



SHIPPENSBURG PUMP CO. INC.

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Pride

Quality

Craftsmanship

BULLETIN 102

Revised 2/14



TYPE DC

**DURABLE CONDENSATE PUMPS
WITH CAST IRON RECEIVERS**

*20 Year Warranty
Against Corrosion Failure on Receiver*

Condensate temperature of unit is generally 200°F.

Temperature is a function of pump NPSH and elevation above sea level.

Certain pumping points have NPSH requirements of 2 feet and therefore can handle 210°F without elevating the receiver.

SHIPCO[®]
PUMPS are equipped with Mechanical Seals rated up to a standard 250°F.
Higher temperature seals and special faces available upon request.

Charted units are a representation of the typical systems and sizes used.

Higher pump pressures and larger pump capacities are available.

TYPE DC CONDENSATE UNITS

CAP. SQ. FT. EDR	PUMP CAP. GPM	PUMP DISCH. PRESS. PSIG	MOTOR 3500 RPM		MOTOR 1750 RPM		DISCH. SIZE INCHES	CATALOG NO.	REC. CAP. GALS.	INLET SIZE AND INLET HEIGHT IN.
			HP	PHASE	HP	PHASE				
1,000	2	10	1/3	1 or 3	1/3	1 or 3	3/4"	10 DC	10S/ 15D	Inlet – 2" Inlet Centerline Height Inches 9-1/2"
		15	1/3	1 or 3	1/3	1 or 3		11 DC		
		20	1/3	1 or 3	1/2	1 or 3		12.0 DC		
		25	1/2	1 or 3	1/2			12.5 DC		
		30	3/4	1 or 3				13 DC		
		40	1	1 or 3				14 DC		
		50	1-1/2	1 or 3				15 DC		
		60	2	1 or 3				16 DC		
		70	3	3				17 DC		
		80	3	3				18 DC		
		90	5	3				19 DC		
2,000	3	10	1/3	1 or 3	1/3	1 or 3	3/4"	20 DC	10S/ 15D	Inlet – 2" Inlet Centerline Height Inches 9-1/2"
		15	1/3	1 or 3	1/3	1 or 3		21 DC		
		20	1/3	1 or 3	1/2	1 or 3		22.0 DC		
		25	1/2	1 or 3	1/2			22.5 DC		
		30	3/4	1 or 3				23 DC		
		40	1	1 or 3				24 DC		
		50	1-1/2	1 or 3				25 DC		
		60	2	1 or 3				26 DC		
		70	3	3				27 DC		
		80	3	3				28 DC		
		90	5	3				29 DC		
4,000	6	10	1/3	1 or 3	1/3	1 or 3	3/4"	40 DC	10S/ 15D	Inlet – 2" Inlet Centerline Height Inches 9-1/2"
		15	1/3	1 or 3	1/3	1 or 3		41 DC		
		20	1/3	1 or 3	1/2	1 or 3		42.0 DC		
		25	1/2	1 or 3	1/2			42.5 DC		
		30	3/4	1 or 3				43 DC		
		40	1	1 or 3				44 DC		
		50	1-1/2	1 or 3				45 DC		
