ANSIMAG Process Pumps

ETFE-lined Sealless Pumps
for Chemical Services

Presented By:
Enter Name Here

RELIABILITY REALIZED.

About Us.

- Sundyne is a leading supplier of world-class precision-engineered fluid handling solutions (pumps, compressors and special fit-for-purpose systems) to the oil and gas production, refining, petrochemical, chemical, power and water process industries
- Built to exacting ASME, API, ISO and other global standards, Sundyne integrally geared pumps, sealless magnetic drive pumps and compressors run reliably for years without the need for an expensive overhaul
- Sundyne products dramatically reduces operational expenses – which can account for as much as 96% of your budget

Sundyne is a proud member of the OSHA Voluntary Protection Program.

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Learn more at:
www.sundyne.com

Support.

Local Sales & Service

Aftermarket Parts and Service is provided by our global Factory Trained and Certified Channel Partners

● Authorized Stocking Distributors

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Support.

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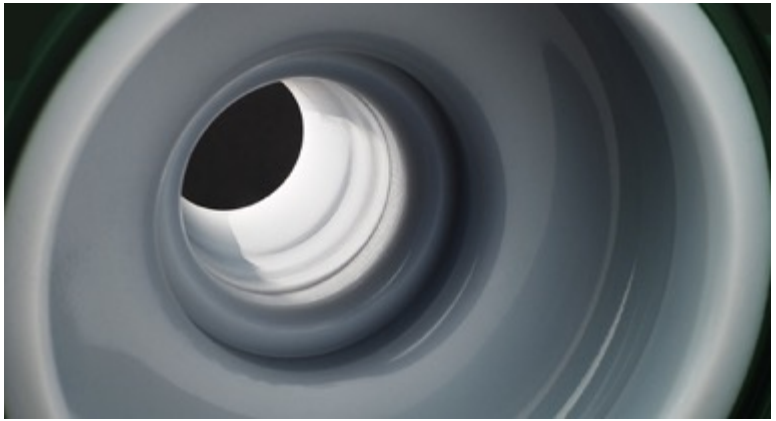
Simple by Design.

ANSIMAG SEALLESS MAGNETIC DRIVE ETFE LINED PUMPS—SIMPLE BY DESIGN

- ANSIMAG sealless magnetic drive ETFE lined pumps are specifically designed for plant managers and process engineers who demand reliable and safe pumps for chemical processing and downstream refining applications.
- All wetted parts are molded ETFE components that can safely handle a wide range of corrosives and solvents up to 250°F (121°C) without corrosion. A patented, fully encapsulated magnetic drive hermetically seals the inner magnets to isolate them from process fluid and maintain magnet integrity for the life of the pump. A Kevlar-fiber reinforced vinyl ester shell delivers unprecedented reliability.
- ANSIMAG sealless magnetic drive pumps are more energy-efficient than mechanically sealed pumps. An innovative rear casing generates no eddy currents thus eliminating heat generation and reducing energy costs. Because ANSIMAG pumps do not have seals - there are no leaks, no emissions and no costs related to seal maintenance.
- ANSIMAG pumps provide affordable replacement options for aging ASME/ANSI B73.3 and ISO 2858 sized pumps, because the line covers a wide range of sizes and standard external dimensions to facilitate sealless or sealed pump replacement without changing piping or baseplates.



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ANSIMAG

Process Pumps.

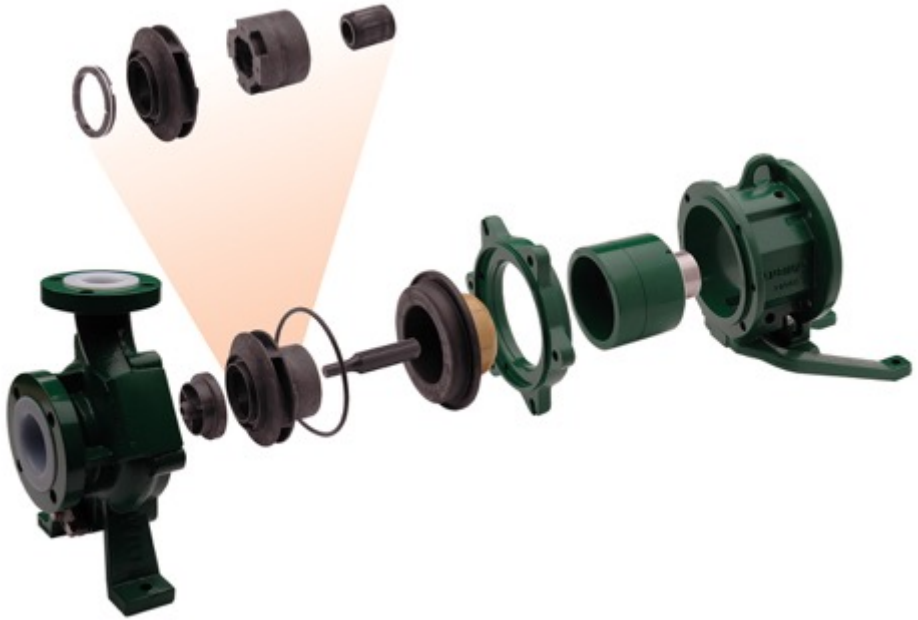
Sundyne

WHY ANSIMAG?

- Leading Supplier of ETFE-lined Process Pumps to the Chemical Process Industry
  - Since 1985
  - Over 50,000 pumps supplied
- Sealless Mag Drive Technology
  - No mechanical seals to leak or fail
  - Near universal chemical compatibility
- Cost Efficient
  - Non metallic (lined) construction
  - Simple, low maintenance (close coupled) design
- Application Expertise
  - Most experienced and trained Sales Engineers in the industry
- Quality
  - ISO 9001:2008 – Quality Management System

Construction.

- Fully Supported Impeller
- Axial Thrust Washer
- Fully Encapsulated Drive
- Replaceable Impeller
- Simple Sealless Design
- Superior Solids Handling
- Non-metalic Containment Shell



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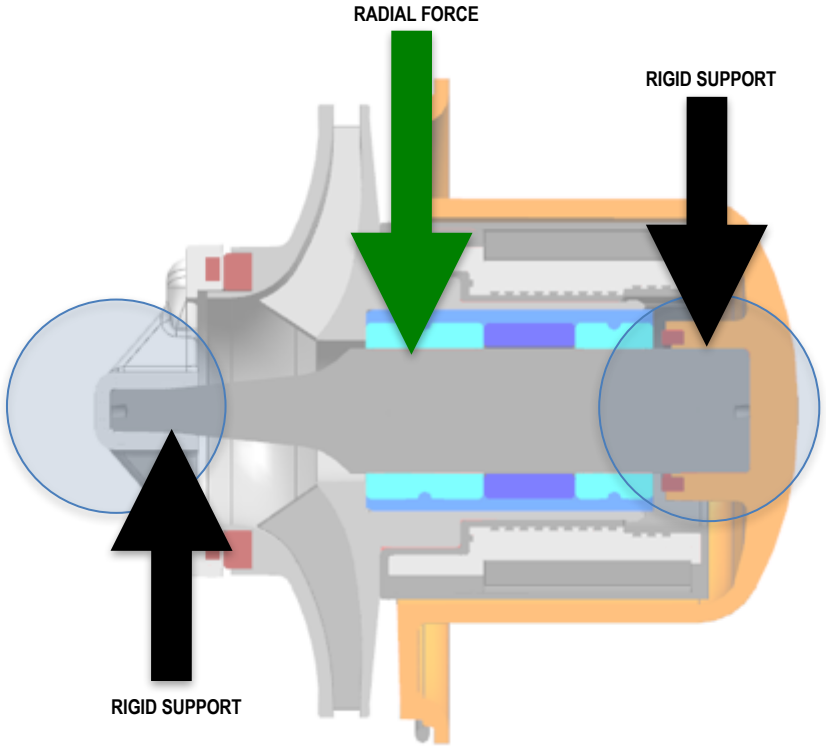
Features.

Fully Supported Impeller

– By rigidly supporting the stationary pump shaft at the pump suction and rear containment shell, ANSIMAG keeps your equipment up and running by providing a fully supported platform for the rotating impeller assembly, preventing any radial deflection when operating at low flow (or off BEP) conditions.

– By preventing any radial impeller deflection, ANSIMAG increases the allowable operating range and reliability of the pump over cantilevered or overhung impeller designs.



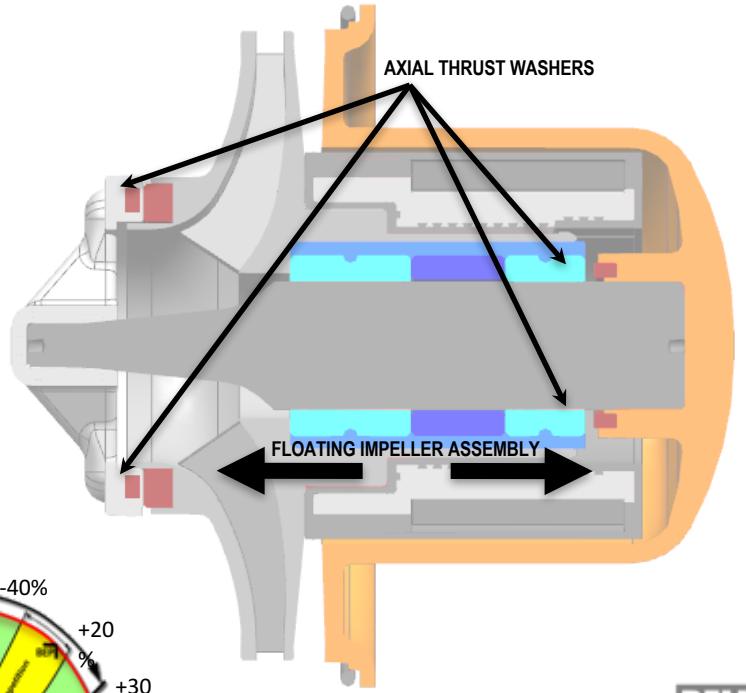
RELIABILITY REALIZED.

