

Hoffman Specialty boiler feed units are used to return condensate to the boiler. Applications include residential, commercial, and industrial steam heating and processing, dry cleaning plants, chemical refineries, wood pulp and paper processing, textile mills, and manufacturing facilities.

#### **Stock Units**

- Rated for 210°F (99°C) condensate
- Available from 2,160,000 BTU/hr (2250 lbm/hr stm) to 9,600,000 BTU/hr (10,000 lbm/hr stm) sizes
- Available in Simplex and Duplex configuration
- Heavy gauge steel receiver with HoffGuard™ corrosion resistance coating for longer life
- Easily fits through standard 32" (813mm) door for trouble-free installation

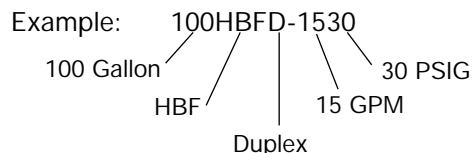
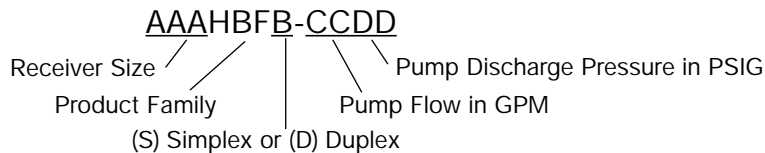
#### **Built to Order Units**

- Three phase motors applications
- Tri-volt motors with control panels
- Alternate duty points are available by special request (consult factory)



# Hoffman Specialty® Series HBF Boiler Feed Units

## Model Designation



### STOCK UNITS (Standard Features Only)

Model Number	BHP	Sq. Ft. EDR (Lb/Hr)	Flow GPM (L/M)	Pressure PSIG (kPa)	HP (KW)	Pump Model No.	Tank Size Gallons (L)
50HBF(S/D)-1520	100	15,000 (3750)	15 (57)	20 (138)	1/3 (0.25)	609PF	50 (189)
100HBF(S/D)-1520	110	15,000 (3750)	15 (57)	20 (138)	1/3 (0.25)	609PF	110 (416)
100HBF(S/D)-2030	145	20,000 (5000)	20 (76)	30 (207)	3/4 (0.56)	*616PF	110 (416)
200HBF(S/D)-3020	217	30,000 (7500)	30 (114)	20 (138)	1/2 (0.37)	**616PF	220 (833)
200HBF(S/D)-3030	217	30,000 (7500)	30 (114)	30 (207)	1 (0.75)	**616PF	220 (833)
200HBF(S/D)-4020	290	40,000 (10,000)	40 (151)	20 (138)	1 (0.75)	**626PF	220 (833)
200HBF(S/D)-4030	290	40,000 (10,000)	40 (151)	30 (207)	1 1/2 (1.12)	**626PF	220 (833)

