



MODEL 3804



Certified to  
NSF/ANSI 372

# AURORA<sup>®</sup> 3800 SERIES SINGLE STAGE END SUCTION PUMPS

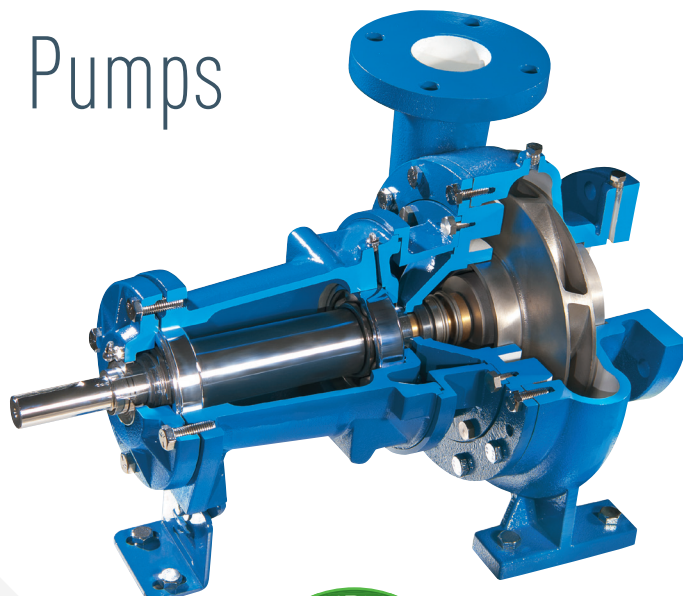
# AURORA® 3800 SERIES

## Single Stage End Suction Pumps

Capacities to 4200 gpm (954 m<sup>3</sup>/hr)  
 Heads to 520 feet (158 meters)  
 Temperatures to 300°F (149°C)

### Setting New Standards of Efficiency

Liquid handling requirements are much more involved than they were years ago. The variety of liquids being handled has increased along with temperatures and pressures. Today's installations demand quiet, smooth running pumps with long life. Aurora's 90 years of experience with design, sales and manufacturing of centrifugal pumps has led to the 3800 Series. These modern pumps with a clean, straightforward design were developed with maximum interchangeability in mind. Aurora's highly reliable 3800 pumps offer an economical solution to your liquid handling problems.



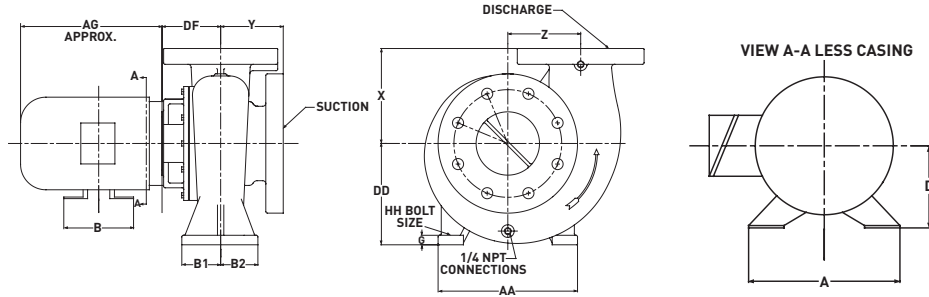
### Standard Features

- Offered in two models:
  - 3801 Close coupled
  - 3804 Flexible coupled-frame mounted
- 316 SST impeller
- 316 SST shaft sleeve
- Double volute on 4" discharge and larger to reduce bearing loads
- Gauge taps on suction and discharge on flanged models
- 4 Power frame sizes
- Casing feet for easy back pullout
- Regreaseable bearings (3804 only)
- Coupling guard (flex coupled design)
- Formed steel base (flex coupled design)

### Optional Features

- 316 SST shaft
- Drip rim base
- Drip pan (3804 only)
- Flush lines
- Epoxy coating
- Several mechanical seal options  
(required for temperatures over 225°F)
- Oil lube bearings (flex coupled only)
- Case wear ring

# Model 3801 Product Offering

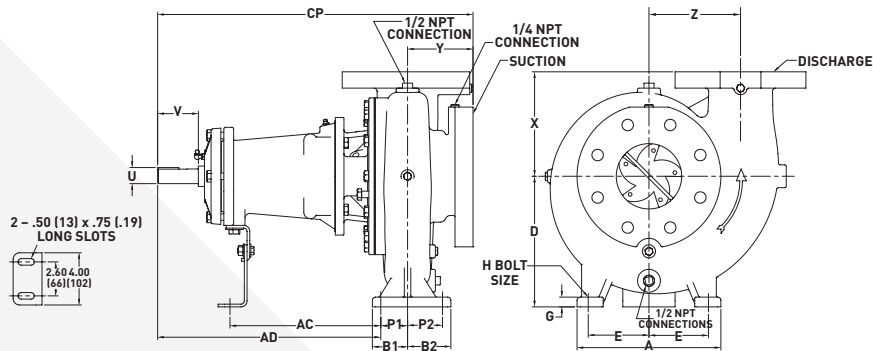


**Notes:**

1. Dimensions are approximate.
2. All dimensions are in inches (mm) and may vary ± 1/4 (6).
3. Not for construction purposes unless certified.
- ▲ Available in 250 lb./125 lb. flanges.
- Dimensions do not match Bell & Gossett.
4. Conduit box is shown in approximate location. Dimensions are not specified as they may vary with each motor manufacturer.
5. There are two mounting holes on the rear foot for the noted pumps.

