

VIKING PUMP

GLOBAL LEADER IN POSITIVE DISPLACEMENT PUMPING SOLUTIONS



PRODUCT CATALOG



INTERNAL GEAR EXTERNAL GEAR ROTARY VANE

GLOBAL LEADER IN POSITIVE DISPLACEMENT PUMPING SOLUTIONS



WORLD HEADQUARTERS Cedar Falls, Iowa, United States of America

VIKING PUMP

INDUSTRY & APPLICATION EXPERTS

With over 100 years of expertise, each Viking pump is uniquely designed for the task at hand, from simple solutions to your most advanced and demanding needs.

SOLUTIONS PROVIDER

Vertically integrated and able to create from concept to final product. Viking Pump is your one source for pumps, accessories, parts, service and support.

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.

GLOBAL SERVICE & SUPPORT

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

WHAT'S INSIDE

THE VIKING ADVANTAGE ⁴

ROTARY PUMP BENEFITS ⁶

MARKETS & APPLICATIONS ⁸

CORE TECHNOLOGIES ¹⁰

INTERNAL GEAR ¹²

EXTERNAL GEAR ³²

ROTARY VANE ³⁸

SOLUTIONS & SYSTEMS ⁴²

ACCESSORIES ⁴⁶

QUALITY ASSURANCE ⁵⁰

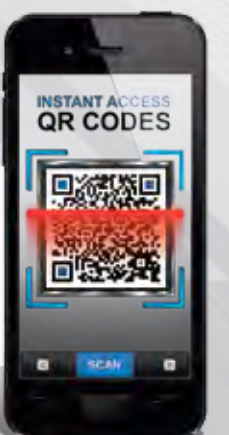
PARTS & SERVICE ⁵¹

SEAL & MATERIAL GUIDE ⁵²

PRODUCT SELECTION GUIDE ⁵⁴

Quickly link to more information throughout this catalog by scanning the QR icons with your smartphone.

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VIKINGPUMP.COM

VIKING PUMP

THE VIKING ADVANTAGE

PROBLEM SOLVING EXPERTISE

- **Strong knowledge** of industrial pump applications and products that meet or exceed your expectations
- **Product customization** to handle virtually any application through an experienced and specialized engineering team
- **Quality control** and extensive testing across all finished products to ensure superior quality

AVAILABLE SERVICES

- **Full product testing** - certified performance, certified hydro, pneumatic, NPSHr, sound and vibration testing
- **Liquid sample analysis** - rheology testing and elastomeric compatibility
- **Additional testing** - magnetic particle, dye penetrant, traceability and positive material identification

APPLICATION & SUPPORT

- **Local application support** from authorized distributors across the globe with extensive inventories of pumps and parts
- **Knowledge base of 1,400+ liquids pumped** allows the comparison of the best pumps and materials for your liquid
- **Customer solutions group** of application, sales and design engineers develops unique pumping solutions for both OEM manufacturers and pump end users with special requirements

QUALITY MANUFACTURING

- **Vertically integrated production process**, from raw materials to finished product
- **ISO 9001:2008** quality standards, using Six-Sigma and Lean Kaizen tools
- **Global manufacturing** footprint in the Americas, Europe and Asia



PRODUCTION PROCESS

Viking Pump's **vertically integrated production process** is a key element in our superior quality and customer satisfaction from concept to finished products.

VIKING ROTARY PUMP BENEFITS

OPERATES AT ANY POINT ON THE CURVE

High efficiency at full range of speeds.

LONG SEAL AND BEARING LIFE

Generally operated at speeds from 250 to 1,750 RPM, for reduced seal and bearing wear.

LOW SHEAR

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

LOW NPSH_r

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 ANY VISCOSITY

Capable of handling 28 to 2,000,000 SSU (1 to 440,000 cSt).

SIMPLE MAINTENANCE

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

ENERGY EFFICIENT

Compare to your current pumps using our pump selector at vikingpump.com/pumpselector.

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.

MARKETS & APPLICATIONS

Viking pumps are used in virtually every industry today, from chemicals, fuels and plastics, to materials that are thin, thick, hot, cold, liquid, solid and much more.

COATINGS & SEALANTS

Paints, Inks & Dyes • Adhesives • Caulks



MACHINERY

Fuel & Lube • Heat Transfer Liquids • Filtration

PERSONAL CARE

Lotions & Creams • Toothpaste • Hair & Skin Care



FOODS

Sugars • Chocolate • Oils • Dairy • Meats



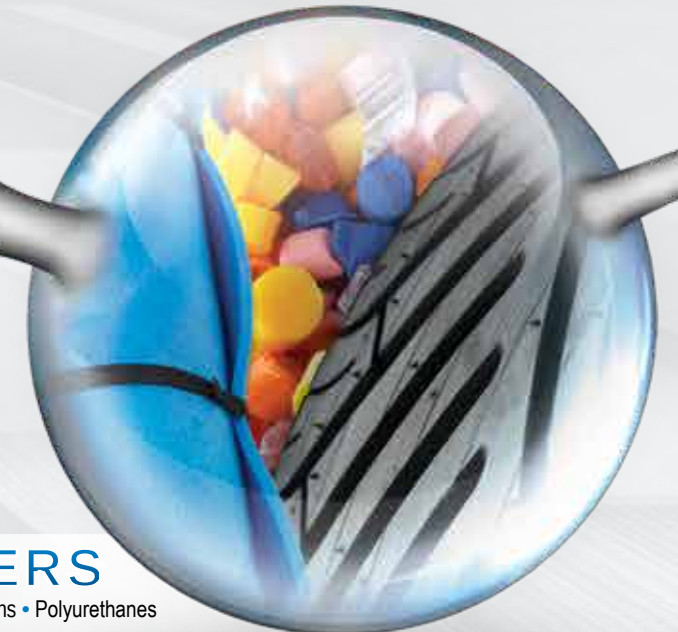
CHEMICALS

Acids & Bases • Alcohols & Solvents • Soaps & Detergents



POLYMERS

Rubbers & Plastics • Fibers & Resins • Polyurethanes



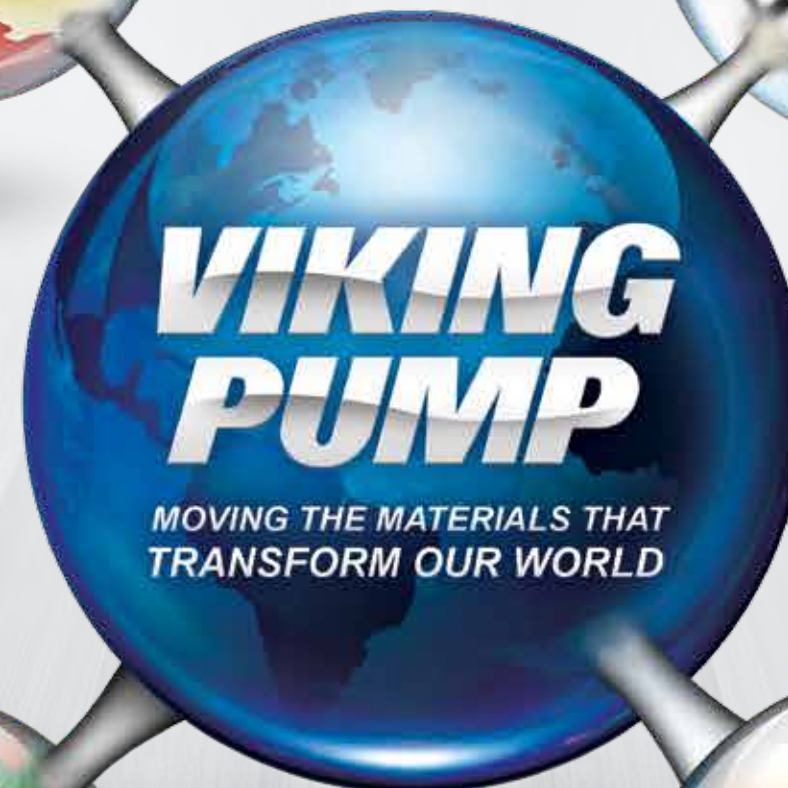
FUELS

Refined Fuels • Biofuels • Liquified Gases



OILS

Crude Oils • Lube Oil & Greases • Asphalt & Bitumens



VIKING PUMP TECHNOLOGIES

Rotary Positive Displacement Pumps displace a fixed quantity of liquid with each revolution of the pump by moving liquid between the pump elements and a stationary casing.



DID YOU KNOW?

Viking Pump founder, Jens Nielsen, invented the first internal gear pump

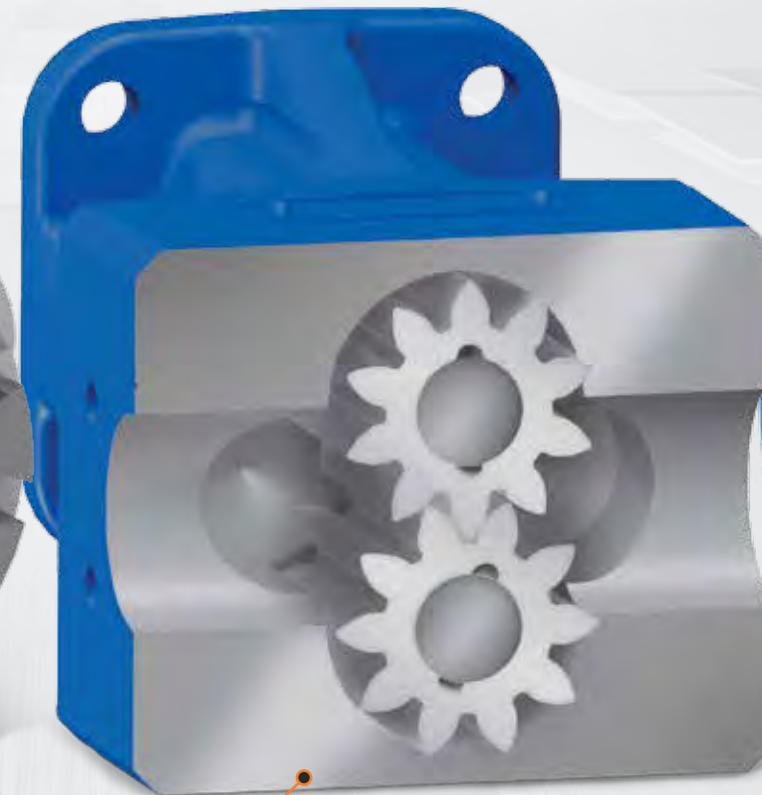
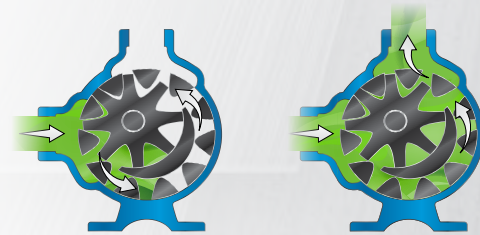
Jens Nielsen had a water seepage problem in his limestone quarry at the corner of 18th and Main Streets in Cedar Falls, Iowa. He realized a rotary style pump was needed to remove the excess water, and began creating wood carvings of pump concepts he believed could fix the problem. The gear-within-a-gear pump design was completed and patented in 1904 and was a technological breakthrough. The first pump was built out of cast iron, weighed 900 pounds and pumped 900 gallons per minute.

Nielsen's invention was a simple solution for a very basic pumping problem. The new design featured only two moving parts - the idler and rotor gear. This advanced design has continued to solve pumping problems for well over a century.



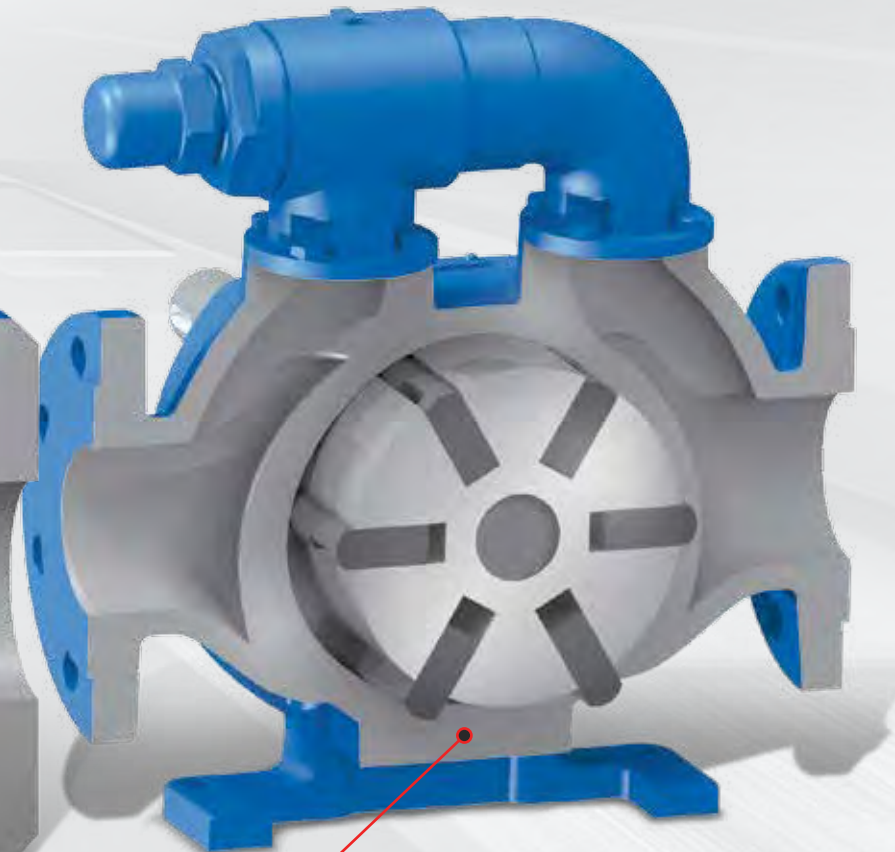
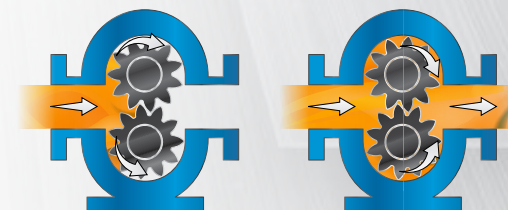
INTERNAL GEAR

- **Broadest selection** of materials, designs, seals, ports and displacements for many applications
- **Adjustable clearances** enable handling viscosities from 28 to 2,000,000 SSU (1 to 440,000 cSt)
- **Minimal shear** with slower speeds



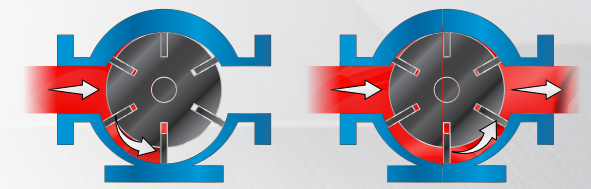
EXTERNAL GEAR

- **Bearing support** on both sides of the gears enables differential pressures 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



ROTARY VANE

- **Maintains highest possible efficiency** because vanes compensate for wear
- **Simple vane replacement** without removing pump from piping
- **Shaft support** on both sides of rotor enable differential pressures to 200 PSI (14 BAR)



PUMP TECHNOLOGY: INTERNAL GEAR



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

ADVANTAGES

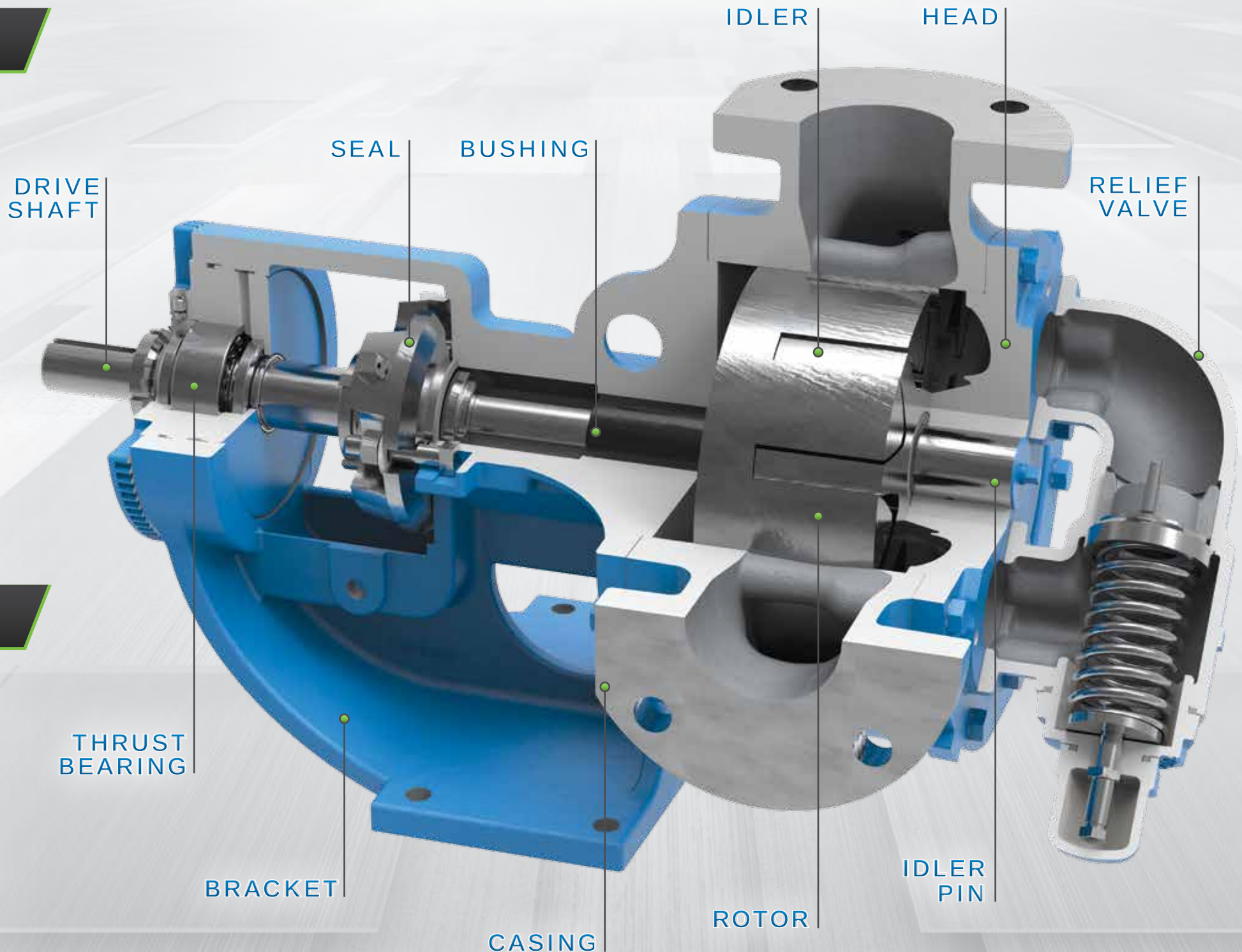
- **Reliable & Easy to Maintain**
Only two moving parts
- **Adjustable End Clearances**
For low or high viscosities, high temperatures, or to compensate for wear over time
- **Shaft Seal Options**
Including packed gland, lip seal, component seal, cartridge seal and mag drive options
- **Porting Options**
Viking's broadest selection of port locations, configurations and types
- **Minimal Pulsation**
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

