

For condensate up to 210°F (98.9°C) (at sea level);
capacities to 260 GPM (984L/M) and discharge pressures to
100 PSIG (690 kPa)

- **Lowest possible inlet -**
Often eliminates double pumping and concrete pits
- **Minimum headroom requirement**
Low profile units are easy to install and service
- **“Package” construction yields total unit responsibility**
Complete factory assembly - Thorough testing of
complete unit - Simplified installation
- **Series B35™ 2 ft. NPSH pumps or Centriflo®
centrifugal boiler feed pumps**
Vertical mounting puts motors above dirt
and water, saves floor space



Domestic® Pump Series CMHD™ Boiler Feed Units



CMHD Boiler Feed Units

CMHD units offer flexible and economical solutions to feeding low pressure boilers. The conveniently low inlet of the floor mounted receiver frequently permits handling gravity returns without having to resort to expensive concrete pits.

The receiver is fabricated of black steel, and is available with optional hot dipped galvanizing, epoxy lining or in stainless steel. There is a wide range of receiver sizes, guaranteeing an efficient match of unit to system, and

depending on receiver size, as many as eight boiler feed pumps can be mounted on the receiver. Centriflo or 2 ft. NPSH B35 pumps are standard equipment. These 2 ft. NPSH centrifugal pumps, rugged and reliable, insure operation even at temperatures within two degrees of boiling. A floor level receiver is practical only because of the low required NPSH of these pumps.

For those situations where initial cost is an overriding factor, CMHD units can be furnished with economical Centriflo single stage pumps.

Model Designation

Model Number

<u>AAA</u>	-	<u>BBBB</u>	-	<u>CCC</u>	-	<u>DDD</u>
Boiler Horsepower ÷ 100		Boiler Feed Receiver		Pump Discharge Pressure ÷ 10		Pump Series C17 - Centriflo - 1750 RPM C35 - Centriflo - 3500 RPM B35 - 2 ft. NPSH - 3500 RPM

Example:	<u>2.05</u>	-	<u>CMHD</u>	-	<u>5.0</u>	-	<u>B35</u>
	205 Boiler Horsepower		Style of Boiler Feed Receiver		50 PSI Discharge Pressure		2 ft. NPSH Pump(s)

$$\text{Boiler Horsepower} \times 34.5 = \text{Lbs/Hr S+M @ 212°F (100°C)}$$

Domestic Pump Series CMHD Boiler Feed Units

STANDARD UNIT FEATURES:

- Steel Receiver, minimum 3/16" (5mm) thickness with dished heads and inlet cascade baffle. Receiver sized for 10 minute net storage of system water requirements.
- Heightless supports
- Gauge Glass with shutoff valve
- Dial Thermometer
- Low level cut-off float switch
- Centrifugal 2 ft. NPSH Series B35 pumps with open drip proof motors. Pump capacity sized for 2 times the system return rate.
- Float switch, solenoid valve and "Y" strainer water make-up assembly.

OPTIONAL EQUIPMENT AS SPECIFIED:

- Centriflo centrifugal pumps Series C17 -1750 RPM or Series C35-3500 RPM
- Inlet Basket Strainer
- Suction Butterfly valves for capacities to 115 GPM (435L/M) with C17 or C35 pumps and capacities to 75 GPM (284L/M) with B35 pumps
- Manhole and/or additional openings on receiver
- NEMA 2 - U.L. Listed Control Panels
- Manual bypass assembly around solenoid water make-up valve and/or air gap fitting
- TEFC motors
- Hot Dip Galvanizing, epoxy lining, stainless steel
- Discharge Pressure Gauges
- High or low water alarms and required controls
- Magnesium anode corrosion inhibitor
- Preheater (steam distribution tube)

