

# VIKING® HEAVY DUTY PUMPS

## SERIES 123 AND 4123

### STEEL EXTERNAL CONSTRUCTION

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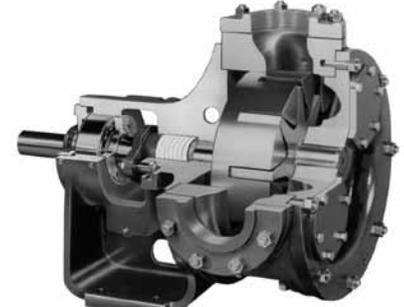
## FEATURES



**SERIES 123 Pumps**  
Cutaway View—(Packed Type)  
15-30 GPM Sizes  
(3-7 m<sup>3</sup>/hr)



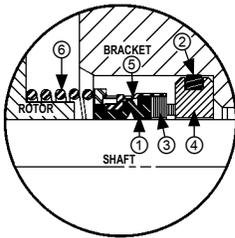
**SERIES 4123 Pumps**  
Cutaway View—(Mechanical Seal Type)  
60-80-135 GPM Sizes  
(14-18-31 m<sup>3</sup>/hr)



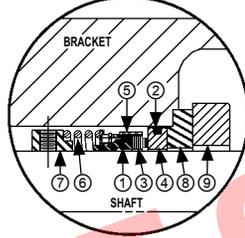
**SERIES 123 Pumps**  
Cutaway View—(Packed Type)  
140-200-300-420 GPM Sizes  
(32-45-68-95 m<sup>3</sup>/hr)  
Shown without over-pressure relief valve.

### MECHANICAL SEAL (SERIES 4123)

#### "H"- "LL" SIZES



#### "LS"- "M" SIZES



- ① Buna-N Bellows
- ② Buna-N O-Ring
- ③ Carbon Rotating Face (Washer)
- ④ Ni-Resist Stationary Seat
- ⑤ Steel Metal Parts
- ⑥ Stainless Steel Spring

- ① Buna-N Bellows
- ② Buna-N O-Ring
- ③ Carbon Rotating Face (Washer)
- ④ Ni-Resist Stationary Seat
- ⑤ Steel Metal Parts
- ⑥ Stainless Steel Spring
- ⑦ Set Collar
- ⑧ Seal Holder
- ⑨ Seal Plate

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	-20°F. to +800°F. (-29°C. to +427°C.)
① Viscosity Range	28 SSU to 2,000,000 SSU (0.1 cP to 440,000 cSt)

**GPM 15-30-60-80-135-140-200-300-420**  
**(m<sup>3</sup>/hr 3-7-14-18-31-32-45-68-95)**

② (Nominal Rating)

If your pumping problem involves the consideration of extra strength, shock resistance or other safety contingencies, you can rely on this series of Viking pumps with steel externals. The steel used in the manufacture of these Vikings meets ASTM designation A216 Grade WCB specifications.

These pumps are often purchased for applications in refineries, petrochemical and chemical processing plants, other process industries as well as in general industry where their rugged construction provides long life and peak, trouble-free operation.

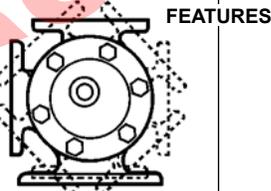
They are furnished as standard with packed type (Series 123) or mechanical seal (Series 4123) construction, to minimize liquid loss and for shaft protection. The positive-lock thrust control provides micrometer adjustments for accurate rotor and shaft positioning to help you keep operating with new-pump efficiency through years of heavy-duty service.

The smooth positive displacement action of our "gear-within-a-gear" rotor and idler combination delivers a cushioned positive flow and low-shear transmission of your liquid year after year without foaming or churning.

Series 4123 mechanical seal pumps can handle a wide variety of liquids with viscosities up to 15,000 SSU. Special seals are available for higher viscosities. Consult the factory for details.

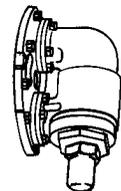
① Values shown represent minimums or maximums. Some special construction or consideration may be required before a cataloged pump can be applied to an application involving maximum pressure or minimum or maximum temperature and/or viscosity. Certain models have restrictions in pressures and/or viscosities. See specifications, page 151.4, and performance curves.

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



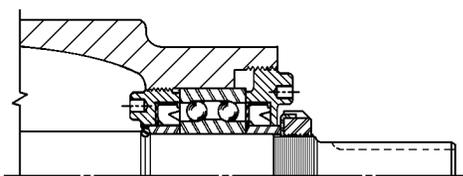
**REVOLVABLE PUMP CASING**  
(Standard Equipment)

All Series 123 and 4123 pumps are equipped with pump casings that can be turned to eight positions except the "K," "KK," "LQ" and "LL" 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.



**OVER-PRESSURE 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 100 lbs. unless otherwise requested. If Viking over-pressure relief valve is not used, pumping system should include some form of over-pressure protection, e.g., valve in discharge line, torque limiting devices, rupture discs, etc.



### POSITIVE-LOCK THRUST CONTROL

Series 123 and 4123 pumps are manufactured with positive-lock thrust control for accurate axial positioning of rotor and shaft. Illustration shows bearing and double end cap arrangement.

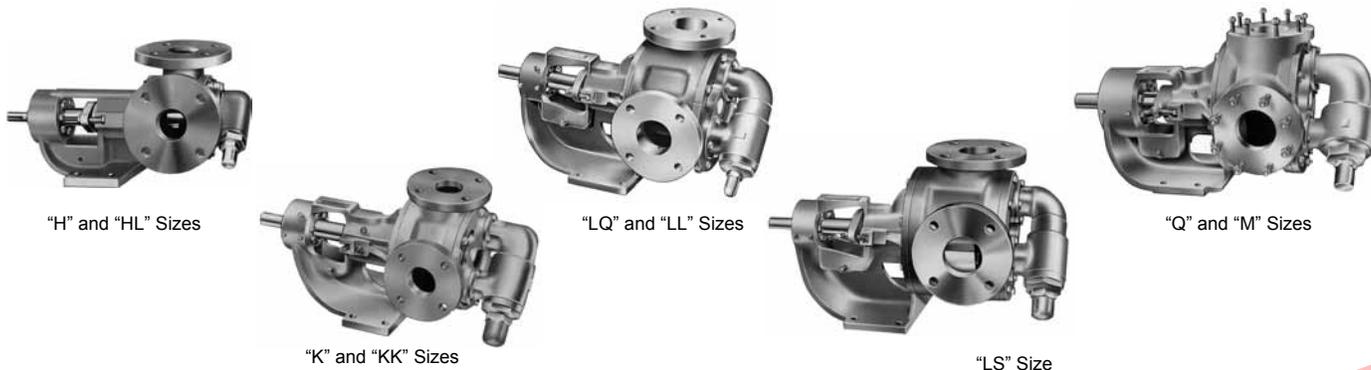
Metric conversions are based on US measurements and rounded to the nearest whole number.

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# VIKING® HEAVY DUTY PUMPS

## SERIES 123 AND 4123

### UNMOUNTED PUMPS



This series of heavy-duty pumps is available either unmounted or mounted units as shown on following pages. Available with Multi-Ring 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, the pump casing is designed so it can be rotated on the bracket to any 45° or 90° angle from that shown in the illustrations.

See revolvable casing feature on Page 151.3. Over-pressure relief valve on head is standard for this series. To permit use of this type pump in a greater range of applications, these pumps are available with jacketed head plate. For heavy-duty pumps, steel with jacketed bracket and head, see Catalog Section 152.