PERFORMANCE

- **Capacity**
to 1,600 GPM (363 m³/h)
- **Viscosity**
28 to 2,000,000 SSU (0.1 to 440,000 cSt)
With special construction
- **Pressure**
to 250 PSI (17 BAR)
Pressure to 400 PSI (27 BAR) available with factory approval
- **Temperature**
-120°F to +800°F (-85°C to +430°C)
With special construction

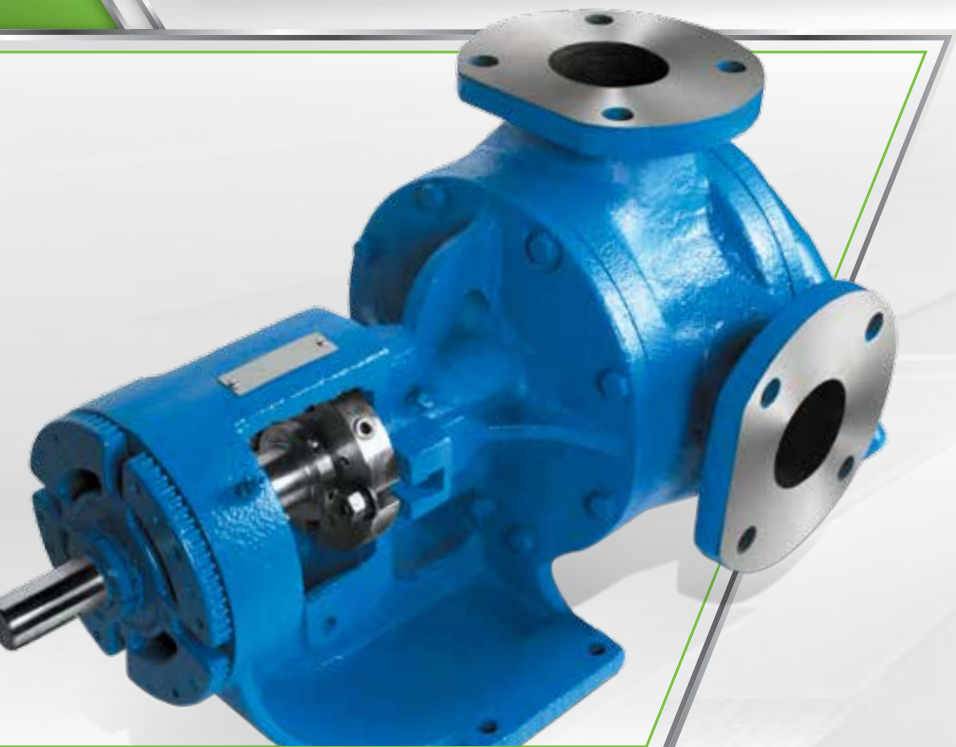
IN THIS SECTION

Universal Seal		14
Jacketed Universal Seal		15
Behind the Rotor Seal		16
Jacketed Behind the Rotor Seal		17
Universal Mag Drive		18
XPD 676 & Universal 682		19
Motor Speed: G-HL		20
Motor Speed: KE-QS		21
Heavy Duty Alloy		22
Mag Drive Motor Speed		23
General Purpose		24
Motor Mounted General Purpose		25
Jacketed Asphalt		26
Electrically Heated Asphalt		27
Ammonia		28
Abrasive Liquid		29
Hygienic Series		30



UNIVERSAL SEAL

SERIES: 124A/AE, 4124A/AE, 123A, 4123A, 127A, 4127A, 324A, 4324A, 323A, 4323A, 327A, 4327A



1,600 GPM (363 m³/h)

MAX. CAPACITY

200 PSI (14 BAR)

MAX. PRESSURE*

28 to 2,000,000 SSU (0.1 to 440,000 cSt)

VISCOSITY RANGE**

-120°F to +800°F (-85°C to +430°C)

TEMPERATURE RANGE**

PERFORMANCE CURVES
vikingpump.com/PumpSelector

* Pressures to 400 PSI (27 BAR) with factory approval | ** Special construction required

Materials

- Cast Iron
- Steel
- Stainless Steel
- Alloy C, Alloy 20 and Others
- Hard Materials and Coatings

Sealing

- Packing
- Component Mechanical Seals
- Cartridge Mechanical Seals
- Cartridge Triple Lip Seals
- Sealless Mag Drive (See Page 18)

Porting

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

Mounting

- Foot Mount

Features & Benefits

- Pumps accommodate virtually all sealing types and manufacturers
- Back pull-out seals provide access without disturbing the wet end
- Design adaptability for an unequalled range of liquids, viscosities and temperatures
- Rugged design with heavy duty bearings extends pump life
- Available with FDA and EN1935/2004 materials for food contact

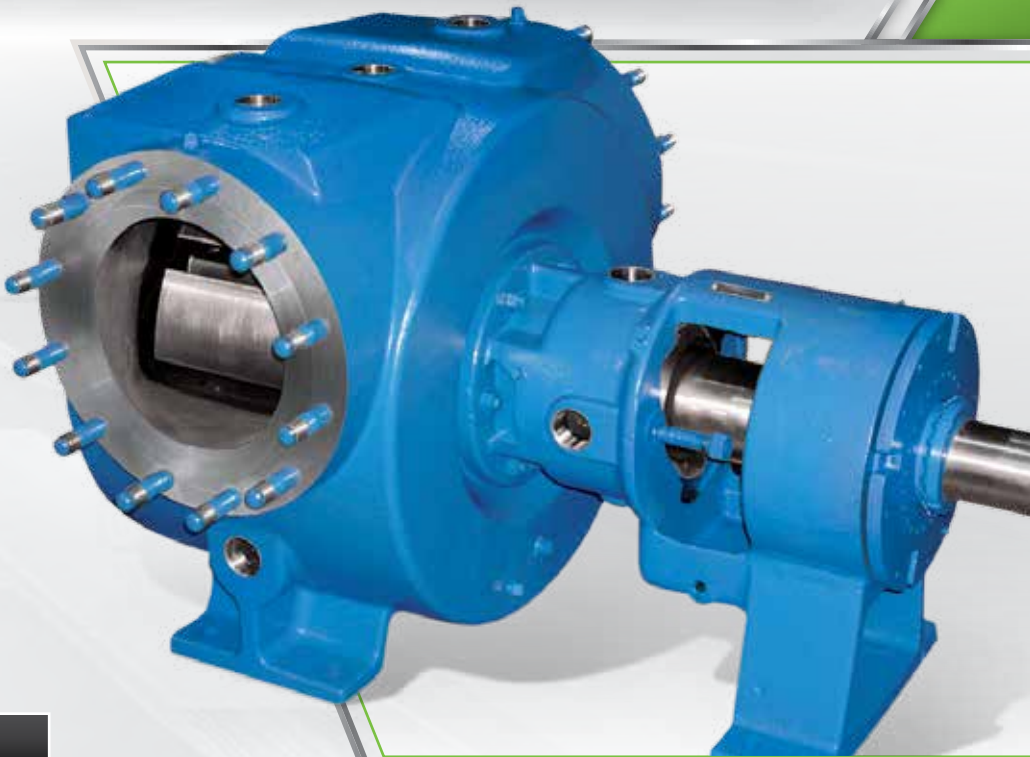
PERFORMANCE SPECIFICATIONS									
	Size	Standard Port	Nominal Capacity At Maximum Speed		Maximum Speed	Maximum Pressure			
		Inches	GPM	m³/h	RPM	PSI	BAR		
CAST IRON - STEEL	G ①	1	8	2	1,750	200	14		
	H	1.5	15	3	1,750	200	14		
	HL	1.5	30	7	1,750	200	14		
	AK ①	2	67	15	1,450	200	14		
	AL ①	2	90	20	1,450	200	14		
	K	2	75	17	780	200	14		
	KK	2	100	23	780	200	14		
	L	2	135	31	640	200	14		
	LQ	2.5	135	31	640	200	14		
	LL	3	140	32	520	200	14		
	LS	3	200	45	640	200	14		
	Q	4	300	68	520	200	14		
	M ①	4	420	95	420	200	14		
	QS	6	500	114	520	200	14		
	N	6	600	136	350	200	14		
	R	8	1,100	250	280	200	14		
STAINLESS STEEL	RS	10	1,600	363	280	125	9		
	H	1.5	10	2	1,150	150	10		
	HL	1.5	20	5	1,150	150	10		
	K	2	50	11	520	150	10		
	KK	2	65	15	520	150	10		
	LQ	2.5	90	20	420	150	10		
	LL	3	110	25	420	150	10		
	LS	3	160	36	520	125	9		
	Q	4	200	45	350	125	9		
	QS	6	320	73	350	125	9		
	N	6	600	136	350	200	14		
	R	8	1,110	252	280	175	12		
	RS	10	1,600	363	280	125	9		

Integral relief valve is standard on non-jacketed pumps, except RS

① Available in cast iron only

JACKETED UNIVERSAL SEAL

SERIES: 224A/AE, 4224A/AE, 223A, 4223A, 227A, 4227A, 324A, 4324A, 323A, 4323A, 327A, 4327A



MAX. CAPACITY

1,600 GPM (363 m³/h)

MAX. PRESSURE

200 PSI (14 BAR)

VISCOSITY RANGE

38 to 2,000,000 SSU (1 to 440,000 cSt)

TEMPERATURE RANGE

-120°F to +800°F (-85°C to +430°C)

PERFORMANCE CURVES
vikingpump.com/PumpSelector

* Pressures to 400 PSI (27 BAR) with factory approval | ** Special construction required

Materials

- Cast Iron
- Steel
- Stainless Steel
- Alloy C, Alloy 20 and others
- Hard Materials and coatings

Sealing

- Packing
- Component Mechanical Seals
- Cartridge Mechanical Seals
- Cartridge Triple Lip Seals
- Sealless Mag Drive (See Page 18)

Porting

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

Mounting

- Foot Mount

Features & Benefits

- Jacketing options available for all critical areas of the pump provide rapid heating for faster startup
- Allows a variety of heating or cooling media including hot oil, steam and water
- Variety of jacket connection options including tapped and flange
- Fully-jacketed steel and stainless steel models offer proven uniform temperature control for improved product consistency
- Numerous porting positions, configurations and sizes provide enhanced application flexibility

PERFORMANCE SPECIFICATIONS									
	Size	Standard Port	Nominal Capacity At Maximum Speed		Maximum Speed	Maximum Pressure			
		Inches	GPM	m³/h	RPM	PSI	BAR		
CAST IRON - STEEL	H	1.5	15	3	1,750	200	14		
	HL	1.5	30	7	1,750	200	14		
	K	2	75	17	780	200	14		
	KK	2	100	23	780	200	14		
	L	2	135	31	640	200	14		
	LQ	2.5	135	31	640	200	14		
	LL	3	140	32	520	200	14		
	LS	3	200	45	640	200	14		
	Q	4	300	68	520	200	14		
	M ①	4	420	95	420	200	14		
	QS	6	500	114	520	200	14		
	N	6	600	136	350	200	14		
STAINLESS STEEL	R	8	1,100	250	280	200	14		
	RS	10	1,600	363	280	125	9		
	H	1.5	10	2	1,150	150	10		
	HL	1.5	20	5	1,150	150	10		
	K	2	50	11	520	150	10		
	KK	2	65	15	520	150	10		
	LQ	2.5	90	20	420	150	10		
	LL	3	110	25	420	150	10		
	LS	3	160	36	520	125	9		
	Q	4	200	45	350	125	9		
	QS	6	320	73	350	125	9		
	N	6	600	136	350	200	14		
	R	8	1,110	250	280	175	12		
	RS	10	1,600	363	280	125	9		

① Available in cast iron only



SCAN TO LEARN MORE ABOUT
UNIVERSAL SEAL PUMPS

DETAILED INFO IN MASTER CATALOG SECTION 630



SCAN TO LEARN MORE ABOUT
JACKETED UNIVERSAL SEAL PUMPS

DETAILED INFO IN CATALOG SECTION 630

BEHIND THE ROTOR SEAL

SERIES: 4124B



500 GPM (114 m³/h)

MAX. CAPACITY

200 PSI (14 BAR)

MAX. PRESSURE

28 to 15,000 SSU (.1 to 3,300 cSt)

VISCOSITY RANGE*

-60°F to +650°F (-51°C to +343°C)

TEMPERATURE RANGE

PERFORMANCE CURVES
vikingpump.com/PumpSelector

* Viscosity to 250,000 SSU (55,000 cSt) with optional pinned-seat seal

Materials

- Cast Iron

Sealing

- Behind the Rotor

Porting

- Opposite (180°) (Rotatable Casing)
- Right Angle (90°) (Rotatable Casing)
- NPT
- Flanged (ANSI)

Mounting

- Foot Mount

Features & Benefits

- Positive Displacement Internal Gear pumping principle handles a broad range of viscosities with constant flow rate
- Footed cast iron bracket provides rigid mounting to help maintain alignment, which extends seal and bearing life
- Axial rotor thrust is controlled by double row ball or tapered roller bearings mounted in the rotatable bearing housing, which enables fast, easy end clearance adjustment
- Pressure relief valve standard

PERFORMANCE SPECIFICATIONS

	Size	Standard Port	Nominal Capacity At Maximum Speed		Maximum Speed	Maximum Pressure	
		Inches	GPM	m³/h	RPM	PSI	BAR
CAST IRON	G	1	8	1.8	1,750	200	14
	H	1.5	15	3.4	1,750	200	14
	HL	1.5	30	7	1,750	200	14
	AK	2	67	15	1,450	200	14
	K	2	75	18	780	200	14
	KK	2	100	23	780	200	14
	L	2	135	31	640	200	14
	LQ	2.5	135	31	640	200	14
	LL	3	140	32	520	200	14
	LS	3	200	45	640	200	14
	Q	4	300	68	520	200	14
	QS	6	500	114	520	200	14

JACKETED BEHIND THE ROTOR SEAL

SERIES: 4224B

Features & Benefits

- Pressure relief valve optional
- Enable heating to liquefy ambient temperature solids prior to startup using steam or other heat transfer fluid, with jacketed bracket and head
- Behind-the-rotor seal prevents fluid contact with grease-lubricate bracket bushing for longest life

PERFORMANCE SPECIFICATIONS

	Size	Standard Port	Nominal Capacity At Maximum Speed		Maximum Speed	Maximum Pressure	
		Inches	GPM	m³/h	RPM	PSI	BAR
CAST IRON	H	1.5	15	3.4	1,750	200	14
	HL	1.5	30	7	1,750	200	14
	K	2	75	18	780	200	14
	KK	2	100	23	780	200	14
	L	2	135	31	640	200	14
	LQ	2.5	135	31	640	200	14
	LL	3	140	32	520	200	14
	LS	3	200	45	640	200	14
	Q	4	300	68	520	200	14
	QS	6	500	114	520	200	14



MAX. CAPACITY

500 GPM (114 m³/h)

MAX. PRESSURE

200 PSI (14 BAR)

VISCOSITY RANGE*

28 to 15,000 SSU (.1 to 3,300 cSt)

TEMPERATURE RANGE

-40°F to +225°F (-40°C to +110°C)

PERFORMANCE CURVES
vikingpump.com/PumpSelector

* Viscosity to 250,000 SSU (55,000 cSt) with optional pinned-seat seal

Materials

- Cast Iron

Sealing

- Behind the Rotor

Porting

- Opposite (180°) (Rotatable Casing)
- Right Angle (90°) (Rotatable Casing)
- NPT
- Flanged (ANSI)

Mounting

- Foot Mount



SCAN TO LEARN MORE ABOUT
JACKETED UNIVERSAL SEAL PUMPS

DETAILED INFO IN CATALOG SECTION 628



SCAN TO LEARN MORE ABOUT
MOTOR SPEED PUMPS

DETAILED INFO IN MASTER CATALOG SECTION 628

UNIVERSAL MAG DRIVE

SERIES: 8124A, 8123A, 8127A



500 GPM (114 m³/h)

MAX. CAPACITY

200 PSI (14 BAR)

MAX. PRESSURE*

28 to 250,000 SSU (.1 to 55,000 cSt)

VISCOSITY RANGE**

-120°F to +500°F (-85°C to +260°C)

TEMPERATURE RANGE**

PERFORMANCE CURVES
vikingpump.com/PumpSelector

* Pressures to 400 PSI (27 BAR) with factory approval | ** Special construction required

Materials

- Cast Iron
- Steel
- Stainless Steel
- Alloy C, Alloy 20 and Others
- Hard Materials

Sealless Magnetic Couplings

- Neodymium Iron Boron
- Samarium Cobalt

Porting

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

Mounting

- Foot Mount

Features & Benefits

- Reduces maintenance costs and downtime associated with shaft seal failure and replacement
- Reduces environmental costs associated with shaft seal leakage
- Minimizes installation costs when upgrading existing universal series pumps to sealless with dimensionally interchangeable footprint
- Bi-directional pumping design eliminates cost of second pump for loading or unloading

