AERCT, & AERCS
Series Regenerative Turbine Pumps
Now available in Cast Iron/Bronze Fitted & All Stainless Steel

Aero AERCT, AERCS Series
Fabtek AERCT, and AERCS Series close coupled regenerative turbine pumps are manufactured by Fabtek located in Plano, Illinois. New for 2008 is the availabilty of pumps in cast iron bronze fitted construction for low initial cost. Our all stainless pumps remain unchanged. Fabtek pumps have greater quality, efficiency, and overall value than other popular brands, yet can be easily retrofitted to replace them, thereby improving reliability and performance of any system. By combining the latest concepts in hydraulic turbine pump design with precision computer controlled manufacturing, the AERCT, and AERCS Series pumps deliver high efficiency operation. Costs are controlled by highly optimized pump designs and efficient manufacturing processes, thereby giving you top of the line pumps at a reasonable price. Should maintenance ever be required, costs are kept to a minimum by combining an easily serviceable design with the use of heavy duty, high quality components to provide long life.

Water Passage Design
Fabtek masters one of the most critical design considerations for regenerative turbine pumps -- the shaping of water passageways to achieve highest capacity and pressure while minimizing horsepower requirements. By optimizing water passageway cross-sectional profiles for each impeller, Fabtek has improved both efficiency and pressure in the Fabtek Pumps, and exceeds the levels realized by previous techniques.

Compact Size
Ideal for OEM or retrofit applications.

Mechanical Seals
All pumps have mechanical seals of high temperature carbon verses ceramic seats with Buna elastomers for Bronze fitted and Viton for Stainless. All wetted parts are stainless steel. Optional seats and materials are available.

Self-Adjusting Impeller
A hydrodynamic film on each side of the impeller positions it for long life. The impeller exerts no axial thrust load on bearings, thereby greatly extending motor life compared with competitors designs. Pump operates equally well in a vertical or horizontal position.

300 PSI Case Working Pressure
Rigid structure is designed for maximum casing strength.

Best Efficiency
New pump design optimizes efficiency for each size meaning lower power costs to the user.

Close Coupled Design
No Couplings or alignment issues means fewer service calls.

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AERCT, & AERCS
Series Regenerative Turbine Pumps

100% Tested
Every pump is fully tested to catalog performance requirements prior to shipment. You can always trust an AERO pump to do it's job from the start, right out of the box.

Entrained Fluid Handling
Turbine impeller intermittently handles vapor up to 20% by volume, minimizing the possibility of vapor locks.

Low Suction Head Applications
AERCT, and AERCS series pumps may be operated under adverse inlet conditions without audible or measurable cavitation.

"O"Ring Gaskets
"O"ring seals are used throughout the AERCT, and AERCS Series pumps to assure sealing.

Simple Construction
AERCT, and AERCS Series pumps contain only three major components, thereby giving longer service life, and easier service.

End Suction • Top Discharge
AERCT and AERCS Series pumps fit into small spaces easily. Discharge can be rotated to 90 degree, 180 degree, or 270 degree positions, to make your installation easier and less expensive.

Standard Materials

PART	Cast Iron/Bronze Fitted	316 STAINLESS STEEL
Motor Bracket and Cover/Casing	Cast Iron*	Stainless Steel AISI 316
Impeller	Bronze	20% Nickel Silver
[1]Sleeve/Bushing	Bronze	Stainless Steel AISI 316
"O" Rings	Buna	Viton
Mechanical Seal	Ceramic/Carbon/Buna	Ceramic/Carbon/Viton
Shaft	Stainless Steel	Stainless Steel

* Cast Iron Parts are electroless nickel plated for corrosion resistance.
1CS Only: Sleeves for 3HP and under; Bushings for 5HP and over.