Selection Data

Application Range

System Capacity	Pump Cap.** GPM (L/M)	Pump Disch. Press. PSIG (kPa)	to 200 °F		to 210 °F		Receiver Size *** Receiver No. & Net Storage Cap.	Opening Sizes, Inches (mm)
			Centriflo Pump Motor Horsepower	Model Number	Series B35 Pump Motor Horsepower	Model Number		
14,250 sq. ft. EDR 3,500 lb/hr (1,600 kg/hr) 95 BHP	15 (57)	20 (138) 25 (172) 30 (207) 40 (276) 50 (345) 60 (414) 75 (518) 85 (587) 90 (621) 100 (690)	1/2 1/2 3/4 1 1 1/2 2 3 - 5 -	.95-CMHD-2.0-C35 .95-CMHD-2.5-C35 .95-CMHD-3.0-C35 .95-CMHD-4.0-C35 .95-CMHD-5.0-C35 .95-CMHD-6.0-C35 .95-CMHD-7.5-C35 - .95-CMHD-9.0-C35 -	1/2 3/4 3/4 1 1/2 2 3 5 5 - 5	.95-CMHD-2.0-B35 .95-CMHD-2.5-B35 .95-CMHD-3.0-B35 .95-CMHD-4.0-B35 .95-CMHD-5.0-B35 .95-CMHD-6.0-B35 .95-CMHD-7.5-B35 .95-CMHD-8.5-B35 - .95-CMHD-10.0-B35	24" x 36" (610 mm x 914 mm) 65 GAL (246 L)	INLET 2 1/2 (64) OVERFLOW 2 (51) VENT 2 (51)
22,000 sq. ft. EDR 5,500 lb/hr (2,495 kg/hr) 150 BHP	22 (83)	15 (103) 20 (138) 25 (172) 30 (207) 40 (276) 50 (345) 60 (414) 75 (518) 85 (587) 90 (621) 100 (690)	1/2 1/2 3/4 3/4 1 1/2 2 3 3 5 - 5	1.50-CMHD-1.5-C35 1.50-CMHD-2.0-C35 1.50-CMHD-2.5-C35 1.50-CMHD-3.0-C35 1.50-CMHD-4.0-C35 1.50-CMHD-5.0-C35 1.50-CMHD-6.0-C35 1.50-CMHD-7.5-C35 - 1.50-CMHD-9.0-C35 -	1/2 1/2 3/4 3/4 1 1/2 2 3 3 5 5 - 5	1.50-CMHD-1.5-B35 1.50-CMHD-2.0-B35 1.50-CMHD-2.5-B35 1.50-CMHD-3.0-B35 1.50-CMHD-4.0-B35 1.50-CMHD-5.0-B35 1.50-CMHD-6.0-B35 1.50-CMHD-7.5-B35 1.50-CMHD-8.5-B35 - 1.50-CMHD-10.0-B35	24" x 60" (610 mm x 1524 mm) 104 GAL (394 L)	INLET 2 1/2 (64) OVERFLOW 2 (51) VENT 2 (51)
30,000 sq. ft. EDR 7,500 lb/hr (3,500 kg/hr) 205 BHP	30 (114)	15 (103) 20 (138) 25 (172) 30 (207) 40 (276) 50 (345) 60 (414) 75 (518) 85 (587) 90 (621) 100 (690)	1/2 3/4 3/4 1 1 1/2 2 3 3 5 - 5	2.05-CMHD-1.5-C35 2.05-CMHD-2.0-C35 2.05-CMHD-2.5-C35 2.05-CMHD-3.0-C35 2.05-CMHD-4.0-C35 2.05-CMHD-5.0-C35 2.05-CMHD-6.0-C35 2.05-CMHD-7.5-C35 - 2.05-CMHD-9.0-C35 -	1/2 3/4 3/4 1 2 3 3 5 5 - 7 1/2	2.05-CMHD-1.5-B35 2.05-CMHD-2.0-B35 2.05-CMHD-2.5-B35 2.05-CMHD-3.0-B35 2.05-CMHD-4.0-B35 2.05-CMHD-5.0-B35 2.05-CMHD-6.0-B35 2.05-CMHD-7.5-B35 2.05-CMHD-8.5-B35 - 2.05-CMHD-10.0-B35	30" x 48" (762 mm x 1219 mm) 141 GAL (534 L)	INLET 3 (76) OVERFLOW 2 1/2 (64) VENT 2 (51)
44,000 sq. ft. EDR 11,000 lb/hr (5,000 kg/hr) 295 BHP	45 (170)	15 (103) 20 (138) 25 (172) 30 (207) 40 (276) 50 (345) 60 (414) 75 (518) 85 (587) 90 (621) 100 (690)	3/4 1 1 1 1/2 2 3 3 5 - 5 -	2.95-CMHD-1.5-C35 2.95-CMHD-2.0-C35 2.95-CMHD-2.5-C35 2.95-CMHD-3.0-C35 2.95-CMHD-4.0-C35 2.95-CMHD-5.0-C35 2.95-CMHD-6.0-C35 2.95-CMHD-7.5-C35 - 2.95-CMHD-9.0-C35 -	3/4 3/4 1 1 1/2 3 3 5 5 7 1/2 - 7 1/2	2.95-CMHD-1.5-B35 2.95-CMHD-2.0-B35 2.95-CMHD-2.5-B35 2.95-CMHD-3.0-B35 2.95-CMHD-4.0-B35 2.95-CMHD-5.0-B35 2.95-CMHD-6.0-B35 2.95-CMHD-7.5-B35 2.95-CMHD-8.5-B35 - 2.95-CMHD-10.0-B35	30" x 72" (762 mm x 1829 mm) 204 GAL (772 L)	INLET 3 (76) OVERFLOW 2 1/2 (64) VENT 2 (51)
