

Aurora 3800 Series

Features, Benefits & Installation
ASC Pumping Equipment, Inc.

Department of Energy (DOE) 2020 Requirements

What Changed:

- Certain pump categories will be required to meet new energy standards, effective January 27th 2020.
- The US Government is pursuing an energy savings of 0.27 quadrillion BTUs over a 30 year period.
- The new standard will reduce energy consumption, saving money over time.

Pumps Impacted:

- End Suction Close Coupled
- End Suction Frame Mounted
- In-Line
- Radially-split, multi-stage, vertical, in-line diffuser casing
- Submersible Turbines

What we have done:

- ASC Pumping Equipment has phased out the Aurora 340 End Suction Pump line.
- We have implemented full production of the 3800 Series.
- Stocking all pump components, premium efficient motors and spare parts to serve the end user.
- Providing quick delivery to installing contractors.

Pumps & Applications

What Pumps were affected

- Clean Water 1-200 HP (BEP)
- Flows > 25 gpm (BEP)
- Heads < 459 tdh (BEP)
- Temperatures from 14 to 248 F

End Suction Close Coupled & Frame Mounted Applications

- Chilled water
- Heating and air conditioning
- Cooling tower
- Water booster systems
- Transfer service
- Agricultural irrigation
- Commercial pools

Understanding PEI (Pump Energy Index)

PEI value *greater than 1.00*

- Pump consumes more energy than allowed by DOE's energy conservation standard
- Pump does **not** comply

PEI value *less than 1.00*

- Pump consumes less energy than the level required by the standard
- Pump does comply!
- PEI_{CL} values will be displayed on pump data plate

S/N		PEI _{CL}		Type		Imp. Dia.		AURORA CENTRIFUGAL PUMP
Size		RPM		GPM		TDH		ASC PUMPING EQUIPMENT, INC.
Model No.								ASSEMBLED IN THE USA
								800.472.1012 Wisconsin
								800.838.5585 Kansas
								www.ascpump.com

End of the 340 Series?

7 Years

The amount of time parts are *required* to be available for purchase from the manufacturer.

Parts Stock?

ASC currently stocks most Liquid End components including Impellers for the 340 Series.

