			30	3	615A					
BFC - 2540				40	1 1/2	GV6	BFC - 6540			40	5	615J					
BFC - 2550				50	2	GV6	BFC - 6550			50	2 1/2	615J					
BFC - 2555				55	2	GV6	BFC - 6555			55	2 1/2	815G					
BFC - 2570				70	2 1/2	810A	BFC - 6570			70	10	810A					
BFC - 2580				80	2 1/2	810A	BFC - 6580			80	10	810A					
BFC - 2590				90	10	810A	BFC - 6590			90	15	810A					
BFC - 25100	100	10	810A	BFC - 65100	100	15	810A										

# Boiler Feed Unit Selection Tables (1750 RPM)



IDENTIFICATION: \_\_\_\_\_ VOLTS / \_\_\_\_\_ Hp / \_\_\_\_\_ Hz

\* USING CLOSED COUPLED SERIES GV6 OR SERIES 1000 PUMPS

## SERIES BFC OR BFCE 3450 RPM

Unit Model Number <input type="checkbox"/> Simplex <input type="checkbox"/> Duplex	Boiler Hp		Pump USGPM	Tank Capa. Gallons	Pump Disch Press. PSI	3450 RPM	
	E.D.R (sq. ft)	BTUH (1000's)				Motor Hp	Pump Motor Models
BFC - 7510			112½	70	10	--	--
BFC - 7515	Hp 538				15	--	--
BFC - 7520					20	--	--
BFC - 7530					30	5	615A
BFC - 7540	EDR 75,000				40	5	615J
BFC - 7550					50	7½	615J
BFC - 7555					55	7½	810A
BFC - 7570	BTUH 18,000				70	10	810A
BFC - 7580					80	10	810A
BFC - 7590					90	15	810A
BFC - 75100			100	15	810A		
BFC - 10010	Hp 717		150	120	10	--	--
BFC - 10015					15	--	--
BFC - 10020					20	--	--
BFC - 10030		30			5	620A	
BFC - 10040	EDR 100,000				40	7½	615A
BFC - 10050					50	7½	615J
BFC - 10055					55	10	815G
BFC - 10070	BTUH 24,700				70	10	815G
BFC - 10080					80	15	815G
BFC - 10090					90	15	815G
BFC - 100100			100	15	810A		

## SERIES BFC OR BFCE 1750 RPM

Unit Model Number <input type="checkbox"/> Simplex <input type="checkbox"/> Duplex	Boiler Hp		Pump USGPM	Tank Capa. Gallons	Pump Disch Press. PSI	1750 RPM			
	E.D.R (sq. ft)	BTUH (1000's)				Motor Hp	Pump Motor Model		
BFC - 0210	Hp 14		3	15	10	¼	GV6		
BFC - 0215					15	¼	GV6		
BFC - 0220					20	3	1020A		
BFC - 0230	EDR 2,000				30	5	1020A		
BFC - 0240					40	7½	1020A		
BFC - 0250					50	10	1215A		
BFC - 0255	BTUH 490				55	10	1215A		
BFC - 0410	Hp 29				6	15	10	¼	GV6
BFC - 0415							15	⅓	GV6
BFC - 0420							20	3	1020A
BFC - 0430	EDR 4,000		30	5			1020A		
BFC - 0440			40	7½			1020A		
BFC - 0450			50	10			1215A		
BFC - 0455	BTUH 990		55	10			1215A		
BFC - 0610	Hp 43		9	15			10	¼	GV6
BFC - 0615							15	¼	GV6
BFC - 0620							20	3	1020A
BFC - 0630	EDR 6,000				30	5	1020A		
BFC - 0640					40	7½	1020A		
BFC - 0650					50	10	1215A		
BFC - 0655	BTUH 1,480				55	10	1215A		
BFC - 0810	Hp 57				12	15	10	¼	GV6
BFC - 0815							15	¼	GV6
BFC - 0820							20	3	1020A
BFC - 0830	EDR 8,000		30	5			1020A		
BFC - 0840			40	7½			1020A		
BFC - 0850			50	10			1215A		
BFC - 0855	BTUH 1,975		55	10			1215A		
BFC - 1010	Hp 72		15	15			10	¼	GV6
BFC - 1015							15	¼	GV6
BFC - 1020							20	1½	810A
BFC - 1030	EDR 10,000				30	5	1020A		
BFC - 1040					40	7½	1020A		
BFC - 1050					50	10	1215A		
BFC - 1055	BTUH 2,470				55	10	1215A		

Dimensions not to be used for construction unless prints is certified by factory.





