



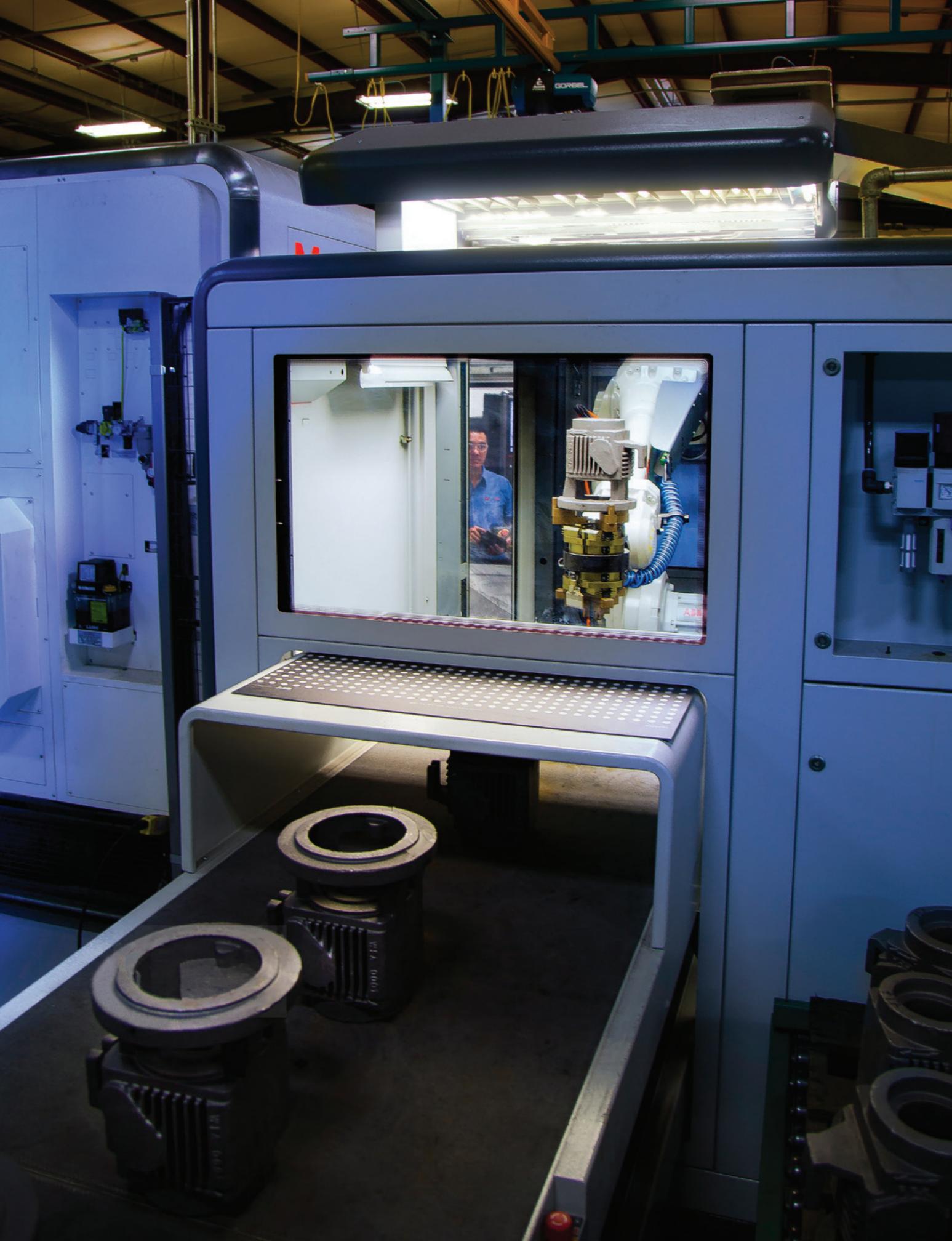
# INDUSTRIAL

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## CAPABILITIES



 *Engineered, Assembled, & Tested in the USA*



**INTRODUCTION**

PumpWorks Industrial is headquartered in Houston, Texas, where we manufacture a wide variety of centrifugal process pumps exceeding ANSI B73.1 and other standards for the Chemical and Petrochemical, Pulp and Paper, Food and Beverage, Oil and Gas, Mining, Power Generation, Waste Treatment and General Industrial industries. Teamed with PumpWorks610 and a vast distribution network, our highly experienced staff stands ready to provide the very best quality, price and delivery-meeting your exact specification needs, each and every time.

This brochure is designed to give you a concise overview of PumpWorks Industrial products and services.

**PumpWorks Industrial provides:**

- PWA ANSI / ASME B73.1 Process Pump
- PWA-SP Self Priming Process Pump
- PWA-LF Low Flow ANSI Process Pump
- PWA-IL ANSI / ASME B73.2 In-Line Process Pump
- PW-VSP Vertical Sump Pump
- ANSI Process Power End Upgrade Program

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We manufacture and test all pumps in the USA with a considerably shorter delivery time than our competitors. We also offer open access for end users and specifiers to select their pump online through our pump selection software ePOD (Electronic Pump On Demand) at our website [www.pumpworksindustrial.com](http://www.pumpworksindustrial.com).