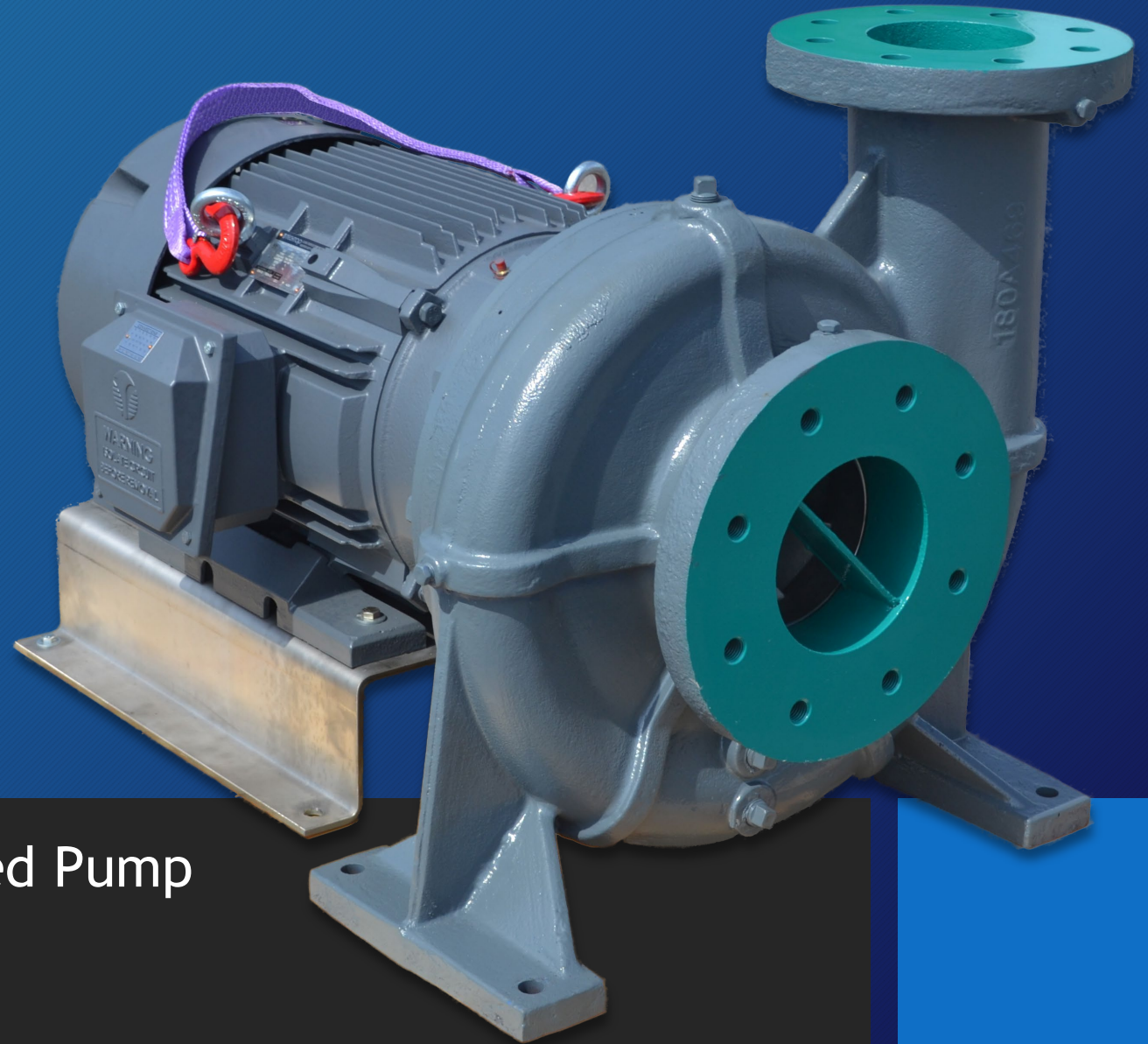
Seal Kits

Seal kits will remain a stocked item for quick ship in the event of a seal failure.