*Dimensions for Unmounted Pumps—See Page 151.9.*

*Performance Data for Unmounted Pumps—See Pages 151.17 through 151.38.*

### CONSTRUCTION — SERIES 123 AND ① 4123 (“H” THROUGH “M” SIZES)

Pump Construction	Casing	Head	Bracket	Rotor	Idler	Rotor Shaft And Idler Pin	Bushings				Internal Relief Valve
							Packed		Mechanical Seal		
							Idler	Bracket	Idler	Bracket	
Standard Construction	Steel	Steel	Steel	⑦ Iron	⑩ Iron	Steel	Bronze	Bronze	Carbon Graphite	⑪ Bronze	Steel Externals
Steel Fitted	Steel	Steel	Steel	Steel	② Iron	Steel	Bronze	Bronze	Carbon Graphite	⑪ Bronze	Steel Externals
⑨ Bronze Fitted	Steel	Steel	Steel	③ Bronze	③ Bronze	Steel	Bronze	Bronze	Carbon Graphite	⑪ Bronze	Steel Externals

### SPECIFICATIONS — SERIES 123 AND ① 4123 UNMOUNTED PUMPS

Model Number		150 lb. ANSI Flange Port Size	⑥ Nominal Pump Rating		Motor HP Required At Rated Speed Pumping 100 SSU Liquid		Maximum Hydrostatic Pressure	Steel Fitted Construction Recommended Above This Viscosity	⑤ Maximum Recommended Discharge Pressure Handling 100 SSU Liquid At Rated Speeds	⑤ Maximum Recommended Temperature for Cataloged Pump °F. (°C.)		Approximate Shipping Weight With Valve
Packed	①③ Mech. Seal	④ Inches	GPM (m³/hr)	RPM	50 PSI (3 BAR)	100 PSI (7 BAR)	PSIG (BAR)	SSU (cSt)	PSIG	Packed	Mech. Seal	Pounds (KG)
H123	H4123	1½	15 (3)	1800	1½	2	400 (28)	25,000 (5,500)	200	300 (149)	225 (107)	43 (19)
HL123	HL4123	1½	30 (7)	1800	2	3	400 (28)	7,500 (1,650)	200	300 (149)	225 (107)	45 (20)
K123	K4123	2	60 (14)	640	3	7½	400 (28)	25,000 (5,500)	200	300 (149)	225 (107)	120 (54)
KK123	KK4123	2	80 (18)	640	5	7½	400 (28)	25,000 (5,500)	200	300 (149)	225 (107)	125 (57)
LQ123	LQ4123	2½	135 (31)	640	7½	15	400 (28)	25,000 (5,500)	200	300 (149)	225 (107)	185 (84)
LL123	LL4123	3	140 (32)	520	7½	15	400 (28)	2,500 (550)	200	300 (149)	225 (107)	195 (89)
LS123	LS4123	3	200 (45)	640	15	20	400 (28)	75,000 (16,500)	150	300 (149)	225 (107)	200 (91)
Q123	Q4123	4	300 (68)	520	20	30	400 (28)	7,500 (1,650)	150	300 (149)	225 (107)	440 (200)
M123	M4123	4	420 (95)	420	20	40	400 (28)	25,000 (5,500)	125	300 (149)	225 (107)	600 (272)

- ① Buna-N elastomer used in mechanical seal of Series 4123 pumps.
- ② “Q” size has steel idler when steel fitted construction is required.
- 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 150# ANSI steel companion flanges or flanged fittings.
- ⑤ Standard seal can be used from -20°F. to +225°F. With special construction, temperatures to +800°F. can be handled with this series pumps.
- ⑥ Nominal rating based on handling thin liquids.

- ⑦ “KK” and “LS” 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. “LS” size not available in bronze-fitted construction.
- ⑩ “LS”, “Q” and “M” 4123 models furnished with carbon graphite bracket bushings.
- ⑪ “H” and “HL” sizes have powdered metal idler.
- ⑫ “LQ” and “LS” relief valve bodies are stainless steel.

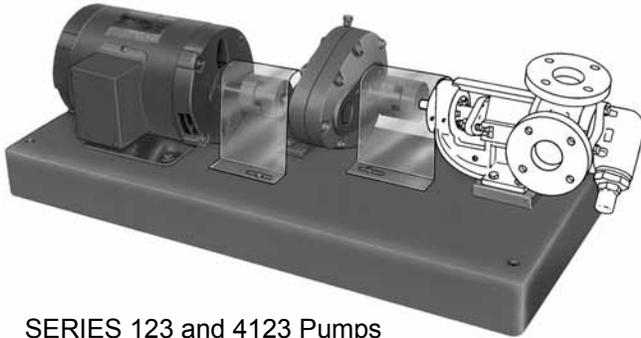
Metric conversions are based on US measurements and rounded to the nearest whole number.

# VIKING® HEAVY DUTY PUMPS

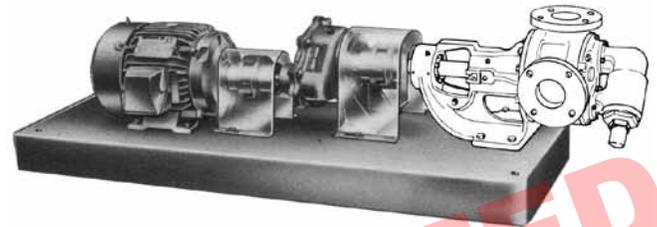
## SERIES 123 AND 4123

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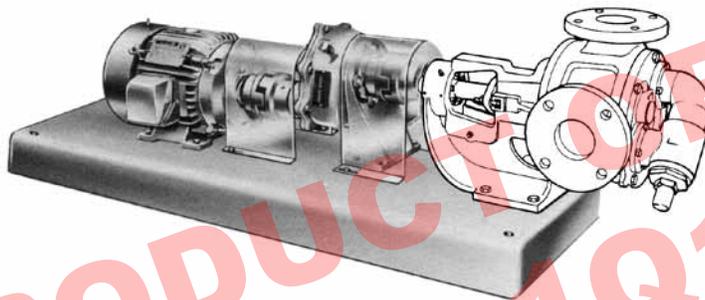
### VIKING HELICAL GEAR REDUCTION UNITS (“R” DRIVE)



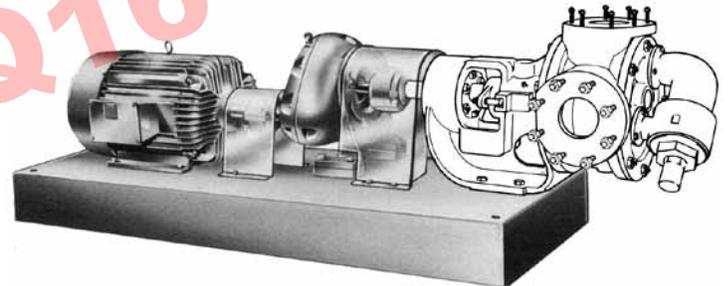
SERIES 123 and 4123 Pumps  
with “R” Drive “A” Reducer



SERIES 123 and 4123 Pumps  
with “R” Drive “B” Reducer



SERIES 123 and 4123 Pumps  
with “R” Drive “B” Reducer



SERIES 123 and 4123 Pumps  
with “R” Drive “C” Reducer

Viking’s heavy-duty pump Series 123 and 4123 are available with helical gear reducers that have been specifically developed for efficient operation with Viking heavy-duty pumps. These rugged, compact, exceptionally quiet gear reducers come in three sizes: the “small” A size, “medium” B size and “large” C size.

The “A” size reducer, available with four gear ratios (2.24, 2.76, 3.43, and 4.17 to 1), is ideally suited for use with the “H” and “HL” size pumps. This reducer is bracket mounted and requires couplings on both the input and output shafts. With the “A” size reducer and 1200 or 1800 RPM motors, the “H” and “HL” size pumps can be used to cover a capacity range from 1.9 to 13 GPM.

The medium size “B” helical gear reducer is available with eight gear ratios from 1.87:1 to 7.65:1. This size normally is used with pump sizes “K” through “LS”. Like

the “A” reducer, the “B” reducer is bracket mounted and requires couplings on both the input and the output shafts. With the “B” reducer, “K” through “LS” pumps driven by 1200 or 1800 RPM motors can be used to cover a capacity range to 210 GPM.