# FLO FAB Boiler Feed Unit Selection Tables (1750 RPM)

IDENTIFICATION: \_\_\_\_\_ VOLTS / \_\_\_\_\_ Hp / \_\_\_\_\_ Hz

\* USING CLOSED COUPLED SERIES GV6 OR SERIES 1000 PUMPS

SERIES  BFC OR  BFCE 1750 RPM

SERIES  BFC OR  BFCE 1750 RPM

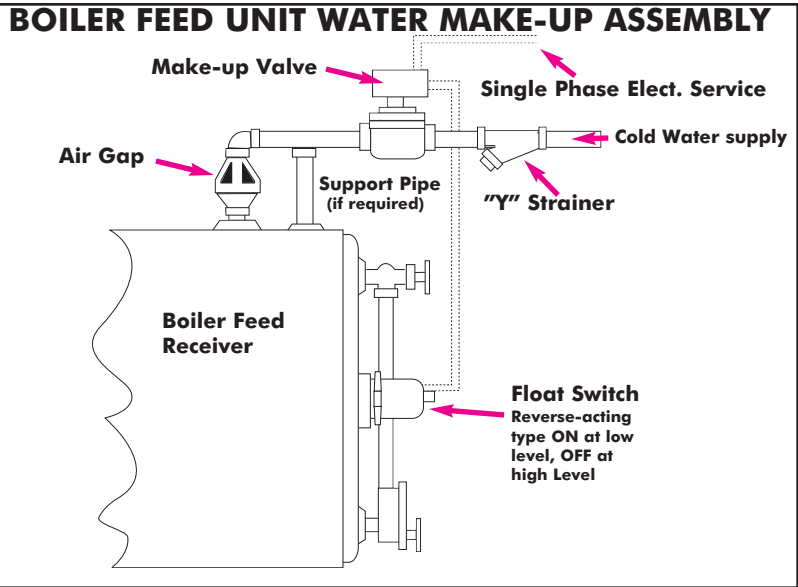
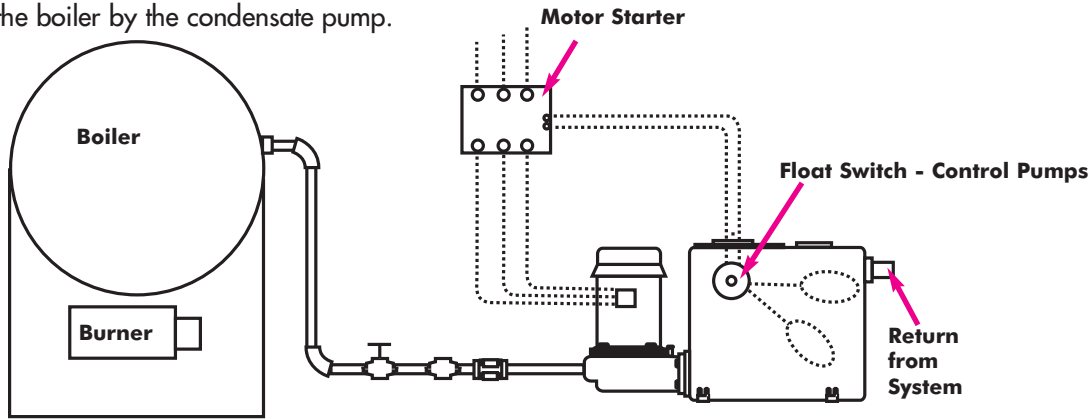
Unit Model Number <input type="checkbox"/> Simplex <input type="checkbox"/> Duplex	Boiler Hp	Pump USGPM	Tank Capa. Gallons	Pump Disch Press. PSI	1750 RPM	
	E.D.R (sq. ft)				Motor Hp	Pump Motor Model
	BTUH (1000's)					
BFC - 1510	Hp 108	22 1/2	25	10	1/4	GV6
BFC - 1515				15	1/3	GV6
BFC - 1520	EDR 15,000			20	1 1/2	810A
BFC - 1530				30	2	810A
BFC - 1540	40			7 1/2	1020A	
BFC - 1550	BTUH 3,600			50	10	1215A
BFC - 1555				55	10	1215A
BFC - 2010	Hp 143	30	25	10	1/4	GV6
BFC - 2015				15	1/3	GV6
BFC - 2020	EDR 20,000			20	1 1/2	810A
BFC - 2030				30	2	810A
BFC - 2040	40			7 1/2	1020A	
BFC - 2050	BTUH 4,940			50	10	1215A
BFC - 2055				55	10	1215A
BFC - 2510	Hp 179	37 1/2	35	10	1/3	GV6
BFC - 2515				15	1	610A
BFC - 2520	EDR 25,000			20	1 1/2	810A
BFC - 2530				30	2	810A
BFC - 2540	40			7 1/2	1020A	
BFC - 2550	BTUH 6,170			50	10	1215A
BFC - 2555				55	10	1215A
BFC - 3010	Hp 215	45	35	10	1/2	615J
BFC - 3015				15	3/4	815G
BFC - 3020	EDR 30,000			20	1 1/2	810A
BFC - 3030				30	2	810A
BFC - 3040	40			5	1020A	
BFC - 3050	BTUH 7,400			50	10	1215A
BFC - 3055				55	10	1215A
BFC - 4010	Hp 285	60	50	10	3/4	615J
BFC - 4015				15	1	810A
BFC - 4020	EDR 40,000			20	2	810A
BFC - 4030				30	5	1020A
BFC - 4040	40			7 1/2	1020A	
BFC - 4050	BTUH 9,880			50	10	1215A
BFC - 4055				55	15	1215A