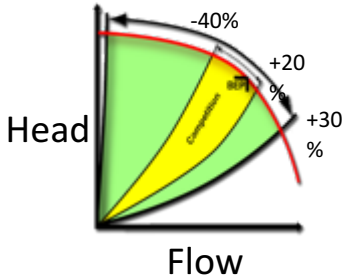
Features.

Axial Thrust Washers

– By using axial thrust washers, ANSIMAG increases the *allowable* operating range over "thrust balanced" methods.

– Unlike competitive designs, ANSIMAG axial thrust balancing design provides a positive thrust surface that is unaffected by cavitation, solids or transient suction conditions and effective over the complete operating range of the unit for increased pump reliability.





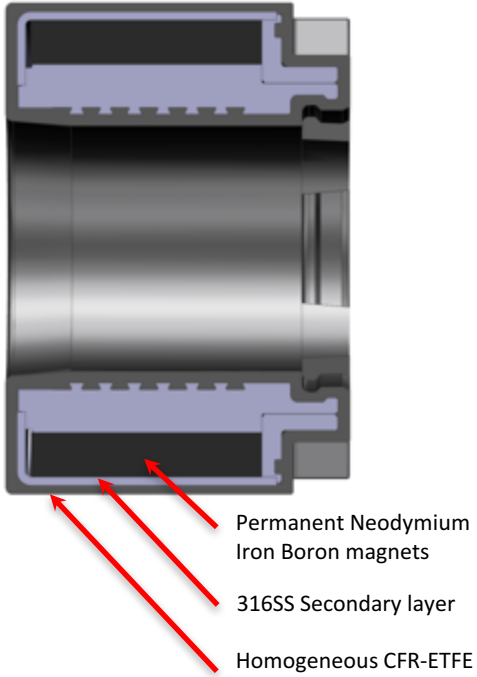
RELIABILITY REALIZED.

Features.

Fully Encapsulated Magnetic Drive

– ANSIMAG patented inner drive encapsulation process hermetically seals the inner magnets, isolating them from process fluid, maintaining the integrity and strength of the magnets over the lifetime of the unit

- Homogenous primary boundary layer of CFR-ETFE hermetically seals the magnets Unlike competitive designs, the chance for permeation is removed by eliminating any post injection molding machining or plastic welding.
- A secondary stainless steel layer is provided for increased durability.
- "Permanent" neodymium iron boron magnets are utilized to ensure performance over the lifetime of the pump.



RELIABILITY REALIZED.

Features.

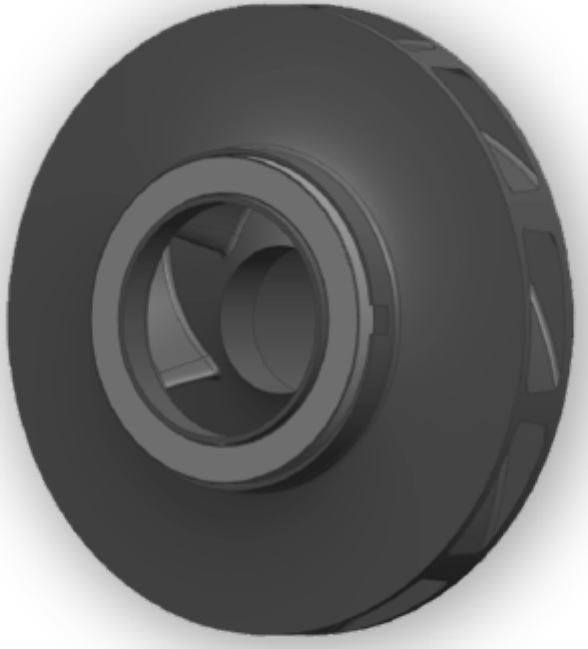
Replaceable Impeller

– ANSIMAG pumps feature a single piece closed impeller that is separate from the inner magnet drive.

– The impeller is attached to the inner magnet drive with ANSIMAG patented tongue and groove system.

– Unlike competitive designs, the single piece replaceable impeller enables a cost effective approach to both:

- warehouse spares mgmt
- re-rating operation conditions for the unit.



RELIABILITY REALIZED.

Features.

Simple Sealless Design

– If an ANSIMAG pump should fail due to process upset or other means... the pump can be quickly and easily repaired in the field.

– ANSIMAG pumps consist of only **9 wetted parts**.

– Routine maintenance or repairs can be performed in the field without the need for special training or tools.

Simple by Design™

ANSIMAG

COMPETITION

RELIABILITY REALIZED.

Features.

Superior Solids Handling

– With its generous internal clearances, ANISMAG pumps are designed to handle liquids with solids up to 20%+ w/w, 1/8 inch diameter.

– Unlike competitive designs, ANSIMAG pumps do not rely on close fitting internally wetted Silicon Carbide wear rings (held in place with non-metallic snap rings) that can trap solids or lock-up the pump.

Frequently Handled Solids:

- Inorganic Salts
- Fine Sand
- Caustic Precipitates
- TiO_2 (Paints & Coatings)
- Slag (Steel Pickeling)
- Carbon Black

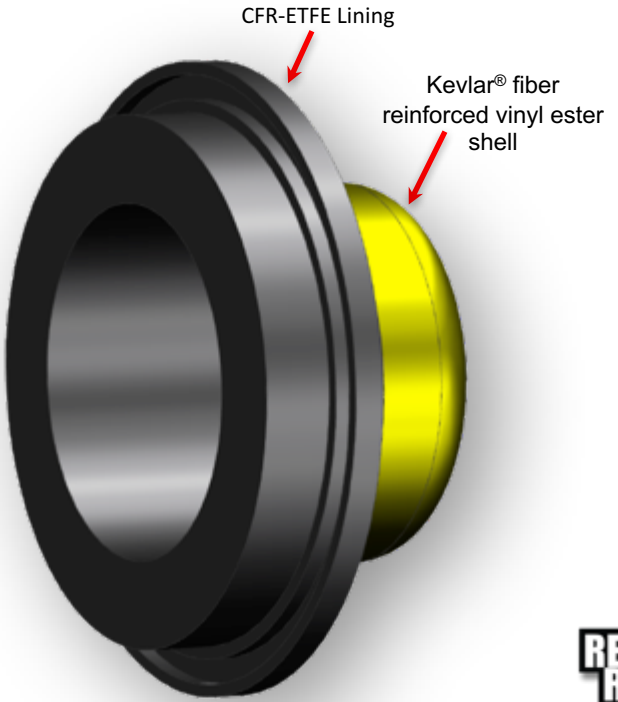
RELIABILITY REALIZED.

Features.

Non Metallic Containment Shell

– With the ANSIMAG non-metallic containment shell, ANSIMAG pumps are as energy efficient as mechanically sealed pumps.

- The non-metallic CFR-ETFE lined containment shell generates no hysteresis losses during operation. No hysteresis loss means **no heat generation** and **no power loss**
- With a burst pressure of 6X MAWP of the pump, the Kevlar® fiber reinforced vinyl ester shell provides ANSIMAG pumps with industry leading robustness,



RELIABILITY REALIZED.

The ANSIMAG line of chemical process pumps are designed and built with the reliability and durability features that defines the Sundyne brand promise...

RELIABILITY REALIZED.

ANSIMAG Envelope.

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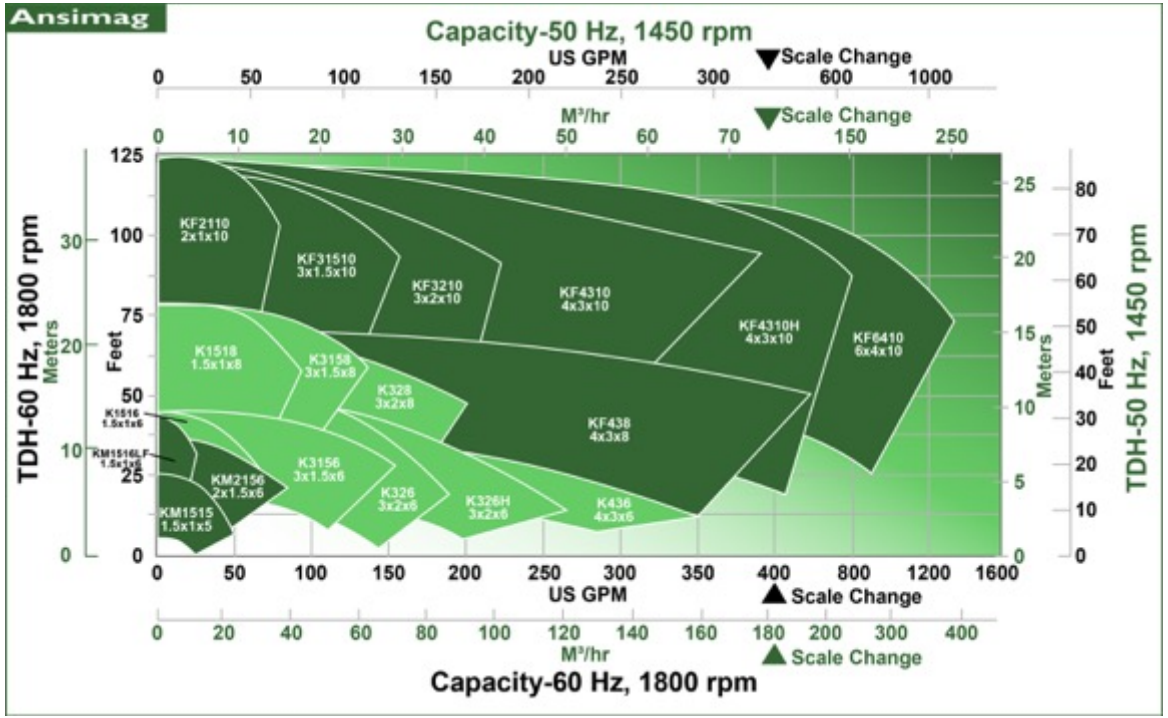
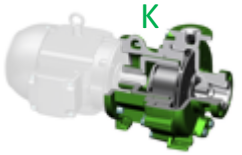
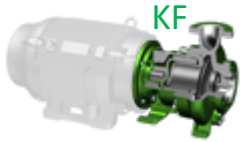


*KV, KP and KI models are not included on this chart. Please refer to the individual model page for these models.





