

VIKING UNIVERSAL SEAL PUMPS

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SERIES 124A, 4124A, 124AE, 4124AE, 224A, 4224A, 224AE, 4224AE, 324A, and 4324A (Cast Iron)
 126A, 4126A, 226A and 4226A (Ductile Iron)
 123A, 4123A, 223A and 4223A, 323A, 4323A (Steel Externals)
 127A, 4127A, 227A and 4227A, 327A, 4327A (Stainless Steel)

Heavy-Duty, Foot-Mounted Internal Gear Pumps With Multiple Seal Options



Standard Pump (shown: KK124A)



Jacketed Pump (shown: KK4224A)

Operating Range^①:

Cast Iron Series: 124A/AE, 4124A/AE, 324A, 4324A, 224A/AE, 4224A/AE		
Ductile Iron Series: 126A, 4126A, 226A & 4226A		
Nominal Flow	(GPM)	8 - 1600
	(m ³ /h)	1.8 - 364
Pressure Range	(PSI)	To 200 PSI
	(Bar)	To 14 Bar
Temp. Range	(°F)	-60°F to +650°F
	(°C)	-51°C to +343°C
Viscosity Range	(SSU)	28 SSU to 2,000,000 SSU
	(cSt)	0.1 cSt to 440,000 cSt

Steel Externals Series: 123A, 4123A, 323A, 4323A, 223A & 4223A		
Nominal Flow	(GPM)	15 - 1600
	(m ³ /h)	3.4 - 364
Pressure Range	(PSI)	To 200 PSI
	(Bar)	To 14 Bar
Temp. Range	(°F)	-20°F to +800°F
	(°C)	-29°C to +427°C
Viscosity Range	(SSU)	28 SSU to 2,000,000 SSU
	(cSt)	0.1 cSt to 440,000 cSt

Nominal Flow Rates:

Pump Size	Cast Iron, Ductile Iron*		Steel Externals		Stainless Steel	
	GPM	m ³ /h	GPM	m ³ /h	GPM	m ³ /h
G	8	1.8	—	—	—	—
H	15	3.4	15	3.4	10	2.3
HL	30	6.8	30	6.8	20	4.5
AK	67	15	—	—	—	—
AL	90	20	—	—	—	—
K	80	18	75	17.0	45	10
KK	100	23	100	23	65	15
L/LQ	135	31	135	31	90	20
LL	140	32	140	32	110	25
LS	200	45	200	45	160	36
Q	300	68	300	68	200	45
QS	500	114	500	114	320	73
M	420	95	—	—	—	—
N	600	136	600	136	600	136
R	1100	250	1100	250	1100	250
RS	1600	364	1600	364	1600	364

* G, AK, AL, M, N, R & RS in cast iron only, not ductile iron.

Stainless Steel Series: 127A, 4127A, 327A, 4327A, 227A & 4227A		
Nominal Flow	(GPM)	10-1600
	(m ³ /h)	2.3 - 364
Pressure Range	(PSI)	To 200 PSI
	(Bar)	To 14 Bar
Temp. Range	(°F)	-120°F to +500°F
	(°C)	-84°C to +260°C
Viscosity Range	(SSU)	28 SSU to 2,000,000 SSU
	(cSt)	0.1 cSt to 440,000 cSt

① Refer to Specification Tables 630.9 and 630.15 for individual model information. Special construction needed to achieve some operating limits.

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 127A, 4127A, 227A and 4227A, 327A, 4327A (Stainless Steel)

Series Description

The Universal Seal pumps are designed for a broad range of applications requiring continuous duty at pressures up to 200 psi. Even higher pressures are possible with high fluid viscosities at reduced operating speeds (consult factory).

This Series features 16 different sizes with flows to 1,600 GPM (364 m³/h), with four materials of construction options. They are applied to both thin and thick liquids, and operate equally well in either direction. They are also capable of operating under suction lift conditions.

This series has the broadest range of sealing options of all pumps built by Viking. The stuffing box on all sizes accepts packing, numerous component single mechanical seals, or a wide variety of cartridge seals.

The Universal Seal series is Viking Pump's most versatile series of internal gear pumps due to the availability of many design and material options. A summary of the major design features and available options appears to the right.



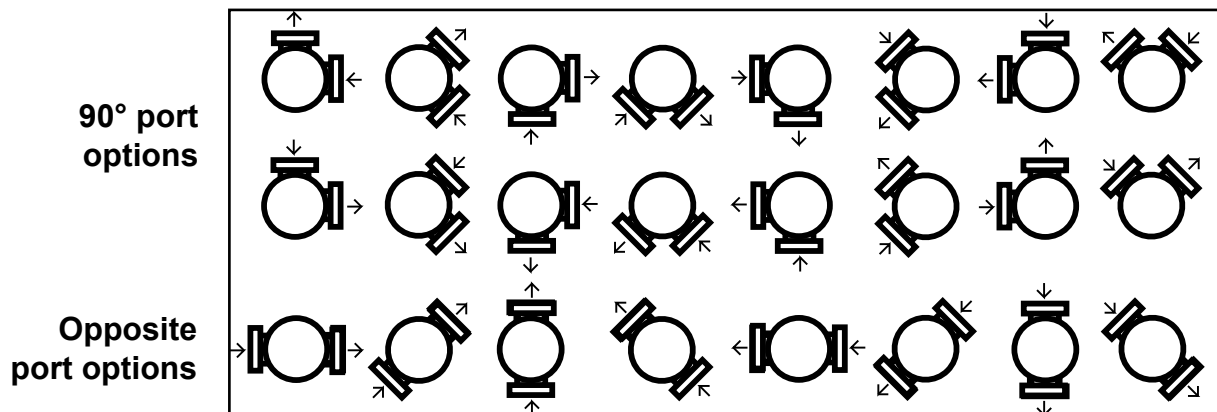
Viking Universal Seal series pumps carry a three year limited warranty. See catalog section 000 for details.

Major Design Features & Options

- Positive Displacement, Internal Gear pumping principle.
- Axial rotor thrust is controlled by double row ball or tapered roller bearings. Radial shaft loads are controlled using bushings.
- Rotatable bearing housing provides easy rotor end clearance adjustment to compensate for viscosity or wear.
- Series designed with an enlarged bearing housing. Used in conjunction with a spacer coupling permits easy cartridge seal installation and removal in place without removing the head and rotor/shaft.
- Seal options include packing, single component seals, cartridge lip seals and cartridge single and double mechanical seals. Various seal flush plans are available.
- Comes in four materials of construction: Cast Iron, Ductile Iron, Steel Externals and Stainless Steel.
- Numerous material options are available for bushings, idler pins, shafts, rotors, idlers and elastomers.
- Series can be direct driven, gear reducer driven or V-belt driven.
- The series is available in a jacketed version. Pumps come with an internal relief valve on standard design, jacketed head or jacket plate is provided on jacketed models.
- Gear and pump geometry has been optimized based on more than 100 years of experience.

Revolvable Pump Casings Standard on G through M Sizes

All Universal Seal pumps are equipped with pump casings that can be positioned to meet common piping configurations. G through M sizes have standard 90° ports and QS has standard opposite ports, all of which can be turned to any of eight positions (LQ, LL, and LS sizes will not allow a port at the 6 o'clock position). N, R and RS sizes have non-rotatable opposite ports as standard. Direction of flow is reversible so any given port can be used as suction or discharge. The relief valve must "point" to the suction port in all cases. Typical port configurations are shown below. See Optional Casings tables for available port options.

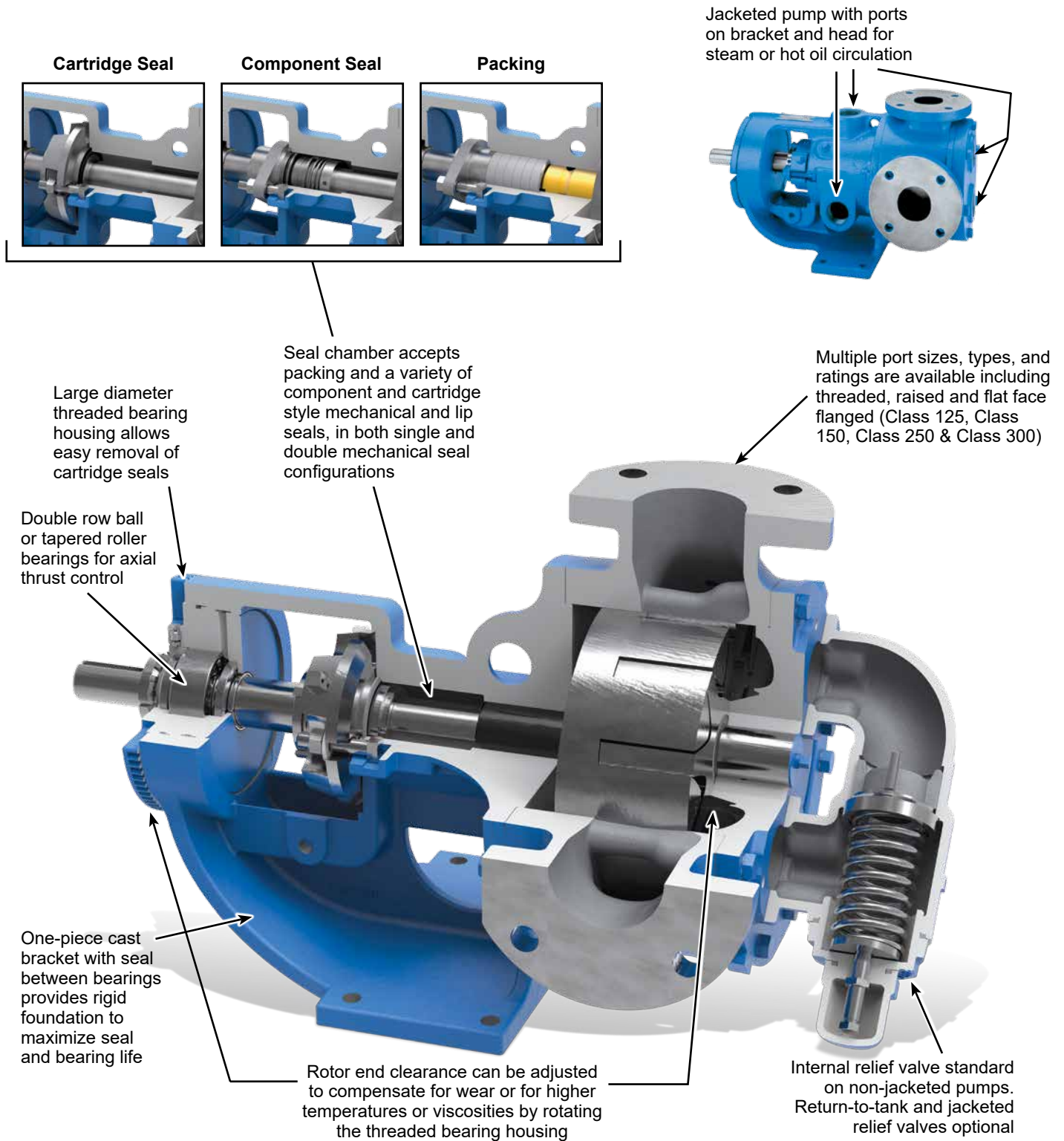


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 127A, 4127A, 227A and 4227A, 327A, 4327A (Stainless Steel)

Pump Construction and Features

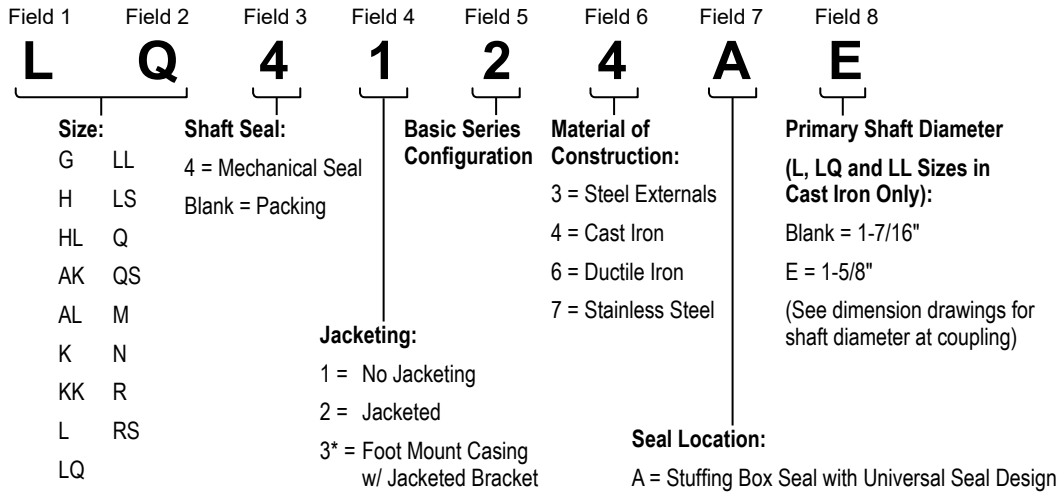


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Model Number Key



* Note on Field 4 that only the N through RS sizes are foot mount with jacketed bracket (3).

The N size is standard with a jacketed bracket, non-jacketed head and non-jacketed relief valve. A jacketed head (without relief valve) or jacketed relief valve option (with non-jacketed head) is available. The R size is standard with a jacketed bracket, jacketed head and non-jacketed relief valve. The RS size is standard with a jacketed bracket and jacketed head, but is provided less valve as standard because a full bypass relief valve for the RS is not available. An R size relief valve is available as an option for the RS pump, providing pressure relief to 1,100 GPM, but this does not provide full bypass protection. Contact factory for details.

The model numbering scheme is illustrated in the table below, with the cast iron, non-jacketed series pumps.

Model Number Scheme, Cast Iron Pumps	
Packed	Stuffing Box Seal
G124A	G4124A
H124A	H4124A
HL124A	HL4124A
AK124A	AK4124A
AL124A	AL4124A
K124A	K4124A
KK124A	KK4124A
L124A, L124AE	L4124 A, L4124AE
LQ124A, LQ124AE	LQ4124A, LQ4124AE
LL124A, LL124AE	LL4124A, LL4124AE
LS124A	LS4124A
Q124A	Q4124A
QS124A	QS4124A
M124A	M4124A
N324A	N4324A
R324A	R4324A
RS324A	RS4324A

Note that on L, LQ and LL pumps with the "AE" designation at the end of the model number will have 1-5/8" shaft as standard, the L, LQ and LL pumps ending in "A" will have a 1-7/16" shaft standard as illustrated in the chart below. The "AE" designation, i.e., LQ124AE is dimensionally interchangeable with a LQ124A or LQ125 (obsolete) except that the "AE" model has a 1-5/8" shaft at the drive end versus 1-7/16" for the other models. The "AE" version is recommended in severe-duty applications or those where stress corrosion may be encountered. (Dimensional drawings are located on pages 12,13 and 18,19).

