



3800 SERIES

# SINGLE STAGE END SUCTION PUMPS



MODEL 3804



MODEL 3801

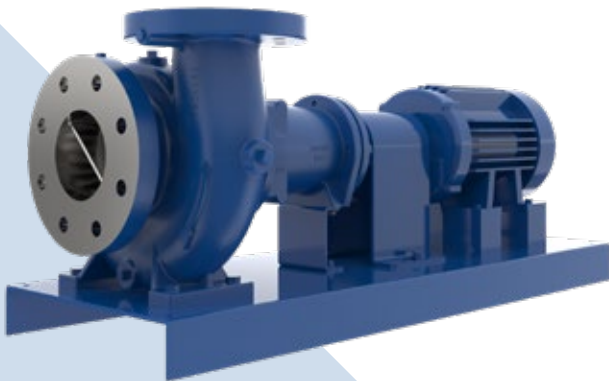


# 3800 SERIES SINGLE STAGE END SUCTION PUMPS

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

Pentair Aurora is delivering over a century of innovation for constant peace of mind. The years of experience with design, sales and manufacturing of centrifugal pumps has led to the new generation of the Pentair Aurora 3800 Series. Liquid handling requirements have evolved over the years and have increased along with temperatures and pressures. Today's installations demand sturdy but quiet, smooth running pumps with longer life cycles. These modern pumps with a clean, straightforward and updated design were developed with upgraded materials of construction and a simplified offering without limiting ranges and keeping maximum interchangeability in mind. These pumps not only exceed U.S. Department of Energy (DOE) pump efficiency standards, but also feature shared hydraulics and premium materials as standard offering. The new Pentair Aurora 3800 series offer industry leading durability and are the most reliable solution for your liquid handling needs.



### STANDARD FEATURES

- ◆ Offered in two configurations:
  - 3801 Close coupled
  - 3804 Flexible coupled-frame mounted
- ◆ Ductile Iron ASTM A536 Casings provide higher strength and durability
- ◆ Dimensions match the largest installed base for maximum interchangeability
- ◆ 316 Stainless Steel impellers and shaft sleeves provide less corrosion additional chemical resistance and durability
- ◆ Shared Hydraulics with Pentair Aurora 382B Vertical In-line Pumps to streamline inventories
- ◆ Heavy duty power frames with bearing life of 100,000 hours (Pentair Aurora 3804 only)
- ◆ Double volute on 4" discharge and larger to reduce bearing loads and increase durability. Note: Not available on 4x5x11 and 4x5x13.5. Note: Single volute also available.
- ◆ Gauge taps on suction and discharge on flanged models
- ◆ 4 Power frame sizes
- ◆ Standard back pullout design reduces downtime
- ◆ Internal self-flushing mechanical seal for continuous lubrication and extended durability, eliminates the need for exterior lubricating and tubing
- ◆ Regreaseable bearings (Pentair Aurora 3804 only)
- ◆ Coupling guard (Pentair Aurora 3804 only)
- ◆ Working pressures up to 175 PSI
- ◆ Formed steel base (Pentair Aurora 3804 only)

### OPTIONAL FEATURES

- ◆ 316 Stainless Steel shaft
- ◆ Unique drip rim base that is easier to grout than fabricated bases (Pentair Aurora 3804 only)
- ◆ Drip pan (Pentair Aurora 3804 only)
- ◆ Braided hose of Stainless Steel construction
- ◆ Epoxy coating for NSF50
- ◆ Several mechanical seal options for maximum temperatures up to 275°F
- ◆ Oil lube bearings (Pentair Aurora 3804 only)
- ◆ 416 Stainless Steel case wear ring
- ◆ Certified performance testing