AURORA
Pentair Water

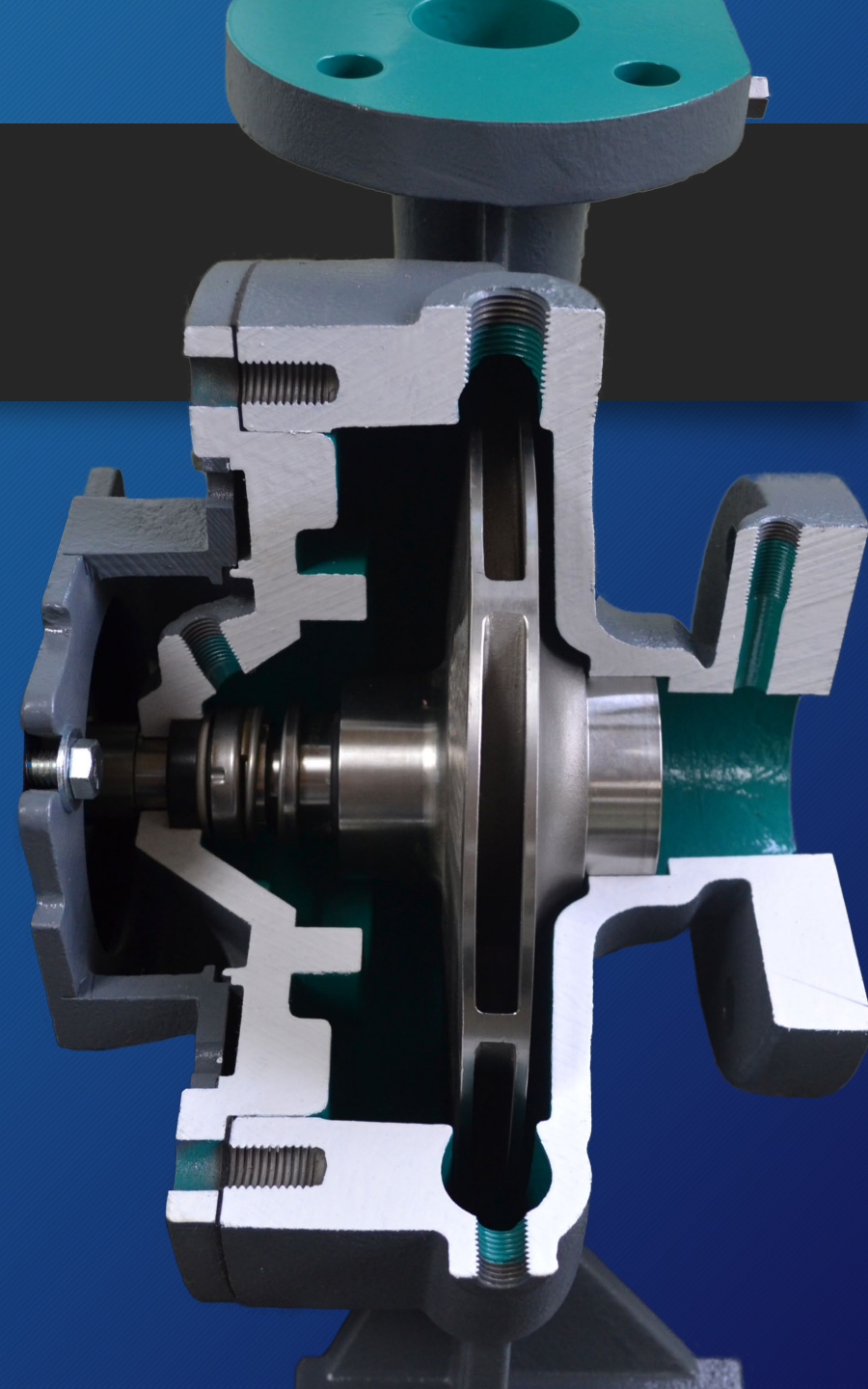


3800 Series End Suction Close Coupled Pump

Features

Standard Features

- Offered in two Models
 - 3801 Close Coupled (Horizontal / Vertical)
 - 3804 Flex Coupled
- 316SS Impeller
- 316SS Shaft Sleeve
- 316SS Motor Shaft
- Double volute on 4" discharge and larger to reduce bearing load
- 316SS Motor Riser
- Ductile Iron Casings
- Field Convertible Conduit Box Position
- Internal* Shaft Grounding



NSF
STANDARD 50
APPROVED

Why Shaft Grounding?

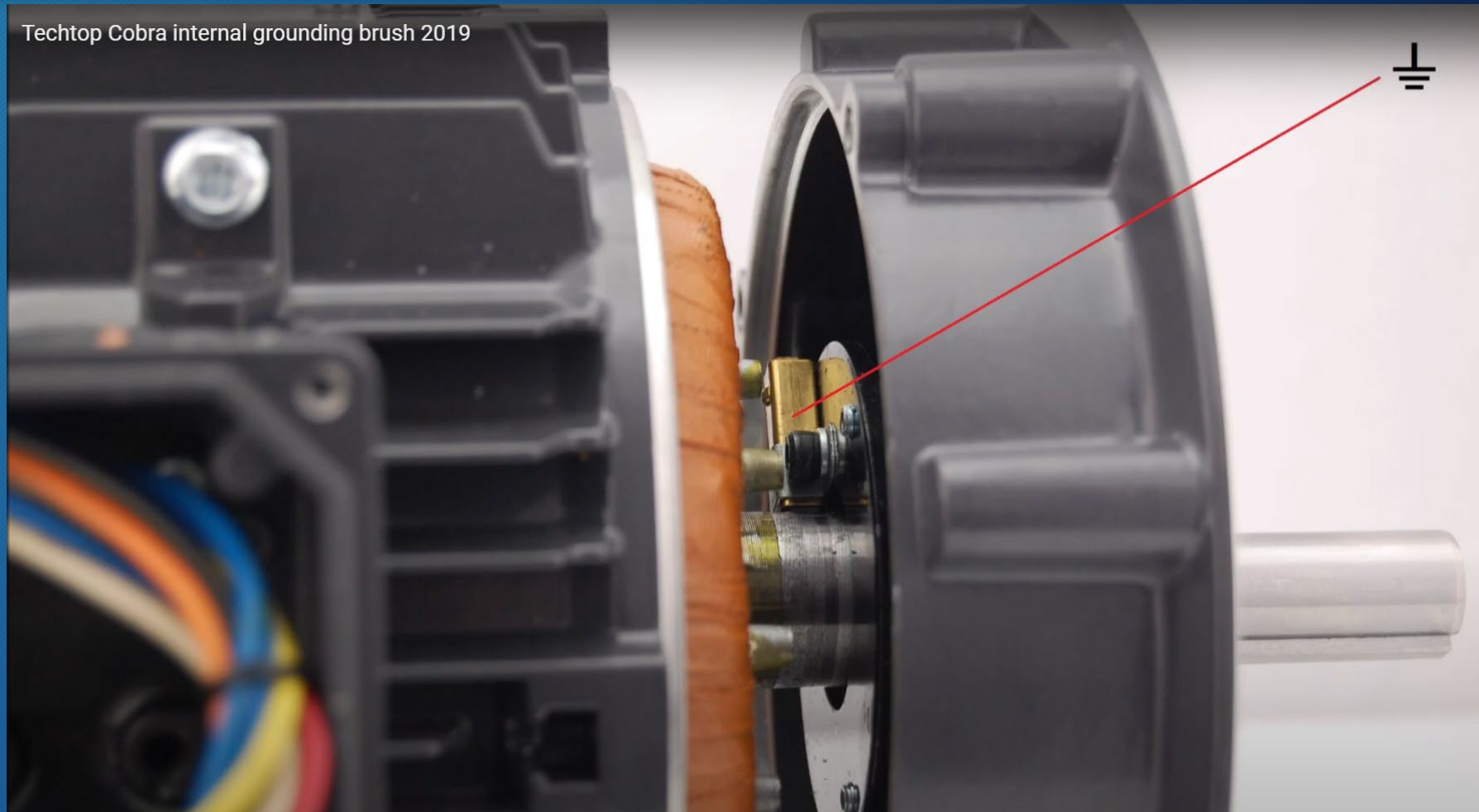
Cause

- VFD Induced Shaft Voltages can discharge through motor bearings, causing pitting, fluting(right), and frosting in as little as three months.

