



**RANGER  
PUMPS**

Ranger, Inc. / Memphis, TN

**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**

Series Eleven 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 only.



**SERIES 17**

Series Seventeen 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 2" NPT tapped port.



**SERIES 22**

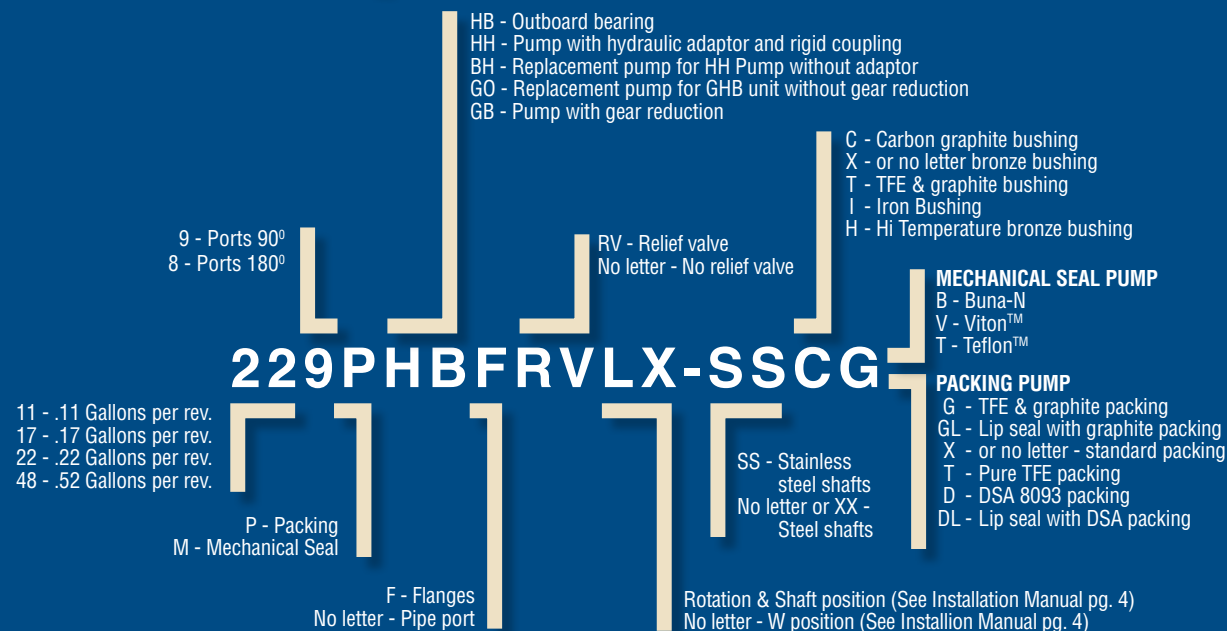
Series Twenty-two Ranger pumps are designed to output .22 gallons per revolution at a maximum of 750 rpm and generate up to 165 gallons per minute. These pumps are offered in 90° and 180° with 3" and 4" flanges.