Pump Requirement Selection Guide for Boiler Feed Units

Boiler Size HP	Evap. Rate in GPM	Pump Capacity in GPM	Safety Factor	BOILER PRESSURE PSI									
				15		50		100		125		150	
				Pump	HP	Pump	HP	Pump	HP	Pump	HP	Pump	HP
1/5	0.5	1.5	3	3AERCT5	1/3	3AERCT5	1/3	3AERCT5	1/3	5AERCT5	1/2	5AERCT5	1/2
4/6	0.5	1.5	3	3AERCT5	1/3	3AERCT5	1/3	3AERCT5	1/3	5AERCT6	1/2	5AERCT6	1/2
7/10	0.7	2.1	3	5AERCT6	1/2	5AERCT6	1/2	5AERCT6	1/2	5AERCT6	1/2	5AERCT6	1/2
10/15	1.0	3.1	3	5AERCT6	1/2	3AERCT5	1/3	5AERCT5	1/2	7AERCT6	3/4	7AERCS5	3/4
15/20	1.4	4.2	3	7AERCT7	3/4	3AERCT6	1/3	5AERCT6	1/2	7AERCT7	3/4	10AERCS5	1
20/25	1.7	5.2	3	7AERCT7	3/4	3AERCT6	1/3	7AERCT8	3/4	7AERCT7	3/4	15AERCS5	1 1/2
25/30	2.1	6.3	3	10AERCS5	1	5AERCT7	1/2	7AERCT8	3/4	15AERCS5	1 1/2	15AERCS5	1 1/2
30/35	2.5	7.3	3	15AERCS5	1 1/2	7AERCT7	3/4	10AERCS5	1	15AERCS5	1 1/2	15AERCS6	1 1/2
35/45	3.2	9.4	3	15AERCS7	1 1/2	7AERCS5	3/4	20AERCS6	2	20AERCS6	2	30AERCS7*	3
45/60	4.2	12.5	3	15AERCS7	1 1/2	15AERCS7	1 1/2	20AERCS7	2	30AERCS7*	3	30AERCS9*	3
70	4.7	14	3	15AERCS7	1 1/2	15AERCS7	1 1/2	30AERCS8*	3	30AERCS8*	3	50AERCS8*	5
80	5.4	16	3	20AERCS8	1 1/2	20AERCS8	2	30AERCS8*	3	30AERCS8*	3	50AERCS8*	5
90	6.1	18.3	3	20AERCS8	1 1/2	20AERCS8	2	30AERCS8*	3	30AERCS8*	3	50AERCS8*	5

*Available in 3-phase only.
Notes: Evap. Rate = boiler HP x .069 - Add the prefix "3" to the model number to indicate a 3-phase motor selection.
All pump selections are based on high service factor ODP Motors. If 1.0 S.F. motors are required, choose next larger HP selection.

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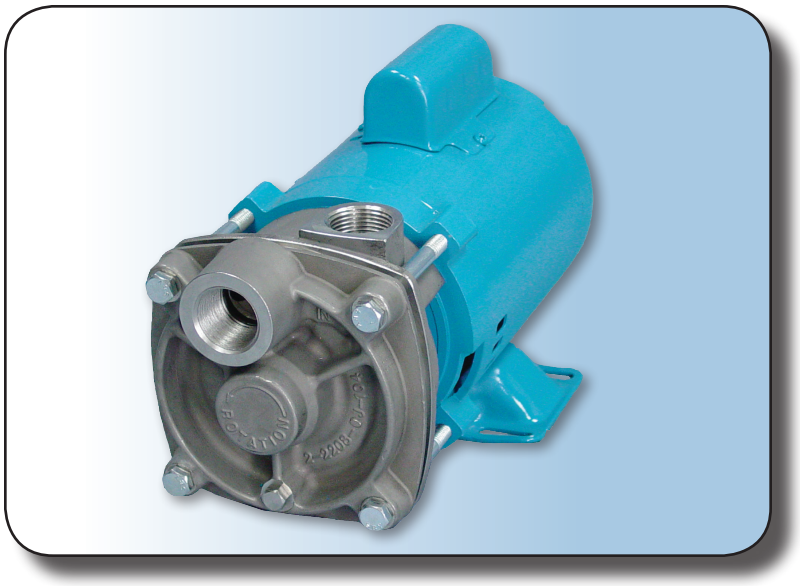
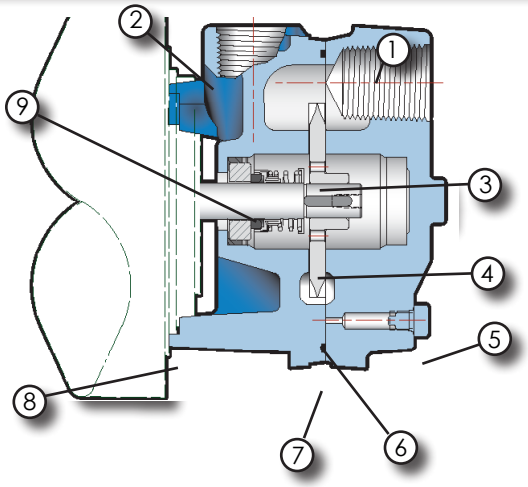
AERCT Series Regenerative Turbine Pumps

