



RANGER PUMPS

Ranger, Inc.

**Manufacturer
of precision helical gear pumps
for a wide range of
industrial applications**

Made in the USA

Four series of versatile helical gear pumps for moving both low and high viscosity liquids

RANGER PUMP FEATURES

SMOOTH OPERATING HELICAL GEARS

- Heat treated ductile iron helical gears provide silent, efficient long service life.
- Finely keyed and machined gears are easily replaced by sliding on and off the mainshaft.
- Friction and vibration are kept at a minimum by careful machining of the meshing helical gears.

EXTENDED-LIFE WEARING SERVICES

- High lead bronze, iron or carbon bearings are available.
- Pumping gears are supported by four heavy duty sleeve bearings to prolong service life.
- Special machined grooves in the bearings allow both circulation and

lubrication for lower bearing temperatures.

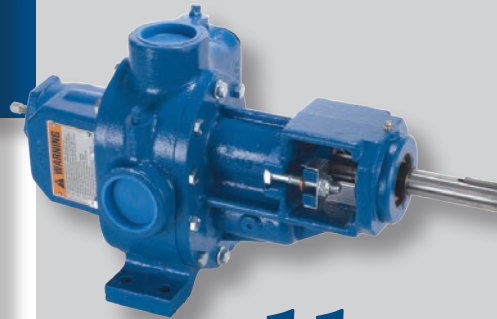
- Special outboard drive shaft bearing absorbs thrust loads and helps support external radial loads.

PRECISION GROUND SHAFTS

- Induction hardened bearing and packing surfaces on precision ground steel shafts extend pump life.
- Hardened stainless steel shafts are available for specific installations.

RUGGED CAST-IRON CASTINGS

- Maximum pumping efficiency is gained from quality castings machined to high tolerances.
- Positive alignment of the faceplate case and backplate is insured by large hardened steel dowel pins.



SERIES 11

This series of Ranger pumps are designed to output .11 gallons per revolution at a maximum of 750 rpm and generate up to 80 gallons per minute. These pumps are offered in a 90°, 2" NPT tapped port model and a 180° model with 2" flanges.



SERIES 17

This series of Ranger pumps are designed to output .17 gallons per revolution at a maximum of 750 rpm and generate up to 126 gallons per minute in a 90° model with 2" or 2.5" flanges and a 90° model with 2" NPT tapped ports.



SERIES 22

This series of Ranger pumps are designed to output .22 gallons per revolution at a maximum of 750 rpm and generate up to 165 gallons per minute. These pumps are offered in 90° and 180° with 3" and 4" flanges.



SERIES 48

This series of Ranger pumps are designed to output .52 gallons per revolution at a maximum of 900 rpm and generate up to 460 gallons per minute. These pumps are offered in a 90° model with 3" or 4" flanges.

Pump Identification Guide

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

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

MECHANICAL SEAL PUMP

B - Buna-N
 V - Viton™
 T - Teflon™

PACKING PUMP

G - TFE & graphite packing
 LG - Lip seal with graphite packing
 X - or no letter - standard packing
 T - Pure TFE packing
 D - DSA 8093 packing
 LD - Lip seal with DSA packing

9 - Ports 90°
 8 - Ports 180°

DB - Double relief valve
 RV - Relief valve
 No letter - No relief valve

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

P - Packing
 M - Mechanical Seal

F - Flanges
 No letter - Pipe port

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

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

229PHBFRVLX-SSCG



SERIES 11
180° Ported Housing

Ranger now offers the 11 series with 180° ports and 2" NPT flanges. This is a good choice when your plumbing does not accommodate the 90° port model. It is available with the standard RV, Double RV and plain endplate. It is also available with the HB, HH and GB models.



Bi-Rotational Double Relief Valve

Ranger now offers a double relief valve for our series 11, 17 and 22 that will provide protection in both shaft rotations. The double relief will continue to protect from overpressure even when the shaft rotation is changed and the pumps flow is reversed. The double relief is field adjustable and works similar to the standard RV.



SERIES 48
Gear Reduction

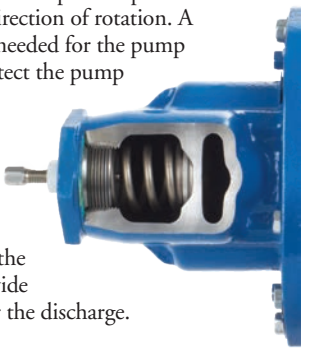
Ranger now offers an integrated gear reduction unit for the 48 series. It is available in a 4.26:1, 4.88:1 and 5.66:1 ratio. Please refer to page 7 for additional information.

Ranger pumps can be engineered for Blending • Mixing • Transfer • Solvents • Molasses Gasoline • Resins • Oil • Asphalt • Chemicals

Field Adjustable Relief Valve

The relief valve will provide protection in only one direction of rotation. A relief valve is needed for the pump system to protect the pump from over-pressures.

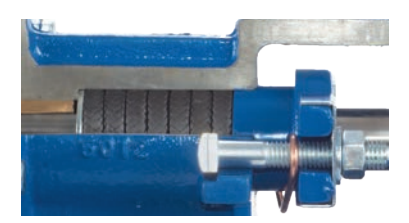
The valves can be positioned to either side of the pump to provide protection for the discharge.



*See Installation, Operation and Maintenance manual for details.

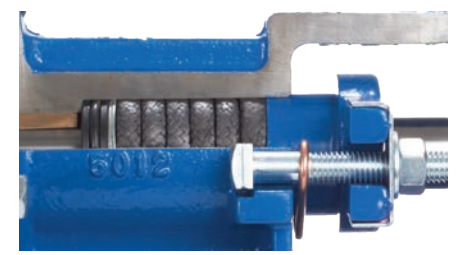
Stuffing Box

Ranger pumps can be supplied as standard with stuffing box. They can be easily converted from packing to a lip seal or mechanical seal. Several types of packing are available for various applications: for example - high temperatures.