		60	2	1 or 3				46 DC		
		70	3	3				47 DC		
		80	3	3				48 DC		
		90	5	3				49 DC		
6,000	9	10	1/3	1 or 3	1/3	1 or 3	3/4"	60 DC	10S/ 15D	Inlet – 2" Inlet Centerline Height Inches 9-1/2"
		15	1/3	1 or 3	1/3	1 or 3		61 DC		
		20	1/3	1 or 3	1/2	1 or 3		62.0 DC		
		25	1/2	1 or 3	1/2	1 or 3		62.5 DC		
		30	3/4	1 or 3	1-1/2	3		63 DC		
		40	1	1 or 3	3	3		64 DC		
		50	1-1/2	1 or 3				65 DC		
		60	2	1 or 3				66 DC		
		70	3	3				67 DC		
		80	3	3				68 DC		
		90	5	3				69 DC		
8,000	12	10	1/3	1 or 3	1/3	1 or 3	3/4"	80 DC	15	Inlet – 2" Inlet Centerline Height Inches 9-1/2"
		15	1/3	1 or 3	1/3	1 or 3		81 DC		
		20	1/3	1 or 3	1/2	1 or 3		82.0 DC		
		25	1/2	1 or 3	3/4	1 or 3		82.5 DC		
		30	3/4	1 or 3	1-1/2	3		83 DC		
		40	1	1 or 3	3	3		84 DC		
		50	1-1/2	1 or 3				85 DC		
		60	2	1 or 3				86 DC		
		70	3	3				87 DC		
		80	5	3				88 DC		
		90	5	3				89 DC		
10,000	15	10	1/3	1 or 3	1/3	1 or 3	3/4"	100 DC	15	Inlet – 2" Inlet Centerline Height Inches 9-1/2"
		15	1/3	1 or 3	1/3	1 or 3		101 DC		
		20	1/3	1 or 3	1/2	1 or 3		102.0 DC		
		25	1/2	1 or 3	3/4	1 or 3		102.5 DC		
		30	3/4	1 or 3	1-1/2	3		103 DC		
		40	1	1 or 3	3	3		104 DC		
		50	1-1/2	1 or 3				105 DC		
		60	3	3				106 DC		
		70	3	3				107 DC		
		80	3	3				108 DC		
		90	5	3				109 DC		
12,000	18	10	1/3	1 or 3	1/3	1 or 3	1-1/2"	120 DC	25	Inlet – 2" Inlet Centerline Height Inches 10"
		15	1/3	1 or 3	1/2	1 or 3		121 DC		
		20	1/3	1 or 3	1/2	1 or 3		122.0 DC		
		25	1/2	1 or 3	3/4	1 or 3		122.5 DC		
		30	3/4	1 or 3	1-1/2	3		123 DC		
		40	1-1/2	1 or 3	3	3		124 DC		
		50	2	1 or 3				125 DC		
		60	3	3				126 DC		
		70	3	3				127 DC		
		80	3	3				128 DC		
		90	5	3				129 DC		
15,000	22-1/2	10	1/3	1 or 3	1/3	1 or 3	1-1/2"	150 DC	25	Inlet – 2" Inlet Centerline Height Inches 10"
		15	1/3	1 or 3	1/2	1 or 3		151 DC		
		20	1/2	1 or 3	3/4	1 or 3		152.0 DC		
		25	3/4	1 or 3	3/4	1 or 3		152.5 DC		
		30	3/4	1 or 3	1-1/2	3		153 DC		
		40	1-1/2	1 or 3	3	3		154 DC		
		50	2	1 or 3				155 DC		
		60	3	3				156 DC		
		70	3	3				157 DC		
		80	5	3				158 DC		
		90	5	3				159 DC		