PERFORMANCE SPECIFICATIONS

	Size	Standard Port	Nominal Capacity At Maximum Speed		Maximum Speed	Maximum Pressure	
		Inches	GPM	m³/h	RPM	PSI	BAR
CAST IRON - STEEL	H	1.5	15	3	1,750	200	14
	HL	1.5	30	7	1,750	200	14
	K	2	80	18	780	200	14
	KK	2	100	23	780	200	14
	L	2	135	31	640	200	14
	LQ	2.5	135	31	640	200	14
	LL	3	170	39	640	200	14
	LS	3	200	45	640	200	14
	Q	4	300	68	520	200	14
	QS	6	500	114	520	200	14
STAINLESS STEEL	H	1.5	15	3	1,750	150	10
	HL	1.5	30	7	1,750	150	10
	K	2	80	18	780	150	10
	KK	2	100	23	780	150	10
	LQ	2.5	135	31	640	150	10
	LL	3	170	39	640	150	10
	LS	3	200	45	640	125	9
	Q	4	300	68	520	125	9
	QS	6	500	114	520	125	9
	Integral relief valve is standard						

Integral relief valve is standard

Features & Benefits

- XPD 676 Series (AX model) pumps offer full compliance with API Standard 676 for Rotary Positive Displacement Pumps
- Universal 682 Series (AA model) pumps offer API 682 seals, but take exception to some parts of the standard
- Suitable for Oil and Gas or Petrochemical applications
- Available with most brands and types of API 682 seals, including Category 1, 2 or 3 single or double seals, with seal plans: Type A (Chem & Petrochem Duty) Type B (Oil & Gas Duty) Type C (Oil & Gas Duty with Test Data)

PERFORMANCE SPECIFICATIONS

	Size	Universal 682 Series	XPD 676 Series	Standard Port	Nominal Capacity At Maximum Speed		Maximum Speed	Maximum Pressure	
				Inches	GPM	m³/h	RPM	PSI	BAR
STEEL	H	✓	—	1.5	15	3	1,750	200	14
	HL	✓	✓	1.5	30	7	1,750	200	14
	K	✓	—	2	75	17	780	200	14
	KK	✓	✓	2	100	23	780	200	14
	LQ	✓	—	2.5	135	31	640	200	14
	LL	✓	—	3	140	32	520	200	14
	LS	✓	✓	3	200	45	640	200	14
	Q	✓	✓	4	300	68	520	200	14
	QS	✓	✓	6	500	114	520	200	14
	N	✓	✓	6	600	136	350	200	14
	R	✓	✓	8	1,100	250	280	200	14
	RS	✓	—	10	1,600	363	280	125	9

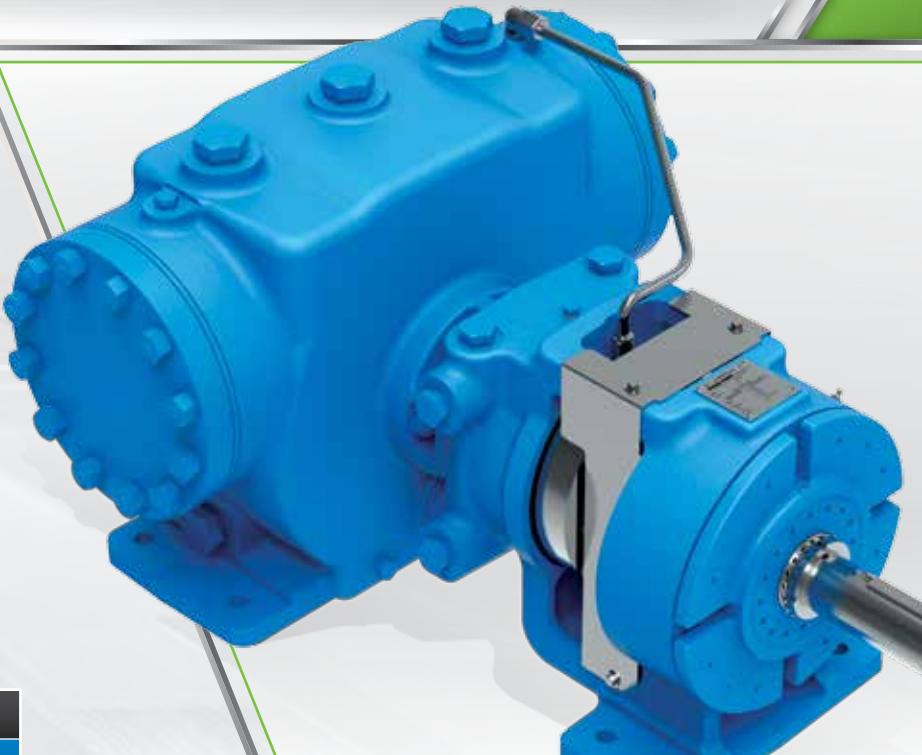
OPERATIONAL & FUNCTIONAL TESTING

Test / Certification / Procedure	XPD 676	Universal 682
Material Traceability	●	●
Weld Maps	●	●
Serialized Castings	●	●
Welder Certification	●	●
Welding Procedure Qualification	●	●
Post-Weld Heat Treatment	●	●
Visual Test (VT)	●	●
Mag Particle Test (MT)	●	●
Dye Penetrant Test (PT) for SS	●	●
Liquid (Hydro) Test (LT)	●	●
Certified Performance Test	●	●

● = Standard ● = Available Option ● = Not Available

XPD 676 & UNIVERSAL 682

SERIES: 4223AX, 4323AX, 4127AX, 4327AX, 4123AA, 4223AA, 4323AA, 4127AA, 4227AA, 4327AA



MAX. CAPACITY

1,600 GPM (363 m³/h)

MAX. PRESSURE*

200 PSI (14 BAR)

VISCOSITY RANGE**

28 to 2,000,000 SSU (.1 to 440,000 cSt)

TEMPERATURE RANGE**

-20°F to +650°F (-29°C to +340°C)

PERFORMANCE CURVES
vikingpump.com/PumpSelector

* Pressures to 400 PSI (27 BAR) with factory approval | ** Special construction required

Materials

- Steel Externals
- Low Temperature Steel
- NACE Compliant Steel
- Stainless Steel

Sealing

- API 682 Cartridge Mechanical Seals
- Cartridge triple lip seals (not compliant with API 682)

Porting

- Opposite (180°) (All AX Models and AA models QS-RS)
- Right Angle (90°) (Rotatable Casing) (AA Models H-Q)
- Flanged (ANSI Class 150 or 300)

Mounting

- Foot Mount

SCAN TO LEARN MORE ABOUT
XPD 676 PUMPS

DETAILED INFO IN MASTER CATALOG SECTIONS 632 & 633



SCAN TO LEARN MORE ABOUT
UNIVERSAL MAG DRIVE PUMPS

DETAILED INFO IN MASTER CATALOG SECTION 635

MOTOR SPEED: G-HL

SERIES: 495, 4195, 493, 4193, 4197



115 GPM (27 m³/h)

MAX. CAPACITY

250 PSI (17 BAR)

MAX. PRESSURE

28 to 25,000 SSU (.1 to 5,500 cSt)

VISCOSITY RANGE

-40°F to +350°F (-40°C to +180°C)

TEMPERATURE RANGE

PERFORMANCE CURVES
vikingpump.com/PumpSelector

Materials

- Cast Iron
- Steel
- Stainless Steel
- Alloy C, Alloy 20 and Others

Sealing

- Component Mechanical Seal

Porting

- Opposite (180°)
- NPT / BSP
- Flanged (ANSI)

Mounting

- Foot Mount
- NEMA or IEC Motor Mount (Close-Coupled)
- Vertical or Horizontal Inline Mount

Features & Benefits

- Heavy duty antifriction bearing shaft support for higher pressure and extended pump life
- Motor speed operation eliminates speed reduction equipment on thinner liquids
- Pressure lubrication system automatically lubricates the idler bushing, increasing pump life
- Space-saving mounting configurations available to better match your installation needs:
 - Foot Mount
 - Motor Mount (Close-Coupled NEMA and IEC)
 - Vertical Inline Mount (example on page 45)

PERFORMANCE SPECIFICATIONS

	Size	Standard Port	Nominal Capacity At Maximum Speed		Maximum Speed	Maximum Pressure	
		Inches	GPM	m³/h	RPM	PSI	BAR
ALL MATERIALS	G ①	1	8	1.8	1,750	250	17
	GG	1	10	2.3	1,750	250	17
	H ①	1.5	15	3.4	1,750	250	17
	HJ	1.5	20	4.5	1,750	250	17
	HL	1.5	30	6.8	1,750	250	17
	AS	2.5	55	12	1,750	250	17
	AK	2.5	85	20	1,750	250	17
	AL	3	115	26	1,750	250	17

① Cast Iron only



GG493 & GG4197 in polymer manufacturing.



SCAN TO LEARN MORE ABOUT
MOTOR SPEED PUMPS

DETAILED INFO IN MASTER CATALOG SECTIONS 144, 154, & 164

MOTOR SPEED: KE-QS

SERIES: 4195



MAX. CAPACITY

580 GPM (132 m³/h)

MAX. PRESSURE*

150 PSI (10 BAR)

VISCOSITY RANGE

28 to 25,000 SSU (.1 to 5,500 cSt)

TEMPERATURE RANGE

-40°F to +225°F (-40°C to +110°C)

PERFORMANCE CURVES
vikingpump.com/PumpSelector

* Higher pressures available with factory approval

Materials

- Cast Iron

Sealing

- Component Mechanical Seal

Porting

- Opposite (180°)
- Flanged (ANSI or DIN)

Mounting

- Foot Mount
- NEMA or IEC Motor Mount (Close-Coupled)
- Horizontal Inline Mount

Features & Benefits

- Higher speeds enable higher flow rates than similar sized heavy duty pumps, with maximum flow of 580 GPM (132 m³/h)
- Reduced foot print for space constrained applications
- Motor speed operation to 350 GPM provides higher value per GPM
- Simplicity of design allows for an easy installation process
- Space-saving mounting configurations available to better match your installation needs:
 - Foot Mount
 - Motor Mount, KE - LSE sizes (Close-Coupled NEMA and IEC)
 - Vertical Inline Mount, KE - LSE sizes

PERFORMANCE SPECIFICATIONS

	Size	Standard Port ①	Nominal Capacity At Maximum Speed		Maximum Speed	Maximum Pressure	
		Inches	GPM	m³/h	RPM	PSI	BAR
ALL MATERIALS	KE ①	4	150	34	1,750	150	10
	KKE ①	4	205	47	1,750	150	10
	LQE ①	4	235	53	1,150	150	10
	LSE ①	4	350	80	1,150	150	10
	Q	6	460	104	780	150	10
	QS	6	580	132	640	150	10

① Have a mounting flange for motor bracket and a mounting foot

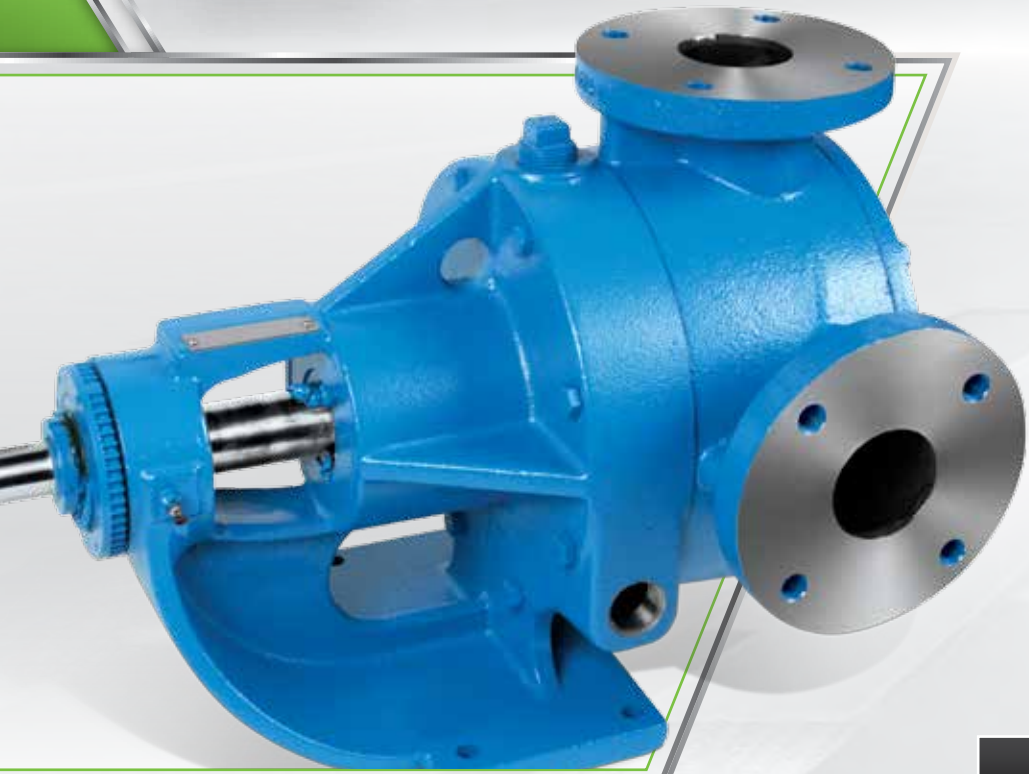
SCAN TO LEARN MORE ABOUT
MOTOR SPEED PUMPS

DETAILED INFO IN MASTER CATALOG SECTION 144



HEAVY DUTY ALLOY

SERIES: 724, 4724



110 GPM (25 m³/h)

MAX. CAPACITY

200 PSI (14 BAR)

MAX. PRESSURE

38 to 2,000,000 SSU (3.5 to 440,000 cSt)

VISCOSITY RANGE

-110°F to +500°F (-80°C to +260°C)

TEMPERATURE RANGE

PERFORMANCE CURVES
vikingpump.com/PumpSelector

Materials

- 316 Stainless Steel
- Alloy C, Alloy 20, and Others
- Cast Iron Bracket

Sealing

- Packing
- Component Mechanical Seal in Stuffing Box (sizes F-G)
- Component Mechanical Seal Behind-the-rotor (sizes H-LL)

Porting

- Opposite (180°) NPT / BSP Ports (sizes F - G)
- Right Angle (90°) NPT / BSP Ports (sizes H-L)
- Right Angle (90°) 150 Class ANSI Flange Ports (sizes LQ & LL)

Mounting

- Foot Mount



SCAN TO LEARN MORE ABOUT
HEAVY DUTY ALLOY PUMPS

DETAILED INFO IN MASTER CATALOG SECTION 210

Features & Benefits

- Jacketed bracket standard on H-LL sizes for heating or cooling (Optional jacketed heads available)
- Integral thrust bearing standard for heavy duty applications
- Integral pressure relief valve standard on sizes G-LL
- Motor speed operation on smaller sizes – no reducer required
- Alloy wetted materials with cast iron non-wetted bracket for enhanced value

PERFORMANCE SPECIFICATIONS

	Size	Standard Port	Nominal Capacity At Maximum Speed		Maximum Speed	Maximum Pressure	
		Inches	GPM	m³/h	RPM	PSI	BAR
STAINLESS STEEL	F	0.5	1.5	0.3	1,750	200	14
	FH	0.75	3	0.7	1,750	200	14
	G	1	5	1	1,150	200	14
	H	1.5	10	2	1,150	150	10
	HL	1.5	20	5	1,150	150	10
	K	2	45	10	520	150	10
	KK	2	65	15	520	150	10
	L	2	90	20	420	150	10
	LQ	2.5	90	20	420	150	10
	LL	3	110	25	420	150	10

Integral relief valve is standard on all sizes except F and FH

Features & Benefits

- Series 855 offers IEC or NEMA motor mounts and ANSI or DIN flanges
- Casing and canister drains facilitate servicing
- Series 893/895/897 offer NPT / BSP or ANSI flange ports and NEMA motor mounts
- Long-coupled design available for applications requiring speed reducers
- High pressure canister options for inlet pressures to 2,000 PSI for pipeline sampling

PERFORMANCE SPECIFICATIONS

	Size	Standard Port ①	Nominal Capacity At Maximum Speed		Maximum Speed	Maximum Pressure	
		Inches	GPM	m³/h	RPM	PSI	BAR
SERIES 855 CAST IRON	GS	1	5	1	1,750	200	14
	GG	1	10	2	1,750	200	14
	HJ	1.5	20	5	1,750	200	14
	HL	1.5	30	7	1,750	200	14
	AS	2.5	42	10	1,450	150	10
	AK	2.5	66	15	1,450	150	10
	AL	3	88	20	1,450	150	10
	KE	3	94	21	1,150	150	10
	KKE	3	130	30	1,150	150	10
SERIES 893, 895, 897 STEEL, CAST IRON, STAINLESS STEEL	GG	1 ①	10	2	1,750	125	9
	HJ	1 ①	20	5	1,750	125	9
	HL	1 ①	30	7	1,750	125	9
	AS	3 ①	35	8	1,150	125	9
	AK	3 ①	50	11	1,150	125	9
	AL	3 ①	75	17	1,150	125	9

① ANSI = Inches / DIN = MM

MAG DRIVE MOTOR SPEED

SERIES: 855, 893, 895, 897



MAX. CAPACITY

130 GPM (30 m³/h)

MAX. PRESSURE

200 PSI (14 BAR)

VISCOSITY RANGE

28 to 250,000 SSU (.1 to 55,000 cSt)

TEMPERATURE RANGE

-50°F to +225°F (-45°C to +110°C)

PERFORMANCE CURVES
vikingpump.com/PumpSelector

Materials

- Cast Iron
- Steel
- Stainless Steel
- Alloy C, Alloy 20 and Others

Mag Coupling

- Neodymium Iron Boron
- Samarium Cobalt

Porting

- Opposite (180°)
- NPT / BSP
- Flanged (ANSI or DIN)

Mounting

- Foot Mount
- Motor Mount (Close-Coupled)

