



# **VIKING PUMP<sup>®</sup>**

## **PRODUCT CATALOG**

**GLOBAL LEADER** IN POSITIVE  
**DISPLACEMENT PUMPING** SOLUTIONS

## GLOBAL **LEADER** IN POSITIVE DISPLACEMENT **PUMPING** SOLUTIONS



**VIKING PUMP HYGIENIC**  
Eastbourne, United Kingdom



**VIKING PUMP CANADA**  
Windsor, Ontario, Canada



**IDEX PUMP TECHNOLOGIES**  
Shannon, Ireland



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## SOLUTIONS PROVIDER

With over 110 years of expertise, each Viking pump is uniquely designed for the task at hand, from simple solutions to your most advanced and demanding needs.

## QUALITY MANUFACTURING

Viking's vertically integrated production process, from raw materials to finished product, meet ISO 9001:2015 quality standards. Global manufacturing footprint in the Americas, Europe and Asia use Six-Sigma and Lean Kaizen tools.

## RELIABILITY, QUALITY & PERFORMANCE

Offering one of the broadest selections of pumping principles, designs, materials and options available, Viking pumps are time and field tested to meet or exceed your expectations.

## APPLICATION & INDUSTRY SUPPORT

Channel support group of application, sales and design engineers develops unique pumping solutions for both OEM manufacturers and pump end users with unique requirements.

## GLOBAL SALES & SERVICE

Viking pumps are in operation on all 7 continents. Our worldwide network of factory-trained distributors understand your application and service needs.

## DID YOU KNOW?

Viking Pump founder, *Jens Nielsen*, invented the first ever internal gear pump; patented on February 4th, 1904.



# QUALITY & LAB SERVICES

## ANALYTICAL SERVICES FOR OPTIMUM PERFORMANCE



Enable best possible pump selection for your liquids and process conditions



Validate pump performance before installation with certified pump tests



Satisfy engineering specifications and governmental regulations



Test your pump only, or the complete unit (pump, reducer & drive)



Guarantee accuracy with NIST-traceable calibration



Test at your required viscosities



## LAB RESOURCES

- | Dynamometers
- | Data Acquisition Tools
- | Viscometer
- | Test Liquids from 28 to 25,000 SSU
- | Machine Shop

## TESTING SERVICES

- | Pneumatic Testing
- | NPSHr Testing
- | Sound & Vibration
- | Visual Inspection & Measurements
- | Material Testing
- | Liquid Sample Analysis
- | Positive Material Identification
- | Traceability
- | Magnetic Particle Testing



Watch our product engineering lab video



## CERTIFIED PERFORMANCE TEST

- | Factory testing to ensure your Viking pump meets your performance requirements
- | Using state-of-the-art dynamometers and data gathering software, tests can be performed on a variety of liquids to best duplicate your unique conditions of service
- | 9 dynamometers through 300 HP
- | Oils, solvents, water and other test fluids
- | Witnessed testing available



## CERTIFIED HYDROSTATIC TEST

- | Hydrostatic testing ensures that your pump will not leak at or beyond your application pressure, using petroleum-based or non-petroleum test fluid
- | Test condition is at 1.5x the maximum operating pressure or 250 PSI (whichever is greater)
- | Pressure and duration may be changed to meet customer specifications
- | Pneumatic testing also available

Note: Not all tests are available at all manufacturing locations.

# MARKETS & APPLICATIONS



## WE HAVE THE PRODUCTS FOR YOUR INDUSTRY

We have experience with thousands of liquids that allow us to deliver proven solutions for your application, whether it is thin / thick, hot / cold, edible / toxic, liquid / solid and much more.



## CHEMICALS

- | Acids & Bases
- | Alcohols & Solvents
- | Soaps & Detergents



## POLYMERS

- | Rubbers & Plastics
- | Fibers & Resins
- | Polyurethanes



## OILS

- | Crude Oils
- | Lube Oil & Greases
- | Asphalt & Bitumens



## FUELS

- | Refined Fuels
- | Biofuels
- | Liquefied Gases



## PHARMACEUTICAL

- | Medicinal Chemicals
- | Creams & Ointments
- | Blood & Plasma Processing



## MACHINERY

- | Fuel & Lube
- | Heat Transfer Liquids
- | Filtration



## FOODS

- | Liquid Sugars
- | Chocolate & Confectionery
- | Edible Oils



## DAIRY

- | Butter
- | Cheese
- | Cream



## PULP & PAPER

- | Coatings
- | Starch
- | Black Liquor Soap



## PERSONAL CARE

- | Lotions & Creams
- | Toothpaste
- | Hair & Skin Care



## WATER & WASTEWATER

- | Methanol
- | Polymers
- | Additives



## COATINGS & SEALANTS

- | Paints, Dyes & Inks
- | Adhesives
- | Caulks



## BEVERAGES

- | Distillers & Vinters
- | Fruit & Vegetable Purees
- | Carbonated Drinks



 CONTACT DISTRIBUTOR

**VIKING PUMP®**

# PRODUCT QUICK VIEW GUIDE

SEGMENT	VIKING PUMP INDUSTRIAL SOLUTIONS						
PRODUCT LINES	Universal			Motor Speed			
EXTERNAL MATERIAL	Cast Iron	Steel Externals	Stainless Steel	Ductile Iron	Cast Iron	Steel Externals	Stainless Steel
<b>PERFORMANCE*</b>							
Maximum Flow – GPM	1,600	1,600	1,600	190	580	115	75
Maximum Flow – LPM	6,057	6,057	6,057	719	2,196	435	284
Maximum Flow – m <sup>3</sup> /h	363	363	363	43	132	27	17
Maximum Pressure – PSI	200	200	200	500	250	250	200
Maximum Pressure – BAR	14	14	14	34	17	17	14
Maximum Viscosity – SSU	2,000,000	2,000,000	2,000,000	1,000,000	25,000	25,000	25,000
Maximum Viscosity – cSt	440,000	440,000	440,000	250,000	5,500	5,500	5,500
Temperature Range – °F	-40°F to +450°F	-20°F to +800°F	-120°F to +500°F	-60°F to +450°F	-40°F to +350°F	-20°F to +350°F	-40°F to +350°F
Temperature Range – °C	-40°C to +230°C	-30°C to +430°C	-85°C to +260°C	-50°C to +230°C	-40°C to +180°C	-30°C to +180°C	-40°C to +180°C
<b>SEALING</b>							
Packing	✓	✓	✓				
Lip Seal				✓	✓		
O-Pro® Seal	✓		✓				
O-Ring Seal							
Behind the Rotor Seal	✓		✓		✓	✓	✓
Component Mechanical Seal	✓	✓	✓	✓			
Cartridge Mechanical Seal	✓	✓	✓				
Cartridge Triple Lip Seal	✓	✓	✓				
API 682 Seal		✓	✓				
Sealless Mag Drive	✓	✓	✓	✓	✓	✓	✓
<b>JACKETING OPTIONS</b>							
Head / Bracket	✓	✓	✓				
Casing / Head / Bracket (Full)	✓	✓	✓				
<b>PORTING</b>							
Right Angle (90°)	✓	✓	✓				
Opposite (180°)	✓	✓	✓	✓	✓	✓	✓
NPT	✓		✓	✓	✓		
Flanged	✓	✓	✓		✓	✓	✓
SAE Flange				✓			
Rectangular Flange							
Threaded							
Hygienic Clamp							
SAE O-Ring				✓			
<b>MOUNTING</b>							
Foot Mount	✓	✓	✓	✓	✓	✓	✓
Motor Mount (Close-Coupled)				✓	✓	✓	✓
Vertical Mount				✓	✓	✓	
<b>PAGE</b>	<b>18-19</b>	<b>20-21</b>	<b>22-23</b>	<b>24-25</b>	<b>26-27</b>	<b>28-29</b>	<b>30-31</b>

\* Maximums and ranges are catalog standard ratings, special construction may be needed or allow for performance exceeding the ratings.

# ROTARY PUMP BENEFITS

VIKING PUMP HYGIENIC SOLUTIONS			
Circumferential Piston	Rotary Lobe	Circumferential Piston	Rotary Lobe
Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
450	832	450	832
1,703	3,149	1,703	3,149
102	189	102	189
500	218	500	218
34	15	34	15
2,000,000	2,000,000	2,000,000	2,000,000
440,000	440,000	440,000	440,000
to +300°F	to +355°F	to +300°F	to +355°F
to +150°C	to +180°C	to +150°C	to +180°C
	✓		✓
✓	✓	✓	✓
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✓	✓	✓	✓
✓	✓	✓	✓
✓	✓	✓	✓
✓	✓	✓	✓
32-33	34-35	32-33	34-35



## OPERATES AT ANY POINT ON THE CURVE

- High efficiency at full range of speeds
- Flow rate largely independent of changes in pressure



## LONG SEAL & BEARING LIFE

- Generally operated at speeds from 10 to 1750 RPM, for increased seal and bearing life



## LOW SHEAR

- Documented shear rates enable selection of proper pump and speed to protect shear-sensitive liquids



## LOW NPSHR

- Enables suction lifts, handling fluids prone to flashing, and pulling from vacuum vessels



## FLOW PROPORTIONAL TO SPEED

- Provides easy control of flow rate with a variable speed drive for excellent metering capabilities



## HANDLES A WIDE RANGE OF VISCOSITIES

- Capable of handling up to 2,000,000 SSU (440,000 cSt)



## SIMPLE MAINTENANCE

- Seal, head and gear replacement can usually be done in place without removing pump from piping



## SELF-PRIMING

- Enables priming if pump is above liquid level
- Some Viking pumps are capable of suction lifts up to 20 ft (6 m)



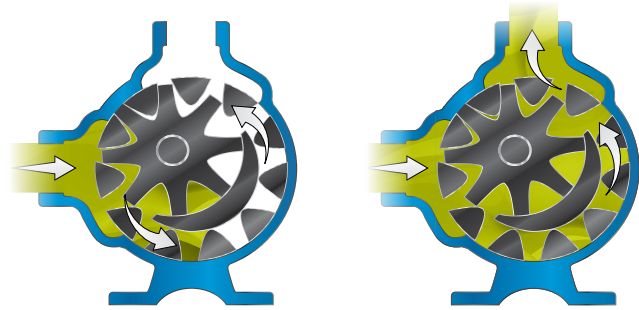
## REVERSIBLE DIRECTION OF FLOW

- Use same pump for loading and unloading or line stripping

# INTERNAL GEAR PUMPS

**WHY?** The internal gear pump is the "workhorse" of countless manufacturing processes.

- Broadest selection of materials, designs, seals, ports and displacements
- Adjustable clearances enable handling viscosities from 28 to 2,000,000 SSU (1 to 440,000 cSt)
- Low shear



## INCLUDED PRODUCTS

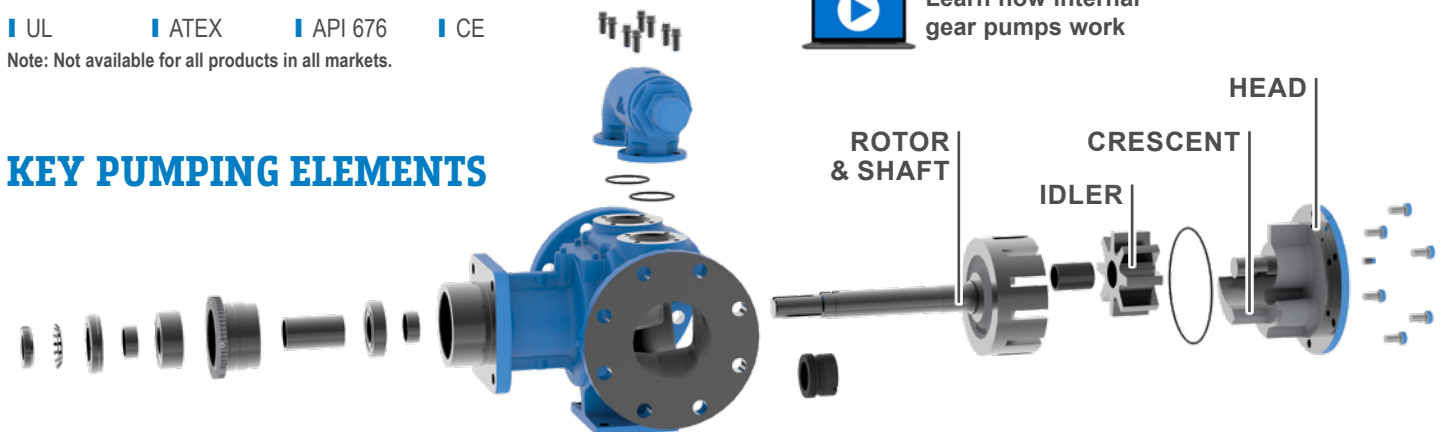
- |                 |                  |                  |
|-----------------|------------------|------------------|
| ■ 126A Series™  | ■ 4123A Series™  | ■ 4227AA Series™ |
| ■ 4126A Series™ | ■ 4223A Series™  | ■ 4327AA Series™ |
| ■ 124A Series™  | ■ 4323A Series™  | ■ 4227AX Series™ |
| ■ 224A Series™  | ■ 4223AA Series™ | ■ 4327AX Series™ |
| ■ 324A Series™  | ■ 4323AA Series™ | ■ 724 Series™    |
| ■ 1124A Series™ | ■ 4223AX Series™ | ■ 4724 Series™   |
| ■ 1224A Series™ | ■ 4323AX Series™ | ■ 8127A Series™  |
| ■ 1324A Series™ | ■ 8123A Series™  | ■ 495 Series™    |
| ■ 4124A Series™ | ■ 127A Series™   | ■ 4195 Series™   |
| ■ 4224A Series™ | ■ 227A Series™   | ■ 75 Series™     |
| ■ 4324A Series™ | ■ 327A Series™   | ■ 475 Series™    |
| ■ 4124B Series™ | ■ 1127A Series™  | ■ 895 Series™    |
| ■ 4224B Series™ | ■ 1227A Series™  | ■ 493 Series™    |
| ■ 8124A Series™ | ■ 1327A Series™  | ■ 4193 Series™   |
| ■ 123A Series™  | ■ 4127A Series™  | ■ 893 Series™    |
| ■ 223A Series™  | ■ 4227A Series™  | ■ 4197 Series™   |
| ■ 323A Series™  | ■ 4327A Series™  | ■ 897 Series™    |

## CERTIFICATIONS

- UL
- ATEX
- API 676
- CE

Note: Not available for all products in all markets.

## KEY PUMPING ELEMENTS



## MATERIALS OF CONSTRUCTION & CONFIGURATION OPTIONS

### EXTERNALS (HEAD, CASING, BRACKET)

Cast iron, ductile iron, steel, stainless steel, and other alloys

### INTERNALS (ROTOR, IDLER)

Cast iron, ductile iron, steel, hardened steel, stainless steel, and other alloys

### BUSHINGS (SLEEVE BEARINGS)

Carbon graphite, bronze, hardened cast iron, silicon carbide, tungsten carbide, and other specials materials as needed

### SHAFT SEAL

Lip seals, packing, O-Pro® seals, component mechanical seals, industry-standard cartridge mechanical seals, API 682 seals and sealless magnetic couplings

## TYPICAL APPLICATIONS

Common internal gear pump applications include, but are not limited to:

- All varieties of refined fuels & lubricants
- Resins & polymers
- Alcohols & solvents
- Asphalt, bitumen & pitch
- Polyurethane foam (isocyanates, polyols & additives)
- Food products such as corn syrup, chocolate & peanut butter
- Paint, inks & pigments
- Soaps & surfactants
- Heat transfer fluids



Learn how internal gear pumps work



The Internal Gear Pump was invented by Viking Pump's founder, Jens Nielsen, in 1904. It is used in manufacturing many of the products that we all touch every day.