TYPE DC CONDENSATE UNITS

CAP. SQ. FT. EDR	PUMP CAP. GPM	PUMP DISCH. PRESS. PSIG	MOTOR 3500 RPM		MOTOR 1750 RPM		DISCH. SIZE INCHES	CATALOG NO.	REC. CAP. GALS.	INLET SIZE AND INLET HEIGHT IN.					
			HP	PHASE	HP	PHASE									
20,000	30	10	1/3	1 or 3	1/3	1 or 3	1-1/2"	200 DC	37	Inlet - 3" Inlet Centerline Height Inches 14"					
		15	1/2	1 or 3	1/2	1 or 3		201 DC							
		20	3/4	1 or 3	3/4	1 or 3		202.0 DC							
		25	3/4	1 or 3	3/4	3		202.5 DC							
		30	1	1 or 3	1-1/2	3		203 DC							
		40	1-1/2	1 or 3	3	3		204 DC							
		50	2	1 or 3				205 DC							
		60	3	3				206 DC							
		70	5	3				207 DC							
		80	5	3				208 DC							
		90	5	3				209 DC							
25,000	37-1/2	10	1/2	1 or 3	1/2	1 or 3	1-1/2"	250 DC	37	Inlet - 3" Inlet Centerline Height Inches 14"					
		15	1/2	1 or 3	3/4	1 or 3		251 DC							
		20	3/4	1 or 3	3/4	1 or 3		252.0 DC							
		25	1	1 or 3	1	3		252.5 DC							
		30	1-1/2	1 or 3	2	3		253 DC							
		40	2	1 or 3	3	3		254 DC							
		50	3	3				255 DC							
		60	5	3				256 DC							
		70	5	3				257 DC							
		80	5	3				258 DC							
		90	5	3				259 DC							
30,000	45	10	3/4	1 or 3	1/2	1 or 3	1-1/2"	300 DC	37	Inlet - 3" Inlet Centerline Height Inches 14"					
		15	3/4	1 or 3	3/4	1 or 3		301 DC							
		20	1	1 or 3	1	1 or 3		302.0 DC							
		25	1-1/2	1 or 3	1-1/2	3		302.5 DC							
		30	1-1/2	1 or 3	2	3		303 DC							
		40	2	1 or 3	3	3		304 DC							
		50	3	3				305 DC							
		60	5	3				306 DC							
		70	5	3				307 DC							
		80	5	3				308 DC							
		90	7-1/2	3				309 DC							
40,000	60	10	1	3	1	1 or 3	1-1/2"	400 DC	57	Inlet - 3" Inlet Centerline Height Inches 14"					
		15	1	3	1-1/2	1 or 3		401 DC							
		20	1-1/2	3	1-1/2	1 or 3		402.0 DC							
		25	2	3	2	3		402.5 DC							
		30	2	3	2	3		403 DC							
		40	3	3	3	3		404 DC							
		50	5	3				405 DC							
		60	5	3				406 DC							
		70	7-1/2	3				407 DC							
		80	7-1/2	3				408 DC							
		50,000	75	10	1-1/2	3		1			1 or 3	2"	500 DC	80	Inlet - 4" Inlet Centerline Height Inches 16"
15	2			3	1-1/2	3	501 DC								
20	2			3	2	3	502.0 DC								
25	2			3	2	3	502.5 DC								
30	3			3	3	3	503 DC								
40	5			3	3	3	504 DC								
50	5			3			505 DC								
60	5			3			506 DC								
70	7-1/2			3			507 DC								
80	7-1/2			3			508 DC								
65,000	97-1/2			10	2	1 or 3	1-1/2	1 or 3	2"	650 DC	80		Inlet - 4" Inlet Centerline Height Inches 16"		
		15	2	1 or 3	1-1/2	3	651 DC								
		20	2	1 or 3	2	3	652.0 DC								
		25	3	3	2	3	652.5 DC								
		30	3	3	3	3	653 DC								
		40	5	3			654 DC								
		50	5	3			655 DC								
		60	7-1/2	3			656 DC								
		70	10	3			657 DC								
		75,000	112-1/2	10	2	1 or 3	1-1/2	3		2"		750 DC		125	Inlet - 4" Inlet Centerline Height Inches 18"
				15	2	1 or 3	2	3				751 DC			
20	3			3	2	3	752.0 DC								
25	3			3	2	3	752.5 DC								
30	3			3	3	3	753 DC								
40	5			3			754 DC								
50	5			3			755 DC								
60	7-1/2			3			756 DC								
100,000	150			10	3	1 or 3	2	3	2-1/2" on 3500 RPM 3" on 1750 RPM		1000 DC	125	Inlet - 4" Inlet Centerline Height Inches 18"		
				15	3	1 or 3	2	3			1001 DC				
				20	3	3	3	3			1002 DC				
		25	5	3	5	3	1002.5 DC								
		30	5	3	5	3	1003 DC								
		40	7-1/2	3			1004 DC								
		50	7-1/2	3			1005 DC								
		60	10	3			1006 DC								

NOTE: Units are sized at 3 times the normal condensing rate. Upon proper application, units can be sized at 2 times the condensing rate and therefore handle 1½ times the tabled capacity in sq. ft. EDR. This is based upon design and operating experience. Charted units are a representation of the typical systems and sizes used. Higher pump pressures and larger pump capacities are available.