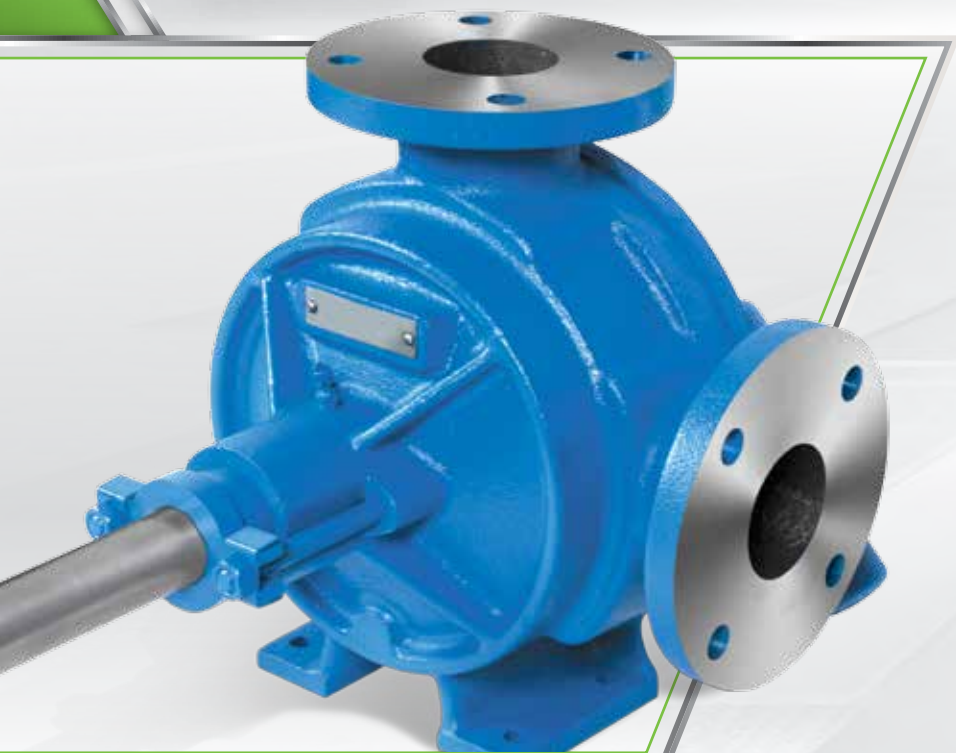


SCAN TO LEARN MORE ABOUT
MAG DRIVE MOTOR SPEED PUMPS

DETAILED INFO IN MASTER CATALOG SECTIONS 680 & 685

GENERAL PURPOSE

SERIES: 32, 432, 432-X



450 GPM (102 m³/h)

MAX. CAPACITY

250 PSI (17 BAR)

MAX. PRESSURE

31 to 250,000 SSU (1 to 55,000 cSt)

VISCOSITY RANGE

-60°F to +300°F (-50°C to +150°C)

TEMPERATURE RANGE**

PERFORMANCE CURVES
vikingpump.com/PumpSelector

** Temperatures to +650°F (+343°C) with special construction packed pumps

Materials

- Cast Iron

Sealing

- Packing
- Component Mechanical Seal (C-HL)

Porting

- Opposite (180°)
- Right Angle (90°)
- Same Side
- NPT / BSP
- Flanged

Mounting

- Foot Mount

Features & Benefits

- Simplified rotor retention system, economical for medium duty applications
- Back pull-out seals provide access without disturbing the wet end
- Long shaft standard for pillow block and belt drive, or reducer drive

PERFORMANCE SPECIFICATIONS							
	Size	Standard Port	Nominal Capacity At Maximum Speed		Maximum Speed	Maximum Pressure	
		Inches	GPM	m³/h	RPM	PSI	BAR
FOOT-MOUNTED	C	0.25	0.5	0.1	1,750	250	17
	F	0.5	1.5	0.3	1,750	250	17
	FH	0.5	3	0.7	1,750	250	17
	G	1	5	1	1,150	100	7
	H	1	10	2	1,150	100	7
	HL	1.5	20	5	1,150	100	7
	K	1.5	35	8	420	100	7
	KK	2	50	11	420	100	7
	L	2	90	20	420	100	7
	LQ	2.5	90	20	420	100	7
	LL	3	140	32	520	100	7
	Q	3	200	45	350	75	5
	M	4	280	64	280	75	5
	N	5	450	102	280	75	5
	Integral pressure relief valve is standard.						
 C thru HL sizes available UL 343 listed for fuel oil applications							



C thru HL sizes available UL 343 listed for fuel oil applications

MOTOR MOUNTED GENERAL PURPOSE

SERIES: 456, 75, 475, 456-X

Features & Benefits

- NEMA C-face mount for easy installation and a small footprint (75 & 475)
- Simplified rotor retention system, economical for medium duty applications
- IEC mount option available

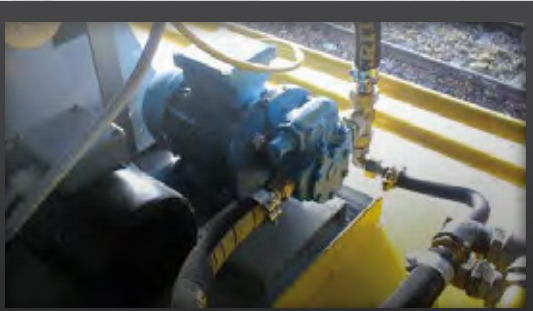


FH456

PERFORMANCE SPECIFICATIONS							
	Size	Standard Port	Nominal Capacity At Maximum Speed		Maximum Speed	Maximum Pressure	
		Inches	GPM	m³/h	RPM	PSI	BAR
456/456-X	C	0.25	0.5	0.1	1,750	250	17
	F	0.5	1.5	0.3	1,750	250	17
	FH	0.5	3	0.7	1,750	250	17
SERIES 75/475	G	1	7	2	1,750	100	7
	GG	1	10	2	1,750	100	7
	H	1.5	15	3	1,750	100	7
	HJ	1.5	20	5	1,750	100	7
	HL	1.5	30	7	1,750	100	7
Integral pressure relief valve is standard.							
 C thru FH sizes available UL 343 listed for fuel oil applications							



C thru FH sizes available UL 343 listed for fuel oil applications



Flanged general purpose pump connected to flexible lines.



MAX. CAPACITY

30 GPM (7 m³/h)

MAX. PRESSURE

250 PSI (17 BAR)

VISCOSITY RANGE

28 to 7,500 SSU (.1 to 1,650 cSt)

TEMPERATURE RANGE**

-60°F to +350°F (-50°C to +180°C)

PERFORMANCE CURVES
vikingpump.com/PumpSelector

** Temperatures to +500°F (+260°C) with special construction sealed pumps

Materials

- Cast Iron

Sealing

- Component Mechanical Seal
- Lip Seal (75 Series Only)

Porting

- Opposite (180°) (Sizes G - HL)
- Same Side (Sizes C - FH)
- NPT / BSP

Mounting

- NEMA & IEC Motor Mount (Close-Coupled)



SCAN TO LEARN MORE ABOUT
GENERAL PURPOSE PUMPS

DETAILED INFO IN MASTER CATALOG SECTION 310

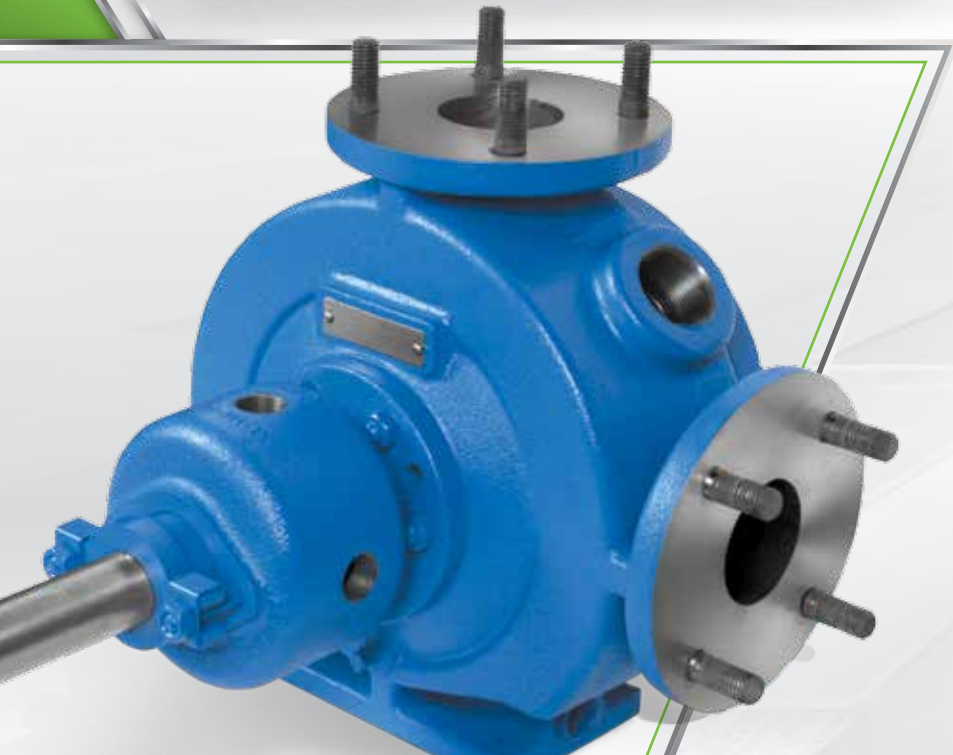


SCAN TO LEARN MORE ABOUT
FLANGED MOUNTED GENERAL PURPOSE PUMPS

DETAILED INFO IN MASTER CATALOG SECTION 320

JACKETED ASPHALT

SERIES: General Purpose: 34, 434, Heavy Duty: 224A/AE, 4224A/AE/B, 324A, 4324A



1,600 GPM (363 m³/h)

MAX. CAPACITY

200 PSI (14 BAR)

MAX. PRESSURE

31 to 2,000,000 SSU (1 to 440,000 cSt)

VISCOSITY RANGE

-60°F to +450°F (-50°C to +230°C)

TEMPERATURE RANGE**

PERFORMANCE CURVES
vikingpump.com/PumpSelector

** Temperatures to +650°F (+343°C) with special construction packed pumps

Materials

- Cast Iron

Sealing

- Packing
- Cartridge Mechanical Seal (Heavy Duty Only)
- Cartridge Triple Lip Seal (Heavy Duty Only)

Porting

- Opposite (180°)
- Right Angle (90°)
- NPT / BSP
- Flanged

Mounting

- Foot Mount

Features & Benefits

- Simplified rotor retention system, economical for medium duty applications
- Jacketing suitable for hot oil or steam for enhanced application flexibility
- Belt drive or reducer drive options available

PERFORMANCE SPECIFICATIONS

	Size	Standard Port	Nominal Capacity At Maximum Speed		Maximum Speed	Maximum Pressure	
		Inches	GPM	m³/h	RPM	PSI	BAR
GENERAL PURPOSE	LQ	2.5	90	20	420	100	7
	Q	3	200	45	350	75	5
	M	4	280	64	280	75	5
	N	5	450	102	280	75	5
HEAVY DUTY	H	1.5	15	3	1,750	200	14
	HL*	1.5	30	7	1,750	200	14
	K*	2	75	17	780	200	14
	KK*	2	100	23	780	200	14
	L*	2	135	31	640	200	14
	LQ*	2.5	135	31	640	200	14
	LL	3	140	32	520	200	14
	LS*	3	200	45	640	200	14
	Q	4	300	68	520	200	14
	QS	6	500	114	520	200	14
	N*	6	600	136	350	200	14
	R	8	1,100	250	280	200	14
	RS	10	1,600	363	280	125	9

For Heavy Duty features and benefits reference page 15
* Higher speeds available with lower pressures, consult factory



Jacketed pump blending asphalt at terminal.

ELECTRICALLY HEATED ASPHALT

SERIES: 124E, 324E, 32E



MAX. CAPACITY

685 GPM (156 m³/h)

MAX. PRESSURE

200 PSI (14 BAR)

VISCOSITY RANGE*

31 to 2,000,000 SSU (1 to 440,000 cSt)

TEMPERATURE RANGE**

-60°F to +450°F (-50°C to +230°C)

PERFORMANCE CURVES
vikingpump.com/PumpSelector

* Special construction required | ** Higher temperatures available with factory approval

Materials

- Cast Iron

Sealing

- Packing

Porting

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

Mounting

- Foot Mount

Features & Benefits

- 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

PERFORMANCE SPECIFICATIONS

	Size	Standard Port	Nominal Capacity At Maximum Speed		Maximum Speed	Maximum Pressure		Total Watts
		Inches	GPM	m³/h	RPM	PSI	BAR	
124E & 324E	H	1.5	15	3.4	1,750	200	14	275
	HL	1.5	50	11	2,900	200	14	275
	K	2	90	20	950	200	14	690
	KK	2	120	27	950	200	14	690
	L	2	210	48	950	200	14	1,200
	LQ	2	210	48	950	200	14	1,200
	LL	3	140	32	520	200	14	1,200
	LS	3	230	52	720	200	14	1,200
	Q	4	300	68	520	200	14	2,200
	QS	6	500	114	520	200	14	2,200
32E	N	6	685	156	420	200	14	2,500
	LQ	2.5	90	20	420	100	6.9	1,200
	Q	3	200	45	350	75	5.2	1,500
	M	4	280	64	280	75	5.2	2,250
	N	5	450	102	280	75	5.2	2,500



PID closed loop controller provides fast time-to-temperature, easy setpoint adjustment.

Detailed info in Technical Service Manual 630.4

SCAN TO LEARN MORE ABOUT ELECTRICALLY HEATED PUMPS

DETAILED INFO IN MASTER CATALOG SECTION 430



SCAN TO LEARN MORE ABOUT ASPHALT PUMPS

DETAILED INFO IN MASTER CATALOG SECTION 430



REFRIGERATION AMMONIA

SERIES: 4924A (replaces 4925 series)



60 GPM (14 m³/h)

MAX. CAPACITY

50 PSI (3.5 BAR)

MAX. PRESSURE

N/A

VISCOSITY RANGE

Down to -40°F (-40°C)

TEMPERATURE RANGE

PERFORMANCE CURVES
vikingpump.com/PumpSelector

Materials

- Cast Iron

Sealing

- Double Mechanical Seal

Porting

- Right Angle (90°)
- NPT / BSP
- Flanged

Mounting

- Foot Mount

Features & Benefits

- Double mechanical seals 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

PERFORMANCE SPECIFICATIONS

	Size	Standard Port	Nominal Capacity At Maximum Speed		Maximum Speed	Maximum Pressure	
		Inches	GPM	LPM	RPM	PSI	BAR
CAST-IRON	HL	1.5	10	37.8	780	50	3
	K	2	20	75.7	280	50	3
	KK	2	30	113.5	280	50	3
	LQ	2.5	45	170	280	50	3
	LL	3	60	227	280	50	3

Return-to-tank relief valve standard

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 like paints, inks and waste oil

PERFORMANCE SPECIFICATIONS

	Size	Standard Port	Nominal Capacity At Maximum Speed		Maximum Speed	Maximum Pressure	
		Inches	GPM	m³/h	RPM	PSI	BAR
CAST-IRON	F	0.5	0.75	0.2	870	100	7
	FH	0.5	1.5	0.3	870	100	7
	H	1.5	5	1	640	150	10
	HL	1.5	10	2	640	150	10
	K	2	25	6	280	150	10
	KK	2	35	8	280	150	10
	L	2	50	11	230	150	10
	LQ	2.5	50	11	230	150	10
	LL	3	65	15	230	150	10
	LS	3	72	16	230	150	10
	Q	3	110	25	190	125	9
	QS	6	182	41	190	125	9

Integral pressure relief valve is standard
Abrasion resistant components also available in other series and sizes

NOTE: Jacketed abrasive liquid pumps available using Series 4224B pumps (see page 17) with optional hard parts and flush.

ABRASIVE LIQUID

SERIES: 4624B (replaces 4625 series)



MAX. CAPACITY

160 GPM (36 m³/h)

MAX. PRESSURE

150 PSI (10 BAR)

VISCOSITY RANGE

38 to 750,000 SSU (3.5 to 160,000 cSt)

TEMPERATURE RANGE**

-60°F to +250°F (-50°C to +120°C)

PERFORMANCE CURVES
vikingpump.com/PumpSelector

** Temperatures to +450°F (+232°C) with special construction

Materials

- Cast Iron

Sealing

- Pinned Seat High Viscosity Component Mechanical Seal with SiC/SiC Faces

Porting

- Opposite (180°)
- Right Angle (90°)
- NPT / BSP
- Flanged

Mounting

- Foot Mount



SCAN TO LEARN MORE ABOUT
AMMONIA PUMPS

DETAILED INFO IN MASTER CATALOG SECTION 420



SCAN TO LEARN MORE ABOUT
SPECIAL PURPOSE - ABRASIVE LIQUID PUMPS

DETAILED INFO IN MASTER CATALOG SECTION 410

HYGIENIC SERIES

SERIES: 157B/4157B, 257B/4257B



150 GPM (35 m³/h)

MAX. CAPACITY

150 PSI (10 BAR)

MAX. PRESSURE

28 to 100,000 SSU (.1 to 21,500 cSt)

VISCOSITY RANGE**

-5°F to +225°F (-20°C to +107°C)

TEMPERATURE RANGE**

PERFORMANCE CURVES
vikingpump.com/PumpSelector

** Special construction required

Materials

- Stainless Steel Wetted Parts

Sealing

- Single or Double Component Mechanical Seals
- Single or Double O-ring Seals

Porting

- Opposite (180°)
- Right Angle (90°)
- Sanitary Clamp
- Flanged (ANSI)

Mounting

- Foot Mount



SCAN TO LEARN MORE ABOUT
HYGIENIC SERIES PUMPS

DETAILED INFO IN MASTER CATALOG SECTION 230

Features & Benefits

- One shaft seal (Half the seal replacement cost of timed pumps with two shaft seals)
- Field-removable head, idler, rotor and casing for fast Clean Out of Place (COP)
- Reversible direction of flow for stripping line, and self-draining design (with vertical ports) for fast Clean In Place (CIP)
- No shimming, no rotor timing, and no oil/grease changing needed
- All FDA-conforming wetted materials (Ensures product integrity)
- Locating pin on casing (Helps prevent incorrect reassembly)
- Dimensionally interchangeable with existing Viking pumps

PERFORMANCE SPECIFICATIONS

	Size	Standard Port	Nominal Capacity At Maximum Speed		Maximum Speed	Maximum Pressure	
		Inches	GPM	m³/h	RPM	PSI	BAR
CAST IRON	H	1	6	1.5	1150	150	10
	HL	1.5	12	3	1150	150	10
	KS	1.5	30	7	520	150	10
	K	2	40	10	520	150	10
	KK	2	55	13	520	150	10
	LQ	2.5	75	17	420	150	10
	LL	3	100	22	420	150	10
	LS	3	150	35	520	125	9

Certified to Succeed

The Hygienic Series has been designed to meet the certifications you need for it to perform its best in a large variety of hygienic applications.