| Pump Size        | Disch. | Suct. | DD           | X            | Y          | Z           | B1         | B2         | G          | HH         | AA          | DF<br>143-184JM | DF<br>213-215JM | DF<br>254-256JM | DF<br>284-326JM | DF<br>364-404TCZ | DF<br>444-449TCZ | Motor Frame |              |             |             |
|------------------|--------|-------|--------------|--------------|------------|-------------|------------|------------|------------|------------|-------------|-----------------|-----------------|-----------------|-----------------|------------------|------------------|-------------|--------------|-------------|-------------|
|                  |        |       |              |              |            |             |            |            |            |            |             |                 |                 |                 |                 |                  |                  | Frame       | AG Approx.   | A           | D           |
| 1.25x1.5x7 (NPT) | 1.25   | 1.5   | 7.00 (178)   | 5.00 (127)   | 3.25 (083) | 4.50 (114)  | 2.63 (067) | 2.38 (060) | 0.63 (016) | 0.44 (011) | 8.00 (203)  | 4.25 (108)      | 4.25 (108)      | N/A             | N/A             | N/A              | N/A              | 143JM       | 10.00 (254)  | 7.00 (178)  | 3.50 (089)  |
| 1.5x2x7 (NPT)    | 1.5    | 2     | 7.00 (178)   | 6.00 (152)   | 3.13 (079) | 4.63 (117)  | 2.44 (062) | 2.56 (065) | 0.63 (016) | 0.44 (011) | 8.00 (203)  | 4.75 (121)      | 4.75 (121)      | 5.31 (135)      | N/A             | N/A              | N/A              | 145JM       | 11.00 (279)  | 7.00 (178)  | 3.50 (089)  |
| 1.5x2x11 (NPT)   | 1.5    | 2     | 8.00 (203)   | 9.00● (229)  | 3.13 (079) | 5.75 (146)  | 2.25 (057) | 3.75 (095) | 0.69 (017) | 0.44 (011) | 11.00 (279) | 4.63 (118)      | 4.63 (118)      | 5.63 (143)      | 5.63 (143)      | N/A              | N/A              | 182JM       | 11.00 (279)  | 9.00 (229)  | 4.50 (114)  |
| 1.5x2x12 (NPT)   | 1.5    | 2     | 10.00 (254)  | 7.75 (197)   | 2.75 (070) | 5.75 (146)  | 2.87 (073) | 3.75 (095) | 0.69 (017) | 0.44 (011) | 11.00 (279) | 4.81 (122)      | 4.81 (122)      | N/A             | N/A             | N/A              | N/A              | 184JM       | 12.00 (305)  | 9.00 (229)  | 4.50 (114)  |
| 2x2.5x7▲         | 2      | 2.5   | 7.00 (178)   | 6.50 (165)   | 3.50 (089) | 4.75 (121)  | 2.56 (065) | 2.44 (062) | 0.63 (016) | 0.44 (011) | 8.00 (203)  | 4.88 (124)      | 4.88 (124)      | 5.5 (140)       | 5.5 (140)       | N/A              | N/A              | 213JM       | 14.00 (356)  | 10.50 (267) | 5.25 (133)  |
| 2x2.5x9.5▲       | 2      | 2.5   | 8.00 (203)   | 7.00 (178)   | 4.00 (102) | 5.88 (149)  | 2.38 (060) | 3.63 (092) | 0.69 (017) | 0.44 (011) | 11.00 (279) | 4.75 (121)      | 4.75 (121)      | 5.44 (138)      | 5.44 (138)      | N/A              | N/A              | 215JM       | 15.00 (381)  | 10.50 (267) | 5.25 (133)  |
| 2x3x11▲          | 2      | 3     | 10.00 (254)  | 8.00 (203)   | 5.50 (140) | 6.50 (165)  | 3.23 (082) | 3.77 (096) | 0.88 (022) | 0.50 (013) | 16.00 (406) | 4.44 (113)      | 4.44 (113)      | 5.31 (135)      | 5.31 (135)      | 9.13 (232)       | 9.13 (232)       | 254JM       | 17.50 (445)  | 12.50 (318) | 6.25 (159)  |
| 2x3x13.5▲        | 2      | 3     | 10.00 (254)  | 9.00 (229)   | 5.50 (140) | 7.25 (184)  | 3.00 (076) | 4.00 (102) | 0.88 (022) | 0.50 (013) | 16.00 (406) | N/A             | 5.38 (137)      | 5.38 (137)      | 5.38 (137)      | N/A              | N/A              | 256JM       | 19.00 (483)  | 12.50 (318) | 6.25 (159)  |
| 2.5x3x7▲         | 2.5    | 3     | 7.00 (178)   | 6.00 (152)   | 4.25 (108) | 4.69 (120)  | 2.63 (067) | 2.38 (060) | 0.63 (016) | 0.44 (011) | 8.00 (203)  | 4.81 (122)      | 4.81 (122)      | 4.44 (113)      | 4.44 (113)      | N/A              | N/A              | 284JM       | 19.00 (483)  | 14.00 (356) | 7.00 (178)  |
| 2.5x3x9.5▲       | 2.5    | 3     | 8.00 (203)   | 6.75 (171)   | 4.00 (102) | 6.00 (152)  | 2.44 (062) | 3.56 (090) | 0.69 (017) | 0.44 (011) | 11.00 (279) | 4.94 (125)      | 4.94 (125)      | 5.56 (141)      | 5.56 (141)      | 9.56 (243)       | 9.56 (243)       | 286JM       | 21.00 (533)  | 14.00 (356) | 7.00 (178)  |
| 2.5x3x13.5▲      | 2.5    | 3     | 10.00 (254)  | 9.00 (229)   | 6.00 (152) | 8.00 (203)  | 3.00 (076) | 4.00 (102) | 0.88 (022) | 0.50 (013) | 16.00 (406) | N/A             | 5.5 (140)       | 5.5 (140)       | 5.5 (140)       | N/A              | N/A              | 324JM       | 22.00 (559)  | 16.00 (406) | 8.00 (203)  |
| 3x4x7▲           | 3      | 4     | 7.00 (178)   | 6.00 (152)   | 4.13 (105) | 5.00 (127)  | 2.69 (068) | 2.31 (059) | 0.63 (016) | 0.44 (011) | 8.00 (203)  | 4.69 (119)      | 4.69 (119)      | 5.31 (135)      | 5.31 (135)      | N/A              | N/A              | 326JM       | 23.00 (584)  | 16.00 (406) | 8.00 (203)  |