## **PWA ANSI/ASME B73.1 PROCESS PUMP**

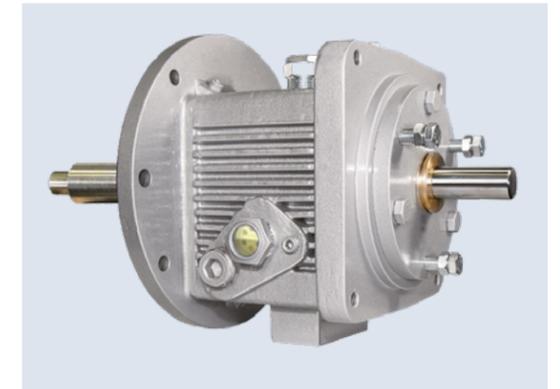
### **| Typical Applications**

PWA ANSI/ASME B73.1 Process Pump is designed, built and tested in the USA to ANSI and ISO exacting standards, while enhancing the typical design to the next level of reliability. High strength carbon steel liquid end and frame adapter material, additional casing thickness and upgraded bearing lubrication for increased bearing life are just a few no charge features considered extra from other manufacturers. Coupled with our fully staffed professional sales and service teams and strategically located inventory throughout the Northern Hemisphere ensures consistent, rapid shipment tailored to customer specification requirements.

- ANSI B73.1 end suction, top discharge back pull out process pump.
- High strength carbon steel liquid end with a broad range of alloyed corrosive resistant materials of construction available.
- Rigid heavy duty shaft and bearing system design, exceeding ANSI B73.1 bearing life specifications. 316L SS shaft material is standard.
- 5 year unconditional Power End warranty is standard with every product.
- Proven flinger disk lubrication device to ensure effective bearing lubrication. Provides 30% increased bearing L10 life and minimum 15° lower bearing operating temperatures compared to flood oil design.

#### **Multiple alloy bearing frame options:**

- WCB carbon steel (standard)
- 316SS and higher (optional)



### **| Typical Services**

**Services covered but not limited to the PWA pump include:**

- Chemical/Petrochemical
- Pulp and Paper
- Food and Beverage
- Oil and Gas
- Primary Metals Manufacturing
- Power Generation
- Waste Treatment
- General Industrial





## **PWA-SP SELF PRIMING PROCESS PUMP**

### **| Typical Applications**

The PWA-SP Self-Priming Process Pump is uniquely designed to provide all in one pump priming and air removal without the need for priming devices such as air separator, check valve or external priming equipment and designed, built and tested in the USA to ANSI and ISO exacting standards, while enhancing the typical design to the next level of reliability.

High strength carbon steel liquid end and frame adapter material, additional casing thickness and upgraded bearing lubrication for increased bearing life are just a few no charge features considered extra from other manufacturers. Coupled with our fully staffed professional sales and service teams and strategically located inventory throughout the Northern Hemisphere ensures consistent, rapid shipment tailored to customer specification requirements.

- Single component casing with primer and air removal chamber requiring no external priming devices.
- ANSI B73.1 end suction, top discharge back pull out process pump.
- High strength carbon steel liquid end with a broad range of alloyed corrosive resistant materials of construction available.
- Rigid heavy duty shaft and bearing system design, exceeding ANSI B73.1 bearing life specifications. 316L SS shaft material is standard.
- 5 year unconditional Power End warranty is standard with every product.
- Proven flinger disk lubrication device to ensure effective bearing lubrication. Provides 30% increased bearing L10 life and minimum 15° lower bearing operating temperatures compared to flood oil design.

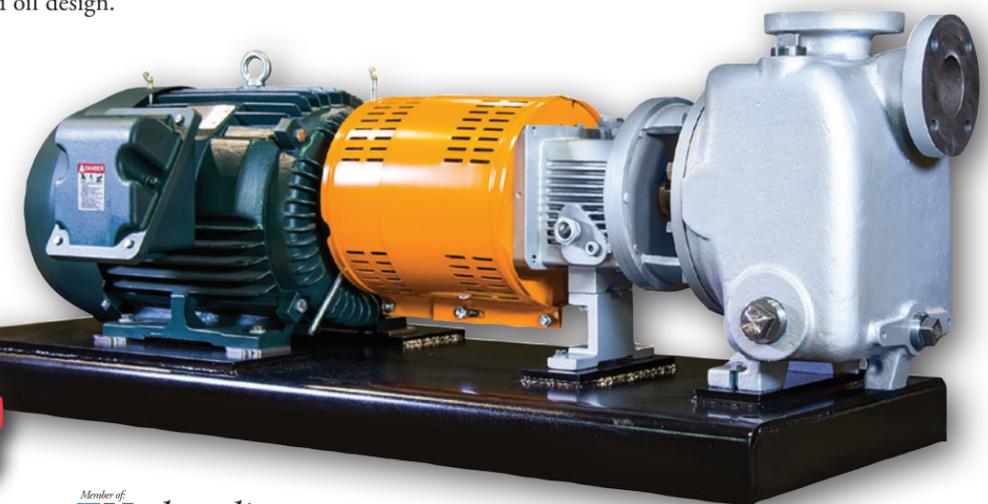
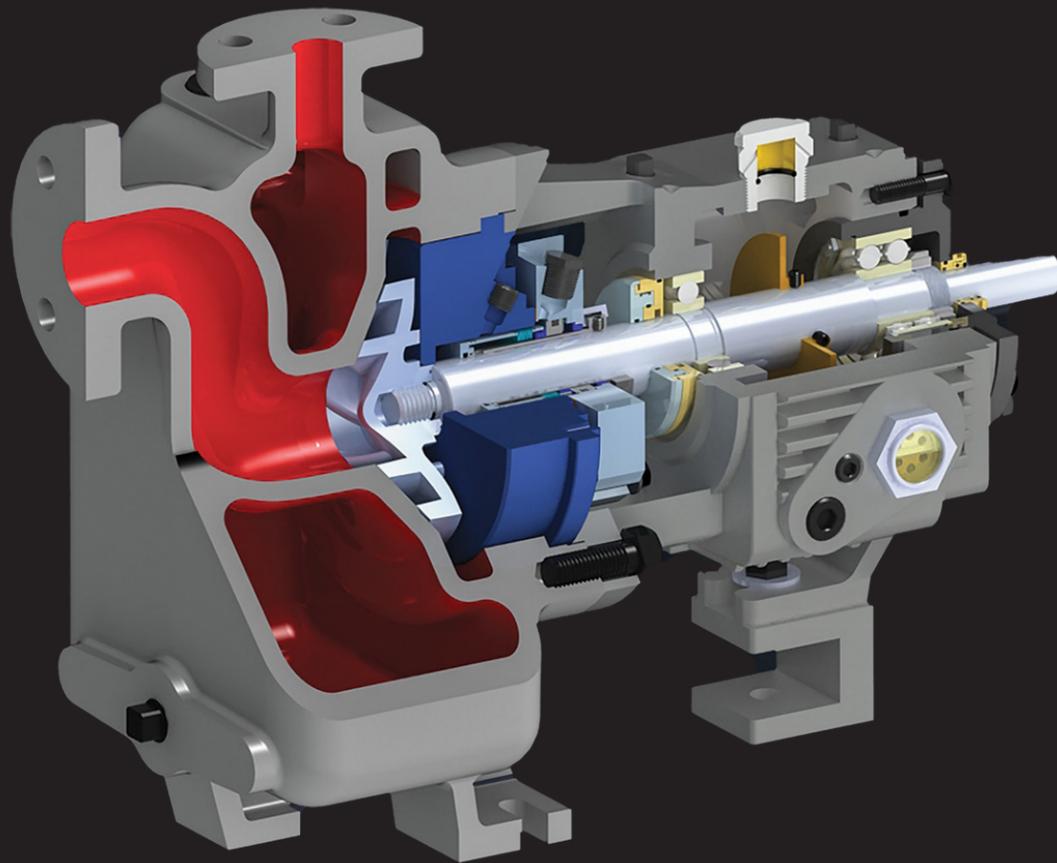
### **Multiple alloy bearing frame options:**