VIKING PUMP SERVICE VIDEOS

Support Your Pump



SCAN TO GET INSTANT ACCESS
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VIKINGPUMP.COM/VIDEOS



1.2.3.

Easy to Follow Instruction

Maintain your Viking pump with complete confidence by following along with our step-by-step service videos.



Tips and Tricks

Learn the trade secrets that make pump maintenance a breeze. We will provide you pointers for various pumps and industries throughout each video.



Maintenance Kits Advantage

We show you why maintenance kits are the easy method to maximize your Viking pump's uptime.

PUMP TECHNOLOGY: EXTERNAL GEAR



The External Gear Pump, with spur, helical or herringbone 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
- **Multi-Section Pumps**
Use one motor for multiple pumping applications, blending liquids, or splitting flows to different uses
- **Shaft Seal Options**
Including lip seal, component seal, cartridge seal and mag drive options
- **Compact, Close-Coupled Options**
For motor speed operation or with gearmotors
- **Minimal Pulsation**
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

PERFORMANCE

- **Capacity**
to 190 GPM (43 m³/h)
- **Viscosity**
28 to 1,000,000 SSU (.1 to 250,000 cSt)
With special construction
- **Pressure**
to 2,500 PSI (170 BAR)
- **Temperature**
-40°F to +450°F (-40°C to +230°C)
With special construction

IN THIS SECTION

Spur Gear 34



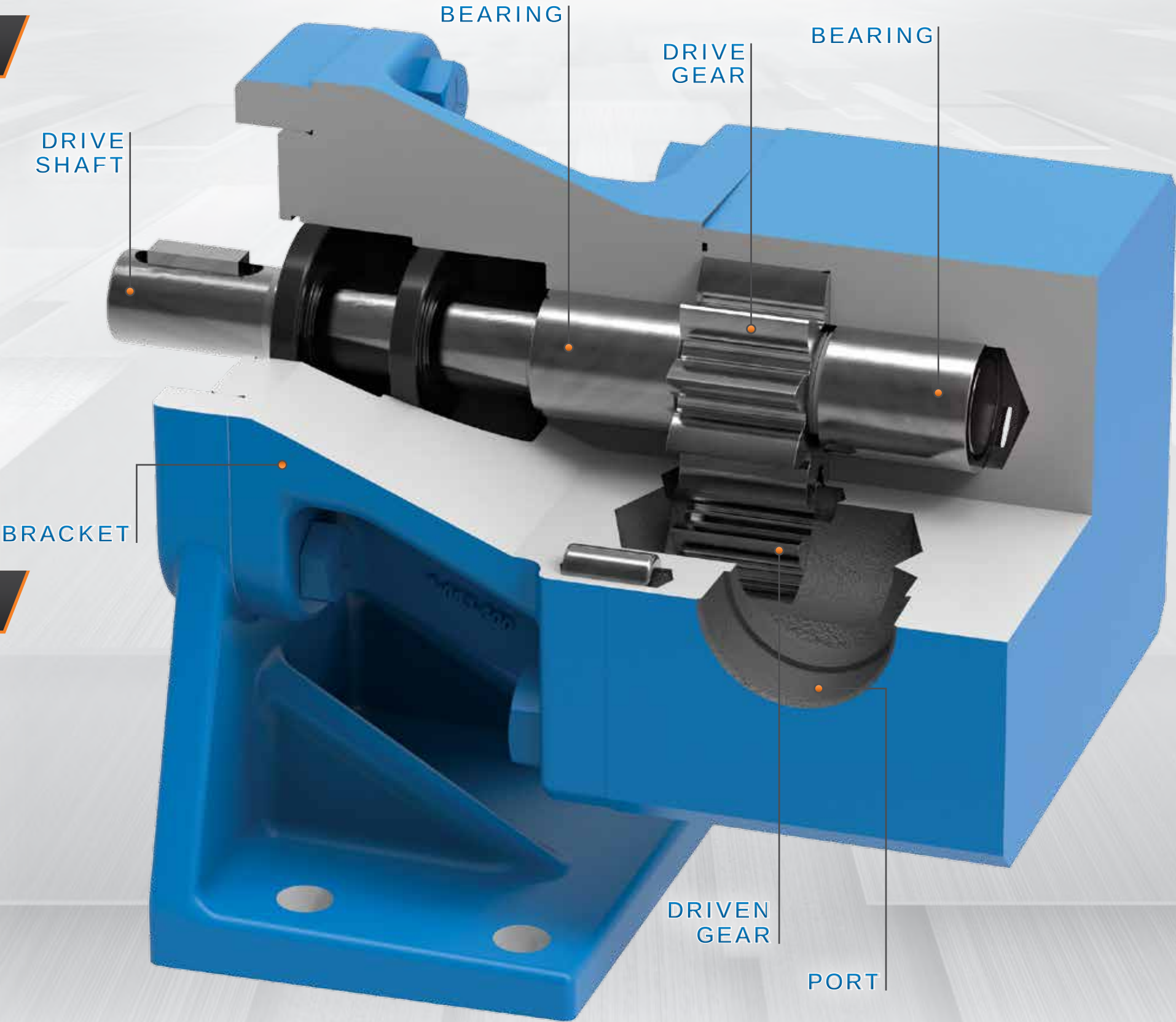
High Pressure Spur Gear 35



Oil & Gas 36



Composite Mag Drive 37



SPUR GEAR

SERIES: SG



190 GPM (43 m³/h)

MAX. CAPACITY

500 PSI (34 BAR)

MAX. PRESSURE

28 to 1,000,000 SSU (.1 to 250,000 cSt)

VISCOSITY RANGE

-40°F to +450°F (-40°C to +230°C)

TEMPERATURE RANGE

PERFORMANCE CURVES
vikingpump.com/PumpSelector

Materials

- Cast Iron
- Ductile Iron

Sealing

- Lip Seal
- Component Mechanical Seal
- Cartridge Mechanical Seal
- Sealless Mag Drive

Porting

- Opposite (180°)
- Same Side
- NPT / BSP
- SAE O-Ring
- SAE Flange

Mounting

- Foot Mount
- Motor Mount for IEC & NEMA Motors (Close-Coupled)
- Vertical In-Line

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



SG-807 Mag Drive
Spur Gear Pump

PERFORMANCE SPECIFICATIONS

	Standard Size	Standard Port	Nominal Capacity At 1750 RPM		Continuous Pressure		Intermittent Pressure	
		Inches	GPM	LPM	PSI	BAR	PSI	BAR
SG-04	SG-0417	0.375	0.06	0.23	500	34	750	52
	SG-0418	0.375	0.14	0.53	500	34	1,250	86
	SG-0425	0.375	0.18	0.68	500	34	1,500	103
	SG-0470	0.375	0.5	1.89	500	34	1,500	103
SG-05	SG-0518 ①	0.5	0.7	2.6	500	34	1,500	103
	SG-0525 ①	0.5	1	3.8	500	34	2,500	172
	SG-0535 ①	0.5	1.4	5.3	500	34	2,500	172
	SG-0550 ①	0.5	2	7.6	500	34	2,500	172
	SG-0570 ①	0.5	2.8	10.6	500	34	1,800	124
	SG-0510 ①	0.5	4	15.1	500	34	1,250	86
	SG-0514 ①	0.75	5.6	21.2	500	34	900	62
	SG-0519 ①	0.75	7.6	28.8	200	14	400	28
	SG-0528 ①	0.75	11.2	42.4	100	7	200	14
	SG-0729	1	2.8	10.6	500	34	2,500	172
SG-07	SG-0741	1	4	15.1	500	34	2,500	172
	SG-0758	1	5.6	21.2	500	34	2,500	172
	SG-0782	1	8	30.3	500	34	2,250	155
	SG-0711	1	11.2	42.4	500	34	1,600	110
	SG-0716	1	16	61	500	34	1,100	75
	SG-0722	1.50 X 1.25	22	83	500	34	1,600	110
	SG-0732	1.50 X 1.25	32	121	500	34	1,100	75
SG-10	SG-1009	1	16	61	500	34	2,500	172
	SG-1013	1.5	25	95	500	34	1,900	131
	SG-1026	2	50	189	500	34	1,000	69
SG-14	SG-1420	2	70	265	500	34	1,100	76
	SG-1436	3	125	473	290	20	580	40
	SG-1456	4	190	719	190	13	380	26

Integral pressure relief valve standard (single pump).
① SG-05 models available with UL 343 listing for fuel oil.

HIGH PRESSURE SPUR GEAR

SERIES: GP



MAX. CAPACITY

190 GPM (43 m³/h)

MAX. PRESSURE

2,500 PSI (170 BAR)

VISCOSITY RANGE

38 to 25,000 SSU (3.5 to 5,500 cSt)

TEMPERATURE RANGE

-40°F to +450°F (-40°C to +230°C)

PERFORMANCE CURVES
vikingpump.com/PumpSelector

Materials

- Cast Iron

Sealing

- Lip Seal

Porting

- Opposite (180°)
- Same Side
- NPT / BSP
- SAE O-Ring
- SAE Flange

Mounting

- Foot Mount
- Motor Mount (Close-Coupled) for IEC & NEMA Motors
- Vertical In-Line

Features & Benefits

- High efficiency, fixed displacement, external gear pumps for medium pressure fluid power (hydraulic) applications
- Optional outboard bearing available for overhung loads
- Installation is simple, with brackets to close-couple to NEMA or IEC motors, or foot mount



Double Pumps
See Catalog Section 341.2



Flow Dividers
See Catalog Section 341.6

PERFORMANCE SPECIFICATIONS

	Standard Size	Standard Port	Nominal Capacity At 1750 RPM		Continuous Pressure		Intermittent Pressure	
		Inches	GPM	LPM	PSI	BAR	PSI	BAR
GP-04	GP-0417	0.375	0.06	0.23	750	52	750	52
	GP-0418	0.375	0.14	0.53	1,000	69	1,000	69
	GP-0425	0.375	0.18	0.68	1,250	86	1,500	103
	GP-0470	0.375	0.5	1.89	900	62	1,500	103
GP-05	GP-0518	0.5	0.7	2.6	1,500	103	1,500	103
	GP-0525	0.5	1	3.8	2,000	138	2,500	172
	GP-0535	0.5	1.4	5.3	1,800	124	2,500	172
	GP-0550	0.5	2	7.6	1,250	86	2,500	172
	GP-0570	0.5	2.8	10.6	900	62	1,800	124
	GP-0510	0.5	4	15.1	625	43	1,250	86
	GP-0514	0.75	5.6	21.2	450	31	900	62
GP-07	GP-0741	1	4	15.1	2,250	155	2,500	172
	GP-0758	1	5.6	21.2	1,600	110	2,500	172
	GP-0782	1	8	30.3	1,125	78	2,250	155
	GP-0711	1	11.2	42.4	800	55	1,600	110
GP-10	GP-0716	1	16	61	550	38	1,100	76
	GP-1009	1	16	61	500	34	2,500	172
	GP-1013	1.5	25	95	500	34	1,900	131
GP-14	GP-1026	2	50	189	500	34	1,000	69
	GP-1420	2	70	265	500	34	1,100	76
	GP-1436	3	125	473	290	20	580	40
	GP-1456	4	190	719	190	13	380	26

SCAN TO LEARN MORE ABOUT
HIGH PRESSURE SPUR GEAR PUMPS

DETAILED INFO IN MASTER CATALOG SECTION 341.4



SCAN TO LEARN MORE ABOUT
SPUR GEAR PUMPS

DETAILED INFO IN MASTER CATALOG SECTIONS 341.1 & 341.3



OIL & GAS

SERIES: Spur Gear LACT Booster Pumps



6,035 BPD / 175 GPM (40 m³/h)

MAX. CAPACITY

1,500 PSI (103 BAR)

MAX. PRESSURE*

28 to 1,000 SSU (.1 to 220 cSt)

VISCOSITY RANGE

-40°F to +450°F (-40°C to +230°C)

TEMPERATURE RANGE

Contact your LACT Sales Specialist for curves & selection

* Higher pressures available with factory approval

Materials

- Ductile Iron

Sealing

- Component Mechanical Seal
- Balanced Mechanical Seal
- Cartridge Seal

Porting

- Opposite (180°)
- SAE 4 Bolt Standard
- SAE to Weldneck Adapters Standard

Mounting

- Foot Mount
- Motor Mount

Features & Benefits

- Specifically designed to handle thin shale crudes at high pressures
- Special bushings provide high pressure capabilities
- Multiple configurations and flow rates available
- SAE 4 Bolt porting as standard for modularity to adapt to piping needs
- Motor speed operation, reducing the need for gearbox and additional maintenance
- Single seal with back pull out design
- Complete units available from factory

PERFORMANCE SPECIFICATIONS

	LACT Booster Pumps	Nominal Flow @ No Pressure (1,750 RPM)		Nominal Flow @ Max Pressure (1,750 RPM) on 4 cPs Viscosity		Maximum Continuous Pressure	Ports*
		GPM	BPD	GPM	BPD		
DUCTILE IRON	GP-41013	25	20	690	1,000	2" SAE	
	GP-41026	50	40	1,380	1,000	2" SAE	
	GP-41415	55	45	1,550	1,500	2" SAE	
	GP-41420	70	55	1,900	750	2" SAE	
	GP-41430	110	85	2,930	1,500	2" SAE	
	GP-41440	140	115	3,965	750	3" SAE	
	GP-41455	195	160	5,520	750	3" SAE	
	GP-41460	210	175	6,035	750	4" SAE	

* 2" & 3" SAE Ports use J518 Code 61 SAE Flange Ports.
4" SAE Port uses 3000 Series Square Flange.



Pipeline booster pump in the Bakken Shale Formation.

Features & Benefits

- Inert composite materials for universal chemical compatibility
- Compact design
- Sealless Mag Drive
- Entirely non-metallic
- High repeatability for chemical metering

PERFORMANCE SPECIFICATIONS

	Size	Standard Port	Nominal Capacity At 1450 RPM		Nominal Capacity At 1750 RPM		Pressure	
		Inches	GPM	LPM	GPM	LPM	PSI	BAR
CMD	02	.25	.34	1.3	.4	1.5	150	10
	05	.375	1.3	4.9	1.5	5.8	150	10
	12	.75	2.6	10	3.2	12.1	150	10
	25	1	5.5	21	6.5	24.6	150	10
	75	1.5	16.5	62.5	20	75	150	10
	125	1.5	27	104	33	125	150	10

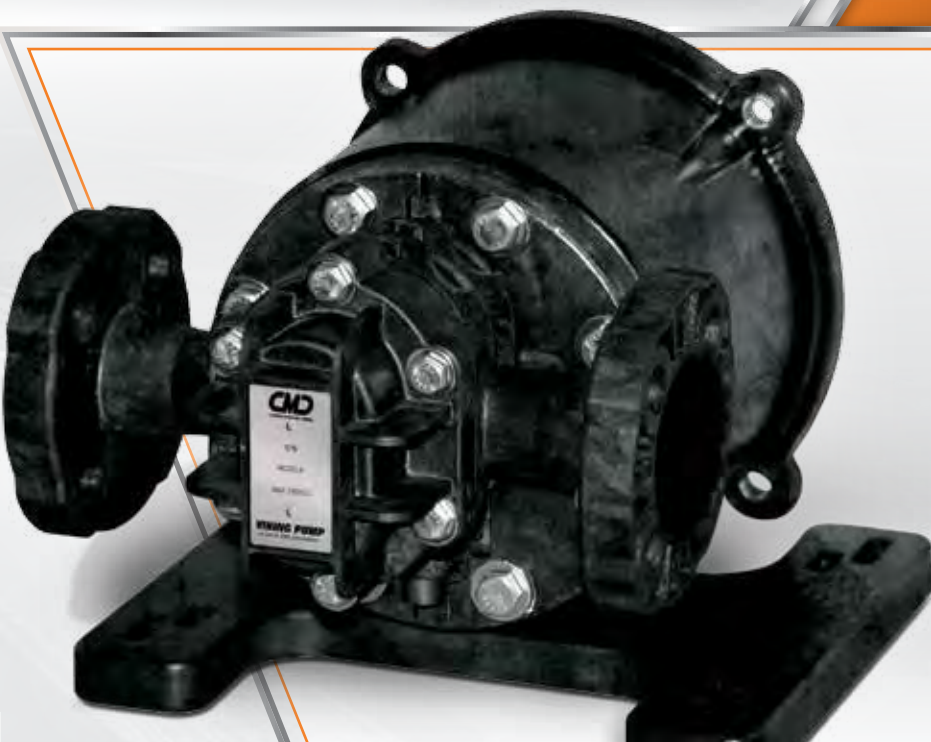
In-line valve sold separately.



CMD pumps (main and redundant) metering industrial water treatment chemicals.