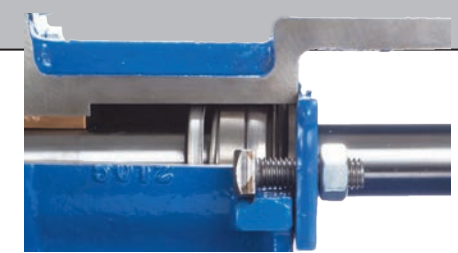
Lip Seal Design

Ranger pumps can be supplied with a combination lipseal and back-up packing as shown above. This can be easily converted from the lipseal combination to packing only or a mechanical seal.



Mechanical Seal

Ranger pumps can be supplied as standard with a single mechanical seal. They can be easily converted from a mechanical seal to packing or lipseal. Several types of seals are available (Buna-N, Viton™ and Teflon™) for various applications, for example: high temperatures or corrosive conditions. Contact Ranger for application assistance.



Standard Fitted Materials of Construction

PART	STANDARD MATERIALS	OPTIONS
Housing & Backplates	ASTM A48 Class 30 Cast Iron	
Gears	Ductile Iron	
Shafts	Carbon Steel	440 Stainless Steel
Bearing Bushings	Bronze	Carbon, Iron, TFE/ Graphite
R.V. Parts	Carbon Steel	Stainless Steel
Gaskets	Fiber	Aluminum
Hardware	Zinc Plated Steel	

Maximum Pump Ratings

125 PSI (862 KPA) maximum inlet and discharge pressure

750 RPM maximum for 11, 17 & 22 series.
(See speed vs. viscosity curve for maximum RPM).

900 RPM maximum for 48 series.
(See speed vs. viscosity curve for maximum RPM).

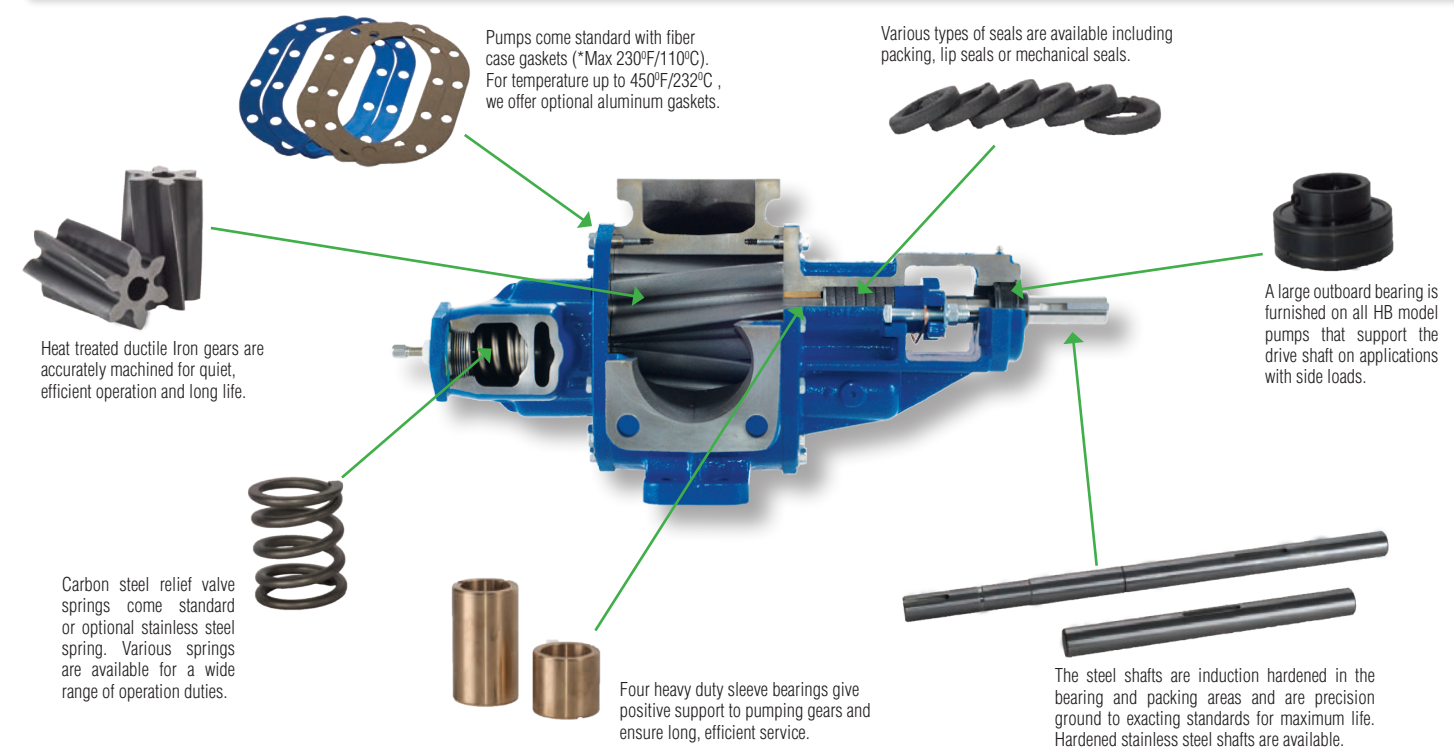
350°F (177°C) maximum temperature for standard packing.