- WCB carbon steel (standard)
- 316SS and higher (optional)

### **| Typical Services**

#### **Services covered but not limited to the PWA-SP pump include:**

- Chemical/Petrochemical
- Pulp and Paper
- Food and Beverage
- Oil and Gas
- Primary Metals Manufacturing
- Power Generation
- Waste Treatment
- General Industrial





## **PWA-LF LOW FLOW ANSI PROCESS PUMP**

### **| Typical Applications**

PWA-LF ANSI B73.1 Low Flow pump is designed, built and tested in the USA to ANSI and ISO exacting standards, while enhancing the typical design to the next level of reliability. High strength carbon steel liquid end and frame adapter material, additional casing thickness and upgraded bearing lubrication for increased bearing life are just a few no charge features considered extra from other manufacturers.

Unique circular casing and radial vane impeller provides stable operation at low flow ANSI conditions. Coupled with our fully staffed professional sales and service teams and strategically located inventory throughout the Northern Hemisphere ensures consistent, rapid shipment tailored to customer specification requirements.

PWA-LF ANSI B73.1 Low flow design utilizes matched circular casing with precisely machined discharge channel and a fully shrouded, radial impeller yielding low flow stability.

Impeller balance holes reducing bearing thrust loads for extended bearing life and lower stuffing box pressure and increased seal life.

- ANSI B73.1 end suction, top discharge back pull out process pump.
- High strength carbon steel liquid end with a broad range of alloyed corrosive resistant materials of construction available.
- Rigid heavy duty shaft and bearing system design, exceeding ANSI B73.1 bearing life specifications. 316L SS shaft material is standard.
- 5 year unconditional Power End warranty is standard with every product.
- Proven flinger disk lubrication device to ensure effective bearing lubrication. Provides 30% increased bearing L10 life and minimum 15° lower bearing operating temperatures compared to flood oil design.