| 3x4x9.5▲         | 3      | 4     | 8.00 (203)   | 7.50 (191)   | 4.75 (121) | 6.13 (156)  | 2.69 (068) | 3.31 (084) | 0.75 (019) | 0.44 (011) | 11.00 (279) | 4.69 (119)      | 4.69 (119)      | 5.31 (135)      | 5.31 (135)      | 9.31 (236)       | 9.31 (236)       | 364JM       | 26.00 (660)  | 17.17 (436) | 9.00 (229)  |
| 3x4x11▲          | 3      | 4     | 10.00 (254)  | 9.50 (241)   | 5.50 (140) | 7.38 (187)  | 3.44 (087) | 3.56 (091) | 0.88 (022) | 0.50 (013) | 16.00 (406) | 4.44 (113)      | 4.44 (113)      | 5.31 (135)      | 5.31 (135)      | 9.13 (232)       | 9.13 (232)       | 365JM       | 26.00 (660)  | 17.17 (436) | 9.00 (229)  |
| 3x4x13.5▲        | 3      | 4     | 10.00 (254)  | 9.50 (241)   | 5.63 (143) | 8.00 (203)  | 3.13 (080) | 3.88 (098) | 0.88 (022) | 0.50 (013) | 16.00 (406) | N/A             | N/A             | 5.44 (138)      | 5.44 (138)      | 9.31 (236)       | 9.31 (236)       | 404JM       | 32.00 (813)  | 19.92 (506) | 10.00 (254) |
| 4x5x7▲           | 4      | 5     | 8.00 (203)   | 7.50 (191)   | 4.94 (125) | 5.75 (146)  | 3.06 (078) | 2.94 (075) | 0.69 (017) | 0.44 (011) | 11.00 (279) | 4.94 (125)      | 4.94 (125)      | 5.56 (141)      | 5.56 (141)      | N/A              | N/A              | 405JM       | 32.00 (813)  | 19.92 (506) | 10.00 (254) |
| 4x5x9.5▲         | 4      | 5     | 10.00 (254)  | 8.00 (203)   | 5.00 (127) | 7.00 (178)  | 2.69 (068) | 3.31 (084) | 0.75 (019) | 0.44 (011) | 11.00 (279) | 4.69 (119)      | 4.69 (119)      | 5.31 (135)      | 5.31 (135)      | 9.31 (236)       | 9.31 (236)       | 364TCZ      | 24.00 (610)  | 18.00 (457) | 9.00 (229)  |
| 4x5x11▲          | 4      | 5     | 10.00 (254)  | 9.75 (248)   | 5.56 (141) | 7.25 (184)  | 3.41 (087) | 3.59 (091) | 0.88 (022) | 0.50 (013) | 16.00 (406) | 4.5 (114)       | 4.5 (114)       | 5.38 (137)      | 5.38 (137)      | 9.19 (233)       | 9.19 (233)       | 365TCZ      | 24.00 (610)  | 18.00 (457) | 9.00 (229)  |
| 4x5x13.5▲        | 4      | 5     | 11.00 (279)  | 10.00 (254)  | 6.00 (152) | 8.56 (218)  | 3.25 (083) | 3.75 (095) | 0.88 (022) | 0.50 (013) | 16.00 (406) | N/A             | N/A             | 5.06 (129)      | 5.06 (129)      | 8.88 (226)       | 8.88 (226)       | 404TCZ      | 27.25 (692)  | 20.00 (508) | 10.00 (254) |
| 5x6x7▲           | 5      | 6     | 10.00 (254)  | 8.50 (216)   | 5.81 (148) | 6.25 (159)  | 3.63 (092) | 2.38 (060) | 0.69 (018) | 0.44 (011) | 11.00 (279) | 5.18 (132)      | 5.18 (132)      | 5.81 (148)      | 5.81 (148)      | 9.5 (241)        | N/A              | 405TCZ      | 28.75 (730)  | 20.00 (508) | 10.00 (254) |
| 5x6x9.5▲         | 5      | 6     | 11.00 (279)  | 10.00 (254)  | 6.00 (152) | 7.50 (191)  | 3.19 (081) | 3.81 (097) | 0.88 (022) | 0.50 (013) | 16.00 (406) | 5.06 (129)      | 5.06 (129)      | 5.69 (145)      | 5.69 (145)      | 9.69 (246)       | 9.69 (246)       | 444TCZ      | 31.13 (791)  | 22.00 (559) | 11.00 (279) |
| 5x6x11▲          | 5      | 6     | 11.00 (279)  | 10.50 (267)  | 5.44 (138) | 7.94 (202)  | 3.44 (087) | 3.56 (091) | 0.88 (022) | 0.50 (013) | 16.00 (406) | N/A             | N/A             | 5.44 (138)      | 5.44 (138)      | 9.25 (235)       | 9.25 (235)       | 445TCZ      | 31.13 (791)  | 22.00 (559) | 11.00 (279) |
| 5x6x13.5▲        | 5      | 6     | 12.00 (305)  | 13.00 (330)  | 6.00 (152) | 9.00 (229)  | 5.19 (132) | 5.81 (148) | 1.00 (025) | 0.63 (016) | 23.00 (584) | N/A             | N/A             | 5.56 (141)      | 5.56 (141)      | 9.38 (238)       | 9.38 (238)       | 447TCZ      | 39.63 (1006) | 22.00 (559) | 11.00 (279) |
| 6x8x9.5▲         | 6      | 8     | 11.00 (279)  | 10.50 (267)  | 7.00 (178) | 8.25 (210)  | 4.13 (105) | 2.88 (073) | 0.88 (022) | 0.50 (013) | 16.00 (406) | N/A             | N/A             | 6.19 (157)      | 6.19 (157)      | N/A              | N/A              | 449TCZ      | 39.63 (1006) | 22.00 (559) | 11.00 (279) |
| 6x8x11▲          | 6      | 8     | 12.00 (305)  | 11.00 (279)  | 6.13 (156) | 8.47 (215)  | 5.63 (143) | 5.38 (137) | 1.00 (025) | 0.63 (016) | 23.00 (584) | N/A             | N/A             | 5.81 (148)      | 5.81 (148)      | N/A              | N/A              |             |              |             |             |
| 6x8x13.5▲        | 6      | 8     | 12.63● (321) | 13.38● (340) | 6.50 (165) | 9.31 (237)  | 5.50 (140) | 5.50 (140) | 1.00 (025) | 0.63 (016) | 23.00 (584) | N/A             | N/A             | 8.38 (213)      | 8.38 (213)      | 9.44 (240)       | 9.44 (240)       |             |              |             |             |
| 8x10x13.5▲       | 8      | 10    | 15.00 (381)  | 14.00 (356)  | 8.00 (203) | 11.00 (279) | 5.50 (140) | 5.50 (140) | 1.00 (025) | 0.63 (016) | 23.00 (584) | N/A             | N/A             | 8.19 (208)      | 8.19 (208)      | 9.25 (235)       | 9.25 (235)       |             |              |             |             |