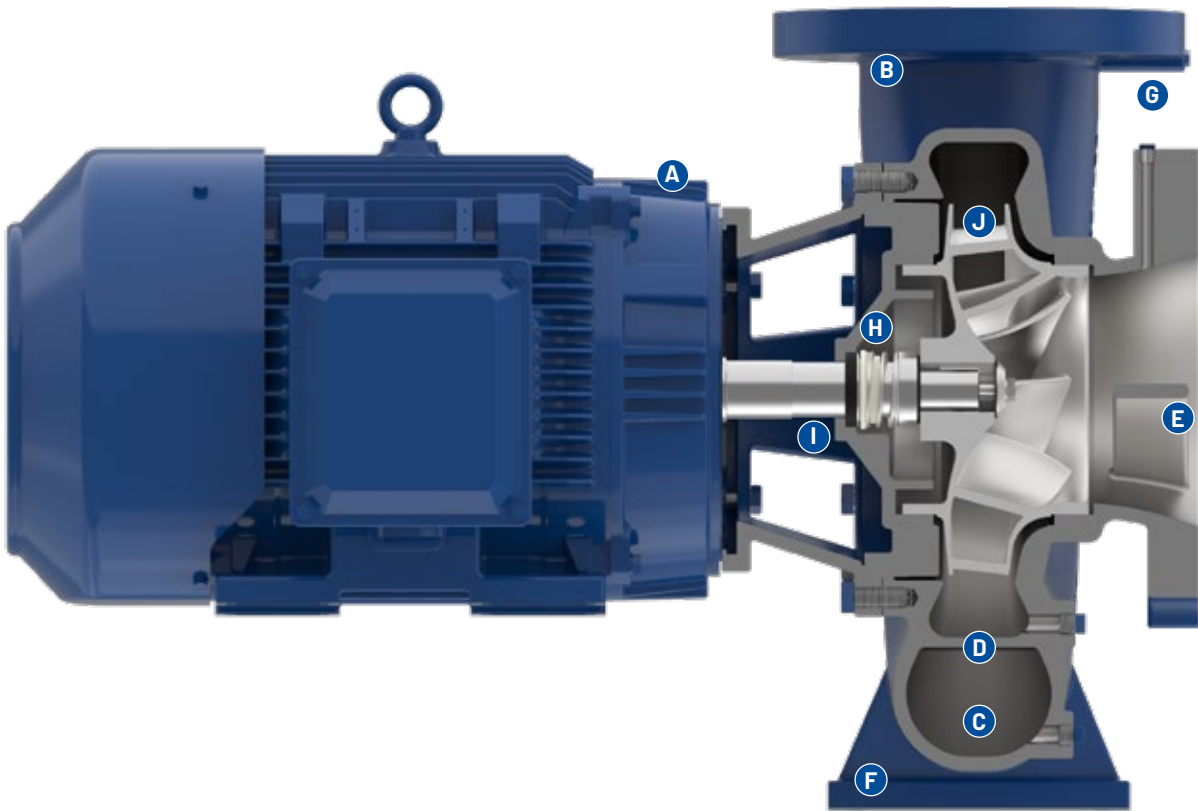
### APPLICATIONS

- ◆ HVAC Systems
- ◆ Boosting
- ◆ Chilled and Hot Water
- ◆ Commercial Pools
- ◆ Industrial Uses
- ◆ Municipal