Visual Bearing Damage



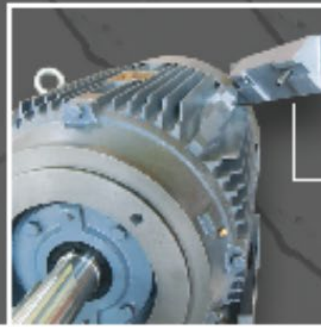
TechTop Internal Shaft Grounding



Removable Feet



Versatile



Removable Feet

Round Body



F3



F1

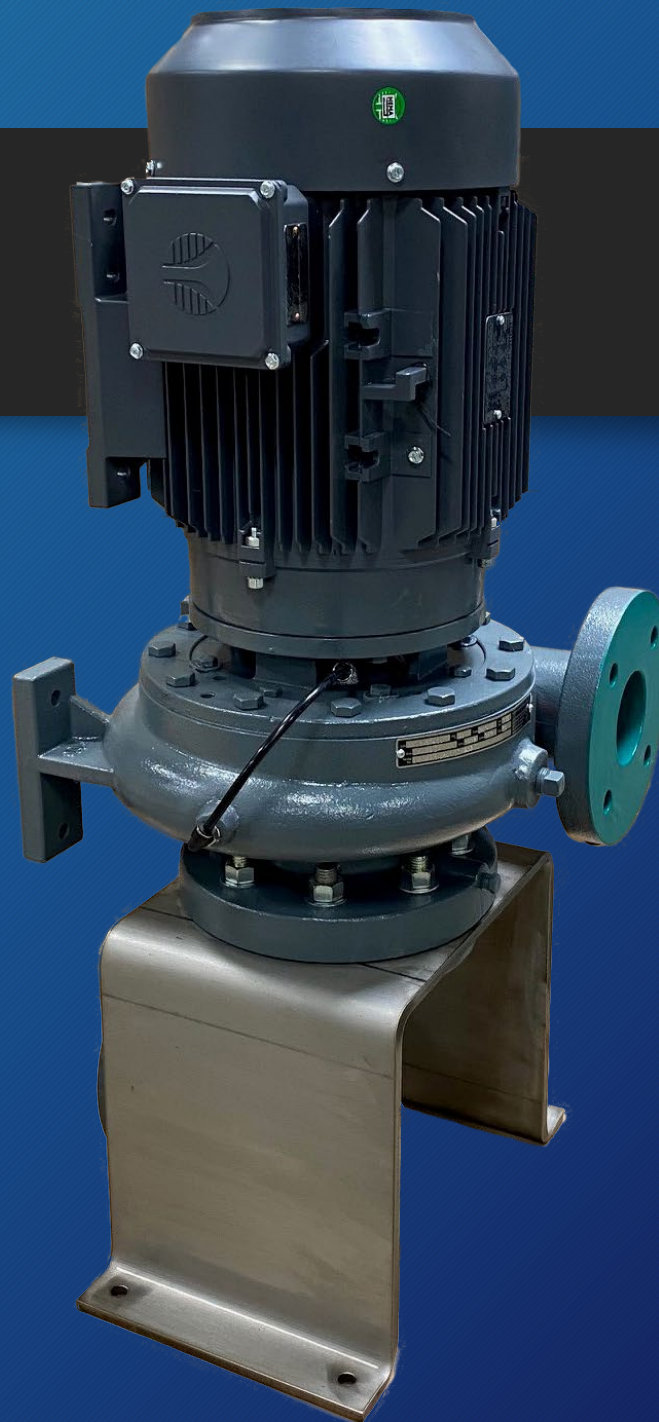


F2



Optional Features