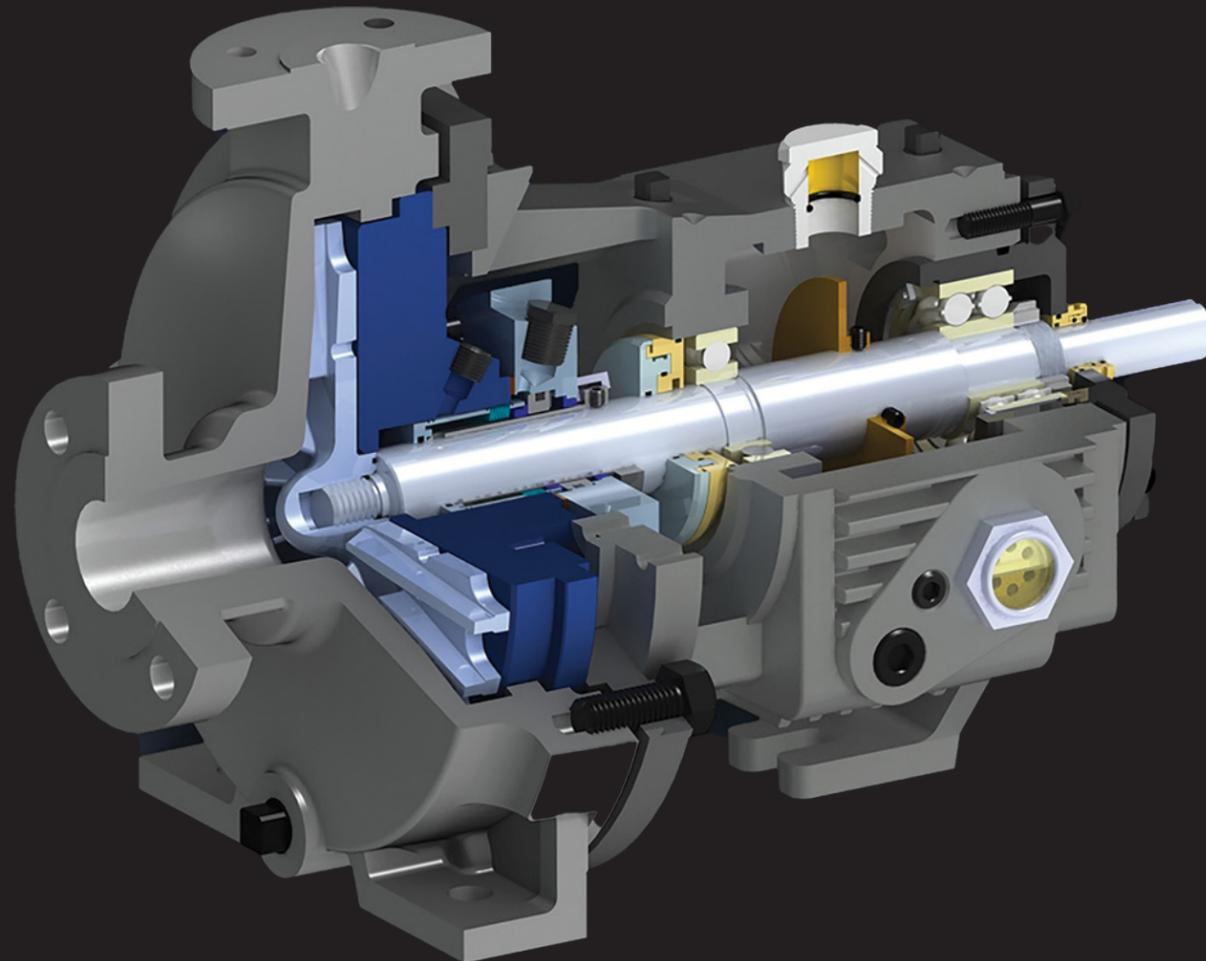
### **Multiple alloy bearing frame options:**

- WCB carbon steel (standard)
- 316SS and higher (optional)

### **| Typical Services**

#### **Services covered but not limited to the PWA-LF pump include:**

- Chemical/Petrochemical
- Pulp and Paper
- Food and Beverage
- Oil and Gas
- Primary Metals Manufacturing
- Power Generation
- Waste Treatment
- General Industrial





## **PWA-IL ANSI/ASME B73.2 IN-LINE PROCESS PUMP**

### **| Typical Applications**

PWA-IL ANSI B73.2 In-Line Process Pump is designed, built and tested in the USA to ANSI and ISO exacting standards, while enhancing the typical design to the next level of reliability. High strength Carbon Steel liquid end and motor support material, additional casing thickness and greased lubricated bearings are just a few, no charge features considered extra from other manufacturers.

Backed with fully staffed professional sales and service teams and strategically located inventory throughout the Northern Hemisphere, ensures consistent, rapid shipment tailored to customer specification requirements.

- ANSI B73.2 In-line process pump. Space saving configuration, lower overall installation cost compared to baseplate mounted pumps.
- High strength carbon steel liquid end provided as standard. We also offer a broad range of corrosive resistant alloy materials – from 316L SS to Titanium.
- Rigid heavy duty shaft and bearing system design, exceeding ANSI B73.2 bearing life specifications. 316L SS shaft material is standard.
- 5 year unconditional Power End warranty is standard with every product.
- Superior high strength carbon steel motor support with machined registered fit, accommodates vertical C-face NEMA electric motors. Optional carbon steel motor support is available to accommodate IEC motors. Simplifies field installation.

#### **Multiple alloy bearing frame options:**

- WCB carbon steel (standard)
- 316SS and higher (optional)

### **| Typical Services**

**Services covered but not limited to the PWA-IL pump include:**

- Chemical/Petrochemical
- Pulp and Paper
- Food and Beverage
- Oil and Gas
- Primary Metals Manufacturing
- Power Generation
- Waste Treatment
- General Industrial



Member of  
**Hydraulic**  
INDUSTRY

**5 Year  
Unconditional  
Power End  
Warranty**



## **PW-VSP VERTICAL SUMP PROCESS PUMP**

- Vertical immersion, simplex and duplex process sump pumps for pit depths up to 26 feet.
- Materials of Construction include cast iron, 316SS stainless steel fitted, all 316SS stainless steel, Alloy 20, Hastelloy and CD4MCu Duplex stainless steel.
- Standard Intermediate lower bearing choker ring guide bearing bushing, with alternate bearing assemblies for Abrasive and Chemical specific applications.
- Unrestricted Vortex design impeller for liquids with entrained solids.
- Standard round, square and oval pit cover plates with direct tank flange mounting and custom pit cover replacements to identically match existing sump dimensions.
- Complete pump reliability control to include liquid level, high water alarm control to NEMA 1, 4, 7 and 9 enclosures.

PW-VSP is designed, built and tested in the USA to exacting industrial, process standards, with a variety of materials available including cast iron, 316SS, Alloy 20, Hastelloy and Duplex stainless Steel. Pumps are available as simplex, duplex and triplex configuration, with round, square, custom or ANSI tank flange mounting designs with gas tight, vapor proof design, optional for pit depths up to 26 feet.

