



Series UH™ Underground Condensate Units

Series UMH™ Boiler Feed Units

- Rated for 200°F (93°C) Condensate
- Carbon Graphite Bearings for improved abrasion and wear resistance
- Simplex or Duplex configuration
- Designed for installations with low or below grade return lines
- 36" or 48" Deep Receivers
- Carbon/Ceramic Mechanical Seal designed for 250°F (121°C)
- Replace Mechanical Seal without removing pump from receiver
- Heavy Duty 2-pole float switch
- Vacuum tight construction available

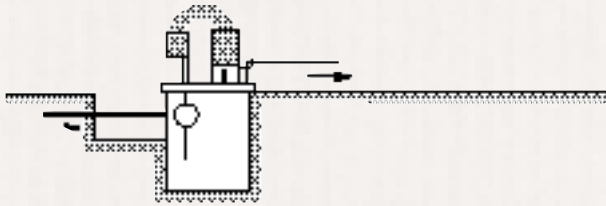
SELECTION DATA

ALL PUMPS ARE 3500 RPM

Capacity Sq. Ft. EDR	Pump Capacity (gpm)	Discharge Pressure (psig)	Std. Pump Motor H.P.	Discharge Size (inches)	CONDENSATE UNITS			BOILER FEED UNITS	
					Model No. With Std. Pumps	Receiver Size Simplex	Receiver Size Duplex	Model No. with Std. Pumps	Receiver Size
1,000 to 10,000	10	15	1/2	1 1/2	101.5UH	18"	24"	101.5UMH	30"
		20	1/2		102UH	dia.	dia.	102UMH	dia.
		25	1/2		102.5UH	x	x	102.5UMH	x
		30	3/4		103UH	36"	36"	103UMH	48"
		40	1		104UH	deep	deep	104UMH	deep
50	1 1/2	105UH			105UMH				
15,000	15	15	1/2	1 1/2	151.5UH	18"	24"	151.5UMH	30"
		20	1/2		152UH	dia.	dia.	152UMH	dia.
		25	3/4		152.5UH	x	x	152.5UMH	x
		30	3/4		153UH	36"	36"	153UMH	48"
		40	1		154UH	deep	deep	154UMH	deep
50	1 1/2	155UH			155UMH				
20,000	20	15	1/2	1 1/2	201.5UH	18"	24"	201.5UMH	36"
		20	1/2		202UH	dia.	dia.	202UMH	dia.
		25	3/4		202.5UH	x	x	202.5UMH	x
		30	1		203UH	36"	36"	203UMH	48"
		40	1 1/2		204UH	deep	deep	204UMH	deep
50	2	205UH			205UMH				
25,000	25	15	1/2	1 1/2	251.5UH	18"	24"	251.5UMH	36"
		20	1/2		252UH	dia.	dia.	252UMH	dia.
		25	3/4		252.5UH	x	x	252.5UMH	x
		30	1		253UH	36"	36"	253UMH	48"
		40	1 1/2		254UH	deep	deep	254UMH	deep
50	2	255UH			255UMH				
30,000	30	15	1/2	1 1/2	301.5UH	24"	24"	301.5UMH	42"
		20	3/4		302UH	dia.	dia.	302UMH	dia.
		25	3/4		302.5UH	x	x	302.5UMH	x
		30	1		303UH	36"	36"	303UMH	48"
		40	1 1/2		304UH	deep	deep	304UMH	deep
50	2	305UH			305UMH				
40,000	40	15	3/4	1 1/2	401.5UH	24"	24"	401.5UMH	48"
		20	3/4		402UH	dia.	dia.	402UMH	dia.
		25	1		402.5UH	x	x	402.5UMH	x
		30	1 1/2		403UH	36"	36"	403UMH	48"
		40	2		404UH	deep	deep	404UMH	deep
50,000	50	15	3/4	1 1/2	501.5UH	30"	30"	Not Available	
		20	1		502UH	dia.	dia.		
		25	1 1/2	2	502.5UH	x	x		
		30	1 1/2		503UH	36"	36"		
70,000	70	15	1 1/2	2	701.5UH	36"	36"	Not Available	
		20	1 1/2		702UH	dia.	dia.		
		25	2		702.5UH	x	x		
		30	2		703UH	36"	36"		
90,000	90	15	1 1/2	2	901.5UH	36"	36"	Not Available	
		20	2		902UH	dia.	dia.		
		25	3		902.5UH	x	x		
		30	3		903UH	36"	36"		