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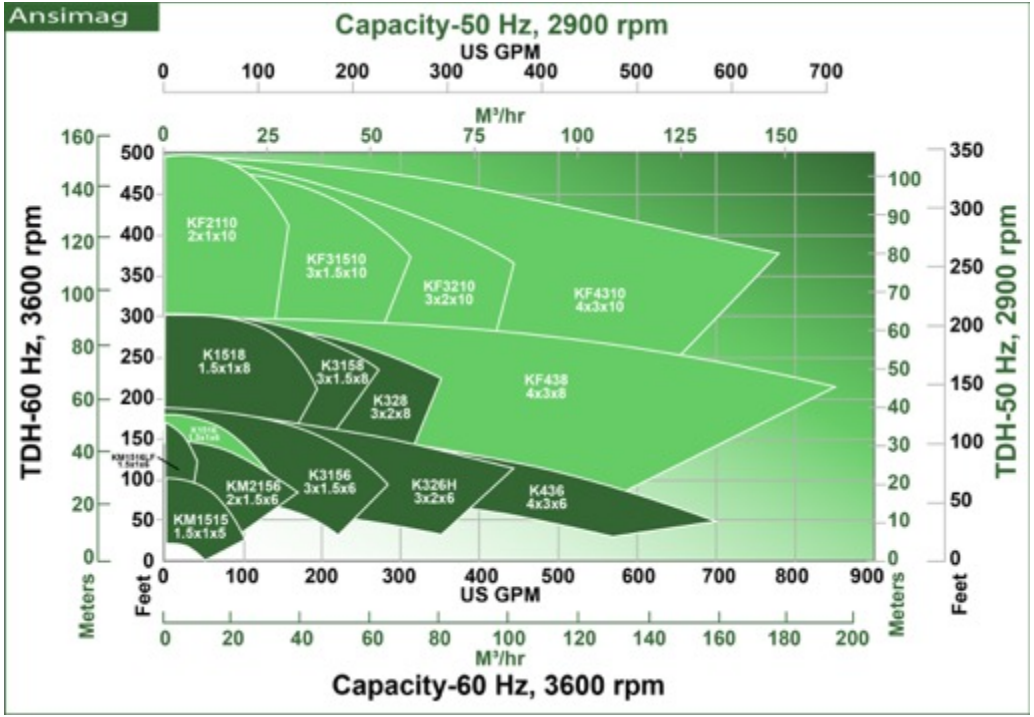
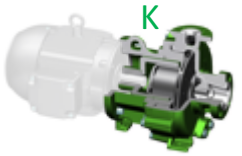
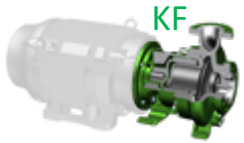






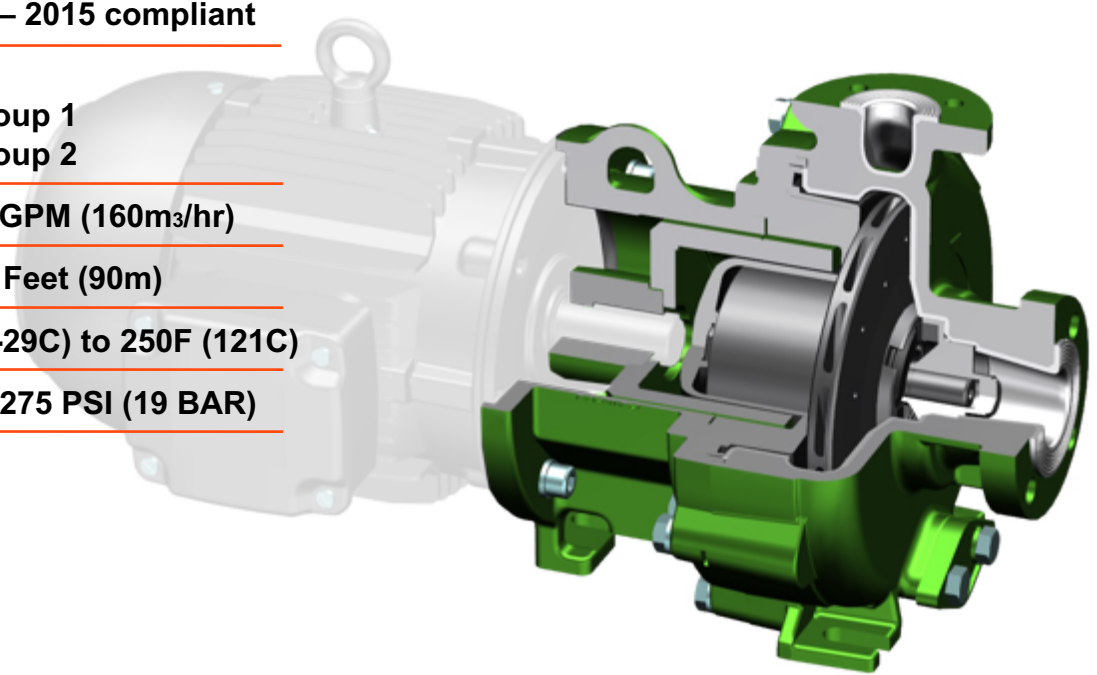
RELIABILITY REALIZED.

*KV, KP and KI models are not included on this chart. Please refer to the individual model page for these models.

K Series.

ASME/ANSI Standard Pumps

- ASME B73.3 – 2015 compliant
- 10 Sizes
  - (6) Group 1
  - (3) Group 2
- Flow: to 700 GPM (160m3/hr)
- Head: to 300 Feet (90m)
- Temp: -20F (-29C) to 250F (121C)
- Pressure: to 275 PSI (19 BAR)

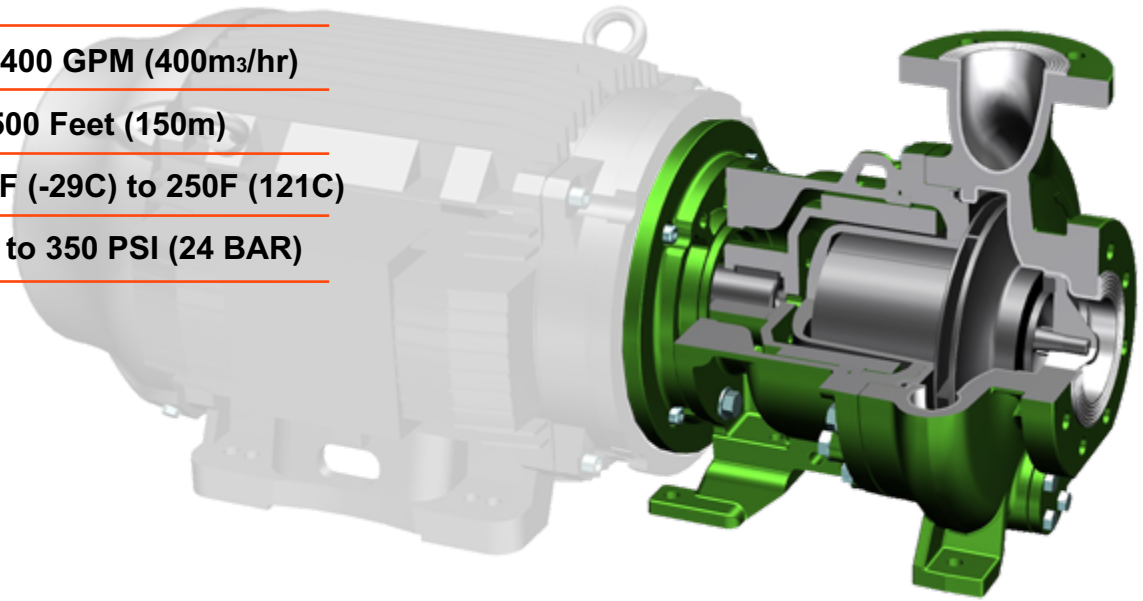


RELIABILITY REALIZED.

KF Series.

ASME/ANSI Standard Pumps

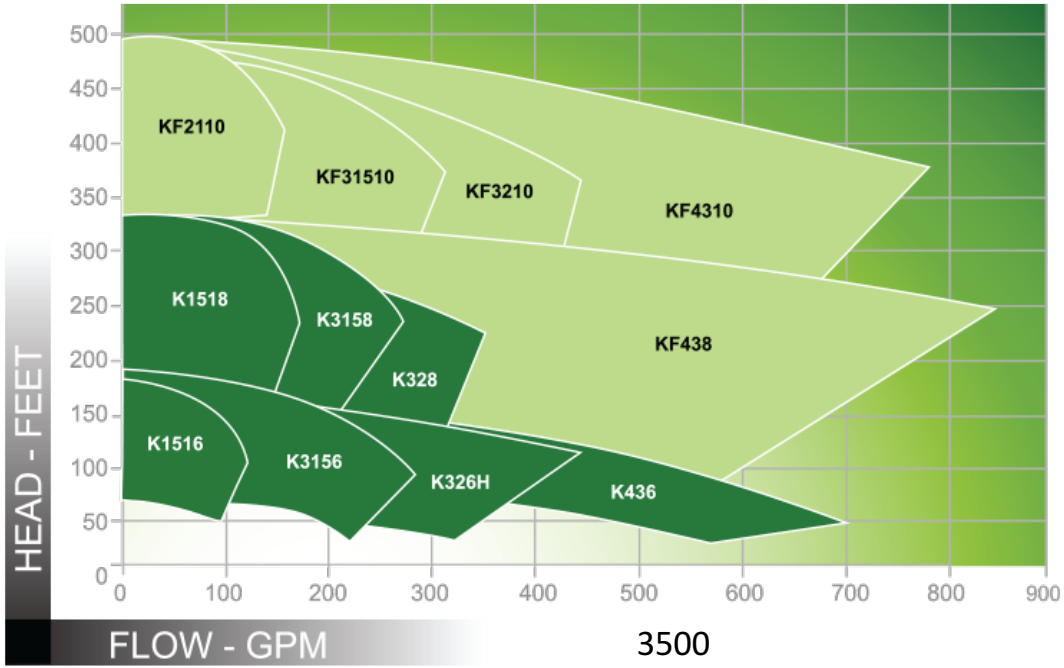
- ASME B73.3 – 2015 compliant
- 7 Sizes
- Flow: to 1400 GPM (400m3/hr)
- Head: to 500 Feet (150m)
- Temp: -20F (-29C) to 250F (121C)
- Pressure: to 350 PSI (24 BAR)



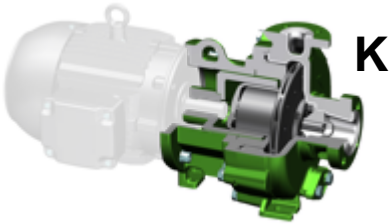
RELIABILITY REALIZED.