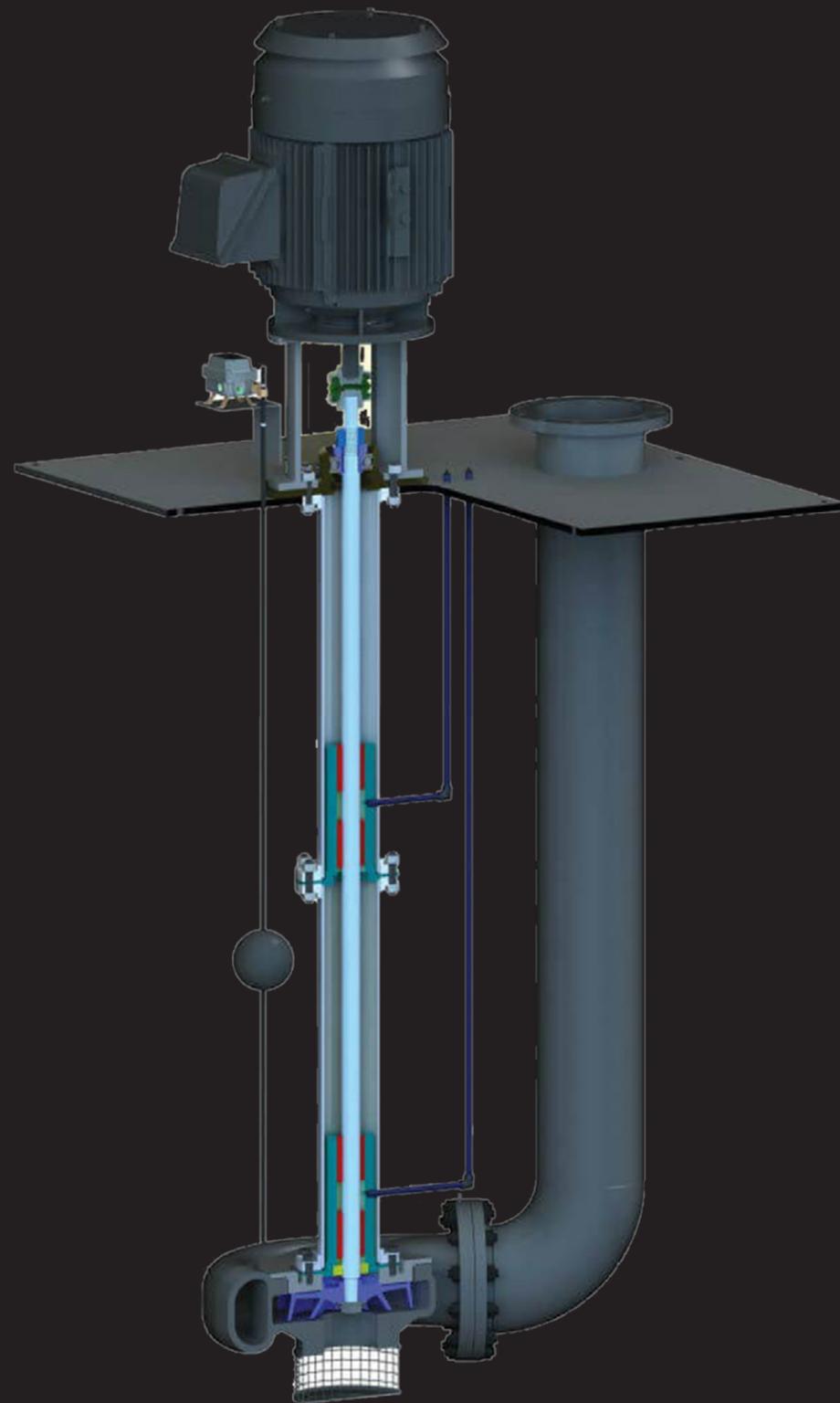
Semi open impeller is keyed to shaft with balancing ring and wiping vanes for abrasion and solids wear resistance and is externally adjustable back to factory clearances without dismantling the pump. The impeller is backed by a choker ring to restrict the entrance of solids into the lower bearing. An optional Vortex Design Impeller is available for liquids with significant amounts of entrained solids.

All column pipe is flanged, with standard stainless shafting. Column, motor, bearing housing and casing joints are machined, registered fits for free running, stable shaft rotation and extended bearing life. Discharge piping is standard threaded, with flanged connection and below grade tee discharge optional. Bearing assemblies are available for upgrade to abrasive and chemical specific applications.

### **| Typical Services**

**Services covered but not limited to the PW-VSP pump include:**

- Industrial Process
- Pollution Control
- Sump Drainage
- Hazardous and Toxic Liquid Removal
- Cooling Tower Circulation
- Flood Control
- Condensate Circulation
- Tank Transfer





## **ANSI PROCESS POWER END UPGRADE PROGRAM**

The PumpWorks Industrial ANSI Power End Upgrade Program not only provides a superior product, it also beats the high cost of rebuilding by providing an upgrade at a better price than other more expensive sources.

