

Western Pacific Products, Inc.

Anything In Or On Your Tank – Ready to Ship

Over 8,000 Part Numbers – Over 26,000 Square Feet of Warehouse – We Ship Worldwide



Ranger Pumps

WE DO IT BETTER!

We specialize in manufacturing precision pumps for industrial applications

Made in the USA
Ranger, Inc. manufactures a precision built helical gear pump for industrial applications. The capacity range is available from 25 GPM to 360 GPM and pressures to 125 PSI. Both low viscosity and high viscosity liquids can be efficiently pumped. Viscosities of upwards to 1,000,000 SSU can be handled. Built-in gear reducers with several gear ratio's are available as a standard option.

Quality
Ranger's quality assurance program continuously promotes top quality products.

Value
Ranger offers quality, service, and value as a winning combination.

Quick Shipments
Ranger's Quick Ship Program is standard – no additional costs.

RANGER, INC.
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7-43

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Ranger Close-Coupled Gear Reduction Option (GB)

This series of Ranger pumps is designed to operate at reduced motor speed. This allows the pump to operate equally well for both high and low viscosity liquids. Low pump speeds also increase pump life. Ranger gear boxes are self contained with oil lubricated antifriction bearings and hardened steel gears standard for maximum sever duty. One gear box has three interchangeable ratios that fit the 11, 17, and 22 Series pumps.

The charts on this page are intended as a guide only. All the application factors must be considered to select the correct pump and reduction speed. Other factors include temperature, liquid characteristics and inlet conditions.

Ranger gear boxes are not intended for the Series 48. Speeds shown for the 48 Series are for reference with independent gear reductions. Contact Ranger for information.

Typical Liquids/Viscosity List

(APPROXIMATE VISCOSITY RANGE SHOWN IN SSU @ 75°F/24°C)

- | | | | |
|---------------------|-----------------|------------------|-------------------|
| 30 to 100 | 100 to 250 | 250 to 800 | 800 to 2,500 |
| • Alcohols | • SAE #5 Oil | • SAE #10 Oil | • SAE #20-30 Oil |
| • Gasoline | • Corn Oil | • Soybean Oil | • Paint Primer |
| • Turpentine | • Olive Oil | • Light Crude | • Spar Varnish |
| 2,500 to 8,000 | 8,000 to 25,000 | 25,000 to 75,000 | 75,000 to 300,000 |
| • SAE 40# Oil | • SAE #50 Oil | • Asphalt | • Tar |
| • Heavy Turbine Oil | • Ink | • Shampoo | • Molasses |
| • Enamel Paint | • Heavy Crude | • Gear Lube | • Chocolate |

GEAR RATIOS FOR GB UNITS				
	MOTOR RPM	GEAR RATIO	PUMP RPM	MAXIMUM PERMISSIBLE HP
11 through 22	1150	4.60:1	250	5.5
		3.94:1	290	6.5
		3.20:1	360	8.0
	1750	4.60:1	380	6.6
		3.94:1	446	10.0
		3.20:1	545	10.0
3450	4.60:1	750	12.0	

Note: Do not exceed maximum allowable HP shown
 Series 1111 gallons per revolution
 Series 1717 gallons per revolution
 Series 2222 gallons per revolution
 Series 4852 gallons per revolution