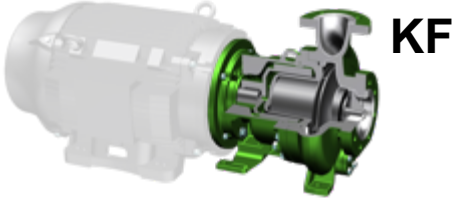
Performance.

K / KF Series: 60Hz



3500
RPM

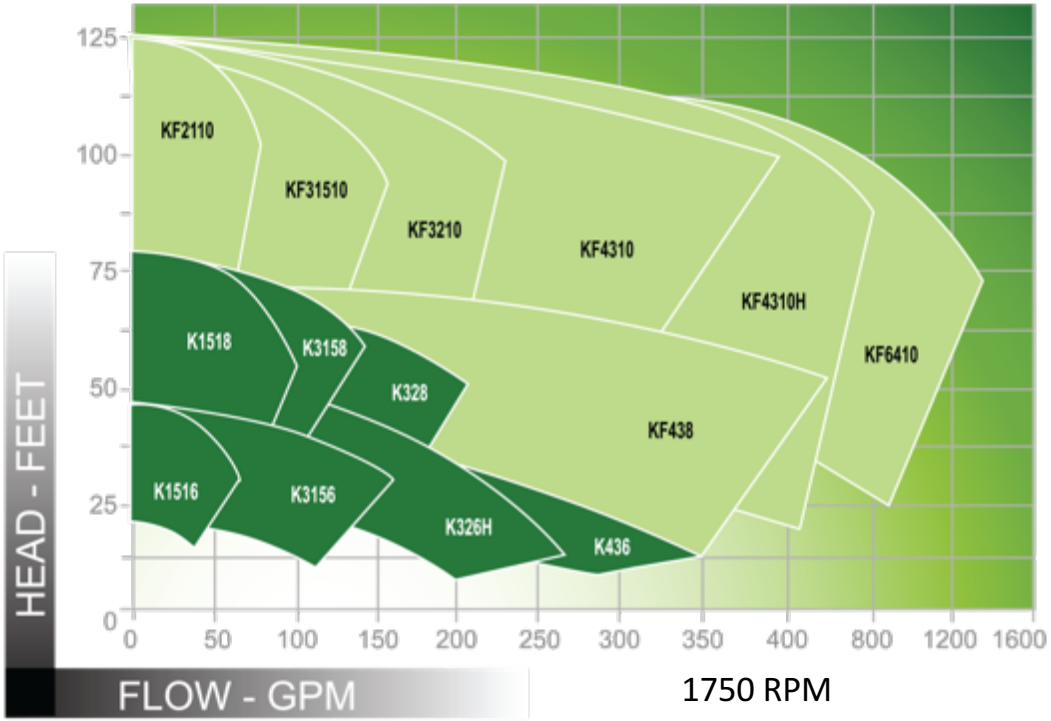




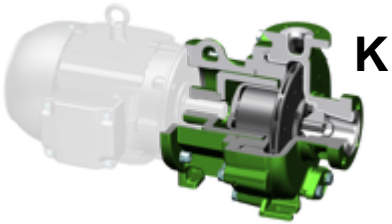
RELIABILITY REALIZED.

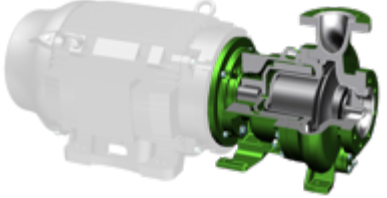
Performance.

K / KF Series: 60Hz



1750 RPM

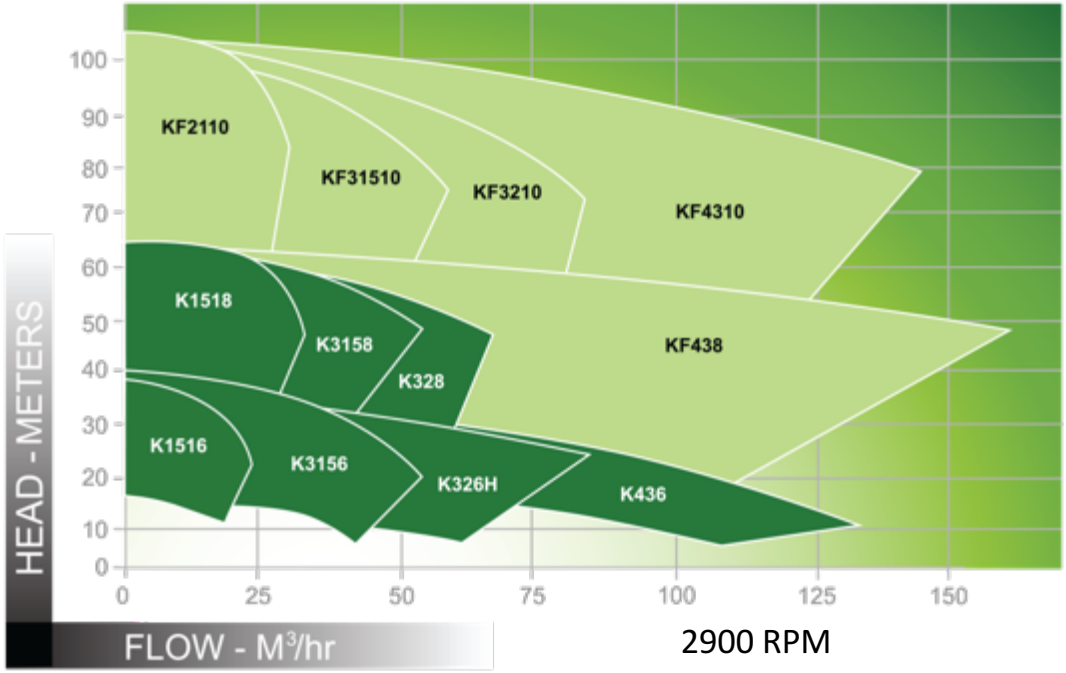




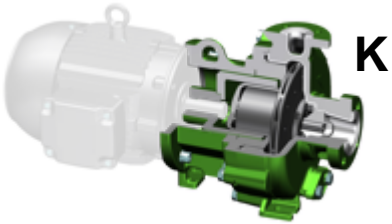
RELIABILITY REALIZED.

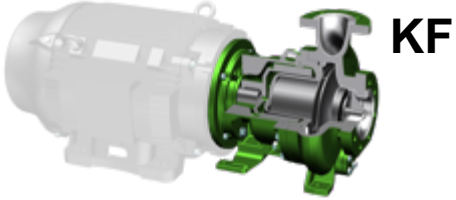
Performance.

K / KF Series: 50Hz



2900 RPM

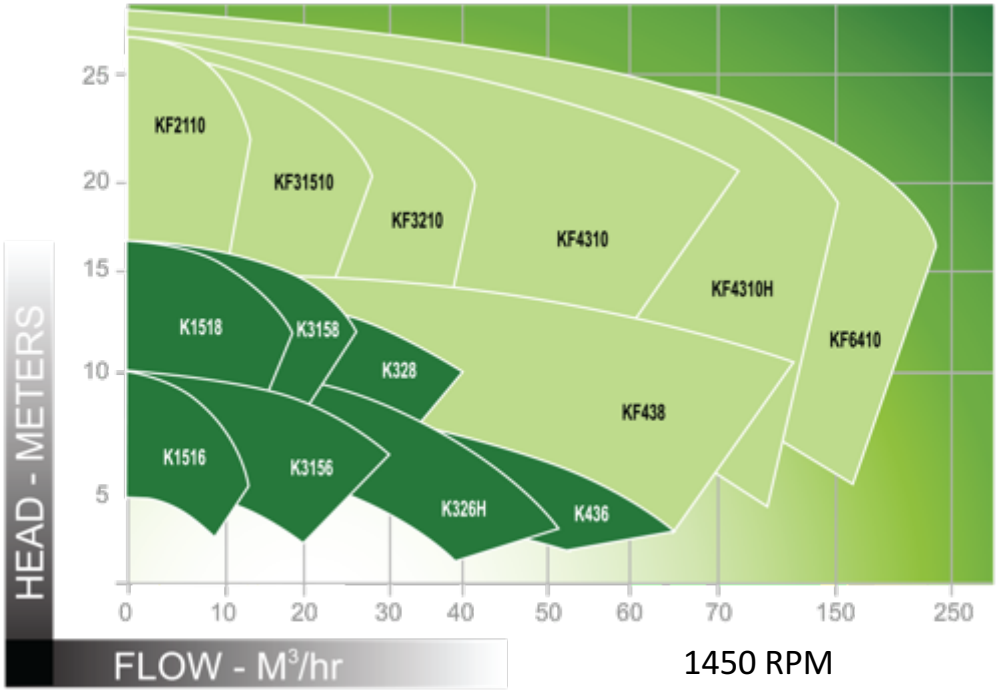




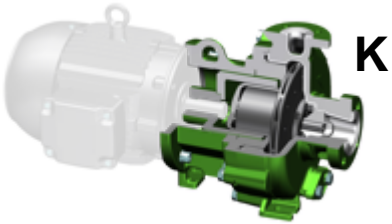
RELIABILITY REALIZED.

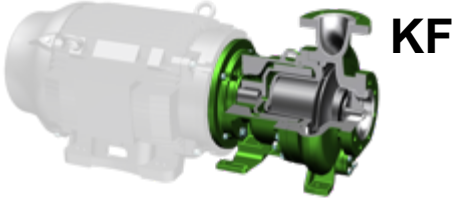
Performance.