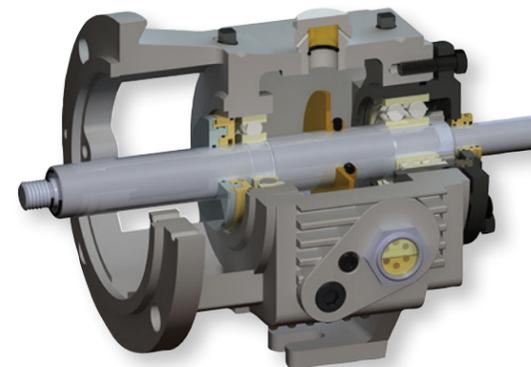
### **The standard PWA horizontal upgrade provides:**

- Inpro/Seal VBXX®-D bearing isolators provided versus less effective lip seals
- PumpWorks upgraded power ends deliver significantly reduced oil temperature and longer bearing life
- Three step bearing frame internal coating process to reduce oil contamination
- Dual sight glasses provide visibility to oil level regardless of pump location
- Multiple alloy bearing frame options:
  - WCB carbon steel (standard)
  - 316SS and higher (optional)

PWA Power Ends are utilized to upgrade ITT Goulds 3196 T, X or I series pumps as well as all other models of ANSI pumps that use the T, X or I series platforms.



**5 Year  
Unconditional  
Power End  
Warranty**



*Sectional View, PWA- Group 1 Power End*

All PumpWorks Industrial ANSI Power End components are sourced, cast and machined in the USA, and feature:

- Reduced inventory costs
- Reduced records management for stocking personnel from dozens of items to one item.
- Reduced direct maintenance costs
- Man-hours spent on getting a pump up and running are dramatically reduced.
- Reduced production downtime costs

Faster repairs result in reduced production costs, and you never pay for a part that's out of stock. Since you're installing a new upgraded unit, you can rest assured that you'll have longer, more reliable performance.

Our 5 year unconditional Power Frame warranty is standard with every product.



## MANUFACTURING, INVENTORY, AND SERVICE

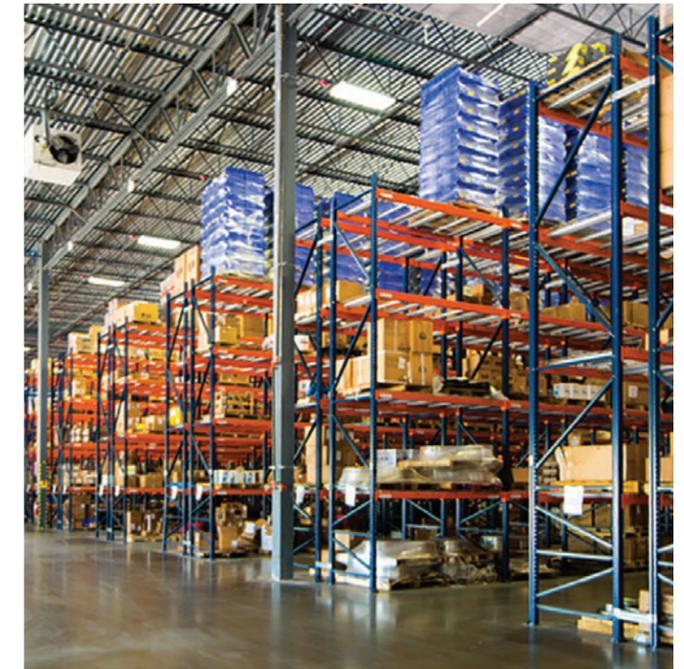
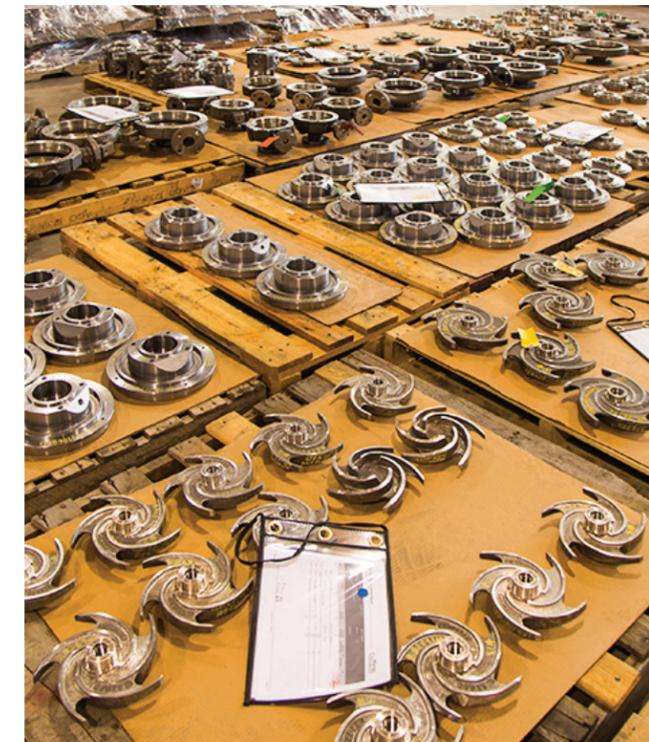
### | Manufacturing

All of our pumps are manufactured and tested in the United States of America, utilizing exclusive state-of-the-art manufacturing equipment and US foundries for all castings. This ensures consistent quality, product availability, and low cost of ownership.

Every wetted part and the Power End are individually serialized and records maintained by PumpWorks Industrial.

**PumpWorks Industrial leverages technology by providing:**

- Superior manufacturing capabilities.
- Company owned USA foundry.
- Extensive inventory selection.
- Professional, reliable service.



### | Inventory

Pump and component inventory in a variety of material options are strategically located through the Northern Hemisphere ensuring consistent, rapid shipment tailored to customer requirements.

### | Service

Fully staffed professional sales and service teams providing superior customer support is available 24/7/365.

ePOD Pump Selector access by end users and specifiers available online at no additional cost at [www.pumpworks.com](http://www.pumpworks.com).