## ADVANTAGES

**Only Two Moving Parts** | Reliable & easy to maintain

**Adjustable End Clearances** | For low or high viscosities, high temperatures, or to compensate for wear over time

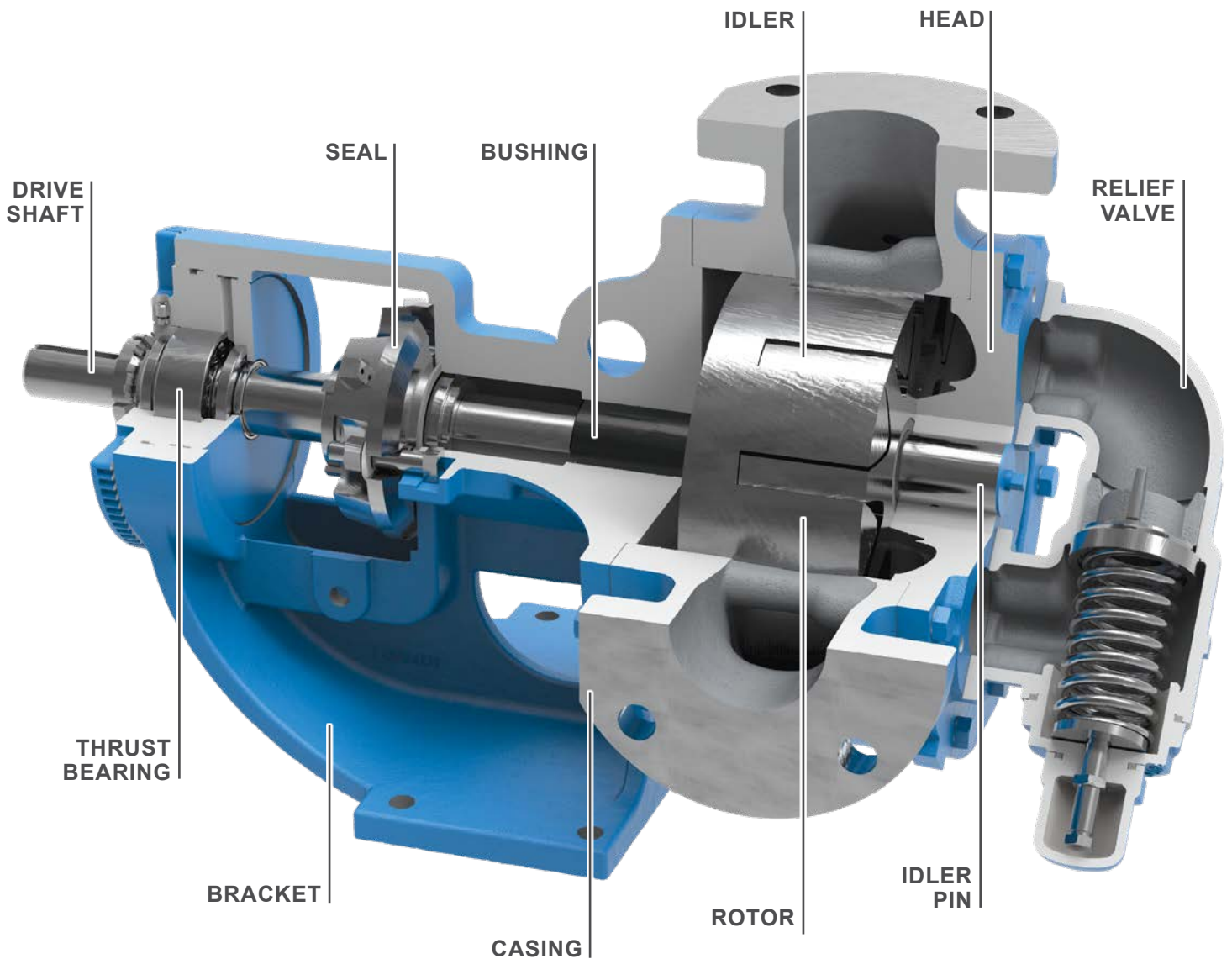
**Shaft Seal Options** | Including packing, lip seal, O-Pro® seals, component seal, cartridge seal and sealless mag drive

**Porting Options** | Viking's broadest selection of port locations, configurations and types

**Smooth, Non-Pulsing Flow** | For accurate flow measurement

**One Shaft Seal** | More reliable and lower cost than two or four seals used on timed lobe and screw pumps

**Compact, Close-Coupled Options** | For motor speed operation or with gearmotors



\* With special construction



**CAPACITY**  
to 1,600 GPM  
(363 m<sup>3</sup>/h)



**PRESSURE**  
to 250 PSI  
(17 BAR)



**VISCOSITY\***  
to 2,000,000 SSU  
(440,000 cSt)



**TEMPERATURE\***  
-120°F to +800°F  
(-85°C to +430°C)



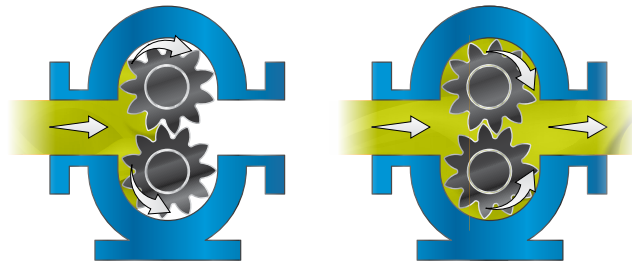
**CONTACT DISTRIBUTOR**

**VIKING PUMP®**

# EXTERNAL GEAR PUMPS

**WHY?** The external gear pump is the ultimate solution for high pressure, low flow pumping.

- Bearing support on both sides of the gears enables differential pressures to 500 PSI (34 BAR), or Intermittent to 2,500 PSI (170 BAR)
- Motor speed operation eliminates cost of speed reducer
- Eliminates lubrication – no external axial or radial bearing required in most applications



## INCLUDED PRODUCTS

- SG-04 Series™
- SG-05 Series™
- SG-405 Series™
- SG-805 Series™
- SG-07 Series™
- SG-407 Series™
- SG-807 Series™
- SG-10 Series™
- SG-410 Series™
- SG-14 Series™
- SG-414 Series™
- CMD Series™

## CERTIFICATIONS

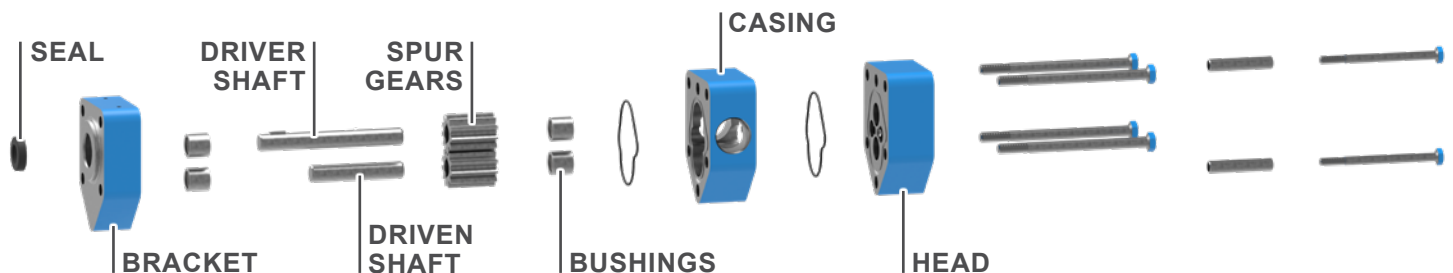
- NSF
- UL / CUL
- CE
- ATEX

Note: Not available for all products in all markets.



Learn how external gear pumps work

## KEY PUMPING ELEMENTS



## MATERIALS OF CONSTRUCTION & CONFIGURATION OPTIONS

### EXTERNALS (HEAD, CASING, BRACKET\*)

Ductile iron, carbon-filled PVDF

\* SG-10 Series™ and SG-14 Series™ brackets are Cast Iron

### INTERNALS (SHAFTS)

Steel, alumina ceramic

### INTERNALS (GEARS)

Steel, carbon filled PTFE

### BUSHINGS (SLEEVE BEARINGS)

Carbon, silicon carbide, needle bearings

### SHAFT SEAL

Lip seal, component mechanical seal, sealless magnetic couplings

## TYPICAL APPLICATIONS

Common external gear pump applications include, but are not limited to:

- Various fuel oils & lube oils
- Chemical additive & polymer metering
- Cooking oil filtration / reclamation
- Isocyanates & polyols
- Industrial & mobile hydraulic applications
- Low volume transfer or application

The External Gear Pump with spur gears offers higher pressures and unique abilities to supply multi-section specialty pumps with one driver.

## ADVANTAGES

**Higher Pressure Capabilities** | With shaft support on both sides of the gears

**Shaft Extension Options** | Include keyed, tang and spline

**Shaft Seal Options** | Including lip seal, component mechanical seal and sealless mag drive options

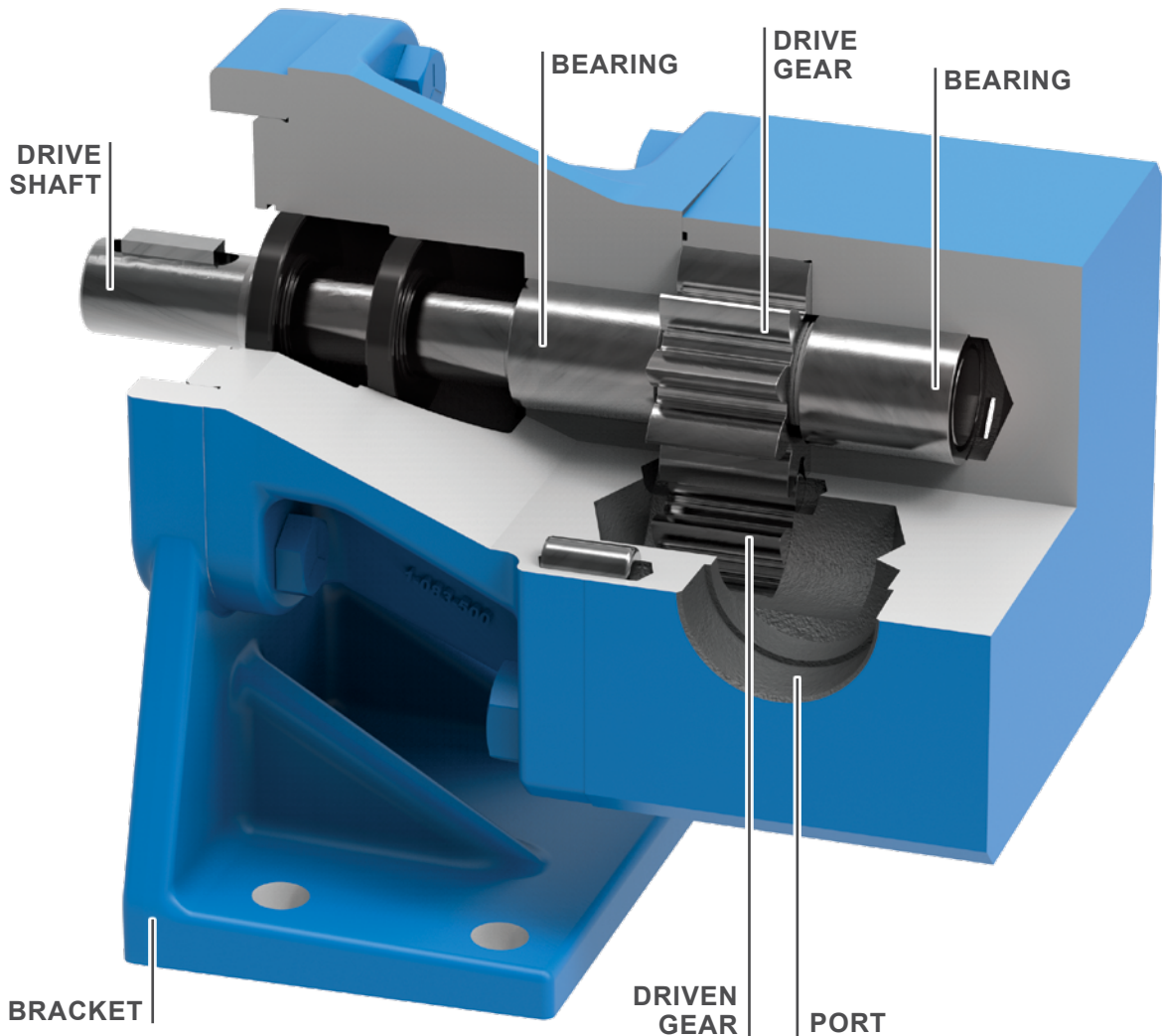
**Compact, Close-Coupled Options** | For motor speed operation or with gearmotors

**Smooth, Non-Pulsing Flow** | For accurate flow measurement

**Reliable & Easy to Maintain** | With only two moving parts

**One Shaft Seal** | More reliable and lower cost than two used on timed lobe and screw pumps

**Precision Clearances** | For low flow metering and dosing applications down to 0.06 GPM (0.23 LPM)



\* With special construction



**CAPACITY**  
to 190 GPM  
(719 LPM)



**PRESSURE**  
to 500 PSI (34 BAR)  
*Intermittent to 2,500 PSI (170 BAR)*



**VISCOSITY\***  
to 1,000,000 SSU  
(250,000 cSt)



**TEMPERATURE\***  
-40°F to +450°F  
(-40°C to +230°C)



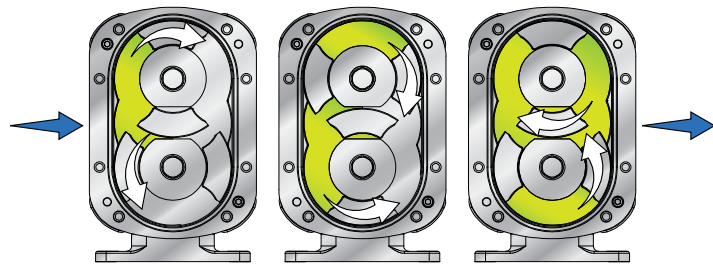
CONTACT DISTRIBUTOR

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# CIRCUMFERENTIAL PISTON PUMPS

**WHY?** Gentle handling of high value shear sensitive liquids across hygienic and industrial applications.

- Wide range of displacements with high pressure capabilities
- Excellent at solids handling
- Low shear characteristics across a wide range of product viscosities



## INCLUDED PRODUCTS

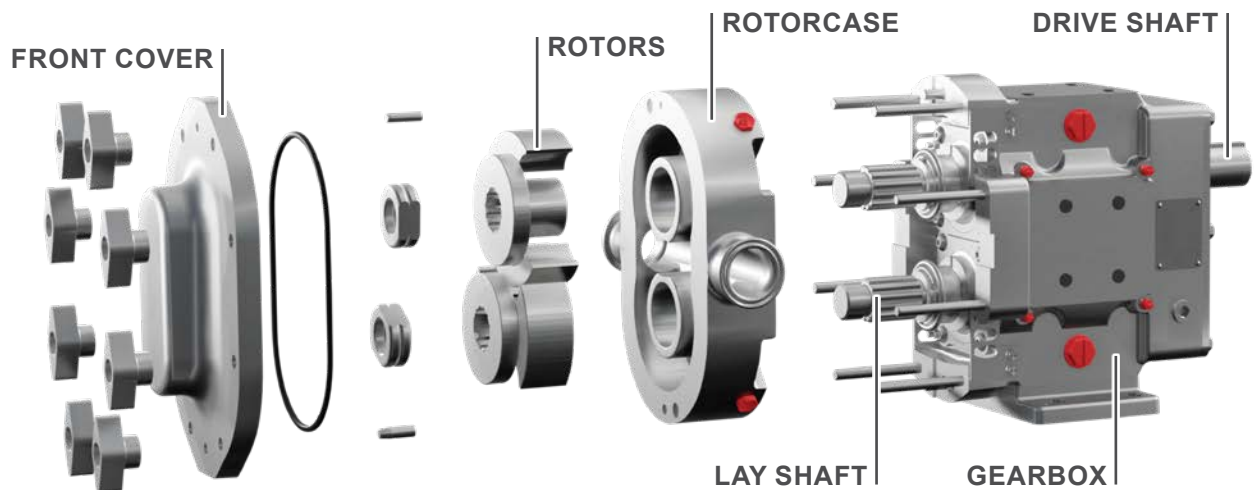
- Revolution® Series
- TRA®20 Series
- TRA®10 Series

## CERTIFICATIONS



Learn how circumferential piston pumps work

## KEY PUMPING ELEMENTS



## MATERIALS OF CONSTRUCTION & CONFIGURATION OPTIONS

### PRODUCT WETTED

**Rotorcase, Rotor Retainers, Front Cover:**  
316 / 316L stainless steel

**Rotors:**  
Alloy 808 & 316 / 316L stainless steel

### GEARBOX (GEARBOX, MOUNTING FEET & BACK PLATES)

Stainless Steel & cast iron, dependent on pump series & size

### SHAFT SEALS

Single & double mechanical seals, single & double O-ring seals

## TYPICAL APPLICATIONS

Common circumferential piston pump applications include, but are not limited to:

- Food products: processed meats, vegetables, sauces & condiments
- Confectionary: chocolate, fondants
- Beverages: alcoholic, soft
- Dairy products: milk, cheese, yogurts
- Personal care products: shampoo, soaps, deodorants, cosmetics
- Pet foods
- Pulp & paper
- Chemicals: lubricants, paints & pigments, polymers

Circumferential Piston Pumps are widely used in many hygienic and industrial fluid handling applications where gentle handling, cleanability and efficiency are paramount.

## ADVANTAGES

**Shaft Sealing Options** | Include single & double mechanical seals, single & double O-ring seals

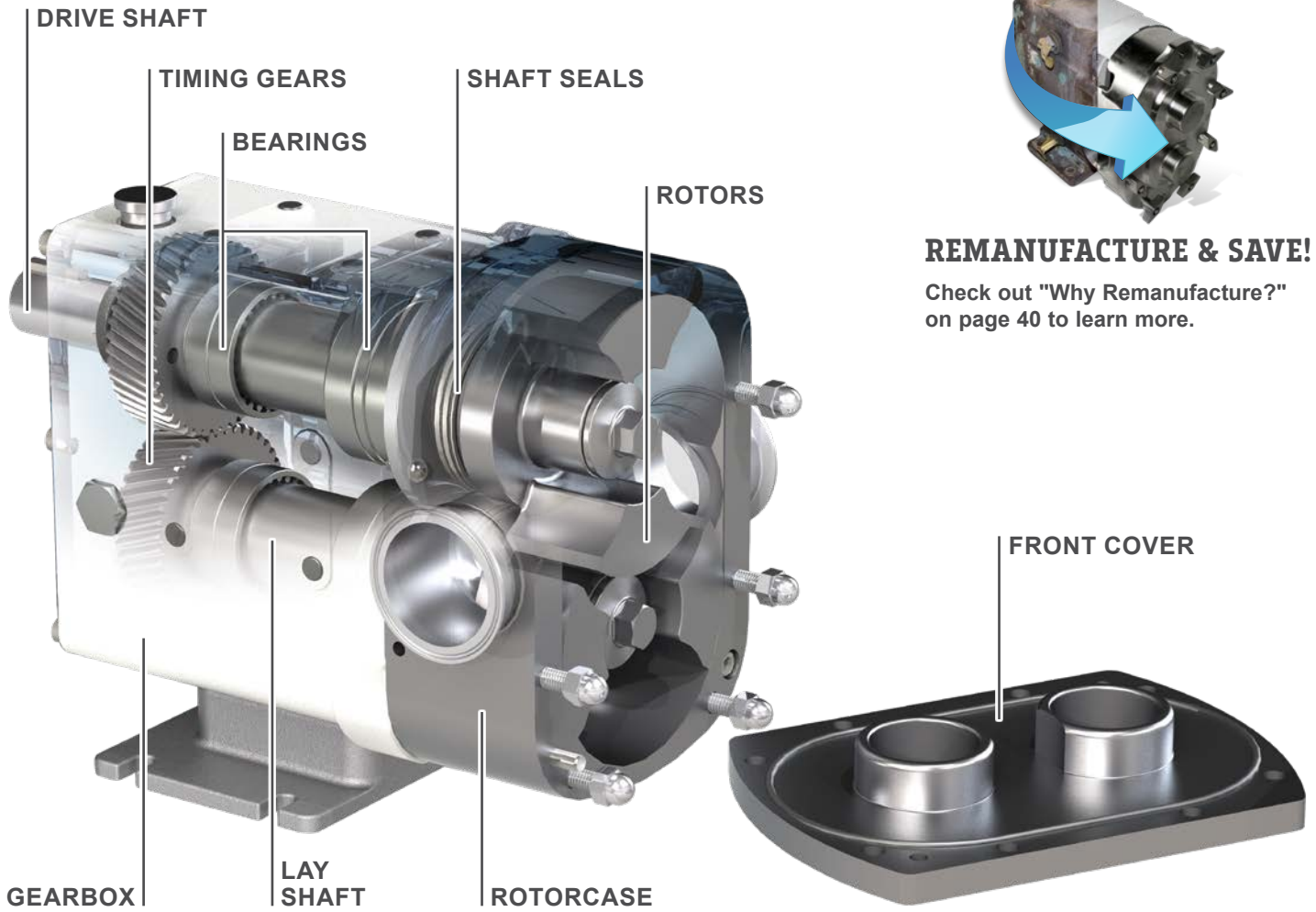
**Porting Options** | Multiple porting options cover hygienic and industrial threaded, clamp and flanges arrangements

**Low Shear Pump Design** | Gentle handling of delicate and shear sensitive products

**Solids Handling** | Will handle a wide range of products including suspended solids

**Efficiency** | High volumetric efficiency on low viscosity products

**Hygienic Designs** | Used in a wide range of hygienic industries where cleanliness is important



### REMANUFACTURE & SAVE!

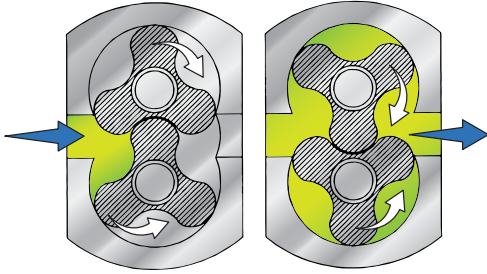
Check out "Why Remanufacture?" on page 40 to learn more.