K / KF Series: 50Hz



1450 RPM



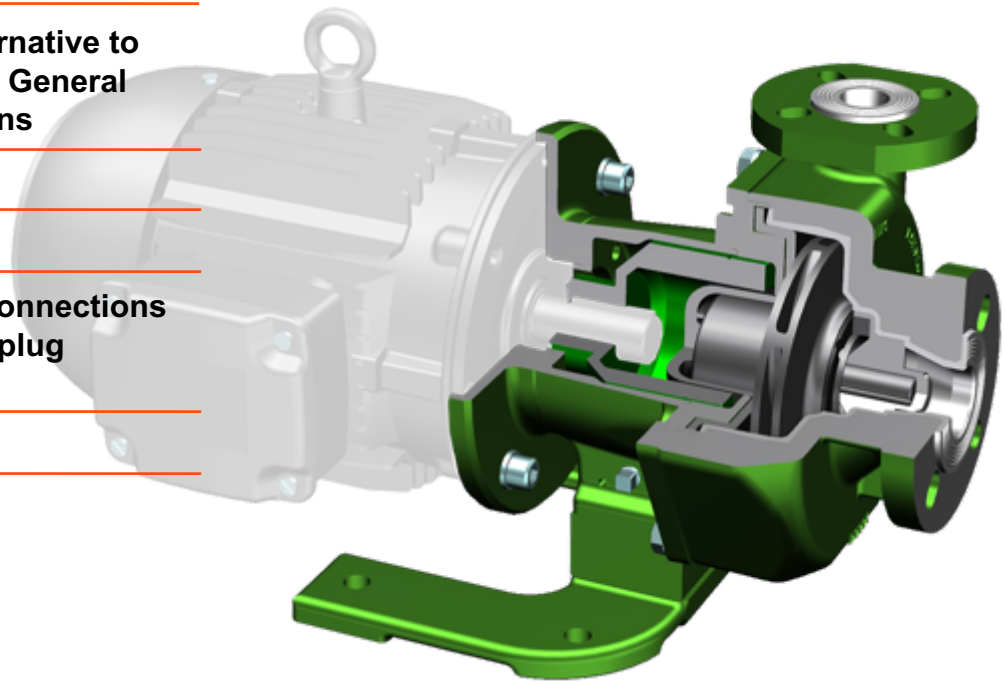


RELIABILITY REALIZED.

KM Series

General Industrial Pumps

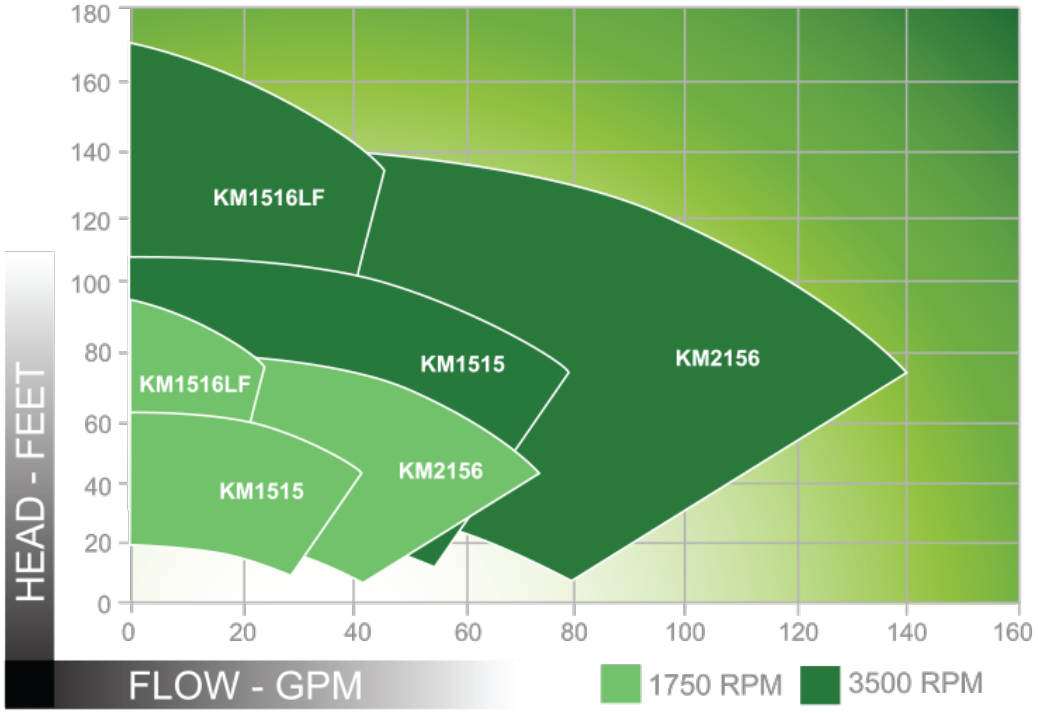
- Cost effective alternative to ANSI/ISO pumps for General Industrial applications
- 3 Sizes
- 150 PSI MAWP
- Universal flange connections (ANSI 150# ISO/DIN plug compatible)
- ETFE or PFA lined construction

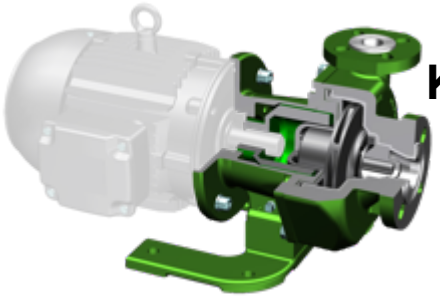


RELIABILITY REALIZED.

Performance.

KM Series:
60Hz



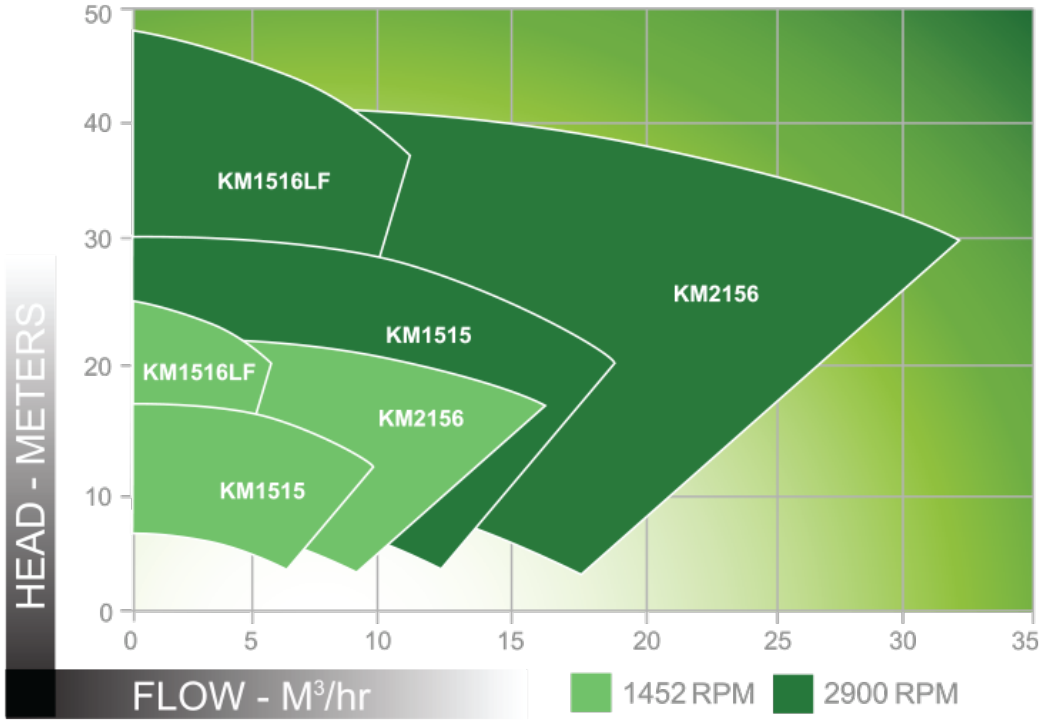


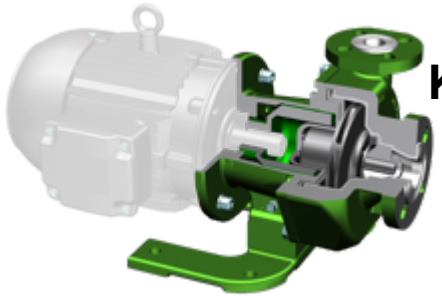
KM

RELIABILITY REALIZED.

Performance.

KM Series:
50Hz





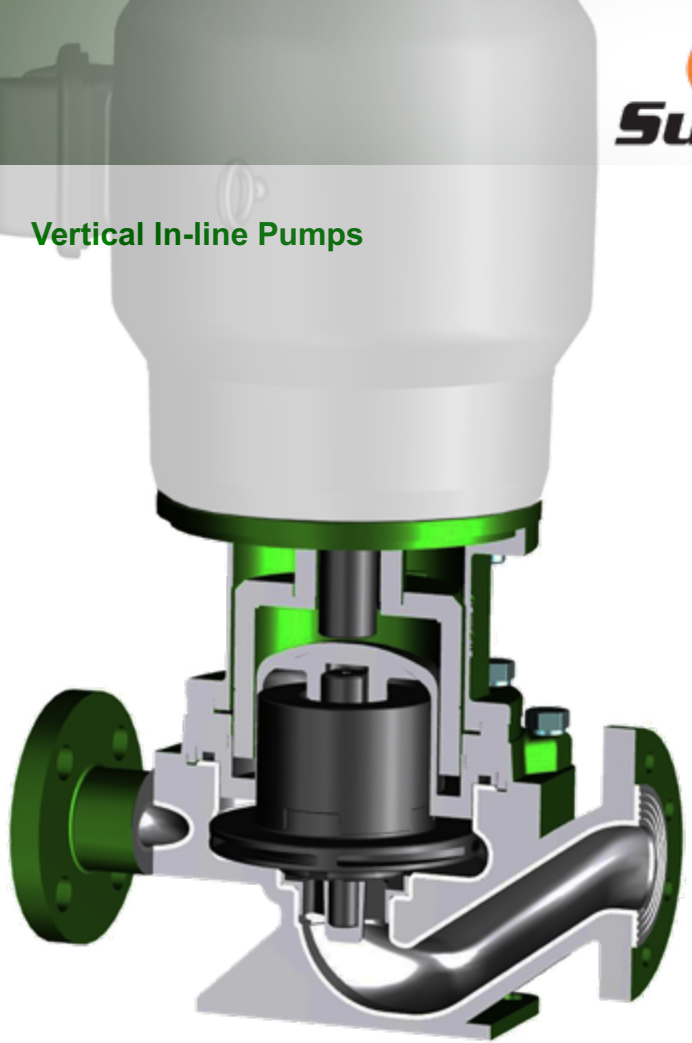
KM

RELIABILITY REALIZED.