The large “C” size reducer also is available with seven gear ratios from 2.21:1 to 7.95:1. It is normally used with the “KK” through “M” size pumps. Like the “A” and “B” reducers, the “C” reducer is bracket mounted and requires flexible couplings both for the input and output shafts. With the “C” reducer, “KK” through “M” size pumps, driven by 1200 or 1800 RPM motors, can cover a capacity range to 410 GPM.

*Dimensions for “R” Drive Units— See Pages 151.10 and 151.11.*

*Performance Data for “R” Drive Units—See Pages 151.17 through 151.38.*

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# VIKING® HEAVY DUTY PUMPS

## SERIES 123 AND 4123

### VIKING HELICAL GEAR REDUCER UNITS (“R” DRIVE)

#### SPECIFICATIONS — “R” DRIVE UNITS

Model Number		Port Size	Nominal Pump Rating		Motor HP Required At Rated Speed Pumping 100 SSU Liquid		Maximum Hydro-Static Pressure	Steel Fitted Construction Recommended Above This Viscosity	③ Maximum Recommended Discharge Pressure When Handling 100 SSU Liquid At Nominal Rated Speeds	Maximum Temperature / Pressure of Fluids in Jackets °F. (°C.)		Approximate Shipping Weight (Less Power) Pounds (KG)		
										Steam (Sat.)	Heat Transfer Oil			
Packed	① Mech. Seal	Inches	GPM (m³/hr)	RPM	50 PSI (3 BAR)	100 PSI (7 BAR)	PSIG (BAR)	SSU (cSt)	PSIG	Packed	Mech. Seal	“A” Reducer	“B” Reducer	“C” Reducer
H123R	H4123R	1½	15 (3)	1800	1½	2	400 (28)	25,000 (5,500)	200	300 (149)	225 (107)	125 (57)	....	....
HL123R	HL4123R	1½	30 (7)	1800	2	3	400 (28)	7,500 (1,650)	200	300 (149)	225 (107)	130 (59)	....	....
K123R	K4123R	2	60 (14)	640	3	7½	400 (28)	25,000 (5,500)	200	300 (149)	225 (107)	....	327 (148)	....
KK123R	KK4123R	2	80 (18)	640	5	7½	400 (28)	25,000 (5,500)	200	300 (149)	225 (107)	....	334 (152)	550 (250)
LQ123R	LQ4123R	2½	135 (31)	640	7½	15	400 (28)	25,000 (5,500)	200	300 (149)	225 (107)	....	415 (188)	625 (284)
LL123R	LL4123R	3	140 (32)	520	7½	15	400 (28)	2,500 (550)	200	300 (149)	225 (107)	....	445 (188)	655 (297)
LS123R	LS4123R	3	200 (45)	640	15	20	400 (28)	75,000 (16,500)	150	300 (149)	225 (107)	....	490 (222)	700 (318)
Q123R	Q4123R	4	300 (68)	520	20	30	400 (28)	7,500 (1,650)	150	300 (149)	225 (107)	....	....	1000 (499)
M123R	M4123R	4	420 (95)	420	20	40	400 (28)	25,000 (5,500)	125	300 (149)	225 (107)	....	....	1140 (518)

① Buna-N elastomer used in mechanical seal of Series 4123 pumps.

② For mechanical seal pumps on applications with viscosities above 15,000 SSU (3,300 cSt), provide details for recommendation.

③ For maximum recommended discharge pressures when handling other viscosities and/or at other speeds, see performance curves. If suction pressure exceeds 50 PSIG (3 BAR), consult factory.

④ Ports are suitable for use with 150# ANSI steel companion flanges or flanged fittings.

⑤ Nominal rating based on handling thin liquids.

⑥ Standard seal can be used from -20°F. to +225°F. With special construction, temperatures to +800°F. can be handled with this series pumps.

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

#### OUTSTANDING FEATURES

- Mounts NEMA standard motors, 1200 or 1800 RPM. (5 HP, 1800 RPM maximum with “A” reducer; 15 HP, 1800 RPM maximum with “B” reducer, and 40 HP, 1800 RPM maximum with “C” reducer.)
- Complete reducers within a size may be interchanged on a Viking pump unit to obtain desired pump speeds and capacities. Thus the four gear ratios within the “A” size reducer may be interchanged within the size by selecting the proper pinion and gear of a common ratio. Similarly, all eight “B” reducers are interchangeable on each respective series of “B” reducer units. All seven “C” reducers are interchangeable on each respective series of “C” reducer units.
- Quiet operation. High hardness helical gears run in a bath of oil.
- Compact, narrow and low to fit in small space and low overhead.
- Pump, motor or reducer can be removed without disturbing the other two components.
- Units with “A”, “B” and “C” reducers have standard flexible coupling with guard between power and reducer as well as between reducer and pump.
- Oil and weather tight for outdoor service.
- Ball bearings throughout.
- Reducers easily adjustable to different motor center heights.
- Self-supported. Not hung on pump or motor shafts. No radial load on pump or motor shafts.
- “A” reducers have ¾” dia., ⅜” key input and output shafts; “B” reducers have 1” dia., ¼” key input shaft and 1⅛” dia., ¼” key output shaft; “C” reducers have 1⅜” dia., ⅝” key input and output shafts.

# VIKING® HEAVY DUTY PUMPS

## SERIES 123 AND 4123

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### VIKING HELICAL GEAR REDUCTION UNITS (“R” DRIVE)

HELICAL REDUCER HORSEPOWER TABLE ② — “A” SIZE

HIGH SPEED SHAFT INPUT RPM ①	GEAR REDUCER RATIOS “A” SIZE				
	2.24:1	2.76:1	3.43:1	4.17:1	
1750	780	640	520	420	LOW SPEED SHAFT RPM
	6.1	4.9	3.8	3.1	MAXIMUM REDUCER HP
1450	640	520	420	350	LOW SPEED SHAFT RPM
	5.2	4.2	3.2	2.7	MAXIMUM REDUCER HP
1150	520	420	350	280	LOW SPEED SHAFT RPM
	4.3	3.4	2.6	2.2	MAXIMUM REDUCER HP
950	420	350	280	230	LOW SPEED SHAFT RPM
	3.6	2.9	2.2	1.8	MAXIMUM REDUCER HP

① For input speeds higher than 1750 RPM, consult the factory.

② Horsepower ratings based on 8-10 hours operation per day, electric motor drive. See Catalog Section 610 for specific reducer sizing information.

HELICAL REDUCER HORSEPOWER TABLE ② — “B” SIZE

HIGH SPEED SHAFT INPUT RPM	GEAR REDUCER RATIOS “B” SIZE								
	① 1.87:1	① 2.24:1	2.76:1	3.40:1	4.19:1	5.06:1	6.27:1	7.65:1	
1750	950	780	640	520	420	350	280	230	LOW SPEED SHAFT RPM
	19.0	17.0	15.0	13.0	11.0	9.5	7.6	6.4	MAXIMUM REDUCER HP
1450	780	640	520	420	350	280	230	190	LOW SPEED SHAFT RPM
	17.3	15.5	13.4	11.6	9.9	8.5	6.4	5.4	MAXIMUM REDUCER HP
1150	640	520	420	350	280	230	190	155	LOW SPEED SHAFT RPM
	16.5	14.0	11.6	10.1	8.5	7.3	5.3	4.4	MAXIMUM REDUCER HP
950	520	420	350	280	230	190	155	125	LOW SPEED SHAFT RPM
	15.5	12.8	10.1	9.0	7.6	6.0	4.3	3.7	MAXIMUM REDUCER HP

① For input speeds higher than 1750 RPM, consult the factory.

② Horsepower ratings based on 8-10 hours operation per day, electric motor drive. See Catalog Section 610 for specific reducer sizing information.