 <b>CAPACITY</b> to 450 GPM (102 m <sup>3</sup> /h)	 <b>PRESSURE</b> to 500 PSI (34 BAR)	 <b>VISCOSITY</b> to 2,000,000 SSU (440,000 cSt)	 <b>TEMPERATURE</b> to +300°F (+150°C)
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# ROTARY LOBE PUMPS

**WHY?** Gentle handling of high value shear sensitive liquids across hygienic and industrial applications.

- Wide range of displacements
- Good solids handling capabilities
- Low shear characteristics across a wide range of product viscosities



## INCLUDED PRODUCTS

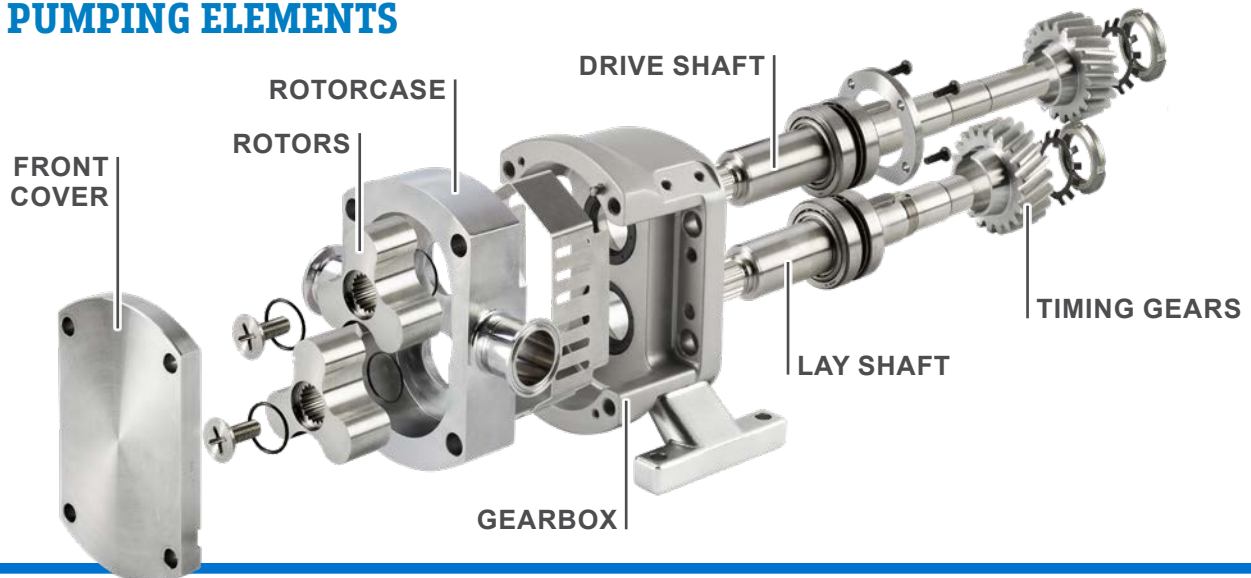
- SteriLobe® Series
- Revolution® Series
- RTP® Series
- Classic+ Series™ / MultiPump® Series

## CERTIFICATIONS



Learn how rotary lobe pumps work

## KEY PUMPING ELEMENTS



## MATERIALS OF CONSTRUCTION & CONFIGURATION OPTIONS

### PRODUCT WETTED (ROTORCASE, ROTORS, ROTOR RETAINERS, FRONT COVER)

316L stainless steel, other alloys also available

### GEARBOX (GEARBOX, MOUNTING FEET & BACK PLATES)

Cast iron & stainless steel, dependent on pump series & size

### SHAFT SEALS

Single, single flushed & double mechanical seals; single & double O-ring seals; packed glands; composite seals, all dependent on pump series

## TYPICAL APPLICATIONS

Common rotary lobe pump applications include, but are not limited to:

- Pharmaceutical & biotech, including vaccines
- Food products: processed meats, vegetables, sauces & condiments
- Confectionary: chocolate, fondants
- Beverages: alcoholic, soft
- Dairy products: milk, cheese, yogurts
- Personal care products: shampoo, soaps, deodorants, cosmetics
- Pet foods
- Pulp & paper
- Chemicals: lubricants, paints & pigments, polymers

Rotary Lobe Pumps are the mainstay of many hygienic & industrial fluid handling applications where gentle handling & cleanability are paramount.

## ADVANTAGES

**Non Contacting Pumping Principle** | No metal on metal contact, avoiding pump wear regardless of product viscosity

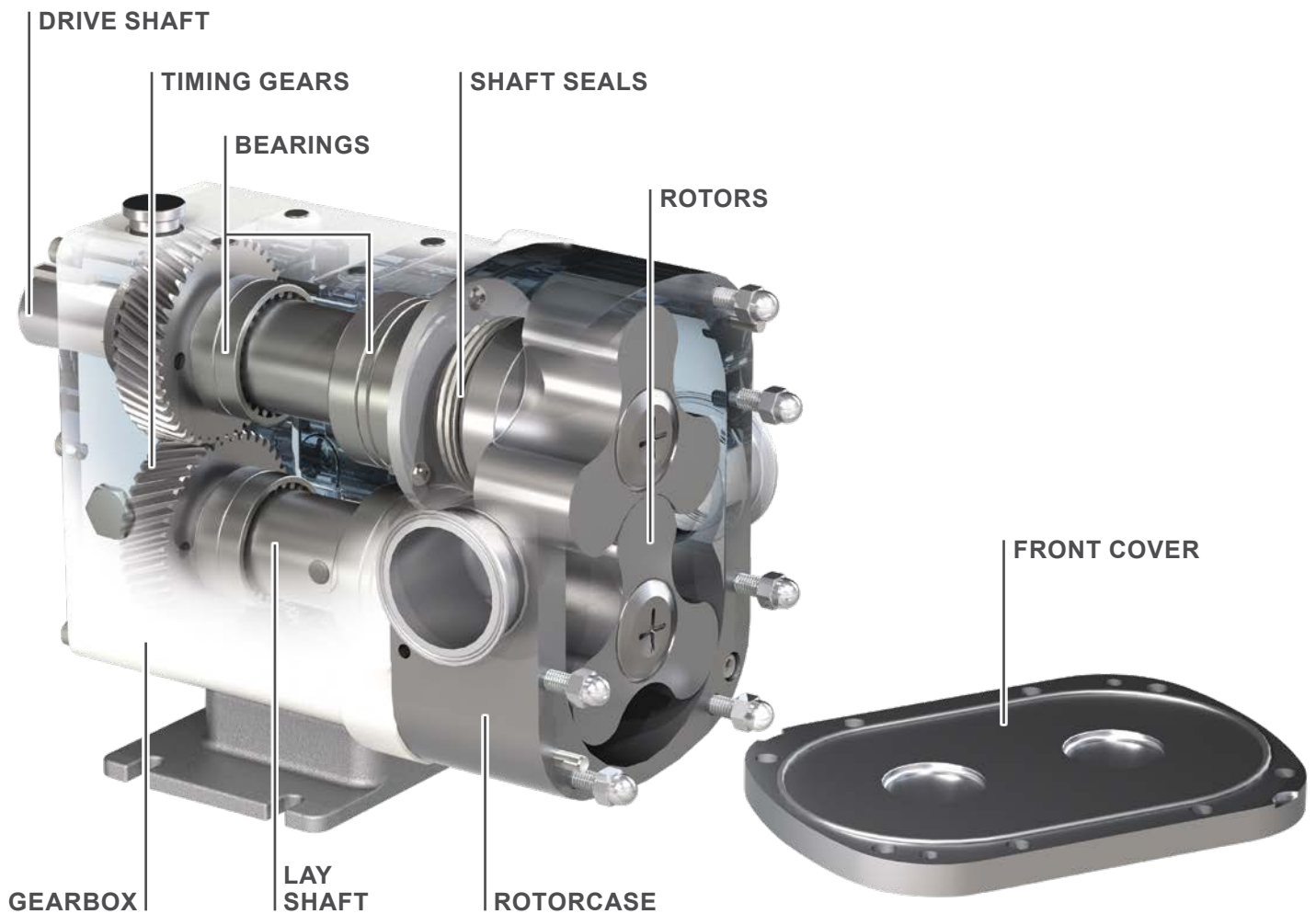
**Shaft Sealing Options** | Include single, single flushed and double mechanical seals, single and double O-ring Seals and packed glands

**Porting Options** | Multiple porting options cover hygienic and industrial threaded, clamp and flanges arrangements

**Low Shear Pump Design** | Gentle handling of delicate and shear sensitive products

**Solids Handling** | Will handle a wide range of products including suspended solids

**Hygienic Designs** | Used in a wide range of hygienic industries where cleanliness is important



**CAPACITY**  
to 832 GPM  
(189 m<sup>3</sup>/h)



**PRESSURE**  
to 218 PSI  
(15 BAR)



**VISCOSITY**  
to 2,000,000 SSU  
(440,000 cSt)



**TEMPERATURE**  
to +300°F  
(+150°C)

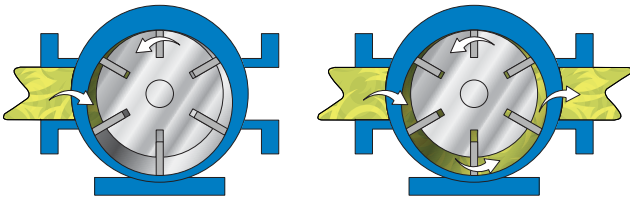


**CONTACT DISTRIBUTOR**

**VIKING PUMP®**

# VANE PUMPS

**WHY?** The vane pump is the ideal solution for high pressure, thin liquid applications.



## INCLUDED PRODUCTS

I LVP Series™

## MATERIALS OF CONSTRUCTION & CONFIGURATION OPTIONS

### EXTERNALS (HEAD & CASING)

316 stainless steel

### INTERNALS (ROTOR & SHAFT)

316 stainless steel

### INTERNALS (VANES & PUSH RODS)

PEEK

### BUSHINGS

Silicon carbide

### SHAFT SEAL

Component mechanical seal, cartridge mechanical seal, cartridge triple lip seal

## TYPICAL APPLICATIONS

Common vane pump applications include, but are not limited to:

- I Acids & alkalis
- I Alcohols & solvents
- I Aqueous solutions
- I Monomers
- I Hexane, pentane
- I Refined fuels
- I Reactor vessel ingredient metering
- I Vacuum vessel service
- I Suction lift applications
- I Long suction or discharge line applications



Learn how vane pumps work

## ADVANTAGES

**Opposite Porting** | For easy in-line mounting

**Seal Chamber** | Accommodates the use of component and cartridge seals

**Hardened 316SS Housing with Non-Metallic Pumping Elements** | Offer broad chemical compatibility and enhanced application flexibility

**Rated to 200 PSI** | Even on the thinnest liquids

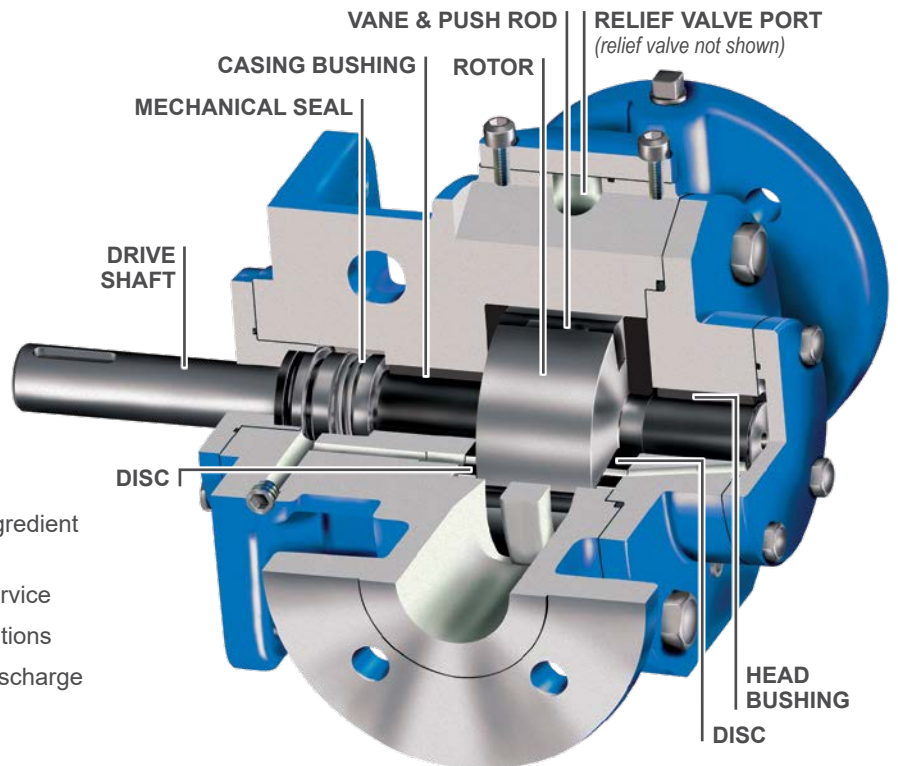
**Self-Priming Capabilities** | Simplify start-up process

**Sliding Vane Design** | Self-adjusts for wear to maintain consistent performance

**Superior Volumetric & Mechanical Efficiency** | For low energy consumption

**Internal Relief Valve** | Provides over pressure protection

**Gauge Ports** | Allow simple addition of local or remote monitoring systems



**CAPACITY**  
to 160 GPM  
(36 m³/h)



**PRESSURE**  
to 200 PSI  
(14 BAR)








**VISCOSITY**  
to 2,300 SSU  
(to 500 cSt)



**TEMPERATURE**  
-60°F to +350°F  
(-50°C to +175°C)



# PUMP PRINCIPLE COMPARISON

					
CHARACTERISTICS	INTERNAL GEAR	EXTERNAL GEAR	SLIDING VANE	ROTARY LOBE	CIRCUMFERENTIAL PISTON
Self-Priming / Pulls Suction Lift	Yes	Yes	Yes	Yes	Yes
Reversible Flow	Yes	Yes	Yes	Yes	Yes
Run-Dry Capability	Yes, for a short time, if fluid film in pump	Yes, for a short time, if fluid film in pump	Yes, for a short time, if fluid film in pump	Yes, indefinitely with seal flush	Yes, indefinitely with seal flush
Pulsation	Low	Low	Moderate	Moderate	Moderate
Flow Independent of Pressure	Yes	Yes	Yes	Yes	Yes
Soft Solids Handling	Small	No	Small	Yes	Yes
Abrasives Handling	Yes (with hardened parts)	No	No	No	No
Non-Lubricating Fluid Capabilities	Good	Good	Good	Excellent	Excellent
Max. Viscosity Limits (cPs)	1,000,000	1,000,000	25,000	1,000,000	1,000,000
Multi-Phase Flow Capability	Yes	Yes	No	No	No
Min Flow Range (GPM)	0.5	0.001	5	0.1	0.1
Max Flow Range (GPM)	1,500	1,500	2,000	3,000	3,000
Max Pressure (PSI)	250	3,000	150	500	500
Max Temperature (°F)	800	500	225	400	300
Efficiency	High	High	High	High	High
Shear Rate	Low (at low RPMs)	Medium	High	Low	Low
Metering Accuracy	High	High	Medium	High	High
Noise level	Medium	Medium	Medium	Medium	Medium
Sealless	Yes (with optional mag drive)	Yes (with optional mag drive)	No	No	No
Number of Shaft Seals	1	1	1	2 or 4	2 or 4
Sanitary Designs	No	No	No	Yes	Yes
Other Advantages	Simple, two-moving part design, easy to repair Only one or two bearings run in pumpage	Runs at motor speeds Low flow, high pressure	Vanes compensate for wear to maintain efficiency	Clean-in-place and sterilize-in-place capabilities	Clean-in-place and sterilize-in-place capabilities
Other Disadvantages	May require reduced speeds Overhung load on rotor shaft	Four bearings run in pumpage	Vane wear	Requires timing gears Overhung load on shafts	Requires timing gears Overhung load on shafts
Relative Initial Cost	Moderate	Moderate	Moderate	High	High



## FEATURES & BENEFITS

- Rugged and reliable, yet economical
- Widest range of sizes and options available to suit almost any non-corrosive application
- Tightest clearances for high efficiency and excellent priming capability
- Universal stuffing box that accepts packing, O-Pro® seals, component seals or cartridge mechanical seals