KV Series.

Vertical In-line Pumps

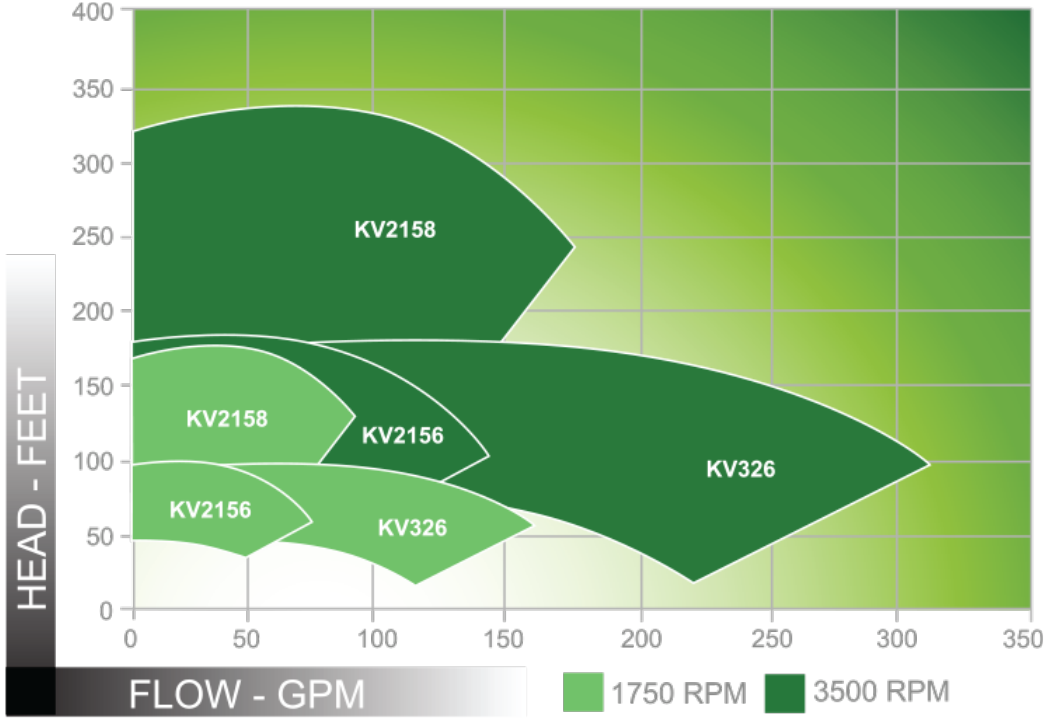
- 3 Sizes
- Dimensionally interchangeable with ASME B73.2 vertical inline pumps
- Small compact footprint
- Internal parts interchangeable with ANSIMAG K series pumps



RELIABILITY REALIZED.

Performance.

KV Series:
60Hz

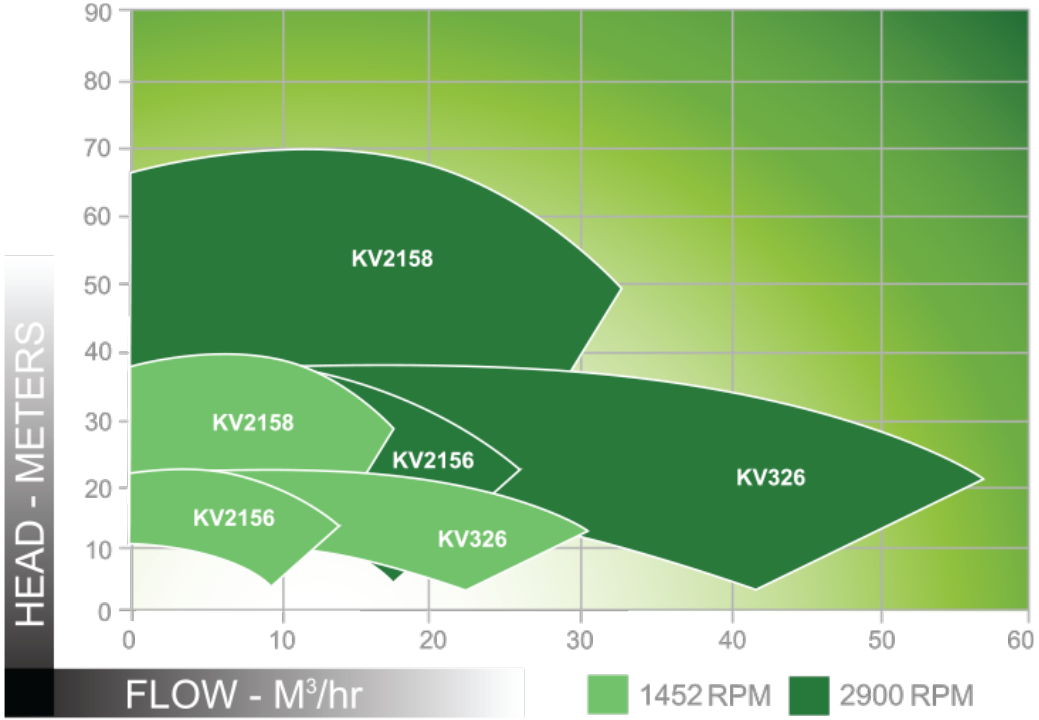


KV

RELIABILITY REALIZED.

Performance.

KV Series:
50Hz



KV

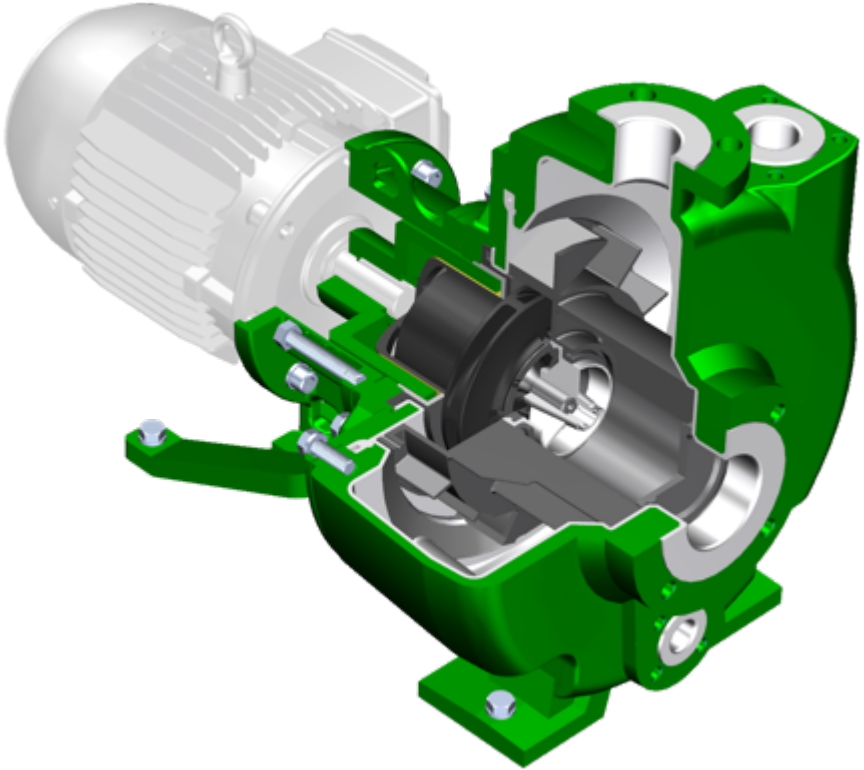
RELIABILITY REALIZED.

KP Series.

Sundyne

Self-Priming Pumps

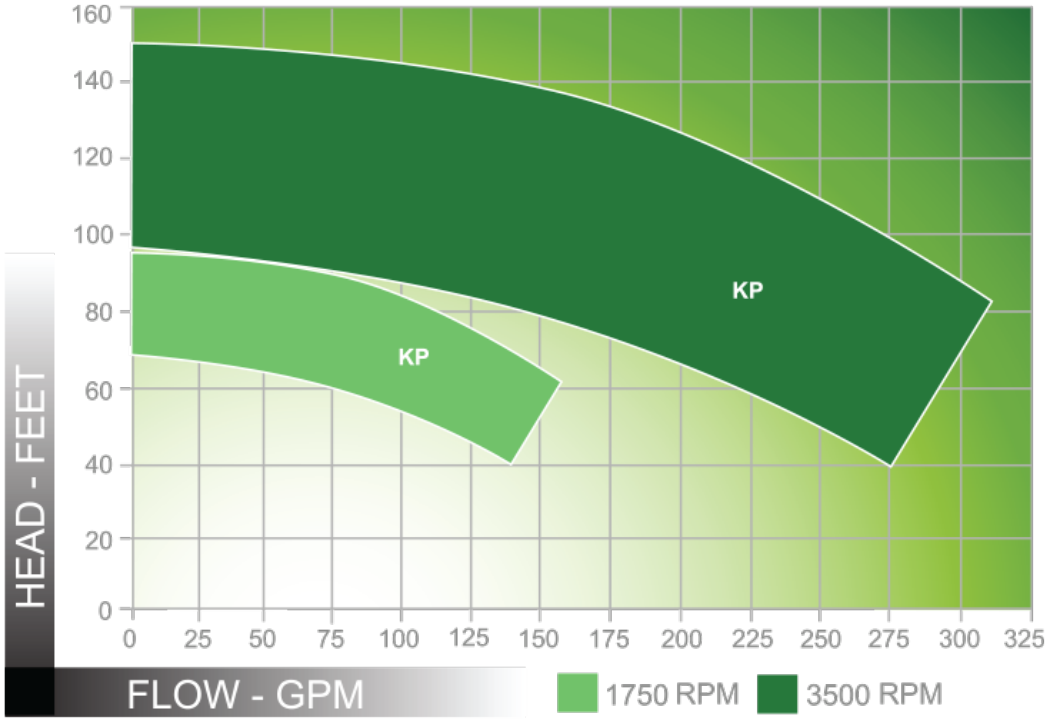
- Ideal for tanker truck or rail car (un)loading
- Compact self-priming design. No external priming chamber or air seperator required
- Internal check valve to prevent reverse flow or loss of priming liquid due to siphoning
- Fast priming. Suction lift to 20 feet (6.1m)
- Optional "goose neck" for sump pump applications
- Internal thermo well for monitoring liquid temperature
- Close coupled or long coupled

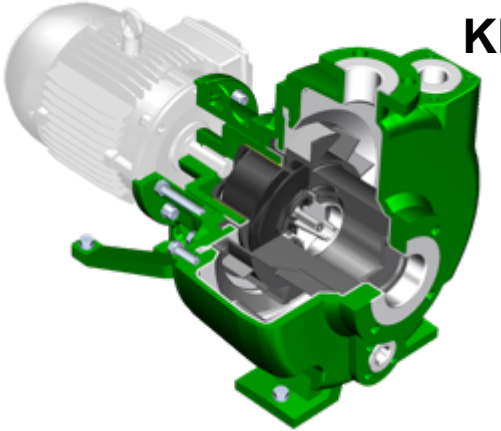


RELIABILITY REALIZED.