500°F (260°C) Maximum temperature for TFE/Graphite

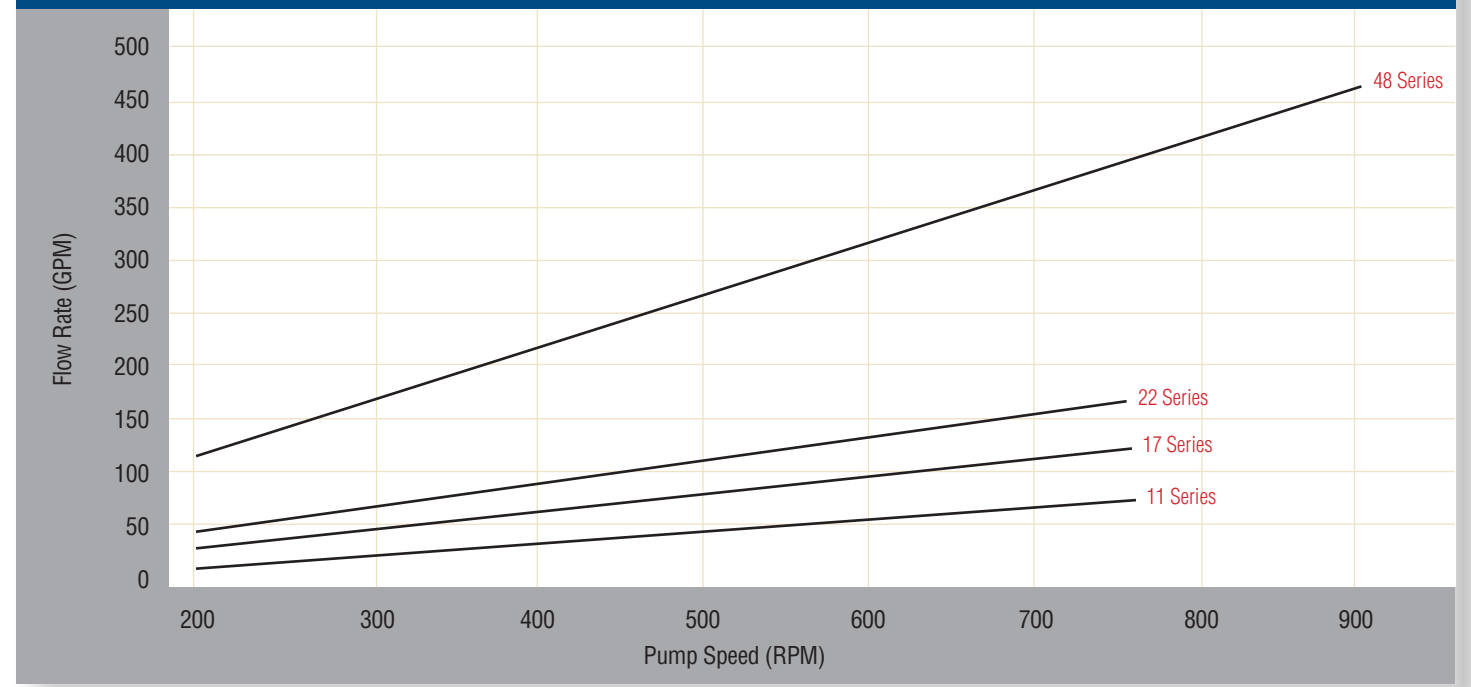
212°F(100°C) maximum temperature for BUNA-N mechanical seal

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

Key Components



Theoretical Capacity



Close-coupled gear reduction option



This series of Ranger pumps is designed to operate at reduced motor speeds. 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 anti-friction bearings and hardened steel gears standard for maximum service life. A common gear box has three interchangeable gear ratios that fit

the 11, 17 and 22 Series pumps.

The charts on this page are intended as a guide only. All application factors including temperature, liquid characteristics and inlet conditions must be considered to select the correct pump and reduction speed. Speeds shown for the 48 Series are for reference only, contact Ranger Pumps for more information.

Gear Ratios for GB Units

Series	Motor RPM	Gear Ratio	Pump RPM	Maximum Permissible HP
11-22	1150	4.60:1	250	5.5
		3.94:1	290	6.5
		3.20:1	360	8.0
48	1750	4.60:1	380	8.5
		3.94:1	445	10.0
		3.20:1	545	10.0
48	3450*	4.60:1	750	10.0
		5.66:1	203	8.5
			235	10.0
48	1750		4.88:1	309
		4.26:1	360	15.0
		4.10	410	15.0
48	3450*	5.66:1	609	15.0

NEW

Note: Do not exceed maximum allowable HP shown. Series 11 - .11 gallons per revolution, Series 17 - .17 gallons per revolution, Series 22 - .22 gallons per revolution, Series 48 - .52 gallons per revolution. *3450 RPM motors used in handling low viscosity lubricating liquids.

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 valve available
- Fabrication options include Base, Coupling and Drives

