VIKING® HEAVY DUTY PUMPS

SERIES 125 AND 4125
STANDARD CONSTRUCTION

Section	141
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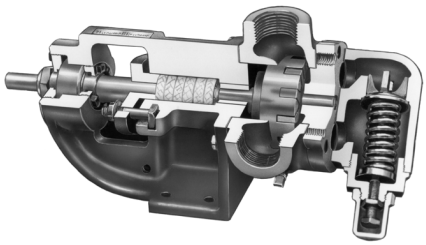
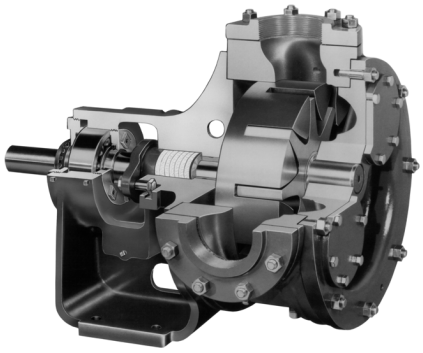
Issue	D

FEATURES



SERIES 125 Pumps
Cutaway View — (Packed Type)
8-15-30 GPM Sizes
(2-3-7 m³/hr)

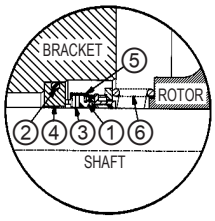
SERIES 4125
Cutaway View— (Mechanical Seal Type)
50-75-100-135 GPM Sizes
(11-17-23-31 m³/hr)
Note: 50 and 75 GPM sizes have seal located in stuffing box area.



SERIES 125 Pumps
Cutaway View— (Packed Type)
140-200-300-420-500 GPM Sizes
(32-45-68-95-114 m³/hr)
Note: 500 GPM ("QS" size) has opposite ports as standard.

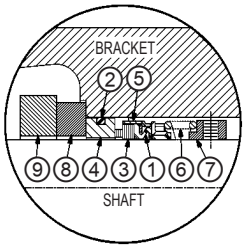
MECHANICAL SEAL (SERIES 4125)

"G"-"HL", "K"-"LL" SIZES



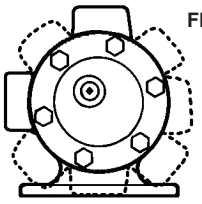
① Bellows
② O-Ring
③ Rotating Face
④ Stationary Seat
⑤ Metal Retainer
⑥ Spring

"AK", "AL", "LS"-"M" SIZES



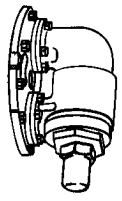
① Bellows
② O-Ring
③ Rotating Face
④ Stationary Seat
⑤ Metal Retainer
⑥ Spring
⑦ Set Collar
⑧ Seal Holder
⑨ Seal Plate

FEATURES



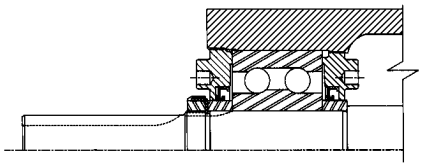
REVOLVABLE PUMP CASING (Standard Equipment)

All Series 125 and 4125 pumps are equipped with pump casings that can be turned to eight positions except the "LQ", "LL", and "QS" sizes. These can be turned in all positions except for a port in the 6 o'clock position. Relief valve must point to suction port in all cases.



OVERPRESSURE RELIEF VALVE (Standard Equipment)

Valve permits bypassing of liquids and prevents excessive pressures in the discharge line. If reversing pump, remove valve and turn end for end. Relief valve must point to suction port in all cases. All valves set at 50 lbs. unless otherwise requested. If overpressure relief valve is not used, pumping system should include some form of overpressure protection, e.g., relief valve in discharge line, torque limiting devices, rupture discs, etc.



POSITIVE-LOCK THRUST CONTROL

Series 125 and 4125 pumps are manufactured with positive-lock thrust control for accurate axial positioning of rotor and shaft. Illustration shows bearing and double end cap arrangement.