# Model 3804 Pump End Only Product Offering



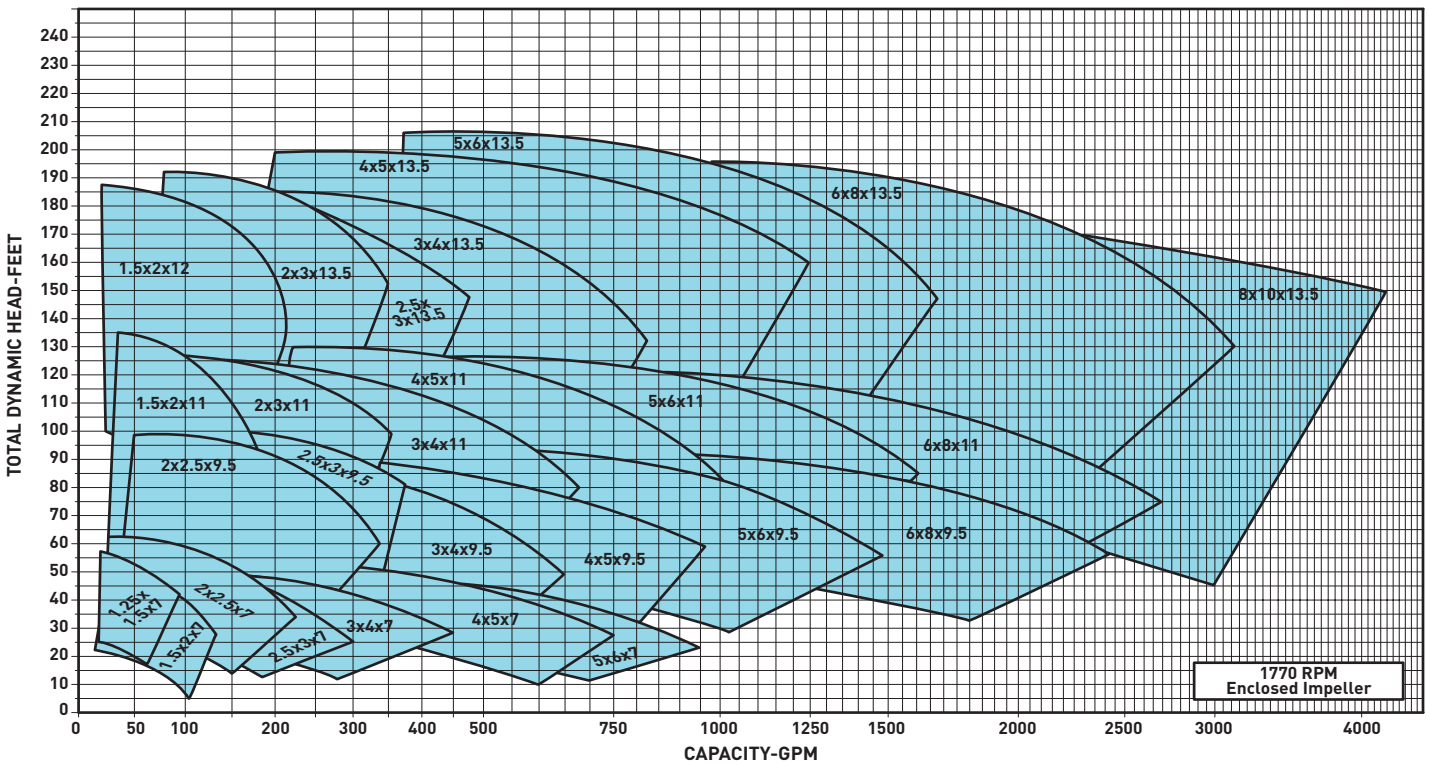
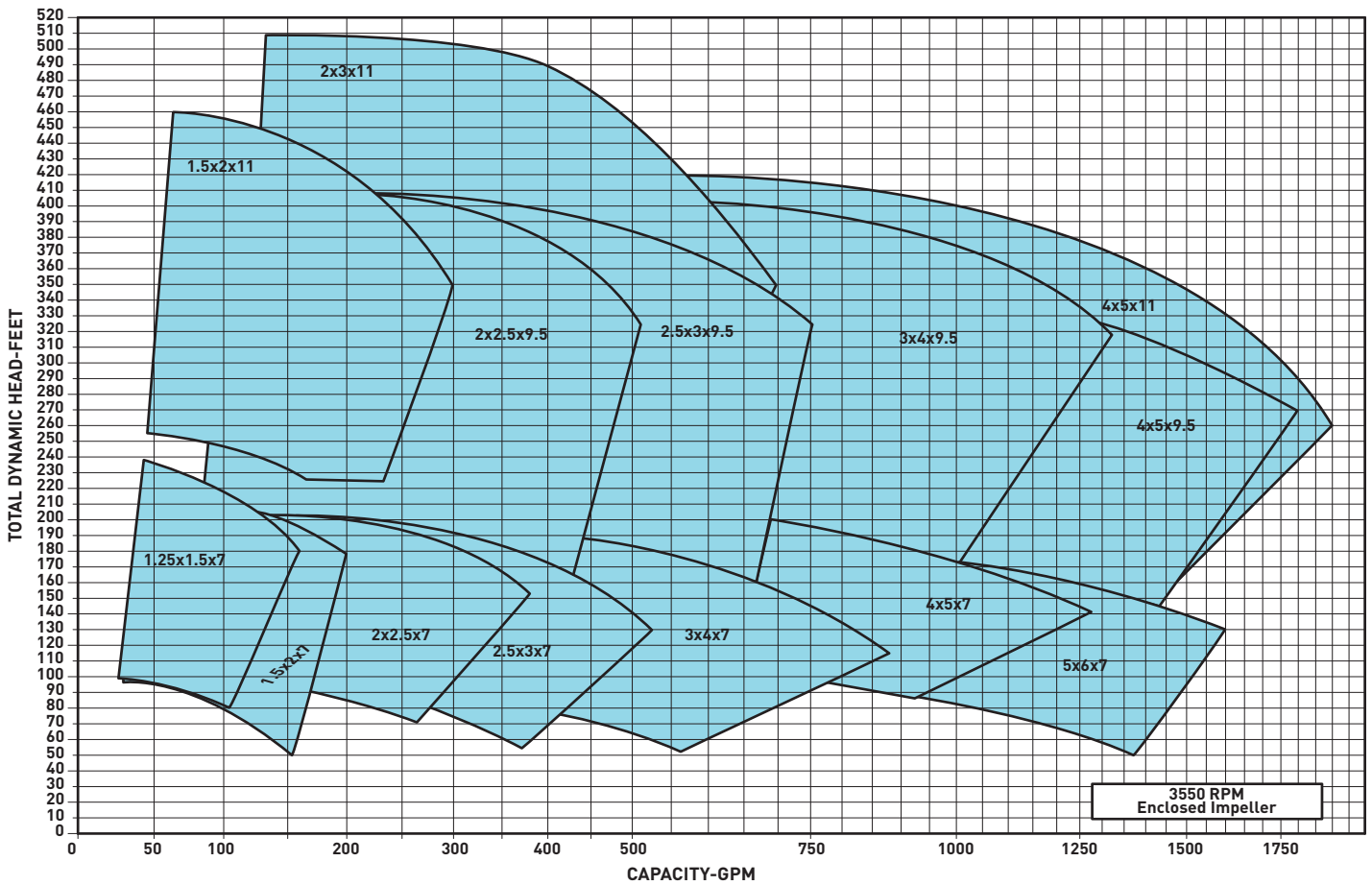
| Pump Size         | Disch | Suct | D           | X          | Y          | Z          | P1         | P2         | B1         | B2         | G          | H          | E          | A           | AC          | AD          | CP          | U          | V          | Key                       |
|-------------------|-------|------|-------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|-------------|-------------|-------------|------------|------------|---------------------------|
| 1.25x1.5x7S (NPT) | 1.25  | 1.5  | 7.00 (178)  | 5.00 (127) | 3.25 (083) | 4.50 (114) | 1.63 (041) | 1.38 (035) | 2.63 (067) | 2.38 (060) | 0.63 (016) | 0.44 (011) | 3.25 (083) | 8.00 (203)  | 8.35 (212)  | 12.93 (328) | 17.81 (452) | 0.88 (022) | 2.13 (054) | .19(5) SQ. x 1.38(35) LNG |
| 1.5x2x7S (NPT)    | 1.5   | 2    | 7.00 (178)  | 6.00 (152) | 3.13 (079) | 4.63 (117) | 1.44 (037) | 1.56 (040) | 2.44 (062) | 2.56 (065) | 0.63 (016) | 0.44 (011) | 3.25 (083) | 8.00 (203)  | 9.03 (229)  | 13.59 (345) | 18.16 (461) | 0.88 (022) | 2.13 (054) | .19(5) SQ. x 1.38(35) LNG |
| 1.5x2x11S (NPT)   | 1.5   | 2    | 8.00 (203)  | 9.00 (229) | 3.13 (079) | 5.75 (146) | 1.44 (037) | 2.94 (075) | 2.25 (057) | 3.75 (095) | 0.69 (017) | 0.44 (011) | 4.56 (116) | 11.00 (279) | 8.92 (227)  | 13.48 (342) | 18.05 (458) | 0.88 (022) | 2.13 (054) | .19(5) SQ. x 1.38(35) LNG |