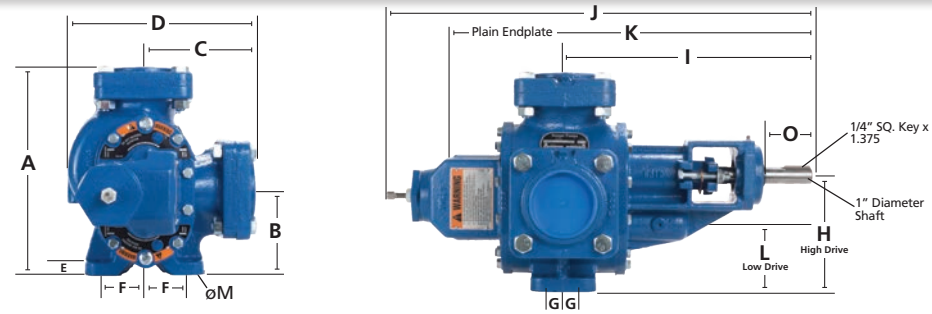
Typical Liquids/Viscosity List

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

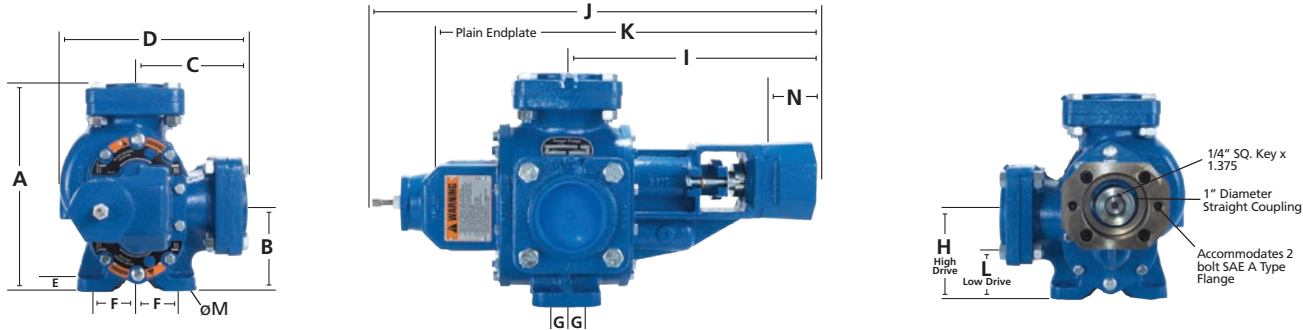
SERIES	RPM	PSI	SSU	250 RPM				290 RPM				360 RPM				380 RPM				445 RPM				545 RPM				750 RPM			
				30	100	1000	10,000	30	100	1000	10,000	30	100	1000	10,000	30	100	1000	10,000	30	100	1000	10,000	30	100	1000	10,000	30	100	1000	10,000
11	25	GPM		25	26	27	27	29	30	31	31	37	38	39	39	40	41	42	42	47	48	49	49	58	59	60	60	80	81	82	82
		HP		.7	.7	.9	1.3	.9	.9	1.2	1.5	1.1	1.1	1.4	2.2	1.1	1.1	1.5	2.3	1.4	1.4	2.0	2.5	1.9	1.9	2.7	2.7	2.8	2.8	3.8	3.8
	50	GPM		23	25	27	27	27	29	31	31	35	37	39	39	38	40	42	42	45	47	49	49	56	58	60	60	78	80	82	82
		HP		1.1	1.1	1.3	1.7	1.3	1.3	1.5	1.9	1.7	1.7	2.0	2.8	1.7	1.7	2.1	2.9	2.1	2.1	2.6	3.5	2.7	2.7	3.5	3.5	3.9	3.9	4.9	4.9
	100	GPM		23	26	27	27	27	30	31	31	35	38	39	39	33	38	41	42	40	45	48	48	51	56	59	59	73	78	81	81
		HP		1.9	2.1	2.5	2.5	2.2	2.4	3.0	3.0	2.8	3.1	3.9	3.9	2.9	2.9	3.3	4.1	3.5	3.5	4.0	4.0	4.4	4.4	5.2	5.2	6.3	6.3	7.3	7.3
	125	GPM		22	26	27	27	26	30	31	31	34	38	39	39	37	41	42	42	44	48	48	48	48	55	59	59	70	77	81	81
		HP		2.2	2.4	2.8	2.8	2.7	2.9	3.5	3.5	3.3	3.6	4.4	4.4	3.5	3.9	4.7	4.7	4.2	4.7	4.7	4.7	5.4	5.4	6.2	6.2	7.5	7.5	8.5	8.5
17	25	GPM		38	40	41	42	45	47	48	49	57	59	60	61	60	62	63	64	71	73	74	74	88	90	91	91	123	125	126	126
		HP		.8	.8	1.1	1.8	1.0	1.0	1.3	2.2	1.2	1.2	1.8	3.0	1.3	1.3	1.9	3.3	1.7	1.7	2.5	2.5	2.3	2.3	3.6	3.6	3.5	3.5	6.0	6.0
	50	GPM		33	38	41	42	40	45	48	49	52	57	60	61	55	60	63	64	66	71	74	74	83	88	91	91	118	123	126	126
		HP		1.4	1.4	1.7	2.4	1.6	1.6	1.9	2.8	2.1	2.1	2.7	3.9	2.3	2.3	2.9	4.3	2.9	2.9	3.7	3.7	3.8	3.8	4.9	4.9	5.4	5.4	7.9	7.9
	100	GPM		34	40	41	41	41	47	48	49	53	59	60	60	52	56	62	63	63	67	73	73	80	84	90	90	115	119	125	125
		HP		2.6	2.9	3.6	3.6	3.0	3.3	4.2	4.2	3.8	3.8	4.4	5.6	4.2	4.2	4.8	6.2	5.0	5.0	5.8	5.8	6.3	6.3	7.6	7.6	9.0	9.0	11.5	11.5
