

## AURORA® 340 SERIES COMMERCIAL SINGLE STAGE END SUCTION PUMPS

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### ECONOMICAL WATER HANDLING SOLUTIONS

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Today, pump installations demand a high standard for efficiency. The Aurora 340 Series pump meets this demand and exceeds the expectations of aquatic designers, and municipal and commercial pool management. Conceived from 90 years of design expertise the Aurora 340 Series pump is quiet, smooth running and provides a long reliable service life.

Flexibility makes the 340 Series pump the answer for your custom aquatic

features. Interchangeable standards and options help to easily configure any 340 Series pump. Capacities can be customized to 2500 GPM, heads up to 100 feet and temperature ranges to 106°F.

This single-stage end suction pump is the work horse of an energy-efficient aquatic facility. Let Pentair Commercial Aquatics™ customize a 340 Series pump for your water feature or pool.

### STANDARD FEATURES

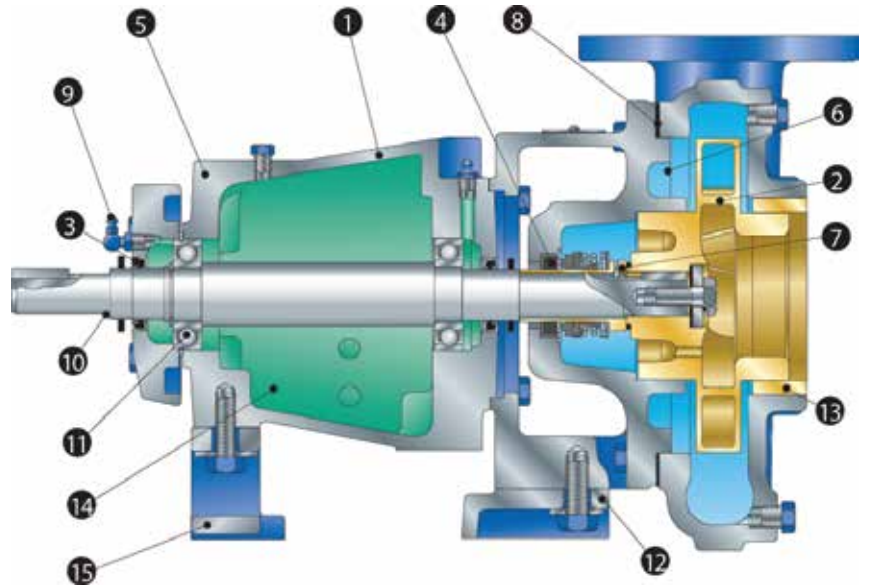
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- Computer machine components
- Precision-cast, dynamically-balanced, enclosed impeller
- Oil seals and Neoprene rotating slingers protect bearings
- Mechanical seal
- Heavy-duty power frame
- Hydrostatic tested pumps
- Bronze fitted pump standard
- Back pull-out design simplifies disassembly
- Conveniently located lubrication fittings
- Epoxy coating options
- ODP and TEFC motor options
- Case wearing rings prevent wear
- NSF Std 50 options available

# AURORA® 340 SERIES COMMERCIAL SINGLE STAGE END SUCTION PUMPS

## FEATURES

1. Computer machined major components with 360-degree register fit to assure concentricity of all pump parts.
2. Precision-cast, dynamically-balanced, enclosed impeller is keyed to the shaft extension and secured by a capscrew and washer. Gaskets are used to prevent leakage to shaft end.
3. Oil seals and non-sparking Neoprene rotating slingers protect both bearings during pump operation and washdown.
4. Mechanical seal has hot water carbon against Ni-Resist face for optimum hot water performance. Long life is also assured with 303 stainless steel metal parts and "Buna-N" elastomer.
5. Power frame provides heavy duty maximum interchangeability for flexible coupled applications.
6. Hydrostatic test of pumps at factory guarantees casting and seal integrity.
7. Bronze shaft sleeve prevents shaft wear, is slip fit over the shaft, key locked and extends the full length of the seal box to eliminate corrosion of the shaft by the pumped liquid. This cancels the requirement for high cost, special stainless steel or alloy shafts.
8. Back pull-out design simplifies disassembly. The suction and discharge piping is not disturbed at disassembly.



