# J SERIES

Centrifugal Pumps for J Series
Condensate & Boiler Feed Units

## Technical Specifications

The Sterlco® J Series Centrifugal Pumps are designed so the motor shaft will not be exposed to water. Provisions for seal flush or vent are provided. The pumps are close-coupled to a 3450 RPM motor (open drip-proof, totally enclosed enclosed fan cooled, wash down duty or explosion-proof).

## Features

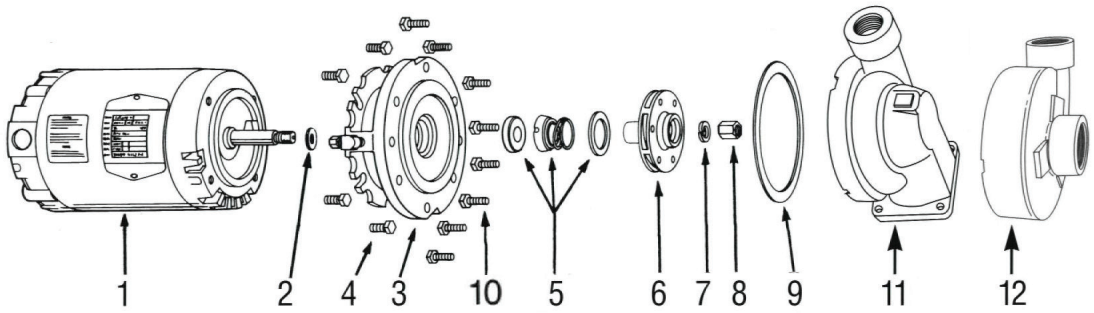
### Standard Features

- "Sterl-Seal" ceramic pump seal (250°F.)
- Impeller is brass for long life. Efficient design provides maximum capacity, minimum motor load
- Heavy-duty cast iron pump housing and bracket assure rigidity and long life
- 1/2 thru 3 HP
- 1 1/2" NPT Discharge
- Stainless steel motor shaft
- Capacities to 75 GPM
- Discharge capacities to 115 FT.
- Motor, bracket and impeller assembly can be removed for service without disturbing discharge piping
- Available motor voltages: 115-208-230 V/1, 208-230-460 V/3, 575 V/3
- Available optional Tefcoated pump castings

### Sample Specifications

A Sterlco® (J Series) centrifugal pump shall be furnished (and installed as shown on the plan). It will have a capacity of _____ GPM @ _____feet total head pressure, without overloading the motor. The pump shall be designed so that the motor shaft will not be exposed to water. Provisions for a seal flush or vent shall be provided. The pump shall be close-coupled to 3450 RPM, (open drip-proof, totally enclosed, washdown duty or explosion-proof) motor of ____HP, _____phase, _____cycle and _____volt. The pump shall allow the motor and impeller to be removed without disturbing the piping connections.

## Product Diagrams

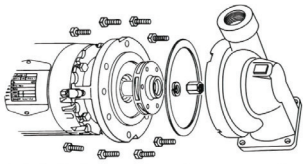



1. Motor
2. Water Slinger
3. Motor Bracket
4. Motor Screws (4)
5. Rotary Seal Assembly)
6. Impeller
7. Lock Washer
8. Impeller Nut
9. Housing Gasket
10. Pump Screws (8)
11. Vertical Inlet Casting
12. Horizontal Inlet Casting

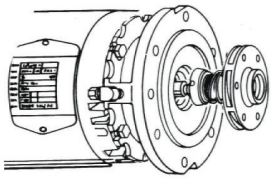
## Removal

**Removal of old Seal Assembly**

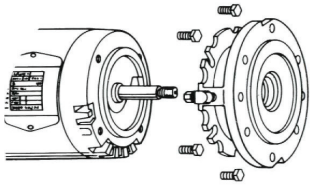
**A)** Remove 8 pump screws and lift out pump and motor, remove drip cover. Insert large screwdriver into slot at end of motor shaft; hold shaft steady and remove impeller nut and washer from nose of impeller by turning counter clockwise.



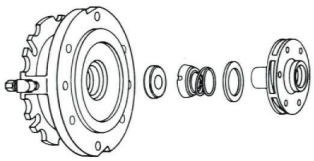
**B)** While still holding motor shaft steady with screwdriver, use 1" socket to remove impeller by turning counterclockwise.