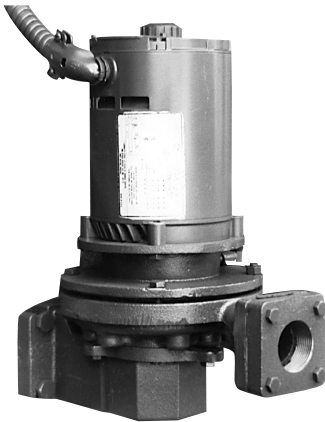
Sizing Condensate Pumps — DC Units

The condensing rate for 1,000 sq. ft. EDR is .5 GPM (see table). The condensate return pumps are sized at 3 times the condensing rate or 1.5 GPM per 1,000 sq. ft. EDR.

Note: Units are sized at 3 times the normal condensing rate. Upon proper application, units can be sized at 2 times the condensing rate and therefore handle 1½ times the tabled capacity in sq. ft. EDR. This is based upon design and operating experience.

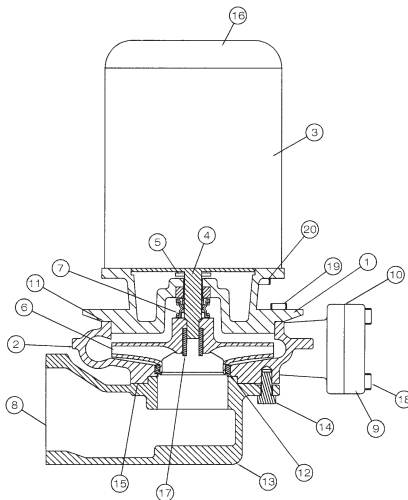
Table — Values of Heat and Power

	GPM	BTU	Lbs/Hr	Sq. Ft. EDR
1 Boiler Horsepower	.069	33,475	34.5	139.4
1,000 sq. ft. EDR	.50	240,000	247.3	1,000



Model D – 56J Frame

1. Pump Head
2. Pump Case
3. Motor
4. Motor Shaft
5. Water Slinger
6. Impeller
7. Mechanical Seal
8. Pump Suction Gasket
9. Discharge Flange
10. Pump Discharge Gasket
11. Head Gasket
12. Wear Ring
13. Suction Housing
14. Cap screws
(Suction Housing to Case)
15. Suction Housing Gasket
16. Drip Cover
17. Impeller Locking Nut
18. Cap screws
19. Cap screws
20. Cap screws



Receiver Sizing — DC Units

The receivers in this series of units are sized to allow for approximately a one minute storage capacity (where practical). The condensate return pumps need to run for approximately a one minute period to prolong the life of the motors in intermittent operation. The condensate is returned to the boiler rooms as quickly as possible to reduce make-up requirements and heat loss.

The Durable Line of Condensate Handling Equipment and Boiler Feed Pumps is constructed with Cast Iron Receivers that provide years of service even with the most aggressive waters.

- Receivers available from 10 gallon to 500 gallon capacity.
- Centrifugal Pumps designed for many years of dependable service with low maintenance.
- Pumps are bronze fitted to resist corrosion and prevent seizing.
- Bronze Impellers are cast one piece construction trimmed and balanced to design capacities.
- Pumps have no internal bearings. (Motor bearings refer to motor manufacturer's instructions.)
- Units are available in most popular voltages.
- Control panels (optional) are available and can be factory mounted and wired to NEMA and J.I.C. specifications.

NOTE: Magnetic Starters should be provided for all three phase motors.

Model D – JM Frame

1. Pump Head
2. Pump Case
3. Motor
4. Motor Shaft
5. Water Slinger
6. Impeller
7. Mechanical Seal
8. Pump Suction Gasket
9. Discharge Flange
10. Pump Discharge Gasket
11. Head Gasket
12. Wear Ring
13. Suction Housing
14. Cap screws
(Suction Housing to Case)
15. Suction Housing Gasket
16. Impeller Screw
17. Drip Cover
18. Cap screws
19. Cap screws
20. Cap screws
21. Impeller Washer
22. Shaft Sleeve (Mech. Seal)