| 1.5x2x11L (NPT)   | 1.5   | 2    | 8.00 (203)  | 9.00 (229) | 3.13 (079) | 5.75 (146) | 1.44 (037) | 2.94 (075) | 2.25 (057) | 3.75 (095) | 0.69 (017) | 0.44 (011) | 4.56 (116) | 11.00 (279) | 12.19 (310) | 18.62 (473) | 23.19 (589) | 1.13 (029) | 3.13 (079) | .25(6) SQ. x 1.75(45) LNG |
| 1.5x2x12S (NPT)   | 1.5   | 2    | 10.00 (254) | 7.75 (197) | 2.75 (070) | 5.75 (146) | 1.94 (049) | 2.94 (075) | 2.87 (073) | 3.75 (095) | 0.69 (017) | 0.44 (011) | 4.56 (116) | 11.00 (279) | 8.60 (218)  | 13.16 (334) | 17.85 (453) | 0.88 (022) | 2.13 (054) | .19(5) SQ. x 1.38(35) LNG |
| 2x2.5x7S          | 2     | 2.5  | 7.00 (178)  | 6.50 (165) | 3.50 (089) | 4.75 (121) | 1.56 (040) | 1.44 (037) | 2.56 (065) | 2.44 (062) | 0.63 (016) | 0.44 (011) | 3.25 (083) | 8.00 (203)  | 9.08 (231)  | 13.63 (346) | 18.70 (475) | 0.88 (022) | 2.13 (054) | .19(5) SQ. x 1.38(35) LNG |
| 2x2.5x9.5S        | 2     | 2.5  | 8.00 (203)  | 7.00 (178) | 4.00 (102) | 5.88 (149) | 1.56 (040) | 2.81 (071) | 2.38 (060) | 3.63 (092) | 0.69 (017) | 0.44 (011) | 4.56 (116) | 11.00 (279) | 8.94 (227)  | 13.50 (343) | 19.07 (484) | 0.88 (022) | 2.13 (054) | .19(5) SQ. x 1.38(35) LNG |
| 2x2.5x9.5L        | 2     | 2.5  | 8.00 (203)  | 7.00 (178) | 4.00 (102) | 5.88 (149) | 1.56 (040) | 2.81 (071) | 2.38 (060) | 3.63 (092) | 0.69 (017) | 0.44 (011) | 4.56 (116) | 11.85 (301) | 17.69 (449) | 23.22 (590) | 23.22 (590) | 1.13 (029) | 3.13 (079) | .25(6) SQ. x 1.75(45) LNG |
| 2x3x11S           | 2     | 3    | 10.00 (254) | 8.00 (203) | 5.50 (140) | 6.50 (165) | 2.23 (057) | 2.77 (070) | 3.23 (082) | 3.77 (096) | 0.88 (022) | 0.50 (013) | 7.00 (178) | 16.00 (406) | 7.93 (201)  | 12.52 (318) | 20.22 (514) | 0.88 (022) | 2.13 (054) | .19(5) SQ. x 1.38(35) LNG |