## TYPICAL APPLICATIONS

- Adhesives
- Asphalt & Bitumens
- Paints & Inks
- Polymers
- Resins
- Chocolate
- Peanut Butter
- Molasses
- Refined Fuels
- Edible Oils
- Non-Corrosive Chemicals

## PERFORMANCE

INTERNAL GEAR MODELS									SPECIFICATIONS				
Non-Jacketed					Jacketed				Performance			Standard Ports	
Packing	O-Pro® Seal	Mechanical Seal	Behind the Rotor Seal	Mag Drive	Packing	O-Pro® Seal	Mechanical Seal	Behind the Rotor Seal	Max Speed, RPM	GPM	m³/h	Size, Inches	Type
G124A	—	G4124A	G4124B	—	—	—	—	—	1750	8	1.8	1	NPT
H124A	H1124A	H4124A	H4124B	H8124A	H224A	H1224A	H4224A	H4224B	1750	15	3.4	1.5	NPT
HL124A	HL1124A	HL4124A	HL4124B	HL8124A	HL224A	HL1224A	HL4224A	HL4224B	1750	30	6.8	1.5	NPT
AK124A	—	AK4124A	AK4124B	—	—	—	—	—	1450	65	15	2	NPT
AL124A	—	AL4124A	—	—	—	—	—	—	1450	90	20	2	NPT
K124A	K1124A	K4124A	K4124B	K8124A	K224A	K1224A	K4224A	K4224B	780	80	18	2	NPT
KK124A	KK1124A	KK4124A	KK4124B	KK8124A	KK224A	KK1224A	KK4224A	KK4224B	780	100	23	2	NPT
L124A	L1124A	L4124A	L4124B	L8124A	L224A	L1224A	L4224A	L4224B	640	135	31	2	NPT
LQ124A	LQ1124A	LQ4124A	LQ4124B	LQ8124A	LQ224A	LQ1224A	LQ4224A	LQ4224B	640	135	31	2.5	Flange
LL124A	LL1124A	LL4124A	LL4124B	LL8124A	LL224A	LL1224A	LL4224A	LL4224B	640	170	39	3	Flange
LS124A	LS1124A	LS4124A	LS4124B	LS8124A	LS224A	LS1224A	LS4224A	LS4224B	640	200	45	3	Flange
Q124A	Q1124A	Q4124A	Q4124B	Q8124A	Q224A	Q1224A	Q4224A	Q4224B	520	300	68	4	Flange
QS124A	QS1124A	QS4124A	QS4124B	QS8124A	QS224A	QS1224A	QS4224A	QS4224B	520	500	114	6	Flange
M124A	—	M4124A	—	—	M224A	—	M4224A	—	420	420	95	4	Flange
—	—	—	—	—	N324A	N1324A	N4324A	—	350	600	136	6	Flange
—	—	—	—	—	R324A	R1324A	R4324A	—	280	1,100	250	8	Flange
—	—	—	—	—	RS324A	RS1324A	RS4324A	—	280	1,600	363	10	Flange

NOTE: Refer to the catalog section of a particular product series for specific performance details.

## PORTING

- Right Angle (90°) (Rotatable Casing)
- Opposite (180°) (Rotatable Casing)
- NPT
- Flanged (ANSI/ASME or DIN Compatible)

## SEALING

- Packing
- O-Pro® Seal
- Behind the Rotor Seal
- Component Mechanical Seal
- Cartridge Mechanical Seal
- Cartridge Triple Lip Seal
- Sealless Mag Drive

## MOUNTING

- Foot Mount

## OPTIONS

- Jacketing
- Ductile Iron (126A Series™, 4126A Series™)

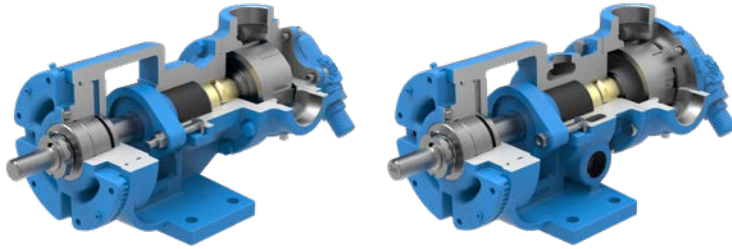
## DRIVES



Refer to "Appendix A" on page 42 for more information on drives.

Refer to "Appendix B" on page 43 for more information on seals and porting.

<b>CAPACITY</b> to 1,600 GPM (363 m³/h)	<b>PRESSURE</b> to 200 PSI (14 BAR)	<b>VISCOSITY</b> to 2,000,000 SSU (to 440,000 cSt)	<b>TEMPERATURE</b> -60°F to +450°F (-50°C to +230°C)
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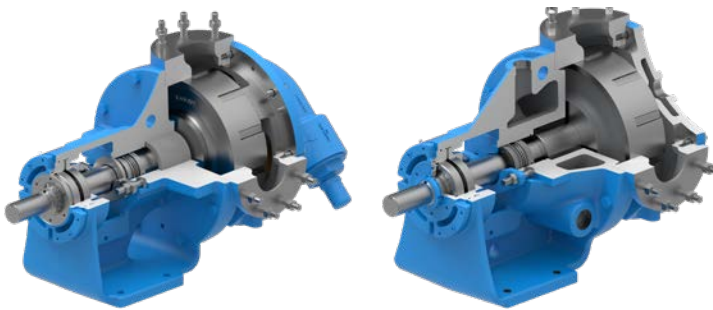
**124A** (non-jacketed, packing)  
**224A** (jacketed, packing)  
**324A** (jacketed, packing)

- Handle the highest viscosity liquids, up to 2,000,000 SSU
- Packing requires some minimal leakage for cooling and lubrication



**1124A** (non-jacketed, O-Pro® Barrier seal)  
**1224A** (jacketed, O-Pro® Barrier seal)  
**1324A** (jacketed, O-Pro® Barrier seal)

- O-Pro® Barrier is a single piece seal that replaces both the shaft bushing and seal, provides easy maintenance for high viscosity and hard to seal liquids



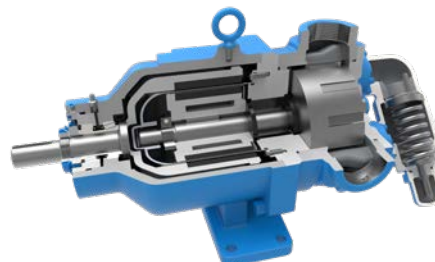
**4124A** (non-jacketed, mechanical seal)  
**4224A** (jacketed, mechanical seal)  
**4324A** (jacketed, mechanical seal)

- Component and cartridge mechanical seals handle lower viscosity liquids with minimal leakage
- The bearing housing opening enables seal maintenance or replacement without removing the pump



**4124B** (non-jacketed, behind the rotor seal)  
**4224B** (jacketed, behind the rotor seal)

- Value-oriented pumps, with a mechanical seal located directly behind the rotor, and a greased bracket bushing not contacting the process liquid, allowing for long life
- Optional hard-faced, pin driven mechanical seals enable operation on abrasive liquids and on viscosities up to 250,000 SSU (55,000 cSt)



**8124A** (sealless mag drive)

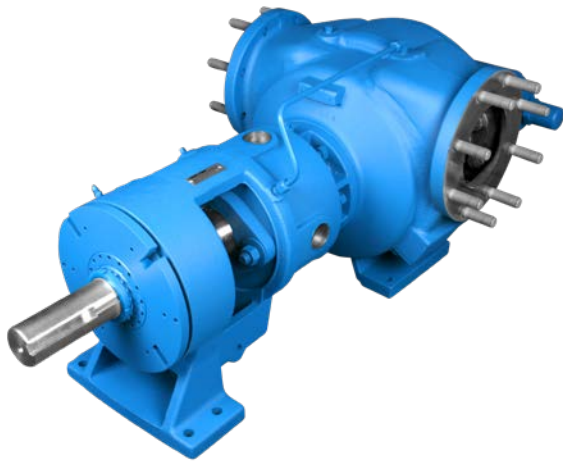
- Eliminates the shaft seal to provide the highest level of liquid and vapor containment
- All liquid and vapor is hermetically sealed in the pump
- Used especially for hazardous and difficult-to-seal liquids

Note: Product images may not reflect standard construction.



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**VIKING PUMP®**



## FEATURES & BENEFITS

- For refinery and petrochemical applications
- Recommended for extremely high temperatures
- Widest range of sealing options available

## TYPICAL APPLICATIONS

- Crude Oil
- Fuels
- Lube Oil
- Basic Petrochemicals
- Asphalts & Bitumens
- Heat Transfer Fluids

## PERFORMANCE

INTERNAL GEAR MODELS								SPECIFICATIONS				
Non-Jacketed				Jacketed				Performance			Standard Ports	
Packing	Mechanical Seal	Mag Drive	API 682 Seal	Packing	Mechanical Seal	API 682 Seal	Max Speed, RPM	GPM	m <sup>3</sup> /h	Size, Inches	Type	
H123A	H4123A	H8123A	H4123AA	H223A	H4223A	H4123AA	—	1750	15	3.4	1.5	Flange
HL123A	HL4123A	HL8123A	HL4123AA	HL223A	HL4223A	HL4123AA	HL4223AX	1750	30	7	1.5	Flange
K123A	K4123A	K8123A	K4123AA	K223A	K4223A	K4123AA	—	780	80	18	2	Flange
KK123A	KK4123A	KK8123A	KK4123AA	KK223A	KK4223A	KK4123AA	KK4223AX	780	100	23	2	Flange
LQ123A	LQ4123A	LQ8123A	LQ4123AA	LQ223A	LQ4223A	LQ4123AA	—	640	135	30	2.5	Flange
LL123A	LL4123A	LL8123A	LL4123AA	LL223A	LL4223A	LL4123AA	—	640	170	39	3	Flange
LS123A	LS4123A	LS8123A	LS4123AA	LS223A	LS4223A	LS4123AA	LS4223AX	640	200	45	3	Flange
Q123A	Q4123A	Q8123A	Q4123AA	Q223A	Q4223A	Q4123AA	Q4223AX	520	300	68	4	Flange
QS123A	QS4123A	QS8123A	QS4123AA	QS223A	QS4223A	QS4123AA	QS4223AX	520	500	114	6	Flange
—	—	—	N4323AA	N323A	N4323A	N4323AA	N4323AX	350	600	136	6	Flange
—	—	—	R4323AA	R323A	R4323A	R4323AA	R4323AX	280	1,100	250	8	Flange
—	—	—	—	RS323A	RS4323A	—	—	280	1,600	363	10	Flange

NOTE: Refer to the catalog section of a particular product series for specific performance details.

## PORTING

- Right Angle (90°) (Rotatable Casing)
- Opposite (180°) (Rotatable Casing)
- Flanged (ANSI/ASME or DIN Compatible)

## SEALING

- Packing
- Component Mechanical Seal
- Cartridge Mechanical Seal
- Cartridge Triple Lip Seal
- API 682 Seal
- Sealless Mag Drive

## MOUNTING

- Foot Mount

## OPTIONS

- Jacketing
- Low temperature carbon steel down to -50°F (-45°C)

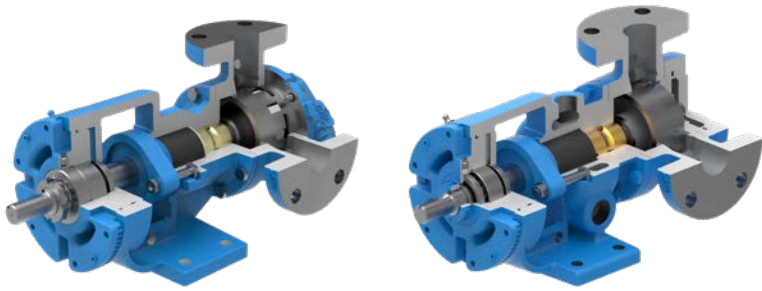
## DRIVES



Refer to "Appendix A" on page 42 for more information on drives.

Refer to "Appendix B" on page 43 for more information on seals and porting.

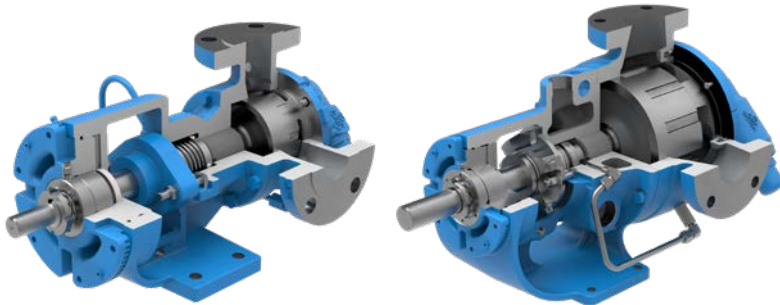
<p><b>CAPACITY</b> to 1,600 GPM (363 m<sup>3</sup>/h)</p>	<p><b>PRESSURE</b> to 200 PSI (14 BAR)</p>	<p><b>VISCOSITY</b> to 2,000,000 SSU (to 440,000 cSt)</p>	<p><b>TEMPERATURE</b> -20°F to +800°F (-30°C to +430°C)</p>
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**123A** (non-jacketed, packing)

**223A** (jacketed, packing)

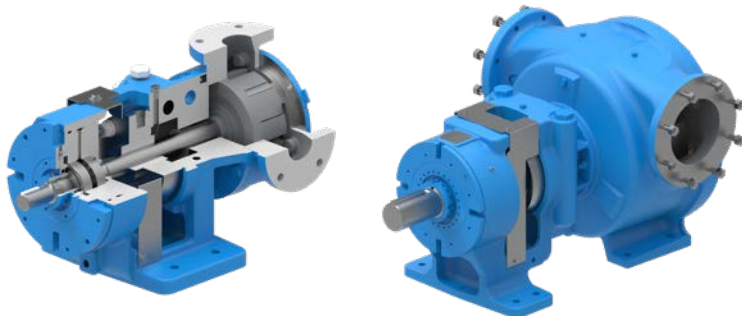
- Handle the highest viscosity liquids, up to 2,000,000 SSU
- Packing requires some minimal leakage for cooling and lubrication



**4123A** (non-jacketed, mechanical seal)

**4223A** (jacketed, cartridge seal)

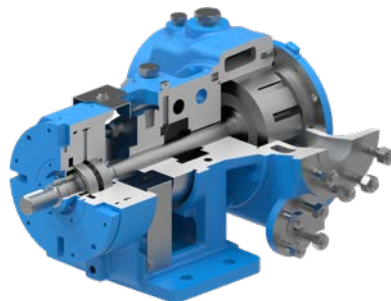
- Component and cartridge mechanical seals handle lower viscosity liquids with minimal leakage
- The bearing housing opening enables seal maintenance or replacement without removing the pump



**4223AA** (API 682 Seal, API 676 Compliant w/ minor Exceptions)

**4323AA** (API 682 Seal, API 676 Compliant w/ minor Exceptions)

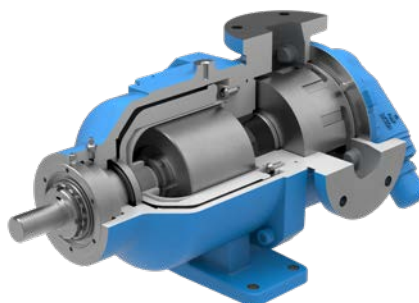
- Bracket features enlarged bearing housing to fit API 682 Cat. 1, 2 or 3 cartridge seals with seal plans
- Conforms to API 676 3rd Edition, with exceptions
- NDE and performance testing required by API 676 is optional



**4223AX** (API 682 Seal, API 676 Full Compliance)

**4323AX** (API 682 Seal, API 676 Full Compliance)

- Conforms fully to API 676 3rd Edition, no exceptions
- API 682 Cat. 1, 2 or 3 cartridge seals with seal plans
- All NDE and performance testing required by API 676 is included, as standard



**8123A** (sealless mag drive)

- Eliminates the shaft seal to provide the highest level of liquid and vapor containment
- All liquid and vapor is hermetically sealed in the pump
- Used especially for hazardous and difficult-to-seal liquids

Note: Product images may not reflect standard construction.



 CONTACT DISTRIBUTOR

**VIKING PUMP** 21



## FEATURES & BENEFITS

- For corrosion resistance over a wider pH range
- Non-galling gear materials available for handling thin liquid applications
- All stainless steel construction or economical 724 Series™ & 4724 Series™

## TYPICAL APPLICATIONS

- Soaps, Detergents & Surfactants
- Acids & Caustics
- Water-Based Liquids
- Vegetable Oil
- General Chemicals

## PERFORMANCE

INTERNAL GEAR MODELS										SPECIFICATIONS				
Non-Jacketed					Jacketed					Performance			Standard Ports	
Packing	O-Pro® Seal	Mechanical Seal	Mag Drive	Packing	Packing	O-Pro® Seal	Mechanical Seal	Behind the Rotor Seal	Behind the Rotor Seal	Max Speed, RPM	GPM	m³/h	Size, Inches	Type
—	—	—	—	—	F724*	—	—	F4724*	—	1750	1.5	0.3	0.5	NPT
—	—	—	—	—	FH724*	—	—	FH4724*	—	1750	3	0.7	0.75	NPT
—	—	—	—	—	G724*	—	—	G4724*	—	1150	5	1	1	NPT
H127A	H1127A	H4127A	H8127A	H227A	H724**	H1227A	H4227A	H4724**	—	1750	15	3.4	1.5	Flange
HL127A	HL1127A	HL4127A	HL8127A	HL227A	HL724**	HL1227A	HL4227A	HL4724**	—	1750	30	6.8	1.5	Flange
K127A	K1127A	K4127A	K8127A	K227A	K724**	K1227A	K4227A	K4724**	—	780	80	18	2	Flange
KK127A	KK1127A	KK4127A	KK8127A	KK227A	KK724**	KK1227A	KK4227A	KK4724**	—	780	100	23	2	Flange
—	—	—	—	—	L724**	—	—	L4724**	—	420	90	20	2	NPT
LQ127A	LQ1127A	LQ4127A	LQ8127A	LQ227A	LQ724	LQ1227A	LQ4227A	LQ4724	—	640	135	30	2.5	Flange
LL127A	LL1127A	LL4127A	LL8127A	LL227A	LL724	LL1227A	LL4227A	LL4724	—	640	170	39	3	Flange
LS127A	LS1127A	LS4127A	LS8127A	LS227A	—	LS1227A	LS4227A	—	—	640	200	45	3	Flange
Q127A	Q1127A	Q4127A	Q8127A	Q227A	—	Q1227A	Q4227A	—	—	520	300	68	4	Flange
QS127A	QS1127A	QS4127A	QS8127A	QS227A	—	QS1227A	QS4227A	—	—	520	500	114	6	Flange
—	—	—	—	N327A	—	N1327A	N4327A	—	—	350	600	136	6	Flange
—	—	—	—	R327A	—	R1327A	R4327A	—	—	280	1,100	250	8	Flange
—	—	—	—	RS327A	—	RS1327A	RS4327A	—	—	280	1,600	363	10	Flange

\* Stuffing box seal, non-jacketed \*\* These 724 & 4724 models are standard with NPT ports.