### BUILT TO ORDER UNITS (Optional Features Available)

Model Number	BHP	Sq. Ft. EDR (Lb/Hr)	Flow GPM (L/M)	Pressure PSIG (kPa)	HP (KW)	Pump Model No.	Tank Size Gallons (L)
50HBF(S/D)-0920	65	9,000 (2250)	9 (34)	20 (138)	1/3 (0.25)	609PF	50 (189)
50HBF(S/D)-0925	65	9,000 (2250)	9 (34)	25 (172)	1/3 (0.25)	609PF	50 (189)
50HBF(S/D)-0930	65	9,000 (2250)	9 (34)	30 (207)	1/3 (0.25)	609PF	50 (189)
50HBF(S/D)-1520	110	15,000 (3750)	15 (57)	20 (138)	1/3 (0.25)	609PF	50 (189)
100HBF(S/D)-0920	65	9,000 (2250)	9 (34)	20 (138)	1/3 (0.25)	609PF	110 (416)
100HBF(S/D)-0925	65	9,000 (2250)	9 (34)	25 (172)	1/2 (0.37)	*616PF	110 (416)
100HBF(S/D)-0930	65	9,000 (2250)	9 (34)	30 (207)	3/4 (0.56)	*616PF	110 (416)
100HBF(S/D)-1520	110	15,000 (3750)	15 (57)	20 (138)	1/3 (0.25)	609PF	110 (416)
100HBF(S/D)-1525	110	15,000 (3750)	15 (57)	25 (172)	1/2 (0.37)	*616PF	110 (416)
100HBF(S/D)-1530	110	15,000 (3750)	15 (57)	30 (207)	3/4 (0.56)	*616PF	110 (416)
100HBF(S/D)-2020	145	20,000 (5000)	20 (76)	20 (138)	1/3 (0.25)	609PF	110 (416)
100HBF(S/D)-2025	145	20,000 (5000)	20 (76)	25 (172)	3/4 (0.56)	*616PF	110 (416)
100HBF(S/D)-2030	145	20,000 (5000)	20 (76)	30 (207)	3/4 (0.56)	*616PF	110 (416)
200HBF(S/D)-2520	180	25,000 (6250)	25 (95)	20 (138)	3/4 (0.56)	616PF	220 (833)
200HBF(S/D)-2525	180	25,000 (6250)	25 (95)	25 (172)	3/4 (0.56)	616PF	220 (833)
200HBF(S/D)-2530	180	25,000 (6250)	25 (95)	30 (207)	1 (0.75)	616PF	220 (833)
200HBF(S/D)-3020	217	30,000 (7500)	30 (114)	20 (138)	1/2 (0.37)	**616PF	220 (833)
200HBF(S/D)-3025	217	30,000 (7500)	30 (114)	25 (172)	3/4 (0.56)	**616PF	220 (833)
200HBF(S/D)-3030	217	30,000 (7500)	30 (114)	30 (207)	1 (0.75)	**616PF	220 (833)
200HBF(S/D)-4020	290	40,000 (10,000)	40 (151)	20 (138)	1 (0.75)	**626PF	220 (833)
200HBF(S/D)-4025	290	40,000 (10,000)	40 (151)	25 (172)	1 1/2 (1.12)	**626PF	220 (833)
200HBF(S/D)-4030	290	40,000 (10,000)	40 (151)	30 (207)	1 1/2 (1.12)	**626PF	220 (833)

\*Orificed discharge

\*\*Maximum condensate temperature 200°F (93.3°C)

## Series HBF Standard Features

**HoffGuard™**: Corrosion resistance coatings give additional protection to the heavy gauge steel receiver.

### Centrifugal Pumps:

- Pumps include carbon/ceramic mechanical seals designed for 250°F (121°C) for maximum life.
- Rated for high temperature 210°F (99°C) condensate.
- Pumps sized for twice system return rate.

**Horizontal Receivers**: Lowest inlet design for retrofit of existing applications with low return lines. Sized for a minimum of 5 minutes net storage. All receivers have 2 pump openings.

**Make-Up Valve**: Float operated, internal water make-up valve adds cold water at low level. Level adjustment is standard.

### Inlet, Vent and Overflow:

- Low height NPT inlet for easy return line piping.
- Separate NPT connections provide a secondary vent for safe operation.
- NPT drain connection.

**Water Level Gauge Glass**: Includes protective brass rods and shut off valve.

**ISO 9001 Certified**: Domestic Pump™ produces the HBF in our ISO 9001 certified manufacturing facility. ISO certification assures a product built with a consistent level of quality and performance.

**100% factory tested as a complete unit.**

## Series HBF Optional Features

### Nema 4X 115/230 Volt Single Phase Simplex Control Panel

- For wall mounting
- Single phase motor starter
- Fuse protected contactor coil
- Control circuit overload protection
- Pilot light for positive "Pump-On" indication
- UL listed

### Inlet Basket Strainer

- Removes particles from the heating system before pump damage can occur.

### "Y" Strainer

- Removes incoming particles from the city water make-up source before pump damage can occur.

### Dial Thermometer

- Temperature reading for total system monitoring.

### Pressure Gauges

- Pressure reading for total system monitoring.