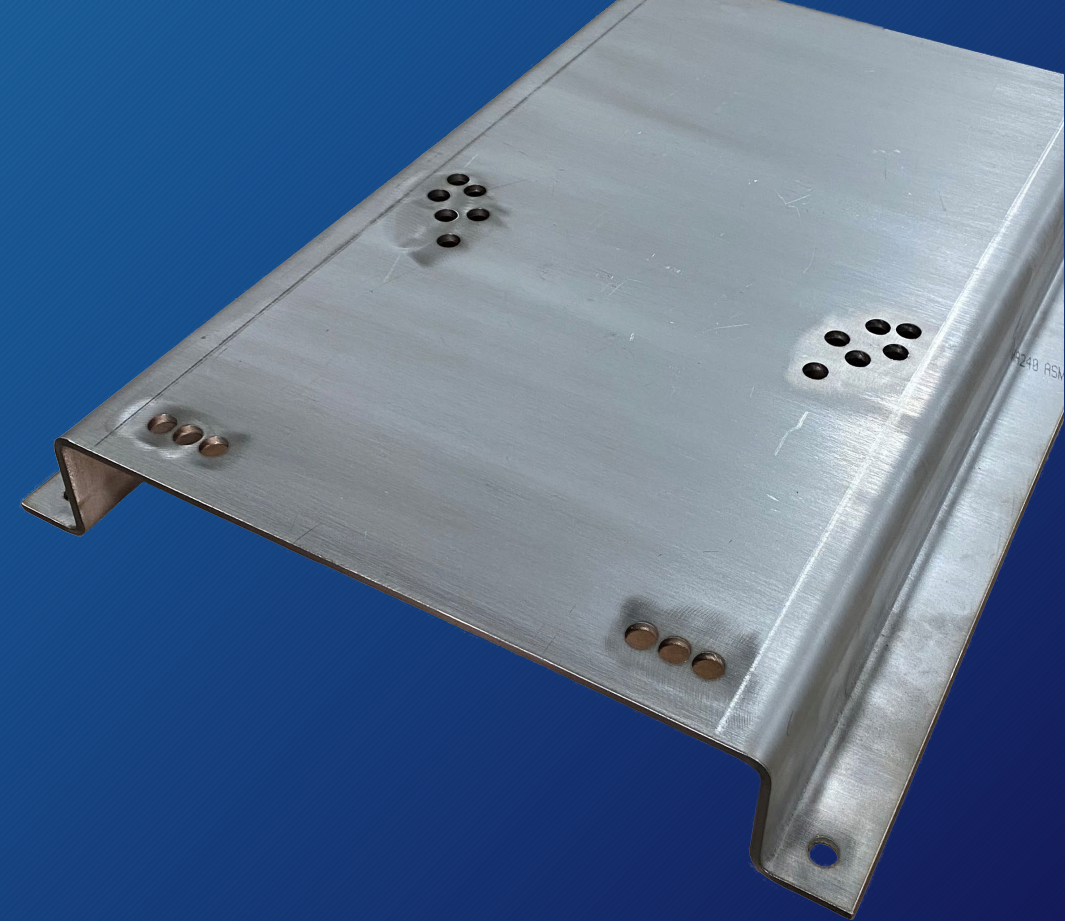
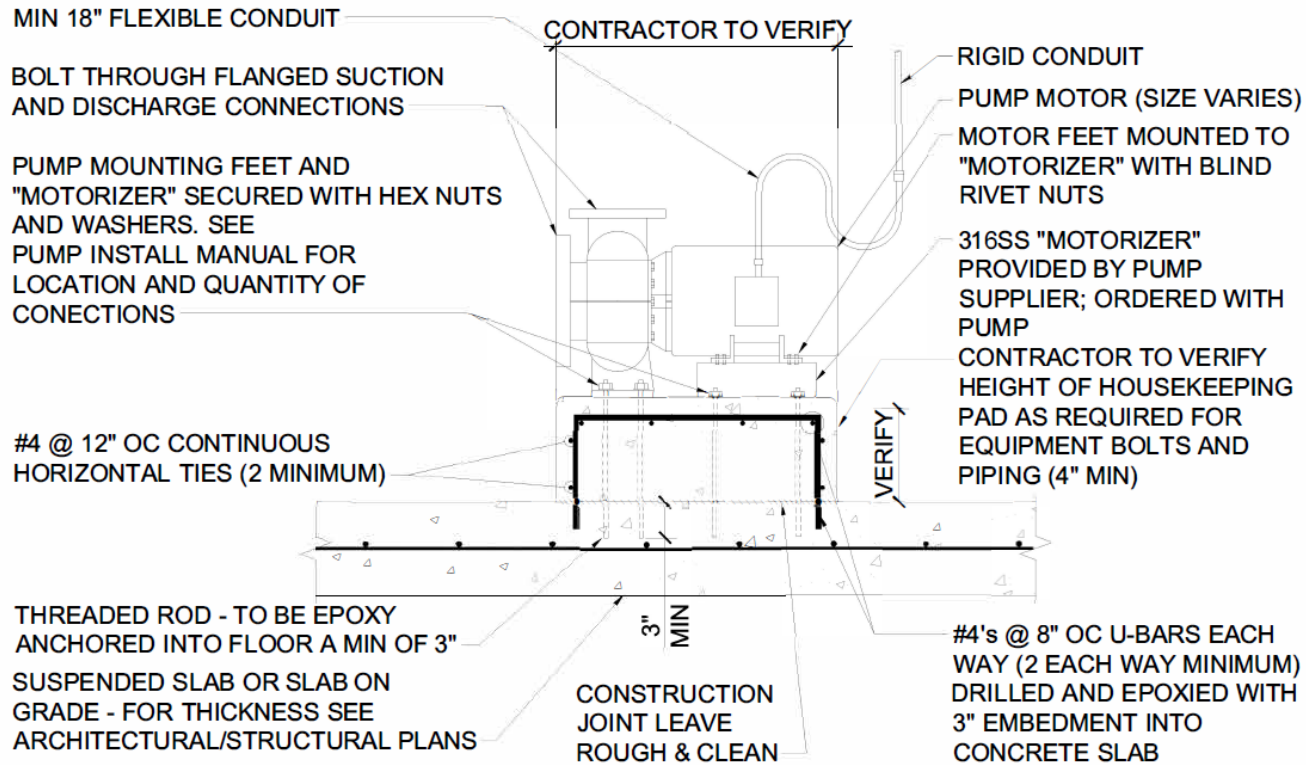
- Epoxy Coating - 3M™ Scotchkote 134
- NSF 50 Certification Label
- Base Elbow for Vertical Conversion
- Suction *Decreasing* Elbow
- 316SS Elbow Pedestal