NOTE: Refer to the catalog section of a particular product series for specific performance details.

## PORTING

- Right Angle (90°) (Rotatable Casing)
- Opposite (180°) (Rotatable Casing)
- NPT
- Flanged (ANSI/ASME or DIN Compatible)

## SEALING

- Packing
- O-Pro® Seal
- Behind the Rotor Seal
- Component Mechanical Seal
- Cartridge Mechanical Seal
- Cartridge Triple Lip Seal
- API 682 Seal
- Sealless Mag Drive

## MOUNTING

- Foot Mount

## OPTIONS

- Jacketing

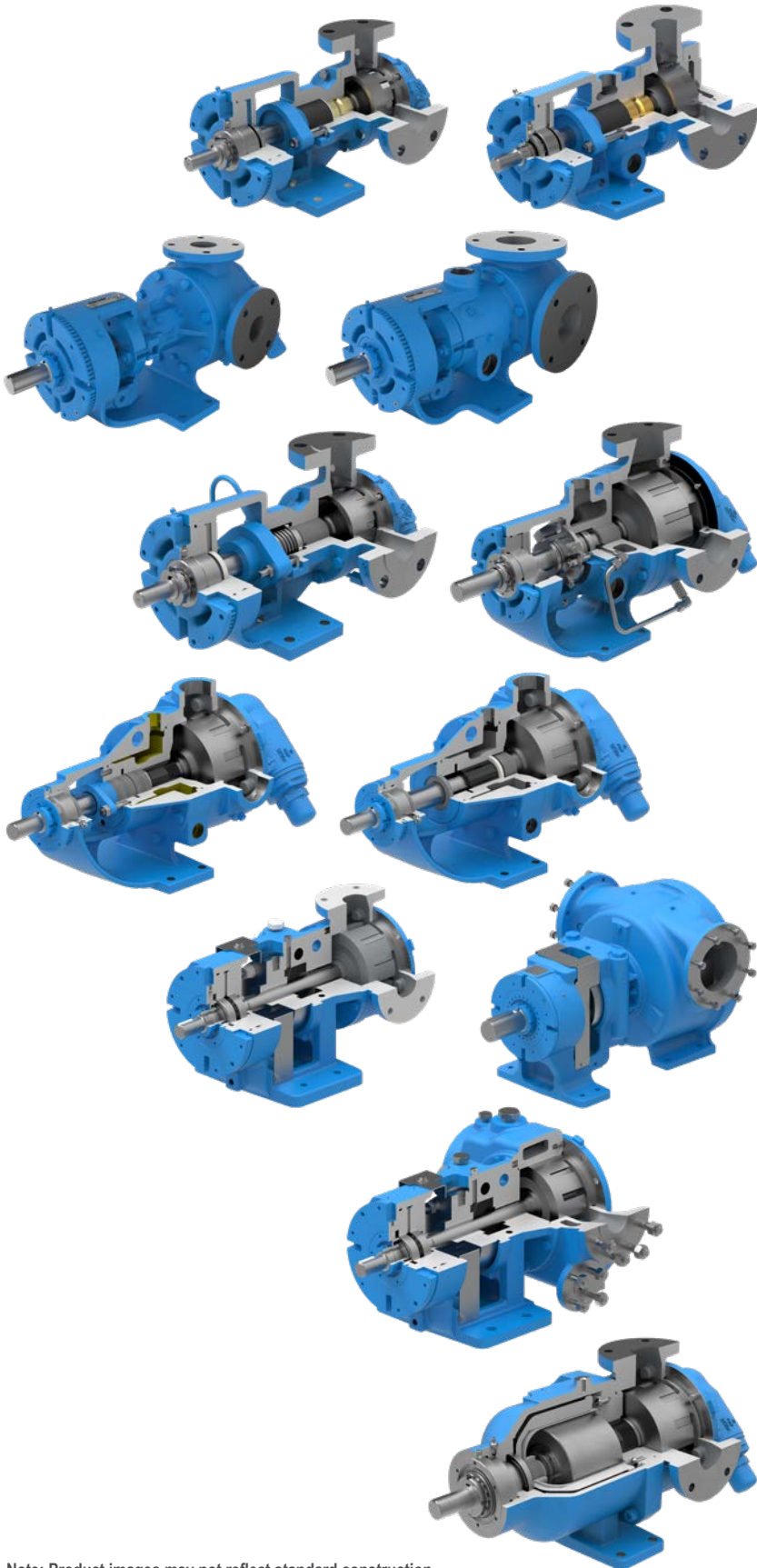
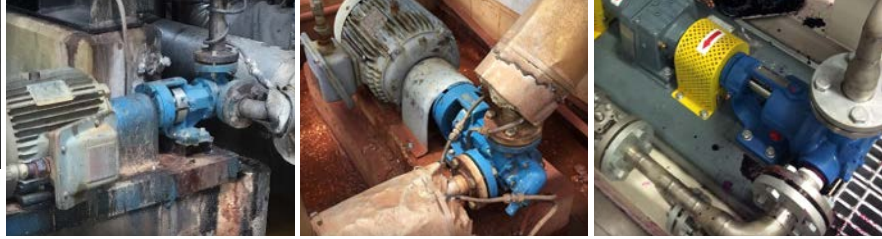
## DRIVES



Refer to "Appendix A" on page 42 for more information on drives.

Refer to "Appendix B" on page 43 for more information on seals and porting.

<p><b>CAPACITY</b> to 1,600 GPM (363 m³/h)</p>	<p><b>PRESSURE</b> to 200 PSI (14 BAR)</p>	<p><b>VISCOSITY</b> to 2,000,000 SSU (to 440,000 cSt)</p>	<p><b>TEMPERATURE</b> -120°F to +500°F (-85°C to +260°C)</p>
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**127A** (non-jacketed, packing)

**227A** (jacketed, packing)

- Handle the highest viscosity liquids, up to 2,000,000 SSU
- Packing require some minimal leakage for cooling and lubrication

**1127A** (non-jacketed, O-Pro® Guard seal)

**1227A** (jacketed, O-Pro® Guard seal)

**1327A** (jacketed, O-Pro® Guard seal)

- O-Pro® Guard provides a robust sealing solution for high viscosity and hard to seal liquids
- O-Pro® Guard rebuildable design offers minimal downtime and low cost

**4127A** (non-jacketed, mechanical seal)

**4227A** (jacketed, cartridge seal)

- Component and cartridge mechanical seals handle lower viscosity liquids with minimal leakage
- The bearing housing opening enables seal maintenance or replacement without removing the pump

**724** (jacketed, packing)

**4724** (jacketed, mechanical seal)

- Non-wetted cast iron mounting bracket
- Behind the rotor mechanical seal
- Jacketed bracket standard
- Most economical stainless steel series

**4227AA** (API 682 Seal, API 676 Compliant w/ minor Exceptions)

**4327AA** (API 682 Seal, API 676 Compliant w/ minor Exceptions)

- Bracket features enlarged bearing housing to fit API 682 Cat. 1, 2 or 3 cartridge seals with seal plans
- Conforms to API 676 3rd Edition, with exceptions
- NDE and performance testing required by API 676 is optional

**4227AX** (API 682 Seal, API 676 Full Compliance)

**4327AX** (API 682 Seal, API 676 Full Compliance)

- Conforms fully to API 676 3rd Edition, no exceptions
- API 682 Cat. 1, 2 or 3 cartridge seals with seal plans
- All NDE and performance testing required by API 676 is included, as standard

**8127A** (sealless mag drive)

- Eliminates the shaft seal to provide the highest level of liquid and vapor containment
- All liquid and vapor is hermetically sealed in the pump
- Used especially for hazardous, corrosive and difficult-to-seal liquids

Note: Product images may not reflect standard construction.



 CONTACT DISTRIBUTOR

**VIKING PUMP®** 23

# MOTOR SPEED PRODUCT LINE | DUCTILE IRON



## FEATURES & BENEFITS

- Needle bearings provide high pressure capabilities, sleeve bearing options available
- Close-coupled motor mount or foot bracket options to match space or motor requirements
- Double pump configurations offer two flow rates operating from a single power source, reducing equipment costs

## TYPICAL APPLICATIONS

- Pipeline Injection
- Pipeline Sampling
- Oil Polishing
- High Pressure Lubrication
- Hydraulics

## PERFORMANCE

EXTERNAL GEAR MODELS			SPECIFICATIONS							
Lip Seal	Mechanical Seal	Mag Drive	Nominal Flow Range At 1750 RPM		Continuous Pressure		Intermittent Pressure		Standard Ports	
			GPM	LPM	PSI	BAR	PSI	BAR	Size, Inches	
SG-0417	—	—	0.06	0.23	500	34	750	52	0.375	
SG-0418	—	—	0.14	0.53	500	34	1,250	86	0.375	
SG-0425	—	—	0.18	0.68	500	34	1,500	103	0.375	
SG-0470	—	—	0.5	1.89	500	34	1,500	103	0.375	
SG-0518 ①	SG-40518	SG-80518	0.7	2.6	500	34	1,500	103	0.5	
SG-0525 ①	SG-40525	SG-80525	1	3.8	500	34	2,500	172	0.5	
SG-0535 ①	SG-40535	SG-80535	1.4	5.3	500	34	2,500	172	0.5	
SG-0550 ①	SG-40550	SG-80550	2	7.6	500	34	2,500	172	0.5	
SG-0570 ①	SG-40570	SG-80570	2.8	10.6	500	34	1,800	124	0.5	
SG-0510 ①	SG-40510	SG-80510	4	15.1	500	34	1,250	86	0.5	
SG-0514 ①	SG-40514	SG-80514	5.6	21.2	500	34	900	62	0.75	
SG-0519 ①	SG-40519	SG-80519	7.6	28.8	200	14	400	28	0.75	
SG-0528 ①	SG-40528	SG-80528	11.2	42.4	100	7	200	14	0.75	
SG-0729	SG-40729	—	2.8	10.6	500	34	2,500	172	1	
SG-0741	SG-40741	SG-80741	4	15.1	500	34	2,500	172	1	
SG-0758	SG-40758	SG-80758	5.6	21.2	500	34	2,500	172	1	
SG-0782	SG-40782	SG-80782	8	30.3	500	34	2,250	155	1	
SG-0711	SG-40711	SG-80711	11.2	42.4	500	34	1,600	110	1	
SG-0716	SG-40716	SG-80716	16	61	500	34	1,100	75	1	
SG-0722	SG-40722	SG-80722	22	83	500	34	1,600	110	1.50 X 1.25	
SG-0732	SG-40732	SG-80732	32	121	500	34	1,100	75	1.50 X 1.25	
SG-1013	SG-41013	—	25	95	500	34	1,900	131	1.5	
SG-1026	SG-41026	—	50	189	500	34	1,000	69	2	
SG-1420	SG-41420	—	70	265	500	34	1,100	76	2	
SG-1436	SG-41436	—	125	473	290	20	580	40	3	
SG-1456	SG-41456	—	190	719	190	13	380	26	4	

Integral pressure relief valve standard (single pump).

① SG-05 models available with UL 343 listing for fuel oil.

NOTE: Refer to the catalog section of a particular product series for specific performance details.

## PORTING

- Opposite (180°)
- NPT
- SAE O-Ring
- SAE Flange

## SEALING

- Lip Seal
- Component Mechanical Seal
- Sealless Mag Drive

## MOUNTING

- Foot Mount (with Footed Bracket)
- Motor Mount Bracket to IEC & NEMA Motors (Close-Coupled)
- Vertical Mount

## OPTIONS

- Double Pump

## DRIVES

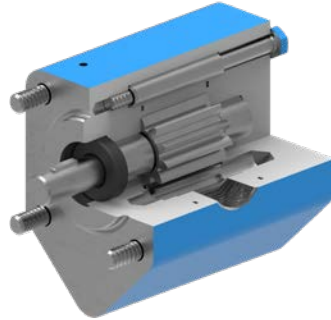


Refer to "Appendix A" on page 42 for more information on drives.

Refer to "Appendix B" on page 43 for more information on seals and porting.

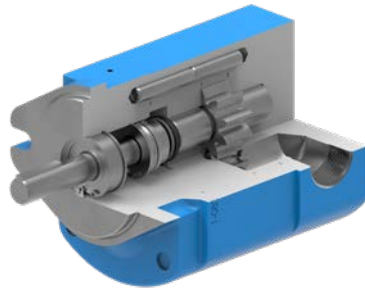
<p><b>CAPACITY</b> to 190 GPM (719 LPM)</p>	<p><b>PRESSURE</b> to 500 PSI (34 BAR)</p>	<p><b>VISCOSITY</b> to 1,000,000 SSU (to 250,000 cSt)</p>	<p><b>TEMPERATURE</b> -40°F to +450°F (-40°C to +230°C)</p>
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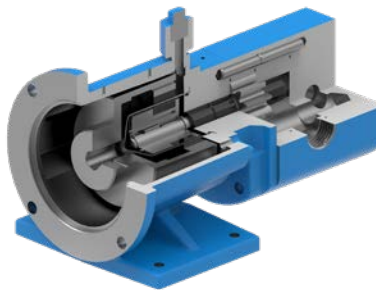
**SG-05** (*lip seal*)

- Wide range of viscosities
- Economical option for clean lubricating liquids
- Needle bearings as standard



**SG-407** (*mechanical seal*)

- Used for thin liquids
- Carbon graphite bearings as standard



**SG-807** (*sealless mag drive*)

- Sealless technology to eliminate seal leakage at pressures to 500 PSI (34 Bar)



**ALSO AVAILABLE:**

**CMD Series™ Composite Mag Drive**

- Non-metallic external gear design for corrosive and difficult to seal liquids.

MODELS	SPECIFICATIONS							
	Nominal Flow At 1450 RPM		Nominal Flow At 1750 RPM		Pressure		Standard Ports	
Sealless Mag Drive	GPM	LPM	GPM	LPM	PSI	BAR	Size, Inches	Type
CMD-E02	0.34	1.3	0.4	1.5	150	10	¼	NPT
CMD-E05	1.3	4.9	1.5	5.8	150	10	⅜	NPT
CMD-E12	2.6	10	3.2	12.1	150	10	¾	NPT
CMD-E25	0.5	21	6.5	24.6	150	10	1	Flange
CMD-E75	16.5	62.5	20	75	150	10	1½	Flange

In-line valve sold separately.

Note: Product images may not reflect standard construction.



**CONTACT DISTRIBUTOR**

# MOTOR SPEED PRODUCT LINE | CAST IRON



## FEATURES & BENEFITS

- The most compact gear pump series available to fit tight space constraints
- Vertical mounting options to further reduce the unit footprint
- High speed operation for the most economical pump option for thin to moderate viscosity applications

## TYPICAL APPLICATIONS

- Refined Fuels
- Lube Oils
- Rotating Equipment Lubrication
- Mobile Pump Carts
- Glycols
- Pipeline Sampling
- Isocyanates

## PERFORMANCE

INTERNAL GEAR MODELS					SPECIFICATIONS				
Motor Mount		Foot Mount		Bracket Mount	Performance			Standard Ports	
Lip Seal	Mechanical Seal	Mechanical Seal	Mechanical Seal	Mag Drive	Max Speed, RPM	GPM	m <sup>3</sup> /h	Size, Inches	Type
G75	G475	G4195	G495	—	1750	8	1.8	1	NPT
GG75	GG475	GG4195	GG495	GG895	1750	10	2	1	NPT
H75	H475	H4195	H495	—	1750	15	3	1.5	NPT
HJ75	HJ475	HJ4195	HJ495	HJ895	1750	20	5	1.5	NPT
HL75	HL475	HL4195	HL495	HL895	1750	30	7	1.5	NPT
—	—	AS4195	AS495	AS895	1750	55	12	2.5	NPT
—	—	AK4195	AK495	AK895	1750	85	19	2.5	NPT
—	—	AL4195	AL495	AL895	1750	115	26	3	NPT
—	—	KE4195*	—	—	1750	150	34	4	Flange
—	—	KKE4195*	—	—	1750	205	47	4	Flange
—	—	LQE4195*	—	—	1150	235	53	4	Flange
—	—	LSE4195*	—	—	1150	350	80	4	Flange
—	—	Q4195	—	—	750	460	104	6	Flange
—	—	QS4195	—	—	640	580	132	6	Flange

\* KE, KKE, LQE and LSE sizes have a foot mount and flange for M-Drive Bracket.

NOTE: Refer to the catalog section of a particular product series for specific performance details.

## PORTING

- Opposite (180°)
- NPT
- Flanged (ANSI/ASME or DIN Compatible)
- High Pressure Flanges (ANSI 250# or DIN PN25)

## SEALING

- Lip Seal
- Behind the Rotor Seal
- Balanced Seal
- Sealless Mag Drive

## MOUNTING

- Motor Mount
- Foot Mount
- Vertical Mount

## DRIVES



Refer to "Appendix A" on page 42 for more information on drives.

Refer to "Appendix B" on page 43 for more information on seals and porting.