Design Features

- For Boilers 4 to 50 Horsepower
- Capacities to 10GPM
- Heads to 400 Feet
- Low NPSHR
- Temperatures to 230°F
- UL Approved Motor



1	Cover
2	Motor Bracket
3	Impeller
4	Self-aligning Balanced Holes
5	1/8" SAE Drain Plug
6	High Efficiency Water Channel Design
7	High-Temp "O" Rings
8	D3 Motors with 56C Face
9	Long lasting Mechanical Seals



Limitations

Discharge Pressure	300 PSI
Seal Pressure*	200 PSI
Suction Pressure (Min.)	26" Hg Vac.
Speed (Max.)	3500 RPM
*Suction Pressure Plus 50 Percent of Differential Pressure	
Temperature	
Standard Construction	-20°F +230°F
Horsepower	
D3	1/3 to 3 HP

Engineering Specifications

The contractor shall furnish (and install as shown on the plans) an AERCT Series horizontal close coupled regenerative turbine type pump model_____ size 1" by 1" of _____ construction. Each pump shall have a capacity of ____GPM when operating at a total head of ____feet. Suction pressure will be ____feet with a liquid temperature of ____degrees F.

The pump is to be furnished with a mechanical seal with stainless steel metal parts, Viton elastomers, ceramic seat and carbon washer. A stainless steel shaft shall be furnished.

The pump casing shall be vertically split two piece, end suction and (TOP DISCHARGE.) (90° DISCHARGE.) (180° DISCHARGE.) (270° DISCHARGE.) The impeller shall be hydraulically self centering and no external adjustment shall be necessary.

The pump shall be close coupled to a D3 80mm NEMA "C" face ___ HP ___phase ___Hertz ___voltage ___RPM horizontal _____ motor. The motor shall be sized to prevent overloading at the highest head condition listed in this specification.

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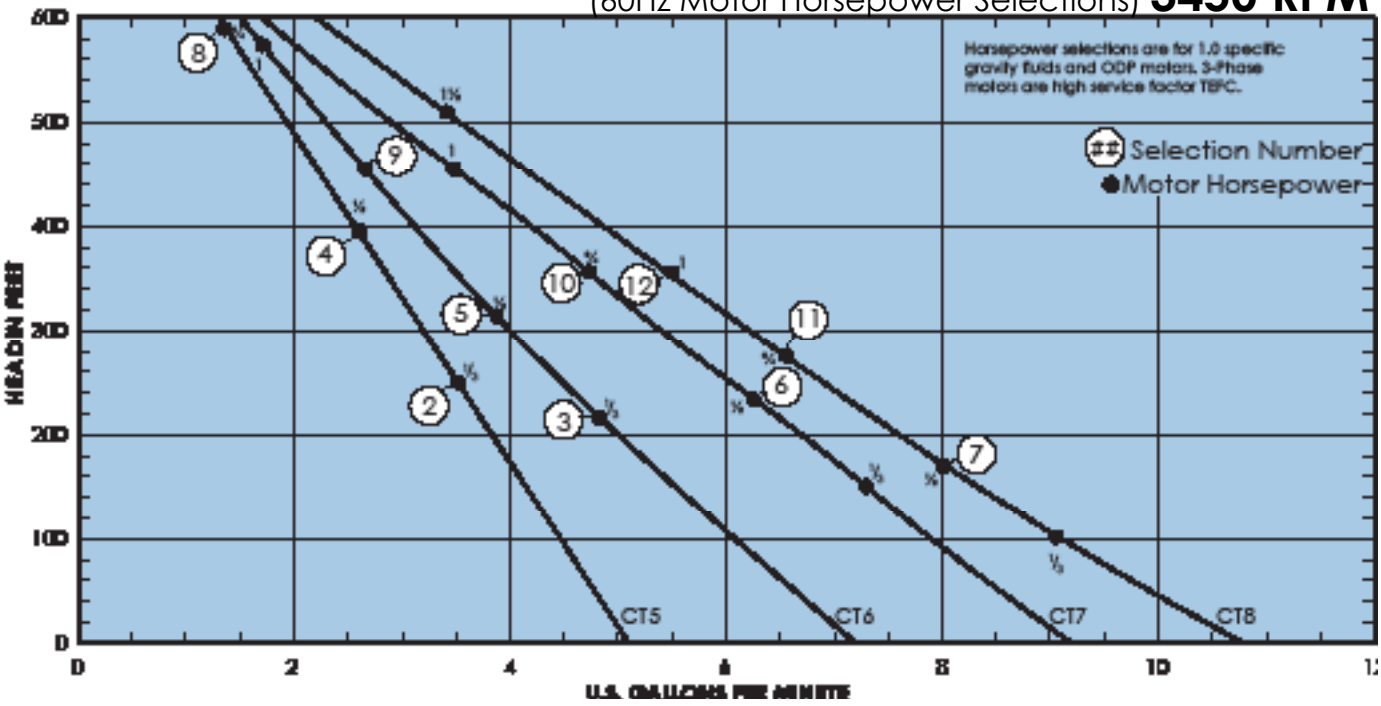
AERCT Series Regenerative Turbine Pumps