316SS vs. Chlorine & Atmosphere

- **CDC Guideline values for Commercial Pools**
 - pH 7.4
 - 1.0-3.0 PPM Chlorine.
- **American Water Works Association**
 - Type 304L becomes vulnerable to crevice corrosion when chlorine exposure ranges from 3 to 5 PPM.
 - 316L is more resistant in part due to the addition of Molybdenum. (2-3%)
- **Corrosion Cracking / Crevice Corrosion / Staining / Pitting**
 - Severe pitting and corrosion can attack areas which are occasionally splashed by pool water, allowing corrosive salt deposits to built up.
 - Atmospheric changes in temperature and humidity play a large part in advancing corrosion

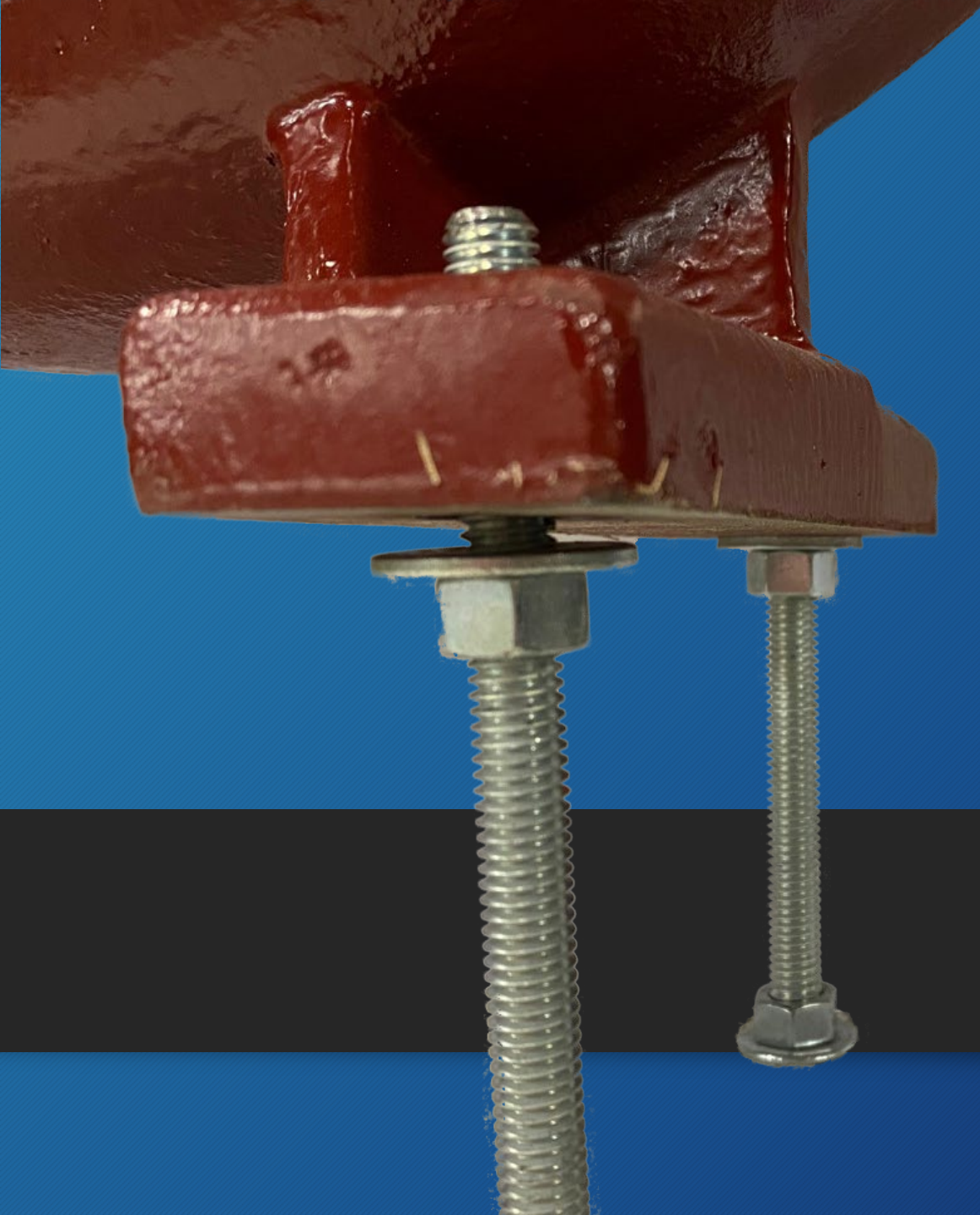


Typical Pump Pad Detail - Motor Riser

Each end suction pump will come equipped with a 316SS motor riser. This riser will eliminate the height difference between casing feet and motor feet; Allowing a single level housekeeping pad to be installed; also preserving Back-Pullout Design.

Motor Frame vs Motorizer





Mounting the 3800
Initial Support Method

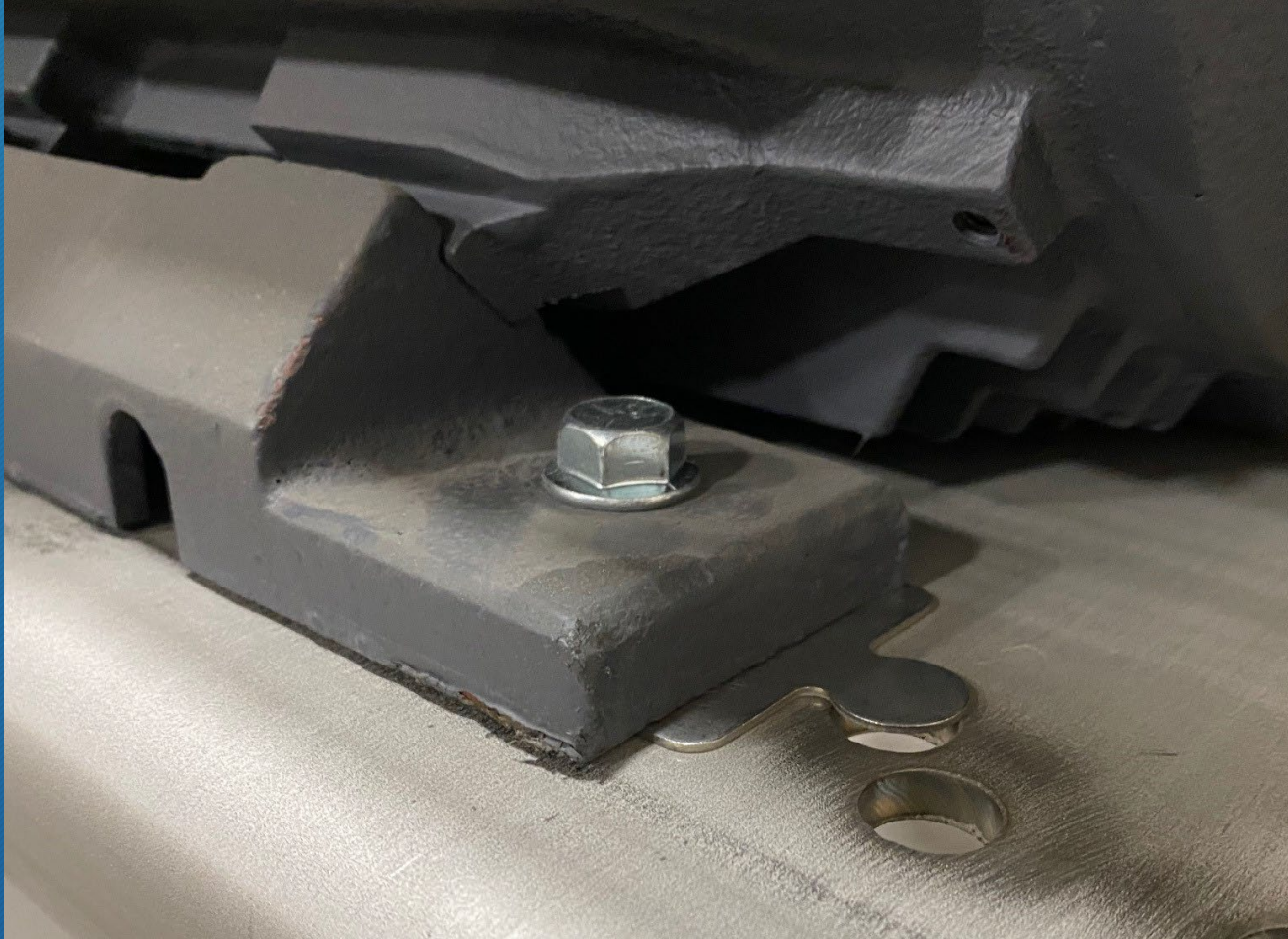
Fully Mounted, Prepared for Grout



Result of Improper Mounting

Rear motor foot was loosened,
Motor was deflected 0.125"