SERIES	RPM	250 RPM	290 RPM	360 RPM	380 RPM	445 RPM	545 RPM	750 RPM												
Pump	PSI	SSU	1000/10,000	30	100	1000/10,000	30	100	1000/10,000	30	100	1000/10,000	30	100	1000/10,000	30	100	1000/10,000		
11	GPM	25	28	27	27	29	30	31	31	37	38	39	39	40	41	42	42	47	48	49
	HP	7	7	7	7	8	8	8	8	9	9	9	9	1.2	1.1	1.1	1.1	1.5	1.5	1.6
11	GPM	23	25	27	27	29	31	31	35	37	39	39	38	40	42	42	45	47	49	56
	HP	1.1	1.1	1.3	1.3	1.3	1.3	1.3	1.7	1.7	1.8	1.7	1.7	2.1	2.1	2.1	2.1	2.6	2.7	2.7
11	GPM	23	26	27	27	30	31	31	35	38	39	38	41	42	42	45	48	48	51	56
	HP	1.8	2.1	2.5	2.5	2.5	3.0	3.0	3.5	3.1	3.8	3.8	4.1	4.2	4.5	4.5	5.0	5.4	5.4	5.2
11	GPM	22	24	27	27	29	31	31	34	36	38	37	41	42	44	48	48	50	55	59
	HP	2.2	2.5	2.8	2.7	2.9	3.5	3.5	3.3	3.8	4.4	4.4	5.5	5.5	6.2	6.2	6.7	7.5	7.5	8.5
17	GPM	28	40	41	42	45	47	48	49	57	59	60	61	62	63	64	71	73	74	86
	HP	8	8	1.1	1.8	1.8	1.8	1.8	2.2	2.2	2.8	3.0	3.1	3.1	3.2	3.2	3.7	3.7	4.1	4.1
17	GPM	33	38	41	42	45	48	48	52	57	60	61	65	65	64	66	71	74	74	83
	HP	1.4	1.4	1.7	1.6	1.6	1.9	2.8	2.1	2.1	2.7	2.9	2.3	2.3	2.9	3.7	3.8	3.8	4.9	5.4
17	GPM	34	40	41	41	47	48	49	53	59	62	62	63	67	73	73	80	84	89	118
	HP	2.8	2.9	3.6	3.0	3.3	4.2	3.8	3.8	4.8	4.2	4.8	5.2	5.0	5.0	5.8	6.2	6.3	7.8	9.0
17	GPM	39	41	41	41	48	48	49	52	59	62	62	63	65	72	80	82	89	118	123
	HP	3.6	4.1	4.1	4.1	4.8	4.8	4.8	5.2	5.4	5.0	5.0	5.8	7.0	8.0	8.0	8.8	7.5	7.5	8.8
22	GPM	52	53	55	55	60	61	62	63	70	72	73	80	81	82	84	95	97	110	117
	HP	1.1	1.1	1.4	1.3	1.3	1.3	1.3	1.7	2.6	2.6	2.6	2.8	2.8	2.7	2.7	3.0	3.2	3.2	4.4
22	GPM	50	52	54	55	58	60	62	63	74	76	78	80	82	83	86	96	98	114	118
	HP	2.0	2.0	2.3	2.2	2.3	2.8	3.4	3.1	3.1	3.7	3.0	3.3	3.3	4.1	5.4	6.1	6.1	4.9	4.8
22	GPM	44	50	53	55	52	58	61	63	68	74	77	79	81	83	86	92	95	106	114
	HP	3.5	3.5	3.8	4.2	4.2	4.3	5.2	5.4	5.4	6.0	7.3	5.7	5.7	6.5	7.8	6.8	6.8	8.2	8.2
22	GPM	48	50	55	57	61	63	66	70	77	79	81	83	84	91	95	106	113	117	152
	HP	4.2	4.5	5.0	5.2	5.5	6.3	6.5	6.9	7.1	8.4	6.9	6.9	7.7	8.0	8.3	8.3	9.1	10.2	10.2
SERIES	RPM	250 RPM	300 RPM	350 RPM	400 RPM	500 RPM	600 RPM	700 RPM												
Pump	PSI	SSU	1000/10,000	30	100	1000/10,000	30	100	1000/10,000	30	100	1000/10,000	30	100	1000/10,000	30	100	1000/10,000		
48	GPM	118	122	127	129	142	142	146	150	164	167	171	175	189	190	200	240	251	258	259
	HP	3.8	4.0	4.2	4.8	4.3	4.3	5.3	5.5	6.0	7.0	6.1	6.8	8.0	10.0	8.3	9.0	10.9	13.8	15.7
48	GPM	98	102	118	123	130	139	142	148	150	163	164	170	180	189	194	250	240	248	254
	HP	3.1	3.3	4.6	7.2	6.8	8.3	8.7	7.3	7.8	9.3	10.8	9.8	10.2	11.5	13.5	12.0	12.8	14.6	17.5
48	GPM	102	114		122	134		148	158		172	185		210	222	248		240	277	289
	HP		8.8	10.8		12.5	13.5		14.8	16.0		17.5	19.5		20.2	22.1		25.0	23.0	27.9
48	GPM			108		130		148	158		172	185		210	222	248		240	277	289
	HP			10.8		13.0		14.8	15.8		17.2	18.5		21.0	22.2	24.8		24.0	27.7	28.9
48	GPM																			
	HP																			

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Maximum Pump Ratings

PSI (862 kPa) maximum inlet and discharge pressure
750 RPM maximum. (See speed vs. viscosity curve for maximum RPM).