66,000 sq. ft. EDR 16,500 lb/hr (7,000 kg/hr) 440 BHP	60 (227)	15 (103) 20 (138) 25 (172) 30 (207) 40 (276) 50 (345) 60 (414) 75 (518) 85 (587) 90 (621) 100 (690)	1 1 1/2 1 1/2 2 3 3 5 5 - 7 1/2 -	4.40-CMHD-1.5-C35 4.40-CMHD-2.0-C35 4.40-CMHD-2.5-C35 4.40-CMHD-3.0-C35 4.40-CMHD-4.0-C35 4.40-CMHD-5.0-C35 4.40-CMHD-6.0-C35 4.40-CMHD-7.5-C35 - 4.40-CMHD-9.0-C35 -	1 1/2 1 1/2 2 2 3 3 5 5 7 1/2 7 1/2 -	4.40-CMHD-1.5-B35 4.40-CMHD-2.0-B35 4.40-CMHD-2.5-B35 4.40-CMHD-3.0-B35 4.40-CMHD-4.0-B35 4.40-CMHD-5.0-B35 4.40-CMHD-6.0-B35 4.40-CMHD-7.5-B35 4.40-CMHD-8.5-B35 - 4.40-CMHD-10.0-B35	36" x 72" (914 mm x 1829 mm) 302 GAL (1143 L)	INLET 4 (102) OVERFLOW 3 (76) VENT 2 1/2 (64)
105,000 sq. ft. EDR 26,250 lb/hr (12,000 kg/hr) 700 BHP	90 (341)	15 (103) 20 (138) 25 (172) 30 (207) 40 (276) 50 (345) 60 (414) 75 (518) 85 (587)	1 1/2 2 2 3 5 5 7 1/2 7 1/2 -	7.00-CMHD-1.5-C35 7.00-CMHD-2.0-C35 7.00-CMHD-2.5-C35 7.00-CMHD-3.0-C35 7.00-CMHD-4.0-C35 7.00-CMHD-5.0-C35 7.00-CMHD-6.0-C35 7.00-CMHD-7.5-C35 -	1 1/2 2 3 3 5 7 1/2 7 1/2 10 10	7.00-CMHD-1.5-B35 7.00-CMHD-2.0-B35 7.00-CMHD-2.5-B35 7.00-CMHD-3.0-B35 7.00-CMHD-4.0-B35 7.00-CMHD-5.0-B35 7.00-CMHD-6.0-B35 7.00-CMHD-7.5-B35 7.00-CMHD-8.5-B35	42" x 84" (1067 mm x 2134 mm) 492 GAL (1862 L)	INLET 4 (102) OVERFLOW 3 (76) VENT 2 1/2 (64)
146,250 sq. ft. EDR 35,500 lb/hr (16,000 kg/hr) 975 BHP	150 (568)	15 (103) 20 (138) 25 (172) 30 (207) 40 (276) 50 (345) 60 (414) 75 (518) 85 (587)	3 3 5 5 7 1/2 7 1/2 10 10 -	9.75-CMHD-1.5-C35 9.75-CMHD-2.0-C35 9.75-CMHD-2.5-C35 9.75-CMHD-3.0-C35 9.75-CMHD-4.0-C35 9.75-CMHD-5.0-C35 9.75-CMHD-6.0-C35 9.75-CMHD-7.5-C35 -	- - - - - - - - -	- - - - - - - - -	48" x 96" (1219 mm x 2438 mm) 712 GAL (2695 L)	INLET 6 (152) OVERFLOW 4 (102) VENT 3 (76)
191,250 sq. ft. EDR 45,300 lb/hr (20,000 kg/hr) 1275 BHP	180 (682)	20 (138) 25 (172) 30 (207) 40 (276)	5* 5* 5* 7 1/2	12.75-CMHD-2.0-C35 12.75-CMHD-2.5-C35 12.75-CMHD-3.0-C35 12.75-CMHD-4.0-C35	- - - -	- - - -	48" x 120" (1219 mm x 3048 mm) 879 GAL (3327 L)	INLET 6 (152) OVERFLOW 4 (102) VENT 3 (76)
284,250 sq. ft. EDR 67,000 lb/hr (30,000 kg/hr) 1895 BHP	260 (985)	20 (138) 25 (172) 30 (207) 40 (276)	5* 5* 7 1/2 7 1/2	18.95-CMHD-2.0-C35 18.95-CMHD-2.5-C35 18.95-CMHD-3.0-C35 18.95-CMHD-4.0-C35	- - - -	- - - -	60" x 108" (1524 mm x 2743 mm) 1306 GAL (4943 L)	INLET 6 (152) OVERFLOW 4 (102) VENT 3 (76)