## **FOUNDRY / PUMPWORKS CASTINGS**

The Foundry / PumpWorks Castings is a 40,000 sq. ft. facility located in Lufkin, TX and is a fully integrated foundry with complete tool design and development capabilities. Our concurrent engineering services help increase throughput in the manufacturing process. This process efficiency drives product design, to reduce development time and speeding delivery of our casting products.

### **The Foundry / PumpWorks Castings provides:**

- Precision investment cast impellers yields exceptionally smooth surface finish ensuring repeatable, efficient hydraulic performance.
- One ton piece part capacity. Metallurgies from Carbon Steel through Pure Nickel.
- Complete in house casting inspection includes certified spectrographic, hardness, physical properties and live casting X-ray analysis.



Prior to melt, PumpWorks Castings' commitment to ensure metallurgical and dimensional repeatability is paramount. From raw material to final casting products, PumpWorks Castings' quality team monitors every aspect of sand casting and investment casting process. As standard all castings receive our mandatory 100% visual inspection. Additionally, we employ chemical spectroanalysis, physical property testing, and non-destructive testing techniques to guarantee metallurgical properties and structural integrity.

Use of precision investment casting techniques yields a part with exceptionally smooth surface finish insuring repeatable, efficient hydraulic performance. Metallurgies range from Carbon Steel through Pure Nickel.

With PumpWorks Industrial and PumpWorks Castings we have complete control of the supply chain process. This allows for rapid, on time product availability and exceptional service. To find out more about how you can benefit from PumpWorks Casting expertise please contact us directly.





## **ANSI PROCESS PUMPS TEST FACILITY**

### **| Comprehensive Performance Testing**

At PumpWorks Industrial, our test facility is fully equipped with precision flow, vibration, torque, temperature, pressure and speed measuring devices to accurately test our full range of products. Calibrated torque couplings provide data to accurately calculate horsepower and efficiency. Flow is measured by one of three calibrated magnetic flow meters installed in dedicated metering runs, while calibrated electronic sensors measure pressure in metering spools connected to the suction and discharge nozzles of the pump.

A five (5) point vibration spectrum analysis is performed on every pump to ensure that the pump operates smoothly and within Hydraulic Institute vibration acceptance criteria throughout its entire operating range.

Bearing and oil temperature data collected automatically throughout test.

On-site electronic meteorological grade barometer and a vacuum pump are utilized to accurately calculate NPSHr.

PumpWorks Industrial test procedures are based on American Petroleum Institute (API) and Hydraulic Institute (HI) criteria. Test standards can be modified to meet specific customer requirements as needed.

Data Acquisition and Comprehensive ANSI Pump Performance reports are prepared per PumpWorks proprietary pump test software. This custom-designed Automated Pump Test Software (APTS) allows all pumping system parameters to be monitored and controlled from a central control station. PumpWorks Industrial APTS provides precise system control to achieve and maintain specific operating conditions so that data from precision electronic sensors can be collected and recorded for use in verifying ANSI pump performance. The PumpWorks Industrial Test Facility is a "for hire" facility. If you're not sure your ANSI pump is performing correctly, contract with PumpWorks Industrial to test your pump.



### **| Test Facilities Capabilities**

- Test flows up to 7,600 GPM
- Discharge test pressures up to 740 PSI
- Supply tank rated from full vacuum to 65 psi
- 460 volt through 600 HP, 3600 RPM
- Calibrated flow, pressure vibration, torque, temperature and speed measuring equipment
- Utilize 460 volt VFDs to achieve precise pump speed up to 600 HP
- Test motors through 600 HP
- Calibrated magnetic flow meters 2", 6" and 10"
- Calibrated torque couplings provide data to calculate brake horsepower and efficiency
- 1000 Nm torque measurement
- Full Performance Testing per ASME B73.1 and Hydraulic Institute criteria

These features combined produce the most accurate test possible, the results of which are then compiled into a certified comprehensive report.





## PUMPWORKS INDUSTRIAL COMPANY PROFILE

At PumpWorks Industrial, we know what it takes to build a quality pump. With our experience as a leader in providing high quality, short lead time, made in USA API 610 pumps, we now bring our customers a superior ANSI pump and vertical sump pump line engineered, manufactured and tested in the USA.

What other manufacturers offer as options, PumpWorks Industrial provides as “standard:” features such as Carbon Steel wet ends, Carbon Steel Power Ends, 316L SS shafting, and flinger disc splash lubrication. Our pumps meet and exceed all B73.1-2012 requirements.

Regardless of your pump applications, Chemical, Pulp & Paper, Mining & Mineral, Food & Beverage, Water & Wastewater, Power Generation, Pharmaceutical or Oil & Gas, the PumpWorks Industrial ANSI and Industrial pump product line is capable of handling virtually any fluid processing application within its range.

PumpWorks Industrial achieves maximum results with our ANSI Pump line by integrating our foundry with our engineering, manufacturing, product assembly and testing capabilities.

All components in our ANSI pumps are made in the United States of America, from the power frame to the impeller including every nut, bolt and all associated hardware.



HOUSTON, TEXAS USA

35,000 sq. ft. manufacturing plant and pump performance test facility.

The new PumpWorks Industrial 35,000 sq. ft. facility in Houston, Texas is fully equipped with multiple cut and multiple station CNC centers speeding up the manufacturing production process and ensuring tremendous throughput, as well as parts and component availability for operational productivity. ISO certification procedures are in development to ensure superior quality control.