Model Sizes L, LQ, LL	Shaft Seal Dimension	"U" Coupling Dimension
124A, 4124A 224A, 4224A	1-7/16"	1-1/8"
124AE, 4124AE 224AE, 4224AE	1-5/8"	1-7/16"

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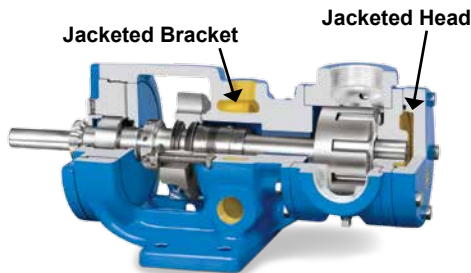
Standard-Jacketed and Fully-Jacketed Pumps

Jacketing

Jacketed pumps provide a cavity, or jacket, on the external wall of the pump through which steam or heat transfer liquid can be passed to control the temperature of the fluid in the pump. The heat transfer medium flows in a closed loop back to the boiler or heater. Applications include “melting” ambient temperature solids like asphalt which solidify in the pump when it cools, and maintaining precise temperature control in processes like manufacturing polymers and epoxy resins.

Standard-Jacketed Pumps

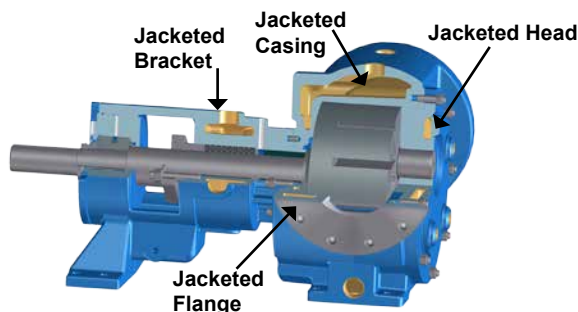
Standard-Jacketed pumps include series 224A, 4224A, 224AE, 4224AE; 226A and 4226A; 223A and 4223A; and 227A and 4227A. They feature jacketing on the head and bracket only, and are typically used for melting ambient temperature solids.



Standard-Jacketed Pump Cutaway – H4224A

Fully-Jacketed Pumps

Pumps with a Fully-Jacketed Option use the Standard-Jacketed pumps' series designation, but replace the standard casing with a jacketed casing, in addition to the jacketed head and bracket. Available for steel and stainless steel models, the jacketed casing provides heat transfer surface area around the perimeter of the rotor, in the inlet and discharge throat areas, and in many sizes into the flanges. Fully jacketed pumps are typically used in applications where precisely maintaining a uniform, predetermined temperature is critical, in extreme environments, and to provide faster startup of cold processes to improve production efficiency.



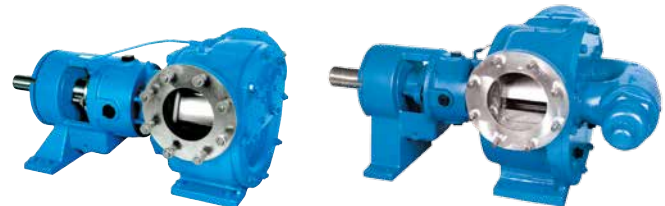
Fully-Jacketed Pump Cutaway – N323A

Relief Valve Configurations

Jacketed pumps are provided with a jacketed head with no relief valve as standard. Integral pressure relief valves in jacketed and non-jacketed configurations are available on “L” through “N” sizes, but require a non-jacketed valve-type head.

The “N” 324A, 4324A, 323A, 4323A, 327A and 4327A pumps are standard with a jacketed bracket and non-jacketed head and non-jacketed relief valve. A jacketed head, or a jacketed relief valve with non-jacketed valve-type head, is available as an option.

The “R” 324A, 4324A, 323A, 4323A, 327A and 4327A pumps are standard with a jacketed bracket, a jacketed head and a non-jacketed relief valve. For “RS” models contact the factory for assistance with jacketing options.



N4324A
Non-Jacketed Head with
Coverplates Shown

R4323A
Jacketed Head with
Non-Jacketed Relief
Valve Shown

Porting and Sealing

A variety of opposite and 90° port configurations are available, including top suction with bottom or side discharge designs typically mounted at the bottom of a tank or reactor.

Jacketed port options for steam or heat transfer liquid include threaded, flanged and weld neck configurations. Viking will provide custom welded steam or hot oil flange connections upon request.

The Universal Seal design allows the use of packing, component seals or cartridge seals. Seal Plans, including API plan 53 and 54, are available.

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127A, 4127A, 227A and 4227A, 327A, 4327A (Stainless Steel)

Standard Materials of Construction - All Series

Component		Cast Iron Non-Jacketed Series 124A/AE, 4124A/AE, Jacketed Series 224A, 4224A, 224AE, 4224AE, 324A, 4324A	Ductile Iron Non-Jacketed Series 126A, 4126A Jacketed Series 226A & 4226A	Steel Externals Non-Jacketed Series 123A, 4123A, 323A, 4323A Jacketed Series 223A, 4223A	Stainless Steel & Other Alloys Non-Jacketed Series 127A, 4127A, 327A, 4327A Jacketed Series 227A, 4227A
Casing		Cast Iron ASTM A48, Class 35B	Ductile Iron ASTM A536 Grade 60-40-18	Steel ASTM A216, Grade WCB	Stainless Steel ASTM A 743, Grade CF8M
Head		Cast Iron ASTM A48, Class 35B	Ductile Iron ASTM A536 Grade 60-40-18	Steel ASTM A216, Grade WCB	Stainless Steel ASTM A 743, Grade CF8M Case Hardened
Head Plate for Jacketed Models		Cast Iron ASTM A48, Class 35B	Steel ASTM A216, Grade WCB	Steel ASTM A216, Grade WCB	Cast Iron ASTM A48, Class 35B
Bracket		Cast Iron ASTM A48, Class 35B	Ductile Iron ASTM A536 Grade 60-40-18	Steel ASTM A216, Grade WCB	Stainless Steel ASTM A 743, Grade CF8M
Idler		②③ Cast Iron ASTM A48 Class 35B	②③ Cast Iron ASTM A48 Class 35B	②③ Cast Iron ASTM A48 Class 35B	Stainless Steel ASTM A 743, Grade CF8M Case Hardened
Rotor	Standard	① Cast Iron ASTM A48, Class 35B	① Cast Iron ASTM A48, Class 35B	① Cast Iron ASTM A48, Class 35B	Stainless Steel ASTM A 743, Grade CF8M Case Hardened
	Steel Fitted	④ Steel ASTM A148, Grade 80-40	④ Steel ASTM A148, Grade 80-40	④ Steel ASTM A148, Grade 80-40	
Rotor Shaft		⑤ Steel ASTM A108, Grade 1045	⑤ Steel ASTM A108, Grade 1045	⑤ Steel ASTM A108, Grade 1045	Stainless Steel ASTM A276 Type XM-19 or 316 condition B ⑥
Idler Pin		Hardened Steel ASTM A108, Grade 1045	Hardened Steel ASTM A108, Grade 1045	Hardened Steel ASTM A108, Grade 1045	Hard Coated Stainless Steel ASTM A276 Type 316 Colmony # 6 Coated
Idler Bushing	Packed	Bronze ASTM B584 (B505), Alloy C93700	Bronze ASTM B584 (B505), Alloy C93700	Bronze ASTM B584 (B505), Alloy C93700	Carbon Graphite
	Mech. Seal	Carbon Graphite	Carbon Graphite	Carbon Graphite	
Bracket Bushing	Packed	Bronze ASTM B584 (B505), Alloy C93700	Bronze ASTM B584 (B505), Alloy C93700	Bronze ASTM B584 (B505), Alloy C93700	Carbon Graphite
	Mech. Seal	Carbon Graphite	Carbon Graphite	Carbon Graphite	
Internal Pressure Relief Valve ⑦		Cast Iron ASTM A48, Class 35B	⑧ Ductile Iron ASTM A536 Grade 60-40-18	⑦ Steel ASTM A216, Grade WCB	Stainless Steel ASTM A 743, Grade CF8M

① AK, AL, KK, LS, QS, N and RS sizes have ductile iron rotor, ASTM A536 Grade 60-40-18.

② Steel fitted Q and QS sizes have steel idler.

③ G, H and HL sizes have powdered metal idler -
G: MPIF 35, FC-0208-50, H and HL: MPIF 35 FC-0208-45

④ Material specification for HL steel rotor is AISI 8620,
LS steel rotor is ASTM A148 80-50.

⑤ RS relief valve not available. Contact factory for options.

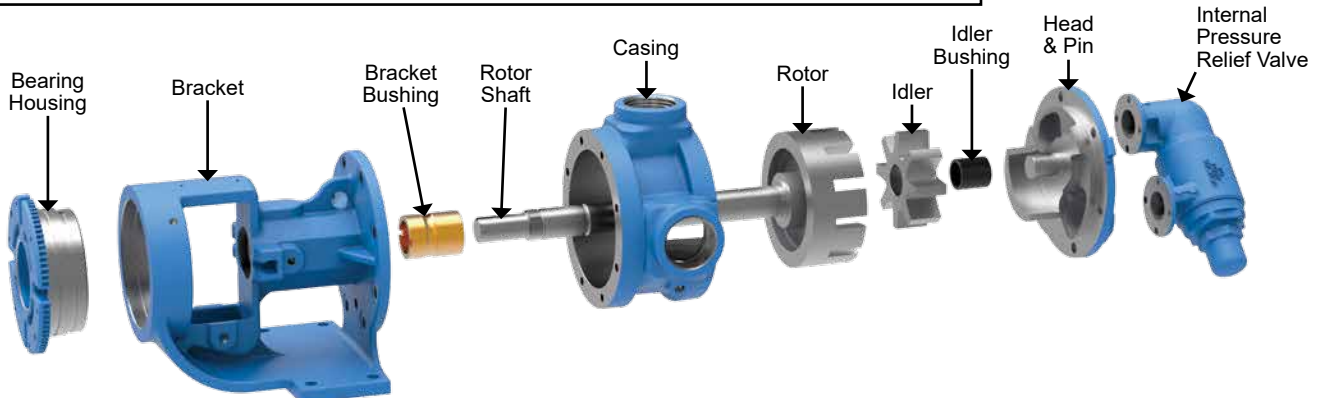
⑥ N, R, RS shafts are Colmony #6 coated.

⑦ LQ-LS relief valve bodies are stainless steel.

⑧ H and HL size relief valves are steel.

⑨ L, LQ, LL and LS sizes, including "A", "AE", "E" and "B" models, are high strength steel ASTM A434 Type 4140 Grade BC or equivalent.

Numerous material options, coatings and treatments available to satisfy specific application needs.



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127A, 4127A, 227A and 4227A, 327A, 4327A (Stainless Steel)**

Special Materials and Options Selection Guidelines

For High Viscosities - Above 2,500 SSU (550 cSt)

- Steel fitted construction recommended on Cast Iron, Ductile Iron and Steel Externals pumps above the following viscosities, according to pump size:

Viscosity	Pump Size																
	G	H	HL	AK	AL	K	KK	L	LQ	LL	LS	Q	QS	M	N	R	RS
SSU	7,500	25,000	7,500	25,000	25,000	25,000	75,000	25,000	25,000	2,500	75,000	7,500	75,000	25,000	75,000	25,000	75,000
cSt	1,650	5,500	1,650	5,500	5,500	5,500	16,500	5,500	5,500	550	16,500	1,650	16,500	5,500	16,500	5,500	16,500

- Extra clearances, depending on viscosity. Contact factory for clearance specifications.
- Special Sealing – Buna N or Viton® Type 1 component seals good up to 15,000 SSU (3,300 cSt).
PTFE Type 9 seals good up to 25,000 SSU (5,500 cSt).
Packed gland good up to 2,000,000 SSU (440,000 cSt).
Cartridge triple lip seals available to 2,000,000 SSU (440,000 cSt).
- Larger ports may be required depending on suction conditions.
- Pump should be operated at slower than normal speeds, which may require a larger pump.
- For viscosities over 250,000 SSU (55,000 cSt), contact factory for additional pump construction and operation recommendations.

For low viscosities or non-lubricating liquids – Below 100 SSU (20 cSt)

- Carbon graphite bushings.
- Cast iron idler for iron or steel pumps, or 770 non-galling stainless alloy idler for stainless steel pumps.
- Pump should be operated at slower than normal speeds, which may require a larger pump.

For high temperatures – Above 225°F (107°C)

- High temperature elastomers – Buna up to 225°F (107°C); Viton® up to 350°F (177°C); PTFE up to 450°F (232°C); Kalrez® up to 550°F (288°C); Grafoil up to 700°F (371°C). High temp packing in excess of 500°F (260°C).
- High temperature relief valve above 350°F (177°C).
- High temperature bushings recommended depending on temperature, size and specific material. See ESB-3 for recommendations.
- Additional operating clearances may be required depending on temperature, size and specific material. See ES-2 for recommendations.
- For temperatures above 450°F (232°C), special materials and sealing requirements may be needed. Contact factory for recommendations.
- Pump should be operated at slower than normal speeds, which may require a larger pump.

For abrasive or dirty liquids

- If possible, filter or strain out the abrasives present.
- Wear resistant bushings - hardened cast iron, tungsten carbide or Colmonoy coated.
- Abrasive-resistant idler pin - tungsten carbide or Colmonoy plus TC filler coated pins.
- Hardened or hard-coated shafting.
- Abrasive-resistant seals.
- For high concentrations of abrasives or particle sizes greater than 250 microns (0.010 in), contact factory for recommendations.
- Pump should be operated at slower than normal speeds, which may require a larger pump.
- Consult factory for specific recommendations.

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Typical Product Configuration By Size



G (G4124A shown)



H & HL (H4124A shown)



AK & AL (AK4124A shown)



K & KK (K123 shown)



L (L124A shown)



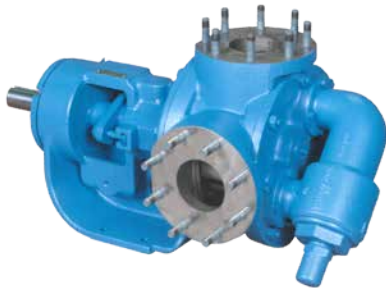
LQ (LQ4124A shown)



LL (LL4126A shown)



LS (LS124A shown)



Q (Q124A shown)



QS (QS4124A shown)



M (M4124A shown)



N (N4324A shown)



R (R324A shown)



RS (RS4327A shown)

Note: Ports shown are not necessarily the standard configuration.