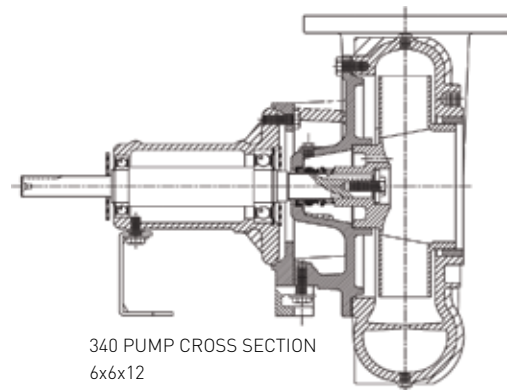
9. Lubrication fittings are conveniently located for quick accessibility and provides positive bearing lubrication. Oil lubrication optionally available.
10. Carbon steel shaft designed for minimum deflection. Not to exceed .002" at sealing faces at maximum load.
11. Bearings selected for 3-year minimum life at maximum load. Average bearing life 5x minimum. Grease lube standard.
12. Close coupled motors in smaller frame sizes are supported off of the motor bracket for maximum rigidity.
13. Case wearing ring prevents wear on casing and is easily and inexpensively replaced. Impeller rings are available.

Front case wearing rings are standard on all models and size pumps. Front impeller wearing rings are optional on all models and size pumps. Rear impeller wearing rings are optional only on 2" discharge and larger model 340 Series pumps.

14. Large capacity oil reservoir is provided on power frame model 344 pumps for optional oil lube.
15. Rear support foot provides support and simplifies coupling alignment. All supports are slotted to simplify back pull-out of power frame.

## Design Details

| Pump Part         | Standard Fitted   | Bronze Fitted         | All-Iron              | All-Bronze  |
|-------------------|---|-----------------------|-----------------------|---|
| Casing            | Cast Iron<br>ASTM A48   | Cast Iron<br>ASTM A48 | Cast Iron<br>ASTM A48 | Bronze<br>ASTM B62  |
| Case Wearing Ring | Bronze<br>ASTM B62  | Bronze<br>ASTM B62    | Cast Iron<br>ASTM A48 | Bronze<br>ASTM B62  |
| Impeller          | Cast Iron<br>ASTM A48   | Bronze<br>ASTM B584   | Cast Iron<br>ASTM A48 | Bronze<br>ASTM B584   |
| Motor Bracket     | Cast Iron<br>ASTM A48   | Cast Iron<br>ASTM A48 | Cast Iron<br>ASTM A48 | Cast Iron<br>ASTM A48   |
| Shaft             | Steel<br>AISI C1045   | Steel<br>AISI C1045   | Steel<br>AISI C1045   | Steel<br>AISI C1045   |
| Power Frame       | Cast Iron<br>ASTM A48   | Cast Iron<br>ASTM A48 | Cast Iron<br>ASTM A48 | Cast Iron<br>ASTM A48   |
| Mechanical Seal   | 303 Stainless steel metal parts, "Buna-N" elastomer parts, Ni-Resist seat and carbon washer |                       |                       | 303 Stainless steel metal parts, viton, elastomer, ceramic seat and carbon washer |
| Stuffing Box      | Cast Iron<br>ASTM A48   | Cast Iron<br>ASTM A48 | Cast Iron<br>ASTM A48 | Bronze<br>ASTM B62  |