# PUMP SIZE OFFERING

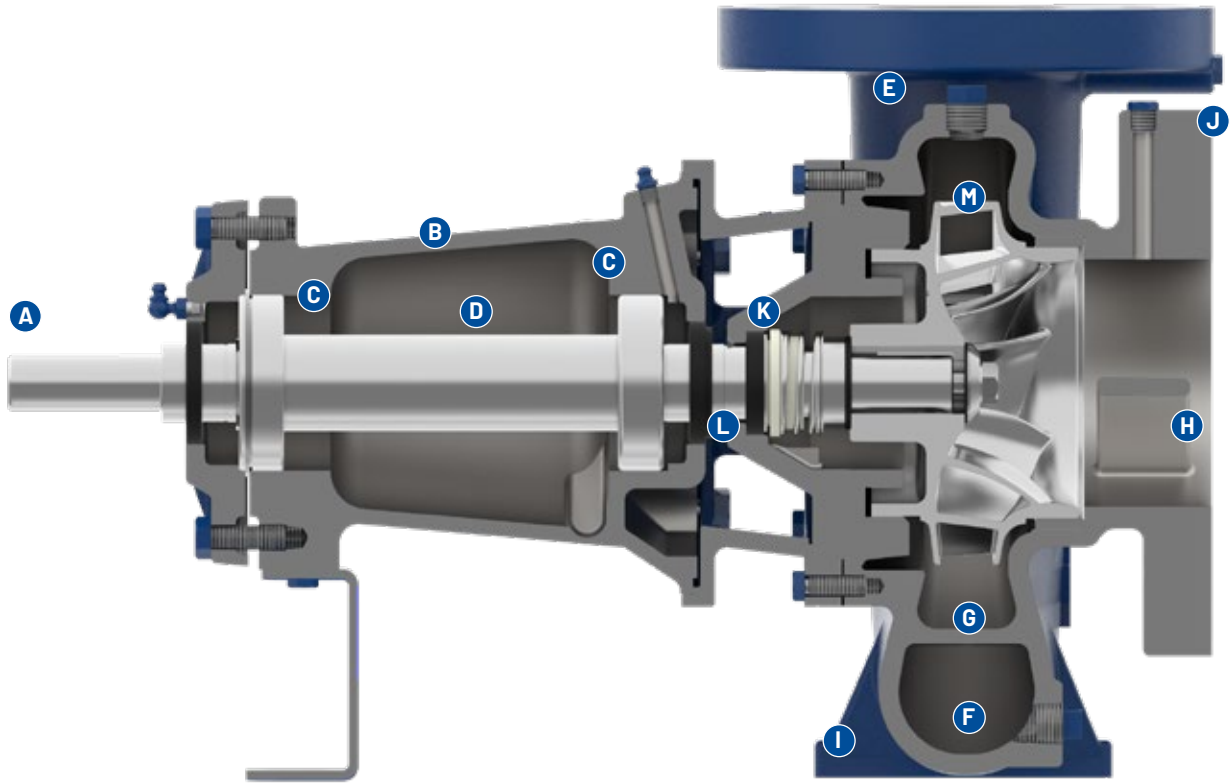
Pump Sizes
1.5x2x11
2x3x11
3x4x11
4x5x11A
5x6x11
6x8x11A
1.25x1.5x7
1.5x2x7
2x2.5x7
2.5x3x7
3x4x7
4x5x7
5x6x7
1.25x1.5x9.5
1.5x2x9.5
2x2.5x9.5
2.5x3x9.5
3x4x9.5
4x5x9.5
5x6x9.5
6x8x9.5
2x3x13.5
2.5x3x13.5
3x4x13.5
4x5x13.5
5x6x13.5
6x8x13.5
8x10x13.5
1.5x2x12

# PENTAIR AURORA\* 3801 CLOSE COUPLED



- A.** Standard JM and JP motors provide low noise level pump operation.
- B.** Ductile Iron casing long life with higher working pressures.
- C.** Factory Hydro test guarantees casing and seal integrity.
- D.** Double volute discharge to reduce bearing loads (exceptions: 4x5x11 and 4x5x13.5).  
Note: Single Volute also available
- E.** Suction splitter  
On 5" suction and larger to eliminate pre-rotation.
- F.** Casing feet for easy back pull out  
allows servicing of pump without disturbing suction and discharge pipelines.
- G.** Gauge taps on suction and discharge flanges
- H.** Mechanical seal has carbon against ceramic face for optimum hot water performance. Long life is assured with 303 SST metal parts and Buna-N flexible elastomers.
- I.** Shaft sleeve to protect the motor shaft.
- J.** Stainless Steel impeller keyed to shaft extension and secured by a capscrew and washer. Gaskets are used to prevent leakage to shaft end.
- K.** Optional casing wear rings
- L.** Optional seal materials

# PENTAIR AURORA\* 3804 FLEXIBLE COUPLED



**A.** Standard T and TS base type motors

provide low noise level pump operation.

**B.** Heavy duty power frame

with re-greaseable bearing for long life.

**C.** Re-greaseable bearings

**D.** Stainless Steel shaft

Designed for minimum deflection.

**E.** Ductile Iron casing

long life with higher working pressures.

**F.** Factory Hydro test

guarantees casing and seal integrity.

**G.** Double volute discharge

on 4" discharge and larger to reduce bearing loads.

Note: Single Volute also available

**H.** Suction splitter

On 5" suction and larger to eliminate pre-rotation.

**I.** Casing feet for easy back pull out

allows servicing of pump without disturbing suction and discharge pipelines.

**J.** Gauge taps on suction and discharge flanges

**K.** Mechanical seal

has carbon against ceramic face for optimum hot water performance. Long life is assured with 303 SST metal parts and Buna-N flexible elastomers.

**L.** Shaft sleeve

to protect the pump shaft.