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Specifications (U.S. Units) – Non-Jacketed Pumps

Model Number		Standard Port Size	Nominal Pump Rating (100 SSU and below)		Maximum Hydrostatic Pressure	① Maximum Discharge Pressure for 100 SSU liquid at rated speed	② Maximum Recommended Temperature for Standard Pump (°F)		Steel Fitted Recommended Above	Approximate Shipping Weight with Valve					
Packed	Stuffing Box Seal	Inches	GPM	RPM	PSIG	PSIG	Packed	Mech Seal	SSU	Pounds					
G124A	G4124A	①	8	1750	400	200	450	225	7,500	25					
H124A	H4124A	① ½	15	1750	400	200	450	225	25,000	38					
H126A	H4126A	① ½	15	1750						38					
H123A	H4123A	① ½	15	1750						43					
H127A	H4127A	① ½	10	1150						48					
HL124A	HL4124A	① ½	30	1750						400	200	450	225	7,500	40
HL126A	HL4126A	① ½	30	1750	40										
HL123A	HL4123A	① ½	30	1750	45										
HL127A	HL4127A	① ½	20	1150	50										
AK124A	AK4124A	②	67	1450	400	200	450	225	25,000						82
AL124A	AL4124A	②	90	1450	400	200	450	225	25,000	85					
K124A	K4124A	②	80	780	400	200	450	225	25,000	105					
K126A	K4126A	②	80	780						105					
K123A	K4123A	②	80	780						120					
K127A	K4127A	②	50	520						125					
KK124A	KK4124A	②	100	780						400	200	450	225	75,000	110
KK126A	KK4126A	②	100	780	110										
KK123A	KK4123A	②	100	780	125										
KK127A	KK4127A	②	65	520	130										
L124A/AE	L4124A/AE	②	135	640	400	200	450	225	25,000						155
L126A	L4126A	②	135	640						155					
LQ124A/AE	LQ4124A/AE	② ½	135	640						400	200	450	225	25,000	175
LQ126A	LQ4126A	② ½	135	640											175
LQ123A	LQ4123A	② ½	135	640											185
LQ127A	LQ4127A	② ½	90	420	205										
LL124A/AE	LL4124A/AE	③	140	520	400	200	450	225	2,500						185
LL126A	LL4126A	③	140	520						185					
LL123A	LL4123A	③	140	520						195					
LL127A	LL4127A	③	110	420						240					
LS124A	LS4124A	③	200	640						400	200	450	225	75,000	190
LS126A	LS4126A	③	200	640	190										
LS123A	LS4123A	③	200	640	200										
LS127A	LS4127A	③	160	520	220										
Q124A	Q4124A	④	300	520	400	200	450	225	7,500						440
Q126A	Q4126A	④	300	520						440					
Q123A	Q4123A	④	300	520						450					
Q127A	Q4127A	④	200	350						460					
QS124A	QS4124A	⑥	500	520						400	200	450	225	75,000	540
QS126A	QS4126A	⑥	500	520	540										
QS123A	QS4123A	⑥	500	520	550										
QS127A	QS4127A	⑥	320	350	560										
M124A	M4124A	④	420	420	400	200	450	225	25,000						600
N324A	N4324A	⑥	600	350	400	200	450	225	75,000	810					
N323A	N4323A	⑥	600	350						810					
N327A	N4327A	⑥	600	350						810					
R324A	R4324A	⑧	1100	280						400	200	450	225	25,500	1435
R323A	R4323A	⑧	1100	280											1435
R327A	R4327A	⑧	1100	280	1435										
RS324A	RS4324A	⑩	1600	280	400	125	450	225	75,000						2000
RS323A	RS4323A	⑩	1600	280											2500
RS327A	RS4327A	⑩	1600	280						2500					

- ① For maximum recommended discharge pressures at different viscosities, see performance curves, which can be electronically generated with the Viking Pump Selector Program, located on www.vikingpump.com. If suction pressure exceeds 50 PSIG, consult factory. Higher pressures possible with factory approval based on application details.
- ② Extra clearances are required above 225°F. Higher temperatures can be handled with special construction, consult factory.

- ③ Ports are tapped for standard (NPT) pipe. Other thread standards available.
- ④ Ports are suitable for use with Class 125 ANSI cast iron companion flanges or flanged fittings.
- ⑤ Ports are suitable for Class 150 ANSI steel or stainless steel companion flanges or flanged fittings.

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VIKING UNIVERSAL SEAL PUMPS

SERIES 124A, 4124A, 124AE, 4124AE, 224A, 4224A, 224AE, 4224AE, 324A, and 4324A (Cast Iron)
126A, 4126A, 226A and 4226A (Ductile Iron)
123A, 4123A, 223A and 4223A, 323A, 4323A (Steel Externals)
127A, 4127A, 227A and 4227A, 327A, 4327A (Stainless Steel)

Specifications (Metric Units) – Non-Jacketed Pumps

Model Number		Standard Port Size	Nominal Pump Rating (100 SSU and below)		Maximum Hydrostatic Pressure	① Maximum Discharge Pressure for 20 cSt liquid at rated speed	② Maximum Recommended Temperature for Standard Pump (°C)		Steel Fitted Recommended Above	Approximate Shipping Weight with Valve					
Packed	Stuffing Box Seal	Inches Ⓞ	m³/h	RPM	BAR	BAR	Packed	Mech Seal	cSt	KG					
G124A	G4124A	Ⓞ1	1.8	1750	28	14	232	107	1,650	11					
H124A	H4124A	Ⓞ1 ½	2.8	1450	28	14	232	107	5,500	17					
H126A	H4126A	Ⓞ1 ½	2.8	1450						17					
H123A	H4123A	Ⓞ1 ½	2.8	1450						20					
H127A	H4127A	Ⓞ1 ½	1.9	950						22					
HL124A	HL4124A	Ⓞ1 ½	5.6	1450	28	14	232	107	1,650	18					
HL126A	HL4126A	Ⓞ1 ½	5.6	1450						18					
HL123A	HL4123A	Ⓞ1 ½	5.6	1450						20					
HL127A	HL4127A	Ⓞ1 ½	3.7	950						23					
AK124A	AK4124A	Ⓞ2	15	1450	28	14	232	107	5,500	37					
AL124A	AL4124A	Ⓞ2	20	1450	28	14	232	107	5,500	39					
K124A	K4124A	Ⓞ2	18	780	28	14	232	107	5,500	48					
K126A	K4126A	Ⓞ2	18	780						48					
K123A	K4123A	Ⓞ2	18	780						54					
K127A	K4127A	Ⓞ2	11	520						57					
KK124A	KK4124A	Ⓞ2	23	780	28	14	232	107	16,500	50					
KK126A	KK4126A	Ⓞ2	23	780						50					
KK123A	KK4123A	Ⓞ2	23	780						57					
KK127A	KK4127A	Ⓞ2	15	520						59					
L124A/AE	L4124A/AE	Ⓞ2	31	640	28	14	232	107	5,500	70					
L126A	L4126A	Ⓞ2	31	640						70					
LQ124A/AE	LQ4124A/AE	Ⓞ2 ½	31	640						28	14	232	107	5,500	80
LQ126A	LQ4126A	Ⓞ2 ½	31	640											80
LQ123A	LQ4123A	Ⓞ2 ½	31	640	84										
LQ127A	LQ4127A	Ⓞ2 ½	20	420	93										
LL124A/AE	LL4124A/AE	Ⓞ3	32	520	28	14	232	107	550	84					
LL126A	LL4126A	Ⓞ3	32	520						84					
LL123A	LL4123A	Ⓞ3	32	520						89					
LL127A	LL4127A	Ⓞ3	25	420						109					
LS124A	LS4124A	Ⓞ3	45	640	28	14	232	107	16,500	86					
LS126A	LS4126A	Ⓞ3	45	640						86					
LS123A	LS4123A	Ⓞ3	45	640						91					
LS127A	LS4127A	Ⓞ3	36	520						100					
Q124A	Q4124A	Ⓞ4	68	520	28	14	232	107	1,650	200					
Q126A	Q4126A	Ⓞ4	68	520						200					
Q123A	Q4123A	Ⓞ4	68	520						204					
Q127A	Q4127A	Ⓞ4	45	350						209					
QS124A	QS4124A	Ⓞ6	114	520	28	14	232	107	16,500	245					
QS126A	QS4126A	Ⓞ6	114	520						245					
QS123A	QS4123A	Ⓞ6	114	520						250					
QS127A	QS4127A	Ⓞ6	73	350						254					
M124A	M4124A	Ⓞ4	95	420	28	14	232	107	5,500	600					
N324A	N4324A	Ⓞ6	136	350	28	14	232	107	16,500	367					
N323A	N4323A	Ⓞ6	136	350						367					
N327A	N4327A	Ⓞ6	136	350						367					
R324A	R4324A	Ⓞ8	250	280	28	14	232	107	5,500	651					
R323A	R4323A	Ⓞ8	250	280						651					
R327A	R4327A	Ⓞ8	250	280						651					
RS324A	RS4324A	Ⓞ10	364	280	28	9	232	107	16,500	907					
RS323A	RS4323A	Ⓞ10	364	280						1140					
RS327A	RS4327A	Ⓞ10	364	280						1140					

① For maximum recommended discharge pressures at different viscosities, see performance curves, which can be electronically generated with the Viking Pump Selector Program, located on www.vikingpump.com. If suction pressure exceeds 3.5 BAR, consult factory. Higher pressures possible with factory approval based on application details.

② Extra clearances are required for temperatures above 107°C. Higher temperatures can be handled with special construction. Consult factory.

③ Ports are tapped for standard (NPT) pipe.

④ Ports are suitable for use with Class 125 ANSI cast iron companion flanges or flanged fittings.

⑤ Ports are suitable for Class 150 ANSI steel or stainless steel companion flanges or flanged fittings.

⑥ Port sizes are inch standard, not metric design or size.

VIKING UNIVERSAL SEAL PUMPS

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**SERIES 124A, 4124A, 124AE, 4124AE, 224A, 4224A, 224AE, 4224AE, 324A, and 4324A (Cast Iron)
126A, 4126A, 226A and 4226A (Ductile Iron)
123A, 4123A, 223A and 4223A, 323A, 4323A (Steel Externals)
127A, 4127A, 227A and 4227A, 327A, 4327A (Stainless Steel)**

Optional Casings for Different Port Configurations – Non Jacketed Pumps

Model Number		Standard Ports †	Optional Casings							
Packed	Stuffing Box Seal									
H124A	H4124A	1.5"①	1.5"②Ⓡ	1.5"③Ⓡ	2"②Ⓡ					
H126A	H4126A	1.5"①	1.5"⑤Ⓡ	2"⑤Ⓡ						
H123A	H4123A	1.5"④	1.5"⑥Ⓡ	2"④Ⓡ	2"⑤Ⓡ					
H127A	H4127A	1.5"④	1.5"⑥Ⓡ	2"④Ⓡ	2"⑤Ⓡ					
HL124A	HL4124A	1.5"①	1.5"②Ⓡ	1.5"③Ⓡ	2"②Ⓡ					
HL126A	HL4126A	1.5"①	1.5"⑤Ⓡ	2"⑤Ⓡ						
HL123A	HL4123A	1.5"④	1.5"⑥Ⓡ	2"④Ⓡ	2"⑤Ⓡ					
HL127A	HL4127A	1.5"④	1.5"⑥Ⓡ	2"④Ⓡ	2"⑤Ⓡ					
K124A	K4124A	2"①	2"②Ⓡ	2"③Ⓡ	2.5"①Ⓞ	2.5"②Ⓡ	3"②Ⓡ	4"②Ⓡ		
K126A	K4126A	2"①	2"⑥Ⓡ	3"⑥Ⓡ	4"⑥Ⓡ					
K123A	K4123A	2"④	2"⑥Ⓡ	2.5"④Ⓡ	2.5"⑤Ⓡ	3"④Ⓡ	3"⑤Ⓡ	4"④Ⓡ	4"⑤Ⓡ	
K127A	K4127A	2"④	2"⑥Ⓡ	2.5"④Ⓡ	2.5"⑤Ⓡ	3"④Ⓡ	3"⑤Ⓡ	4"④Ⓡ	4"⑤Ⓡ	
KK124A	KK4124A	2"①	2"②Ⓡ	2"③Ⓡ	2.5"①Ⓞ	2.5"②Ⓡ	3"②Ⓡ	4"②Ⓡ		
KK126A	KK4126A	2"①	2"⑥Ⓡ	3"⑥Ⓡ	4"⑥Ⓡ					
KK123A	KK4123A	2"④	2"⑥Ⓡ	2.5"④Ⓡ	2.5"⑤Ⓡ	3"④Ⓡ	3"⑤Ⓡ	4"④Ⓡ	4"⑤Ⓡ	
KK127A	KK4127A	2"④	2"⑥Ⓡ	2.5"④Ⓡ	2.5"⑤Ⓡ	3"④Ⓡ	3"⑤Ⓡ	4"④Ⓡ	4"⑤Ⓡ	
L124A/AE	L4124A/AE	2"①	2"Ⓡ							
L126A	L4126A	2"①								
LQ124A/AE	LQ4124A/AE	2.5"②	2.5"③Ⓡ	3"②Ⓡ	4"②Ⓡ	6"②Ⓡ*	Side 5"②Ⓡ, Top 6"②			
LQ126A	LQ4126A	2.5"④	3"⑥Ⓡ	4"⑥Ⓡ						
LQ123A	LQ4123A	2.5"④	2.5"⑥Ⓡ	3"⑥Ⓡ	4"④Ⓡ	4"⑥Ⓡ	6"④Ⓡ			
LQ127A	LQ4127A	2.5"④	2.5"⑥Ⓡ	4"④Ⓡ	4"⑥Ⓡ					
LL124A/AE	LL4124A/AE	3"②	3"③Ⓡ	4"②Ⓡ	5"②Ⓡ*					
LL126A	LL4126A	3"④								
LL123A	LL4123A	3"④	3"⑥Ⓡ	4"④Ⓡ	4"⑥Ⓡ					
LL127A	LL4127A	3"④	3"⑥Ⓡ	4"④Ⓡ	4"⑥Ⓡ					
LS124A	LS4124A	3"②	3"③Ⓡ	4"②Ⓡ*						
LS126A	LS4126A	3"④								
LS123A	LS4123A	3"④	3"⑥Ⓡ	4"④Ⓡ	4"⑥Ⓡ					
LS127A	LS4127A	3"④	3"⑥Ⓡ	4"④Ⓡ	4"⑥Ⓡ	4"⑥Ⓞ	6"④Ⓡ			
Q124A	Q4124A	4"②	4"③Ⓡ	3"②Ⓡ	5"②Ⓡ	6"②Ⓞ	Side 4"②Ⓡ, Top 8"②		Side 4"②ⓇL, Top 8"②	Side 6"②Ⓡ, Top 8"②
Q126A	Q4126A	4"④								
Q123A	Q4123A	4"④	4"⑥Ⓡ	5"④Ⓡ	5"⑥Ⓡ	6"④Ⓡ*	6"⑥Ⓡ*	6"④Ⓞ	6"⑥Ⓞ	
Q127A	Q4127A	4"④		3"④Ⓡ	4"⑥Ⓡ	5"④Ⓡ	6"④Ⓡ*	6"④Ⓞ	6"④Ⓞ	6"⑥Ⓞ
QS124A	QS4124A	6"②Ⓞ								
QS126A	QS4126A	6"④Ⓞ								
QS123A	QS4123A	6"④Ⓞ	6"④Ⓡ	6"⑥Ⓞ						
QS127A	QS4127A	6"④Ⓞ	6"④Ⓡ	6"⑥Ⓞ						
M124A	M4124A	4"②	6"②Ⓡ	6"②Ⓞ						
N324A	N4324A	6"②Ⓞ	5"②ⓇN							
N323A	N4323A	6"④Ⓞ								
N327A	N4327A	6"④Ⓞ								
R324A	R4324A	8"②Ⓞ	6"②ⓇN							
R323A	R4323A	8"④Ⓞ								
R327A	R4327A	8"④Ⓞ								
RS324A	RS4324A	10"④Ⓞ								
RS3233A	RS4323A	10"④Ⓞ								
RS327	RS4327A	10"④Ⓞ								

† Standard port configuration is 90° which may be rotated (H-Q) or opposite (QS-R) with right hand inlet viewed from the shaft end. 90° ports may be rotated.

① Port(s) tapped for standard (NPT) pipe.

② Port(s) suitable for use with Class 125 ANSI cast iron companion flanges or flanged fittings.

③ Port(s) suitable for use with Class 250 ANSI cast iron companion flanges or flanged fittings.

④ Port(s) suitable for Class 150 ANSI steel or stainless steel companion flanges or flanged fittings.