COMPOSITE MAG DRIVE

SERIES: Composite Mag Drive (CMD)



MAX. CAPACITY

33 GPM (7.5 m³/h)

MAX. PRESSURE

150 PSI (10 BAR)

VISCOSITY RANGE

31 to 25,000 SSU (1 to 5,500 cSt)

TEMPERATURE RANGE

-40°F to +200°F (-40°C to +95°C)

PERFORMANCE CURVES
vikingpump.com/PumpSelector

Materials

- PVDF

Sealing

- Sealless Mag Drive

Porting

- Opposite (180°)
- NPT / BSP
- Flanged (ANSI or DIN)

Mounting

- Motor Mount
- Foot Mount



SCAN TO LEARN MORE ABOUT THE
VIKING PUMP OIL & GAS OFFERING

SCAN TO LEARN MORE ABOUT
COMPOSITE MAG DRIVE PUMPS

DETAILED INFO IN MASTER CATALOG SECTIONS 344



PUMP TECHNOLOGY: ROTARY VANE

ADVANTAGES

- **Higher Pressure on Thin Liquids**
For long distance transfer of thin fuels and chemicals
- **Superior Suction Lift**
Enables top-of-tank mounting for fireguard applications
- **Fast Vane Replacement**
Vaness can be replaced in the field without removing the pump
- **Minimal Pulsation**
For accurate flow measurement
- **One Shaft Seal**
More reliable and lower cost than two used on timed lobe and screw pumps
- **ANSI or DIN Compatible Flange Ports**
For easy mounting anywhere in the world
- **Compact, Close-Coupled Options**
For motor speed operation or with gearmotors

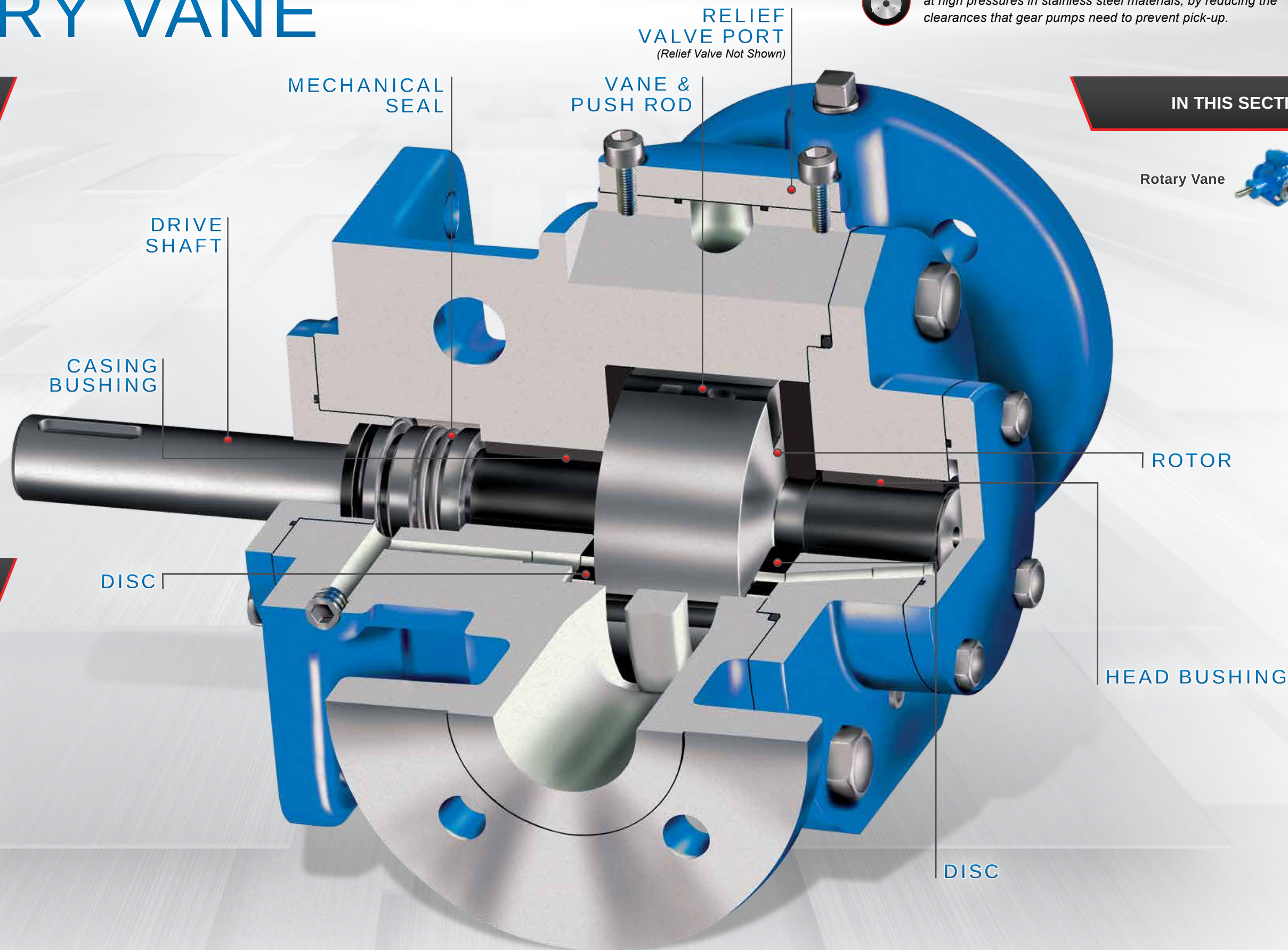
PERFORMANCE

- **Capacity**
to 160 GPM (36 m³/h)
- **Viscosity**
28 to 2,300 SSU (.1 to 500 cSt)
- **Pressure**
to 200 PSI (14 BAR)
- **Temperature**
-15°F to +225°F (-30°C to +110°C)

The Rotary Vane Pump offers the ability to handle thin liquids at high pressures in stainless steel materials, by reducing the clearances that gear pumps need to prevent pick-up.

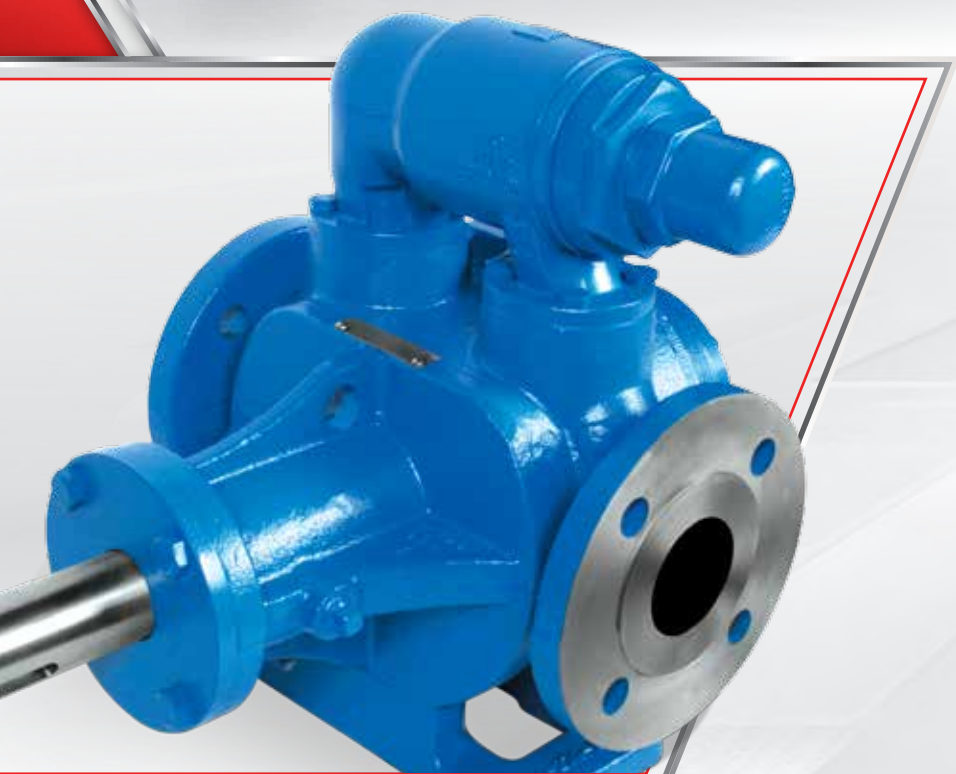
IN THIS SECTION

Rotary Vane  40



ROTARY VANE

SERIES: LVP



160 GPM (36 m³/h)

MAX. CAPACITY

200 PSI (14 BAR)

MAX. PRESSURE

28 to 2,300 SSU (.1 to 500 cSt)

VISCOSITY RANGE

-15°F to +225°F (-30°C to +110°C)

TEMPERATURE RANGE**

PERFORMANCE CURVES
vikingpump.com/PumpSelector

** Temperatures -60°F to +500°F (-51°C to +260°C) with special construction

Materials

- Stainless Steel

Sealing

- Component Mechanical Seal
- Cartridge Mechanical Seal
- Cartridge Triple Lip Seal
- Sealless Mag Drive

Porting

- Opposite (180°)
- Flanged (ANSI or DIN)

Mounting

- Foot Mount
- Motor Mount



SCAN TO LEARN MORE ABOUT
ROTARY VANE PUMPS

DETAILED INFO IN MASTER CATALOG SECTION 445

Features & Benefits

- High pressure and high efficiency with thin liquids
- Pump design offers ANSI or DIN flanges, and IEC or NEMA motor mounts to conform to international standards for enhanced application flexibility
- 20 minute in-line 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

PERFORMANCE SPECIFICATIONS

	Size	Standard Port Inches ①	Nominal Capacity At Maximum Speed		Maximum Speed RPM	Maximum Pressure	
			GPM	m³/h		PSI	BAR
STAINLESS STEEL	LVP40017 LVP41017	(1.5) 40	20	4	1,750	200	14
	LVP40027 LVP41027	(1.5) 40	40	9	1,750	200	14
	LVP41057	(2) 50	80	15	1,150	200	14
	LVP41087	(2) 50	100	23	950	200	14
	LVP41197	(3) 80	125	29	520	200	14
	LVP41237	(3) 80	160	36	520	200	14

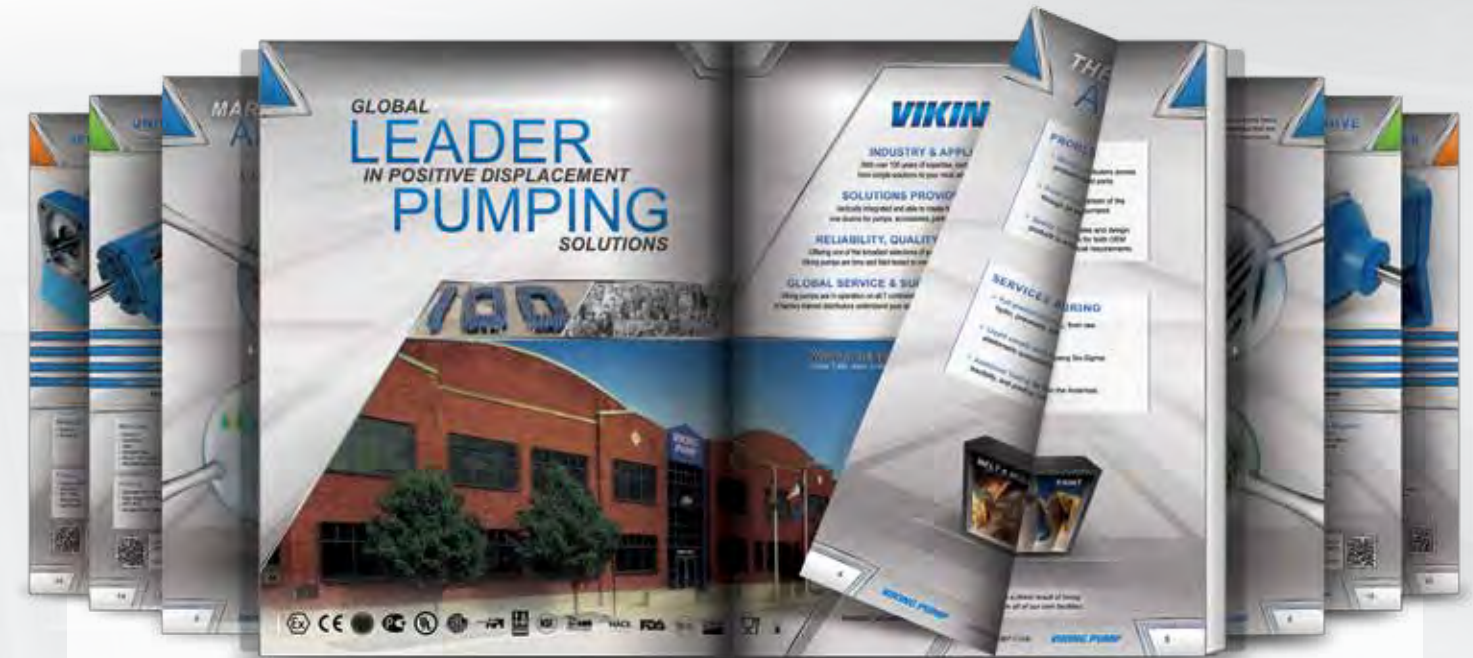
① ANSI-compatible parts in inches, DIN-compatible parts in (mm)
Integral pressure relief valve is standard.



LVP series pumping water for emulsions.

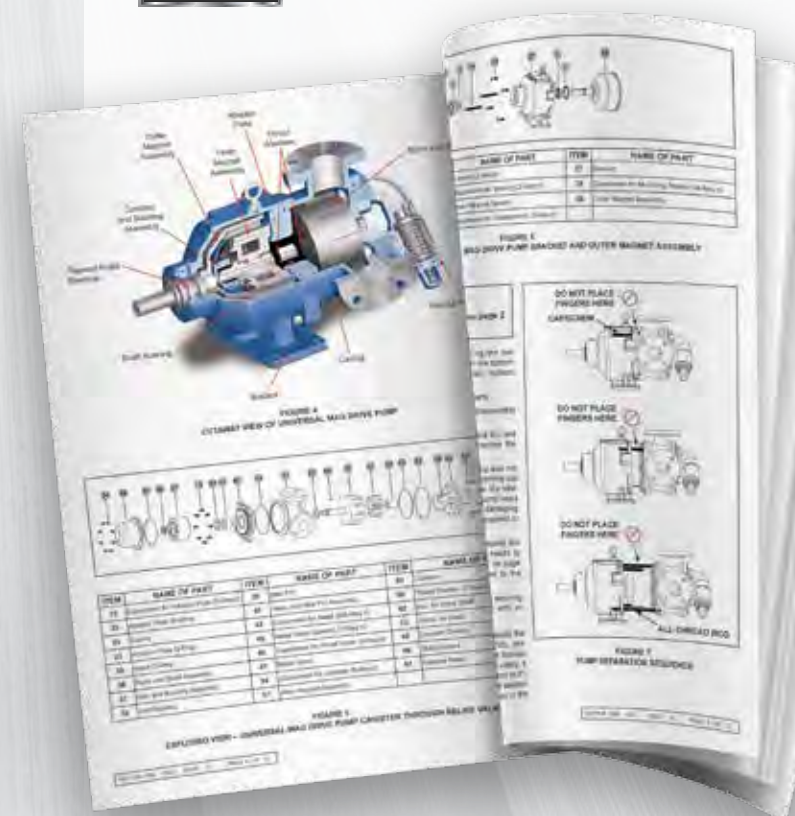
VIKING PUMP LITERATURE

Supports Your Pump



SCAN TO GET INSTANT ACCESS TO
VIKING PUMP LITERATURE

VP.SALESMRC.COM



“Flip” Through The Literature

No need to download large files to browse our latest brochures and catalog. Our Flipping Book powered system allows you to search for content, email page links, and much more.



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Technical Documentation

Get access to all Viking technical service manuals to get diagrams and explanations about every part of your pump.

SOLUTIONS & SYSTEMS

EVERY PUMP APPLICATION IS UNIQUE

Viking Pump doesn't force a standard pump into an engineered process or system. We are able to adapt different pump technologies, materials of construction, sealing, porting, speed of rotation and more, to provide extreme reliability and solutions that fit the following variables:



LIQUID



ELEVATION



PROCESS



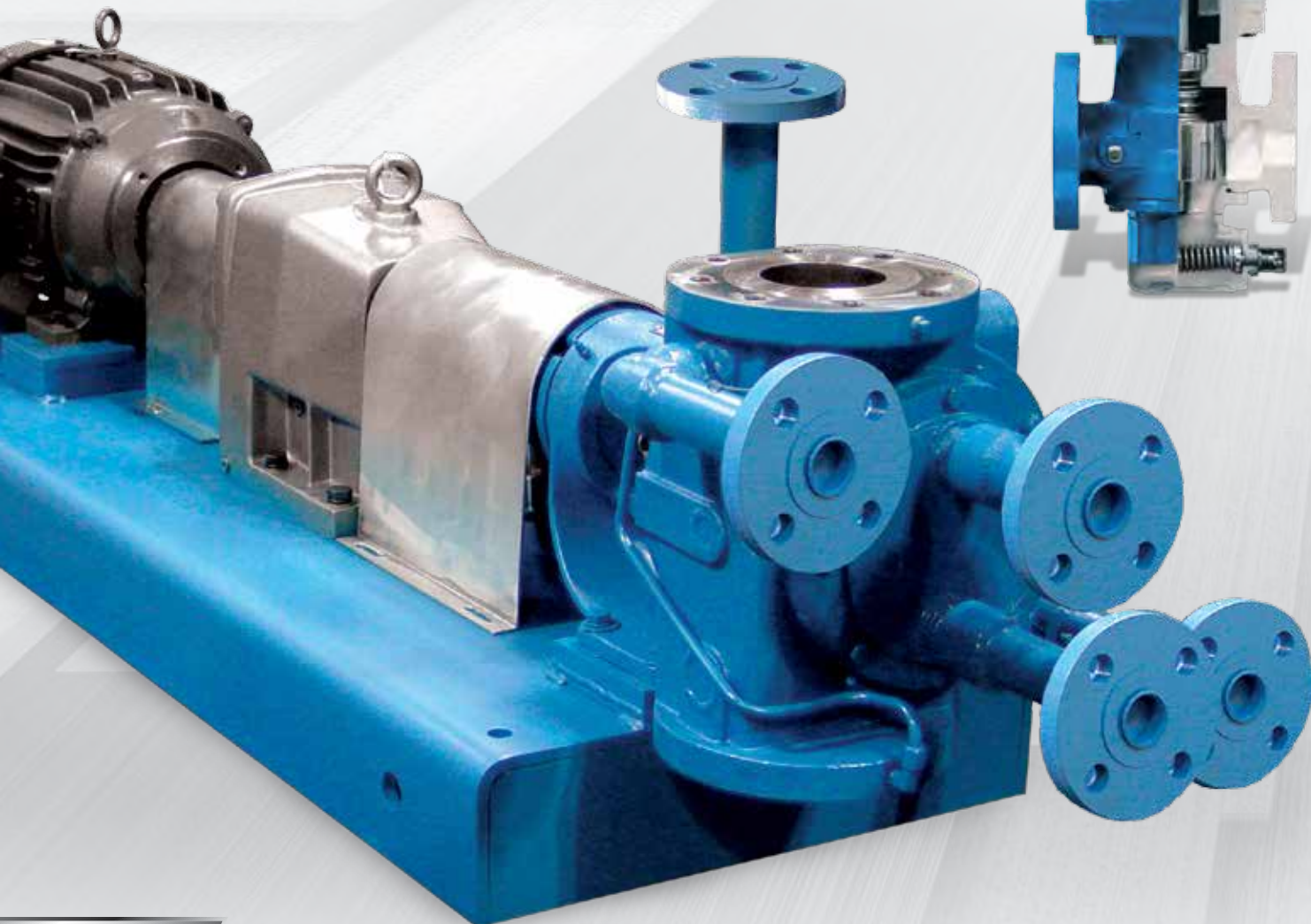
TEMPERATURE



PIPING



ENVIRONMENT



Some solutions involve advanced changes to the pump design to handle a unique OEM application or to fit within a physical footprint of a machine or system.