**M.** Stainless Steel impeller

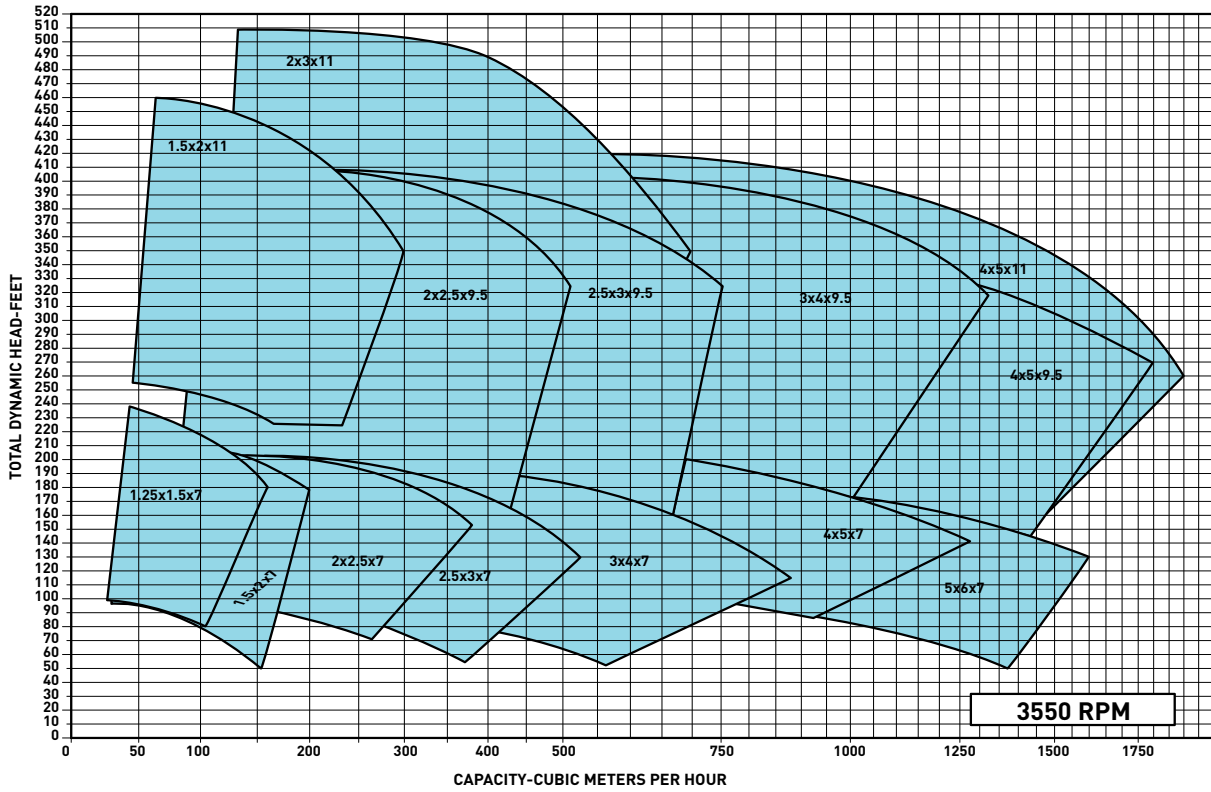
keyed to shaft extension and secured by a capscrew and washer. Gaskets are used to prevent leakage to shaft end.