HELICAL REDUCER HORSEPOWER TABLE ② — “C” SIZE

HIGH SPEED SHAFT INPUT RPM	GEAR REDUCER RATIOS “C” SIZE							
	① 2.21:1	2.80:1	3.31:1	4.21:1	5.08:1	6.24:1	7.95:1	
1750	780	640	520	420	350	280	220	LOW SPEED SHAFT RPM
	49.8	43.5	39.0	32.4	26.6	19.7	18.0	MAXIMUM REDUCER HP
1450	640	520	420	350	280	230	180	LOW SPEED SHAFT RPM
	45.3	36.6	32.8	27.2	22.3	16.7	15.2	MAXIMUM REDUCER HP
1150	520	420	350	280	230	190	145	LOW SPEED SHAFT RPM
	40.1	30.0	26.8	22.2	18.2	13.8	12.6	MAXIMUM REDUCER HP
950	420	350	280	230	190	155	120	LOW SPEED SHAFT RPM
	29.1	24.7	22.1	18.3	15.0	11.4	10.4	MAXIMUM REDUCER HP

① For input speeds higher than 1750 RPM, consult the factory.

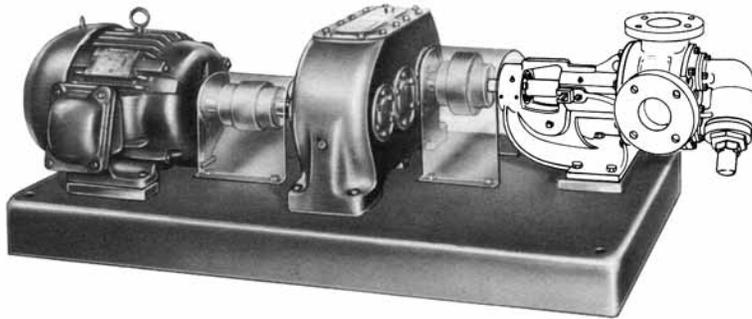
② Horsepower ratings based on 8-10 hours operation per day, electric motor drive. See Catalog Section 610 for specific reducer sizing information.

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# VIKING® HEAVY DUTY PUMPS

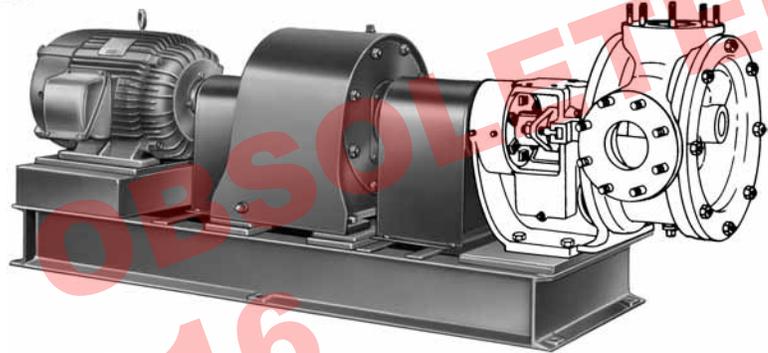
## SERIES 123 AND 4123

### GEAR REDUCER UNITS (“P” DRIVE)



SERIES 123 and 4123 Pumps  
with “P” Drive  
“K” through “LQ” Sizes

SERIES 123 and 4123 Pumps  
with “P” Drive  
“LQ” through “M” Sizes  
Shown without over-pressure relief valve



Viking’s Heavy-Duty Series 123 and 4123 packed and mechanical seal pumps in sizes from “K” through “M” (60 to 420 GPM) are available in the “P” drive arrangement.

These Heavy-Duty units are mounted on formed steel bases (“K” through “LS” sizes) and structural or formed steel bases (“Q” and “M” sizes) as illustrated above.

All mount separate heavy-duty reducers with flexible

couplings between pump, reducer and motor. Coupling guards as illustrated are standard construction. See below for specifications and motor horsepower range.

*Dimensions for “P” Drive Units — Consult Factory.*

*Performance Data for “P” Drive Units — See Pages 151.23 through 151.36.*

### SPECIFICATIONS — “P” DRIVE UNITS

Model Number		150 lb. ANSI Flange Port Size	Nominal Pump Rating		Motor HP Required At Rated Speed Pumping 100 SSU Liquid		Maximum Hydrostatic Pressure	Steel Fitted Construction Recommended Above This Viscosity	Maximum Recommended Discharge Pressure When Handling 100 SSU Liquid At Nominal Rated Speeds	Maximum Recommended Temperature for Cataloged Pump °F. (°C.)		Approximate Shipping Weight With Valve
Packed	Mech. Seal	Inches	GPM (m³/hr)	RPM	50 PSI (3 BAR)	100 PSI (7 BAR)	PSIG (BAR)	SSU (cSt)	PSIG	Packed	Mech. Seal	Pounds (KG)
K123P	K4123P	2	60 (14)	640	3	7½	400 (28)	7,500 (1,650)	200	300 (149)	225 (107)	363 (165)
KK123P	KK4123P	2	80 (18)	640	5	7½	400 (28)	25,000 (5,500)	200	300 (149)	225 (107)	368 (167)
LQ123P	LQ4123P	2½	135 (31)	640	7½	15	400 (28)	25,000 (5,500)	200	300 (149)	225 (107)	443 (201)
LL123P	LL4123P	3	140 (32)	520	7½	15	400 (28)	2,500 (550)	200	300 (149)	225 (107)	473 (215)
LS123P	LS4123P	3	200 (45)	640	15	20	400 (28)	75,000 (16,500)	150	300 (149)	225 (107)	483 (219)
Q123P	Q4123P	4	300 (68)	520	20	30	400 (28)	7,500 (1,650)	150	300 (149)	225 (107)	830 (377)
M123P	M4123P	4	420 (96)	420	20	40	400 (28)	25,000 (5,500)	125	300 (149)	225 (107)	966 (439)

① Buna-N elastic used in mechanical seal of Series 4123 pumps.

② For mechanical seal pumps on applications with viscosities above 15,000 SSU (3,300 cSt), provide details for recommendation.

③ For maximum recommended discharge pressures when handling other viscosities and/or at other speeds, see performance curves. If suction pressure exceeds 50 PSIG (3 BAR), consult factory.

④ Ports are suitable for use with 150# ANSI steel companion flanges or flanged fittings.

⑤ Nominal rating based on handling thin liquids.

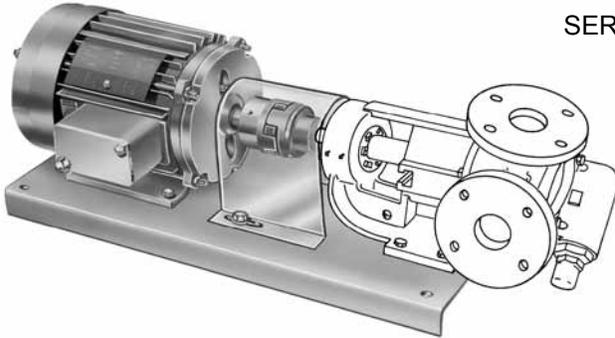
⑥ Standard seal can be used from -20°F. to +225°F. With special construction, temperatures to +800°F. can be handled with this series pumps.

# VIKING® HEAVY DUTY PUMPS

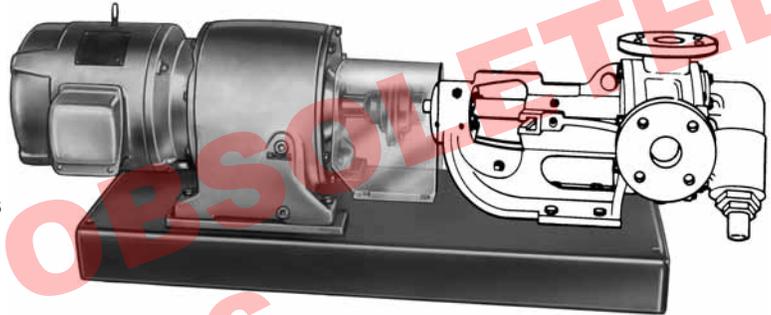
## SERIES 123 AND 4123

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### DIRECT DRIVE UNITS (“D” DRIVE)



SERIES 123 and 4123 Pumps  
with “D” Drive  
“H” and “HL” Sizes



SERIES 123 and 4123 Pumps  
with “D” Drive  
“K” through “M” Sizes

The Direct Drive “D” mounting is specifically designed for compactness and quietness of operation. They save space, installation and operating costs. In this type assembly the pump is mounted on one end of a rectangular formed steel base and connected to a gearhead motor by means of a flexible coupling with guard. “H” and “HL” sizes can be directly connected to 1200 or 1800 RPM motors, as well as gearhead motors.