**C)** Remove the 4 motor screws and separate the bracket from the motor



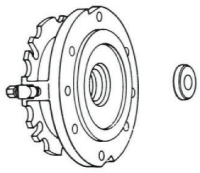
**D)** Remove old seal parts from impeller hub and bracket. Be sure water slinger is in place. Clean the recess in the bracket so that the new seat will fit perfectly and make a watertight joint. If bracket is badly eroded at recess, through severe use, casting should be replaced. Clean all gasket surfaces. Clean impeller hub thoroughly; remove loose particles of dirt, etc. Use fine emery cloth if necessary. Check prime tube or seal flush line and clean as required.



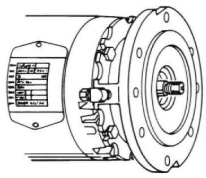
## Installation

**Installation of new Seal Assembly**

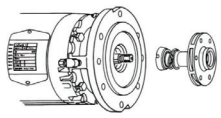
**E)** Coat outside edge of new seat with seal lubricant and slip it into the bracket. Press into bracket with thumbs or wooden dowel. Handle seat carefully so seating surfaces are not scratched or chipped...be sure it is squarely seated.



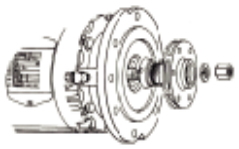
**F)** Remount bracket on motor



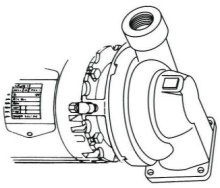
**G)** Lubricate impeller hub with seal lubricant. Slip new bellows and spring onto impeller hub. Be sure bellows slides freely on impeller hub.

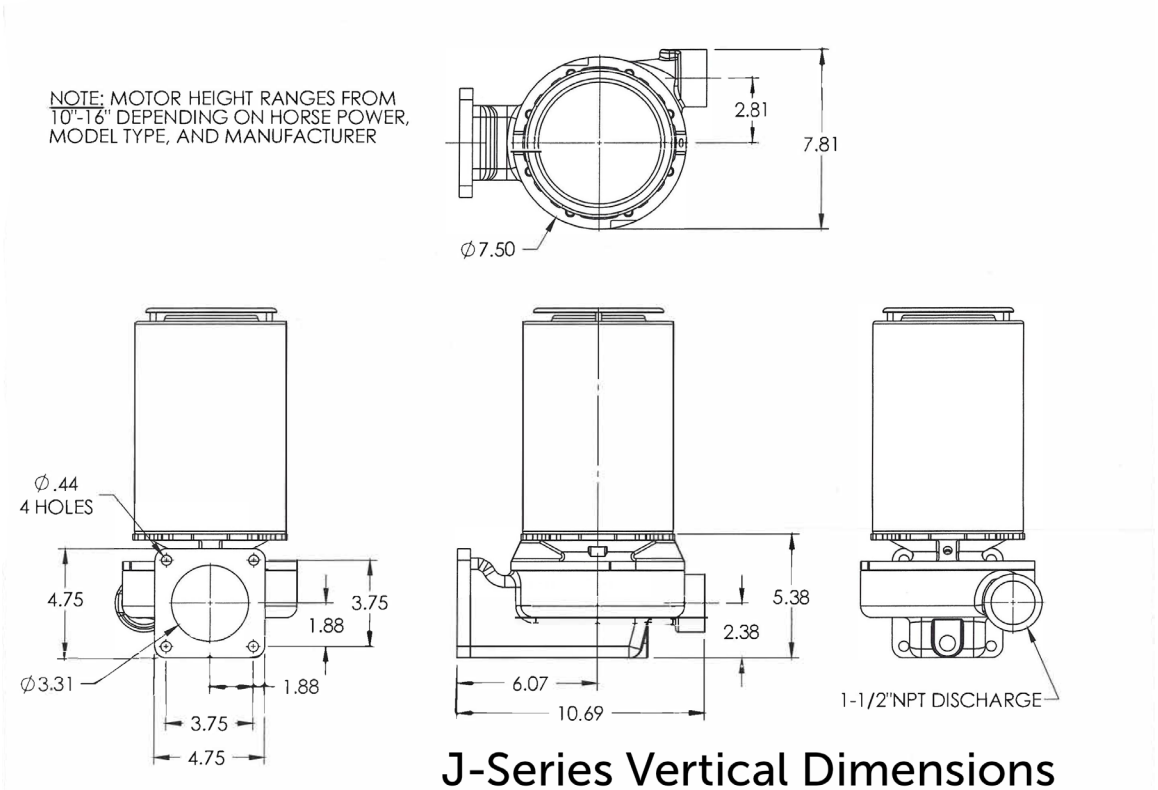


**H)** Thread impeller on motor shaft extension and secure with washer and impeller nut. Hold shaft with screwdriver slot while tightening.