350°F (177°C) maximum temperature for standard packing.

212°F (100°C) maximum temperature for BUNA-N mechanical seal

400°F (204°C) maximum temperature for Viton mechanical seal

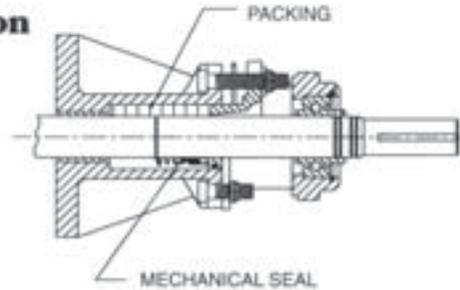
Consult Ranger for any application over 350°F (172°C)

Standard Fitted Materials of Construction

Housing & Backplates	ASTM A48 Class 30 Cast Iron	Options
Gears	Iron Alloy	440 Stainless Steel
Shafts	Carbon Steel	Carbon
Bearing Bushings	Bronze	Iron
		TFE/Graphite
		Stainless Steel
		Aluminum
R.V. Parts	Carbon Steel	
Gaskets	Fiber	
Hardware	Zinc Plated Steel	

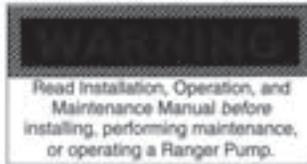
Stuffing Box

Ranger Pumps can be supplied as standard with stuffing box packing or single mechanical seals. They can be easily converted from one arrangement to the other. Several types of both packing and seals are available for various applications; for example – high temperatures or corrosive conditions. Contact Ranger for application assistance.



Construction Advantages

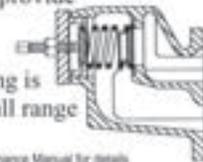
- Positive shaft and gear support with four internal bearings
- Dowel pins insure positive pump alignment
- Hardened gears and shafts for long service life
- Integral speed reducer available as option
- Field adjustable relief available
- Fabrication options include Base, Coupling, and Drives



Field Adjustable Relief Valve

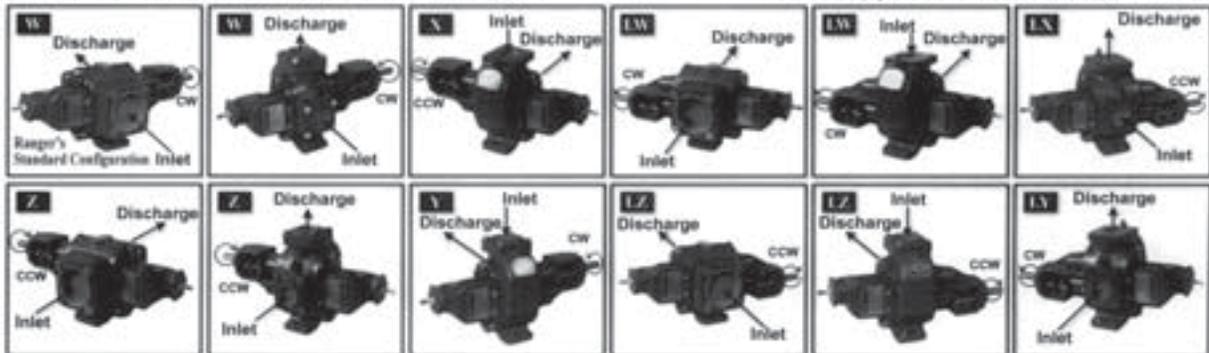
A relief valve is needed for the pump system to protect the pump from over-pressure. The valve can be positioned to provide protection for the discharge.*

A high pressure spring is available to give a full range of relief settings.



*See Installation, Operation and Maintenance Manual for details

Optional Direction of Rotation



Identifying Direction of Rotation Mounting

Hi-Drive Pumps

Y: Clockwise Rotation

Z: Counterclockwise Rotation

W: Clockwise Rotation

X: Counterclockwise Rotation

Lo-Drive Pumps

LY: Clockwise Rotation

LZ: Counterclockwise Rotation

LW: Clockwise Rotation

LX: Counterclockwise Rotation

Rotation is determined by facing the end of driveshaft



Piping Direction

Piping direction is determined when facing the drive shaft. These diagrams will serve as a helpful basis for you to determine the direction of rotation wanted according to your piping system.