A full range of In-house performance tests of ANSI pumps with ranges up to 600 HP – variable speed, up to 740 psig at flows of up to 7500 GPM ensures that we can meet and exceed our customer’s expectations. Additionally, with our “Witness Testing” facility, customers can actually witness tests in person, or can virtually watch online through our secure website. All documentation and paperwork is provided for each ANSI pump tested at our facility.

At PumpWorks Industrial, our customers come first. Through our vast array of engineering, manufacturing and testing expertise, PumpWorks Industrial’s dedicated sales force is trained and equipped to select and propose the best pump or pump package solution for you.

Our vast inventory, located throughout North America, means we can deliver the right pump when you need it. This coupled with our vast North America service center network means you will always have support, 24/7/365.

## ePOD ONLINE PUMP SELECTION

### | Browser Based Pump Selection

ePOD (Electronic Pump On Demand) is a browser-based front end software application allowing the end user and specifiers to intelligently select their own pump on the web.

#### ePOD software quickly delivers:

- Performance curves
- Comprehensive data sheets

Test drive ePOD at our website [www.pumpworksindustrial.com](http://www.pumpworksindustrial.com) today.



## PUMPWORKS INDUSTRIAL CLIENTS

### | Pumpworks Industrial Clients Include:

- Agave Energy Co
- Air & Gas
- Ak Steel Corp
- Allnex Usa Inc
- Amereillinois Companies
- Americagypsum Co Inc
- Anadarko Petroleum
- Aps - Cholla Power Plant
- Arizona Portland Cement Co
- Arizona Public Service
- Atlas Roofing
- Badger Midstream Services LLC
- Ball Metal Beverage Container
- Basf Corp
- Basielectric Power Coop
- Bridger Pipeline
- Cabot Norit Americas Inc
- Campbell Soup Supply Co LLC
- Capitaenergy Inc
- CC&V Gold Mining
- Century Aluminum of Kentucky
- Ch2m Hill
- Chemtrade Solutions LLC
- Chesapeake Energy
- Chevron
- Chs Inc
- Cimarex Energy
- Citgo
- Cleaharbors Environmental Services Inc
- Copano Processing LP
- Cripple Creek & Victor Gold Mine
- Deepwater Iodides
- Delano Growers Grape Products
- Delek Refining Ltd
- Devoenergy Corp
- Dow Chemical Usa
- Dte St. Bernard
- East Kentucky Power
- Emery Oleochemical
- Enbridge
- Enerflex Energy Systems Inc
- Engineered Pipeline Systems Inc
- Enlink Midstream Operating Lp
- Eog Resources Inc
- Epc Inc
- Energy Transfer, Etc
- Ethosenergy Group PS
- Exterra/ Daleel Oman
- Exterraenergy Solutions
- Exxomobil
- Flint Hills Resources, LP
- Gaumer Process
- Grant Prideco, LP
- Hexiospecialty Chemicals
- Holly Energy Partners
- Hospira Inc
- Hughes Meter & Supply Co Inc
- Hunt Forest Products, Inc
- Huntsmaethyleneamines
- Indiana Kentucky Electric Corp
- Indiana Mich Power
- International Paper
- Jim Beam Brands Co
- Jm Smucker Company
- Kinder Morgan
- Kinder Morgaliquids Terminal
- Lafourche Sugars Corp
- Lbc Petrounited Inc
- Liberty Midstream Solutions Llc
- Linde Gas Inc
- Locap Llc
- Logaaluminum
- Louis Dreyfus Agricultural Industries LLC
- Louisiana Sugar Refining LLC
- Lubrizol
- Ma Patout & SoltD LLC
- Markwest Oklahoma Gas Co.
- Matador Productiocompany
- Memorial Productiooperating LLC
- Midstates Petroleum Co LLC
- Millercoors
- Minera Mexico Sa De Cv
- Momentive Performance Materials Inc
- Morrow Energy LLC
- Mrd Operating
- Nalco Co
- Navigator Energy Services LLC
- Nestle Purina Petcare Co
- Ngl Energy Partners LP
- Noble Energy Productions Inc
- Nucor Steel
- Nustar Logistics LP
- Oak Grove Management
- Oasis Petroleum Inc.
- Oil Filtrationsystems Inc
- Oq Measurements LLC
- Owens Corning
- Oxy Usa Inc
- Pepsico Inc
- Ppg Industries
- Pt Freeport Indonesia
- Public Service Co of Nm
- Rock-Tenco
- Rose Rock Midstream Crude LP
- Sandridge Energy Inc
- Saulsbury Industries Inc
- Shamrock Technologies Inc
- Shell Oil Products Us
- Sheridaproductioco Llc
- Shin-Etsu Silicones Of America
- Siemens Water Technologies
- Sinclair Casper Refining Co
- Sinclair Transportatioco
- Spectrum Engineering
- St Mary Sugar Cooperative, Inc
- Stolthavehoustoinc
- Stonegate Productioco LLC
- Sugar Technology International LLC
- Suchemical Corp
- Syncom Space Services LLC
- Tesoro Refining & Marketing Co LLC
- Texas Eastmadivision
- Tysofoods Inc
- United Energy Pakistaltd
- Valero Three Rivers Refinery
- Watco Companies
- Westlake Longview
- Whiting Petroleum Corp
- Xto Energy Inc/Ngo
- Yenkimajestic Paint



**Pumpworks Industrial | [pumpworksindustrial.com](http://pumpworksindustrial.com)**

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ISO 9001:2008  
**BUREAU VERITAS**  
Certification

N° US004662-1