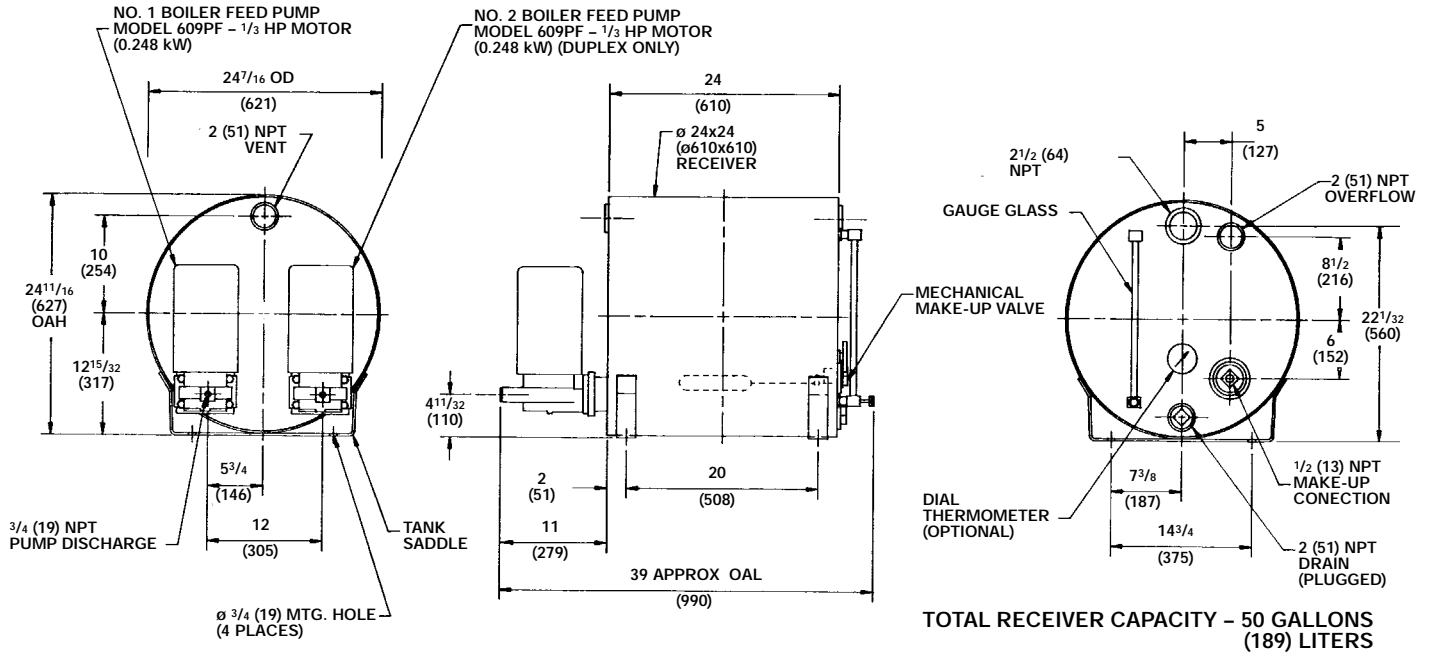
### Butterfly Valves

- Allows for pump removal without interrupted service on duplex unit.

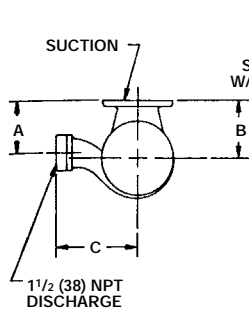
# Roughing-in Dimensions

All dimensions in inches (mm). Not to be used for installation unless certified.