$$\frac{\text{SQ. FT. E.D.R.}}{4} = \text{LB/hr}$$

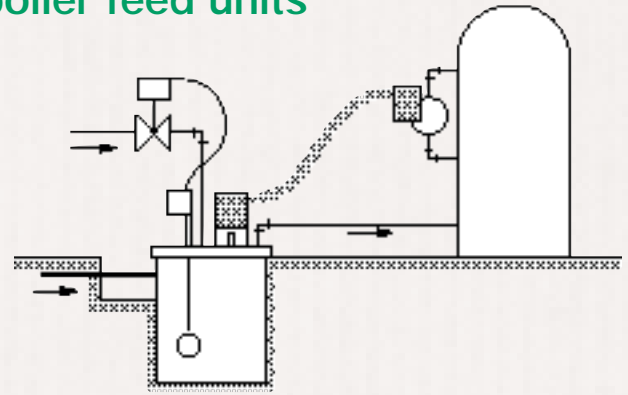
Hoffman™ Series UH™ condensate units



These units consist of a cast iron receiver, one or two pumps, and automatic float control. The pumps operate according to water level change in the receiver. Standard equipment is a heavy duty two-pole float switch on single units. A mechanical alternator is provided on duplex condensate pumps. On single phase pumps through two horsepower, the switch is factory wired.

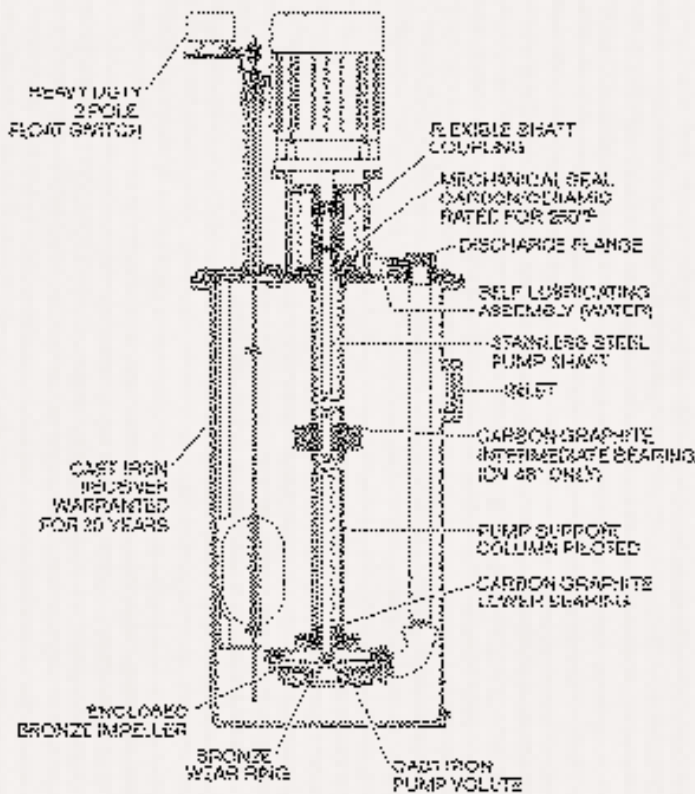
In the selection table, you'll find that condensate pumps are pre-selected to deliver 1 gpm per 1000 EDR according to modern practice. This is twice the condensing rate and is the recommended rating.