340 PUMP CROSS SECTION  
6x6x12

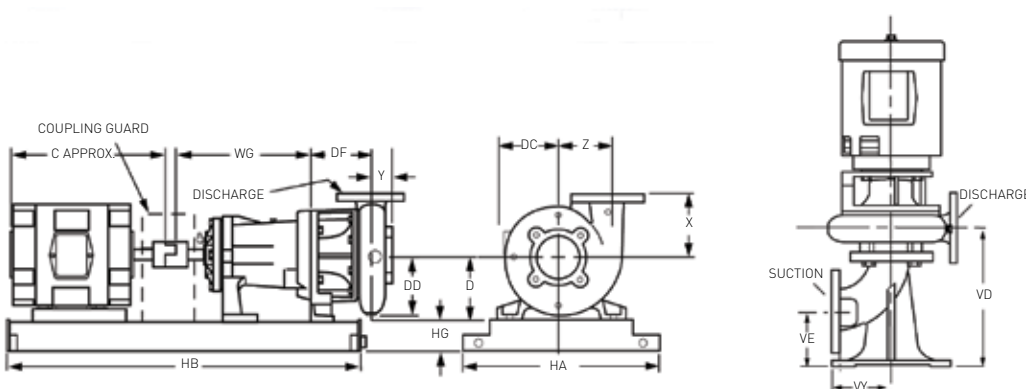
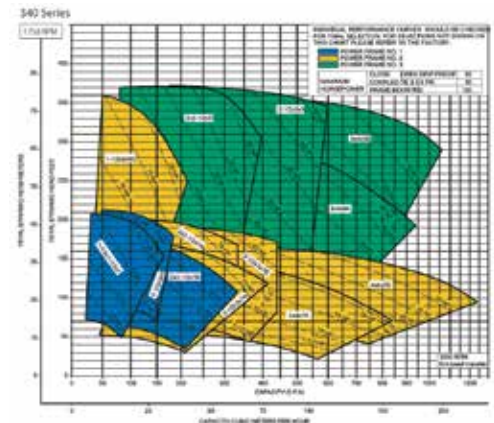
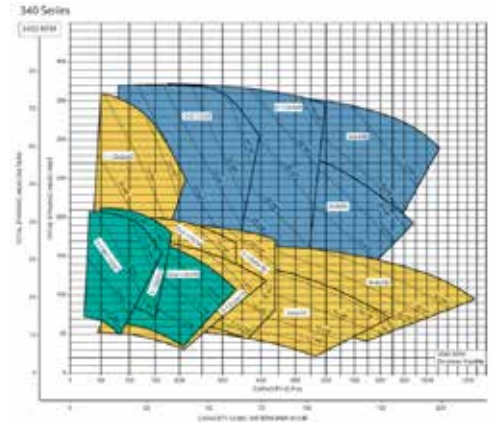
# SIZING CHARTS AND CLEARANCE AREA

## Dimensions

| Pumps with Threaded Connections |         |           |    |    |    |    |    | 340 Series                 |                                 |                                 | 342 Series     |    |    |
|---------------------------------|---------|-----------|----|----|----|----|----|----------------------------|---------------------------------|---------------------------------|----------------|----|----|
| Pump Size                       |         |           | X  | Y  | Z  | DC | DD | DF                         |                                 |                                 | Vertical Pumps |    |    |
| Discharge                       | Suction | Case Bore |    |    |    |    |    | Frame 1<br>143JM-<br>215JM | Frame 2 or 3<br>254JM-<br>256JM | Frame 2 or 3<br>284JM-<br>326JM | VD             | VE | VY |
| 1½                              | 1½      | 7         | 5¼ | 2⅞ | 4⅞ | 4⅞ | 5⅞ | 4¾                         | N/A                             | N/A                             | 9¾             | 3¾ | 4  |
| 1½                              | 1½      | 98        | 6¾ | 2⅞ | 5¾ | 6¾ | 6¾ | 4⅞                         | N/A                             | N/A                             | 9¾             | 3¾ | 4  |
| 1½                              | 2       | 7         | 5¾ | 2½ | 4⅞ | 5⅞ | 5¾ | 4⅞                         | N/A                             | N/A                             | 10⅞            | 4⅞ | 4½ |
| 1½                              | 2       | 9         | 6¾ | 2⅞ | 5½ | 6⅞ | 6⅞ | 4¾                         | 5¾                              | 5¾                              | 10⅞            | 4⅞ | 4½ |
| 1½                              | 2       | 11        | 9  | 2⅞ | 6⅞ | 7⅞ | 7¼ | N/A                        | 5¾                              | 5¾                              | 10½            | 4⅞ | 4½ |
| 1½                              | 2       | 12        | 7¾ | 2¾ | 7⅞ | 8  | 8¼ | N/A                        | 5⅞                              | N/A                             | 10⅞            | 4⅞ | 4½ |