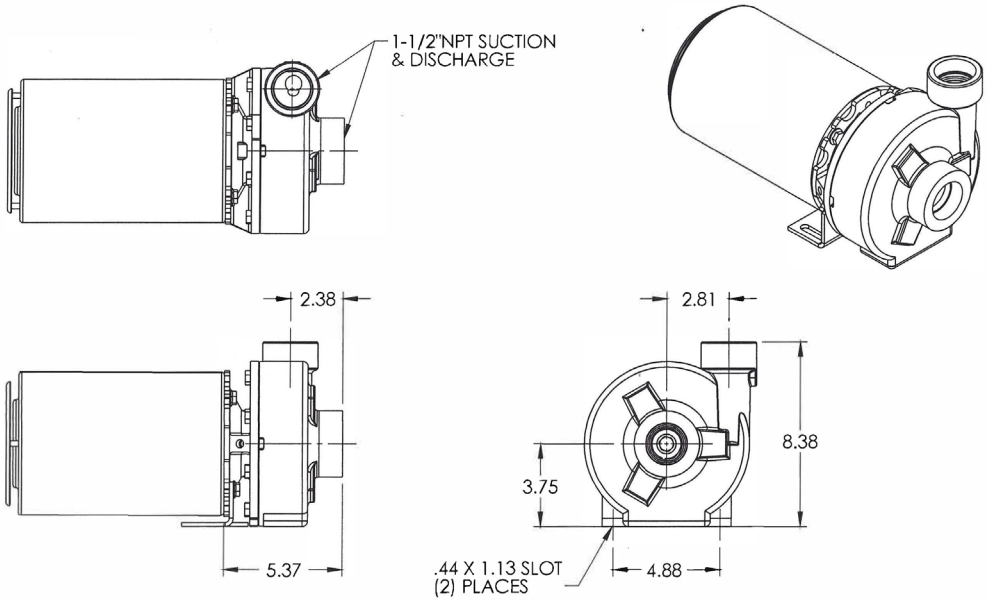


**I)** Replace motor assembly onto volute; using new housing gasket. Secure with pump screws. Be certain gasket is seated properly.






## J-Series Vertical Dimensions



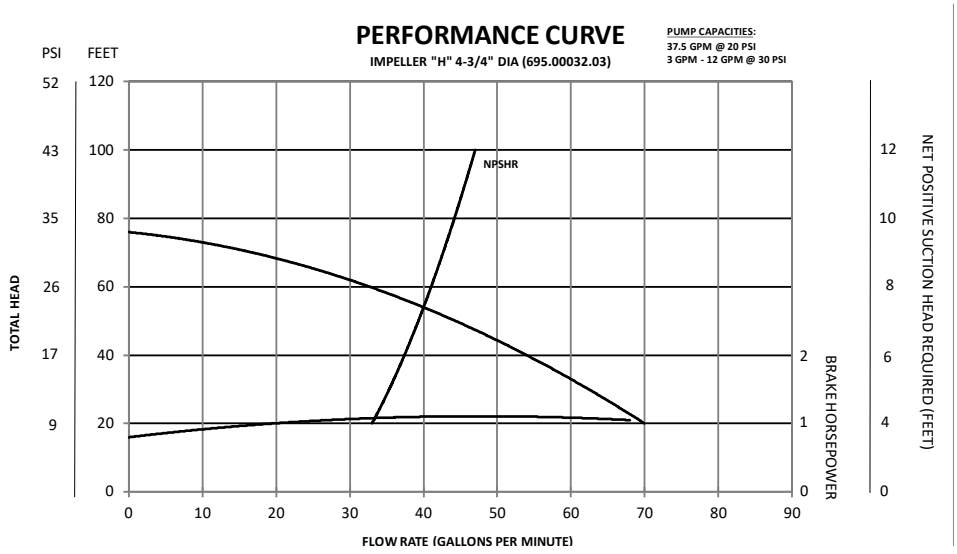

NOTE:
MOTOR HEIGHT RANGES FROM
10"-16" DEPENDING ON HORSE POWER,
MODEL TYPE, AND MANUFACTURER.