Unit Model Number <input type="checkbox"/> Simplex <input type="checkbox"/> Duplex	Boiler Hp	Pump USGPM	Tank Capa. Gallons	Pump Disch Press. PSI	1750 RPM	
	E.D.R (sq. ft)				Motor Hp	Pump Motor Model
	BTUH (1000's)					
BFC - 5010	Hp 358	75	70	10	3/4	615J
BFC - 5015				15	1	815G
BFC - 5020	EDR 50,000			20	2	810A
BFC - 5030				30	5	810A
BFC - 5040	40			7 1/2	1020A	
BFC - 5050	BTUH 12,000			50	10	1215A
BFC - 5055				55	15	1215A
BFC - 6510	Hp 450	97 1/2	70	10	1	615A
BFC - 6515				15	1 1/2	815G
BFC - 6520	EDR 65,000			20	2	815G
BFC - 6530				30	5	1020A
BFC - 6540	40			7 1/2	1020A	
BFC - 6550	BTUH 15,000			50	10	1215A
BFC - 6555				55	15	1215A
BFC - 6570	70	20	1220A			
BFC - 7510	Hp 538	112 1/2	70	10	1 1/2	620A
BFC - 7515				15	2	825A
BFC - 7520	EDR 75,000			20	3	1020A
BFC - 7530				30	5	1020A
BFC - 7540	40			15	1025A	
BFC - 7550	BTUH 18,000			50	10	1215A
BFC - 7555				55	15	1215A
BFC - 7570	70	20	1220A			
BFC - 10010	Hp 717	150	120	10	1 1/2	620A
BFC - 10015				15	2	825A
BFC - 10020	EDR 100,000			20	3	825A
BFC - 10030				30	5	1020A
BFC - 10040	40			15	1025A	
BFC - 10050	BTUH 24,700			50	10	1215A
BFC - 10055				55	15	1215A
BFC - 10070	70	20	1220A			

Dimensions not to be used for construction unless prints is certified by factory.