Hoffman™ Series UMH™ boiler feed units



Underground boiler feed units consist of a cast iron receiver, one or two pumps, an automatic make-up valve, and overflow connection. A boiler feed unit is controlled from the water level in the boiler that it serves, not the level in its own receiver, so it must have a make-up valve in case there is no condensate present when the boiler needs water. Because the boiler feed unit must absorb surges in rate of condensate return, its receiver must be larger than that of a condensate unit; underground boiler feed units are pre-selected based on ten minutes storage. Pump controls are available as options.

The make-up valve is a float-switch-operated solenoid valve, with cushioned closing and epoxy resin encapsulated coil. Make-up water is added into the receiver to "temper" it, minimizing the danger of thermal shock to the boiler.



Note: TEFC and explosion proof motors are available. The motor horsepower requirement is often greater using explosion proof motors as they have unity service factor. A horsepower increase is not necessary using TEFC Motors.

STANDARD UNIT FEATURES:

- Cast Iron Receivers, Receivers for condensate units are pre-selected for 1 minute net storage. Receivers for boiler feed units are pre-selected for 10 minute net storage.
- Cast Iron Receivers are warranted for 20 years from date of shipment against failure due to corrosion.
- Steel Cover Plates, Duplex cover plates are split on 24" dia., 30" dia. and larger have individual pump mounting plates.
- Centrifugal Pumps, Series UH & UMH have standard centrifugal pumps. All pumps are sized 2 times system return rate.
- Level Control, Single condensate units have a heavy duty float switch. Duplex condensate units have a mechanical alternator to sequence pumps and provide automatic stand by on high level. Boiler feed units have a float switch and solenoid valve with Y strainer to add make up water on low level.

OPTIONAL FEATURES AVAILABLE:

- Inlet Basket Strainers; shipped separately; must be installed in pit area to provide servicing.
- Vacuum Tight Construction. Units for vacuum service have special designed cover plates and use displacer type level controls. Mechanical alternator not available on vacuum tight units.
- Duplex Condensate units may be furnished with 2 float switches in lieu of mechanical alternator. Lead-Lag selector switches and electric alternator require 2 float switches.
- Control Panels, see page 4 for description.

ORDERING INSTRUCTIONS

Specify model number, single or duplex, phase, operating voltage, special features. On boiler feed units state number of boilers, type boiler control and describe function of control desired. See catalog Boiler Feed section for boiler piping diagrams.

OPTIONAL ELECTRIC CONTROLS

Consoltrol Control Cabinets are available to comply with NEMA specifications. Panels for underground units are furnished separately for *wall mounting only*.

Description of Optional Panel Components:

- Magnetic Starters must be used on all 3 phase motors and single phase motors 3 HP and larger.
- Disconnect Switches and Circuit Breakers. Either fuses or a circuit breaker is required ahead of the starter to protect against short circuits. A disconnect switch or circuit breaker also provides a means of shutting off power for service.
- Selector Switches. "Auto-off-Hand" selector switches provide a means of shutting off pumps and a means of testing in the "Hand" position. "Off-Hand-Lead-Lag" selector switches may be furnished on duplex units with 2 float switches to provide manual alternation. Use only when magnetic starters are provided.
- Electric Alternator may be furnished on duplex units to provide automatic sequencing of lead pump. Use only when magnetic starters are provided and only with 2 float switches.

- Transformers are required to reduce control voltage when power supply exceeds 230 volts. Transformers are recommended when voltage exceeds 130 volts. Refer to local codes for requirements.
- Power Control Switching Relay is recommended when individual pump disconnect switches are specified and a control transformer is required. This relay maintains control power in the event pump #1's disconnect is turned off or pump #1 fails. In this event the control power will be automatically supplied by pump #2.
- Pilot Lights. Pump running pilot lights are available to indicate pump operation.
- An Audible Alarm to indicate high water level may be furnished on single units or in conjunction with a mechanical alternator on duplex units. A separate level control should be furnished to actuate alarm.