## J- Series Horizontal Dimensions

## PERFORMANCE CURVE

IMPELLER "H" 4-3/4" DIA (695.00032.03)

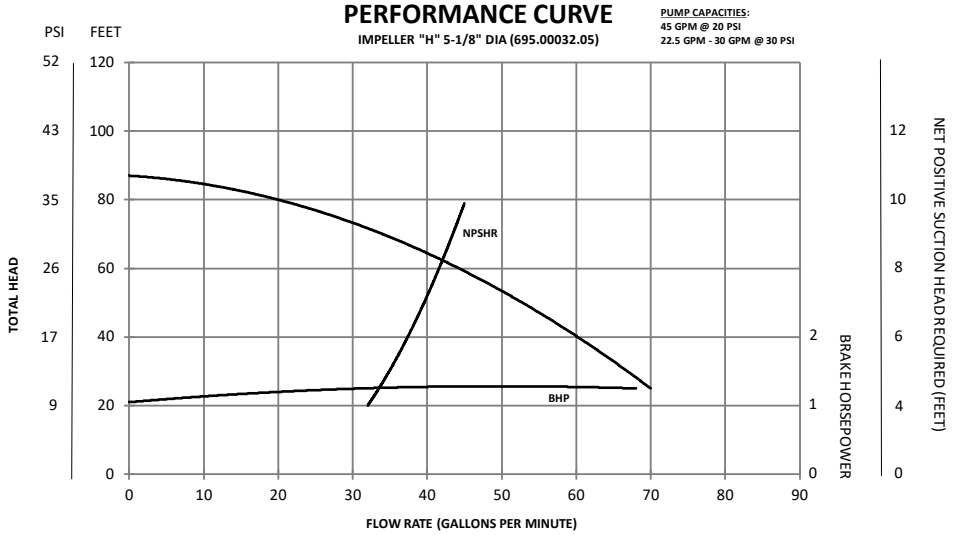
PUMP CAPACITIES:
37.5 GPM @ 20 PSI
3 GPM - 12 GPM @ 30 PSI




## PERFORMANCE CURVE

IMPELLER "H" 5-1/8" DIA (695.00032.05)

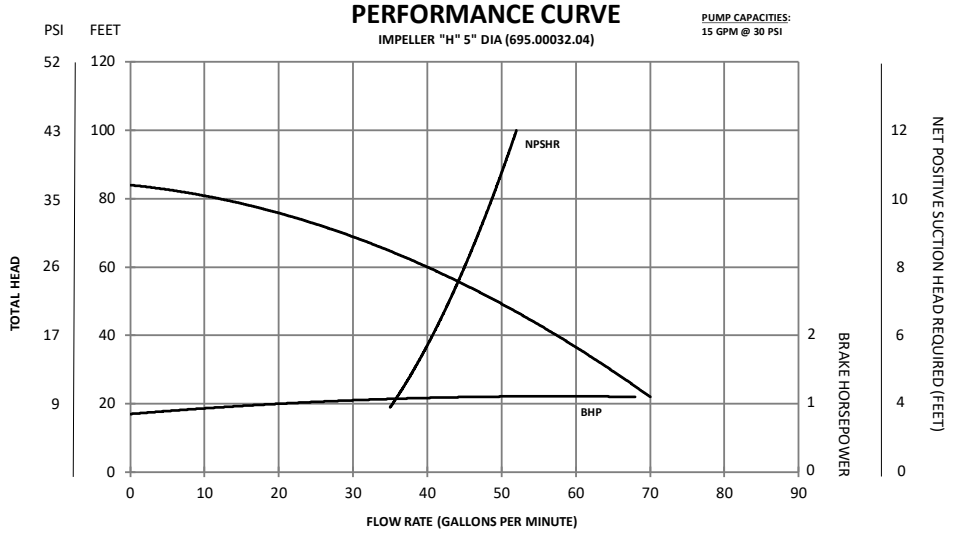
PUMP CAPACITIES:
45 GPM @ 20 PSI
22.5 GPM - 30 GPM @ 30 PSI




## PERFORMANCE CURVE

IMPELLER "H" 5" DIA (695.00032.04)