## Pumps with ANSI Standard 125 lb. Flanged Connections

|    |    |     |    |    |    |     |     |     |     |     |     |     |     |
|----|----|-----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|
| 2  | 2½ | 7   | 5⅞ | 1⅞ | 4⅞ | 5⅞  | 5⅞  | 4⅞  | 5⅞  | N/A | 11⅞ | 4½  | 5   |
| 2  | 2½ | 9   | 7  | 1⅞ | 5⅞ | 6½  | 4⅞  | 5⅞  | 5⅞  | 5⅞  | 11⅞ | 4½  | 5   |
| 2  | 2½ | 12  | 8  | 1⅞ | 7⅞ | 8⅞  | 8½  | 5   | 6   | N/A | 11⅞ | 4½  | 5   |
| 2  | 3  | 11  | 8  | 2⅞ | 6½ | 7   | 7⅞  | 5⅞  | 6⅞  | N/A | 12⅞ | 5   | 5½  |
| 2½ | 3  | 7   | 5⅞ | 2  | 4⅞ | 5⅞  | 6¼  | 5⅞  | 6⅞  | N/A | 12⅞ | 5   | 5½  |
| 2½ | 3  | 9   | 7¼ | 2  | 5⅞ | 6¾  | 7¼  | 5   | 6   | 6   | 12⅞ | 5   | 5½  |
| 2½ | 3  | 112 | 8¼ | 2  | 7⅞ | 8⅞  | 8¼  | 5⅞  | 6⅞  | N/A | 12⅞ | 5   | 5½  |
| 3  | 4  | 9   | 7½ | 2⅞ | 6⅞ | 6⅞  | 7⅞  | 5⅞  | 6⅞  | 6⅞  | 14⅞ | 6   | 6½  |
| 3  | 4  | 11  | 9  | 2¾ | 7  | 7⅞  | 8⅞  | 5⅞  | 6⅞  | N/A | 15¼ | 6   | 6½  |
| 3  | 4  | 12  | 8½ | 2⅞ | 7⅞ | 8⅞  | 8⅞  | 5½  | 6½  | 6½  | 14⅞ | 6   | 6½  |
| 4  | 4  | 7   | 6½ | 2½ | 5½ | 6⅞  | 7⅞  | 5⅞  | 6⅞  | 6⅞  | 14⅞ | 6   | 6½  |
| 4  | 5  | 9A  | 7¼ | 3⅞ | 5¾ | 6⅞  | 7⅞  | 5¼  | 6¼  | 6¼  | 17⅞ | 6½  | 7½  |
| 4  | 5  | 9B  | 7¾ | 2⅞ | 6⅞ | 8⅞  | 8⅞  | 5⅞  | 6⅞  | N/A | 16⅞ | 6½  | 7½  |
| 4  | 5  | 11  | 9  | 3  | 7¼ | 7⅞  | 8⅞  | 5⅞  | 6⅞  | 6⅞  | 17  | 6½  | 7½  |
| 4  | 5  | 12  | 8¾ | 2⅞ | 7⅞ | 8⅞  | 9⅞  | N/A | 6¾  | 6¾  | 16⅞ | 6½  | 7½  |
| 5  | 6  | 11  | 9  | 3⅞ | 8⅞ | 8⅞  | 10⅞ | 6   | 7   | 7   | 18⅞ | 7   | 8   |
| 5  | 6  | 12  | 9  | 2⅞ | 8⅞ | 9¼  | 10⅞ | N/A | 7   | 7   | 17⅞ | 7   | 8   |
| 6  | 6  | 9   | 8¼ | 2¾ | 7  | 8   | 9   | 5½  | 6½  | 6½  | 18¼ | 7   | 8   |
| 6  | 6  | 11  | 9¼ | 3⅞ | 8⅞ | 9⅞  | 10⅞ | N/A | 7¼  | 7¼  | 18¼ | 7   | 8   |
| 6  | 6  | 11A | 9¼ | 3⅞ | 8⅞ | 9⅞  | 10⅞ | N/A | 7¼  | 7¼  | 18¼ | 7   | 8   |
| 6  | 6  | 12B | 9¼ | 3⅞ | 8⅞ | 9⅞  | 10⅞ | N/A | 7¼  | 7¼  | 18¼ | 7   | 8   |
| 6  | 8  | 15  | 18 | 6  | —  | 10⅞ | 14½ | N/A | N/A | N/A | N/A | N/A | N/A |
| 8  | 10 | 15  | 19 | 6  | —  | 11  | 14½ | N/A | N/A | N/A | N/A | N/A | N/A |