⑤ Port(s) suitable for Class 300 ANSI steel or stainless steel companion flanges or flanged fittings.

Ⓡ 90° port arranged for Right Hand inlet (viewed from shaft end)

Ⓛ 90° port arranged for Left Hand inlet (viewed from shaft end)

N Non-Rotatable Ports at 90 degree angle, contact factory for available orientation (right hand or left hand)

Ⓞ Opposite Ports

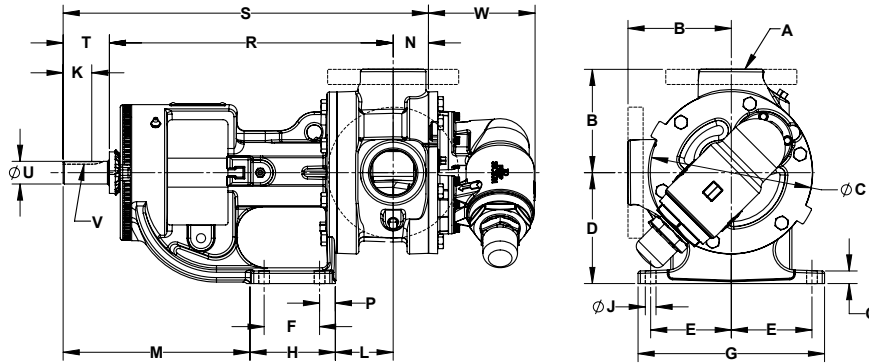
* Core smaller than port size

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SERIES 124A, 4124A, 124AE, 4124AE, 224A, 4224A, 224AE, 4224AE, 324A, and 4324A (Cast Iron)
126A, 4126A, 226A and 4226A (Ductile Iron)
123A, 4123A, 223A and 4223A, 323A, 4323A (Steel Externals)
127A, 4127A, 227A and 4227A, 327A, 4327A (Stainless Steel)

Dimensions - G through Q & M Sizes – All Materials of Construction – Non Jacketed



NOTE: Dimensions "N" through "W" on next page

Model Number		A (in)		B	C	D	E	F	G	H	J	K	L	M
Packed	Stuffing Box Seal													
G124A	G4124A	① 1	in	2.50	5.28	2.75	1.62	1.31	4.00	2.38	0.34	0.57	1.21	4.87
			mm	64	134.1	70	41	33	102	60.4	9	14.5	30.73	123.7
H124A HL124A	H4124A HL4124A	① 1.5	in	3.00	4.75	3.50	2.75	2.25	6.75	3.50	0.47	0.99	3.38	5.19
			mm	76.2	120.6	88.9	69.8	57.1	171.4	88.9	11.9	25.1	85.8	131.8
H123A HL123A H127A HL127A	H4123A HL4123A H4127A HL4127A	③ 1.5	in	4.00	4.75	3.50	2.75	2.25	6.75	3.50	0.47	0.99	3.38	5.19
			mm	101.6	120.6	88.9	69.8	57.1	171.4	88.9	11.9	25.1	85.8	131.8
AK124A AL124A	AK4124A AL4124A	① 2	in	4.50	6.75	5.25	2.88	2.00	6.75	4.03	0.41	1.67	2.82	8.84
			mm	114	171.4	133	73	51	171	102	10	42.4	71.6	224.5
K124A KK124A K126A KK126A	K4124A KK4124A K4126A KK4126A	① 2	in	5.12	8.00	5.50	4.00	2.75	9.25	4.00	0.53	1.42	3.00	9.38
			mm	130.0	203.2	139.7	101.6	69.8	234.9	101.6	13.5	36.1	76.2	238.3
K123A KK123A K127A KK127A	K4123A KK4123A K4127A KK4127A	③ 2	in	5.25	8.00	5.50	4.00	2.75	9.25	4.00	0.53	1.42	3.00	9.38
			mm	133.3	203.2	139.7	101.6	69.8	234.9	101.6	13.5	36.1	76.2	238.3
L124A/AE L126A	L4124A/AE L4126A	① 2	in	6.50	10.25	7.00	4.38	4.00	10.00	5.38	0.53	1.42 ④	3.38	9.12
			mm	165.1	260.3	177.8	111.3	101.6	254.0	136.7	13.5	36.1 ④	85.9	231.6
LQ124A/AE LQ126A LQ123A LQ127A	LQ4124A/AE LQ4126A LQ4123A LQ4127A	② 2.5	in	7.19	10.25	7.00	4.38	4.00	10.00	5.38	0.53	1.42 ④	3.38	9.12
			mm	182.6	260.3	177.8	111.3	101.6	254.0	136.7	13.5	36.1 ④	85.9	231.6
		③ 2.5	in	7.19	10.25	7.00	4.38	4.00	10.00	5.38	0.53	1.42	3.38	9.12
			mm	182.6	260.3	177.8	111.3	101.6	254.0	136.7	13.5	36.1	85.9	231.6
LL124A/AE LL126A LL123A LL127A	LL4124A/AE LL4126A LL4123A LL4127A	② 3	in	7.19	10.25	7.00	4.38	4.00	10.00	5.38	0.53	1.42 ④	3.38	9.12
			mm	182.6	260.3	177.8	111.3	101.6	254.0	136.7	13.5	36.1 ④	85.9	231.6
		③ 3	in	7.19	10.25	7.00	4.38	4.00	10.00	5.38	0.53	1.42	3.38	9.12
			mm	182.6	260.3	177.8	111.3	101.6	254.0	136.7	13.5	36.1	85.9	231.6
LS124A LS126A LS123A LS127A	LS4124A LS4126A LS4123A LS4127A	② 3	in	7.19	10.25	7.00	4.38	4.00	10.00	5.38	0.53	2.55	4.75	9.12
		③ 3	mm	182.6	260.3	177.8	111.3	101.6	254.0	136.7	13.5	64.8	120.6	231.6
Q124A Q126A Q123A Q127A	Q4124A Q4126A Q4123A Q4127A	② 4	in	8.25	14.00	8.75	4.12	4.00	10.00	6.00	0.69	3.58	6.62	11.12
		③ 4	mm	209.5	355.6	222.2	104.6	101.6	254.0	152.4	17.5	90.9	168.1	282.4
M124A	M4124A	② 4	in	9.50	17.35	10.00	5.00	6.00	12.00	8.53	0.69	3.50	7.75	8.10
			mm	241	440.7	254	127	152	305	216.7	18	88.9	197	206

① Ports are tapped for standard (NPT) pipe. Other thread standards available.

② Ports are suitable for use with Class 125 ANSI cast iron (cast iron pumps) or Class 150 ANSI steel companion flanges or flanged fittings (ductile iron pumps).

③ Ports are suitable for Class 150 ANSI steel or stainless steel companion flanges or flanged fittings.

④ "K" dimension for Cast Iron L, LQ and LL sizes is for "A" models. "K" dimension for L, LQ and LL size 124AE and 4124AE pumps is 1.30" (33.0 mm).

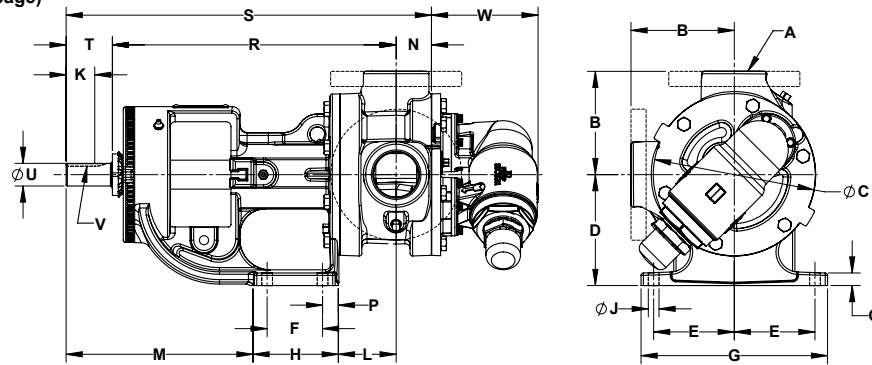
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SERIES 124A, 4124A, 124AE, 4124AE, 224A, 4224A, 224AE, 4224AE, 324A, and 4324A (Cast Iron)
126A, 4126A, 226A and 4226A (Ductile Iron)
123A, 4123A, 223A and 4223A, 323A, 4323A (Steel Externals)
127A, 4127A, 227A and 4227A, 327A, 4327A (Stainless Steel)

Dimensions - G through Q & M Sizes – All Materials of Construction – Non Jacketed

(Continued from previous page)



NOTE: Dimensions "A" through "M" on previous page

Model Number			N	O	P	R	S	T	U	V	W
Packed	Stuffing Box Seal										
G124A	G4124A	in	1.09	0.31	0.63	7.40	9.55	1.06	0.50	.12 x .06	2.71
		mm	28	8	16.0	187.9	142.6	26.9	13	3.05 x 1.52	68.8
H124A HL124A	H4124A HL4124A	in	1.19	0.56	0.62	10.44	13.25	1.62	0.75	.19 x .09	2.85
		mm	30.2	14.2	15.7	265.2	336.5	41.1	19.0	4.83 x 2.29	72.4
H126A HL126A	H4126A HL4126A	in	1.19	0.56	0.62	10.44	13.25	1.62	0.75	.19 x .09	2.85
		mm	30.2	14	15.7	265.2	336.5	41.1	19.0	4.83 x 2.29	72.4
H123A HL123A	H4123A HL4123A	in	1.19	0.56	0.62	10.44	13.25	1.62	0.75	.19 x .09	2.85
		mm	30.2	14	15.7	265.2	336.5	41.1	19.0	4.83 x 2.29	72.4
H127A HL127A	H4127A HL4127A	in	1.19	0.56	0.62	10.44	13.25	1.62	0.75	.19 x .09	2.85
		mm	30.2	14	15.7	265.2	336.5	41.1	19.0	4.83 x 2.29	72.4
AK124A AL124A	AK4124A AL4124A	in	2.00	0.44	1.00	13.19	17.69	2.50	1.00	.25 x .12	4.83
		mm	50.8	11	25	335	449	64	25.4	6.35 x 3.18	122.7
K124A KK124A	K4124A KK4124A	in	1.75	0.62	0.62	14.12	18.12	2.25	1.12	.25 x .12	5.25
		mm	44.4	15.7	15.7	358.6	460.2	57.1	28.4	6.35 x 3.05	133.3
K126A KK126A	K4126A KK4126A	in	1.75	0.62	0.62	14.12	18.12	2.25	1.12	.25 x .12	5.25
		mm	44.4	15.7	15.7	358.6	460.2	57.1	28.4	6.35 x 3.05	133.3
K123A KK123A	K4123A KK4123A	in	1.75	0.62	0.62	14.12	18.12	2.25	1.12	.25 x .12	5.25
		mm	44.4	15.7	15.7	358.6	460.2	57.1	28.4	6.35 x 3.05	133.3
K127A KK127A	K4127A KK4127A	in	1.75	0.62	0.62	14.12	18.12	2.25	1.12	.25 x .12	5.25
		mm	44.4	15.7	15.7	358.6	460.2	57.1	28.4	6.35 x 3.05	133.3
L124A/AE L126A	L4124A/AE L4126A	in	1.75	0.62	0.62	15.62	19.62	2.25 ④	1.12 ⑤	.25 x .12 ⑥	5.43
		mm	44.4	15.7	15.7	396.7	498.3	57.1 ④	28.7 ⑤	6.35 x 3.05 ⑥	137.9
LQ124A/AE LQ126A	LQ4124A/AE LQ4126A	in	1.75	0.62	0.62	15.62	19.62	2.25 ④	1.12 ⑤	.25 x .12 ⑥	5.43
		mm	44.4	15.7	15.7	396.7	498.3	57.1 ④	28.7 ⑤	6.35 x 3.05 ⑥	137.9
LQ123A LQ127A	LQ4123A LQ4127A	in	1.75	0.62	0.62	15.62	19.62	2.25	1.12	.25 x .12	5.43
		mm	44.4	15.7	15.7	396.7	498.3	57.1	28.7	6.35 x 3.05	137.9
LL124A/AE LL126A	LL4124A/AE LL4126A	in	2.25	0.62	0.62	15.62	20.12	2.25 ④	1.12 ⑤	.25 x .12 ⑥	5.43
		mm	57.1	15.7	15.7	396.7	511.0	57.1 ④	28.7 ⑤	6.35 x 3.05 ⑥	137.9
LL123A LL127A	LL4123A LL4127A	in	2.25	0.62	0.62	15.62	20.12	2.25	1.12	.25 x .12	5.43
		mm	57.1	15.7	15.7	396.7	511.0	57.1	28.7	6.35 x 3.05	137.9
LS124A LS126A	LS4124A LS4126A	in	2.44	0.62	0.62	15.75	21.69	3.50	1.44	.38 x .19	5.43
		mm	62.0	15.7	15.7	400.0	550.9	88.9	36.6	9.65 x 4.83	137.9
LS123A LS127A	LS4123A LS4127A	in	2.44	0.62	0.62	15.75	21.69	3.50	1.44	.38 x .19	5.43
		mm	62.0	15.7	15.7	400.0	550.9	88.9	36.6	9.65 x 4.83	137.9
Q124A Q126A	Q4124A Q4126A	in	3.00	0.75	1.00	19.25	26.75	4.50	1.94	.50 x .25	8.25
		mm	76.2	19.0	25.4	488.9	679.4	114.3	49.3	12.70 x 6.35	209.5
Q123A Q127A	Q4123A Q4127A	in	3.00	0.75	1.00	19.25	26.75	4.50	1.94	.50 x .25	8.25
		mm	76.2	19.0	25.4	488.9	679.4	114.3	49.3	12.70 x 6.35	209.5
M124A	M4124A	in	4.00	1.00	1.52	20.13	28.38	4.25	1.94	.50 x .25	8.61
		mm	101.6	25.4	38.6	511.3	720.9	108	49.21	12.70 x 6.35	218.7

④ "T" dimension shown for Cast Iron sizes L, LQ and LL is for "A" models. dimension for L, LQ and LL size 124AE and 4124AE pumps is 2.35" (59.7 mm).
 ⑤ "U" dimension shown for Cast Iron sizes L, LQ and LL is for "A" models. "U" dimension for L, LQ and LL size 124AE and 4124AE pumps is 1.44" (36.6 mm).
 ⑥ "V" dimension shown for Cast Iron sizes L, LQ and LL is for "A" models. "V" dimension for L, LQ and LL size 124AE and 4124AE pumps is 0.38 x 0.19" (9.65 x 4.83 mm).