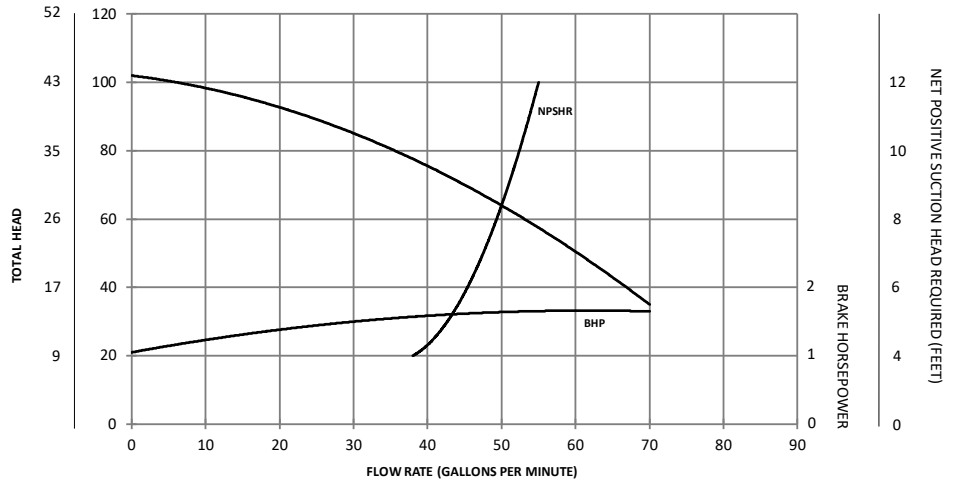
PUMP CAPACITIES:
15 GPM @ 30 PSI



## PERFORMANCE CURVE

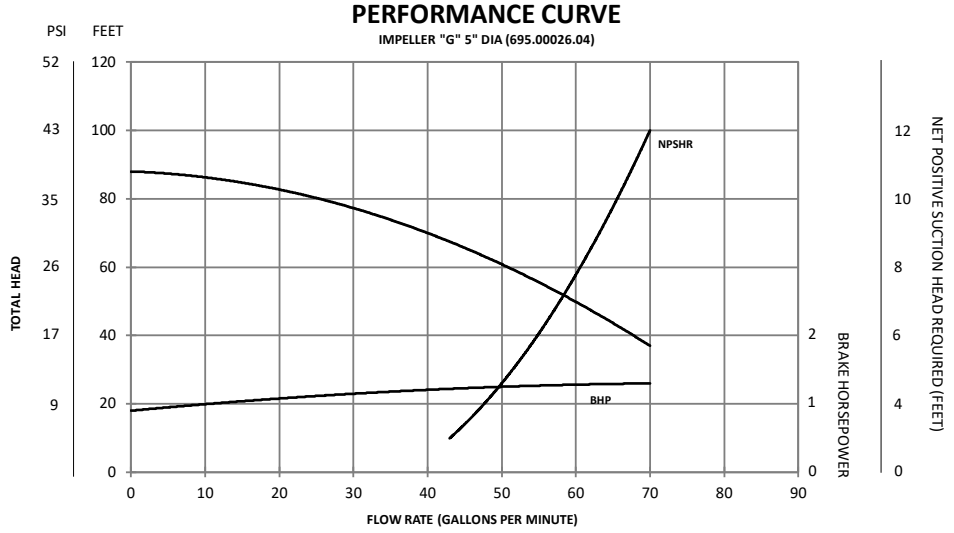
IMPELLER "H" 5-1/2" DIA (695.00032.01)

PUMP CAPACITIES:
60 GPM @ 20 PSI
3 GPM - 22.5 GPM @ 40 PSI




## PERFORMANCE CURVE

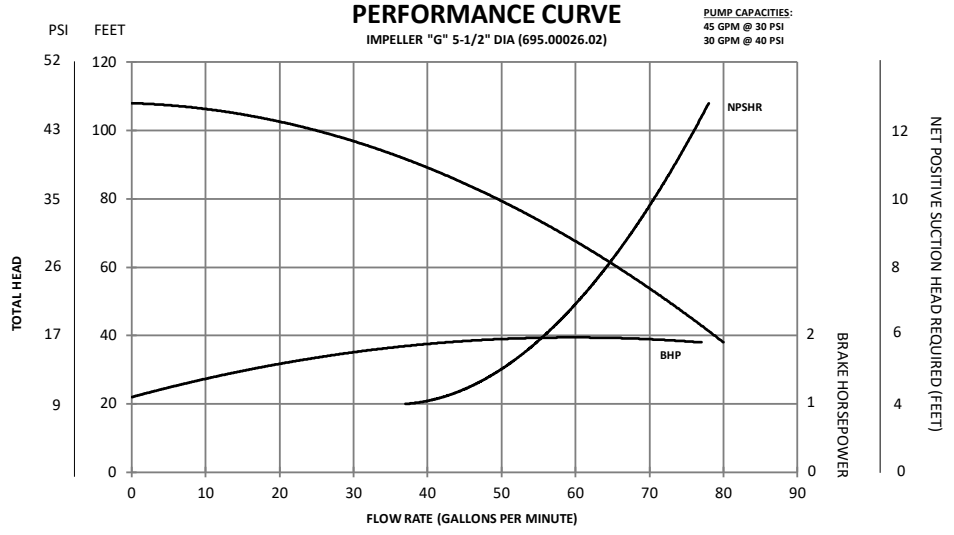
IMPELLER "G" 5" DIA (695.00026.04)