Performance and Selection Chart

(60Hz Motor Horsepower Selections) **3450 RPM**

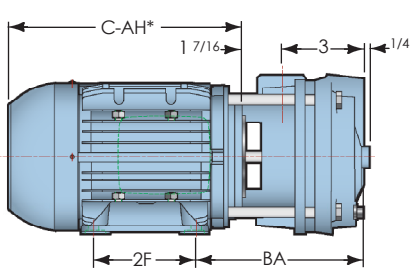


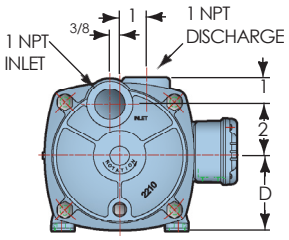
Selection Number	Catalog Number		HP	Tappings		PSI Feet	Total Head												
	1-phase	3-phase		Suct.	Disch.		20 46	30 69	40 92	50 116	60 139	70 162	80 185	90 208	100 231	110 254	120 277	130 300	140 323	150 347
							Capacity in Gallons per Minute												
2	3AERCT5	33AERCT5	1/3	1	1		4.7	4.6	4.5	4.3	4.2	4.0	3.8	3.7	3.6	3.5	—	—	—	—
4	3AERCT5	33AERCT5	1/2	1	1		4.7	4.6	4.5	4.3	4.2	4.0	3.8	3.7	3.6	3.5	3.4	3.2	3.1	2.9
3	3AERCT6	33AERCT6	1/3	1	1		6.5	6.3	6.1	5.8	5.6	5.4	5.1	4.9	—	—	—	—	—	—
5	5AERCT6	35AERCT6	1/2	1	1		6.5	6.3	6.1	5.8	5.6	5.4	5.1	4.9	4.7	4.5	4.3	4.0	—	—
9	7AERCT6	37AERCT6	3/4	1	1		6.5	6.3	6.1	5.8	5.6	5.4	5.1	4.9	4.7	4.5	4.3	4.0	3.8	3.6
6	5AERCT7	35AERCT7	1/2	1	1		8.5	8.3	8.0	7.8	7.5	7.2	6.9	6.7	6.3	—	—	—	—	—
10	7AERCT7	37AERCT7	3/4	1	1		8.5	8.3	8.0	7.8	7.5	7.2	6.9	6.7	6.3	6.0	6.0	5.4	5.1	4.8
7	5AERCT8	35AERCT8	1/2	1	1		9.9	9.5	9.3	8.8	8.6	8.1	—	—	—	—	—	—	—	—
11	7AERCT8	37AERCT8	3/4	1	1		9.9	9.5	9.3	8.8	8.6	8.1	7.8	7.4	7.2	7.0	6.7	—	—	—
12	10AER8CT	310AER8CT	1	1	1		9.9	9.5	9.3	8.8	8.6	8.1	7.8	7.4	7.2	7.0	6.7	6.3	6.0	5.6

Note: When pumping hot water over 180°F, check the NPSH available in the pumping system against the required pump NPSH shown on the pump performance curves. Available NPSH must be greater than required NPSH.