① Pressure Range	200 PSI (14 BAR) for 100 SSU (21 cSt) and above
	100 PSI (7 BAR) for below 100 SSU (21 cSt)
① Temperature Range	-60°F. to +650°F. (-51°C. to +343°C.)
① Viscosity Range	28 SSU to 2,000,000 SSU (0.1 cP to 440,000 cSt)

GPM 8-15-30-50-75-100-135-140-200-300-420-500

(m³/hr 2-3-7-11-17-23-31-32-45-68-95-114)

② (Nominal Rating)

It is the unique and unusually simple construction that has made our rotary pumps so adaptable to so many diversified installations. They possess excellent vacuum developing characteristics and operate equally well in either direction. Because of the cushioned action in providing a continuous and steady stream of liquid without foaming or churning, it is adaptable to an unlimited number of industrial applications.

The rugged construction of these heavy-duty pumps assures long life and peak, trouble-free operation on normal-duty installation and outstanding performance when handling liquids at greater pressures.

These heavy-duty pumps are furnished as standard with packed-type or mechanical seal construction for shaft protection and prevention of leakage. Packed pumps provide extra-deep stuffing box. The rotary-type mechanical seal works with, rather than against, pressure. It is self-adjusting and seals without leakage. Because of its method of sealing it prevents scoring of the pump drive shaft.

The Series 4125 mechanical seal pumps can handle liquids with viscosities up to 15,000 SSU. Special seals for higher viscosities are available; consult factory.

① Values shown represent minimums or maximums. Some special construction or consideration may be required before a cataloged pump can be applied to an application involving maximum pressure or minimum or maximum temperature and/or viscosity. Certain models have restrictions in pressure and/or viscosities. See specifications, page 141.2, and performance curves.

② Nominal capacities based on handling thin liquids at low pressures.

Metric conversions are based on US measurements and rounded to the nearest whole number.

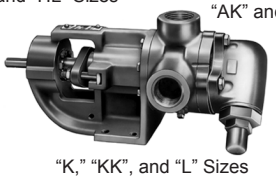
VIKING® HEAVY DUTY PUMPS

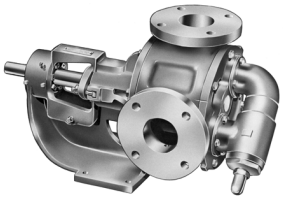
SERIES 125 AND 4125

UNMOUNTED PUMPS

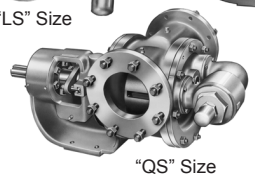

"G", "H", and "HL" Sizes

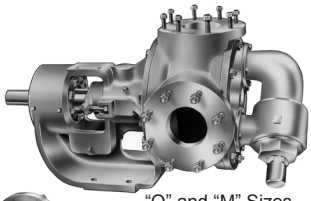

"AK" and "AL" Sizes


"K," "KK", and "L" Sizes


"LQ" and "LL" Sizes


"LS" Size


"QS" Size


"Q" and "M" Sizes

This series of heavy-duty pumps is available either unmounted or mounted as shown on following pages. Available with packed stuffing box or Buna-N mechanical seal with carbon rotating and Ni-Resist stationary faces. The integral thrust bearing is designed to handle heavy-duty pumping jobs without problems of end play and distortion. For increased versatility of installation and complete selection of ports, many of the pump casings are designed so they can be rotated on the bracket to any 45° or 90° angle from that shown in the illustrations. See revolvable casing feature on Page 141.1. Overpressure relief valve on head is standard for this series. To permit use of this type pump in a greater range of applications, some sizes are available with jacketed head plate. For heavy-duty pumps with jacketed bracket and head, see Catalog Section 142.

Dimensions for Unmounted Pumps—See Page 141.8.

Performance Data for Unmounted Pumps—See Pages 141.15 through 141.42.

CONSTRUCTION — SERIES 125 AND ① 4125 ("G" THROUGH "M" SIZES)

Pump Construction	Casing	Head	Bracket	Rotor	Idler	Rotor Shaft And Idler Pin	Bushings				Internal Pressure Relief Valve
							Packed		Mechanical Seal		
							Idler	Bracket	Idler	Bracket	
Standard Construction	Iron	Iron	Iron	⑦ Iron	Iron	Steel	Bronze	Bronze	Carbon Graphite	⑩ Bronze	Iron
⑪ Steel Fitted	Iron	Iron	Iron	Steel	② Iron	Steel	Bronze	Bronze	Carbon Graphite	⑩ Bronze	Iron
⑨ Bronze Fitted	Iron	Iron	Iron	⑨ Bronze	Bronze	Steel	Bronze	Bronze	Carbon Graphite	⑩ Bronze	Iron