## PERFORMANCE CURVE

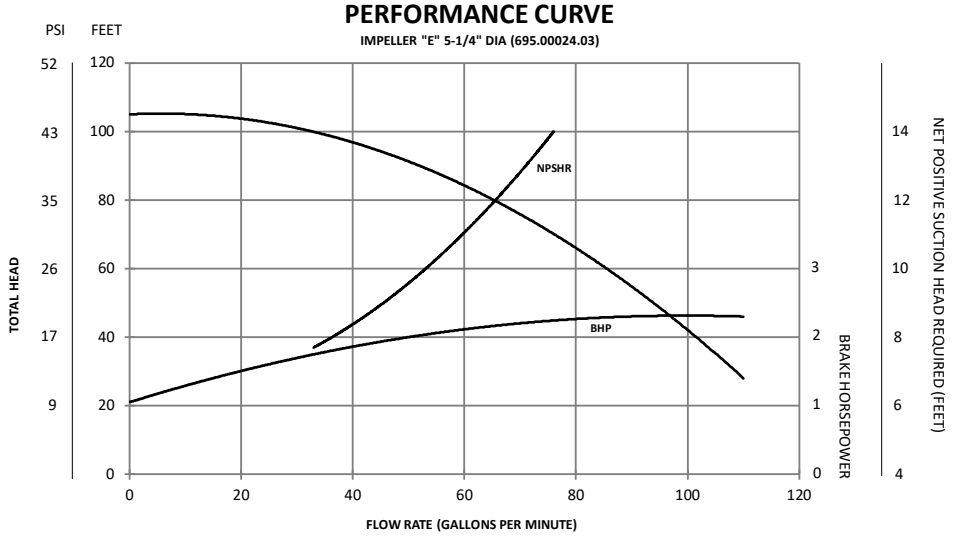
IMPELLER "G" 5-1/2" DIA (695.00026.02)

PUMP CAPACITIES:
45 GPM @ 30 PSI
30 GPM @ 40 PSI



## PERFORMANCE CURVE

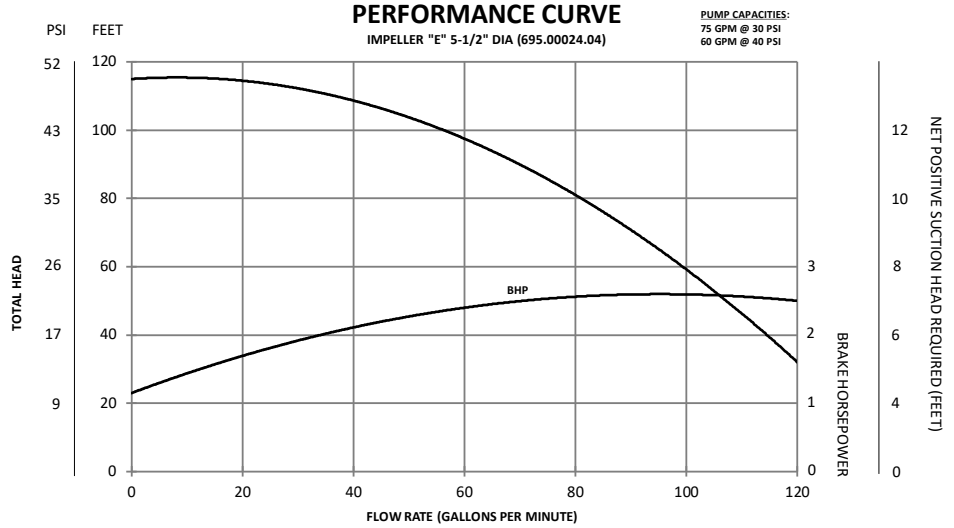
IMPELLER "E" 5-1/4" DIA (695.00024.03)




## PERFORMANCE CURVE

IMPELLER "E" 5-1/2" DIA (695.00024.04)

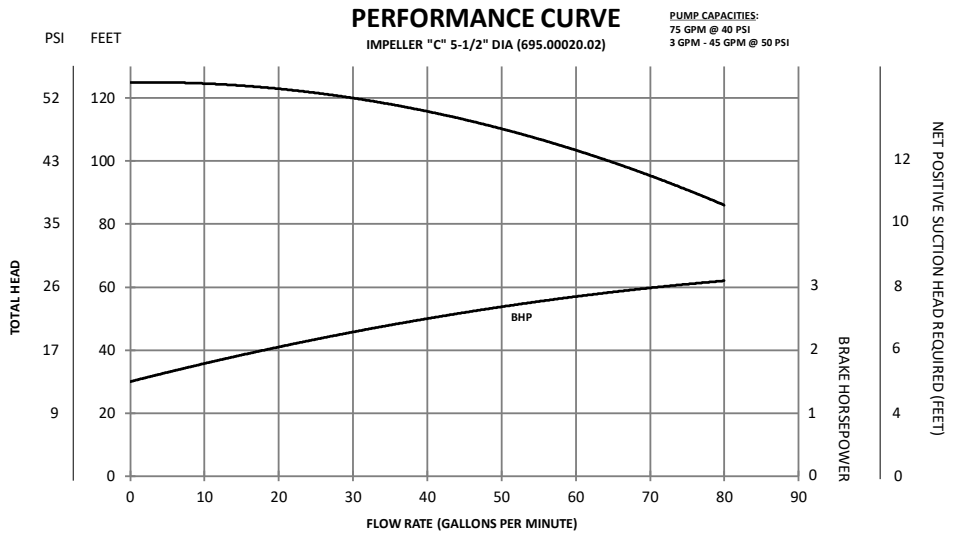
PUMP CAPACITIES:
75 GPM @ 30 PSI
60 GPM @ 40 PSI