## CONDENSATE RETURN UNITS SERIES CVC

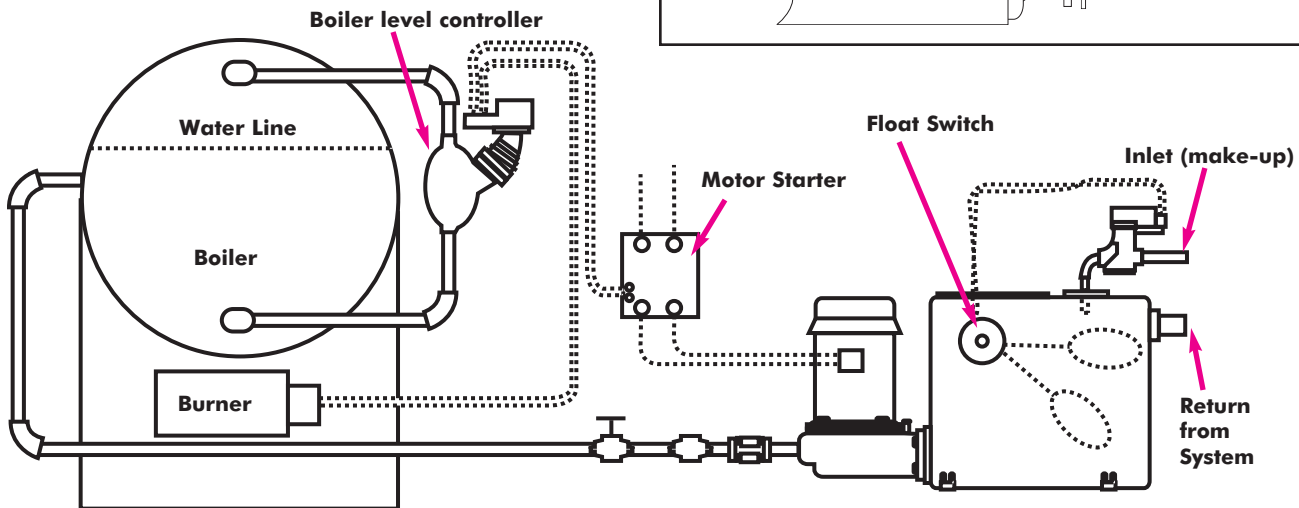
The condensate pump is operated by a float switch in the condensate tank. As water is returned from the system, it is pumped to the boiler by the condensate pump.



## BOILER FEED UNITS SERIES BFC OR BFCE

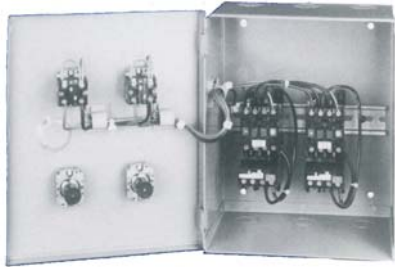
**Circuit 1** - The boiler level controller operates the condensate pump feeding water to the boiler as required.

**Circuit 2** - The float switch mounted in the condensate tank operates a valve adding water to the condensate tank as required.





## SERIES DCP



### SERIES DCP CONTROL PANEL STANDARD

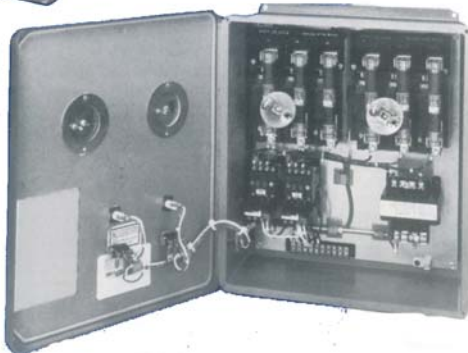
- 1) NEMA Type 1 only
- 2) 2 starters with 3<sup>rd</sup> leg overload protection.
- 3) Reset button in the cover.