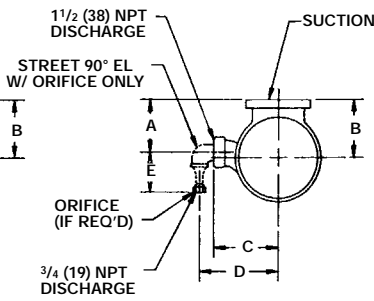
## 50 HBF



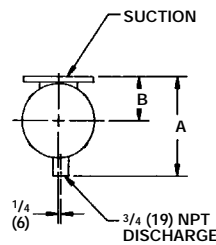
### 626PF PUMP



### 616PF PUMP

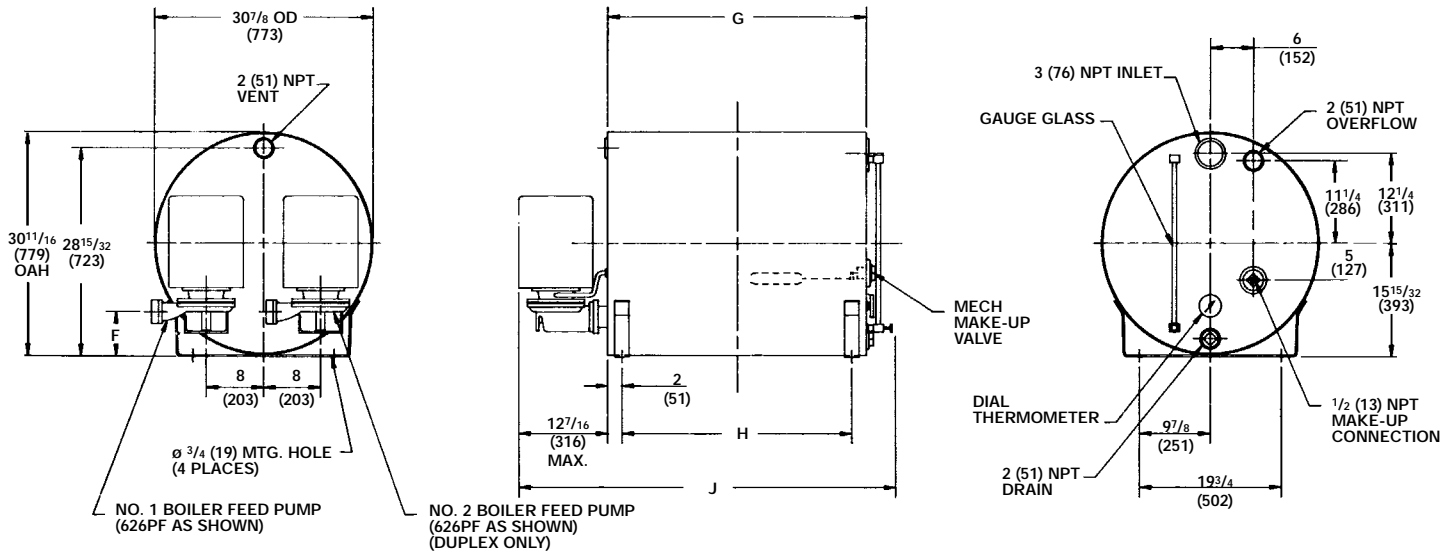


### 609PF PUMP



## 100 AND 200 HBF

SEE SELECTION CHART FOR REQUIRED PUMP



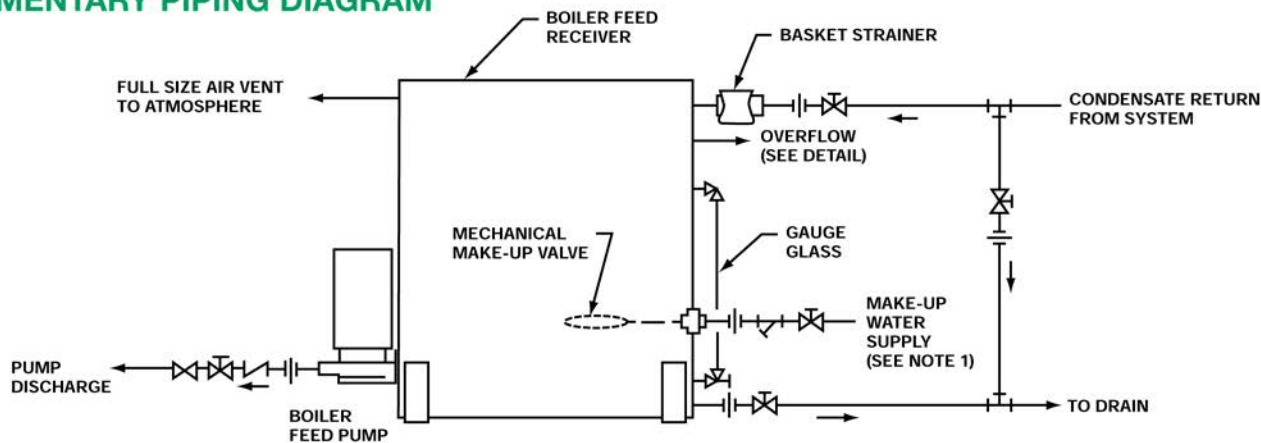
PUMP DIMENSIONS IN INCHES (MM)