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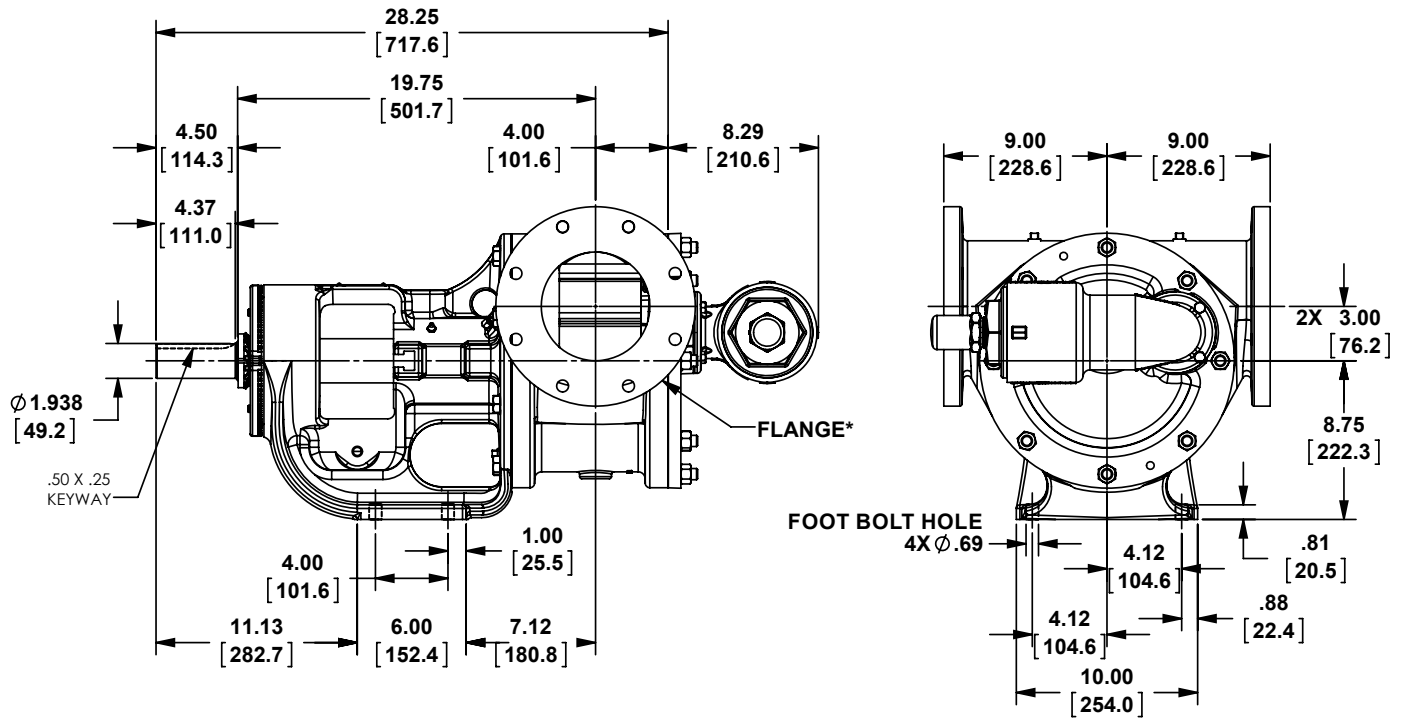
VIKING UNIVERSAL SEAL PUMPS

SERIES 124A, 4124A, 124AE, 4124AE, 224A, 4224A, 224AE, 4224AE, 324A, and 4324A (Cast Iron)
 126A, 4126A, 226A and 4226A (Ductile Iron)
 123A, 4123A, 223A and 4223A, 323A, 4323A (Steel Externals)
 127A, 4127A, 227A and 4227A, 327A, 4327A (Stainless Steel)

Dimensions - QS Size – All Materials of Construction – Non-Jacketed

Series 124A, 4124A, 126A, 4126A, 123A, 4123A, 127A & 4127A

Dimensions in
inches [mm]



* 124A/4124A ports suitable for use with Class 125 ANSI cast iron companion flanges or flanged fittings.

126A/4126A, 123A/4123A, 127A/4127A ports suitable for use with Class 150 ANSI steel or stainless steel companion flanges or flanged fittings.

For N, R & RS size pumps, see jacketed pump dimensional drawings on page 630.21.

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**SERIES 124A, 4124A, 124AE, 4124AE, 224A, 4224A, 224AE, 4224AE, 324A, and 4324A (Cast Iron)
126A, 4126A, 226A and 4226A (Ductile Iron)
123A, 4123A, 223A and 4223A, 323A, 4323A (Steel Externals)
127A, 4127A, 227A and 4227A, 327A, 4327A (Stainless Steel)**

Specifications (U.S. Units) – Jacketed Pumps

Model Number		⊕ Standard Port Size	Nominal Pump Rating (100 SSU and below)		Max. Hydrostatic Pressure	① Max. Discharge Pressure for 100 SSU Liquid at rated speed	② Max. Recommended Temp. for Standard Pump (°F)		Steel Fitted Recommended Above	Approx. Shipping Weight with Valve					
Packed	Stuffing Box Seal		Inches	GPM			RPM	PSIG			PSIG	⑦ Mech Seal			
H224A	H4224A	⊕1 ½	15	1750	400	200	450	450	25,000	42					
H226A	H4226A	⊕1 ½	15	1750						42					
H223A	H4223A	⊕1 ½	15	1750						42					
H227A	H4227A	⊕1 ½	10	1150						47					
HL224A	HL4224A	⊕1 ½	30	1750	400	200	450	450	7,500	45					
HL226A	HL4226A	⊕1 ½	30	1750						45					
HL223A	HL4223A	⊕1 ½	30	1750						45					
HL227A	HL4227A	⊕1 ½	20	1150						52					
K224A	K4224A	⊕2	80	780	400	200	450	450	25,000	120					
K226A	K4226A	⊕2	80	780						120					
K223A	K4223A	⊕2	80	780						120					
K227A	K4227A	⊕2	50	520						125					
KK224A	KK4224A	⊕2	100	780	400	200	450	450	25,000	125					
KK226A	KK4226A	⊕2	100	780						125					
KK223A	KK4223A	⊕2	100	780						125					
KK227A	KK4227A	⊕2	65	520						130					
L224A/AE	L4224A/AE	⊕2	135	640	400	200	450	450	25,000	175					
L226A	L4226A	⊕2	135	640						175					
LQ224A/AE	LQ4224A/AE	⊕2 ½	135	640						400	200	450	450	25,000	190
LQ226A	LQ4226A	⊕2 ½	135	640											190
LQ223A	LQ4223A	⊕2 ½	135	640	190										
LQ227A	LQ4227A	⊕2 ½	90	420	210										
LL224A/AE	LL4224A/AE	⊕3	140	520	400	200	450	450	2,500	200					
LL226A	LL4226A	⊕3	140	520						200					
LL223A	LL4223A	⊕3	140	520						210					
LL227A	LL4227A	⊕3	110	420						255					
LS224A	LS4224A	⊕3	200	640	400	200	450	450	75,000	210					
LS226A	LS4226A	⊕3	200	640						210					
LS223A	LS4223A	⊕3	200	640						210					
LS227A	LS4227A	⊕3	160	520						230					
Q224A	Q4224A	⊕4	300	520	400	200	450	450	7,500	480					
Q226A	Q4226A	⊕4	300	520						480					
Q223A	Q4223A	⊕4	300	520						490					
Q227A	Q4227A	⊕4	200	350						500					
QS224A	QS4224A	⊕6	500	520	400	200	450	450	75,000	580					
QS226A	QS4226A	⊕6	500	520						580					
QS223A	QS4223A	⊕6	500	520						590					
QS227A	QS4227A	⊕6	320	350						600					
M224A	M4224A	⊕4	420	420	400	200	450	450	25,000	975					
N324A	N4324A	⊕6	600	350	400	200	225	225	75,000	810					
N323A	N4323A	⊕6	600	350						810					
N327A	N4327A	⊕6	600	350						810					
R324A	R4324A	⊕8	1100	280	400	200	225	225	25,500	1435					
R323A	R4323A	⊕8	1100	280						1435					
R327A	R4327A	⊕8	1100	280						1435					
RS324A	RS4324A	⊕10	1600	280	400	125	225	225	75,500	2000					
RS323A	RS4323A	⊕10	1600	280						2500					
RS327A	RS4327A	⊕10	1600	280						2500					

NOTE: The N size is standard with a jacketed bracket and non-jacketed head and non-jacketed relief valve, while the "R" size is standard with a jacketed bracket, a jacketed head, and a non-jacketed relief valve. "RS" size contact factory for jacketing options.

- ① For maximum recommended discharge pressures at different viscosities, see performance curves, which can be electronically generated with the Viking Pump Selector Program, located on www.vikingpump.com. If suction pressure exceeds 50 PSIG, consult factory. Higher pressures possible with factory approval based on application details.
- ② Higher temperatures can be handled with special construction and/or extra clearances, consult factory.
- ③ Ports are tapped for standard (NPT) pipe. Other thread standards available.
- ④ Ports are suitable for use with Class 125 ANSI cast iron flanges or flanged fittings.
- ⑤ Ports are suitable for Class 150 ANSI steel or stainless steel companion flanges or flanged fittings.
- ⑥ See p. 630.16 for other port size options.
- ⑦ Temperature based on PTFE seal as standard. Lower temperature limits may be required when using other seal elastomers.

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VIKING UNIVERSAL SEAL PUMPS

SERIES 124A, 4124A, 124AE, 4124AE, 224A, 4224A, 224AE, 4224AE, 324A, and 4324A (Cast Iron)
126A, 4126A, 226A and 4226A (Ductile Iron)
123A, 4123A, 223A and 4223A, 323A, 4323A (Steel Externals)
127A, 4127A, 227A and 4227A, 327A, 4327A (Stainless Steel)

Specifications (Metric Units) – Jacketed Pumps

Model Number		ⓐ Standard Port Size	Nominal Pump Rating (22 cSt and below)		Max. Hydrostatic Pressure	① Max Discharge Pressure for 22 cSt Liquid at rated speed	② Max Recommended Temp. for Standard Pump (°C)		Steel Fitted Recommended Above	Approx. Shipping Weight with Valve					
Packed	Stuffing Box Seal		Inches	m ³ /h			RPM	BAR			Packed	⑦ Mech Seal			
H224A	H4224A	ⓐ1 ½	3.4	1450	28	14	232	232	5,500	19					
H226A	H4226A	ⓐ1 ½	3.4	1450						19					
H223A	H4223A	ⓐ1 ½	3.4	1450						19					
H227A	H4227A	ⓐ1 ½	2.3	950						21					
HL224A	HL4224A	ⓐ1 ½	6.8	1450	28	14	232	232	1,650	20					
HL226A	HL4226A	ⓐ1 ½	6.8	1450						20					
HL223A	HL4223A	ⓐ1 ½	6.8	1450						20					
HL227A	HL4227A	ⓐ1 ½	4.5	950						24					
K224A	K4224A	ⓐ2	18	780	28	14	232	232	5,500	54					
K226A	K4226A	ⓐ2	18	780						54					
K223A	K4223A	ⓐ2	18	780						54					
K227A	K4227A	ⓐ2	11	520						57					
KK224A	KK4224A	ⓐ2	23	780	28	14	232	232	5,500	57					
KK226A	KK4226A	ⓐ2	23	780						57					
KK223A	KK4223A	ⓐ2	23	780						57					
KK227A	KK4227A	ⓐ2	15	520						59					
L224A/AE	L4224A/AE	ⓐ2	31	640	28	14	232	232	5,500	79					
L226A	L4226A	ⓐ2	31	640						79					
LQ224A/AE	LQ4224A/AE	ⓐ2 ½	31	640						28	14	232	232	5,500	86
LQ226A	LQ4226A	ⓐ2 ½	31	640											86
LQ223A	LQ4223A	ⓐ2 ½	31	640	86										
LQ227A	LQ4227A	ⓐ2 ½	20	420	95										
LL224A/AE	LL4224A/AE	ⓐ3	32	520	28	14	232	232	550	91					
LL226A	LL4226A	ⓐ3	32	520						91					
LL223A	LL4223A	ⓐ3	32	520						95					
LL227A	LL4227A	ⓐ3	25	420						116					
LS224A	LS4224A	ⓐ3	45	640	28	14	232	232	16,500	95					
LS226A	LS4226A	ⓐ3	45	640						95					
LS223A	LS4223A	ⓐ3	45	640						95					
LS227A	LS4227A	ⓐ3	36	520						104					
Q224A	Q4224A	ⓐ4	68	520	28	14	232	232	1,650	218					
Q226A	Q4226A	ⓐ4	68	520						218					
Q223A	Q4223A	ⓐ4	68	520						222					
Q227A	Q4227A	ⓐ4	45	350						227					
QS224A	QS4224A	ⓐ6	114	520	28	14	232	232	16,500	265					
QS226A	QS4226A	ⓐ6	114	520						265					
QS223A	QS4223A	ⓐ6	114	520						268					
QS227A	QS4227A	ⓐ6	73	350						272					
M224A	M4224A	ⓐ4	95	420	28	14	232	232	5,500	442					
N324A	N4324A	ⓐ6	136	350	28	14	107	107	16,500	367					
N323A	N4323A	ⓐ6	136	350						367					
N327A	N4327A	ⓐ6	136	350						367					
R324A	R4324A	ⓐ8	250	280	28	14	107	107	5,500	651					
R323A	R4323A	ⓐ8	250	280						651					
R327A	R4327A	ⓐ8	250	280						651					
RS324A	RS4324A	ⓐ10	364	280	28	9	107	107	16,500	907					
RS323A	RS4323A	ⓐ10	364	280						1140					
RS327A	RS4327A	ⓐ10	364	280						1140					

NOTE: The N size is standard with a jacketed bracket and non-jacketed head and non-jacketed relief valve, while the "R" size is standard with a jacketed bracket, a jacketed head, and a non-jacketed relief valve. "RS" contact factory for jacketing options.

① For maximum recommended discharge pressures at different viscosities, see performance curves, which can be electronically generated with the Viking Pump Selector Program, located on www.vikingpump.com. If suction pressure exceeds 50 PSIG, consult factory. Higher pressures possible with factory approval based on application details.

② Higher temperatures can be handled with special construction and/or extra clearances. Consult factory.

③ Ports are tapped for standard (NPT) pipe. Other thread standards available.

④ Ports are suitable for use with Class 125 ANSI cast iron flanges or flanged fittings.

⑤ Ports are suitable for Class 150 ANSI steel or stainless steel companion flanges or flanged fittings.

⑥ Port sizes are inch standard, not metric design or size. See p.630.16 for other port size options.

⑦ Temperature based on PTFE seal as standard. Lower temperature limits may be required when using other seal elastomers.