* 1750 RPM pumps. All others are 3500 RPM.

** Pump GPM based upon 2 times the return rate

*** For storage other than 10 minutes, adjust receiver size accordingly.

For larger pump capacities and/or receivers, please consult factory

NEMA 2 - U.L. Listed Control Panels



The control cabinets usually furnished on CMHD boiler feed units are our own "Consolitrol" drip proof enclosures (NEMA 2 - U.L. Listed). Control cabinets can also be furnished to comply with other NEMA and JIC specifications. Consult your local Bell & Gossett Representative.

Cabinets are clearly identified by permanently affixed nameplates, showing unit serial number, wiring diagram number, power supply and control voltage. Internal cabinet wiring is numbered to match the diagram for easy identification. Each cabinet is thoroughly tested prior to shipment.

For more detailed help in selecting controls, please refer to Domestic catalog section on BOILER FEED PIPING and CONTROLS.

Water Make-Up Valve

To replace condensate lost from the system, CMHD receivers are equipped with a float-switch-actuated electric solenoid valve. Control is "on-off", and the valve is sized to equal the capacity of one boiler feed pump. The solenoid valve furnished is an extremely reliable packless type, piston-pilot-operated with cushioned closing feature and epoxy-resin molded waterproof coil.



Water make-up valves are furnished with a "Y" strainer for maximum reliability.

Roughing-In Dimensions

Not to be used for installation - CERTIFIED DIMENSIONS ON REQUEST.

CMHD Receiver sizes other than those shown are available.

Receiver Size** Inches (mm)	Net Storage Capacity U.S. GAL (L)	Total Receiver Capacity U.S. GAL (L)	System Rating			Suggested pump* GPM (L/M)	Approximate Overall Dimensions			
			Total Boiler HP	EDR	lbs/hr (kg/hr) steam		Length inches (mm)	Width*** inches (mm)	Height inches (mm)	Head & shell Thickness
24 x 36 (610 x 914)	65 (246)	77 (291)	95	14250	3200 (1452)	15 (57)	62 (1575)	39 (991)	44¾ (1137)	3/16" (5 mm)
24 x 60 (610 x 1524)	104 (394)	124 (469)	150	22000	5150 (2336)	22 (83)	86 (2184)	39 (991)	44¾ (1137)	
30 x 48 (762 x 1219)	141 (534)	161 (609)	205	30000	6975 (3164)	30 (114)	73 (1854)	43 (1092)	50½ (1283)	
30 x 72 (762 x 1829)	204 (772)	234 (886)	295	44000	10100 (4581)	45 (170)	97 (2464)	45 (1143)	54¾ (1391)	
36 x 72 (914 x 1829)	302 (1143)	342 (1294)	440	66000	14950 (6781)	60 (227)	102 (2591)	52 (1321)	54¾ (1391)	
42 x 84 (1067 x 2134)	492 (1862)	542 (2051)	715	105000	24325 (11034)	90 (341)	116 (2946)	58 (1473)	58¾ (1489)	
48 x 96 (1219 x 2438)	712 (2695)	805 (3047)	1030	146250	35225 (15978)	150 (568)	147½ (3747)	63 (1600)	63 (1600)	1/4" (6 mm)
48 x 120 (1219 x 3048)	879 (3327)	995 (3766)	1275	191250	43475 (19720)	180 (681)	171½ (4356)	63 (1600)	63 (1600)	
60 x 108 (1524 x 2743)	1306 (4943)	1424 (5390)	1895	284250	46400 (21047)	260 (984)	152 (3861)	74½ (1892)	62½ (1588)	
60 x 120 (1524 x 3048)	1433 (5424)	1564 (5920)	2080	312000	70875 (32149)	287 (1086)	164 (4166)	74½ (1892)	62½ (1588)	
60 x 144 (1524 x 3658)	1697 (6423)	1854 (7017)	2460	369000	83925 (38068)	340 (1287)	188 (4775)	74½ (1892)	62½ (1588)	

* Pump GPM based upon 2 times system rate.

** For storage other than 10 minutes, adjust receiver accordingly.

***Varies according to pump size. Maximum dimension shown

We value your feedback. Please take our 3 question survey at bellgossett.com/survey to let us know how we are doing.



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