PUMP	A	B	C	D	E	F
626PF	4 3/4 (121)	5 1/4 (133)	7 3/8 (194)	—	—	6 3/32 (155)
616PF	4 3/4 (121)	5 1/4 (133)	6 (152)	8 (203)	5 3/8 (137)	5 19/32 (142)
609PF	9 1/16 (230)	4 1/16 (103)	—	—	—	5 11/32 (136)

RECEIVER DIMENSIONS IN INCHES (MM)

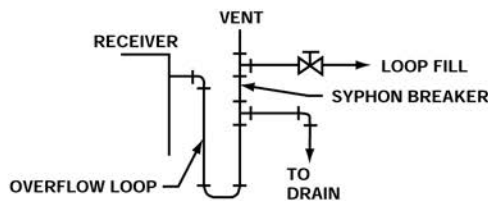
RECEIVER	G	H	J	CAPACITY
30x36 (762x914)	36 (914)	32 (813)	52 1/2 (1333)	100 Gallons (416 Liters)
30x72 (762x1829)	72 (1829)	68 (1727)	88 1/2 (2248)	220 Gallons (833 Liters)

## ELEMENTARY PIPING DIAGRAM



### LEGEND

- PLUG COCK
- GATE VALVE
- CHECK VALVE
- UNION
- Y-STRAINER



OVERFLOW LOOP DETAIL

### NOTE:

1. Inlet water pressure should not exceed 30 psi (207kPa). For water systems in excess of 30 psi, use a Bell & Gossett #6 Pressure Reducing Valve, set at 30 psi.

## Series HBF Specification

### Part 2 – Products

#### 2.1 Acceptable Manufacturers

- A. Subject to compliance with these specifications, the following manufacturers shall be acceptable:
  1. Bell & Gossett Hoffman Specialty
  2. Pre-approved equal

#### 2.2 Components\*

##### A. RECEIVER

1. The receiver shall be fabricated of black steel with HoffGuard™ coating for added corrosion resistance.
2. The receiver shall be horizontal for the lowest possible inlet.
3. Receiver shall include a separate inlet, vent and an overflow connection.
4. The pumps shall be located on the receiver head to minimize the units width to allow passage through A 32" (813mm) door.
5. The receiver shall be sized for a minimum (5) five minutes net storage.
6. Receiver shall be furnished with:
  - a. (1) Water level gauge glass for visual tank level indication.
  - b. (1) Dial thermometer.
  - c. (1) Dial pressure gauge for pump discharge.
  - d. Inlet basket strainer to protect the pumps from system debris.
  - e. "Y" strainer to protect the pumps from make-up water debris.
  - f. (1) Bronze fitted, butterfly isolation valve (up to 75 gpm [284 L/M] pump capacity) between pump sump receiver to permit servicing the pumps without draining the receiver.

##### B. WATER PUMP

1. The water pump shall be centrifugal design, bronze fitted with enclosed cast bronze centrifugal impeller, permanently aligned and flanged mounted for vertical operation.
2. Each pump shall be close-coupled to a 3500 rpm, vertical, drip-proof motor and shall deliver its full capacity with condensate temperatures up to 210°F (99°C) at sea level, at 2 ft. NPSH (net positive suction head). Maximum condensate temperature 200°F (93.3°C) for pumps 30 gpm and above.
3. Each pump gpm shall be sized for 2 times the boiler evaporation rate.
4. Carbon/ceramic mechanical shaft seal shall be rated for 250°F (121°C).
5. Each pump shall include:
  - a. Bronze impeller.
  - b. Renewable bronze casing wear ring.
  - c. Stainless steel shaft.
  - d. Discharge gauge port tapping.
  - e. Drain tapping.

##### C. CONTROL PANEL

1. The unit manufacturer shall furnish a wall mounted 115/230 single phase simplex control panel for each pump.
2. Each NEMA 4X enclosure shall include the following:
  - a. Panel door with interlock.
  - b. IEC contactor, waterproof on-off switch.
  - c. (1) Pump running pilot light.

For complete specification contact local B&G representative.

\*Note: Optional accessories are underlined.



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