	125	GPM		39	41	41	41	46	48	49	51	58	60	60	60	52	54	61	63	63	65	72	72	80	82	89	89	115	117	124	124
		HP		3.4	4.1	4.1	4.1	4.0	4.9	4.6	4.6	5.2	6.4	6.4	6.4	5.0	5.0	5.6	7.0	6.0	6.0	6.8	6.8	7.5	7.5	8.8	8.8	10.8	10.8	13.3	13.3
22	25	GPM		52	53	55	55	60	61	63	63	76	77	79	79	80	81	83	83	94	95	97	97	116	117	119	119	162	163	165	165
		HP		1.1	1.1	1.4	1.9	1.3	1.3	1.7	2.5	2.0	2.0	2.6	3.9	2.2	2.2	3.0	4.3	2.7	2.7	3.5	3.5	3.2	3.2	4.4	4.4	5.1	5.1	7.2	7.2
	50	GPM		50	52	54	55	58	60	62	63	74	76	78	79	78	80	82	83	92	94	96	96	114	116	118	118	161	162	164	164
		HP		2.0	2.0	2.3	2.8	2.3	2.3	2.6	3.4	3.1	3.1	3.7	5.0	3.3	3.3	4.1	5.4	4.1	4.1	4.9	4.9	4.8	4.8	6.0	6.0	7.3	7.3	9.4	9.4
	100	GPM		44	50	53	55	52	58	61	63	68	74	77	79	72	78	81	83	86	92	95	95	108	114	117	117	154	160	163	163
		HP		3.5	3.5	3.8	4.3	4.2	4.2	4.5	5.3	5.4	5.4	6.0	7.3	5.7	5.7	6.5	7.8	6.6	6.8	7.6	7.6	8.2	8.2	9.4	9.4	12.0	12.0	14.1	14.1
	125	GPM		49	53	55	55	50	57	61	63	66	73	77	79	70	77	81	83	84	91	95	95	106	113	117	117	152	159	163	163
		HP		4.2	4.5	5.0	5.0	5.2	5.2	5.5	6.3	6.5	6.5	7.1	8.4	6.9	6.9	7.7	9.0	8.3	8.3	9.1	9.1	10.2	10.2	11.4	11.4	14.7	14.7	16.8	16.8
48	25	GPM		94	97	101	103	111	114	118	120	129	132	136	138	149	152	156	158	176	179	183	185	202	205	209	211	305	308	312	314
		HP		2.5	2.8	3.2	3.8	3.0	3.4	3.9	4.6	3.7	3.9	4.7	5.7	4.4	4.7	5.7	6.9	5.4	5.9	7.0	8.5	6.3	6.8	8.4	10.3	10.9	12.0	16.8	19.7
	50	GPM		93	99	103	106	103	110	116	116	121	128	134	134	133	141	148	154	160	168	175	181	186	194	201	207	209	297	304	310
		HP		4.7	5.3	5.3	6.3	5.1	5.6	6.3	6.3	5.9	6.7	7.7	7.7	6.8	7.1	8.1	9.3	8.0	8.5	9.6	11.1	9.5	10.0	11.6	13.5	15.4	16.5	19.3	24.2
	100	GPM		88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88
		HP		8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5
	125	GPM		101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101
		HP		11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7