Dimensions for “D” Drive Units—See Page 151.12.

Performance Data for “D” Drive Units—See Pages 151.23 through 151.36.

### SPECIFICATIONS — “D” DRIVE UNITS

Model Number	150 lb. ANSI Flange Port Size	Nominal Pump Rating	Motor HP Required At Rated Speed Pumping 100 SSU Liquid		Maximum Hydrostatic Pressure	Steel Fitted Construction Recommended Above This Viscosity	Maximum Recommended Discharge Pressure When Handling 100 SSU Liquid At Nominal Rated Speeds	Maximum Recommended Temperature for Cataloged Pump °F. (°C.)		Approximate Shipping Weight With Valve		
			50 PSI (3 BAR)	100 PSI (7 BAR)				Packed	Mech. Seal			
Packed	Mech. Seal	Inches	GPM (m <sup>3</sup> /hr)	RPM	PSIG (BAR)	SSU (cSt)	PSIG	Pounds (KG)				
H123D	H4123D	1½	15 (3)	1800	1½	2	400 (28)	25,000 (5,500)	200	300 (149)	225 (107)	105 (19)
HL123D	HL4123D	1½	30 (7)	1800	2	3	400 (28)	7,500 (1,650)	200	300 (149)	225 (107)	110 (20)
K123D	K4123D	2	60 (14)	640	3	7½	400 (28)	25,000 (5,500)	200	300 (149)	225 (107)	230 (54)
KK123D	KK4123D	2	80 (18)	640	5	7½	400 (28)	25,000 (5,500)	200	300 (149)	225 (107)	260 (57)
LQ123D	LQ4123D	2½	135 (31)	640	7½	15	400 (28)	25,000 (5,500)	200	300 (149)	225 (107)	355 (84)
LL123D	LL4123D	3	140 (32)	520	7½	15	400 (28)	2,500 (550)	200	300 (149)	225 (107)	410 (89)
LS123D	LS4123D	3	200 (45)	640	15	20	400 (28)	75,000 (16,500)	150	300 (149)	225 (107)	415 (91)
Q123D	Q4123D	4	300 (68)	520	20	30	400 (28)	7,500 (1,650)	150	300 (149)	225 (107)	820 (200)
M123D	M4123D	4	420 (95)	420	20	40	400 (28)	25,000 (5,500)	125	300 (149)	225 (107)	980 (272)

① Buna-N elastomer used in mechanical seal of Series 4123 pumps.

② For mechanical seal pumps on applications with viscosities above 15,000 SSU (3,300 cSt), provide details for recommendation.

③ For maximum recommended discharge pressures when handling other viscosities and/or at other speeds, see performance curves. If suction pressure exceeds 50 PSIG (3 BAR), consult factory.

④ Ports are suitable for use with 150# ANSI steel companion flanges or flanged fittings.

⑤ Nominal rating based on handling thin liquids.

⑥ Standard seal can be used from -20°F. to +225°F. With special construction, temperatures to +800°F. can be handled with this series pumps.

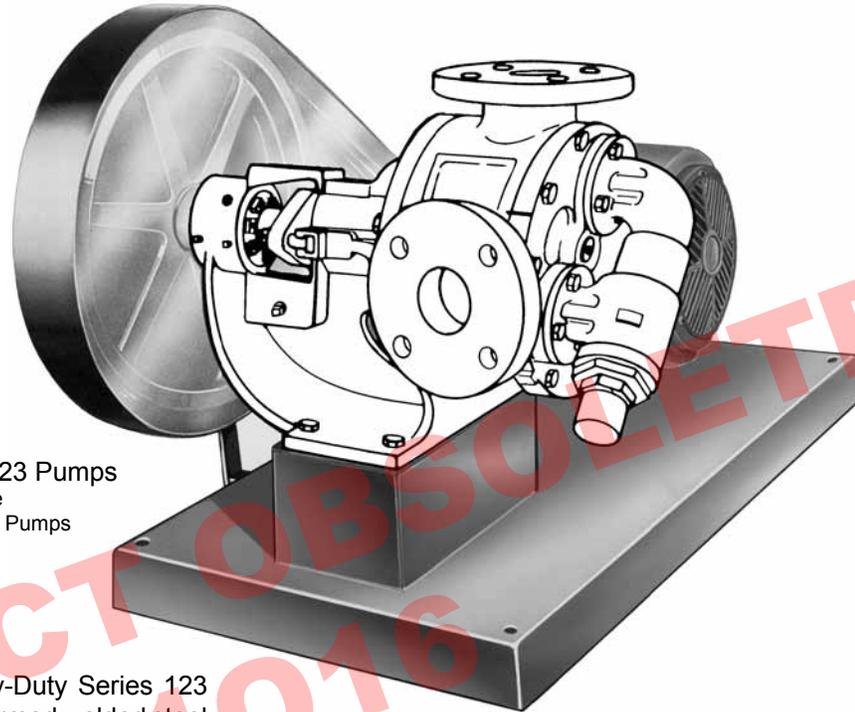
Metric conversions are based on US measurements and rounded to the nearest whole number.

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# VIKING® HEAVY DUTY PUMPS

## SERIES 123 AND 4123

### V-BELT DRIVE UNITS (“V” DRIVE)



SERIES 123 and 4123 Pumps  
with “V” Drive  
“H” through “M” Size Pumps

Viking's V-belt driven line of Heavy-Duty Series 123 and 4123 pumps are all mounted on formed welded steel bases. Pumps mount on pads to accept totally enclosed V-belt drive. All units in this series feature standard pump shaft extension with totally guarded sheave mounted on end of heavy-duty pump shaft.

Dimensions for “V” Drive Units—See Page 151.13.  
Performance Data for “V” Drive Units—See Pages 151.17 through 151.36.

### SPECIFICATIONS — “V” DRIVE UNITS

Model Number	150 lb. ANSI Flange Port Size	⑤ Nominal Pump Rating		Motor HP Required At Rated Speed Pumping 100 SSU Liquid		Maximum Hydrostatic Pressure	Steel Fitted Construction Recommended Above This Viscosity	③ Maximum Recommended Discharge Pressure When Handling 100 SSU Liquid At Nominal Rated Speeds	⑥ Maximum Recommended Temperature for Cataloged Pump *F. (°C.)		Approximate Shipping Weight With Valve	
		GPM (m³/hr)	RPM	50 PSI (3 BAR)	100 PSI (7 BAR)				PSIG (BAR)	SSU (cSt)		PSIG
H123D	H4123D	1½	15 (3)	1800	1½	2	400 (28)	25,000 (5,500)	200	300 (149)	225 (107)	109 (49)
HL123D	HL4123D	1½	30 (7)	1800	2	3	400 (28)	7,500 (1,650)	200	300 (149)	225 (107)	114 (52)
K123D	K4123D	2	60 (14)	640	3	7½	400 (28)	25,000 (5,500)	200	300 (149)	225 (107)	255 (116)
KK123D	KK4123D	2	80 (18)	640	5	7½	400 (28)	25,000 (5,500)	200	300 (149)	225 (107)	265 (120)
LQ123D	LQ4123D	2½	135 (31)	640	7½	15	400 (28)	25,000 (5,500)	200	300 (149)	225 (107)	340 (154)
LL123D	LL4123D	3	140 (32)	520	7½	15	400 (28)	2,500 (550)	200	300 (149)	225 (107)	365 (166)
LS123D	LS4123D	3	200 (45)	640	15	20	400 (28)	75,000 (16,500)	150	300 (149)	225 (107)	375 (170)
Q123D	Q4123D	4	300 (68)	520	20	30	400 (28)	7,500 (1,650)	150	300 (149)	225 (107)	986 (439)
M123D	M4123D	4	420 (95)	420	20	40	400 (28)	25,000 (5,500)	125	300 (149)	225 (107)	1138 (517)

- ① Buna-N elastomer used in mechanical seal of Series 4123 pumps.  
 ② For mechanical seal pumps on applications with viscosities above 15,000 SSU (3,300 cSt), provide details for recommendation.  
 ③ For maximum recommended discharge pressures when handling other viscosities and/or at other speeds, see performance curves. If suction pressure exceeds 50 PSIG (3 BAR), consult factory.