**CAPACITY**  
to 580 GPM  
(132 m<sup>3</sup>/h)



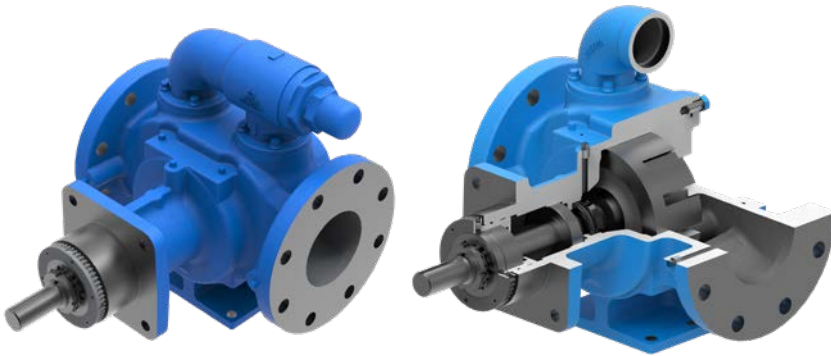
**PRESSURE**  
to 250 PSI  
(17 BAR)



**VISCOSITY**  
to 25,000 SSU  
(to 5,500 cSt)

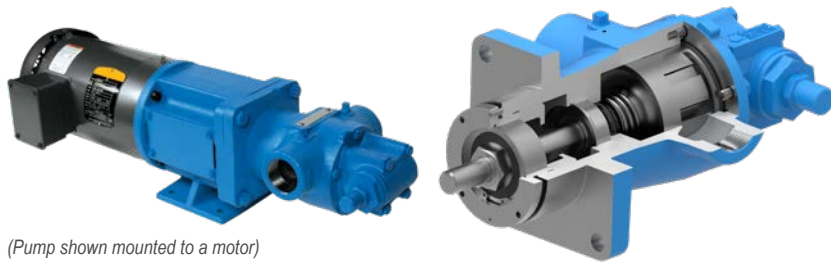


**TEMPERATURE**  
-40°F to +350°F  
(-40°C to +180°C)



**4195** (foot mount, behind the rotor seal)

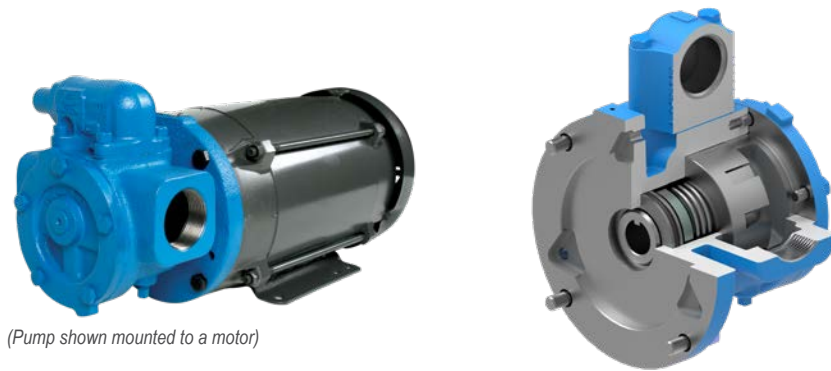
- Behind the rotor mechanical seal with antifriction bracket bearing for motor speed operation
- Optional balanced seal for high inlet pressures
- NPT or Class 125 flange ports with optional Class 250 or DIN PN-25/40 flanges



(Pump shown mounted to a motor)

**495** (bracket mount, behind the rotor seal)

- Flanged bracket for bell housing to close couple NEMA C or IEC B-14 motors
- Eliminates shaft alignment, easy mounting on equipment frames
- KE, KKE, LQE, LSE 4195 models have both foot for long-couple and bracket flange for close coupling



(Pump shown mounted to a motor)

**475** (motor mount, behind the rotor seal)

**75** (motor mount, lip seal)

- NEMA C-face mount for easy installation and a small footprint
- Simplified rotor retention system, economical for medium duty applications
- IEC mount option available



**895** (sealless mag drive)

- Eliminates the shaft seal to provide the highest level of liquid and vapor containment
- All liquid and vapor is hermetically sealed in the pump
- Used especially for hazardous and difficult-to-seal liquids
- Optional high pressure canister for inlet pressures up to 1,500 PSI (103 BAR)

Note: Product images may not reflect standard construction.





## FEATURES & BENEFITS

- Close coupled to fit tight space constraints with vertical mount options for reduced unit footprint
- High speed operation for economical steel pump offering
- High working pressures for compressor lubrication and pipeline sampling applications
- Class 300 flanges standard on all sizes and models

## TYPICAL APPLICATIONS

- Pipeline Sampling
- Compressor Lubrication
- Fuels
- Lube Oils

## PERFORMANCE

INTERNAL GEAR MODELS			SPECIFICATIONS				
Foot Mount	Bracket Mount		Performance			Standard Ports	
Mechanical Seal	Mechanical Seal	Mag Drive	Max Speed, RPM	GPM	m <sup>3</sup> /h	Size, Inches	Type
GG4193	GG493	GG893	1750	10	2.3	1	Flange
HJ4193	HJ493	HJ893	1750	20	4.5	1.5	Flange
HL4193	HL493	HL893	1750	30	6.8	1.5	Flange
AS4193	AS493	AS893	1750	55	12	3	Flange
AK4193	AK493	AK893	1750	85	19	3	Flange
AL4193	AL493	AL893	1750	115	26	3	Flange

NOTE: Refer to the catalog section of a particular product series for specific performance details.

## PORTING

- Opposite (180°)
- Flanged (ANSI/ASME or DIN Compatible)

## SEALING

- Behind the Rotor Seal
- Balanced Seal
- Sealless Mag Drive

## MOUNTING

- Motor Mount
- Foot Mount
- Vertical Mount

## DRIVES



Refer to "Appendix A" on page 42 for more information on drives.

Refer to "Appendix B" on page 43 for more information on seals and porting.



**CAPACITY**  
to 115 GPM  
(27 m<sup>3</sup>/h)



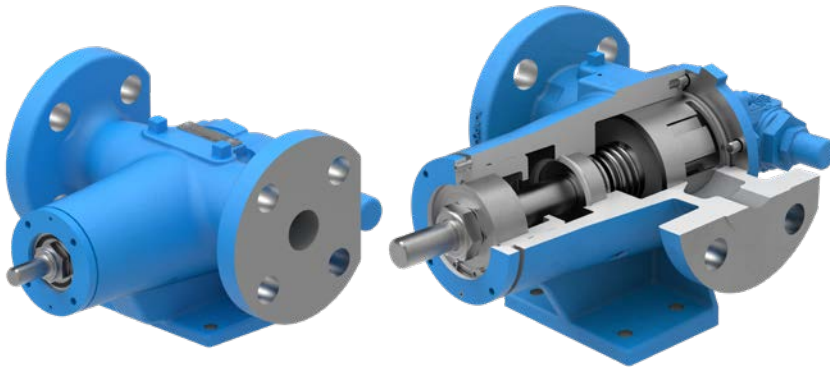
**PRESSURE**  
to 250 PSI  
(17 BAR)



**VISCOSITY**  
to 25,000 SSU  
(to 5,500 cSt)

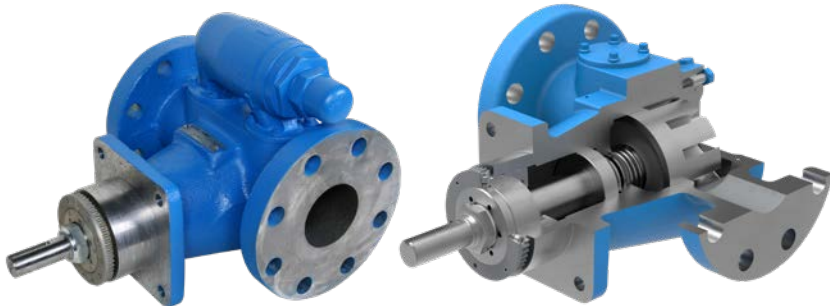


**TEMPERATURE**  
-20°F to +350°F  
(-30°C to +180°C)



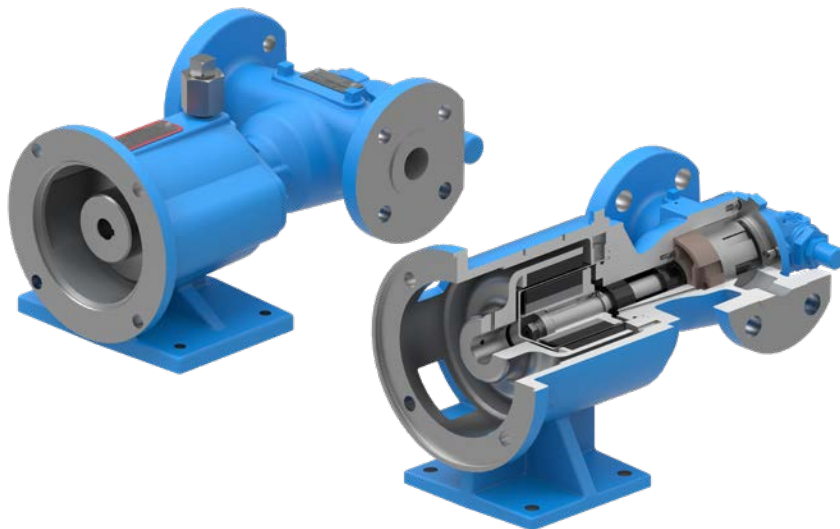
**4193** (*foot mount, behind the rotor seal*)

- Behind the rotor mechanical seal with antifriction bracket bearing for motor speed operation
- Optional balanced seal for high inlet pressures
- Class 300 flange ports
- Conforms to API 676, with exceptions



**493** (*bracket mount, behind the rotor seal*)

- Flanged bracket for bell housing to close couple NEMA C or IEC B-14 motors
- Eliminates shaft alignment, easy mounting on equipment frames



**893** (*sealless mag drive*)

- Eliminates the shaft seal to provide the highest level of liquid and vapor containment
- All liquid and vapor is hermetically sealed in the pump
- Used especially for hazardous and difficult-to-seal liquids
- Optional high pressure canister for inlet pressures up to 1,500 PSI (103 BAR)

Note: Product images may not reflect standard construction.

# MOTOR SPEED PRODUCT LINE | STAINLESS STEEL



## FEATURES & BENEFITS

- For corrosion resistance over a wider pH range
- Compact gear pump series to fit tight space constraints
- Non-galling gear materials standard for handling thin liquid applications

## TYPICAL APPLICATIONS

- Water-Based Liquids
- Acids & Caustics
- Additives
- General Chemical

## PERFORMANCE

INTERNAL GEAR MODELS		SPECIFICATIONS				
Foot Mount	Bracket Mount	Performance			Standard Ports	
Mechanical Seal	Mag Drive	Max Speed, RPM	GPM	m <sup>3</sup> /h	Size, Inches	Type
GG4197	GG897	1750	10	2.3	1	Flange
HJ4197	HJ897	1750	20	4.5	1.5	Flange
HL4197	HL897	1750	30	6.8	1.5	Flange
AS4197	AS897	1150	35	8	3	Flange
AK4197	AK897	1150	50	11	3	Flange
AL4197	AL897	1150	75	17	3	Flange

NOTE: Refer to the catalog section of a particular product series for specific performance details.

VANE MODELS		SPECIFICATIONS				
Foot Mount		Performance			Standard Ports	
Mechanical Seal		Max Speed, RPM	GPM	m <sup>3</sup> /h	Size, Inches	Type
LVP40017		1750	20	4.5	1.5	Flange
LVP41017		1750	20	4.5	1.5	Flange
LVP40027		1750	40	9	1.5	Flange
LVP41027		1750	40	9	1.5	Flange
LVP41057		1150	80	18	2	Flange
LVP41087		950	100	23	2	Flange
LVP41197		520	125	28	3	Flange
LVP41237		520	160	36	3	Flange

Integral pressure relief valve is standard.

NOTE: Refer to the catalog section of a particular product series for specific performance details.

## PORTING

- Opposite (180°)
- Flanged (ANSI/ASME or DIN Compatible)

## SEALING

- Behind the Rotor Seal
- Component Mechanical Seal (LVP)
- Cartridge Mechanical Seal (LVP)
- Cartridge Triple Lip Seal (LVP)
- Sealless Mag Drive

## MOUNTING

- Motor Mount
- Foot Mount

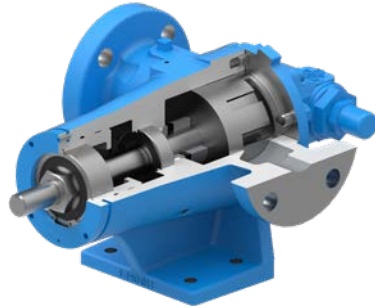
## DRIVES



M = LVP40017 & LVP 40027 only  
Refer to "Appendix A" on page 42 for more information on drives.

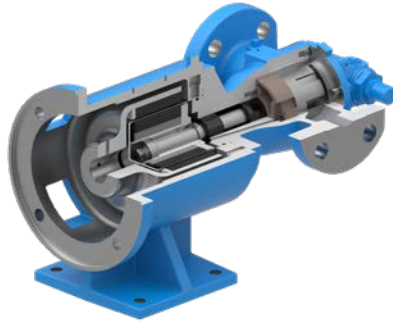
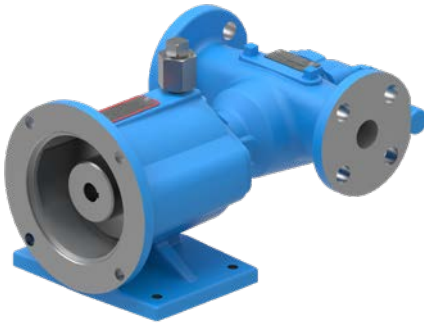
Refer to "Appendix B" on page 43 for more information on seals and porting.

<b>CAPACITY</b> to 160 GPM (36 m <sup>3</sup> /h)	<b>PRESSURE</b> to 200 PSI (14 BAR)	<b>VISCOSITY</b> to 25,000 SSU (to 5,500 cSt)	<b>TEMPERATURE</b> -40°F to +350°F (-40°C to +180°C)
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**4197** (*foot mount, behind the rotor seal*)

- Behind the rotor mechanical seal with antifriction bracket bearing for motor speed operation
- PTFE wedge-type mechanical seal standard for corrosive liquids
- Class 150 flange ports



**897** (*sealless mag drive*)

- Eliminates the shaft seal to provide the highest level of liquid and vapor containment
- All liquid and vapor is hermetically sealed in the pump
- Used especially for hazardous, corrosive and difficult-to-seal liquids
- Optional high pressure canister for inlet pressures up to 1,500 PSI (103 BAR)

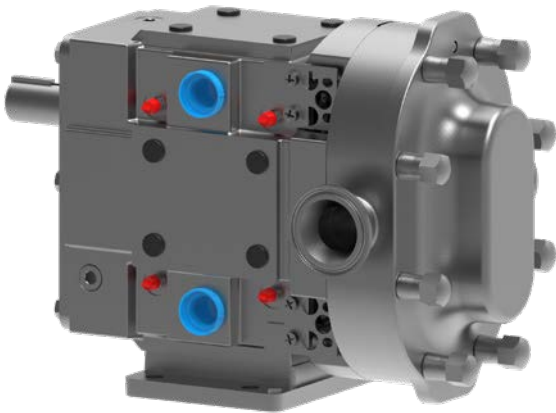


**LVP** (*mechanical seal*)

- Vane pump design offers ANSI or DIN flanges, and IEC or NEMA motor mounts to conform to international standards for enhanced application flexibility
- High pressure and high efficiency with thin liquids
- 20 minute inline vane replacement reduces scheduled downtime
- Harder components than other vane pumps extend pump life
  - 62 Rockwell C surface-hardened one-piece, 316 stainless steel casing
  - Silicon carbide sleeve bearings
  - Chrome oxide shaft coating

Note: Product images may not reflect standard construction.



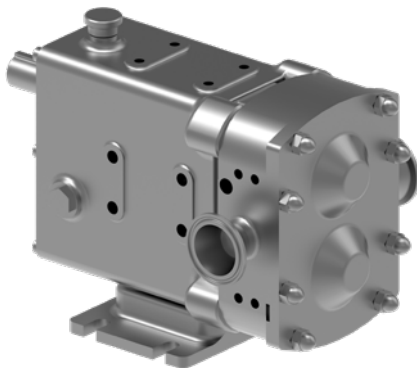


## FEATURES & BENEFITS

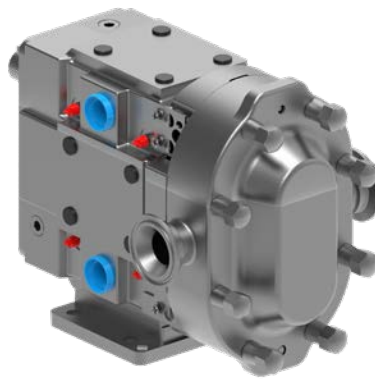
- Low shear pump design for gentle handling of delicate and shear sensitive products
- Handles a wide range of products including suspended solids
- High volumetric efficiency on low viscosity products
- Used in a wide range of hygienic industries where cleanliness is important

## TYPICAL APPLICATIONS

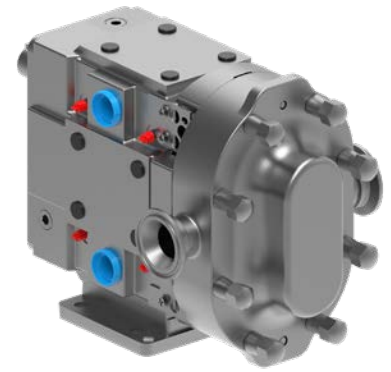
- Dairy
- Bakery
- Meat Processing
- Foods
- Beverage
- Confectionary
- Personal Care
- Pharmaceutical
- Paints
- Chemical



Revolution® Series



TRA®20 Series



TRA®10 Series



## PORTING

- Hygienic port options: Tri-clamp, DIN 11864, DIN 11851 Male, SMS Male (Revolution®)
- Industrial port options: ASA/ANSI 150 lb. or 300 lb. RF, DIN 2633, BSP Male, NPT Male (Revolution®)
- Complete range of hygienic clamp, screw, flange & industrial screw connections (TRA)
- Tri-clamp, flanged, DIN, IMDA, NPT, BSP, etc. (TRA)
- Rectangular flange/hopper inlet available on select sizes

Refer to "Appendix B" on page 43 for more information on seals and porting.