Dimensions

	HP*	FRAME	D	BA	2F
CT 3□	.3 - 1	71	2 13/16	7 3/16	3 9/16
CT 1□	.3 - 1	48	3	7 1/16	2 9/16





*C-AH Dimension -Refer to Motor Price Sheet

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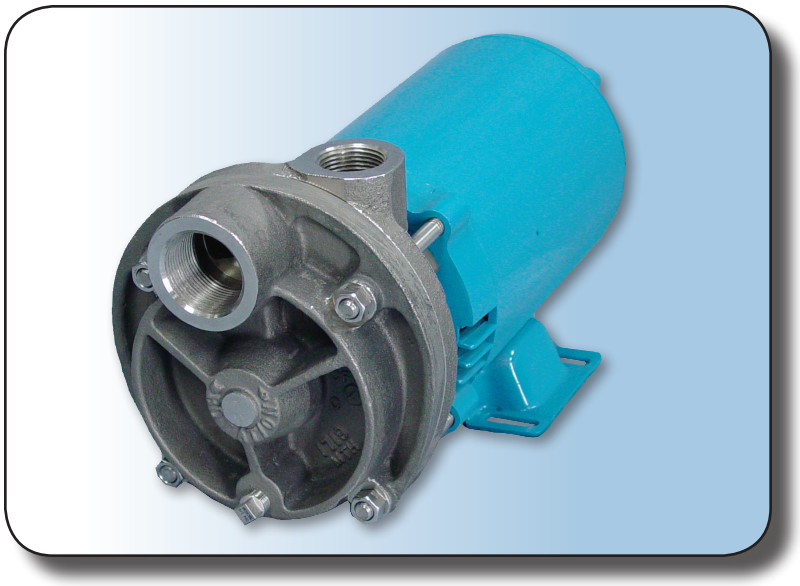
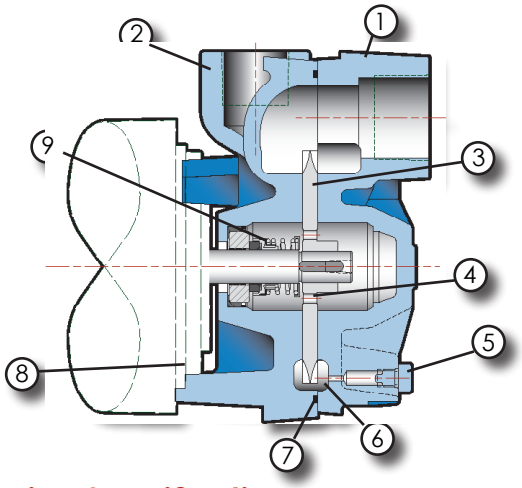
AERCS Series Regenerative Turbine Pumps

Design Features

- For Boilers 20 to 100 Horsepower
- Capacities to 30GPM
- Heads to 600 Feet
- Low NPSHR
- Temperatures to 230°F
- UL Approved Motor



1	Cover
2	Motor Bracket
3	Impeller
4	Self-aligning Balanced Holes
5	1/8" SAE Drain Plug
6	High Efficiency Water Channel Design
7	High-Temp "O" Rings
8	D3/C15 Motors with 56C Face
9	Long lasting Mechanical Seals



Limitations

Discharge Pressure	300 PSI
Seal Pressure*	200 PSI
Suction Pressure (Min.)	26" Hg Vac.
Speed (Max.)	3500 RPM
*Suction Pressure Plus 50 Percent of Differential Pressure	
Temperature	
Standard Construction	-20°F +230°F
Horsepower	
D3	1/3 to 3 HP
C15	5 HP

Engineering Specifications

The contractor shall furnish (and install as shown on the plans) an AERCS Series horizontal close coupled regenerative turbine type pump model_____ size 1" by 1 1/4" of _____ construction. Each pump shall have a capacity of ____ GPM when operating at a total head of _____feet. Suction pressure will be ____feet with a liquid temperature of ____° F.