- ④ Ports are suitable for use with 150# ANSI steel companion flanges or flanged fittings.  
 ⑤ Nominal rating based on handling thin liquids.  
 ⑥ Standard seal can be used from -20°F. to +225°F. With special construction, temperatures to +800°F. can be handled with this series pumps.

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

# VIKING® HEAVY DUTY PUMPS

## SERIES 123 AND 4123

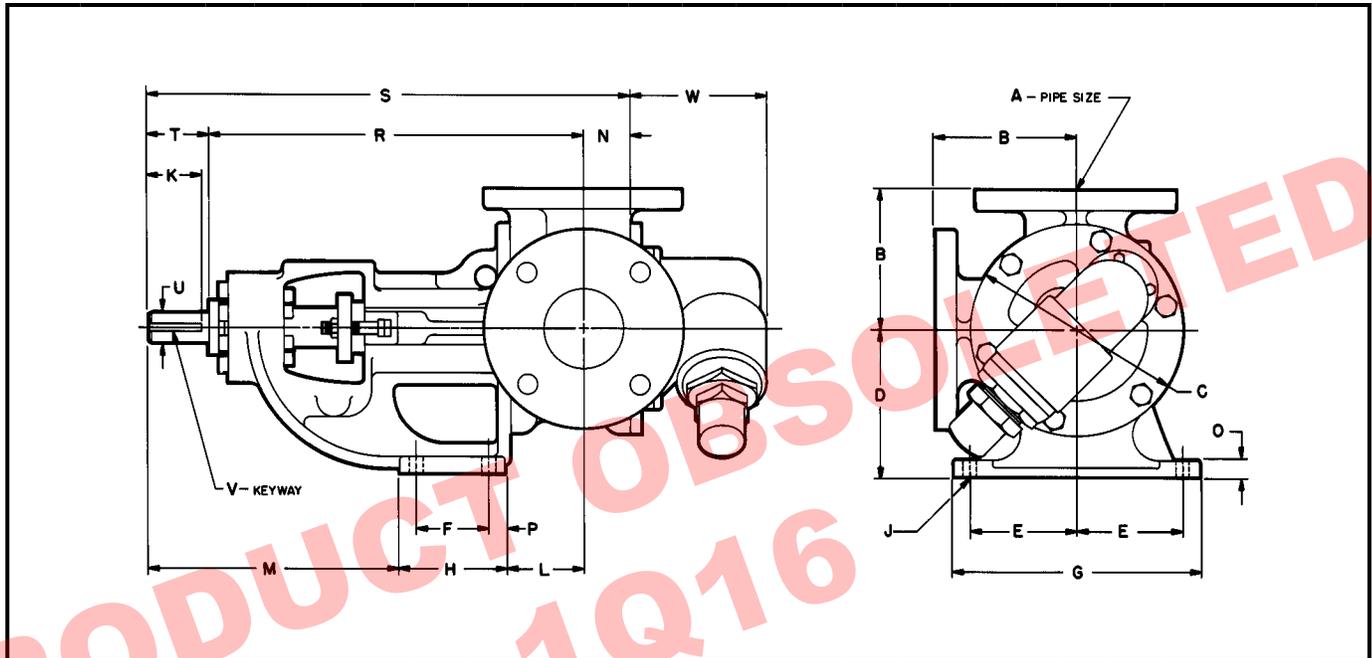
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### DIMENSIONS

These dimensions are average and not for construction purposes. Certified prints on request.

For specifications, see page 151.2.

### DIMENSIONS SERIES 123 AND 4123 UNMOUNTED PUMPS



MODEL NO.		① A																					
PACKED	SEAL		B	C	D	E	F	G	H	J	K	L	M	N	O	P	R	S	T	U	V	W	
H123 HL123	H4123 HL4123	1½	in	4.00	4.75	3.50	2.75	2.25	6.75	3.50	.47	1.50	3.38	5.19	1.19	.56	.62	10.44	13.25	1.62	.75	.19 x .09	2.88
			mm	102	121	89	70	57	171	89	12	38	86	132	30	14	16	265	337	41	19.05	4.76 x 2.38	73
K123 KK123	K4123 KK4123	2	in	5.25	8.00	5.50	4.00	2.75	9.25	4.00	.53	2.00	3.00	9.38	1.75	.62	.62	14.12	18.12	2.25	1.12	.25 x .12	5.12
			mm	133	203	140	102	70	235	102	13	51	76	238	44	16	16	359	460	57	28.58	6.35 x 3.18	130
LQ123	LQ4123	2½	in	7.19	10.25	7.00	4.38	4.00	10.00	5.38	.53	2.00	3.38	9.12	1.75	.62	.62	15.62	19.62	2.25	1.12	.25 x .12	5.38
			mm	183	260	178	111	102	254	137	13	51	86	232	44	16	16	397	498	57	28.58	6.35 x 3.18	137
LL123	LL4123	3	in	7.19	10.25	7.00	4.38	4.00	10.00	5.38	.53	2.00	3.38	9.12	2.25	.62	.62	15.62	20.12	2.25	1.12	.25 x .12	5.38
			mm	183	260	178	111	102	254	137	13	51	86	232	57	16	16	397	511	57	28.58	6.35 x 3.18	137
LS123	LS4123	3	in	7.19	10.25	7.00	4.38	4.00	10.00	5.38	.53	3.25	4.75	9.12	2.44	.62	.62	15.75	21.69	3.50	1.44	.38 x .19	5.19
			mm	183	260	178	111	102	254	137	13	83	121	232	62	16	16	400	551	89	36.51	9.53 x 4.76	132
Q123	Q4123	4	in	8.25	14.00	8.75	4.12	4.00	10.00	6.00	.69	4.38	6.62	11.12	3.00	.75	1.00	19.25	26.75	4.50	1.94	.50 x .25	8.19
			mm	210	356	222	105	102	254	152	18	111	168	282	76	19	25	489	679	114	49.21	12.70 x 6.35	208
M123	M4123	4	in	9.50	17.25	10.00	5.00	6.00	12.00	8.50	.69	4.00	7.75	8.12	4.00	1.00	1.50	20.12	28.38	4.25	1.94	.50 x .25	8.50
			mm	241	438	254	127	152	305	216	18	102	197	206	102	25	38	511	721	108	49.21	12.70 x 6.35	216

① Ports are suitable for use with 150# ANSI steel companion flanges or flanged fittings.