| 2x3x11L           | 2     | 3    | 10.00 (254) | 8.00 (203) | 5.50 (140) | 6.50 (165) | 2.23 (057) | 2.77 (070) | 3.23 (082) | 3.77 (096) | 0.88 (022) | 0.50 (013) | 7.00 (178) | 16.00 (406) | 11.06 (281) | 16.87 (428) | 24.59 (625) | 1.13 (029) | 3.13 (079) | .25(6) SQ. x 1.75(45) LNG |
| 2x3x13.5L         | 2     | 3    | 10.00 (254) | 9.00 (229) | 5.50 (140) | 7.25 (184) | 2.00 (051) | 3.00 (076) | 3.00 (076) | 4.00 (102) | 0.88 (022) | 0.50 (013) | 7.00 (178) | 16.00 (406) | 11.34 (288) | 17.25 (438) | 24.65 (626) | 1.13 (029) | 3.13 (079) | .25(6) SQ. x 1.75(45) LNG |
| 2.5x3x7S          | 2.5   | 3    | 7.00 (178)  | 6.00 (152) | 4.25 (108) | 4.69 (120) | 1.63 (041) | 1.38 (035) | 2.63 (067) | 2.38 (060) | 0.63 (016) | 0.44 (011) | 3.25 (083) | 8.00 (203)  | 8.94 (227)  | 13.50 (343) | 19.38 (492) | 0.88 (022) | 2.13 (054) | .19(5) SQ. x 1.38(35) LNG |
| 2.5x3x9.5S        | 2.5   | 3    | 8.00 (203)  | 6.75 (171) | 4.00 (102) | 6.00 (152) | 1.63 (041) | 2.75 (070) | 2.44 (062) | 3.56 (090) | 0.69 (017) | 0.44 (011) | 4.56 (116) | 11.00 (279) | 9.03 (229)  | 13.62 (346) | 19.22 (488) | 0.88 (022) | 2.13 (054) | .19(5) SQ. x 1.38(35) LNG |
| 2.5x3x9.5L        | 2.5   | 3    | 8.00 (203)  | 6.75 (171) | 4.00 (102) | 6.00 (152) | 1.63 (041) | 2.75 (070) | 2.44 (062) | 3.56 (090) | 0.69 (017) | 0.44 (011) | 4.56 (116) | 11.93 (303) | 11.93 (303) | 17.75 (451) | 23.37 (594) | 1.13 (029) | 3.13 (079) | .25(6) SQ. x 1.75(45) LNG |