The pump is to be furnished with a mechanical seal with stainless steel metal parts, Viton elastomers, ceramic seat and carbon washer. A 316 stainless steel shaft in five horsepower pumps.

The pump casing shall be vertically split two piece, end suction and (TOP DISCHARGE) (90° DISCHARGE) (180° DISCHARGE) (270° DISCHARGE) with water passageways in each piece. The impeller shall be hydraulically self-centering and no external adjustment shall be necessary.

The pump shall be close-coupled to a ___HP ___Phase ___Hertz ___Volt ___RPM horizontal _____ motor. The motor shall be sized to prevent overloading at the highest head condition listed in the name specifications.

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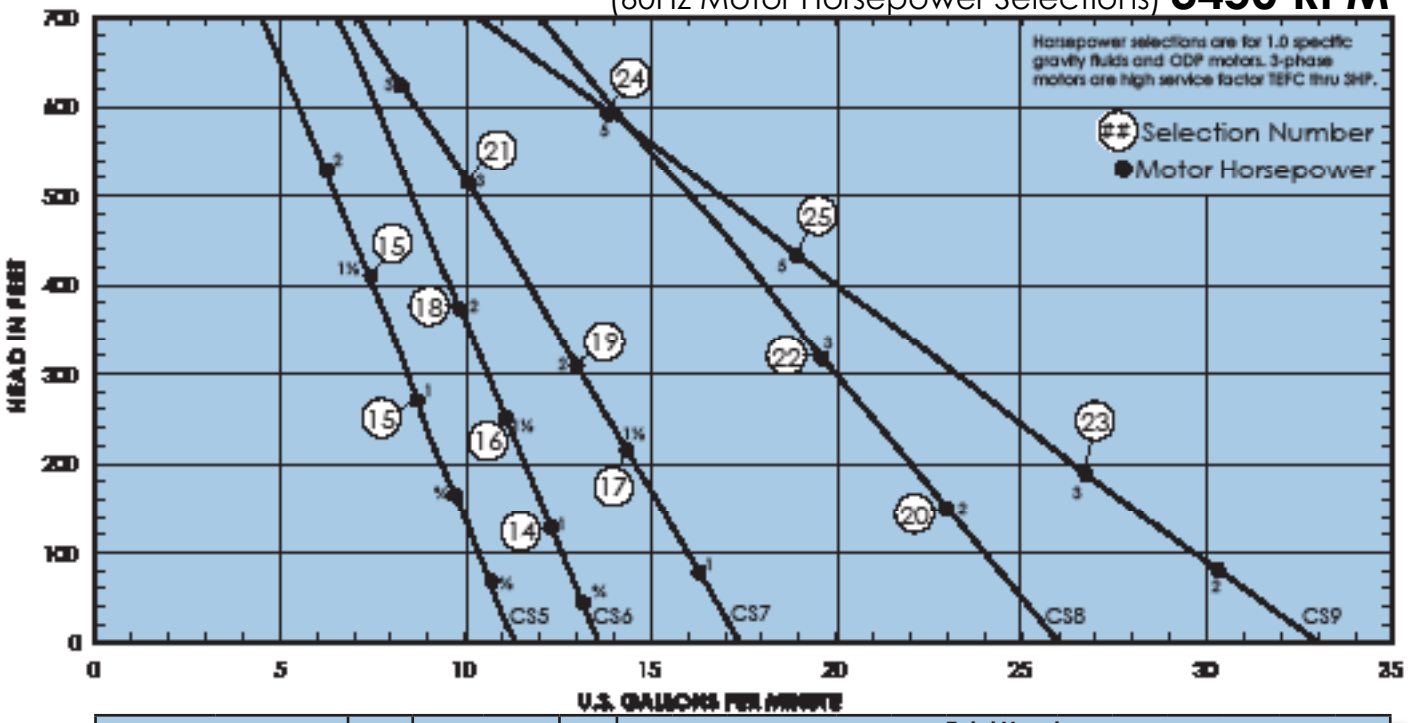
AERCS Series Regenerative Turbine Pumps