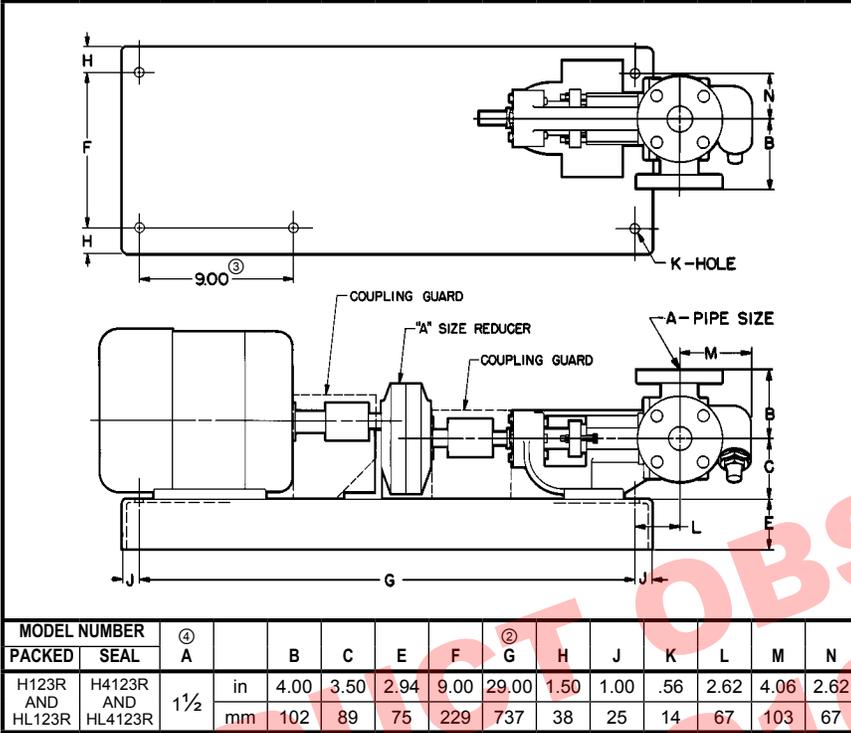
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# VIKING® HEAVY DUTY PUMPS

## SERIES 123 AND 4123

### DIMENSIONS

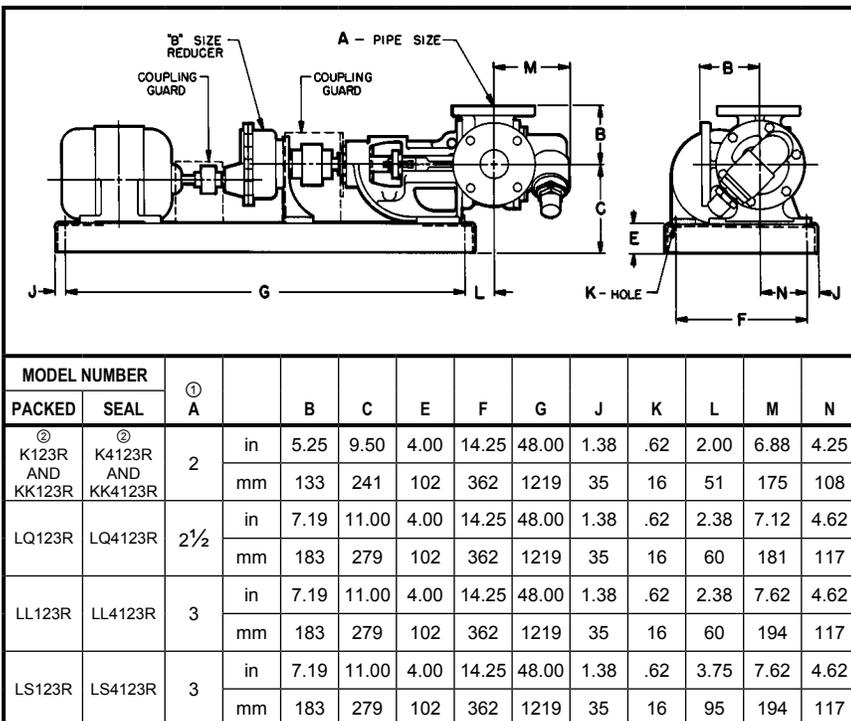
These dimensions are average and not for construction purposes. Certified prints on request.



For specifications, see pages 151.3 through 151.5.

### DIMENSIONS— SERIES 123 AND 4123 ("R" DRIVE) "H" AND "HL" SIZE PUMPS "A" SIZE REDUCER UNITS

- ① Base suitable for 56 through 184-T frame motors.
- ② For motor frames 213-T and 215-T, "G" dimension is increased to 34.00". All other dimensions remain the same. (Base has open ends.)
- ③ With motor frames 182-T and smaller, use the 4 corner base anchor holes. Motor frame 184-T covers up the lower left corner anchor hole, so the hole 9.00" to the right is used.
- ④ Ports are suitable for use with 150# ANSI steel companion flanges or flanged fittings.



For specifications, see pages 151.3 through 151.5.

### DIMENSIONS— SERIES 123 AND 4123 ("R" DRIVE) "K" THROUGH "LS" SIZE PUMPS "B" SIZE REDUCER UNITS

- ① Ports are suitable for use with 150# ANSI steel companion flanges or flanged fittings.
  - ② With motor frames 184-T and smaller, these units are assembled on a shorter base with the following dimension changes: (F = 16", G = 39", L = 3", N = 5½"). Motor rails 1½" high are required with 56, 143-T and 145-T frame motors.
- NOTE: Motor frame larger than 256-T requires larger base. Consult factory. Units available to accept 10 HP, 1200 RPM maximum motor.
- NOTE: Motor rails 2" high are required on "LQ" through "LS" size units with 184-T or 4½" center height motors.

# VIKING® HEAVY DUTY PUMPS

## SERIES 123 AND 4123

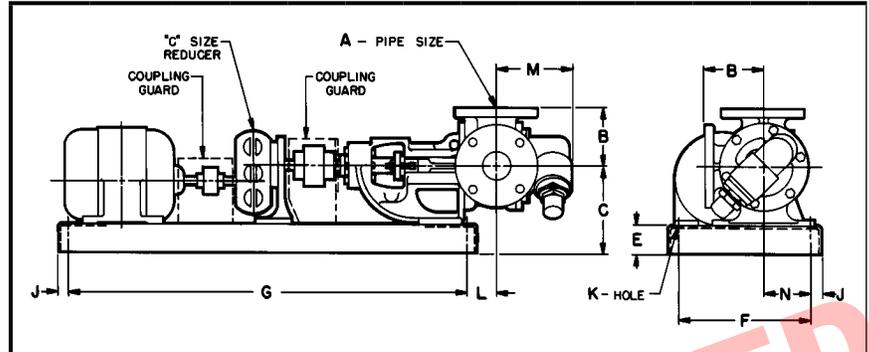
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### DIMENSIONS

These dimensions are average and not for construction purposes. Certified prints on request.

For specifications, see pages 151.3 through 151.5.

### DIMENSIONS — SERIES 123 AND 4123 ("R" DRIVE) "KK" THROUGH "M" SIZE PUMPS "C" SIZE REDUCER UNITS



MODEL NUMBER		① A		B	C	E	F	G	J	K	L	M	N
PACKED	SEAL												
KK123R	KK4123R	2	in	5.25	13.75	6.00	21.00	49.00	1.50	.69	3.00	6.88	6.06
			mm	133	349	152	533	1245	38	18	76	175	154
LQ123R	LQ4123R	2½	in	7.19	13.75	6.00	19.75	59.50	1.50	.69	0	7.12	5.75
			mm	183	349	152	502	1511	38	18	0	181	146
LL123R	LL4123R	3	in	7.19	13.75	6.00	19.75	59.50	1.50	.69	0	7.62	5.75
			mm	183	349	152	502	1511	38	18	0	194	146
LS123R	LS4123R	3	in	7.19	13.75	6.00	19.75	59.50	1.50	.69	1.38	7.62	5.75
			mm	183	349	152	502	1511	38	18	35	194	146
Q123R	Q4123R	4	in	8.25	14.75	6.00	19.75	59.50	1.50	.69	5.88	11.19	5.75
			mm	210	375	152	502	1511	38	18	73	284	146
M123R	M4123R	4	in	9.50	16.00	6.00	19.75	59.50	1.50	.69	6.50	12.50	5.75
			mm	241	406	152	502	1511	38	18	89	318	146

① Ports are suitable for use with 150# ANSI steel companion flanges or flanged fittings.