S – denotes small power frame  
 L – denotes large power frame  
 XL – denotes extra large power frame

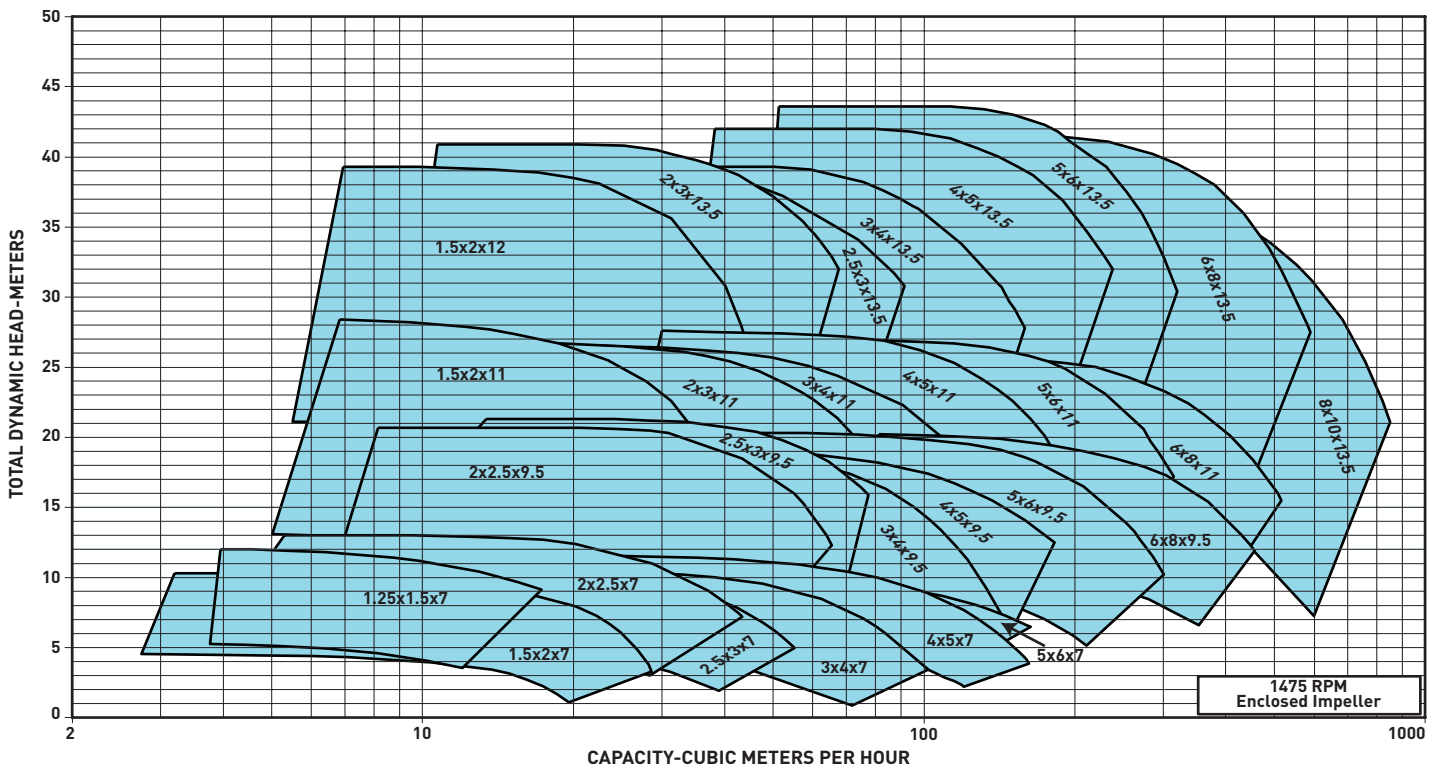
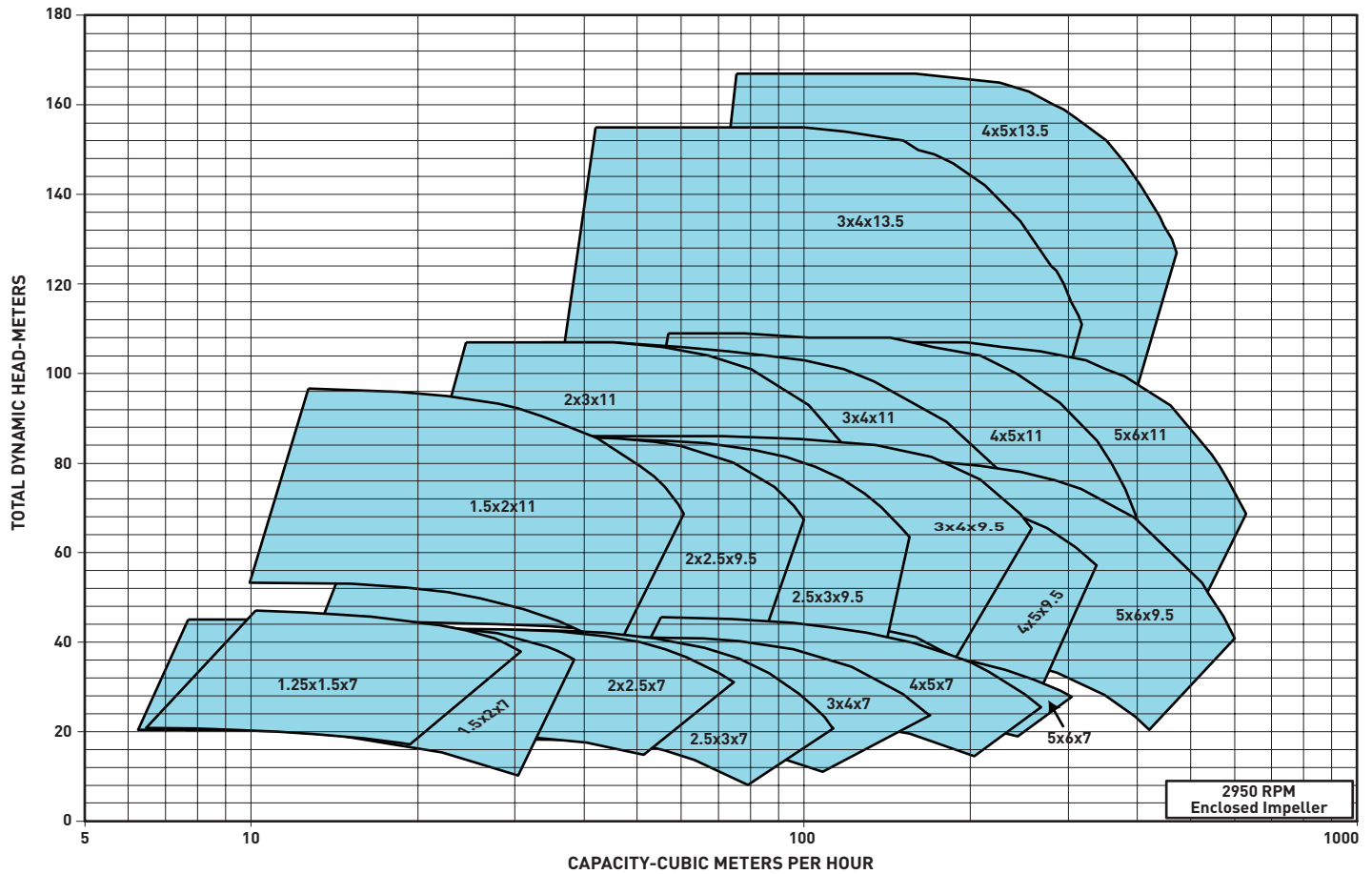
- Notes:
1. Dimensions are approximate.
  2. All dimensions are in inches (mm) and may vary  $\pm 1/4$  (6).
  3. Not for construction purposes unless certified.
    - ◆ Available in 250 lb./125 lb. Flanges
    - Dimensions do not match Bell & Gossett
  4. Use extra large power frame with impeller diameters larger than 12.5 (318).
  5. See 3800 dimension pages for base mount information.