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Pump Identification

9 - Ports 90°
8 - Ports 180°

HB - Outboard bearing
HH - Pump with hydraulic adaptor and rigid coupling
BH - Replacement pump for HH Pump without adaptor
GO - Replacement pump for GHB unit without gear reduction
GB - Pump with gear reduction

RV - Relief valve
No letter - No relief valve

C - Carbon graphite bushing
X - or no letter bronze bushing
T - TFE & graphite bushing
I - Iron Bushing
H - Hi Temperature bronze bushing

G - TFE & graphite packing
X - or no letter - standard packing
T - Pure TFE packing
D - DSA 8093 packing
C - Carbon/Graphite packing

SS - Stainless steel shafts
No letter or XX - Steel shafts

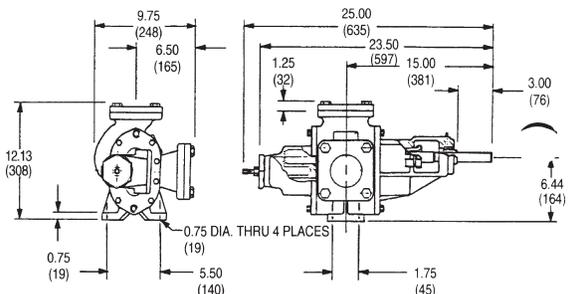
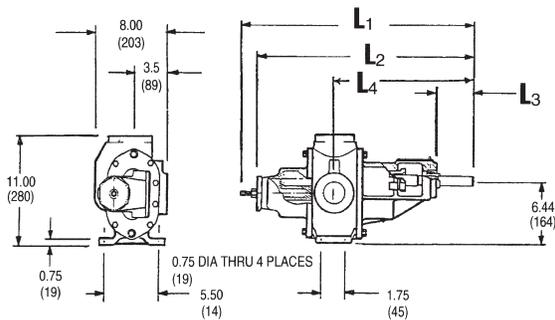
Rotation & Shaft position (See Installation Manual pg. 4)
No letter - W position (See Installation Manual pg. 4)

F - Flange
No letter - Pipe port

P - Packing
M - Mechanical Seal

229PHBFRVLX-SSCG

11 - .11 Gallons per rev.
17 - .17 Gallons per rev.
22 - .22 Gallons per rev.
48 - .48 Gallons per rev.



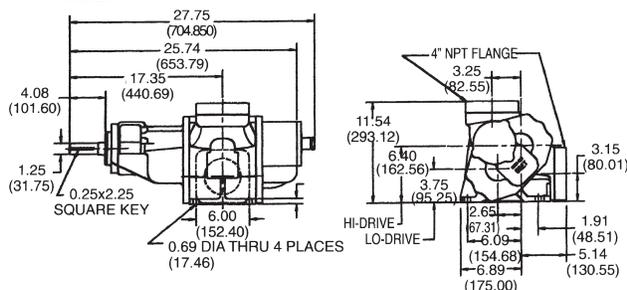
SERIES	HBRV	L1	L2	L3	L4
119P - 119M		22.88 (581)	21.25 (540)	3.75 (95)	13.50 (343)
179P - 179M		23.63 (600)	22.00 (559)	3.13 (80)	14.25 (362)

XX.XX = DIM. IN INCHES
(XXX) = DIM. IN MM.
SHAFT DIA. = 1.00" x 1/4" Key
(25.4) (6.35)

SERIES 229P - 228M HBRV

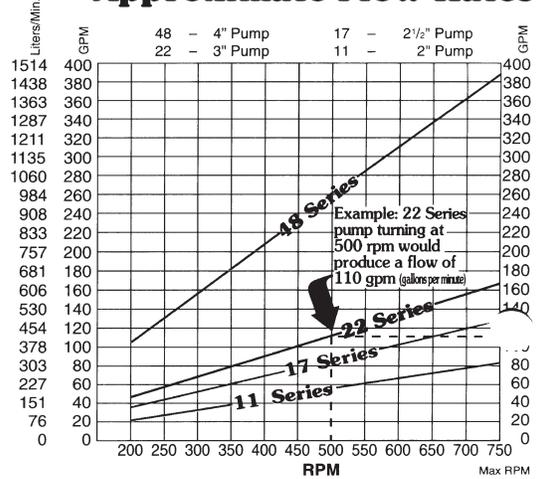
XX.XX = DIM. IN INCHES
(XXX) = DIM. IN MM.
SHAFT DIA. = 1.00" x 1/4" Key
(25.4) (6.35)

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Approximate Flow Rates



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