Correcting Deflection

Adding shims to accommodate motor deflection

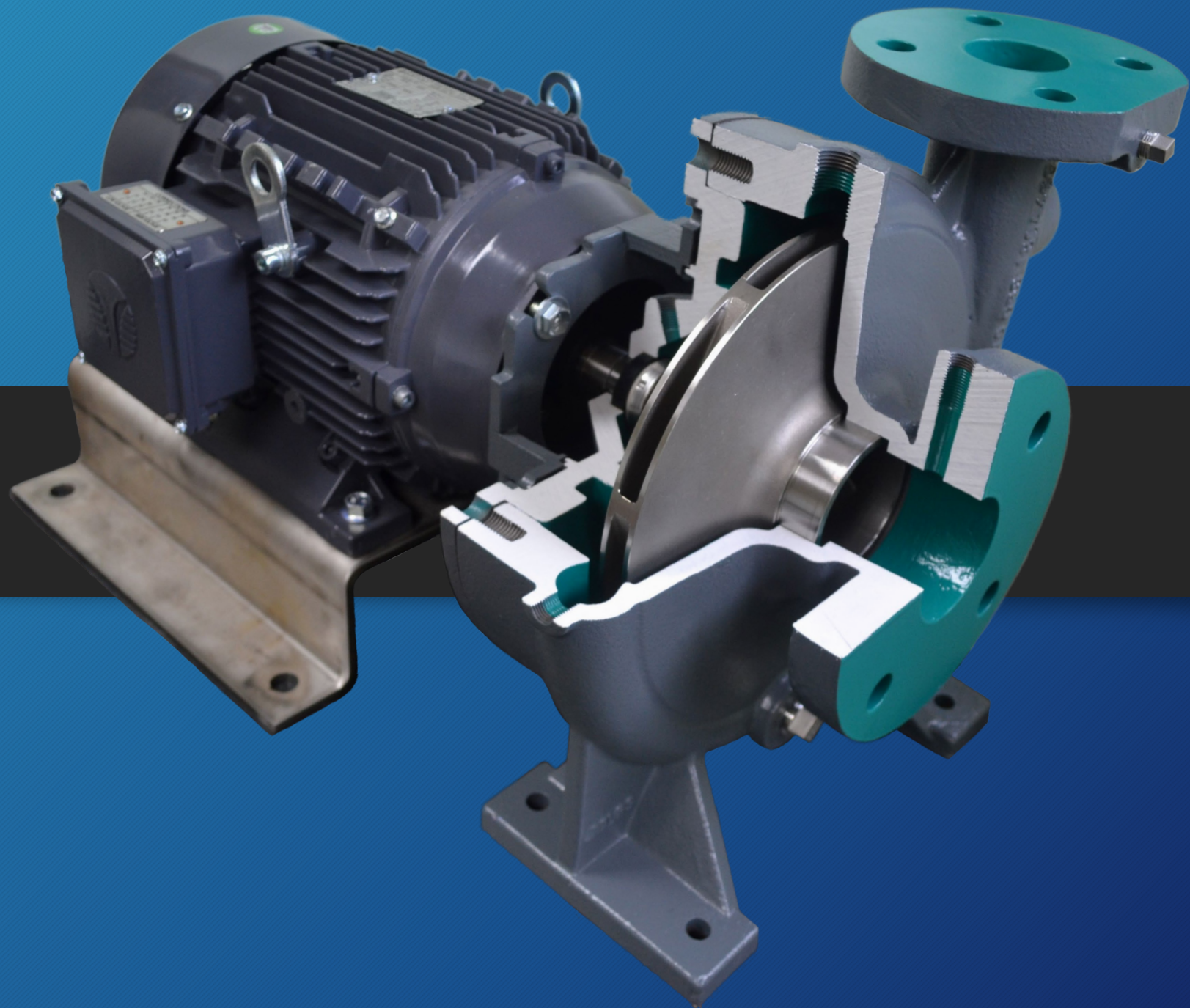
Booster Pumps

AMT single Stage End Suction Pump



Grundfos Vertical In-line Multi-Stage Pump





Q & A