Performance.

KP: 60Hz

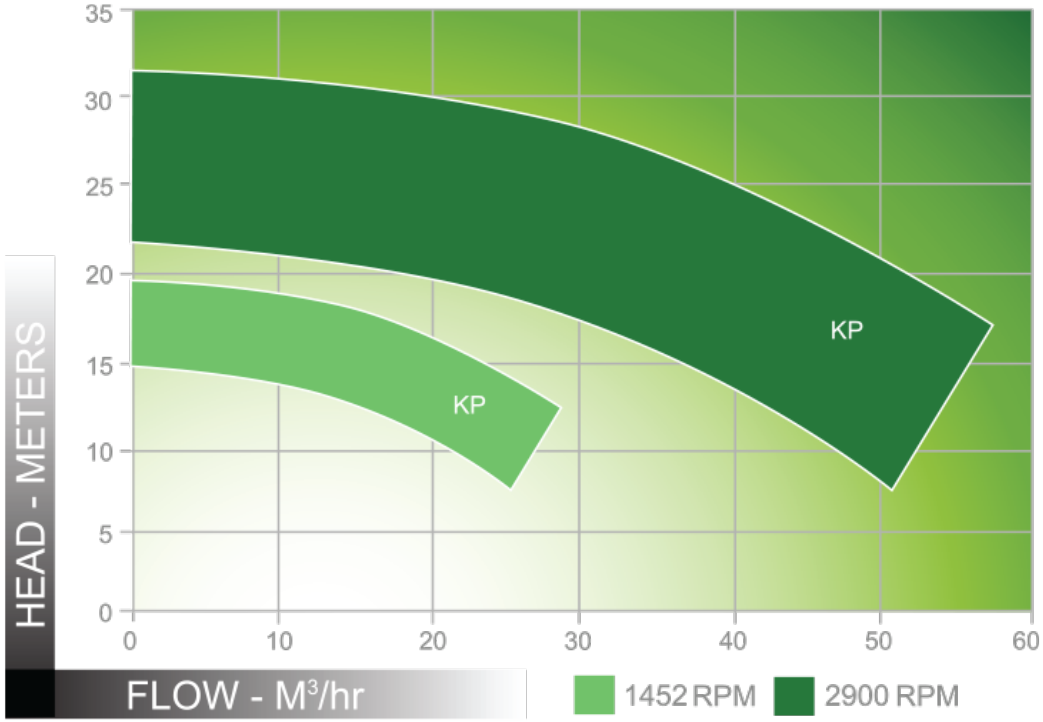


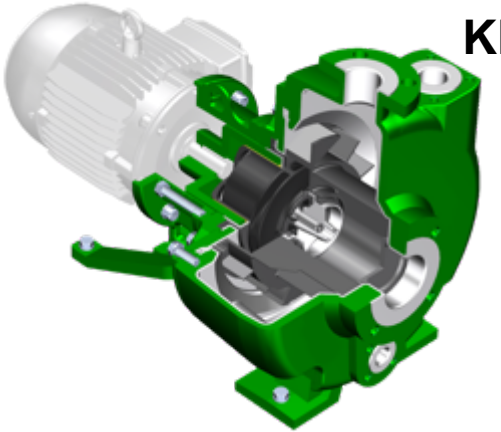


RELIABILITY REALIZED.

Performance.

KP: 50Hz





KP

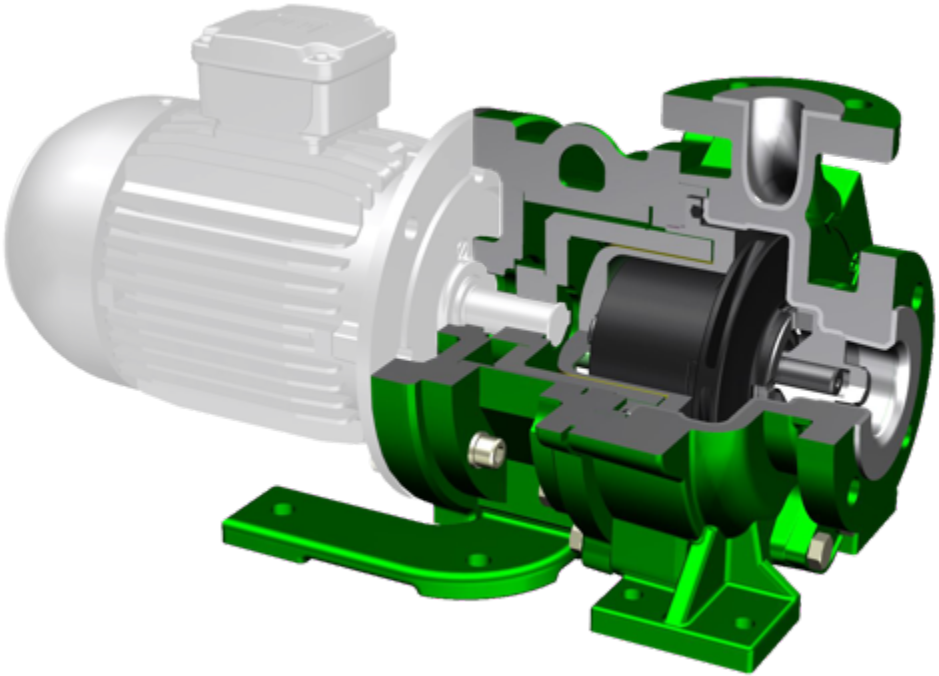
RELIABILITY REALIZED.

KI Series.

Sundyne

ISO 2858 / EN 22858 Pumps

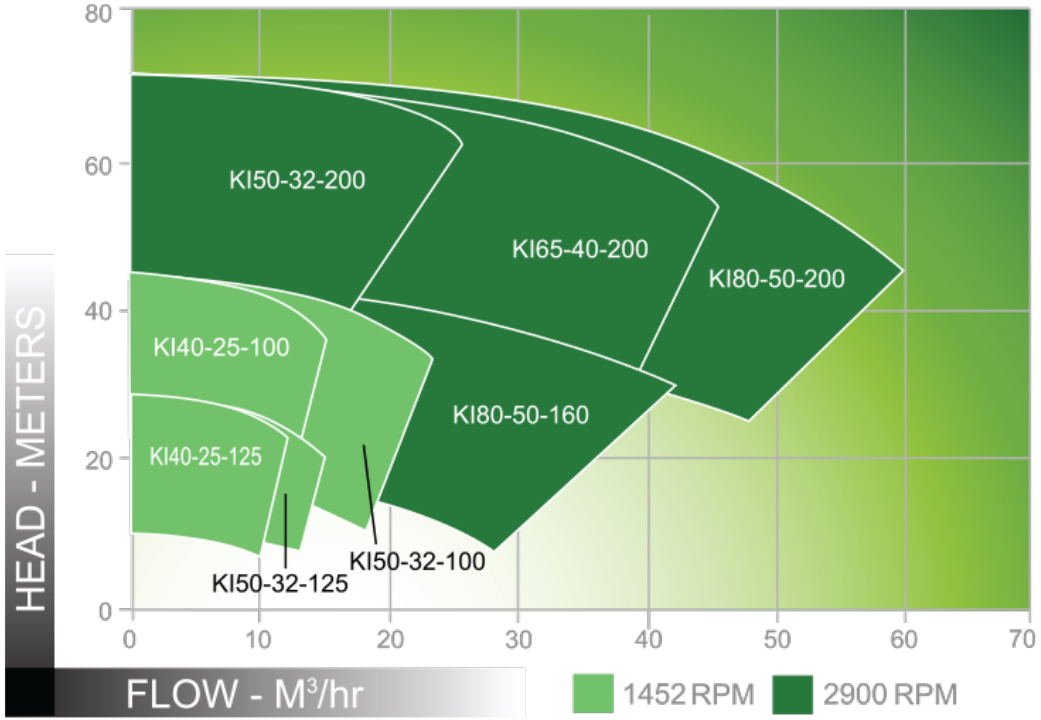
- 5 Sizes
- ATEX / CE Certified
- ISO 2858 Dimensional Casing
- ISO/DIN PN16 Flange Connections
- Metric Hardware
- Compatible With Standard IEC (B5) Motors

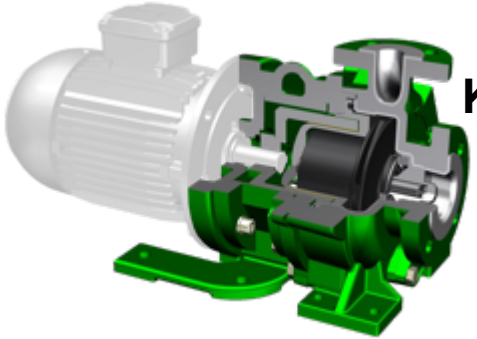


RELIABILITY REALIZED.