11, 17, 22 SERIES - 90° PORTS

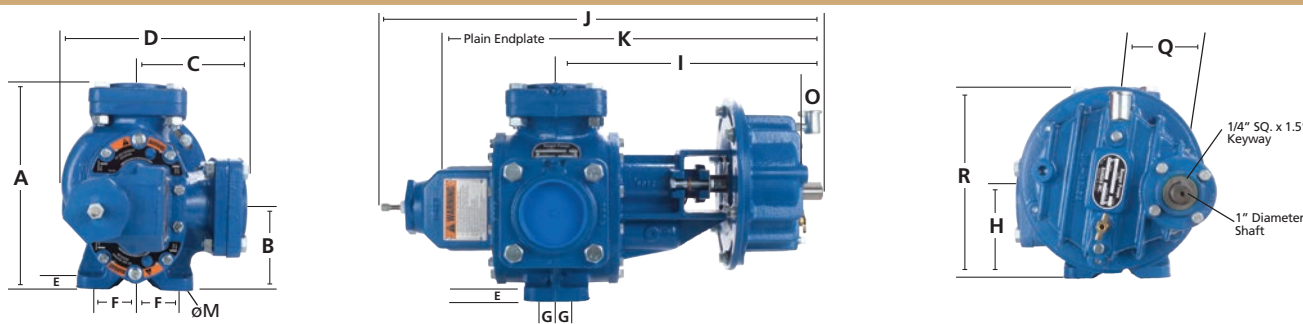
OUTBOARD BEARING - HB



HYDRAULIC - HH



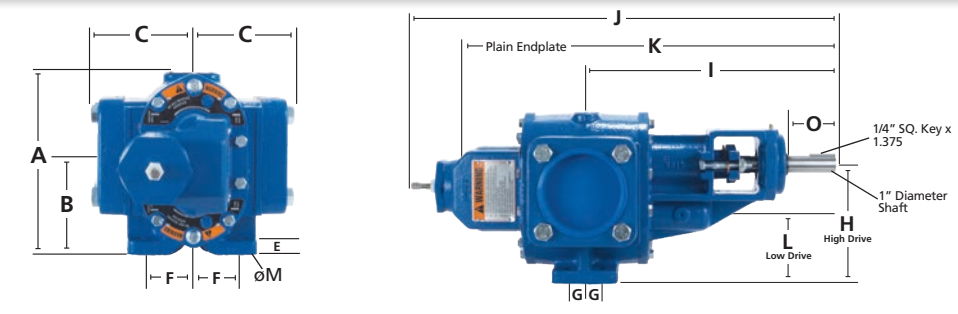
GEAR REDUCTION - GB



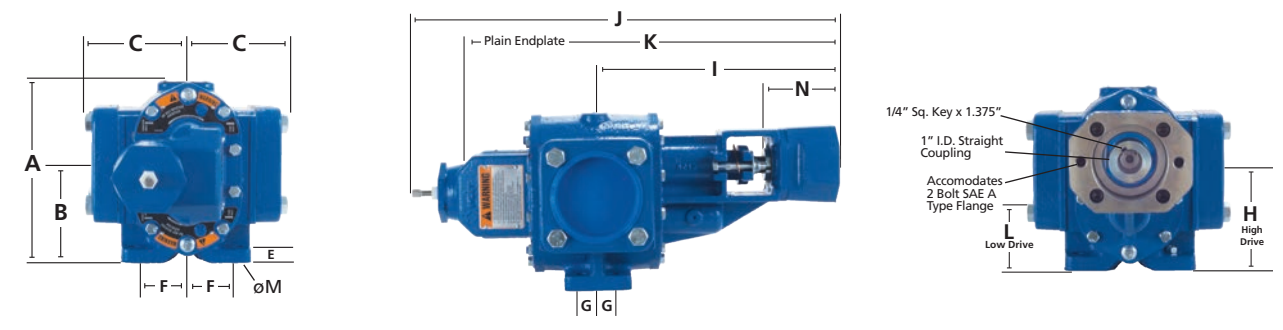
11, 17, 22 SERIES-90°		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	Q	R	PORTS
119	HB & HBRV	in 10.75	5.00	3.63	7.63	0.75	2.75	0.88	6.44	13.50	22.88	21.25	3.65	0.56		3.75			2" NPT TAPPED
		mm 273	127	92	194	19	70	22	164	343	581	540	93	14		95			
	HBF & HBFRV	in 11.52	5.00	4.30	8.30	0.75	2.75	0.88	6.44	13.50	22.88	21.25	3.65	0.56		3.75			2" NPT FLANGE STANDARD 2.5" NPT FLANGE OPTIONAL
		mm 293	127	109	211	19	70	22	164	343	581	540	93	14		95			
	HH & HHRV	in 10.75	5.00	3.63	7.63	0.75	2.75	0.88	6.44	11.84	21.00	17.50	3.65	0.56	2.72				2" NPT TAPPED
		mm 273	127	92	194	19	70	22	164	301	533	445	93	14	69				
	HHF & HHFRV	in 11.52	5.00	4.30	8.30	0.75	2.75	0.88	6.44	11.84	21.00	17.50	3.65	0.56	2.72				2" NPT FLANGE STANDARD 2.5" NPT FLANGE OPTIONAL
		mm 293	127	109	211	19	70	22	164	301	533	445	93	14	69				
	GB & GBRV	in 10.75	5.00	3.63	7.63	0.75	2.75	0.88	6.44	14.81	23.88	20.52	3.65	0.56		1.75	3.52	11.63	2" NPT TAPPED
		mm 273	127	92	194	19	70	22	164	376	607	521	93	14		44	89	295	
	GBF & GBFRV	in 11.52	5.00	4.30	8.30	0.75	2.75	0.88	6.44	14.87	23.88	20.52	3.65	0.56		1.75	3.52	11.63	2" NPT FLANGE STANDARD 2.5" NPT FLANGE OPTIONAL
		mm 293	127	109	211	19	70	22	164	376	607	521	93	14		44	89	295	
179	HB & HBRV	in 10.75	5.00	3.63	7.75	0.75	2.75	0.88	6.44	13.71	23.63	22.00	3.65	0.56		3.00			2" NPT TAPPED
		mm 273	127	92	197	19	70	22	164	348	600	559	93	14		76			
	HBF & HBFRV	in 11.63	5.00	4.25	8.25	0.75	2.75	0.88	6.44	13.71	23.63	20.12	3.65	0.56		3.00			2" NPT FLANGE STANDARD 2.5" NPT FLANGE OPTIONAL
		mm 295	127	108	210	19	70	22	164	348	600	511	93	14		76			
	HH & HHRV	in 10.75	5.00	3.63	7.75	0.75	2.075	0.88	6.44	12.60	22.50	19.00	3.65	0.56	2.72				2" NPT TAPPED
		mm 273	127	92	197	19	70	22	164	320	572	483	93	14	69				
	HHF & HHFRV	in 11.63	5.00	4.25	8.25	0.75	2.75	0.88	6.44	12.60	22.50	19.00	3.65	0.56	2.72				2" NPT FLANGE STANDARD 2.5" NPT FLANGE OPTIONAL
		mm 295	127	108	210	19	70	22	164	320	572	483	93	14	69				
	GB & GBRV	in 10.75	5.00	3.63	7.75	0.75	2.75	0.88	6.44	15.54	25.36	22.00	3.65	0.56		1.75	3.52	11.63	2" NPT TAPPED
		mm 273	127	92	197	19	70	22	164	395	644	559	93	14		44	89	295	
	GBF & GBFRV	in 11.52	5.00	4.30	8.30	0.75	2.75	0.88	6.44	15.54	25.36	22.00	3.65	0.56		1.75	3.52	11.63	2" NPT FLANGE STANDARD 2.5" NPT FLANGE OPTIONAL
		mm 295	127	108	210	19	70	22	164	395	644	559	93	14		35	89	295	
229	HBF & HBFRV	in 12.25	5.00	6.50	11.00	0.75	2.75	0.88	6.44	14.50	25.00	21.50	3.65	0.56		3.00			3" NPT FLANGE STANDARD 4" NPT FLANGE OPTIONAL
		mm 311	127	165	279	19	70	22	164	368	635	546	93	14		76			
	HHF & HHFRV	in 12.25	5.00	6.50	11.00	0.75	2.75	0.88	6.44	13.40	24.00	20.50	3.65	0.56	2.72				3" NPT FLANGE STANDARD 4" NPT FLANGE OPTIONAL
		mm 311	127	165	279	19	70	22	164	340	610	521	93	14	69				
	GBF & GBFRV	in 12.25	5.00	6.50	11.63	0.75	2.75	0.88	6.44	16.38	27.00	23.50	3.65	0.56		1.75	3.52	11.63	3" NPT FLANGE STANDARD 4" NPT FLANGE OPTIONAL
		mm 311	127	165	295	19	70	22	164	416	686	597	93	14		44	89	295	