## SEALING

- Single mechanical
- Double mechanical w/ flush
- Single O-ring (Revolution®, TRA®10)
- Double O-ring w/ flush (Revolution®, TRA®10)

## ROTORS

- Non-galling WFT 808® nickel alloy standard
- Optional clearances: front face, hot, high temperature/high viscosity (chocolate)
- Twin wing rotors standard, single wing rotors optional (TRA)

## GEAR BOX

- Stainless steel



**CAPACITY**  
to 450 GPM  
(102 m³/h)



**PRESSURE**  
to 500 PSI  
(34 BAR)



**VISCOSITY**  
to 2,000,000 SSU  
(440,000 cSt)



**TEMPERATURE**  
to +300°F  
(to +150°C)





## PERFORMANCE

### REVOLUTION® MODELS

Size	Model	Max Capacity		Displacement		Max Pressure		Max Speed	Standard Ports	
		GPM	m³/h	USG/rev.	l/rev.	PSI	BAR	RPM	In	mm
2	R0150X	11	2.6	0.014	0.055	305	21	800	1.5	38.1
2	R0180P	23	5.3	0.029	0.11	203	14	800	1.5	38.1
3	R0200X	34	8	0.04	0.16	305	21	800	1.5	38.1
3	R0300X	48	11	0.06	0.23	247	17	800	1.5	38.1
3	R0400X	62	14	0.08	0.29	203	14	800	2	50.8
4	R0450X	67	15	0.1	0.42	450	31	600	2	50.8
4	R0600P	92	21	0.2	0.58	305	21	600	2.5	63.5
4	R0800X	122	28	0.2	0.77	247	17	600	2.5	63.5
4	R1300X	159	36	0.3	1	203	14	600	3	76.2
5	R1800X, R1830X	231	53	0.4	1.46	450	31	600	3	76.2
5	R2200X, R2230X	313	71	0.5	1.98	305	21	600	4	101.6
5	R2600P, R2630P	399	91	0.7	2.52	203	14	600	4	101.6

### TRA®20 & TRA®10 MODELS

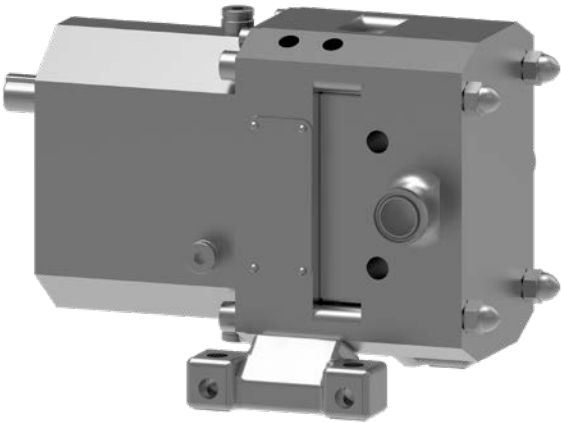
Series	Model	Max Capacity		Displacement		Max Pressure		Max Speed	Standard Ports	
		GPM	m³/h	USG/rev.	l/rev.	PSI	BAR	RPM	In	mm
TRA®20	0060	8	1.8	0.008	0.03	300	21	1000	1	25.4
TRA®20	0150	11	2.5	0.014	0.052	250	17	800	1.5	38
TRA®20	0180	20	4.5	0.029	0.108	200	14	700	1.5	38
TRA®20	0300	36	8.2	0.06	0.227	250	17	600	1.5	38
TRA®20	0450	58	13.2	0.096	0.366	450	31	600	2	51
TRA®20	0600	90	20.4	0.15	0.568	300	21	600	2.5	64
TRA®20	1300	150	34.1	0.25	0.946	200	14	600	3	76
TRA®20	1800	230	52.2	0.383	1.45	450	31	600	3	76
TRA®20	2100	300	68.1	0.5	1.89	500	34	600	4	102
TRA®20	2200	310	70.4	0.516	1.95	300	21	600	4	102
TRA®20	3200	450	102	0.75	2.85	300	21	600	6	152
TRA®10	0060	6	1.3	0.008	0.03	200	14	800	1.5	38
TRA®10	0150	9	2	0.014	0.052	200	14	700	1.5	38
TRA®10	0180	17	3.8	0.03	0.11	200	14	600	1.5	38
TRA®10	0300	36	8.2	0.06	0.23	200	14	600	1.5	38
TRA®10	0450	59	13.3	0.1	0.38	400	27	600	2	51
TRA®10	0600	90	20.4	0.15	0.58	200	14	600	2.5	64
TRA®10	1300	150	34.1	0.25	0.96	200	14	600	3	76
TRA®10	2200	310	70.4	0.52	1.98	200	14	600	4	102
TRA®10	3200	450	102	0.75	2.85	200	14	600	6	152

### RECTANGULAR FLANGE MODELS

Series	Model	Max Capacity		Displacement		Max Pressure		Max Speed	Inlet (W x L)		Outlet	
		GPM	m³/h	USG/rev.	l/rev.	PSI	BAR	RPM	In	mm	In	mm
Revolution®	0340	11	48	0.06	0.23	247	17	800	1.85 x 6.81	47 x 175	2	50.8
Revolution®	0640	21	92	0.2	0.58	305	21	600	2.36 x 8.90	60 x 226	2.5	63.5
Revolution®	1340	36	159	0.3	1	203	14	600	3.19 x 9.29	81 x 236	3	76.2
Revolution®	2240	71	313	0.5	1.98	305	21	600	4.06 x 11.22	103 x 285	4	101.6
TRA®20	0340	24	5.4	0.06	0.23	200	14	400	1.75 x 6.75	44.50 x 171.45	1.5	38.1
TRA®20	0640	60	13.6	0.15	0.57	200	14	400	2.24 x 8.82	56.90 x 224.03	2.5	57.15
TRA®20	1340	100	22.7	0.25	0.95	200	14	400	2.97 x 9.25	75.44 x 234.95	3	76.2
TRA®20	2240	200	45.4	0.52	1.95	200	14	400	3.87 x 11.00	98.30 x 279.40	4	101.6
TRA®10	0340	24	5.4	0.06	0.22	200	14	400	1.75 x 6.75	44.50 x 171.45	2	50.8
TRA®10	0640	60	13.6	0.15	0.57	200	14	400	2.24 x 8.82	56.90 x 224.03	2.5	57.2
TRA®10	1340	100	22.7	0.25	0.96	200	14	400	2.97 x 9.25	75.44 x 234.95	3	76.2
TRA®10	2240	200	45.4	0.52	1.97	200	14	400	3.87 x 11.00	98.30 x 279.40	4	101.6



# ROTARY LOBE PRODUCT LINE | STAINLESS STEEL

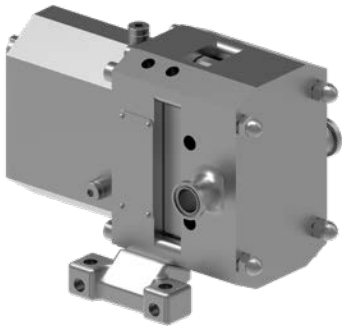


## FEATURES & BENEFITS

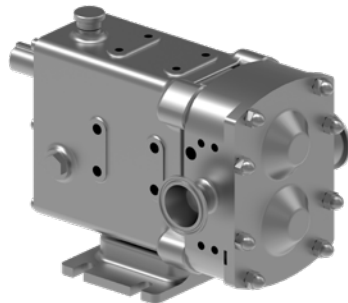
- Low shear pump design for gentle handling of delicate and shear sensitive products
- Handles a wide range of products including suspended solids
- High volumetric efficiency on low viscosity products
- Used in a wide range of hygienic industries where cleanliness is important

## TYPICAL APPLICATIONS

- Pharmaceutical
- Personal Care
- Foods
- Beverage
- Dairy
- Confectionary
- Chemical
- High Fructose Corn Syrup
- Vinegar
- Vegetable Oils



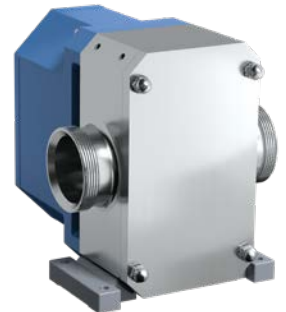
**SteriLobe® Series**



**Revolution® Series**



**Classic+ / MultiPump® Series**



**RTP® Series**



## PORTING

- Complete range of hygienic clamp, screw, flange & industrial screw connections (C+/MP)
- Tri-clamp, flanged, DIN, IMDA, NPT, BSP, etc. (C+/MP)
- Hygienic port options: Tri-clamp, DIN 11864, DIN 11851 Male, SMS Male (Revolution®)
- Industrial port options: ASA/ANSI 150 lb. or 300 lb. RF, DIN 2633, BSP Male, NPT Male (Revolution®)
- Rectangular flange/hopper inlet available on select sizes (Rev)
- Camlock, ACME & DIN 11851 ports available (RTP®)

## SEALING

- Single O-ring (C+/MP, Rev, RTP®)
- Single mechanical (C+/MP, Rev)
- Single mechanical with flush or quench (C+/MP)
- Double O-ring (RTP®)
- Double O-ring with flush (Rev)
- Double mechanical with flush (C+/MP, Rev)
- Gland packing (C+/MP)
- Gland packing with lantern ring with flush (C+/MP)
- Mechanical Seals (RTP®)

## ROTORS

- 316L standard
- Optional clearances: Different temperature clearance bands available dependent on application and cleaning requirements

## GEAR BOX

- Stainless Steel, Powder coated or painted cast Iron dependent on series and model
- Oil lubrication standard, grease optional (Revolution®)
- Ingress protected and sealed lightweight aluminum gearbox (RTP®)

Refer to "Appendix B" on page 43 for more information on seals and porting.



**CAPACITY**  
to 832 GPM  
(189 m³/h)



**PRESSURE**  
to 218 PSI  
(15 BAR)



**VISCOSITY**  
to 2,000,000 SSU  
(440,000 cSt)



**TEMPERATURE**  
to +300°F  
(+150°C)

## PERFORMANCE



### ROTARY LOBE MODELS

Series	Model	Max Capacity		Displacement		Max Pressure		Max Speed	Standard Ports	
		GPM	m <sup>3</sup> /h	USG/rev.	l/rev.	PSI	BAR	RPM	In	mm
SteriLobe®	SLAS	14	3.18	0.0103	0.039	218	15	1400	.75	19
SteriLobe®	SLAL	22	5	0.0156	0.059	145	10	1400	1	25
SteriLobe®	SLBS	25.7	5.8	0.0214	0.081	218	15	1200	1	25
SteriLobe®	SLBL	38.7	8.8	0.0322	0.122	145	10	1200	1.5	38
SteriLobe®	SLCS	53.6	12.2	0.0446	0.169	218	15	1200	1.5	38
SteriLobe®	SLCL	80.5	18.3	0.0671	0.254	145	10	1200	2	50
SteriLobe®	SLDS	93	20.5	0.093	0.352	218	15	1000	1.5	38
SteriLobe®	SLDL	139.5	31.7	0.1395	0.528	145	10	1000	2	50
SteriLobe®	SLES	154.7	35.1	0.1934	0.732	218	15	800	2	50
SteriLobe®	SLEL	232.3	52.8	0.2903	1.099	145	10	800	3	76
SteriLobe®	SLFS	241.5	54.8	0.4026	1.542	218	15	600	3	76
SteriLobe®	SLFL	362.2	82.3	0.6036	2.285	145	10	600	4	101
SteriLobe®	SLGS	502.5	114.1	0.8374	3.17	218	15	600	4	101
SteriLobe®	SLGL	753.5	171.1	1.2559	4.754	145	10	600	6	152
Revolution®	(Size 2) R0150X	16	3.6	0.016	0.061	218	15	1000	1.5	38.1
Revolution®	(Size 2) R0160L	22	4.9	0.021	0.081	145	10	1000	1.5	38.1
Revolution®	(Size 2) R0180L	29	6.6	0.029	0.11	102	7	1000	1.5	38.1
Revolution®	(Size 3) R0200X	47	11	0.05	0.18	203	14	1000	1.5	38.1
Revolution®	(Size 3) R0300X	66	15	0.07	0.25	131	9	1000	1.5	38.1
Revolution®	(Size 3) R0400X	86	20	0.09	0.33	102	7	1000	2	50.8
Revolution®	(Size 4) R0450X	95	22	0.1	0.45	218	15	800	2	50.8
Revolution®	(Size 4) R0800X	173	39	0.2	0.82	131	9	800	2.5	63.5
Revolution®	(Size 4) R1300X	226	51	0.3	1.07	102	7	800	3	76.2
Revolution®	(Size 5) R1800X	246	56	0.4	1.55	218	15	600	3	76.2
Revolution®	(Size 5) R2200X	333	76	0.6	2.1	116	8	600	4	101.6
Classic+ / MultiPump®	10/0005/12	17.1	3.9	0.0122	0.046	174	12	1400	1	25
Classic+ / MultiPump®	10/0008/08	30.7	7	0.0219	0.083	115	8	1400	1 1/2	38
Classic+ / MultiPump®	10/0011/05	41	9.3	0.0293	0.111	70	5	1400	1 1/2	38
Classic+ / MultiPump®	20/0020/12	53.4	12.1	0.0534	0.202	174	12	1000	1 1/2	38
Classic+ / MultiPump®	20/0031/07	82.7	18.8	0.0827	0.313	100	7	1000	2	50
Classic+ / MultiPump®	30/0069/12	137.6	31.2	0.1834	0.694	174	12	750	2	50
Classic+ / MultiPump®	30/0113/07	222.9	50.6	0.2972	1.125	100	7	750	3	76
Classic+ / MultiPump®	40/0180/12	332.9	75.6	0.4756	1.8	174	12	700	3	76
Classic+ / MultiPump®	40/0250/07	462.4	105	0.6605	2.5	100	7	700	4	101
Classic+ / MultiPump®	50/0351/12	603.5	137	0.9284	3.514	174	12	650	4	101
Classic+ / MultiPump®	50/0525/08	832.2	189	1.387	5.25	115	8	600	6	150
RTP®	RTP20	264	60	0.264	1	145	10	1000	2 or 3	50 or 75
RTP®	RTP30	338	76.8	0.338	1.28	174	12	1000	3 or 4	75 or 100

### RECTANGULAR FLANGE MODELS

Series	Model	Max Capacity		Displacement		Max Pressure		Max Speed	Inlet (W x L)		Outlet	
		GPM	m <sup>3</sup> /h	USG/rev.	l/rev.	PSI	BAR	RPM	In	mm	In	mm
Revolution®	0340	11	48	0.06	0.23	247	17	800	1.85 x 6.81	47 x 175	2	50.8
Revolution®	0640	21	92	0.2	0.58	305	21	600	2.36 x 8.90	60 x 226	2.5	63.5
Revolution®	1340	36	159	0.3	1	203	14	600	3.19 x 9.29	81 x 236	3	76.2
Revolution®	2240	71	313	0.5	1.98	305	21	600	4.06 x 11.22	103 x 285	4	101.6

# LIQUID-SPECIFIC PRODUCT LINE

Through 110+ years of pumping experience, our engineers have developed uniquely designed products with a specific application in mind. These products focus on solving targeted challenges that exist within that liquid application.

From speed to viscosity, sealing or shear, these products provide additional security that the product is right for the applications they are built for.

## ABRASIVE LIQUID

### 4624B Series™

#### FEATURES & BENEFITS

- Extended service life provided by:
  - Tungsten carbide components in critical wear areas of pump
  - Other hardened component options available
  - Silicon carbide mechanical seal faces
  - Positive seal flush to keep fresh supply of liquid at seal faces
  - Behind the rotor seal placement eliminates abrasive wear on shaft bushing
  - Pin drive mechanical seal increases viscosity range
- For abrasive liquids such as paints, inks and waste oil



## AMMONIA (REFRIGERATION)

### 4924A Series™

#### FEATURES & BENEFITS

- Double mechanical seal with pressurized seal chamber and oil reservoir pressurized by ammonia, no external flush system required
- Adjustable return-to-tank pressure relief valve
- Pressure-lubricated idler bushing maximizes bushing life
- Designed for liquid overfeed ammonia refrigeration systems
- New bearing housing design simplifies end clearance adjustment and maintenance



MODELS	SPECIFICATIONS				
	Non-Jacketed	Performance			Standard Ports
Behind the Rotor Seal	Max Speed, RPM	GPM	m³/h	Size, Inches	Type
F4624B	870	0.75	0.2	0.5	NPT
FH4624B	870	1.5	0.3	0.5	NPT
H4624B	640	5	1.1	1.5	NPT
HL4624B	640	10	2.3	1.5	NPT
K4624B	280	25	5.7	2	NPT
KK4624B	280	35	8	2	NPT
L4624B	230	50	11	2	NPT
LQ4624B	230	50	11	2.5	Flange
LL4624B	230	65	15	3	Flange
LS4624B	230	72	16	3	Flange
Q4624B	190	110	25	3	Flange
QS4624B	190	182	41	6	Flange

Integral pressure relief valve is standard.

Abrasion resistant components also available in other series and sizes.

MODELS	SPECIFICATIONS				
	Mechanical Seal	Performance			Standard Ports
	Max Speed, RPM	GPM	m³/h	Size, Inches	Type
HL4924A	780	10	2.3	1.5	NPT
K4924A	280	20	4.5	2	NPT
KK4924A	280	30	6.8	2	NPT
LQ4924A	280	45	10	2.5	Flange
LL4924A	280	60	14	3	Flange

Return-to-tank relief valve standard.

Note: Product images may not reflect standard construction. Refer to "Appendix B" on page 43 for more information on seals and porting.