### OPTIONAL

- 3 position selector switch, hand-off auto, Lead-off lag, or test-off auto
- Pilot light(s) 250 V max.
- 1 electric alternator per panel (duplex models only)



## SERIES DCP-B



### SERIES DCP-B CONTROL PANEL WITH CIRCUIT BREAKERS STANDARD

- 1) NEMA Type 1
- 2) 2 starters, each with 3<sup>rd</sup> leg overload protection and reset button on each starter
- 3) Number terminal strip

### OPTIONAL

- NEMA Type, 2, 3, 4X, 7, 9 or 12 Consult Factory
- Fused or non-fused disconnect(s) with interlock with provisions for padlock.
- 1 fuse block per starter
- Fused control circuit transformer 110 volt secondary
- 1 electric alternator per panel (duplex models only)
- Relays - number as required
- Selector switches on cover (1 per starter)
  - Labeled- Hand-off auto
  - Lead-off lag
  - Boiler #1 - off - Boiler #2
  - Pump #1 - off - Pump #2
  - Test-off auto (spring loaded to off)
- Pilot light(s) on cover (1 per starter)
- Alarm bell with silencing switch (1 per panel)
- External reset buttons for starters

## CONDENSATE RETURN UNITS SERIES CVC

### S-CVC (SIMPLEX)      D-CVC (DUPLEX)

The contractor shall furnish and install a FLO FAB automatic condensate unit. Pump(s) shall be mounted vertically and flanged to the receiver. Pump(s) shall be cast iron bronze fitted end suction centrifugal pumps with 250°F (300°F also available) mechanical seals close coupled to 115/230 Volts single or 208/460/575 Volts three phase 60 Hz, 3500 RPM, open drip-proof or totally enclosed electric motors. A vent line shall be furnished from each pump seal chamber to the receiver.

Receiver shall be 15, 25, 35, 45, 70 or 120 gallons  $\frac{3}{16}$ " black steel or cast iron with 2" vent,  $\frac{3}{4}$ " drain and (2" or 3") inlet. Simplex (S-CVC) unit shall include a UQK-2 float switch assembly.

Duplex (D-CVC) unit shall include two UQK-2 float switch with electrical alternator assemblies.

A stem thermometer and a gauge glass should be provided.

**OPTIONAL:** On duplex units, a NEMA 1 control panel with magnetic starter(s) should be installed (not included).

## BOILER FEED UNITS SERIES BFC

### S-BFC (SIMPLEX)      D-BFC (DUPLEX)

The contractor shall furnish and install a FLO FAB automatic ground level boiler feed unit. Pump(s) shall be mounted vertically and flanged to the receiver. Pump(s) shall be cast iron bronze fitted end suction centrifugal pumps with 250°F (300°F also available) mechanical seals close coupled to 115/230 Volts single or 208/460/575 Volts three phase 60 Hz, 3500 RPM, open drip-proof or totally enclosed electric motors.

Receiver shall be 50, 70, 120, 210 or 300 gallons  $\frac{1}{4}$ " black steel with 2" vent,  $\frac{3}{4}$ " drain and (2" or 3") inlet.

Simplex (S-BFC) and duplex (D-BFC) unit shall include make-up valve, vent, a stem thermometer and a gauge glass installed on the tank.

## ELEVATED BOILER FEED UNITS SERIES BFCE

### S-BFCE (SIMPLEX)      D-BFCE (DUPLEX)

The contractor shall furnish and install a FLO FAB automatic elevated boiler feed unit. Pump(s) shall be mounted vertically and flanged to the receiver. Pump(s) shall be cast iron bronze fitted end suction centrifugal pumps with 250°F (300°F also available) mechanical seals close coupled to 115/230 Volts single or 208/460/575 Volts three phase 60 Hz, 3500 RPM, open drip-proof or totally enclosed electric motors.

Receiver shall be 50, 70, 120, 210 or 300 gallons  $\frac{1}{4}$ " black steel with 2" vent,  $\frac{3}{4}$ " drain and (2" or 3") inlet.