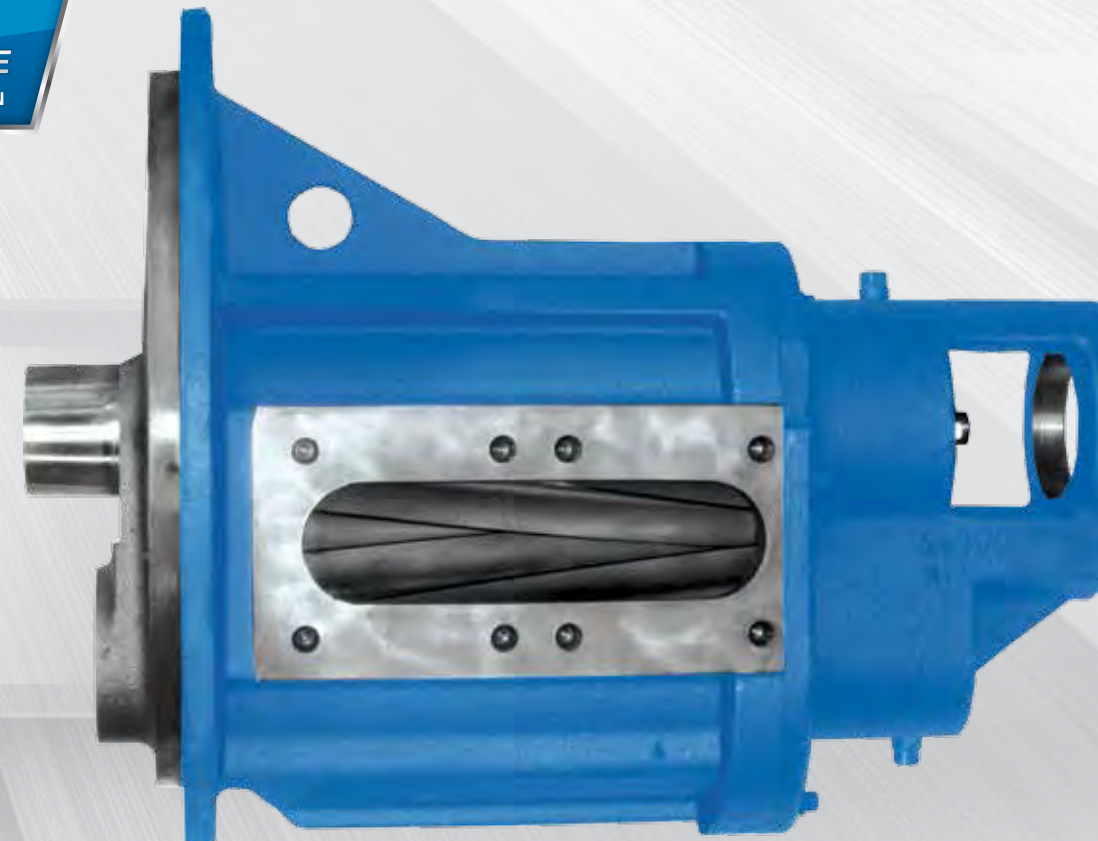
Viking provides unique solutions in:

- Lubrication
- Filtering
- Heat transfer
- Fuel injection
- Burner feed
- Adhesive dispensing
- Two-part meter/mix
- Colorant metering
- Fluid power
- And much more

CONTACT OUR
OEM TEAM
TO LEARN MORE
VIKINGPUMP.COM/DISTRIBUTION

LOCOMOTIVE MAIN LUBE PUMP

This custom-designed helical gear lubrication pump is mounted to the engine of a large diesel locomotive (and is driven by it). It features a bracket to mount the engine's fuel pump, as well.



HEAVY TRUCK TRANSMISSION LUBE PUMP

Designed for large, heavy duty off-road trucks. This rugged pump features three sections, to scavenge oil, lubricate the transmission, and drive a hydraulic motor on the radiator's cooling fan.



GEROTOR PUMP

Economical pumps for clean, low pressure applications such as lube and filtration systems. Customizable mounting and porting are available to interface with your equipment.

DUPLEX FUEL OIL SETS
 Customized to Meet Your Fuel Oil Needs



Standard Equipment

SG-05–Spur Gear Pump in cast iron construction, UL-Listed, heat treated steel gears, case-hardened shafts, carbon graphite bushings, Viton® lip seal, plain head

SG407–Spur Gear Pump in cast iron construction, heat treated steel gears, case-hardened shafts, carbon graphite bushings, Viton® mechanical seal, plain head

Viking M drive brackets to allow pumps to be close-coupled to C faced motors (2)

Motors - Totally Enclosed Fan Cooled, foot mounted, NEMA C or TC, UL, CSA (2)

Common steel baseplate shall be made of heavy gauge steel plate with 1 1/2" high drip-lip and 1/2" NPT drain (1)

Suction Line Equipment

- Viking Lid-Ease Basket Strainers, cast iron body, 40 mesh stainless steel basket (2)
- Ball valves, 600 PSI pressure rated, full port (2)
- Compound Gauges, 30" Hg-0-30 PSI 2.5" dial, liquid filled (2)
- Gauge Valves - brass ball valves, 600 PSI rated (2)

Discharge Line Equipment

- Swing Check Valves, 400 PSI pressure rated (3)
- Ball valves, 600 PSI pressure rated, full port (2)
- Relief Valves - continuous bypass type, cast iron body, stainless steel spring (2)
- Pressure Gauges, 0-100 PSI, 2.5" dial, liquid filled (2)
- Gauge Valves - brass ball valves, 600 PSI rated (2)

Suction and Discharge Piping

- Schedule 40 carbon steel piping and nipples,150 PSI malleable iron screwed fittings
- Unit to be coated with Vinyl Toluene Alkyd, quick dry enamel
- Duplex pump set to be leak tested with 100 PSI air and soap water

Options

- Pressure Switch - Dual Stage - High & Low, EEMAC1 enclosure, installed
- Magnetic Float Switch with Alarm for Drip Tray Leak Detection
- ULC listed Flexible Connectors, SS hose/Steel nipple, set of 3
- API 607 Steel Ball and API 602 Check Valves
- Pre-plumbed Return-to-Tank Header
- Flow Switch (2) - High Pressure to 1450 PSI
- Pressure Switch - Single Stage

Basic Control Panels

- Single pole circuit breaker (2) c/w through the door operation (120 volt) or individual disconnect switches, motor protectors and transformer (208-575 volt)
- Magnetic motor starters (2)
- Hand-Off-Auto selector switches (2)
- Power on pilot light (white)
- Run pilot light (green) (2)
- Terminal Strip
- Control circuit fuse
- Lead pump failure pilot light & manual reset, lag pump start
- P1 - Auto - P2 alternating selector switch
- Provision to connect 3 float switches (normally closed)

Features & Benefits

- Proven, factory manufactured fuel oil sets built custom to your order
- UL-CSA electrical control panels
- Available with standard or UL-listed pumps
- Quick access to comparison sheets, specification sheets, illustration drawings and P&ID drawings
- Over 25 years of experience engineering and manufacturing duplex fuel oil sets

Performance

Max Capacity*
75 GPM (285 LPM)

Max Pressure
500 PSI (34 BAR)

Max Viscosity
0 to 25,000 SSU (2,500 cSt)

Max Temperature
-4°F to +180°F (-20°C to +80°C)

* Larger capacities available, consult factory

Applications

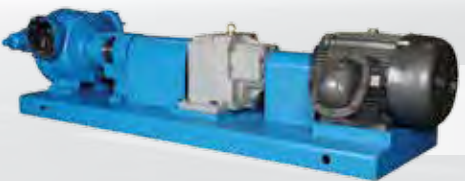
- Fueling diesel generators for backup electrical power generation
- Fuel oil transfer from storage to day tank
- Fuel oil on oil-fired boilers and kilns

Features & Benefits

- Factory assembled systems including base plate, motor, couplings, guards, pumps, and speed reduction if needed
- Pre-alignment from factory minimizes final alignment at installation
- Single source responsibility
- Drawings available to facilitate piping layout
- Viking will provide any customer specified motors, gear reducers, or other components
- Custom engineered bases to fit customer specifications

SPECIFICATIONS							
Pump Series	Drive Style						
	R	P	D	V	B	M	M4
INTERNAL GEAR							
Industrial-Duty Pumps							
Universal Seal & UMD	✓	✓	✓	✓			
Jacketed Universal Seal	✓	✓	✓	✓			
XPD 676	✓	✓	✓	✓			
Motor Speed	✓	✓	✓	✓		✓	
General Purpose Pumps							
General Purpose	✓	✓	✓	✓	✓	✓	
Special Purpose							
Abrasive Liquids	✓	✓	✓	✓			
Ammonia	✓	✓	✓	✓			
Asphalt	✓	✓	✓	✓			
Hygienic Series	✓	✓	✓	✓			
EXTERNAL GEAR							
Sealed							
Spur Gear	✓	✓	✓	✓	✓	✓	✓
Sealless							
Mag Drive Spur Gear	✓	✓	✓	✓	✓	✓	
ROTARY VANE							
LVP Vane	✓	✓	✓			✓	
Specific pumps within each pumping principle may or may not be compatible with a specific drive arrangement. Please contact your Authorized Viking® Distributor to make sure your particular pump is compatible with the desired drive arrangement.							

DRIVE CONFIGURATIONS
 An Entire Pumping Solution in One Package



“P” Drive
 Purchased Gear Reducer



“D” Drive
 Direct Connected to Standard Motor, Variable Speed Drive, or Gear Head Motor



“B” Drive
 Bracket Mounted



“M” Drive
 Motor Mounted



“M4” Drive
 Motor Mounted Tang Shaft



“R” Drive
 Viking Offset Gear Reducer



“IM” Drive
 Vertically Inline Mounted



“V” Drive
 V-Belt



SCAN TO LEARN MORE ABOUT
 DUPLEX FUEL OIL SETS

VERSATILE ACCESSORIES

SIMPLIFY INSTALLATION AND INCREASE RELIABILITY

Our accessories can be installed by Viking Pump or your Viking Pump distributor as a complete pump unit, or separately.



STRAINERS

Lid-Ease® and Bolted-Lid strainers for easy installation. Y and duplex strainers also available.

MOTORS

Electric, hydraulic, air and gear motors to power your pump with reliability and control.

REDUCERS

Gear reducers to help your pump perform at your desired speed and flow.

BASEPLATES

Sturdy platforms to support your entire configuration.

Features & Benefits

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
- Strainer pressure drop calculator available on vikingpump.com/strainer-selector

Bolted-Lid Strainers

- High quality, easy to clean simplex strainers
- Low pressure drop

Duplex Strainers

- Clean basket without shutting down system

Y Strainers

- Remove small amounts of material from flow

PERFORMANCE SPECIFICATIONS

	Size	Standard Port	Nominal Capacity		Rated System Pressure		Maximum Basket Differential Pressure	
		Inches	GPM	m³/h	PSI	BAR	PSI	BAR
CAST IRON*	F-1007	0.75	20	5	200	14	150	10
	F-1010	1	30	7	200	14	150	10
	F-1015	1.5	50	11	200	14	150	10
	F-1020	2	100	23	200	14	150	10
	F-1030	3	200	45	125	9	125	9
	F-1040	4	400	91	125	9	125	9
	F-1060	6	800	182	125	9	75	5
DUCTILE	F-1020-RDUC	2	100	23	250	17	150	10
	F-1020-HDUC	2	100	23	640	44	150	10
	F-1030-RDUC	3	200	45	250	17	125	9
	F-1030-HDUC	3	200	45	640	44	125	9
	F-1040-RDUC	4	400	91	250	17	125	9
STAINLESS STEEL*	F-1007	0.75	20	5	200	14	150	10
	F-1010	1	30	7	200	14	150	10
	F-1015	1.5	50	11	200	14	150	10
	F-1020	2	100	23	200	14	150	10
	F-1030	3	200	45	125	9	125	9
	F-1040	4	400	91	125	9	125	9
	F-1060	6	800	182	125	9	75	5

* Lid-Ease® Simplex Strainers.
Additional sizes available in Duplex and Y Strainers.

Mesh	10	20	40	60	80	100
Opening (microns)	1,910	860	380	230	190	140
Opening (in.)	0.075	0.034	0.015	0.0092	0.007	0.0055

STRAINERS

Protect Your Pumps and Systems With Our Versatile Strainers



Materials

- Cast Iron
- Ductile Iron (Bolted-Lid Only)
- Stainless Steel
- Carbon Steel (Duplex and Y Only)

Options

- Magnetic Inserts
- Differential Pressure Indicators

Porting

- Flanged
- Threaded

How It Works



The inclined position of the strainer basket adjacent to the porting allows for smooth flow patterns.

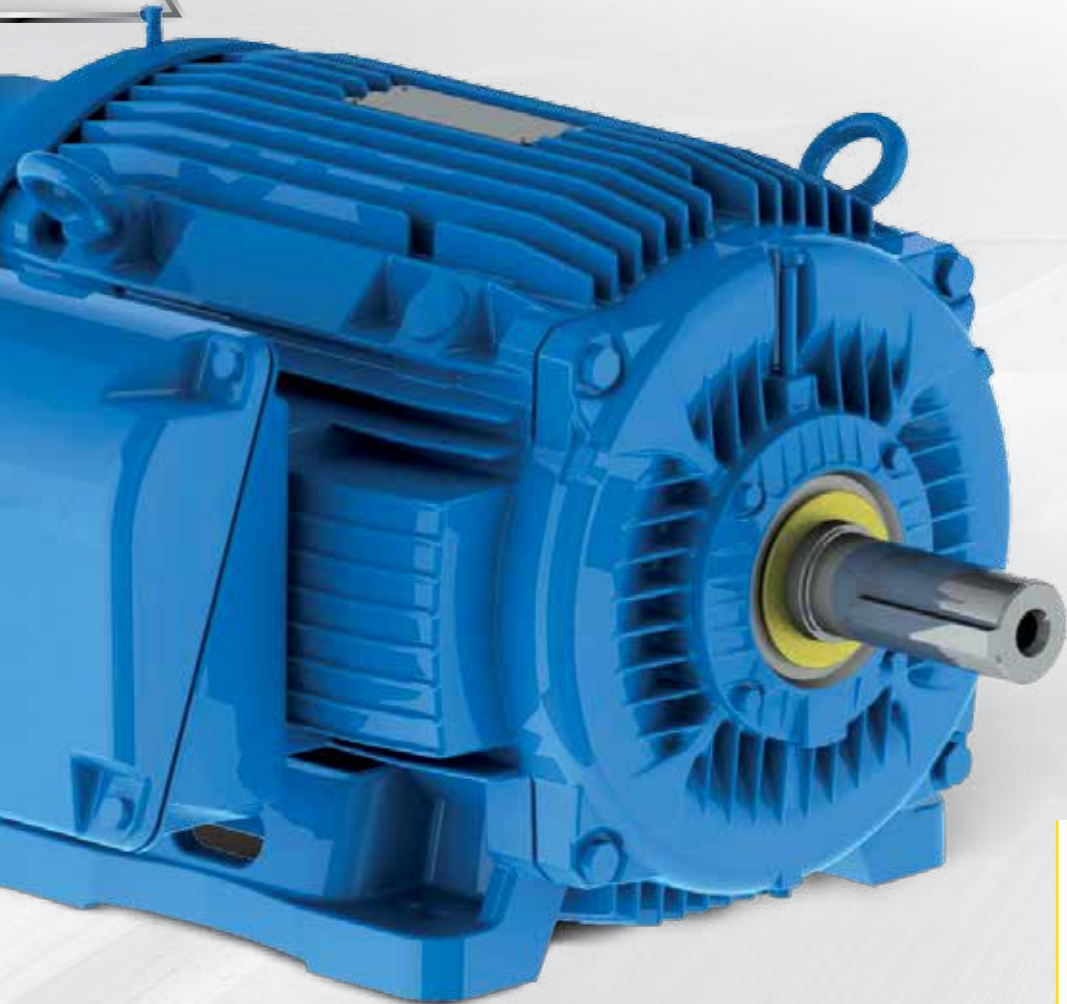
SCAN TO LEARN MORE ABOUT
STRAINERS



DETAILED INFO IN MASTER CATALOG SECTIONS 640, 641 & 642

DRIVE MOTORS

Power Your Pump With a Motor From Viking Pump



Features & Benefits

- 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
- Premium and Super Premium options available