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**SERIES 124A, 4124A, 124AE, 4124AE, 224A, 4224A, 224AE, 4224AE, 324A, and 4324A (Cast Iron)
126A, 4126A, 226A and 4226A (Ductile Iron)
123A, 4123A, 223A and 4223A, 323A, 4323A (Steel Externals)
127A, 4127A, 227A and 4227A, 327A, 4327A (Stainless Steel)**

Optional Casings - Standard-Jacketed* and Fully-Jacketed* Pumps

Model Number		Standard Jacketed Pumps' Standard Ports†	Standard Jacketed Pumps Optional Ports	Fully-Jacketed Casings
Packed	Stuffing Box Seal			
H224A	H4224A	1.5"①	1.5"②Ⓡ, 2"②Ⓡ	
H226A	H4226A	1.5"①		
H223A	H4223A	1.5"①		2"④Ⓡ
H227A	H4227A	1.5"③	2"③Ⓡ	2"④Ⓡ
HL224A	HL4224A	1.5"①	1.5"②Ⓡ, 2"②Ⓡ	
HL226A	HL4226A	1.5"①		
HL223A	HL4223A	1.5"②		2"④Ⓡ
HL227A	HL4227A	1.5"③	2"③Ⓡ	2"④Ⓡ
K224A	K4224A	2"①	2"②Ⓡ, 2.5"②ⓇⓈ, 3"②ⓇⓈ, 4"②ⓇⓈ	
K226A	K4226A	2"③		
K223A	K4223A	2"③	4"③Ⓡ	3"③Ⓡ; 4"③Ⓡ; 3"④Ⓡ; 3"④Ⓢ
K227A	K4227A	2"③	4"③Ⓡ	3"③Ⓡ; 4"③Ⓡ; 3"④Ⓡ; 3"④Ⓢ
KK224A	KK4224A	2"①	2"②Ⓡ, 2.5"②ⓇⓈ, 3"②ⓇⓈ, 4"②ⓇⓈ	
KK226A	KK4226A	2"③		
KK223A	KK4223A	2"③	4"③Ⓡ	3"③Ⓡ; 4"③Ⓡ; 3"④Ⓡ; 3"④Ⓢ
KK227A	KK4227A	2"③	4"③Ⓡ	3"③Ⓡ; 4"③Ⓡ; 3"④Ⓡ; 3"④Ⓢ
L224A/AE	L4224A/AE	2"①		
L226A	L4226A	2"③		
LQ224A/AE	LQ4224A/AE	2.5"②	3"②Ⓡ, 4"②Ⓡ, 6"②Ⓡ	
LQ226A	LQ4226A	2.5"③		
LQ223A	LQ4223A	2.5"③	3"③Ⓡ	3"③Ⓡ; 3"④Ⓡ; 4"④Ⓡ
LQ227A	LQ4227A	2.5"③	3"③Ⓡ	3"③Ⓡ; 3"④Ⓡ; 4"④Ⓡ
LL224A/AE	LL4224A/AE	3"②	4"②Ⓡ, 5"②Ⓡ	
LL226A	LL4226A	3"③		
LL223A	LL4223A	3"③		
LL227A	LL4227A	3"③		
LS224A	LS4224A	3"②	4"②Ⓡ	
LS226A	LS4226A	3"③		
LS223A	LS4223A	3"③	4"③Ⓡ	4"③Ⓡ; 6"③Ⓡ; 4"④Ⓡ
LS227A	LS4227A	3"③	4"③Ⓡ	4"③Ⓡ; 6"③Ⓡ; 4"④Ⓡ
Q224A	Q4224A	4"②	3"②Ⓡ, 5"②Ⓡ, 6"②Ⓡ	
Q226A	Q4226A	4"③		
Q223A	Q4223A	4"③		4"③Ⓡ; 4"④Ⓡ
Q227A	Q4227A	4"③		4"③Ⓡ; 4"④Ⓡ
QS224A	QS4224A	6"②	6"②Ⓢ	
QS226A	QS4226A	6"③		
QS223A	QS4223A	6"③		6"③Ⓡ; 6"④Ⓡ
QS227A	QS4227A	6"②		6"③Ⓡ; 6"④Ⓡ
M224A	M4224A	4"②	6"②Ⓡ	6"②Ⓡ
N324A	N4324A	6"②	5"②Ⓢ	5"②Ⓢ; 6"②Ⓢ
N323A	N4323A	6"③		6"③Ⓢ; 8"④Ⓡ
N327A	N4327A	6"③		6"③Ⓢ; 8"④Ⓡ
R324A	R4324A	8"②	6"②Ⓢ	
R323A	R4323A	8"③		8"③Ⓡ
R327A	R4327A	8"③		8"③Ⓡ
RS324A	RS4324A	10"②		
RS323A	RS4323A	10"③		
RS327A	RS4327A	10"③		

*Standard port configuration is 90° which may be rotated (H-Q) or opposite (QS). with right hand inlet viewed from the shaft end.

- ① Port(s) tapped for standard (NPT) pipe.
- ② Port(s) suitable for use with Class 125 ANSI cast iron companion flanges or flanged fittings.
- ③ Port(s) suitable for Class 150 ANSI steel or stainless steel companion flanges or flanged fittings.
- ④ Port(s) suitable for Class 300 ANSI steel or stainless steel companion flanges or flanged fittings
- Ⓢ Non-Rotatable Ports at 90 degree angle, contact factory for available orientation (right hand or left hand)
- Ⓡ Opposite Ports

Contact factory for flange details (e.g. Flat face or raised face flanges)

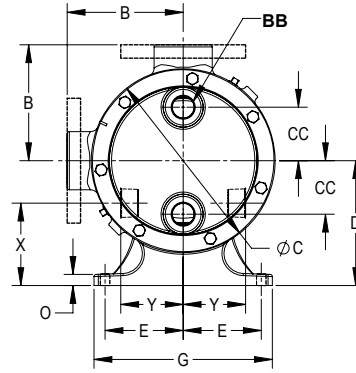
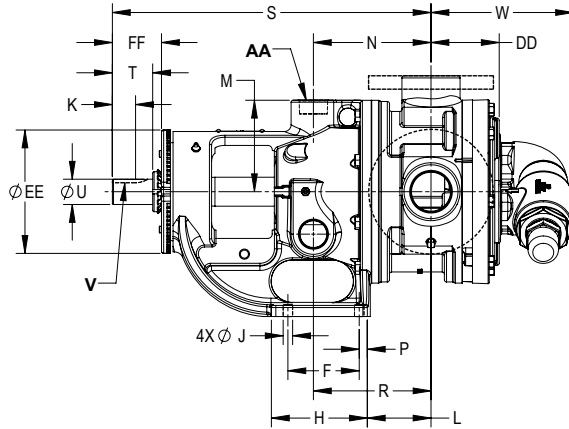
* Standard-Jacketed Pumps have a jacketed bracket and head, but the casing is not jacketed. They have the series designations 224A/4224A & AE, 226A/4226A, 223A/4223A, and 227A/4227A. Also the N324A, N4324A, N323A, N4323A, N327A and N4327A are standard with a jacketed bracket and non-jacketed head and Relief Valve, while the R324A, R4324A, R323A, R4323A, N327A, and R4327A are standard with a jacketed bracket and jacketed head and non-jacketed Relief Valve. Fully-Jacketed pumps use the Standard-Jacketed Pumps' series designation, but substitute a Fully-Jacketed Casing from the list above instead of the Standard-Jacketed Pumps' non-jacketed casing.

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VIKING UNIVERSAL SEAL PUMPS

SERIES 124A, 4124A, 124AE, 4124AE, 224A, 4224A, 224AE, 4224AE, 324A, and 4324A (Cast Iron)
126A, 4126A, 226A and 4226A (Ductile Iron)
123A, 4123A, 223A and 4223A, 323A, 4323A (Steel Externals)
127A, 4127A, 227A and 4227A, 327A, 4327A (Stainless Steel)

Dimensions - H through Q & M Sizes – All Materials of Construction – Jacketed Pumps



NOTE: Dimensions "P" through "FF" on next page

Model Number		A (in)		B	C	D	E	F	G	H	J	K	L	M	N	O
Packed	Stuffing Box Seal															
H224A HL224A H226A HL226A	H4224A HL4224A H4226A HL4226A	①1.5	in	3.00	4.75	3.50	2.75	2.25	6.75	3.50	0.47	0.99	3.38	2.38	4.00	0.56
			mm	76.2	120.6	88.9	69.8	57.1	171.4	88.9	11.9	25.1	85.8	60.5	101.6	14.2
H223A HL223A H227A HL227A	H4223A HL4223A H4227A HL4227A	③1.5	in	4.00	4.75	3.50	2.75	2.25	6.75	3.50	0.47	0.99	3.38	2.38	4.00	0.56
			mm	101.6	120.6	88.9	69.8	57.1	171.4	88.9	11.9	25.1	85.8	60.5	101.6	14.2
K224A KK224A K226A KK226A	K4224A KK4224A K4226A KK4226A	①2	in	5.12	8.00	5.50	4.00	2.75	9.25	4.00	0.53	1.42	3.00	4.00	5.75	0.62
			mm	130.0	203.2	139.7	101.6	69.8	234.9	101.6	13.5	36.1	76.2	101.6	146.0	15.7
K223A KK223A K227A KK227A	K4223A KK4223A K4227A KK4227A	③2	in	5.25	8.00	5.50	4.00	2.75	9.25	4.00	0.53	1.42	3.00	4.00	5.75	0.62
			mm	133.3	203.2	139.7	101.6	69.8	234.9	101.6	13.5	36.1	76.2	101.6	146.0	15.7
L224A/AE L226A	L4224A/AE L4226A	①2	in	6.50	10.25	7.00	4.38	4.00	10.00	5.38	0.53	1.42④	3.38	5.12	6.56	0.62
			mm	165.1	260.3	177.8	111.3	101.6	254	136.7	13.5	36.1④	85.9	130.0	166.6	15.7
LQ224A/AE LQ226A	LQ4224A/AE LQ4226A	②2.5	in	7.19	10.25	7.00	4.38	4.00	10.00	5.38	0.53	1.42④	3.38	5.12	6.56	0.62
			mm	182.6	260.3	177.8	111.3	101.6	254	136.7	13.5	36.1④	85.9	130.0	166.6	15.7
LQ223A LQ227A	LQ4223A LQ4227A	③ 2.5	in	7.19	10.25	7.00	4.38	4.00	10.00	5.38	0.53	1.42	3.38	5.12	6.56	0.62
			mm	182.6	260.3	177.8	111.3	101.6	254	136.7	13.5	36.1	85.9	130.0	166.6	15.7
LL224A/AE LL226A	LL4224A/AE LL4226A	②3	in	7.19	10.25	7.00	4.38	4.00	10.00	5.38	0.53	1.42④	3.38	5.12	6.56	0.62
			mm	182.6	260.3	177.8	111.3	101.6	254	136.7	13.5	36.1④	85.9	130.0	166.6	15.7
LL223A LL227A	LL4223A LL4227A	③ 3	in	7.19	10.25	7.00	4.38	4.00	10.00	5.38	0.53	1.42	3.38	5.12	6.56	0.62
			mm	182.6	260.3	177.8	111.3	101.6	254	136.7	13.5	36.1	85.9	130.0	166.6	15.7
LS224A LS226A LS223A LS227A	LS4224A LS4226A LS4223A LS4227A	②3	in	7.19	10.25	7.00	4.38	4.00	10.00	5.38	0.53	2.55	4.75	5.12	7.40	0.62
			mm	182.6	260.3	177.8	111.3	101.6	254	136.7	13.5	64.8	120.6	130.0	188.0	15.7
Q224A Q226A Q223A Q227A	Q4224A Q4226A Q4223A Q4227A	④ 4	in	8.25	14.00	8.75	4.12	4.00	10.00	6.00	0.69	3.58	6.62	7.00	7.62	0.75
			mm	209.5	355.6	222.2	104.6	101.6	254	152.4	17.5	90.9	168.1	177.8	193.5	19.0
M224A	M4224A	④ 4	in	9.50	17.35	10.00	5.00	6.00	12.00	8.64	0.69	3.50	7.65	8.63	8.32	1.00
			mm	241.3	440.7	254.0	127.0	152.4	304.8	219.5	17.5	88.9	194.31	219.2	211.3	25.4

① Ports tapped for standard (NPT) pipe. Other thread standards available.

② Ports are suitable for use with Class 125 ANSI cast iron (cast iron pumps) or Class 150 ANSI steel companion flanges or flanged fittings (ductile iron pumps).

③ Ports are suitable for Class 150 ANSI steel or stainless steel companion flanges or flanged fittings.

④ "K" dimension for Cast Iron L, LQ and LL sizes is for "A" models. "K" dimension for L, LQ and LL size 224AE and 4224AE pumps is 1.30" (33.0 mm).

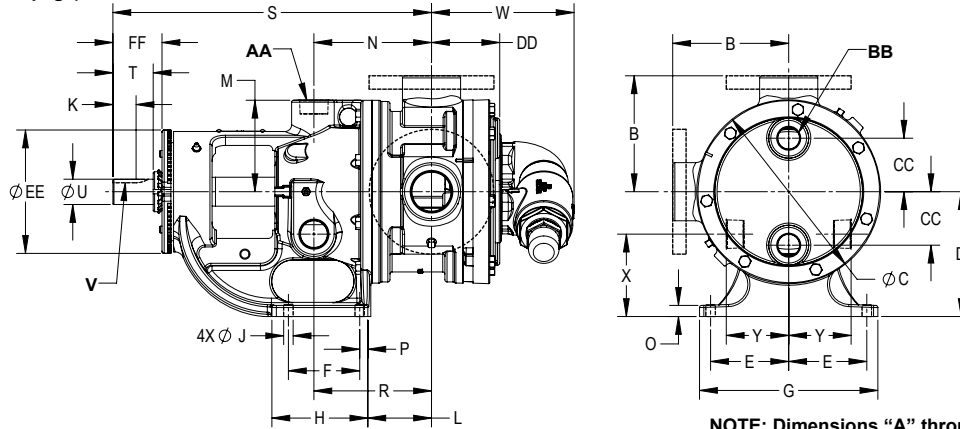
VIKING UNIVERSAL SEAL PUMPS

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SERIES 124A, 4124A, 124AE, 4124AE, 224A, 4224A, 224AE, 4224AE, 324A, and 4324A (Cast Iron)
126A, 4126A, 226A and 4226A (Ductile Iron)
123A, 4123A, 223A and 4223A, 323A, 4323A (Steel Externals)
127A, 4127A, 227A and 4227A, 327A, 4327A (Stainless Steel)

Dimensions - H through Q & M Sizes – All Materials of Construction – Jacketed Pumps

(Continued from previous page)