**N.** Optional casing wear rings

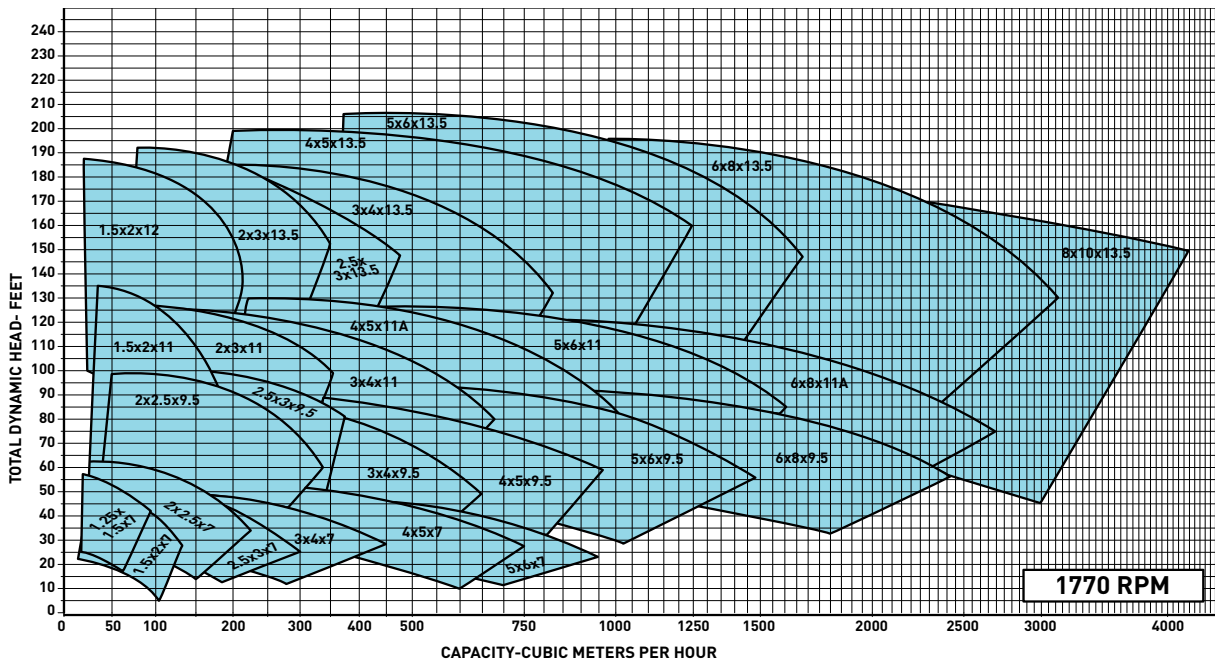
**O.** Optional seal materials

# PUMP PERFORMANCE

## 3550 RPM, 60 Hz RANGE CHART



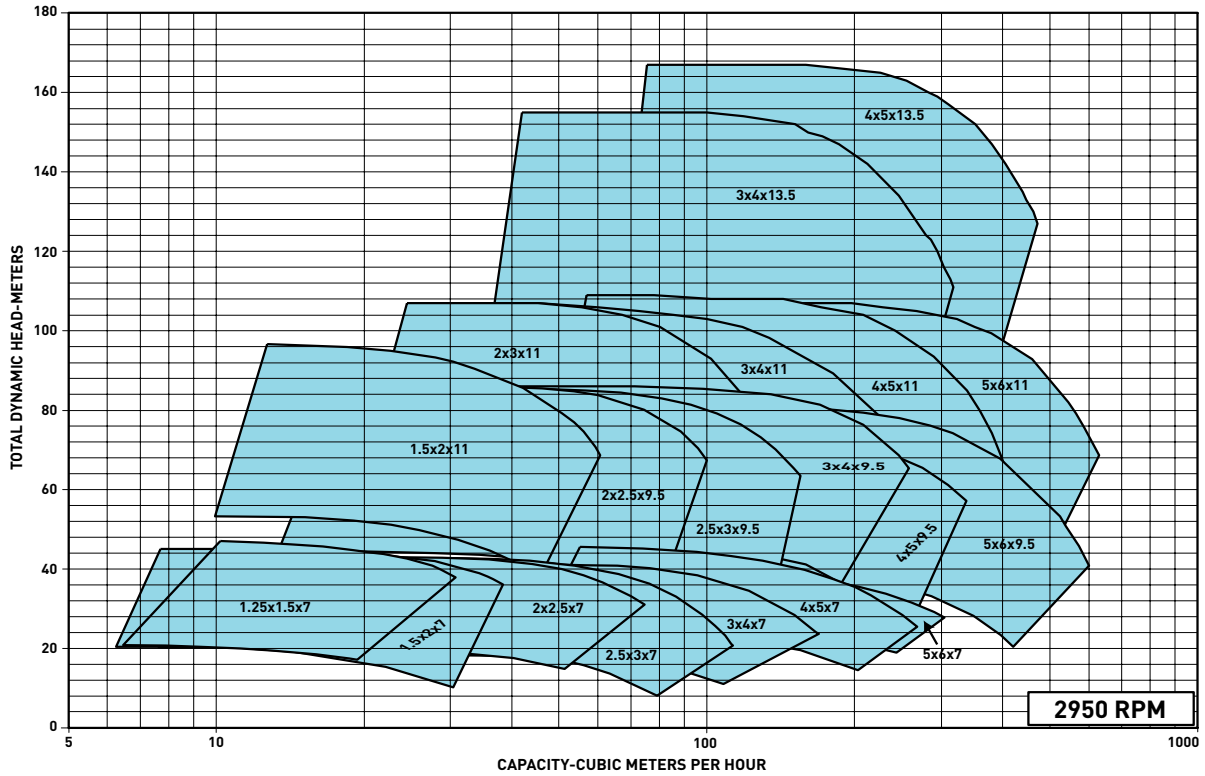
## 1770 RPM, 60 Hz RANGE CHART



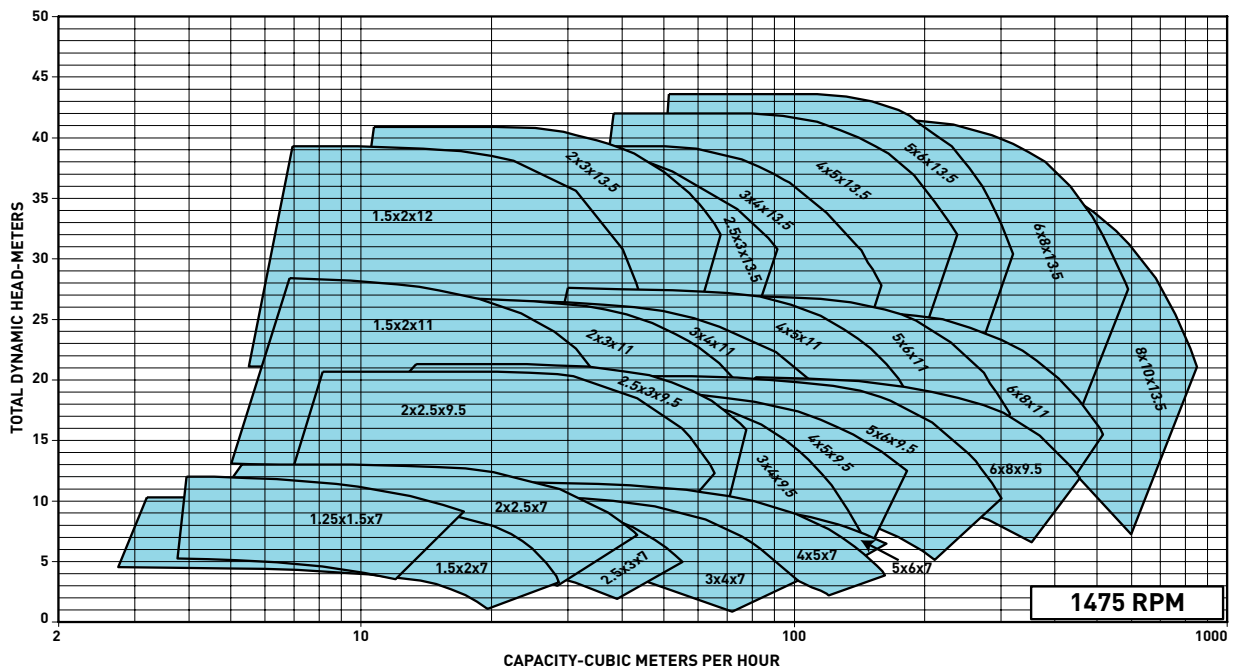
Reference only: For the most current information, refer to the Encompass Pump Selection Tool.

# PUMP PERFORMANCE

## 2950 RPM, 50 Hz RANGE CHART



## 1475 RPM, 50 Hz RANGE CHART



Reference only: For the most current information, refer to the Encompass Pump Selection Tool.

# PUMP FEATURES

## MAXIMUM LIMITATION BASED ON STANDARD MATERIALS AND PUMPING CLEAR WATER

Speed		3600
Horsepower	1200 RPM	60
	1800 RPM	200
	3600 RPM	250
Temperature °F		Standard 225/ Optional 275
Case Working Pressure PSI		175 <sup>1</sup>

<sup>1</sup>Refer to factory for pump size 1.5x2x11, 2x3x11, 3x4x11 & 4x5x11A

## MATERIALS OF CONSTRUCTION

Pump Part	Stainless Steel Impeller Fitted
Casing	Ductile Iron ASTM A536
Impeller	Stainless Steel ASTM A743 Type 316
Seal plate/motor bracket	Cast Iron ASTM A48
Shaft (Pentair Aurora 3804 only)	Stainless Steel AISI C1045
Sleeve	Stainless Steel ASTM A743 Type 316
Power frame (Pentair Aurora 3804 only) (PF1, PF2, PF3 or PF21A)	Cast Iron ASTM A48
Mechanical seal	
Washer	Carbon
Seat	Ceramic
Elastomer	Buna-N
Metal Parts	303 SST
Spring	303 SST



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