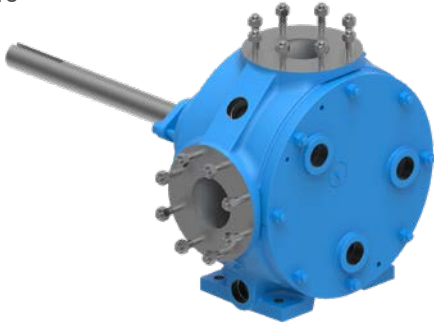
# ASPHALT

## 34 Series™

### FEATURES & BENEFITS:

#### JACKETED, PACKING

- Jacketing suitable for hot oil or steam for enhanced application flexibility
- Belt drive or reducer drive options available
- Economical option for clean asphalt at low to moderate pressure



## 124E Series™, 324E Series™

### FEATURES & BENEFITS:

#### ELECTRICALLY HEATED, PACKING

- Lower installation costs in remote locations when steam or hot oil is not available or long piping runs are required
- Reduced environmental costs by eliminating hot oil leaks
- Reduced energy costs with heat source in pump vs. external heat tracing
- Simplified service by eliminating hot oil or steam pipe connections
- Optional closed loop PID control system maintains tight control



MODELS	SPECIFICATIONS				
	Performance			Standard Ports	
	Max Speed, RPM	GPM	m³/h	Size, Inches	Type
LQ34	420	90	20	2.5	Flange
Q34	350	200	45	3	Flange
M34	280	280	64	4	Flange
N34	280	450	102	5	Flange
H124E*	1750	15	3.4	1.5	NPT
HL124E*	2900	50	11	1.5	NPT
K124E*	950	90	20	2	NPT
KK124E*	950	120	27	2	NPT
L124E*	950	210	48	2	NPT
LQ124E*	950	210	48	2.5	Flange
LL124E*	520	140	32	3	Flange
LS124E*	720	230	52	3	Flange
Q124E*	520	300	68	4	Flange
QS124E*	520	500	114	6	Flange
N324E*	420	685	156	6	Flange
K1224A-ASP	780	80	18	2	NPT
KK1224A-ASP	780	100	23	2	NPT
L1224A-ASP	640	135	31	2	NPT
LQ1224A-ASP	640	135	31	2 ½	Flange
LL1224A-ASP	520	140	32	3	Flange
LS1224A-ASP	640	200	45	3	Flange
Q1224A-ASP	470	275	62	4	Flange
QS1224A-ASP	470	400	91	6	Flange
M1224A-ASP	420	420	95	4	Flange
N1324A-ASP	330	550	125	6	Flange
R1324A-ASP	260	1,000	227	8	Flange
RS1324A-ASP	260	1,500	340	10	Flange

\* Total Watts by Size: H-HL = 275, K-KK = 690, L-LS = 1,200, Q-QS = 2,200, N = 2,500

## 1224A-ASP Series™, 1324A-ASP Series™

### FEATURES & BENEFITS:

#### JACKETED, O-PRO® CARTRIDGE SEAL

- Rugged design provides superior performance in asphalt applications
- Tight clearances offer high efficiency and excellent priming capabilities
- O-Pro® Cartridge seal combines reliable sealing with easy maintenance



Note: O-Pro® Cartridge Seal is patented.

Note: Product images may not reflect standard construction. Refer to "Appendix B" on page 43 for more information on seals and porting.



 CONTACT DISTRIBUTOR

**VIKING PUMP®** 37

# LIQUID-SPECIFIC PRODUCT LINE

## CHEMICAL TANKER

### RTPe Series™

#### CLEANABILITY

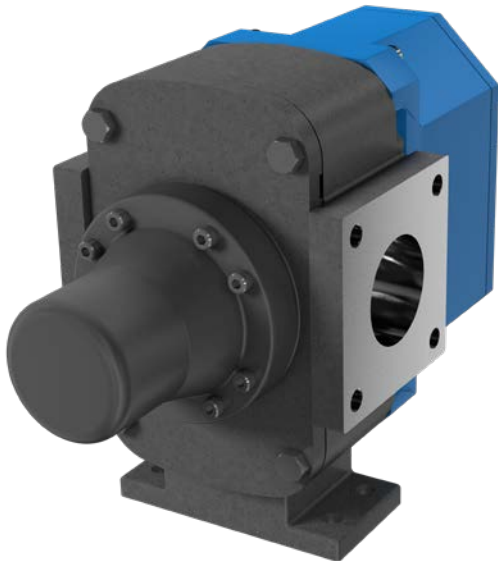
- The simple design behind the rotor makes strip cleaning easy and fast
- Choose the cleaning process that fits your needs: COP (Clean Out of Place) or CIP (Clean In Place)

#### EASE OF MAINTENANCE

- Innovative front loading seal design enables quick inspection and easy servicing
- Sealed gearcase with long-life lubrication eliminates oil inspection and filling
- Easy to service design requires no special tools for disassembly and eliminates need for end clearance adjustments

#### PERFORMANCE

- Wide range of chemical compatibility
- Efficiently handles both low and high viscosity liquids with improved pressure capabilities for faster loading and unloading
- Excellent displacement/weight ratios, which means more in the tank and less in the cabinet (1 l/rev. / 0.264 USG/rev.)
- Precision helical gears, rotors and shaft design, with optimized bearing position, minimize overhung load – extending seal & bearing life



## CHOCOLATE

### 1224A-CHC Series™, 1227A-CHC Series™

#### FEATURES & BENEFITS

- EC1935 Compliant constructions
- Internal O-rings create a sealed lubrication chamber for the bracket bushing, increasing bushing life
- Trusted and proven with world leading chocolate manufacturers
- Low shear design protects delicate chocolate suspensions
- Hardened materials provide long life on abrasive liquors and chocolates



CHC1			PORTS		CHC2		
O-Pro® Seal	GPM	Max Speed, RPM	Size, Inches	Type	O-Pro® Seal	GPM	Max Speed, RPM
H1224A-CHC1	2	280	1.5	NPT	H1224A-CHC2	8	1000
H1224A-CHC1	2	280	2	Flange	H1224A-CHC2	8	1000
HL1224A-CHC1	4.6	280	1.5	NPT	HL1224A-CHC2	17	1000
HL1224A-CHC1	4.6	280	2	Flange	HL1224A-CHC2	17	1000
K1224A-CHC1	17	190	2	NPT	K1224A-CHC2	80	780
K1224A-CHC1	17	190	2 / 3	Flange	K1224A-CHC2	80	780
KK1224A-CHC1	23	190	2	NPT	KK1224A-CHC2	100	780
KK1224A-CHC1	23	190	2 / 3	Flange	KK1224A-CHC2	100	780
LQ1224A-CHC1	25	125	2.5 / 3 / 4	Flange	LQ1224A-CHC2	135	640
LL1224A-CHC1	31	125	3 / 4	Flange	LL1224A-CHC2	140	520
LS1224A-CHC1	38	125	3 / 4	Flange	LS1224A-CHC2	200	640
Q1224A-CHC1	57	100	4	Flange	Q1224A-CHC2	275	470
QS1224A-CHC1	88	100	6	Flange	QS1224A-CHC2	400	470
H1227A-CHC1	2	280	2	Flange	—	—	—
HL1227A-CHC1	4.6	280	2	Flange	—	—	—
K1227A-CHC1	17	190	3	Flange	—	—	—
KK1227A-CHC1	23	190	3	Flange	—	—	—
LQ1227A-CHC1	25	125	4	Flange	—	—	—
LL1227A-CHC1	31	125	4	Flange	—	—	—
LS1227A-CHC1	38	125	4	Flange	—	—	—
Q1227A-CHC1	57	100	4	Flange	—	—	—
QS1227A-CHC1	88	100	6	Flange	—	—	—

CHC1 Models for Cocoa Liquor, All Chocolates, Pastes (≈5,000 to 200,000 cPs)

CHC2 Models for Cocoa Butter, Oils, Lecithin (≈1 to 5,000 cPs)

Note: Product images may not reflect standard construction. Refer to "Appendix B" on page 43 for more information on seals and porting.

## COLD ETHANOL - SOLVENT

4197-SEP Series™

### FEATURES & BENEFITS

- Superior self-priming capabilities
- Low temperature mechanical seal
- Quiet pulsation-free flow
- Designed for continuous or intermittent duty cycle
- Assembled and tested with food grade liquids
- Reliable, steady flow regardless of changes in pressure or viscosity
- Electric motor driven and VFD compatible



## FUEL OIL

432-X Series™, SG-X Series™

### FEATURES & BENEFITS

- UL343 listed for the handling of various fuel oils
- Intended for use in the assembly of power-operated, oil-burning appliances in accordance with ANSI/NFPA 31
- Products achieved UL certification through testing at the UL laboratory
- Capacities range from 0.5 to 20 GPM, with lip seal or mechanical seal options

HL432-X



SG-0514-X



MODELS	SPECIFICATIONS				
	Behind the Rotor Seal	Nominal Flow (60 Hz)		Max. Differential Pressure	Standard Class 150 Flanged Ports
		GPM	RPM	PSIG	Size, Inches
GG4197-SEP1	10	1750	200	1	
HJ4197-SEP1	20	1750	200	1.5	
HL4197-SEP1	30	1750	200	1.5	
AS4197-SEP1	35	1150	200	3	
AK4197-SEP1	50	1150	200	3	
AL4197-SEP1	75	1150	200	3	

NOTE: Contact Viking Pump for performance curves specific to your application.

Note: Product images may not reflect standard construction. Refer to "Appendix B" on page 43 for more information on seals and porting.

# PARTS & ACCESSORIES



There are millions of Viking pumps installed throughout the world. Our parts and accessories are built to keep them running efficiently and make repairs easy.

Not all parts are created equal. Viking Genuine Parts come with a guarantee to dimensionally fit Viking products, as well as having consistent construction, including material grade and quality.

Whether purchasing an individual part, ordering a full repair kit, or choosing an accessory to make your systems work smoothly, ensure that you are maintaining your Viking pumps with the same quality of parts that it left the factory with. Choose Viking Genuine Parts when servicing your pumps. Reach out to your local stocking distributor to get parts on your shelves for proactive operational management.

## PARTS & KITS



Viking Pump parts kits provide customers with the ability to do a complete repair at once vs. each time a part wears. Everything needed is included in the kit, ready before you open the pump. Both seal kits and repair kits are available. Reduce your downtime by contacting your local stocking distributor to have a kit on your shelf ready to go when it is needed.



### DESIGN

- Only Viking Genuine Parts are specifically designed to meet performance requirements for Viking pumps



### QUALITY

- Viking Genuine Parts are tested to ensure optimum reliability



### SUPPORT

- Viking backs all Genuine Parts with its own warranty and stocking distributor network

## PARTS KITS VS. PARTIAL REPAIR



Everything you need in one place



Save time & money



Increase uptime



Increase service life



Reduce frequency of repairs



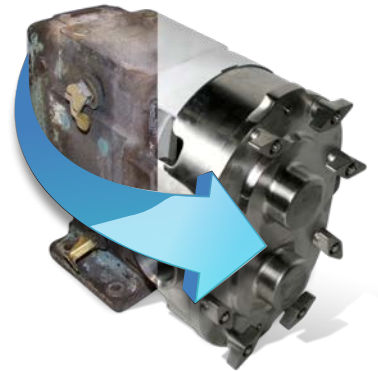
## WHY REMANUFACTURE?

*(Unique to circumferential piston products)*

- Worn pump is returned to like-new condition & performance
- Your remanufactured pump carries a full 1 year factory warranty
- All remanufactured pumps are tested & certified
- Save big compared to purchasing an entirely new pump
- Pumps can be remanufactured up to four times, depending on model & wear

## WHAT YOU GET

- NEW Rotors
- NEW Bearings
- NEW Seal Components
- NEW Shafts
- NEW Gears



## REBUILD VS. REPLACE

- Hygienic parts kits are designed to save time and money, making preventive maintenance and rebuilding easier and more cost-effective
- Hygienic pumps are designed and built to the highest standards, for long life and to be rebuilt instead of replaced when applicable
- Tool kits also available







## REDUCERS

### OFFSET

- Fully interchangeable ratios in each gearbox
- Gearbox is rotatable on mounting bracket to enable multiple mounting brackets enable output shaft to match Viking shaft heights



### IN-LINE

- Available in multiple sizes and a variety of ratios to 200 HP / 160 kW
- Universal mounting - solid input shaft or motor mount option (IEC or NEMA)



Learn about Reducers

## STRAINERS

### LID-EASE STRAINERS

- Quarter-turn, easy opening breech-lock lid simplifies routine cleaning
- Inclined basket design provides low pressure drop for high system efficiency
- Top basket removal eliminates the need to drain the strainer and minimizes product loss



### BOLTED-LID STRAINERS

- High quality, easy to clean simplex strainers
- Low pressure drop
- Gauge ports standard (plugged)
- Lid vent standard (plugged)
- Bottom drain (plugged)



Learn about Strainers

## MOTORS

### DRIVE MOTORS

- Ease of ordering to get pump and motor from one supplier
- Competitive pricing direct through Viking Pump
- All major brands and types available
- Energy efficient, compliant with EISA and EC640/2009 standards



Note: Product images may not reflect standard construction.



CONTACT DISTRIBUTOR

# APPENDIX A

## MATERIALS

### CAST IRON

For most non-corrosive applications. Least cost, best resistance to galling. *(Various coating options for hardness)*

### DUCTILE IRON

Alternative to steel for refinery and petrochem applications, used on some rotors for higher viscosity. *(Grades range from pearlitic to ferritic)*

### STEEL

For refinery and petrochem applications or extremely high temperatures. Optional rotor material for highest viscosities. *(Grades range from cast low alloy to various types of carbon steel)*

### STAINLESS STEEL

For corrosion resistance over a wider pH range. *(Grades range from 316L, 317, 347 and 770, to duplex and martensitic)*

### ALLOY 20

Austenitic stainless steel for sulfuric acid.

## DRIVES



### “B” DRIVE

Pump is mounted to a bracket (32 Series) or foot (SG Series).



### “D” DRIVE

Pump is direct connected to a motor or gear motor.



### “IM” DRIVE

Vertically inline mounted motor speed product line steel pumps.



### “M” DRIVE

Pump is mounted to a bell housing which accepts a C-face NEMA or IEC motor. A flexible coupling connects pump shaft to drive shaft.



### “M4” DRIVE

Tang shaft spur gear product line pumps mounted directly to tang drive motors.



### “P” DRIVE

Pump unit (pump, gear reducer, motor, base, couplings and guards) using a non-standard "purchased" gear reducer.



### “R” DRIVE

Pump unit (pump, gear reducer, motor, base, couplings and guards) using a Viking offset gear reducer.

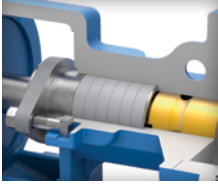


### “V” DRIVE

Pump unit (pump, motor, base, sheaves, belts and guard) using v-belts for speed reduction.

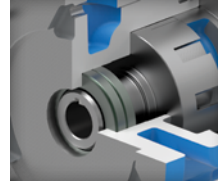
# APPENDIX B

## SEALS



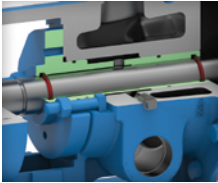
### PACKING

For highest temperatures and a wide range of viscosities.



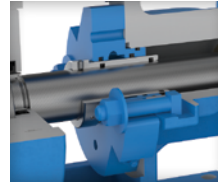
### LIP SEAL

Dynamic elastomeric seals energized with a spring, for very high viscosity capabilities.



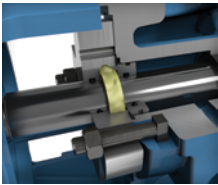
### O-PRO® BARRIER SEAL

Prevents leakage on hard to seal, viscous liquids. Incorporates shaft bushing protection from pumped liquid.



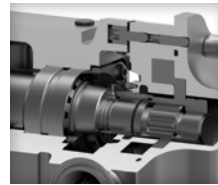
### O-PRO® GUARD SEAL

Prevents leakage on hard to seal, viscous liquids. Sleeved design avoids shaft wear concerns.



### O-PRO® CARTRIDGE SEAL

Prevents leakage on hard to seal, viscous liquids. Available with FFKM elastomers for high temperature or corrosive service.



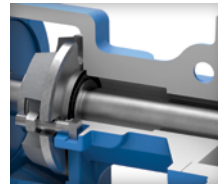
### O-RING SEAL

A simple low cost seal design with a wide range of application areas.



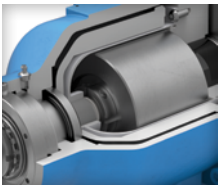
### COMPONENT MECHANICAL SEAL

Located in stuffing box or behind the rotor, component seals are an economical means of limiting leakage.



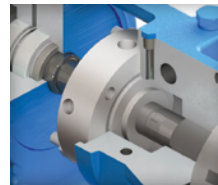
### CARTRIDGE SEAL

Single or double mechanical, or triple lip seals; back pull-out design simplifies replacement.



### SEALLESS MAG DRIVE

Eliminates shaft seals altogether, the ultimate solution to preventing seal leakage.



### API 682 SEAL

Category 1, 2 or 3, with API seal plans for petroleum and petrochemicals.

NOTE: O-Pro® seals are patented.

## PORTING



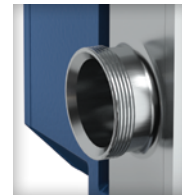
**RIGHT ANGLE (90°) FLANGED (ANSI & DIN)**



**TOP PORT**



**SAE FLANGE**



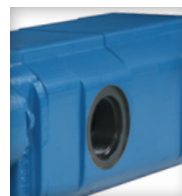
**THREADED**



**OPPOSITE (180°)**



**NPT**



**SAE O-RING**



**SANITARY CLAMP**

# SALES TOOLS

# VERTICAL INTEGRATION



## WEBSITE

[VIKINGPUMP.COM](http://VIKINGPUMP.COM)



## LITERATURE

[VIKINGPUMP.COM/DOWNLOADS](http://VIKINGPUMP.COM/DOWNLOADS)



## VIDEOS

[VIKINGPUMP.COM/VIKINGTV](http://VIKINGPUMP.COM/VIKINGTV)

Viking Pump operates a foundry, a 250,000+ sq. ft. machining, assembly and testing center, and an extensive product engineering and testing lab in its world headquarters in Cedar Falls, Iowa, USA. This level of vertical integration ensures maximum quality, ability to satisfy special needs, and to meet project schedules.



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