Simplex (S-BFCE) and duplex (D-BFCE) unit shall include make-up valve, vent, a stem thermometer and a gauge glass installed on the tank. Suction isolation butterfly valve(s), inlet "Y" strainer(s), a stem thermometer, a gauge glass and metal flexible will be provided.

## OPTIONS FOR SERIES CVC - BFC & BFCE

- "Y" Strainer
- Simplex Basket Strainer (SBS)
- Receivers can be furnished in stainless steel construction.
- $\frac{3}{4}$ " Solenoid on larger units.
- NEMA 1 control panel with magnetic motor starters with HOA switch shall be furnished for each pump motor mounted and wired on receiver, for remote mounting Nema I enclosures.
- FLO FAB Series DCP Duplex control panel with magnetic starters, HOA switches, with or without circuit breakers 115 volt control circuit transformer, 3<sup>rd</sup> leg overload protection, terminal strip, Nema I enclosure shall be furnished mounted on receiver & wired, for remote wall mounting Nema I enclosure with or without electric alternator.



IDENTIFICATION/TAG: \_\_\_\_\_

### BILL OF MATERIALS:

#### CONDENSATE RETURN UNITS SERIES CVC AND/OR BOILER FEED UNITS SERIES BFC & BFCE

##### 1) PUMP(S)

A single-stage closed coupled cast iron, bronze fitted casing, leak proof mechanical shaft seal, stainless steel large diameter corrosion resistant shaft, and bronze casing wearing. These pump(s) requirement allows handling of 250°F condensate without flashing and cavitation. The pump(s) is provided with an axial flow impeller being enclosed in a cast bronze construction. The pump(s) cast iron flanged volute has an internal cast iron baffle preventing pre-rotation of the condensate. The entire rotating assembly can be removed without disturbing the discharge or return piping.

PUMP(S) SELECTION	
CVC MODEL # _____	BFC MODEL # _____
SIMPLEX (S-CVC) <input type="checkbox"/>	SIMPLEX (S-BFC) <input type="checkbox"/>
DUPLEX (D-CVC) <input type="checkbox"/>	SIMPLEX (S-BFCE) <input type="checkbox"/>
	DUPLEX (D-BFCE) <input type="checkbox"/>
	DUPLEX (D-BFC) <input type="checkbox"/>
PUMP CAPACITY: _____ USGPM AT _____ PSI	
1) CENTRIFUGAL PUMP(S) <input type="checkbox"/>	SINGLE STAGE <input type="checkbox"/> MULTI-STAGE <input type="checkbox"/>
2) CLOSED COUPLED <input type="checkbox"/>	

##### 2) MOTOR(S)

Open-drip proof motor, standard NEMA construction. Motor bearings are sealed and factory greased for extra-long trouble-free operation. Single phase fractional Hp with dual voltage motors include built-in thermal overload protection. Motors are standard at 3450 RPM.

MOTOR(S) SELECTION	
MOTOR(S) Hp _____	ODP <input type="checkbox"/> TEFC <input type="checkbox"/> XP <input type="checkbox"/>
60Hz SPEED: 3450 RPM <input type="checkbox"/>	1750 RPM <input type="checkbox"/>
VOLTAGE: 115V <input type="checkbox"/>	208V <input type="checkbox"/> 230V <input type="checkbox"/> 460V <input type="checkbox"/> 575V <input type="checkbox"/>
1 PHASE <input type="checkbox"/>	3 PHASE <input type="checkbox"/>

##### 3) RECEIVER

Receiver inlet, pump(s), vent and drain connections.