Options Available

- Inverter Duty
- Washdown Service
- Hazardous Location

Horsepower Range

- .25 to 350 HP

Voltage Range

- 115 to 575 Volts
- Single or Three Phase

Enclosure

- TEFC
- Open Drip Proof
- Explosion Proof

Mounting

- Foot
- C-Flange

Frequency

- 50/60 Hz

Speeds

- 2, 4, 6, 8 Poles



SCAN TO LEARN MORE ABOUT
DRIVE MOTORS

GEAR REDUCERS

Get the Control and Performance You Need Out of Your Viking Pump

Features & Benefits

In-Line Reducers

- Available in multiple sizes and a variety of ratios to 350 HP / 250 kW
- Universal mounting - solid input shaft or motor mount option (IEC or NEMA)
- High efficiency and low noise levels

Gear Motors

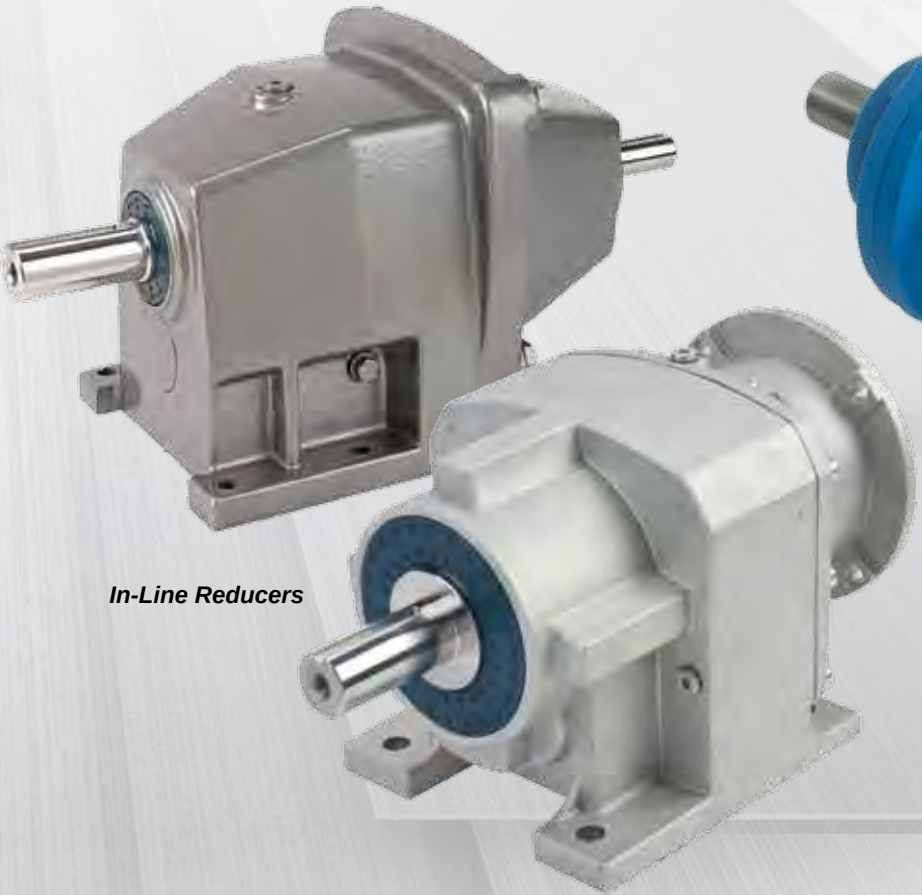
- Integrated motor and reducer
- Compact footprint

Offset Reducers

- Ratios are fully interchangeable in each gearbox
- Multiple mounting brackets enable output shaft to match Viking shaft heights
- Slotted bracket enables input shaft to match multiple motor shaft heights



Gear Motors



In-Line Reducers



Offset Reducers



SCAN TO LEARN MORE ABOUT
GEAR REDUCERS & GEAR MOTORS

DETAILED INFO IN MASTER CATALOG SECTIONS 610, 615, 616, & 617

QUALITY ASSURANCE

ANALYTICAL SERVICES FOR OPTIMUM PERFORMANCE

- Enable best possible pump selection for your liquids and process conditions.
- Satisfy engineering specifications and governmental regulations.
- Guarantee accuracy with NIST-traceable calibration.
- Validate pump performance before installation with certified pump tests.
- Test pump only, or your complete unit – pump, reducer and drive.
- Test with your liquids, especially non-newtonian liquids, at your process temperatures.



M4224A pump performance tested on 150 HP dynamometer

CERTIFIED PERFORMANCE TEST

- Factory testing to ensure your Viking pump meets your flow 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
- 6 dynamometers through 300 HP
- Oils, solvent, water and other test fluids
- Witnessed testing available

CERTIFIED HYDRO TEST

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

Lab Resources:

- Dynamometers
- Test Liquids to 75,000 SSU
- Data Acquisition Tools
- Viscometer
- Machine Shop

Testing Services Available:

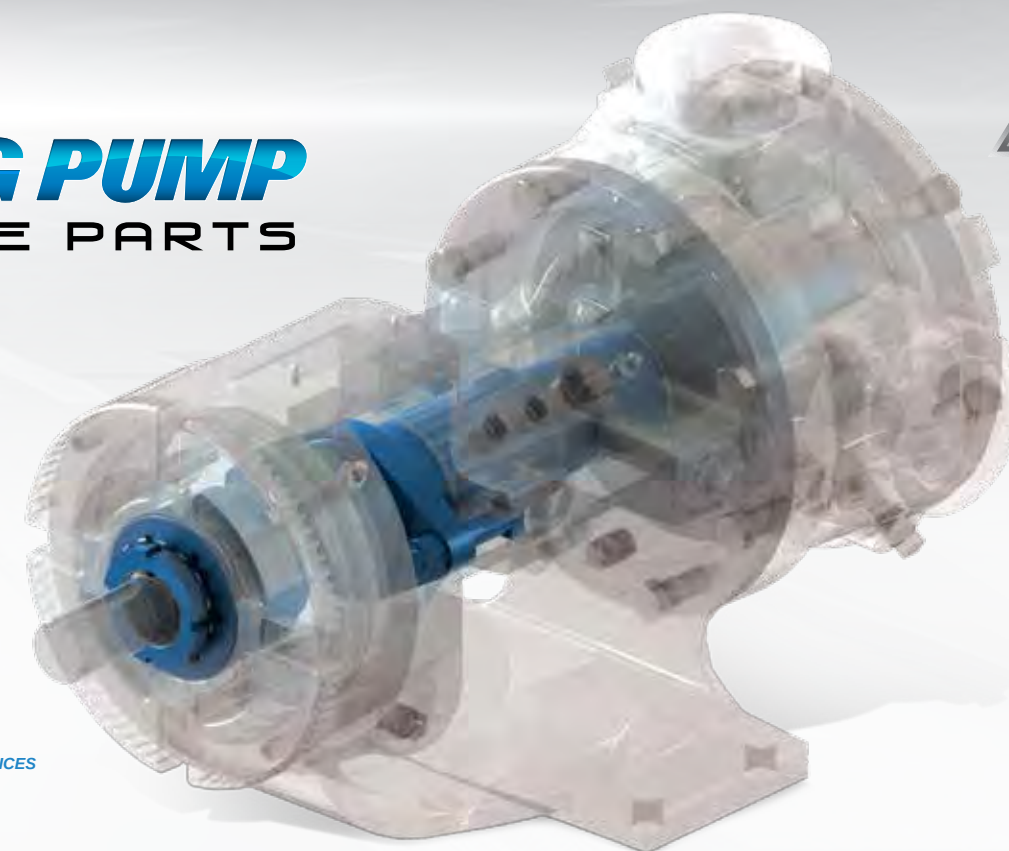
- Pneumatic Testing
- NPSHr Testing
- Sound & Vibration
- Visual Inspection and Measurements
- Liquid Sample Analysis
- Material Testing
- Traceability
- Magnetic Particle Testing

VIKING PUMP GENUINE PARTS



SCAN TO LEARN MORE
ABOUT HOW OUR PARTS
AND SERVICE CAN
SAVE YOU MONEY

VIKINGPUMP.COM/PARTS-AND-SERVICES



REPAIR IT ONCE REPAIR IT RIGHT

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 distributor network.



PARTS KIT vs PARTIAL REPAIR

- Everything you need in one place
- Save time and money
- Increase uptime
- Increase service life
- Reduce frequency of repairs

REBUILD vs REPLACE PUMP

- Viking kits save time and money, making rebuilding easier and more cost effective
- Viking pumps are built to the highest standards so they can be rebuilt instead of replaced
- Average savings of 35% to rebuild compared to replacing your pump
- Less downtime with faster shipping and lead time for kits versus new pumps

SEAL & MATERIAL SELECTION GUIDE

Seals & materials are key elements in defining the reliability and performance of a Viking pump across the many applications existing around the world.

MATERIAL SELECTION

Since 1929, Viking has cast its metals using two captive foundries, allowing for ultimate control and superior quality.



Alloy 20

Austenitic stainless steel for sulfuric acid.

Alloy C

Cast nickel base alloy for strong oxidizers.

Bronze

Used for chloride corrosion resistance in marine applications.

Steel

For refinery and petrochem applications or extremely high temperatures. Grades range from cast low alloy to various types of carbon steel.

Stainless Steel

For corrosion resistance over the entire pH range. Grades range from 316L, 317, 347 and 770, to duplex and martensitic.

Ductile Iron

For lower cost alternative to steel for refinery and petrochem applications where thermal crack resistance is required. Grades range from pearlitic to ferritic.

Gray Cast Iron

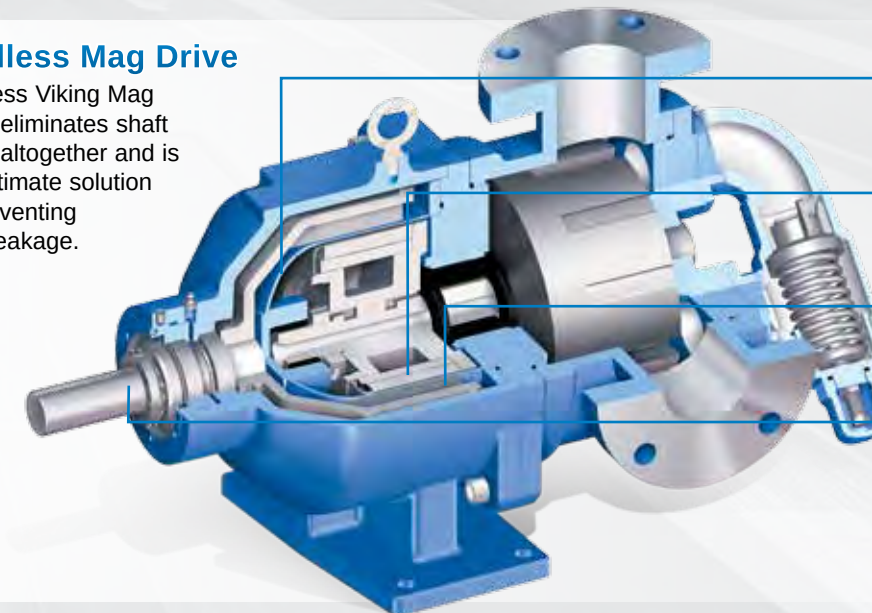
For most non-corrosive applications. Least cost, best resistance to galling. Various coating options for hardness.

SEAL SELECTION

Viking pumps are designed to accept many brands and types of seals.

Sealless Mag Drive

Sealless Viking Mag Drive eliminates shaft seals altogether and is the ultimate solution to preventing seal leakage.



- The liquid is contained inside a hermetically sealed canister in the bracket area
- Inside the canister, an inner magnet assembly is mounted to the rotor shaft
- Outside the canister, an outer magnet assembly is connected to the drive motor
- As the motor turns the outer magnet, magnetic force passes through the canister and turns the inner magnet and rotor/shaft to create flow through the pump

Cartridge Mechanical



- Simple mechanical seals mounted in the stuffing box
- Enable easy seal face replacement
- Viking offers single and double mechanical, as well as triple lip cartridge seals

Component Mechanical



- Mechanical seals feature a smooth rotating face in contact with a smooth stationary face
- Component seals are mounted behind the rotor or in the stuffing box
- Double seals provide two sets of faces, with a barrier fluid between them to prevent air from contacting the liquid pumped

Packing



- Combines lowest cost with highest temperature capabilities
- Requires some ongoing leakage for cooling and lubrication
- Is available in a variety of materials for variations of durability and temperature

Note: Images are for representation only

PRODUCT SELECTION GUIDE



SELECTION MADE EASY

With Viking's
Online Resources

PUMP SELECTOR

- Create performance curves
- Find the exact pump you need
- Help define your application



SCAN TO USE NOW
VIKINGPUMP.COM/PUMPSELECTOR

CHEMICAL GUIDE

- Available as a mobile app
- Quick and easy chemical search
- Hundreds of chemicals to choose



SCAN TO USE NOW
VIKINGPUMP.COM/MOBILE-APPS

PUMPING PRINCIPLE	INTERNAL GEAR																	EXTERNAL GEAR				VANE	
SERIES	Universal Seal	Jacketed Universal Seal	Behind the Rotor Seal	Jacketed Behind the Rotor Seal	Universal Mag Drive	XPD 676 & Universal 682	Motor Speed G-HL		Motor Speed KE-QS	Heavy Duty Alloy	Mag Drive Motor Speed	General Purpose	Motor Mount Gen. Purp.	Jacketed Asphalt	Electrically Heated Asphalt	Ammonia	Abrasive Liquid	Hygienic Series	Spur Gear	High Pressure Spur Gear	LACT Booster Pumps	Composite Mag Drive	Rotary Vane
PERFORMANCE																							
Maximum Capacity, GPM	1,600	1,600	500	500	500	1,600	115		580	110	130	450	30	1,600	685	60	160	275	190	190	175	33	160
Maximum Capacity, LPM	6,060	6,060	2,000	2,000	2,000	6,060	435		760	417	490	1,700	115	6,060	3,000	230	605	1,041	720	720	662	125	605
Maximum Capacity, m³/h	363	363	114	114	114	363	26		132	25	30	102	7	363	156	14	36	62	43	43	40	7.5	36
Maximum Pressure, PSI	200	200	200	200	200	200	250		150	200	200	250	250	200	200	50	150	150	500	2,500	1,500	150	200
Maximum Pressure, BAR	14	14	14	14	14	14	17		10	14	14	17	17	14	14	3.5	10	10	34	172	103	10	14
Maximum Viscosity, SSU	2,000,000	2,000,000	15,000	15,000	250,000	2,000,000	25,000		25,000	2,000,000	250,000	250,000	7,500	2,000,000	2,000,000	N/A	750,000	1,000,000	1,000,000	25,000	1,000	25,000	2,300
Maximum Viscosity, cSt	440,000	440,000	3,300	3,300	55,000	440,000	5,500		5,500	440,000	55,000	55,000	1,650	440,000	440,000	N/A	160,000	250,000	250,000	5,500	220	5,500	500
Temperature °F *	-120 to +800	-120 to +800	-60 to +650	-40 to +225	-120 to +500	-20 to +650	-40 to +350		-40 to +225	-110 to +500	-50 to +225	-60 to +300	-60 to +350	-60 to +450	-60 to +450	Down to -40	-60 to +250	-5 to +225	-40 to +450	-40 to +450	-40 to +450	-40 to +200	-15 to +225
Temperature °C *	-85 to +430	-85 to +430	-51 to +343	-40 to +110	-85 to +260	-29 to +340	-40 to +180		-40 to +110	-80 to +260	-45 to +110	-50 to +150	-50 to +180	-50 to +230	-50 to +230	Down to -40	-50 to +120	-20 to +107	-40 to +230	-40 to +230	-40 to +230	-40 to +95	-30 to +110
EXTERNAL MATERIALS																							
Cast Iron	✓	✓	✓	✓	✓		✓		✓		✓	✓	✓	✓	✓	✓	✓		✓	✓			
Ductile Iron		✓																	✓		✓		
Steel	✓	✓			✓	✓	✓				✓												
Stainless Steel	✓	✓			✓	✓	✓			✓	✓							✓					✓
Alloys	✓	✓			✓		✓			✓	✓												
Composite																						✓	
SEALING																							
Packing	✓	✓								✓		✓	✓	✓	✓								
Lip Seal													✓						✓	✓			
Component Mechanical Seal	✓	✓	✓	✓			✓		✓	✓		✓	✓			✓	✓	✓	✓		✓		✓
Cartridge Mechanical Seal	✓	✓				✓								✓					✓				✓
Cartridge Triple Lip Seal	✓	✓												✓									✓
Sealless Mag Drive					✓						✓								✓			✓	✓
Dynamic O-Ring Seal																		✓					
OPTIONS																							
Jacketed (head/bracket)		✓			✓	✓				✓				✓				✓					
Fully Jacketed (casing/head/bracket)		✓				✓																	
PORTS																							
Opposite (180°)	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Right Angle (90°)	✓	✓	✓	✓	✓	✓				✓		✓		✓	✓	✓	✓	✓					
Same Side (360°)												✓	✓						✓	✓			
Flanged	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NPT / BSP	✓	✓	✓	✓	✓		✓			✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓
MOUNTING																							
Foot Mount	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Motor Mount (Close-Coupled)							✓		✓		✓		✓						✓	✓	✓	✓	✓
Vertical In-Line							✓												✓	✓			
APPLICATIONS																							
High Temperature	✓	✓	✓	✓	✓	✓				✓		✓	✓	✓	✓		✓	✓	✓	✓	✓		✓
Abrasives	✓	✓	✓	✓	✓	✓								✓	✓		✓	✓					
Corrosives	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓							✓				✓	✓
High Viscosity	✓	✓	✓	✓		✓				✓		✓		✓	✓		✓	✓	✓				
Medium Viscosity	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓		✓	✓		✓	✓	✓	✓	✓	✓	
Low Viscosity	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
PAGE	14	15	16	17	18	19	20		21	22	23	24	25	26	27	28	29	30	34	35	36	37	40

* Maximum temperature with special construction

LEADING THE WAY IN GLOBAL SERVICE



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