## PERFORMANCE CURVE

IMPELLER "C" 5-1/2" DIA (695.00020.02)

PUMP CAPACITIES:
75 GPM @ 40 PSI
3 GPM - 45 GPM @ 50 PSI



| J SERIES VERTICAL | MODEL | IMPELLER | DIAMETER | HP | GPM | PSI | MECHANICAL SEAL KIT |
|---|---|---|---|---|---|---|---|
| 605.84553.XX | 41225 | 695.00032.03 | H 4-3/4" | 3/4 HP | 37.5 | 20 | 692.98445.00 |
| | 4132 | | | 1/2 HP | 3 | 30 | 692.98445.00 |
| | 4134 | | | 1/2 HP | 6 | 30 | 692.98445.00 |
| | 4136 | | | 1/2 HP | 9 | 30 | 692.98445.00 |
| | 4138 | | | 1/2 HP | 12 | 30 | 692.98445.00 |
| | | | | | | | |
| 605.84554.XX | 41230 | 695.00032.05 | H 5-1/8" | 1 HP | 45 | 20 | 692.98445.00 |
| | 41315 | | | 1 HP | 22.5 | 30 | 692.98445.00 |
| | 41320 | | | 1 HP | 30 | 30 | 692.98445.00 |
| | | | | | | | |
| 605.84555.XX | 41310 | 695.00032.04 | H 5" | 3/4 HP | 15 | 30 | 692.98445.00 |
| | | | | | | | |
| 605.84556.XX | 41240 | 695.00032.01 | H 5-1/2" | 1-1/2 HP | 60 | 20 | 692.98445.00 |
| | 4142 | | | 1 HP | 3 | 40 | 692.98445.00 |
| | 4144 | | | 1 HP | 6 | 40 | 692.98445.00 |
| | 4146 | | | 1 HP | 9 | 40 | 692.98445.00 |
| | 4148 | | | 1 HP | 12 | 40 | 692.98445.00 |
| | 41410 | | | 1 HP | 15 | 40 | 692.98445.00 |
| | 41415 | | | 1-1/2 HP | 22.5 | 40 | 692.98445.00 |
| | | | | | | | |
| 605.84557.XX | 41325 | 695.00026.04 | G 5" | 1 HP | 37.5 | 30 | 692.98445.00 |
| | | | | | | | |
| 605.84558.XX | 41330 | 695.00026.02 | G 5-1/2" | 1-1/2 HP | 45 | 30 | 692.98445.00 |
| | 41420 | | | 1-1/2 HP | 30 | 40 | 692.98445.00 |
| | | | | | | | |
| 605.84559.XX | 41250 | 695.00024.03 | E 5-1/4" | 2 HP | 75 | 20 | 692.98445.00 |
| | 41340 | | | 2 HP | 60 | 30 | 692.98445.00 |
| | 41425 | | | 1-1/2 HP | 37.5 | 40 | 692.98445.00 |
| | 41430 | | | 2 HP | 45 | 40 | 692.98445.00 |
| | | | | | | | |
| 605.84560.XX | 41350 | 695.00024.04 | E 5-1/2" | 3 HP | 75 | 30 | 692.98445.00 |
| | 41440 | | | 2 HP | 60 | 40 | 692.98445.00 |
| | | | | | | | |
| 605.84561.XX | 41450 | 695.00020.02 | C 5-1/2" | 3 HP | 75 | 40 | 692.98445.00 |
| | 4152 | | | 2 HP | 3 | 50 | 692.98445.00 |
| | 4154 | | | 2 HP | 6 | 50 | 692.98445.00 |
| | 4156 | | | 2 HP | 9 | 50 | 692.98445.00 |
| | 4158 | | | 2 HP | 12 | 50 | 692.98445.00 |
| | 41510 | | | 2 HP | 15 | 50 | 692.98445.00 |
| | 41515 | | | 2 HP | 22.5 | 50 | 692.98445.00 |
| | 41520 | | | 3 HP | 30 | 50 | 692.98445.00 |
| | 41525 | | | 3 HP | 37.5 | 50 | 692.98445.00 |
| | 41530 | | | 3 HP | 45 | 50 | 692.98445.00 |