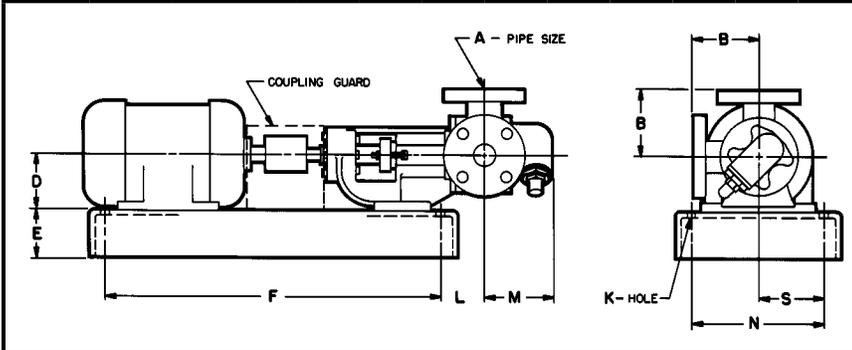
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# VIKING® HEAVY DUTY PUMPS

## SERIES 123 AND 4123

### DIMENSIONS

These dimensions are average and not for construction purposes. Certified prints on request.

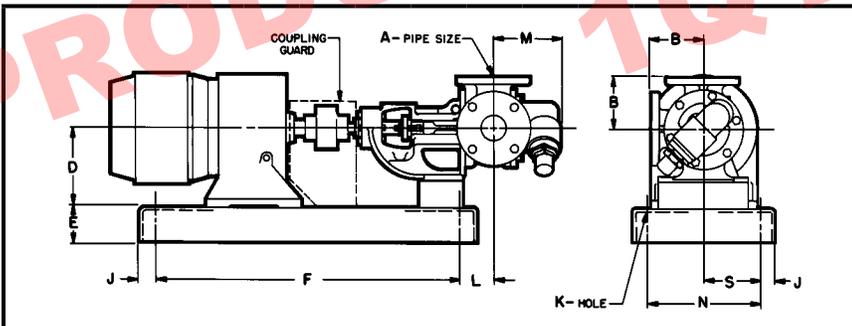


For specifications, see page 151.7.

### DIMENSIONS — SERIES 123 AND 4123 ("D" DRIVE) "H" AND "HL" SIZE PUMPS DIRECT CONNECTED UNITS

MODEL NUMBER		④ A	B	D	E	F	K	L	M	N	S	
PACKED	SEAL											
H123D OR HL123D	H4123D OR HL4123D	1½	in	4.00	① 3.50	1.50	20.50	.50	1.75	4.06	8.50	4.25
			mm	102	89	38	521	13	44	103	216	108
		1½	in	4.00	② 4.50	2.94	25.00	.56	.56	4.06	9.00	4.50
			mm	102	114	75	635	14	14	103	229	114
1½	in	4.00	③ 5.25	2.94	25.00	.56	3.38	4.06	9.00	4.50		
	mm	102	133	75	635	14	86	103	229	114		

- ① For motor frames 56, 143-T and 145-T. (Base has open ends.)
- ② For motor frames 182, 182-T, 184 and 184-T. (Base has closed ends.)
- ③ For motor frames 213 through 215-T. (Base has closed ends.)
- ④ Ports are suitable for use with 150# ANSI steel companion flanges or flanged fittings.



For specifications, see page 151.7.

### DIMENSIONS — SERIES 123 AND 4123 ("D" DRIVE) "K" THROUGH "M" SIZE PUMPS DIRECT CONNECTED UNITS

MODEL NUMBER		① A	B	② D	E	F	J	K	L	M	N	S	
PACKED	SEAL												
K123D AND KK123D	K4123D AND KK4123D	2	in	5.25		4.00	39.00	1.38	.62	3.00	6.88	16.00	8.00
			mm	133		102	991	35	16	76	175	406	203
LQ123D	LQ4123D	2½	in	7.19		4.00	39.00	1.38	.62	3.38	7.12	16.00	8.00
			mm	183		102	991	35	16	86	181	406	203
LL123D	LL4123D	3	in	7.19		4.00	39.00	1.38	.62	3.38	7.62	16.00	8.00
			mm	183		102	991	35	16	86	194	406	203
LS123D	LS4123D	3	in	7.19		4.00	39.00	1.38	.62	4.75	7.62	16.00	8.00
			mm	183		102	991	35	16	121	194	406	203
Q123D	Q4123D	4	in	8.25		6.00	59.50	1.50	.69	2.75	11.19	19.75	9.88
			mm	210		152	1511	38	18	70	284	502	251
M123D	M4123D	4	in	9.50		6.00	59.50	1.50	.69	3.88	12.50	19.75	9.88
			mm	241		152	1511	38	18	99	318	502	251

- ① Ports are suitable for use with 150# ANSI steel companion flanges or flanged fittings.
- ② Varies with gearmotor used.

# VIKING® HEAVY DUTY PUMPS

## SERIES 123 AND 4123

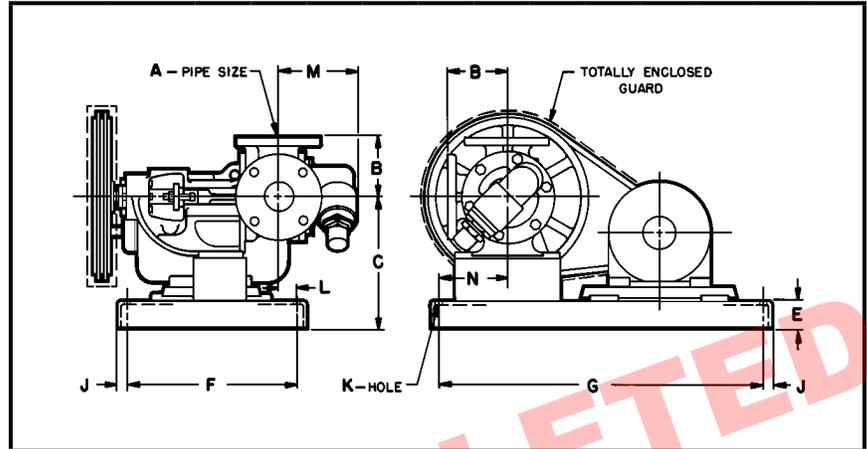
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### DIMENSIONS

These dimensions are average and not for construction purposes. Certified prints on request.

For specifications, see page 151.8.

### DIMENSIONS — SERIES 123 AND 4123 ("V" DRIVE) "H" THROUGH "M" SIZE PUMPS V-BELT DRIVE UNITS



MODEL NUMBER		① A	B	C	E	F	G	J	K	L	M	N	
PACKED	SEAL												
H123V ② AND HL123V	H4123V AND HL4123V	1½	in	4.00	9.25	1.75	14.75	23.75	.75	.50	4.88	4.06	4.25
			mm	102	235	44	375	603	19	13	124	103	108
K123V ③ AND KK123V	K4123V AND KK4123V	2	in	5.25	13.81	3.25	17.00	28.75	1.00	.50	2.50	6.88	5.25
			mm	133	351	83	432	730	25	13	64	175	133
③ LQ123V	LQ4123V	2½	in	7.19	15.31	3.25	17.00	28.75	1.00	.50	2.25	7.12	5.25
			mm	183	389	83	432	730	25	13	57	181	133
③ LL123V	LL4123V	3	in	7.19	15.31	3.25	17.00	28.75	1.00	.50	2.25	7.62	5.25
			mm	183	389	83	432	730	25	13	57	194	133
③ LS123V	LS4123V	3	in	7.19	15.31	3.25	17.00	28.75	1.00	.50	1.06	7.62	5.25
			mm	183	389	83	432	730	25	13	27	194	133
Q123V	Q4123V	4	in	8.25	21.25	6.00	21.00	49.00	1.50	.81	2.75	11.19	8.50
			mm	210	540	152	533	1245	38	21	70	284	216
M123V	M4123V	4	in	9.50	22.50	6.00	21.00	49.00	1.50	.81	2.12	12.50	8.50
			mm	241	572	152	533	1245	38	21	54	318	216

① Ports are suitable for use with 150# ANSI steel companion flanges or flanged fittings.

② Base dimensions correct for all motors.

③ Base dimensions correct through frame 215-T motors and 19" OD sheaves. Larger motors and/or 25" OD sheaves require larger base.