Specified panel Components to be furnished with unit at extra cost.

NEMA 2 - U.L. Listed Control Panels are the standard option when specified.

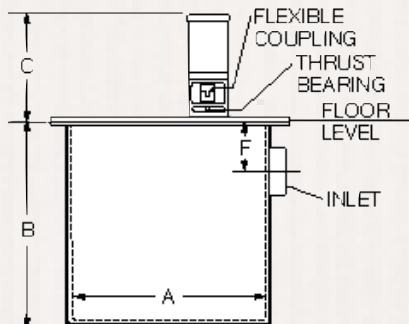
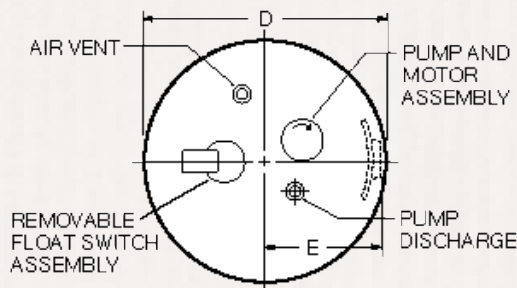
ROUGHING IN DIMENSIONS

not to be used for installation;
certified dimensions on request.

RECEIVER DIMENSIONS (INCHES)						RECEIVER CAPACITY-GALS.		
A	B	D	E	F	STANDARD INLET	FLOAT	TOTAL	
18	36	22	11	9	3	16	40	
24	36	28	14	9	4	25	71	
30	36	34	17	9	4	40	110	
36	36	40	20	9	4	57	158	

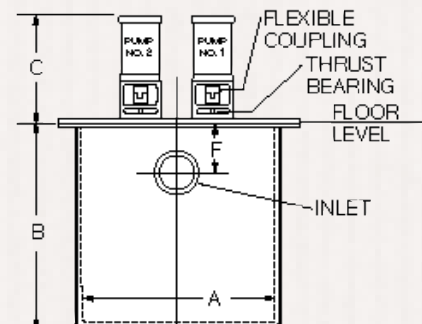
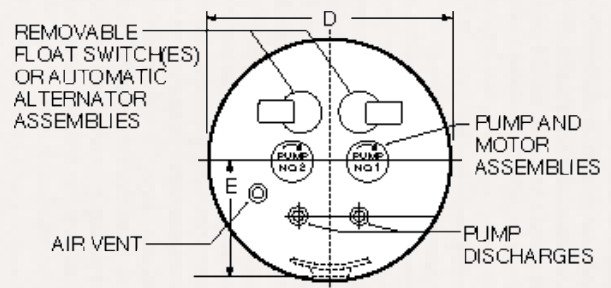
RECEIVER DIMENSIONS (INCHES)						RECEIVER CAPACITY-GALS.		
A	B	D	E	F	STANDARD INLET	FLOAT	TOTAL	
24	48	28	14	9	4	49	94	
30	48	34	17	9	4	77	146	
36	48	40	20	9	4	110	211	
42	48	46	23	9	6	150	288	
48	48	52	26	9	6	196	375	

Simplex



ALLOW B + C ABOVE FLOOR TO REMOVE PUMP & MOTOR ASSEMBLY

Duplex



ALLOW B + C ABOVE FLOOR TO REMOVE PUMP & MOTOR ASSEMBLY

MOTOR HP	3500 RPM	1/2 hp	3/4 hp	1 hp	1 1/2 hp	2 hp	3hp
DIMENSION	C (inches)	16	17	17	19	19	19



For further information, contact ITT Bell & Gossett, 8200 N. Austin Avenue, Morton Grove, IL 60053, Phone (847) 966-3700 — Facsimile (847) 966-9052 <http://fhs.ittdinc.com>