11, 17, 22 SERIES - 180° PORTS

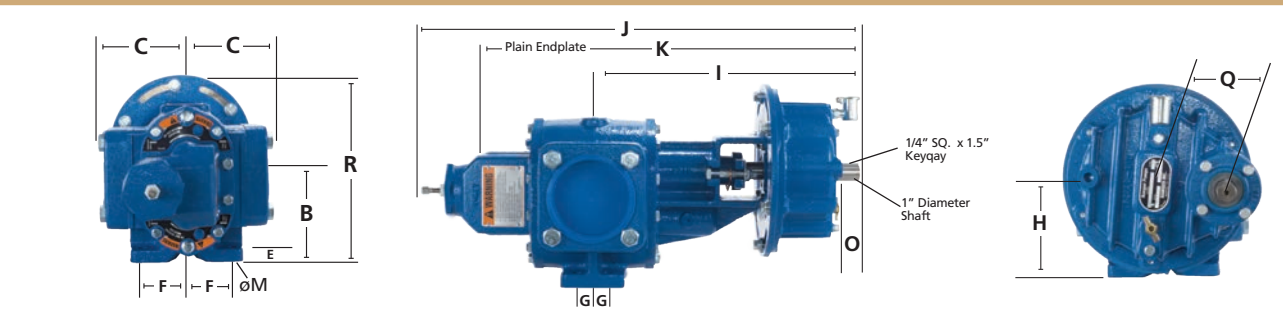
OUTBOARD BEARING - HB



HYDRAULIC - HH



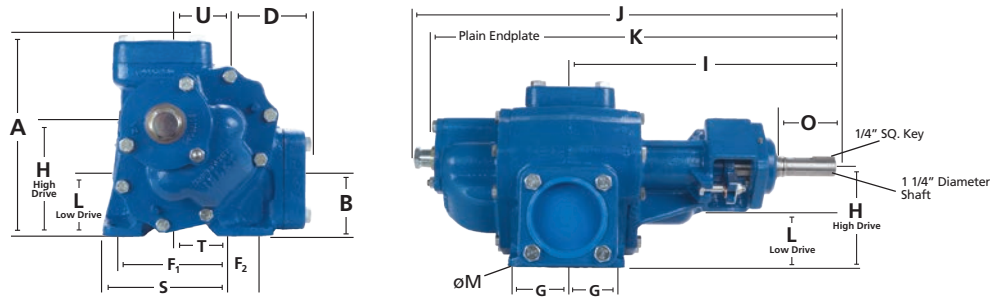
GEAR REDUCTION - GB



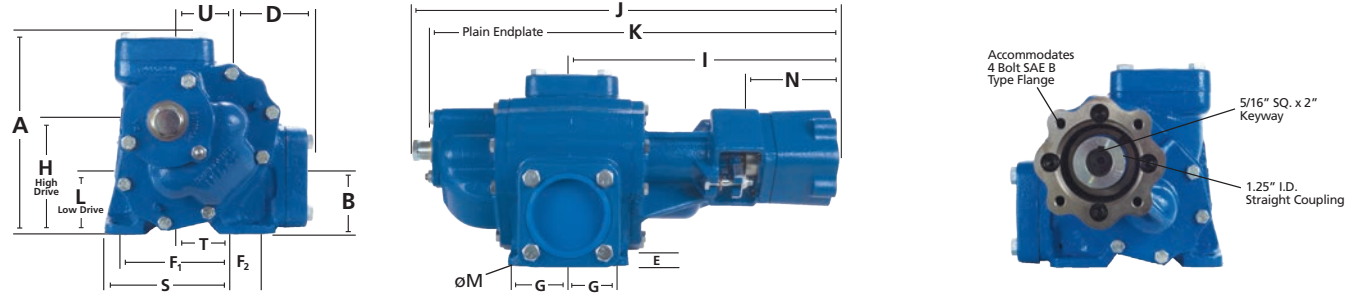
11, 17, 22 SERIES-180°		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	Q	R	PORTS	
118	HBF & HBFRV	in 9.50	5.00	4.14	8.28	0.75	2.75	0.88	6.44	13.50	22.88	21.25	3.65	0.56		3.75			2" NPT FLANGE STANDARD	
		mm 241	127	105	210	19	70	22	164	343	581	540	93	14		95				
	HHF & HHFRV	in 9.50	5.00	4.14	8.28	0.75	2.75	0.88	6.44	11.84	21.00	17.50	3.65	0.56	2.72				2" NPT FLANGE STANDARD	
		mm 241	127	105	210	19	70	22	164	301	533	445	93	14	69					
	GBF & GBFRV	in 9.50	5.00	4.14	8.28	0.75	2.75	0.88	6.44	14.81	23.88	20.52	3.65	0.56		1.75	3.52	11.63	2" NPT FLANGE STANDARD	
		mm 241	127	105	210	19	70	22	164	376	607	521	93	14		44	89	295		
	178	HBF & HBFRV	in 9.50	5.00	4.89	9.78	0.75	2.75	0.88	6.44	13.71	23.63	20.12	3.65	0.56		3.00			3" NPT FLANGE STANDARD
			mm 241	127	124	248	19	70	22	164	348	600	511	93	14		76			
		HHF & HHFRV	in 9.50	5.00	4.89	9.78	0.75	2.75	0.88	6.44	12.60	22.50	19.00	3.65	0.56	2.72				3" NPT FLANGE STANDARD
			mm 241	127	124	248	19	70	22	164	320	572	483	93	14	69				
		GBF & GBFRV	in 9.50	5.00	4.89	9.78	0.75	2.75	0.88	6.44	15.54	25.36	22.00	3.65	0.56		1.75	3.52	11.63	3" NPT FLANGE STANDARD
			mm 241	127	124	248	19	70	22	164	395	644	559	93	14		44	89	295	
228		HBF & HBFRV	in 9.44	5.00	4.75	9.50	0.75	2.75	0.88	6.44	14.50	25.00	21.50	3.65	0.56		3.00			4" NPT FLANGE STANDARD 3" NPT FLANGE OPTIONAL
			mm 240	127	121	241	19	70	22	164	368	635	546	93	14		76			
		HHF & HHFRV	in 9.44	5.00	4.75	9.50	0.75	2.75	0.88	6.44	13.40	24.00	20.50	3.65	0.56	2.72				4" NPT FLANGE STANDARD 3" NPT FLANGE OPTIONAL
			mm 240	127	121	241	19	70	22	164	340	610	521	93	14	69				
		GBF & GBFRV	in 9.44	5.00	4.75	9.50	0.75	2.75	0.88	6.44	16.38	27.00	23.50	3.65	0.56		1.75	3.52	11.63	4" NPT FLANGE STANDARD 3" NPT FLANGE OPTIONAL
			mm 240	127	121	241	19	70	22	164	416	686	597	93	14		44	89	295	