SPECIFICATIONS — SERIES 125 AND ① 4125 UNMOUNTED PUMPS

Model Numbers		Port Size	⑥ Nominal Pump Rating		Maximum Hydrostatic Pressure	Steel Fitted Construction Recommended Above This Viscosity	⑧ Maximum Recommended Discharge Pressure When Handling 100 SSU Liquid At Nominal Rated Speeds	⑤ Maximum Recommended Temperature for Cataloged Pump °F. (°C.)		Approximate Shipping Weight With Valve
Packed	①⑩③ Mech. Seal	Inches	GPM (m^3/hr)	RPM	PSIG (BAR)	SSU (cSt)	PSIG	Packed	Mech. Seal	Pounds (KG)
G125	G4125	1	8 (2)	1800	400 (28)	⑨ 7,500 (1,650)	200	300 (149)	225 (107)	22 (10)
H125	H4125	1½	15 (3)	1800	400 (28)	25,000 (5,500)	200	300 (149)	225 (107)	38 (17)
HL125	HL4125	1½	30 (7)	1800	400 (28)	7,500 (1,650)	200	300 (149)	225 (107)	40 (18)
AK125	AK4125	2	50 (11)	1200	400 (28)	⑪ 25,000 (5,500)	150	300 (149)	225 (107)	78 (35)
AL125	AL4125	2	75 (17)	1200	400 (28)	⑪ 25,000 (5,500)	150	300 (149)	225 (107)	81 (37)
K125	K4125	2	75 (17)	780	400 (28)	25,000 (5,500)	200	300 (149)	225 (107)	105 (48)
KK125	KK4125	2	100 (23)	780	400 (28)	25,000 (5,500)	200	300 (149)	225 (107)	110 (500
L125	L4125	2	135 (31)	640	400 (28)	25,000 (5,500)	200	300 (149)	225 (107)	155 (70)
LQ125	LQ4125	④ 2½	135 (31)	640	400 (28)	25,000 (5,500)	200	300 (149)	225 (107)	175 (79)
LL125	LL4125	④ 3	140 (32)	520	400 (28)	2,500 (550)	200	300 (149)	225 (107)	185 (84)
LS125	LS4125	④ 3	200 (45)	640	400 (28)	75,000 (16,500)	150	300 (149)	225 (107)	190 (86)
Q125	Q4125	④ 4	300 (68)	520	400 (28)	7,500 (1,650)	150	300 (149)	225 (107)	440 (200)
QS125	QS4125	④ 6	500 (114)	520	400 (28)	75,000 (16,500)	150	300 (149)	225 (107)	540 (245)
M125	M4125	④ 4	420 (95)	420	400 (28)	25,000 (5,500)	150	300 (149)	225 (107)	600 (272)

① Buna-N elastomer used in mechanical seal of Series 4125 pumps. Viton®, Neoprene, and PTFE mechanical seals also available.
② "G", "Q", and "QS" sizes have steel idler.
③ For mechanical seal pumps on applications with viscosities above 15,000 SSU (3,300 cSt), provide details for recommendation.
④ Ports are suitable for use with 125# ANSI cast iron or 150# ANSI steel companion flanges or flanged fittings. All others tapped for standard pipe.
⑤ Standard seal can be used from -20°F. to +225°F. With special construction, temperatures from -60°F. to +650°F. can be handled with this series pumps.
⑥ Nominal rating based on handling thin liquids.
⑦ "AK", "AL", "KK", "LS", and "QS" sizes have ductile iron rotor.
⑧ For maximum recommended discharge pressures when handling other viscosities and/or other speeds, see performance curves. Performance curves also show preferred constructions. If suction pressure exceeds 50 PSIG (3 BAR), consult factory.
⑨ Check factory before using bronze rotors at viscosities normally requiring steel-fitted construction. "G", "AK", "AL", "LS", and "QS" sizes not available in bronze-fitted construction.
⑩ "AK", "AL", "LS", "Q", "QS," and "M" 4125 models furnished with carbon graphite bracket bushings and mechanical seal is mounted in stuffing box. Mechanical seal is mounted behind rotor in "G", "H", "HL", "K", "KK", "L", "LQ", and "LL" pumps.
⑪ "AK" and "AL" sizes not available in steel-fitted construction.

Metric conversions are based on US measurements and rounded to the nearest whole number.

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