RECEIVER SELECTION	CONDENSATE (CVC) SELECTION	BOILER FEED (BFC OR BFCE) SELECTION
CAPACITY _____ GALLONS	<input type="checkbox"/> 15 GALLONS	<input type="checkbox"/> 50 GALLONS
TYPE: ASME <input type="checkbox"/> NON-ASME <input type="checkbox"/>	<input type="checkbox"/> 25 GALLONS	<input type="checkbox"/> 70 GALLONS
SHAPE: CYLINDRICAL <input type="checkbox"/> RECTANGULAR <input type="checkbox"/>	<input type="checkbox"/> 35 GALLONS	<input type="checkbox"/> 120 GALLONS
CONSTRUCTION: STEEL <input type="checkbox"/>	<input type="checkbox"/> 45 GALLONS	<input type="checkbox"/> 210 GALLONS
STEEL W/DURATHERM LINING <input type="checkbox"/>	<input type="checkbox"/> 70 GALLONS	<input type="checkbox"/> 300 GALLONS
STAINLESS STEEL <input type="checkbox"/>	<input type="checkbox"/> 120 GALLONS	
STEEL W/GALVANIZING <input type="checkbox"/>		
CAST IRON (RECTANGULAR ONLY) <input type="checkbox"/>		
VENT CONNECTION <input type="checkbox"/> SIZE: _____"		
BLIND PLATE ON SIMPLEX UNITS FOR FUTURE EXPANSION <input type="checkbox"/>		
SHUT OFF VALVE BETWEEN RECEIVER AND PUMP SUCTION (OPTIONAL) <input type="checkbox"/>		
NON STANDARD RECEIVER <input type="checkbox"/> SIZE: _____ GALLONS		
20 YEARS WARRANTY (OPTIONAL) <input type="checkbox"/>		



IDENTIFICATION/TAG: \_\_\_\_\_

**4) RECEIVER ACCESSORIES**

Float switch(es) and alternator connections for complete flexibility

ACCESSORIES SELECTION	
THERMOMETER: RANGE 40°F TO 300°F	<input type="checkbox"/> STRAIGHT <input type="checkbox"/> ANGLE <input type="checkbox"/> DIAL <input type="checkbox"/>
GAUGE GLASS ASSEMBLY <input type="checkbox"/> (STANDARD EXCEPT: 10 AND 15 GALLONS RECEIVERS)	
ADDITIONAL RECEIVER TAPPINGS <input type="checkbox"/>	SIZE: _____"
ONE FLOAT SWITCH (SIMPLEX UNITS) <input type="checkbox"/>	TWO FLOAT SWITCHES (DUPLEX UNITS) <input type="checkbox"/>

**5) MECHANICAL CONTROLS**

**FOR CVC UNITS:**

Automatic operation is provided by an internal mounted enclosed adjustable float switch assembly, for simplex (S-CVC) or two float switches or control panel with electrical alternator for duplex (D-CVC) operation.

The alternator shall: Change the operating sequence automatically after each cycle.

Provide simultaneous operation under peak load conditions

Operate the second pump automatically, should the active pump or its control fail.

SELECTION	
FOR SIMPLEX UNITS: ONE FLOAT SWITCH	<input type="checkbox"/>
FOR DUPLEX UNITS: TWO FLOAT SWITCHES	<input type="checkbox"/>
CONTROL PANEL W/ELECTRICAL ALTERNATOR	<input type="checkbox"/>
NEMA _____ PANEL <input type="checkbox"/>	HIGH LEVEL ALARM WITH FLOAT <input type="checkbox"/>
TANK ALERT MOUNTED <input type="checkbox"/>	UNMOUNTED <input type="checkbox"/> BY OTHERS <input type="checkbox"/>
ISOLATION VALVE(S) (OPTIONAL) IF REQUIRED <input type="checkbox"/>	SIZE: _____"
DISCHARGE PRESSURE GAUGE(S) WITH MINI BALL VALVE(S) (OPTIONAL) <input type="checkbox"/>	
INLET STRAINER FOR TANK RETURN CONNECTION (LOOSE) <input type="checkbox"/>	SIZE: _____"
INLET BASKET STRAINER (CAST IRON RECEIVER) <input type="checkbox"/>	SIZE: _____"

**FOR BFC OR BFCE UNITS:**

Automatic operation is provided by an internal mounted enclosed adjustable float switch operated by an internal make-up valve for boiler feed units.