*** MODEL ALSO APPLIES TO 3500, 4200, 4300 & 5000 SERIES
*** MECHANICAL SEAL KIT PART # 692.98445.00 INCLUDES: (1) ROTARY SEAL - 081.00034.00, (1) HOUSING GASKET- 545.00002.00, (1) SEAL LUBRICANT- 214.00044.00 AND (1) IMPELLER NUT- 535.00001.00
*** FOR 5 HP PUMPS, PLEASE CONSULT FACTORY

| J SERIES HORIZONTAL | IMPELLER | DIAMETER | HP | GPM | PSI | MECHANICAL SEAL KIT |
|---|---|---|---|---|---|---|
| 605.84562.XX | 695.00032.03 | H 4-3/4" | 1/2 HP | 3 | 30 | 692.98445.00 |
| | | | 1/2 HP | 6 | 30 | 692.98445.00 |
| | | | 1/2 HP | 9 | 30 | 692.98445.00 |
| | | | 1/2 HP | 12 | 30 | 692.98445.00 |
| | | | | | | |
| 605.84563.XX | 695.00032.05 | H 5-1/8" | 1 HP | 40 | 20 | 692.98445.00 |
| | | | 1 HP | 50 | 20 | 692.98445.00 |
| | | | 3/4 HP | 20 | 30 | 692.98445.00 |
| | | | 1 HP | 30 | 30 | 692.98445.00 |
| | | | | | | |
| 605.84564.XX | 695.00032.04 | H 5" | 3/4 HP | 15 | 30 | 692.98445.00 |
| | | | | | | |
| 605.84565.XX | 695.00032.01 | H 5-1/2" | 1-1/2 HP | 60 | 20 | 692.98445.00 |
| | | | 1 HP | 3 | 40 | 692.98445.00 |
| | | | 1 HP | 6 | 40 | 692.98445.00 |
| | | | 1 HP | 9 | 40 | 692.98445.00 |
| | | | 1 HP | 12 | 40 | 692.98445.00 |
| | | | 1 HP | 15 | 40 | 692.98445.00 |
| | | | 1-1/2 HP | 20 | 40 | 692.98445.00 |
| | | | | | | |
| 605.84566.XX | 695.00026.04 | G 5" | 1-1/2 HP | 40 | 30 | 692.98445.00 |
| | | | | | | |
| 605.84567.XX | 695.00026.02 | G 5-1/2" | 1-1/2 HP | 50 | 30 | 692.98445.00 |
| | | | 1-1/2 HP | 30 | 40 | 692.98445.00 |
| | | | | | | |
| 605.84568.XX | 695.00024.03 | E 5-1/4" | 2 HP | 80 | 20 | 692.98445.00 |
| | | | 2 HP | 60 | 30 | 692.98445.00 |
| | | | 2 HP | 40 | 40 | 692.98445.00 |
| | | | 2 HP | 50 | 40 | 692.98445.00 |
| | | | | | | |
| 605.84569.XX | 695.00024.04 | E 5-1/2" | 2 HP | 100 | 20 | 692.98445.00 |
| | | | 3 HP | 80 | 30 | 692.98445.00 |
| | | | 2 HP | 60 | 40 | 692.98445.00 |
| | | | | | | |
| 605.84570.XX | 695.00020.02 | C 5-1/2" | 2 HP | 3 | 50 | 692.98445.00 |
| | | | 2 HP | 6 | 50 | 692.98445.00 |
| | | | 2 HP | 9 | 50 | 692.98445.00 |
| | | | 2 HP | 12 | 50 | 692.98445.00 |
| | | | 2 HP | 15 | 50 | 692.98445.00 |
| | | | 2 HP | 20 | 50 | 692.98445.00 |
| | | | 3 HP | 30 | 50 | 692.98445.00 |
| | | | 3 HP | 40 | 50 | 692.98445.00 |
| | | | 3 HP | 50 | 50 | 692.98445.00 |
| | | | | | | |

*** MECHANICAL SEAL KIT PART # 692.98445.00 INCLUDES: (1) ROTARY SEAL - 081.00034.00, (1) HOUSING GASKET- 545.00002.00, (1) SEAL LUBRICANT- 214.00044.00 AND (1) IMPELLER NUT- 535.00001.00