SHIPPENSBURG PUMP CO. INC.
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Pride

Quality

Craftsmanship

BULLETIN 102
Revised 12/2022

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 INCHES
			HP	PHASE	HP	PHASE				
1,000	2	10	1/3	1 or 3	1/3	1 or 3	3/4"	10 DC	10S/ 15D	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	1 or 3		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			1-1/2"	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	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	1 or 3		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			1-1/2"	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	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	1 or 3		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			1-1/2"	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	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			1-1/2"	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	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	3	3			1-1/2"	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	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	2	1 or 3				106 DC		
		70	3	3				107 DC		
		80	3	3			1-1/2"	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	2"
		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	2"
		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 INCHES
			HP	PHASE	HP	PHASE				
		10	1/3	1 or 3	1/3	1 or 3		200 DC		
		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		
20,000	30	40	1-1/2	1 or 3	3	3	1-1/2"	204 DC	25	2"
		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		
		10	1/2	1 or 3	1/2	1 or 3		250 DC		
		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		
25,000	37-1/2	40	2	1 or 3	3	3	1-1/2"	254 DC	37	3"
		50	3	3				255 DC		
		60	3	3				256 DC		
		70	5	3				257 DC		
		80	5	3				258 DC		
		90	5	3				259 DC		
		10	3/4	1 or 3	1/2	1 or 3		300 DC		
		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		
30,000	45	40	2	1 or 3	3	3	1-1/2"	304 DC	37	3"
		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		
		10	1	3	1	1 or 3		400 DC		
		15	1	3	1-1/2	3		401 DC		
		20	1-1/2	3	1-1/2	3		402.0 DC		
		25	2	3	2	3		402.5 DC		
		30	2	3	2	3		403 DC		
40,000	60	40	3	3	3	3	1-1/2"	404 DC	57	3"
		50	5	3				405 DC		
		60	5	3				406 DC		
		70	7-1/2	3				407 DC		
		80	7-1/2	3				408 DC		
		90	7-1/2	3				409 DC		
		10	1-1/2	3	1	1 or 3		500 DC		
		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		
50,000	75	40	3	3	3	3	2"	504 DC	80	4"
		50	5	3				505 DC		
		60	5	3				506 DC		
		70	7-1/2	3				507 DC		
		80	7-1/2	3				508 DC		
		90	7-1/2	3				509 DC		
		10	2	1 or 3	1-1/2	3		650 DC		
		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		
65,000	97-1/2	30	3	3	3	3	2"	653 DC	80	4"
		40	5	3				654 DC		
		50	5	3				655 DC		
		60	7-1/2	3				656 DC		
		70	10	3				657 DC		
		10	2	1 or 3	1-1/2	3		750 DC		
		15	2	1 or 3	2	3		751 DC		
		20	3	3	2	3		752.0 DC		
75,000	112-1/2	25	3	3	2	3	2"	752.5 DC	125	4"
		30	3	3	3	3		753 DC		
		40	5	3				754 DC		
		50	5	3				755 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.**

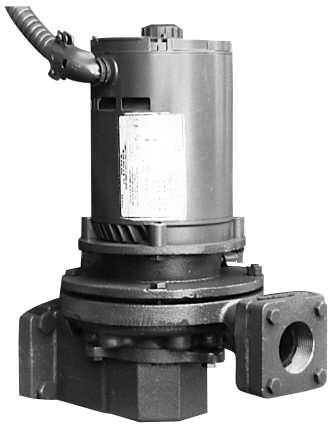
Sizing Condensate Pumps — DC Units

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



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.

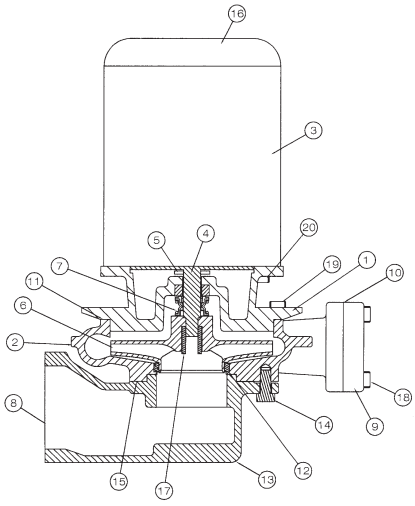
The Durable Line of Condensate Handling Equipment and Boiler Feed Pumps is constructed with Cast Iron Receivers that provide years of service even with the most aggressive waters.

- 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.

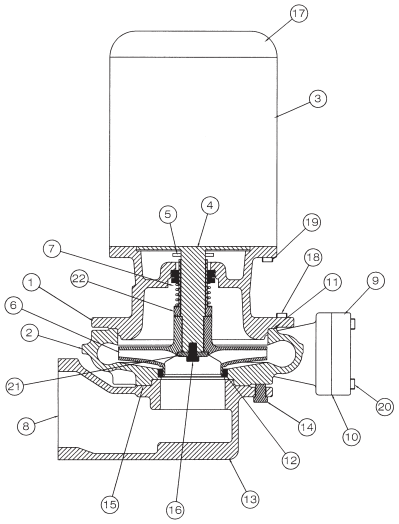
Model D – 56J Frame

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



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)



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