# 3550 and 1770 RPM Range Charts



# 2950 and 1475 RPM Range Charts



# Engineering Specifications

## 3800 Series Specifications

The contractor shall furnish (and install as shown on the plans) Aurora® model (3801 horizontal close coupled) (3804 horizontal flexible coupled) back pullout centrifugal pump size \_\_\_ x \_\_\_ x \_\_\_ of stainless fitted construction.

Each pump shall have a capacity of \_\_\_ gpm at \_\_\_ ft. of 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, ceramic seat and carbon washer. The unit must be equipped with stainless steel shaft sleeve that extends the length of the seal plate. The pump shaft extension shall be gasket sealed from the pumped liquid. Impellers to be 316 stainless steel, dynamically balanced and key locked to the shaft.

## Flexible Coupled–Frame Mounted (3804)

Pump and motor are to be mounted on a common fabricated steel base plate. The shaft is to be steel, installed in a cast iron power frame. Pumps shall have a shaft design of .002" deflection at the seal face with the pump running under maximum load condition. Grease ball bearings have a 3-year minimum life (AFBMA B10) under the maximum condition of load. The pump shall be flexible coupled to a standard horizontal NEMA \_\_\_ hp, \_\_\_ phase, \_\_\_ Hertz, \_\_\_ volts, \_\_\_ rpm (open drip-proof) (totally enclosed fan cooled) 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.

## Materials of Construction

| Pump Part                                      | Stainless Fitted                                                                  |
|------------------------------------------------|-----------------------------------------------------------------------------------|
| Casing                                         | Cast iron ASTM A48                                                                |
| Impeller                                       | 316 SST                                                                           |
| Seal plate/motor bracket                       | Cast iron ASTM A48                                                                |
| Shaft                                          | Steel AISI 1018                                                                   |
| Sleeve                                         | 316 SST                                                                           |
| Power frame (3804)<br>(PF1, PF2, PF3 or PF21A) | Cast iron ASTM A48                                                                |
| Mechanical seal                                | 303 SST metal parts,<br>Buna-N elastomer parts, ceramic<br>seat and carbon washer |

## Design Details

| Area          | Description                             | Power Frame |         |         |         |
|---------------|-----------------------------------------|-------------|---------|---------|---------|
|               |                                         | 1           | 2       | 3       | 21A     |
| Pump Shaft    | Rotation – from driver end              | CW          | CW      | CW      | CW      |
|               | Diameter at impeller                    | 0.88        | 1.25    | 1.25    | 1.63    |
|               | Diameter at shaft sleeve                | 1.00        | 1.38    | 1.38    | 1.75    |
|               | Diameter between bearings               | 1.38        | 1.94    | 2.38    | 3.25    |
|               | Diameter at coupling end                | 0.88        | 1.13    | 1.13    | 2.38    |
|               | Coupling key – square                   | 0.19        | 0.25    | 0.25    | 0.63    |
|               | Max. deflection at seal face            | 0.002       | 0.002   | 0.002   | 0.002   |
| Ball Bearings | Bearing (inboard radial)                | 206K        | 308K    | 310K    | 313     |
|               | Bearing (outboard thrust)               | 206KG       | 308KG   | 310KG   | 5313    |
|               | Bearing centers                         | 5.69        | 7.69    | 7.69    | 9.63    |
|               | Bearing type                            | Ball        | Ball    | Ball    | Ball    |
|               | Min B10 bearing life under maximum load | 3 years     | 3 years | 3 years | 3 years |
| Sleeve        | Outside diameter of sleeve              | 1.13        | 1.50    | 1.50    | 2.00    |