Performance and Selection Chart

(60Hz Motor Horsepower Selections) **3450 RPM**

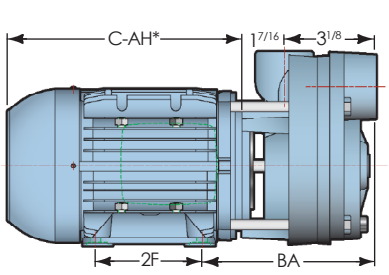


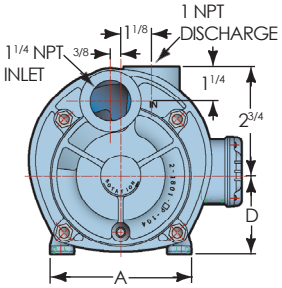
Catalog Number		HP	Tappings		PSI Feet	Total Head											
						20	30	40	50	60	70	80	90	100	110	120	130	140	150
1-phase	3-phase		Suct.	Disch.		46	69	92	116	139	162	185	208	231	254	277	300	323	347
						Capacity in Gallons per Minute													
10AERCS5	310AERCS5	1	1 1/4	1		10.8	10.6	10.5	10.2	10.0	9.9	9.5	9.3	9.0	8.9	—	—	—	—
15AERCS5	315AERCS5	1 1/2	1 1/4	1		10.8	10.6	10.5	10.2	10.0	9.9	9.5	9.3	9.0	8.9	8.6	8.4	8.2	8.0
10AERCS6	310AERCS6	1	1 1/4	1		13.0	12.9	12.8	12.5	—	—	—	—	—	—	—	—	—	—
15AERCS6	315AERCS6	1 1/2	1 1/4	1		13.0	12.9	12.8	12.5	12.2	12.0	11.8	11.6	11.2	11.0	10.8	10.6	10.5	10.0
20AERCS6	320AERCS6	2	1 1/4	1		13.0	12.9	12.8	12.5	12.2	12.0	11.8	11.6	11.2	11.0	10.8	10.6	10.5	10.0
15AERCS7	315AERCS7	1 1/2	1 1/4	1		16.7	16.3	16.1	15.9	13.4	15.0	14.8	14.4	—	—	—	—	—	—
20AERCS7	320AERCS7	2	1 1/4	1		16.7	16.3	16.1	15.9	13.4	15.0	14.8	14.4	14.1	13.8	13.5	13.1	—	—
—	330AERCS7	3	1 1/4	1		16.7	16.3	16.1	15.9	13.4	15.0	14.8	14.4	14.1	13.8	13.5	13.1	12.8	12.3
20AERCS8	320AERCS8	2	1 1/4	1		25.0	24.5	24.1	23.8	23.2	—	—	—	—	—	—	—	—	—
—	330AERCS8	3	1 1/4	1		25.0	24.5	24.1	23.8	23.2	22.9	22.3	22.0	21.5	21.0	20.5	20.0	—	—
—	350AERCS8	5	1 1/4	1		25.0	24.5	24.1	23.8	23.2	22.9	22.3	22.0	21.5	21.0	20.5	20.0	19.5	19.0
—	330AERCS9	3	1 1/4	1		31.1	30.9	30.2	29.5	28.6	27.8	27.0	—	—	—	—	—	—	—
—	350AERCS9	5	1 1/4	1		31.1	30.9	30.2	29.5	28.6	27.8	27.0	26.2	25.6	24.8	24.0	23.3	22.8	21.9

Note: When pumping hot water over 180°F, check the NPSH available in the pumping system against the required pump NPSH shown on the pump performance curves. Available NPSH must be greater than required NPSH.

Dimensions

	HP*	FRAME	A	D	BA	2F
CT 3□	.3 - 1	71	4 7/16	2 13/16	6 7/8	3 9/16
	1.5 - 2	80	4 15/16	3 1/8	6 3/4	3 15/16
	3	90	5 1/2	3 9/16	6 15/16	4 15/16
	5	56	4 7/8	3 1/2	7 7/16	3
CT 1□	.3 - 1	48	4 1/4	3	7 1/4	2 3/4
	2	56	4 7/8	3 1/2	7 7/16	3





*C-AH Dimension -Refer to Motor Price Sheet

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