48 SERIES ANGLED GEAR PUMPS

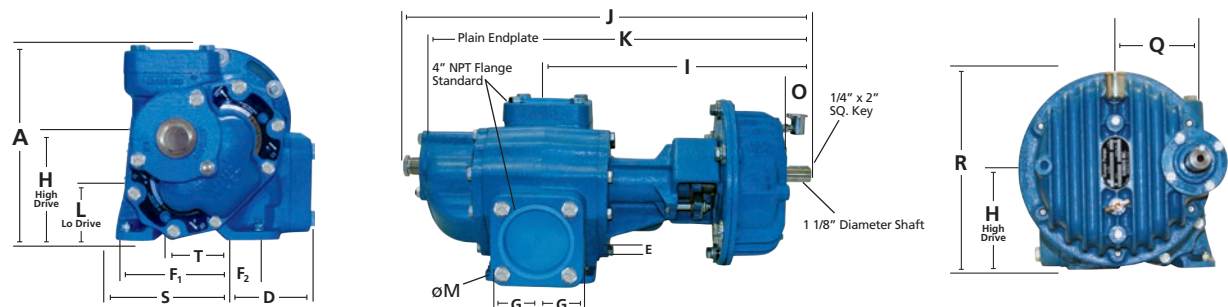
OUTBOARD BEARING - HB



HYDRAULIC - HH



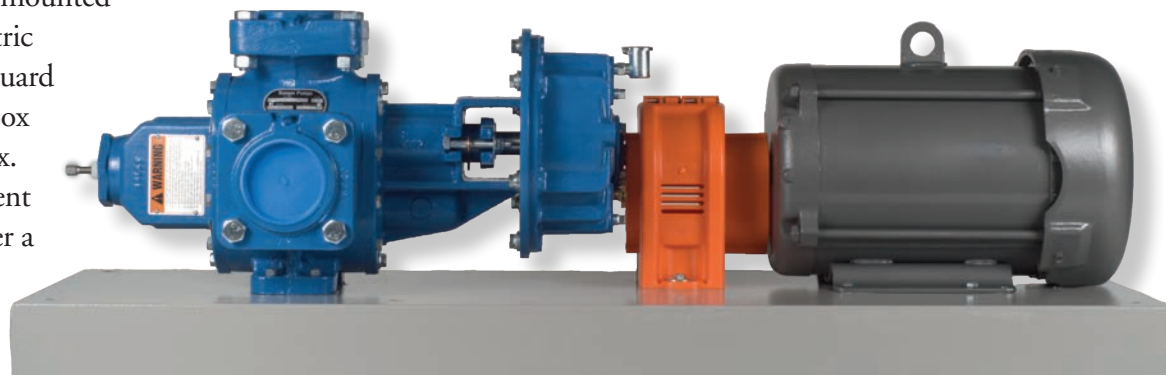
GEAR REDUCTION - GB



489 ANGLED GEAR	A	B	D	E	F ₁	F ₂	H	I	J	K	L	M	N	O	Q	R	S	T	U	PORTS	
489	HB & HBFRV	in	11.54	3.15	5.53	0.63	6.09	1.90	6.40	17.55	28.00	27.25	3.75	0.75							4" NPT FLANGE STANDARD
		mm	293	80	140	16	155	48	163	446	711	692	95	19							3" NPT FLANGE OPTIONAL
	HH & HHFRV	in	11.54	3.15	5.53	0.63	6.09	1.90	6.40	16.35	27.00	26.00	3.75	0.75	3.75						
		mm	293	80	140	16	155	48	163	415	686	660	95	19	95						
GB & GBFRV	in	11.54	3.15	5.53	0.63	6.09	1.90	6.40	22.27	34.00	33.00	3.75	0.75	2.87	4.188	12.04	6.89	2.65			
	mm	293	80	140	16	155	48	163	566	864	838	95	19	73	106	306	175	67			

Mounted Pump Systems

Ranger pumps can be mounted on a base with an electric motor, coupling and guard with an integral gear box or stand alone gear box. There are many different options that can deliver a wide range of gallons per minute.



HYDRAULIC PUMPS

All of the Ranger 11, 17, 22 and 48 series pumps can be supplied with a hydraulic motor adaptor. The adaptor and rigid coupling to connect the pump and hydraulic motor are included in the hydraulic package. Upon request, Ranger can supply the hydraulic motor as well.



Identifying Direction of Rotation Mounting




Hi-Drive Pumps

W: Clockwise Rotation X: Counterclockwise Rotation Y: Clockwise Rotation Z: Counterclockwise Rotation

Lo-Drive Pumps

LW: Clockwise Rotation LX: Counterclockwise Rotation LY: Clockwise Rotation LZ: Counterclockwise Rotation

Pump Rotation

Pumping rotation 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. Example:  CW

WARNING: Read installation, operation and maintenance Manual before installing, performing maintenance or operating a Ranger pump.

Company History

Ranger pumps are built in the USA from parts made in the USA. We are proud of our history of providing our customers with the highest quality helical gear pumps for over 20 years.

Ranger Pumps is a privately held corporation that was founded in 1989 in Memphis, Tennessee. The company has become a national supplier serving customers in all 50 states and numerous countries around the world.

Customer Service

We consider customer service to be a high priority. We are proud of the fact that when you call our offices you will talk to a knowledgeable representative who understands all aspects of our business, not a voice mail message.

Quality Assurance

All of our products are built to exacting standards and are tested to be sure they work before they go out the door.



Shipping

Memphis, Tennessee is a major distribution center hub in the United States. We are able to ship quickly with short lead times to virtually anywhere in the world.

Investing in Our Product

We are constantly adding new equipment and processes. We have recently added a state-of-the-art coordinate measuring machine that allows us to make more accurate parts, thus insuring a very high quality end product.

Made in the USA

We are extremely proud of the fact that all Ranger castings are poured and machined in the USA. All Ranger gears, shafts, bushings and packings are made in the USA. All major Ranger components are made in the USA.

Pumps Are Our Business

We specialize in the manufacture of precision helical gear pumps. Our vision is focused very closely on these specific products, outstanding customer service, with on-time delivery and excellent technical support.

Competitively Priced Products

Ranger pumps performance meets or exceeds the competition in every way. We are careful to be sure that our quality exceeds our competitors while providing an outstanding value on every pump we manufacture.



Ranger, Inc.

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