NOTE: Dimensions "A" through "O" on previous page

Model Number			P	R	S	T	U	V	W	X	Y	ⓐ AA	ⓑ BB	CC	DD	EE	FF
Packed	Stuffing Box Seal																
H224A HL224A H226A HL226A	H4224A HL4224A H4226A HL4226A	in	0.62	4.00	12.06	1.62	0.75	.19 X .09	4.04	1.80	1.83	0.75	0.50	0.94	2.41	5.75	2.30
		mm	15.7	101.6	306.3	41.1	19.0	4.83 X 2.29	102.6	45.7	46.5	19.0	12.7	23.9	61.2	146.0	58.4
H223A HL223A H227A HL227A	H4223A HL4223A H4227A HL4227A	in	0.62	4.00	12.06	1.62	0.75	.19 X .09	4.04	1.80	1.83	0.75	0.50	0.94	2.41	5.75	2.30
		mm	15.7	101.6	306.3	41.1	19.0	4.83 X .29	102.6	45.7	46.5	19.0	12.7	23.9	61.2	146.0	58.4
K224A KK224A K226A KK226A	K4224A KK4224A K4226A KK4226A	in	0.62	5.75	16.38	2.25	1.12	.25 X .12	7.00	3.38	2.75	1.25	1.25	1.75	3.25	6.75	2.92
		mm	15.7	146.0	416.0	57.1	28.4	6.35 X 3.05	177.8	85.9	69.8	31.7	31.7	44.4	82.5	171.4	74.2
K223A KK223A K227A KK227A	K4223A KK4223A K4227A KK4227A	in	0.62	5.75	16.38	2.25	1.12	.25 X .12	7.00	3.38	2.75	1.25	1.25	1.75	3.25	6.75	2.92
		mm	15.7	146.0	416.0	57.1	28.4	6.35 X 3.05	177.8	85.9	69.8	31.7	31.7	44.4	82.5	171.4	74.2
L224A/AE L226A	L4224A/AE L4226A	in	0.62	6.56	17.88	2.25ⓐ	1.12ⓑ	.25 X .12ⓐ	7.18	4.62	3.25	1.25	1	3.00	3.81	6.75	2.93
		mm	15.7	166.6	454.2	57.1ⓐ	28.4ⓑ	6.35 X 3.05ⓐ	182.4	117.3	82.5	31.7	25.4	76.2	96.8	171.4	74.4
LQ224A/AE LQ226A	LQ4224A/AE LQ4226A	in	0.62	6.56	17.88	2.25ⓐ	1.12ⓑ	.25 X .12ⓐ	7.18	4.62	3.25	1.25	1	3.00	3.81	6.75	2.93
		mm	15.7	166.6	454.2	57.1ⓐ	28.4ⓑ	6.35 X 3.05ⓐ	182.4	117.3	82.5	31.7	25.4	76.2	96.8	171.4	74.4
LQ223A LQ227A	LQ4223A LQ4227A	in	0.62	6.56	17.88	2.25	1.12	.25 X .12	7.18	4.62	3.25	1.25	1	3.00	3.81	6.75	2.93
		mm	15.7	166.6	454.2	57.1	28.4	6.35 X 3.05	182.4	117.3	82.5	31.7	25.4	76.2	96.8	171.4	74.4
LL224A/AE LL226A	LL4224A/AE LL4226A	in	0.62	6.56	17.88	2.25ⓐ	1.12ⓑ	.25 X .12ⓐ	7.18	4.62	3.25	1.25	1	3.00	4.31	6.75	2.93
		mm	15.7	166.6	454.2	57.1ⓐ	28.4ⓑ	6.35 X 3.05ⓐ	182.4	117.3	82.5	31.7	25.4	76.2	109.5	171.4	74.4
LL223A LL227A	LL4223A LL4227A	in	0.62	6.56	17.88	2.25	1.13	.25 X .12	7.18	4.62	3.25	1.25	1	3.00	4.31	6.75	2.93
		mm	15.7	166.6	454.2	57.1	28.4	6.35 X 3.05	182.4	117.3	82.5	31.7	25.4	76.2	109.5	171.4	74.4
LS224A LS226A LS223A LS227A	LS4224A LS4226A LS4223A LS4227A	in	0.62	7.00	19.25	3.50	1.44	.38 X .19	7.72	4.40	3.30	1.25	1	3.00	4.50	7.00	4.03
		mm	15.7	177.8	488.9	88.9	36.58	9.65 X .83	196.1	111.8	83.8	31.7	25.4	76.2	114.3	177.8	102.4
Q224A Q226A Q223A Q227A	Q4224A Q4226A Q4223A Q4227A	in.	1.00	6.62	23.75	4.50	1.94	.50 X .25	11.25	5.50	4.50	1.5	ⓐ 1.25	---	4.57	8.38	5.35
		mm	25.4	168.1	603.2	114.3	49.3	12.70 X .35	285.7	139.7	114.3	38.1	ⓐ 31.7	---	116.1	212.8	135.9
M224A	M4224A	in.	1.62	6.96	24.38	4.25	1.94	.50 x .25	8.61	5.50	6.00	1.50	1.50	4.33	5.88	8.38	4.96
		mm	41.1	176.8	619.3	107.9	49.3	12.70 X .35	218.7	139.7	152.4	38.1	38.1	100.0	149.4	212.8	126.0

ⓐ Ports for steam or hot oil jacketing are inch standard NPT threads. Metric (mm) equivalents are for information only, and do not indicate a metric thread size.
 ⓑ "T" dimension show for Cast Iron sizes L,LQ and LL is for "A" models. Dimension for L, LQ and LL size 224AE and 4224AE pumps is 2.35" (59.7 mm).
 ⓑ "U" dimension shown for Cast Iron sizes L, LQ and LL is for "A" models. "U" dimension for L, LQ and LL size 224AE and 4224AE pumps is 1.44" (36.6 mm).
 ⓑ "V" dimension shown for Cast Iron sizes L, LQ and LL is for "A" models. "V" dimension for L, LQ and LL size 224AE and 4224AE pumps is 0.38 x 0.19" (9.65 x 4.83 mm).
 ⓑ "BB" Dimension for Q223A and Q227A is 1"(25.4 mm).

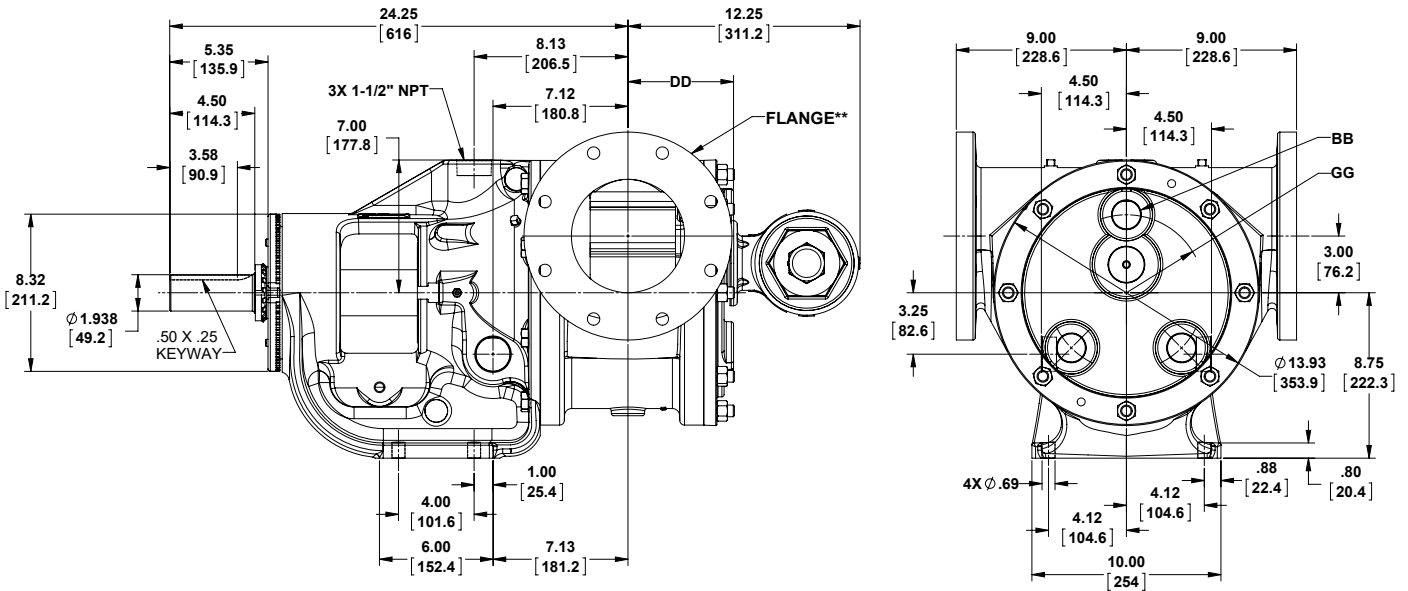
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VIKING UNIVERSAL SEAL PUMPS

SERIES 124A, 4124A, 124AE, 4124AE, 224A, 4224A, 224AE, 4224AE, 324A, and 4324A (Cast Iron)
126A, 4126A, 226A and 4226A (Ductile Iron)
123A, 4123A, 223A and 4223A, 323A, 4323A (Steel Externals)
127A, 4127A, 227A and 4227A, 327A, 4327A (Stainless Steel)

Dimensions - QS Size – All Materials of Construction – Jacketed

Series 224A, 4224A, 226A, 4226A, 223A, 4223A, 227A & 4227A



Model Number		BB*	DD	GG
Packed	Mechanical Seal			
QS224A	QS4224A	1.25 (31.75)	5.57 (141.48)	4.12 (105)
QS226A	QS4226A			
QS223A	QS4223A	1 (25.4)	6.06 (152.93)	3.75 (95.25)
QS227A	QS4227A			

* Ports for steam or hot oil jacketing are inch standard NPT threads.
Metric (mm) equivalents are for information only, and do not indicate a metric thread size.

** 224A/4224A ports suitable for use with Class 125 ANSI cast iron companion flanges or flanged fittings.

226A/4226A, 223A/4223A, 227A/4227A ports suitable for use with Class 150 ANSI steel or stainless steel companion flanges or flanged fittings.

For N, R & RS size pumps, see jacketed pump dimensional drawings on page 630.21.

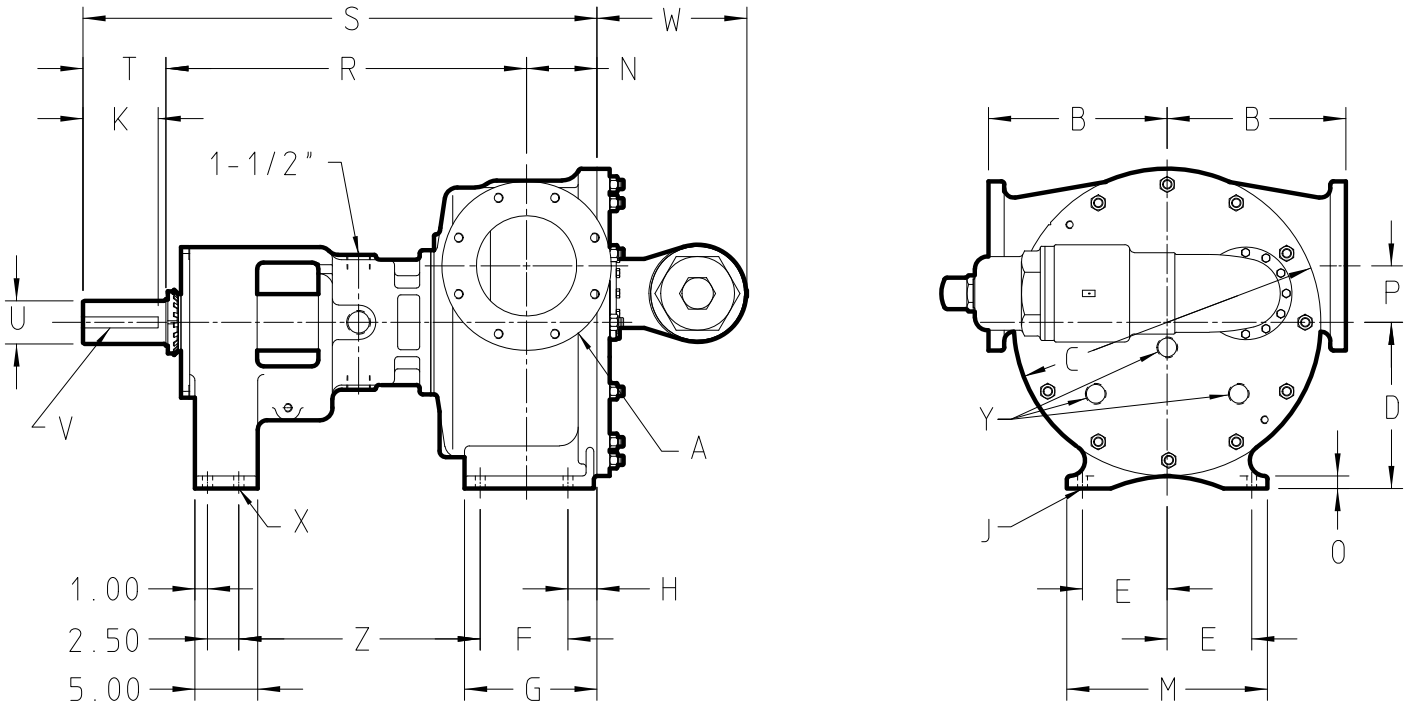
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SERIES 124A, 4124A, 124AE, 4124AE, 224A, 4224A, 224AE, 4224AE, 324A, and 4324A (Cast Iron)
126A, 4126A, 226A and 4226A (Ductile Iron)
123A, 4123A, 223A and 4223A, 323A, 4323A (Steel Externals)
127A, 4127A, 227A and 4227A, 327A, 4327A (Stainless Steel)

Dimensions - N, R & RS Sizes – All Materials of Construction – Jacketed Bracket

Series 324A, 4324A, 323A, 4323A, 327A & 4327A



Model Number		A (in)		B	C	D	E	F	G	H	J	K	M	N	O	P	R	S	T	U	V	W	X	Y	Z
Packed	Stuffing Box Seal	② 6	in	9.75	17.25	9.50	5.00	6.25	8.69	1.62	0.69	4.50	12.00	4.50	1.00	3.00	26.00	36.50	6.00	2.44	.62x.31	8.63	0.69	N/A	18.94
			mm	247.7	438.1	241.3	127.0	158.7	220.7	41.1	17.5	114.3	304.8	114.3	25.4	76.2	660.4	927.1	152.4	62.0	15.74 x7.87	219.2	17.5	N/A	481.0
R324A R323A R327A	R4324A R4323A R4327A	② 8	in	14.25	24.50	13.25	6.75	7.00	10.56	2.31	0.78	6.00	16.00	5.62	1.00	4.50	28.75	41.00	6.62	3.44	.88x.44	12.00	0.69	1.25	19.25
			mm	361.9	622.3	336.5	171.4	177.8	268.2	58.7	19.8	152.4	406.4	142.7	25.4	114.3	730.2	1041	168.1	87.4	22.35 x11.18	304.8	17.5	31.7	488.9
RS324A	RS4324A	② 10	in	14.25	24.5	13.25	6.75	7.00	13.12	4.81	0.88	6.00	16.46	8.12	1.30	4.50	28.55	43.49	6.62	3.44	.88x.44	12.00	0.88	1.25	19.25
			mm	361.9	622.30	336.5	171.4	177.8	333.24	122.17	22.35	152.4	418.08	206.24	33.02	114.3	725.17	1104.64	168.1	87.4	22.35 x11.18	304.8	22.35	31.7	488.9

NOTE: The N size is standard with a jacketed bracket and non-jacketed head and non-jacketed relief valve, while the "R" size is standard with a jacketed bracket, a jacketed head, and a non-jacketed relief valve. "RS" contact factory for jacketing options.

② Ports are suitable for use with Class 125 ANSI cast iron (324A/4324A) or Class 150 ANSI steel or stainless steel companion flanges or flanged fittings (323A/4323A & 327A/4327A).