SELECTION	
FOR SIMPLEX UNITS: ONE FLOAT SWITCH	<input type="checkbox"/>
FOR DUPLEX UNITS: TWO FLOAT SWITCHES	<input type="checkbox"/>
OR CONTROL PANEL W/ELECTRICAL ALTERNATOR	<input type="checkbox"/>
NEMA _____ PANEL <input type="checkbox"/>	HIGH LEVEL ALARM WITH FLOAT <input type="checkbox"/>
TANK ALERT MOUNTED <input type="checkbox"/>	UNMOUNTED <input type="checkbox"/> BY OTHERS <input type="checkbox"/>
ISOLATION VALVE(S) (OPTIONAL) IF REQUIRED <input type="checkbox"/>	SIZE: _____"
DISCHARGE PRESSURE GAUGE(S) WITH MINI BALL VALVE(S) (OPTIONAL) <input type="checkbox"/>	
PRESSURE GAUGE(S): DRY <input type="checkbox"/>	LIQUID FILLED <input type="checkbox"/>
INLET STRAINER FOR TANK RETURN CONNECTION (LOOSE) <input type="checkbox"/>	SIZE: _____"
INLET Y STRAINER <input type="checkbox"/>	SIZE: _____"
INLET BASKET STRAINER <input type="checkbox"/>	SIZE: _____"
FLOAT OPERATED INTERNAL MAKE-UP VALVE	<input type="checkbox"/>
GAUGE GLASS AND SHUT-OFF VALVES <input type="checkbox"/>	(ON BFC 15 TO 200 GALLONS RECEIVERS)

**6) ELECTRICAL CONTROLS**

See EP panel for proper selection. All panels are CSA and/or UL approved.



### OPTIONAL MODIFICATIONS AVAILABLE FOR CONDENSATE (CVC) AND BOILER FEED (BFC OR BFCE) UNITS

#### MECHANICAL MODIFICATIONS

- FLO FAB CONDENSATE RETURN UNITS SERIES CVC CAN BE FURNISHED AS AN AUTOMATIC BOILER FEED UNIT SERIES BFC OR BFCE BY SUBSTITUTING COLD WATER MAKE-UP VALVE ASSEMBLY FOR FLOAT SWITCH, SELECTING A LARGE RECEIVER AND ACTUATING THE PUMP MOTOR BY A BOILER WATER LEVEL CONTROLLER. (MECHANICAL OPERATION OR SOLENOID ACTUATED BY A FLOAT SWITCH)**

#### ELECTRICAL MODIFICATIONS

- TOTALLY ENCLOSED MOTORS AND NEMA - 4 FLOAT SWITCHES AND STARTERS (MOTOR HP SIZE MAY BE INCREASED) WIRING IN SEAL-TIGHT CONDUIT**
- EXPLOSION PROOF MOTORS AND NEMA - 7 FLOAT SWITCHES AND STARTERS (MOTOR HP MAY BE INCREASED)**
- VARIOUS MAGNETIC STARTERS ARRANGEMENTS INCLUDING:  
DUPLEX CONTROL PANELS, COMBINATION STARTERS WITH VARIOUS FORMS OF DISCONNECTS OR CIRCUIT BREAKERS, WATER RESISTANT OR EXPLOSION PROOF ENCLOSURES, HAND-OFF AUTO SWITCHES, PILOT LIGHTS AND TRANSFORMERS PROVIDING LOW CONTROL VOLTAGE. ALL ARRANGEMENTS ARE CSA AND/OR UL APPROVED. TRANSFER SWITCHES TO ALTERNATE PUMP OPERATION  OR TRANSFER PUMP-BOILER RELATIONSHIP IN MULTIPLE BOILER INSTALLATIONS.**   
**SEE TABLE.**
- HIGH WATER ALARM**
- OR LOW WATER ALARM (TANK ALERT) ACTUATED BY FLOAT SWITCH.**

FF

# FLO FAB



**Manufacturer of Pumps, Tanks, Heat Exchangers & Accessories  
for HVAC Market After-Sales Parts and Services**

[www.flofab.com](http://www.flofab.com)

FLO-FAB INC  
LAKE WORTH,  
FLORIDA, USA

SEPTEMBER 2009