Performance.

KI Series:
50Hz





KI

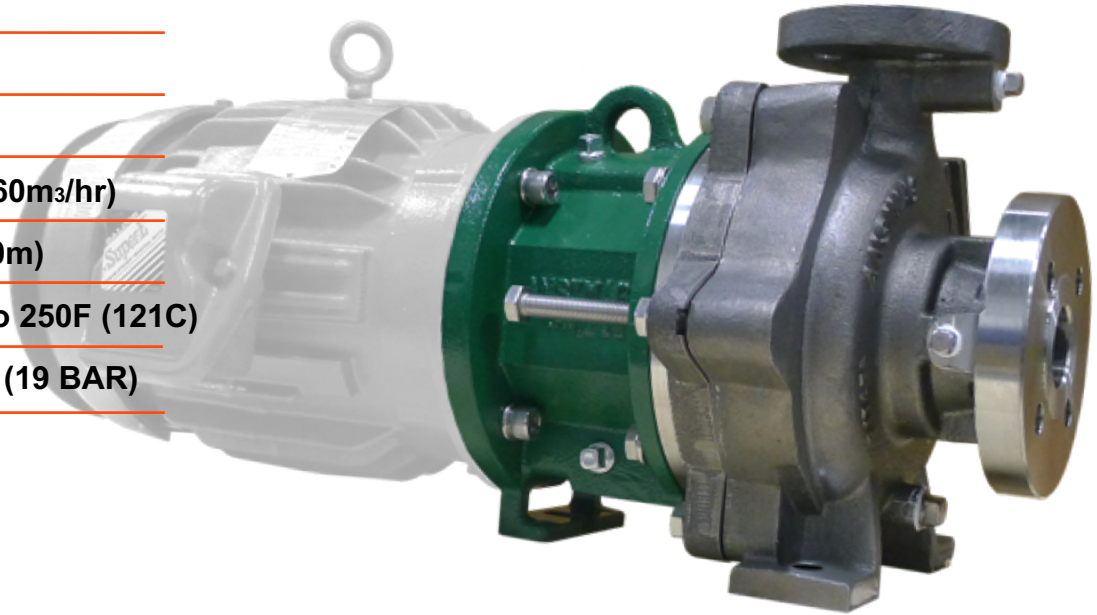
RELIABILITY REALIZED.

KH Series.

Sundyne

Low Temp HTF Pumps

- Ideal for low temperature heat transfer applications
- 6 Sizes
- 316 SS casing
- Flow: to 700 GPM (160m3/hr)
- Head: to 300 Feet (90m)
- Temp: -120F (-84C) to 250F (121C)
- Pressure: to 275 PSI (19 BAR)



RELIABILITY REALIZED.

OPTIONS &

Accessories.

Power Monitor

– Installed in the Motor Control Center (MCC), a power monitor measures the power required to operate the pump. By setting High and Low trip points, the power monitor is the perfect solution for protecting your pump from:

- Dry running
- Low flow (dead head) Operation
- High flow (off curve) Operation
- Severe Cavitation
- Magnetic De-coupling

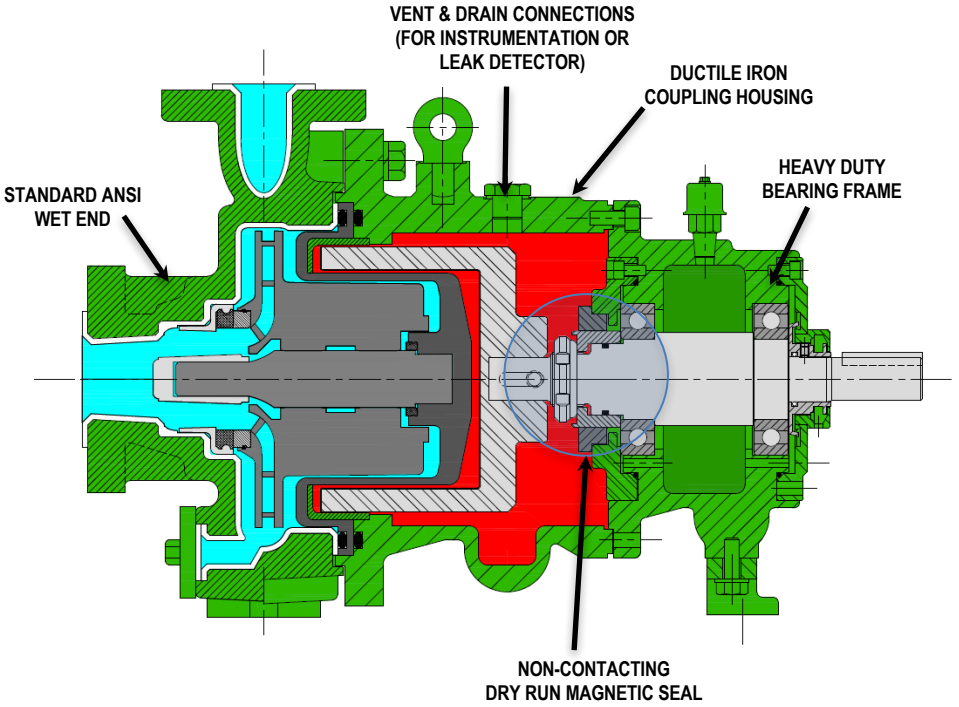
RELIABILITY REALIZED.

OPTIONS &

Accessories.

Secondary Control

– ASME B73.3 – 2015; 5.6.3.1 compliant back-up to control the pumpage in the event primary pressure containment is breached.



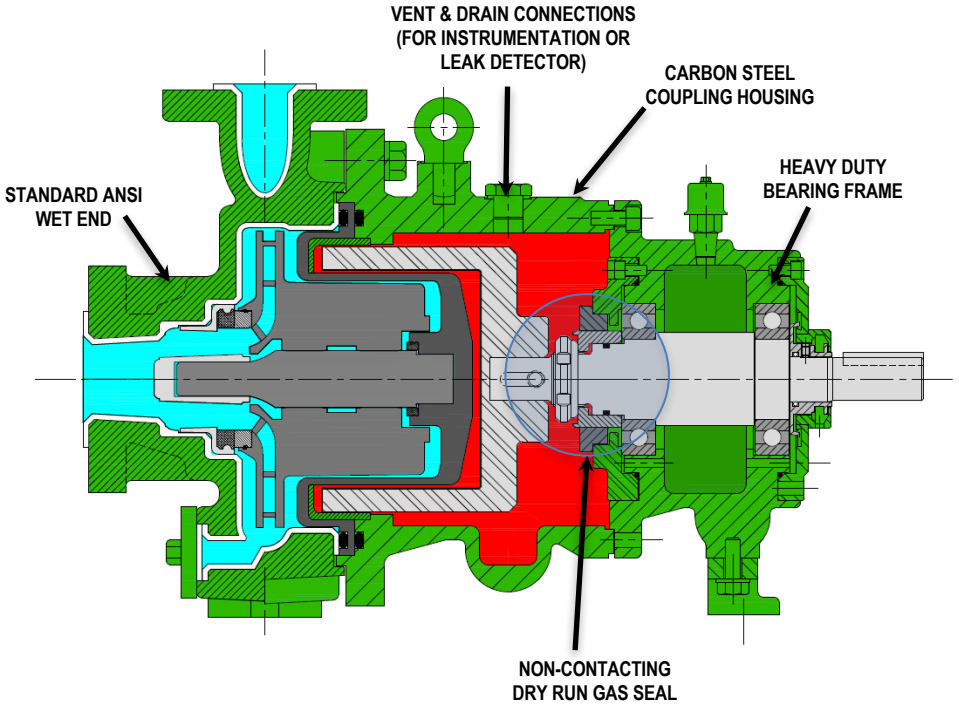
RELIABILITY REALIZED.

OPTIONS &

Accessories.

Secondary Containment

– ASME B73.3 – 2015; 5.6.3.2 compliant Back-up to contain the pumpage in the event that primary pressure containment is breached.



RELIABILITY REALIZED.

OPTIONS &

Accessories.

Liquid Leak Detector

– Solid state device for detecting liquid in the event of a leak in the primary containment shell

Long Coupled

– Long coupled configurations conforming to ANSI B73.3-2015 dimensions for easy replacement of mechanically sealed pumps (utilizing same baseplate, coupling, guard and motor)

RELIABILITY REALIZED.

OPTIONS &

Accessories.

Dry Run Resistant Bearings

Fitting an Ansimag pump with **Carbon** radial bushings reduces the coefficient of friction with the pump shaft extending the life of pump during process upset or dry run operating conditions

Basetek® Baseplates

Pre-engineered, chemically resistant polymer concrete bases provide a superior foundation to channel steel alternatives

RELIABILITY REALIZED.

TYPICAL

Applications.

Chemical Processing
- Various VOCs

Agricultural Chemical
- Pesticides, Insecticides, Herbicides

Aquatic
- Seawater

Biofuels

Chlor-Alkali
- Sodium Hypochlorite, Sodium Hydroxide, Sulfuric Acid, Chlorinated Brine

Water & Wastewater Treatment
- Sodium Hypochlorite, Sodium Hydroxide, Sulfuric Acid

Steel Finishing
- Hydrochloric Acid

Pharmaceutical
- Low Temp Heat Transfer

Electronics
- Hydrofluoric Acid, Sulfuric Acid

Mining
- Sodium Cyanide, Sulfuric Acid, Hydrochloric Acid

Upstream
- Produced Water, Crude Oil

General Industry

References Available

RELIABILITY REALIZED.

Quality.

Quality Management System
- Certified to ISO 9001:2008

Continuous Improvement Program
- Lean Six Sigma

Quality Assurance
- Visual/Dimensional Inspections
- Vacuum Test (Inner Drive)
- Spark Test (Casing Lining)
- Hydrostatically Test (Assembly)

Inspection Documents
- To EN10204:2004

Testing
- Hydrostatic Test
- Performance Test
- NPSH Test

RELIABILITY REALIZED.

ANSIMAG Process Pumps

ETFE-lined Sealless Pumps
for Chemical Services

RELIABILITY REALIZED.