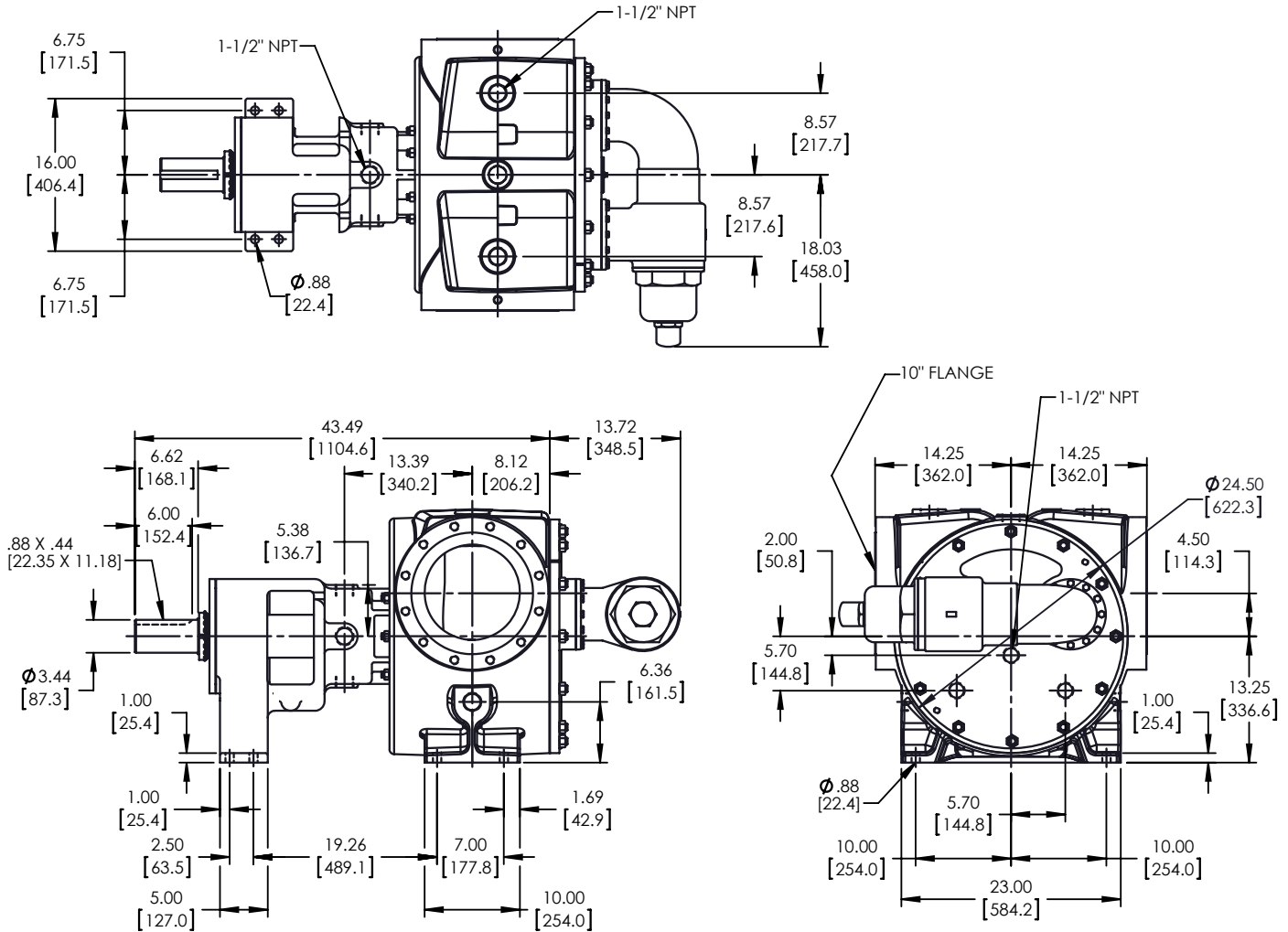
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VIKING UNIVERSAL SEAL PUMPS

SERIES 124A, 4124A, 124AE, 4124AE, 224A, 4224A, 224AE, 4224AE, 324A, and 4324A (Cast Iron)
126A, 4126A, 226A and 4226A (Ductile Iron)
123A, 4123A, 223A and 4223A, 323A, 4323A (Steel Externals)
127A, 4127A, 227A and 4227A, 327A, 4327A (Stainless Steel)

Dimensions - RS Size – All Materials of Construction – Jacketed Bracket

Series 323A, 4323A, 327A & 4327A



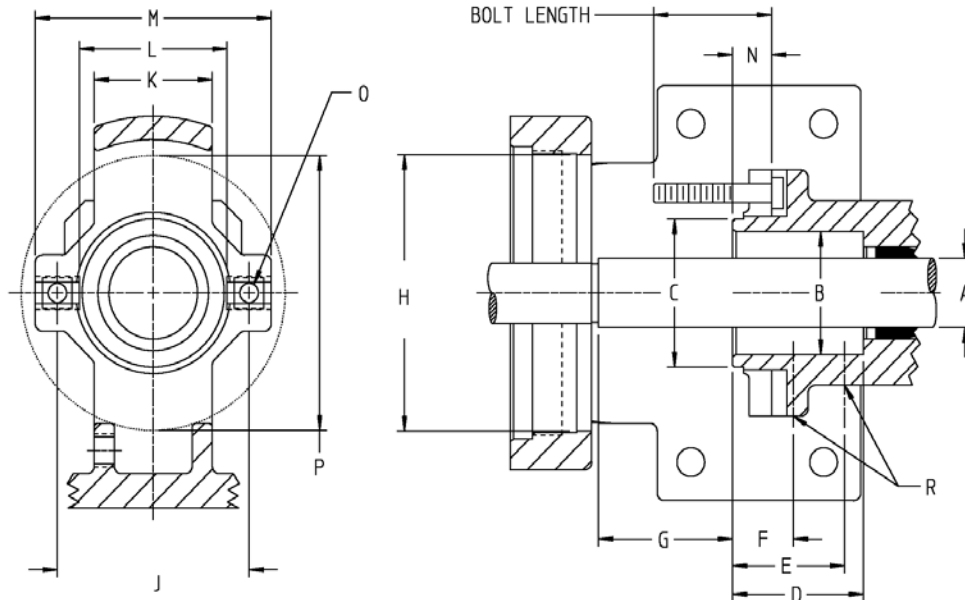
NOTE: RS size pumps in steel and stainless steel are only available with a jacketed casing, as shown, while RS cast iron pumps are only available with a non-jacketed casing.

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SERIES 124A, 4124A, 124AE, 4124AE, 224A, 4224A, 224AE, 4224AE, 324A, and 4324A (Cast Iron)
126A, 4126A, 226A and 4226A (Ductile Iron)
123A, 4123A, 223A and 4223A, 323A, 4323A (Steel Externals)
127A, 4127A, 227A and 4227A, 327A, 4327A (Stainless Steel)

Stuffing Box Seal Chamber Dimensions



Pump Size		A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	R
G	In	0.75	1.63	2.12	1.91	1.38	0.57	1.72	3.87	2.74 to 3.12	1.64	2.24	3.62	1.00	5/16	3.87	1/8
	mm	19.0	41.4	53.8	48.5	38.1	14.5	43.7	98.3	69.6 to 79.2	41.6	56.9	91.9	25.4	7.9	98.3	3.2
H & HL	In	1.12	2.00	2.41	2.22	1.90	1.03	2.27	4.50	3.00 to 3.50	2.00	2.50	4.00	0.66	5/16	4.47	1/8
	mm	28.6	50.8	61.2	56.4	48.3	26.2	57.7	114.3	76.2 to 88.9	50.8	63.5	101.6	16.8	7.9	113.5	3.2
AK & AL	In	1.44	2.31	2.69	2.75	2.25	1.24	3.03	5.25	3.14 to 4.56	2.50	3.00	5.00	0.47	7/16	6.15	1/4
	mm	36.5	58.7	68.3	69.9	57.1	31.5	76.9	133.3	79.8 to 115.8	63.5	76.2	127.0	11.9	11.1	156.2	6.3
K & KK	In	1.44	2.31Ⓞ	3.00	3.13	2.25	1.25	3.00	5.25	3.50 to 4.50	2.50	3.00	5.00	0.38	7/16	5.25	1/4
	mm	36.5	58.7Ⓞ	76.2	79.5	57.1	31.7	76.2	133.3	88.9 to 114.3	63.5	76.2	127.0	9.7	11.1	133.3	6.3
L, LQ, & LL (A)	In	1.44	2.31Ⓞ	3.00	3.13	2.25	1.25	4.00	5.25	3.50 to 4.50	2.50	3.00	5.00	0.44	7/16	5.25	1/4
	mm	36.5	58.7Ⓞ	76.2	79.5	57.1	31.7	101.6	133.3	88.9 to 114.3	63.5	76.2	127.0	11.2	11.1	133.3	6.3
L, LQ, & LL (AE)	In	1.62	2.375	3.00	3.13	2.25	1.16	3.52	5.25	3.50 to 4.50	3.00	3.00	5.00	0.46	7/16	5.25	1/4
	mm	41.3	60.3	76.2	79.5	57.1	29.5	89.4	133.3	88.9 to 114.3	76.2	76.2	127.0	11.7	11.1	133.3	6.3
LS	In	1.62	2.375	2.80	2.70	2.25	1.16	3.52	5.25	3.25 to 4.50	3.00	2.80	5.00	0.46	7/16	5.25	1/4
	mm	41.3	60.3	71.1	68.6	57.1	29.5	89.4	133.3	82.5 to 114.3	76.2	71.1	127.0	11.7	11.1	133.3	6.3
Q & QS	In	2.44	3.42	4.50	4.00	2.50	1.53	4.10	6.75	5.50 to 6.25	3.20	4.50	7.20	0.56	5/8	6.75	1/4
	mm	61.9	87.0	114.3	101.6	63.5	38.9	104.1	171.4	139.7 to 158.7	81.3	114.3	182.9	14.2	15.9	171.4	6.3
M	In	2.44	3.44	—	3.97	2.50	1.53	4.16	6.75	5.44 to 6.26	3.28	4.50	7.20	0.72	5/8	7.37	1/4
	mm	61.9	87.3	—	100.8	63.5	38.9	105.7	171.4	138.2 to 159.0	83.3	114.3	182.9	18.3	15.9	187.2	6.3
N	In	3.44	4.69	—	5.56	1.65	—	4.91	8.81	6.75	—	—	—	—	3/4Ⓞ	9.00	1/4
	mm	87.3	119.3	—	141.2	41.9	—	124.7	223.8	171.4	—	—	—	—	19.0Ⓞ	228.6	6.3
R & RS	In	4.50	5.75	—	5.56	1.53	—	4.79	9.81	7.75	—	—	—	—	3/4Ⓞ	9.81	1/4
	mm	114.3	146.1	—	141.2	38.9	—	121.7	249.2	196.8	—	—	—	—	19.0Ⓞ	249.2	6.3

Ⓞ Bracket is counter bored to a diameter of 2.687 inches (68.25 mm), 0.12 inches (3.05 mm) deep from stuffing box face.

Ⓜ Studs are used in place of cap screws.

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VIKING UNIVERSAL SEAL PUMPS

SERIES 124A, 4124A, 124AE, 4124AE, 224A, 4224A, 224AE, 4224AE, 324A, and 4324A (Cast Iron)
126A, 4126A, 226A and 4226A (Ductile Iron)
123A, 4123A, 223A and 4223A, 323A, 4323A (Steel Externals)
127A, 4127A, 227A and 4227A, 327A, 4327A (Stainless Steel)

Performance Curve Notes

Printed performance curves are not available.

Performance curves can be electronically generated with the Viking Pump Selector Program.

This program can be located on www.vikingpump.com.

NPSH_R data is not available on the pump selector.

INLET CONDITIONS: The performance curves show "Based on 10 (or 15) In.-Hg.," which is the standard test condition. This is not the maximum vacuum capability of the pump.

NPSH (Net Positive Suction Head): The NPSH_R (Net Positive Suction Head Required by the pump) is given in the table below and applies for viscosities through 750 SSU. NPSH_A (Net Positive Suction Head – Available in the system) must be greater than the NPSH_R. For a complete explanation of NPSH, see Application Data Sheet AD-19.

FOR VISCOSITIES UP TO 750 SSU – See NPSH_R table below.

FOR VISCOSITIES GREATER THAN 750 SSU (NPSH_R data not available): The performance curves are based on 10 or 15 In.-Hg. While vacuums up to 20 In.-Hg. will not generally result in any loss of capacity, it is recommended that the suction line size and possibly the pump port size

be increased to hold the expected vacuum to 15 In.-Hg. or less. Vacuum above 20 In.-Hg. should be avoided. Refer to General Catalog, Engineering Section 510 for information on determining line size.

THIN LIQUIDS: pump capacity when handling 28 SSU liquids (solvents, etc.) is shown on the 38 SSU performance curve as a broken line. Pressure shown on broken line is maximum recommended for 28 SSU liquid. Horsepower for 28 SSU is same as 38 SSU at any given pressure. Carbon graphite bushings must be used handling 28 SSU liquids.

MECHANICAL EFFICIENCY: The Mechanical Efficiency (expressed in percent) can be calculated using the following formula:

Mechanical

$$\text{Efficiency} = \frac{(\text{Differential Pressure, PSI}) (\text{Capacity, GPM}) (100)}{(\text{Horsepower, BHP}) (1715)}$$

NPSH_R – FEET OF LIQUID (Specific Gravity 1.0), Viscosities up to 750 SSU

Cast Iron Series 124A/AE, 4124A/AE, 324A, 4324A, 224A/AE, and 4224A/AE

Ductile Iron Series 126A, 4126A, 226A and 4226A

Steel Externals Series 123A, 4123A, 323A, 4323A, 223A and 4223A

Stainless Steel Series 127A, 4127A, 327A, 4327A, 227A and 4227A

PUMP SIZE	PUMPS SPEED, RPM														
	100	125	155	190	230	280	350	420	520	640	780	950	1150	1450	1750
G	—	—	—	—	—	—	—	1.8	2.0	2.2	2.6	3.1	3.9	5.6	7.6
H, HL	—	—	—	—	1.7	1.8	1.9	2.1	2.4	2.8	3.4	4.5	6.2 ^①	9.5	13.5
AK, AL	—	—	1.6	1.7	1.8	2.0	2.3	2.7	3.2	3.9	5.5	7.7	11.2	—	—
K, KK	—	1.7	1.8	1.9	2.1	2.3	2.8	3.3	4.4 ^①	6.3	9.1	—	—	—	—
L	1.6	1.8	2.0	2.2	2.5	3.0	3.8	5.0	7.3	10.8	—	—	—	—	—
LQ	1.6	1.8	2.0	2.2	2.5	3.0	3.8	5.0 ^①	7.3	10.8	—	—	—	—	—
LL	1.6	1.8	2.0	2.2	2.5	3.0	3.8	5.0 ^①	7.3	—	—	—	—	—	—
LS	1.6	1.8	2.0	2.2	2.5	3.0	3.8	5.0	7.3 ^①	10.8	—	—	—	—	—
Q, QS	1.9	2.1	2.3	2.7	3.3	4.2	6.1 ^①	8.4	12.7	—	—	—	—	—	—
M	2.1	2.3	2.8	3.4	4.3	6.0	9.0	12.7	—	—	—	—	—	—	—
N^②	2.1	2.3	3.5	4.5	6.3	9.5	15.0	—	—	—	—	—	—	—	—
R^②	6.1	7.1	8.3	10.1	12.1	15.2	—	—	—	—	—	—	—	—	—
RS^②	7.0	8.5	10.4	13.1	17.2	22.4	—	—	—	—	—	—	—	—	—

① Maximum Speed for Stainless Steel Models

② Ductile Iron not available in N and R sizes

VIKING UNIVERSAL SEAL PUMPS

SERIES 124A, 4124A, 124AE, 4124AE, 224A, 4224A, 224AE, 4224AE, 324A, and 4324A (Cast Iron)
 126A, 4126A, 226A and 4226A (Ductile Iron)
 123A, 4123A, 223A and 4223A, 323A, 4323A (Steel Externals)
 127A, 4127A, 227A and 4227A, 327A, 4327A (Stainless Steel)

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Performance Curve Notes Cont'd

METRIC CONVERSION: The following table has been compiled for conversion to metric values.

VACUUM		PRESSURE		CAPACITY	
In.-Hg (inches of mercury)	KPa* (Kilopascals)	PSI (lb./in ²)	kPa* (Kilopascals)	GPM (US gal/minute)	LPM (Liter/Minute)
1	3.4	1	6.9	1	3.8
5	17	25	172	0.26	1
10	34	50	345		
15	51	100	690		
20	68	150	1034		
25	85	200	1379		
		250	1724		

* 100 kPa = 1 bar