AURORA MODEL 342A PUMP

# AURORA® 340 SERIES

## COMMERCIAL SINGLE STAGE END SUCTION PUMPS

### Aurora 340 Series Pumps

The contractor shall furnish (and install as shown on the plans) Aurora model (341A horizontal close coupled)/(344A horizontal flexible coupled)/(342A vertical close coupled) back pull out centrifugal pumps size \_\_\_x\_\_\_x\_\_\_ of (standard fitted) bronze fitted)/(all iron) construction.

Each pump shall have a capacity of \_\_\_GPM at \_\_\_ft total head, with a temperature of \_\_\_° F \_\_\_specific gravity. Each pump is to be furnished with a mechanical seal with all metal parts to be 303 stainless steel with "Buna-N" elastomers, Ni-Resist seat, and carbon washer. The unit must be equipped with (bronze)/(stainless steel) key-locked shaft sleeve that extends the length of the seal box. The pump shaft

extension shall be "O" ring sealed from the pumped liquid. Pump shall have a case wearing ring (impeller wearing rings). Impellers to be vacuum cast, dynamically balanced, and key-locked to the shaft.

### Flexible Coupled-Frame Mounted

Pump and motor are to be mounted on a common (fabricated steel drip rim)/(steel) base plate. The shaft is to be steel, installed in a cast iron power frame. Pumps shall have a shaft design for .002" deflection at the seal face with the pump running under maximum load condition. (Grease) (oil)/(permanently lubricated) ball bearings, having a 3 year minimum life (AFGMA B10) under the maximum condition of load. Bearings to be produced by separate oil seals and flingers. The pump shall be

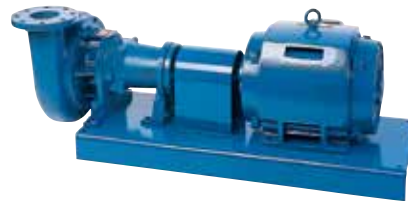
flexible coupled to standard horizontal NEMA....HP....phase....Hertz....volts.....RPM (open drip proof)/(totally enclosed fan cooled) (explosion-proof) motor. Alignment shall be checked in accordance with the standards of the Hydraulic Institute after installation and there shall be no strain transmitted to the pumps.

### Closed Coupled

Each pump is to be closed coupled to a standard HI-NEMAJM (340A Series). HP phase.... Hertz....volt....RPM (drip-proof) (totally enclosed)/(explosion-proof) motor. Model 341A in motor frame sizes up to 184JM shall be supported by a separate support foot on the close coupled pump bracket.



341A PUMP



344A PUMP



342A PUMP



1620 HAWKINS AVE, SANFORD, NC 27330 800.831.7133 WWW.PENTAIRCOMMERCIAL.COM

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