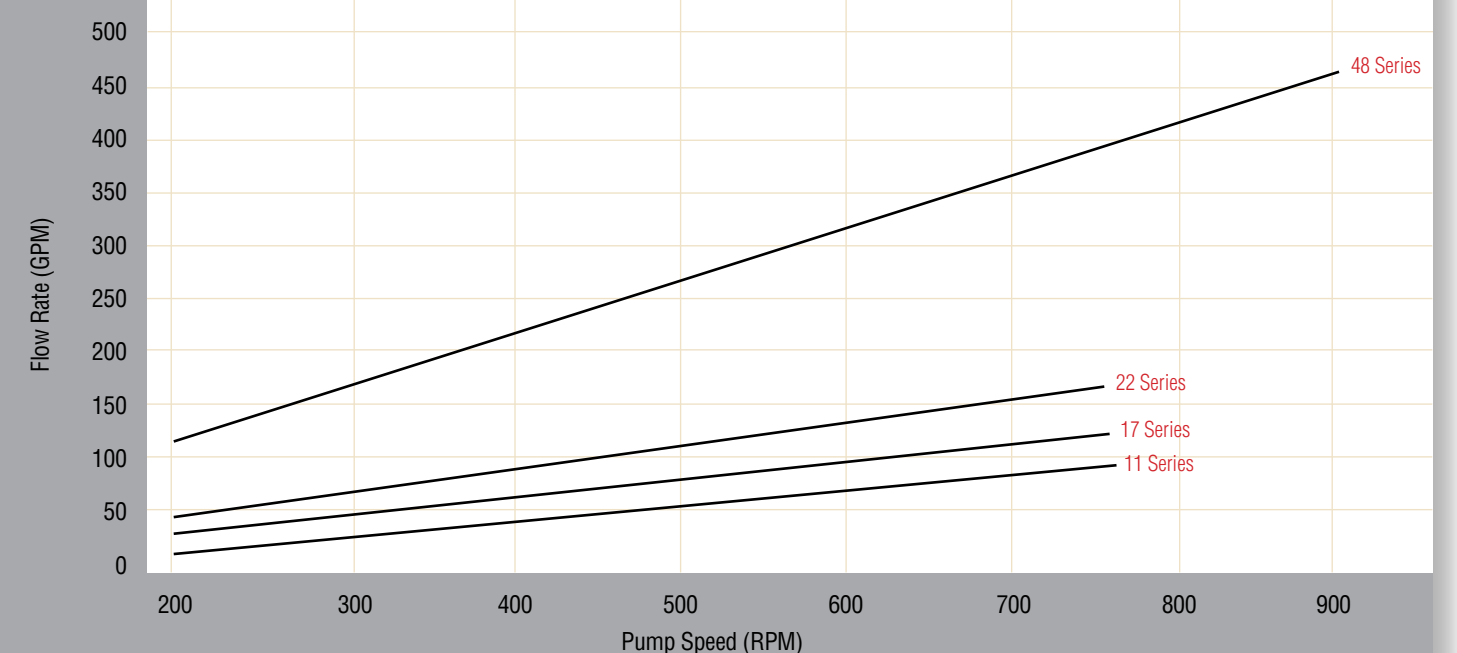
**SERIES 48**

Series Forty-eight 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



## Theoretical Capacity

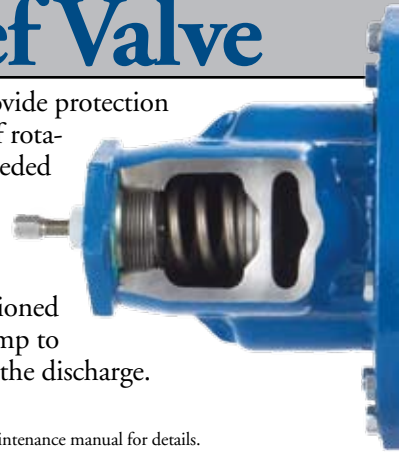


# Ranger Pumps can be Engineered for Blending Mixing • Transfer • Solvents • Molasses • Gasoline Resins • Oil • Asphalt • Chemicals

## 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.



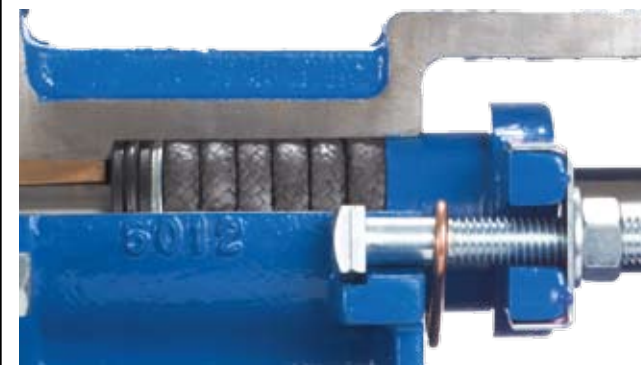
\*See Installation, Operation and Maintenance manual for details.

## Stuffing Box



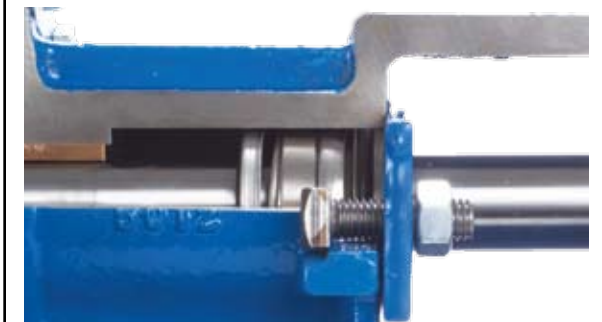
Ranger Pumps can be supplied as standard with stuffing box. They can be easily converted from packing to a lip seal or mechanical seal. Several types of packing are available for various applications: for example - high temperatures.

## Lip Seal Design



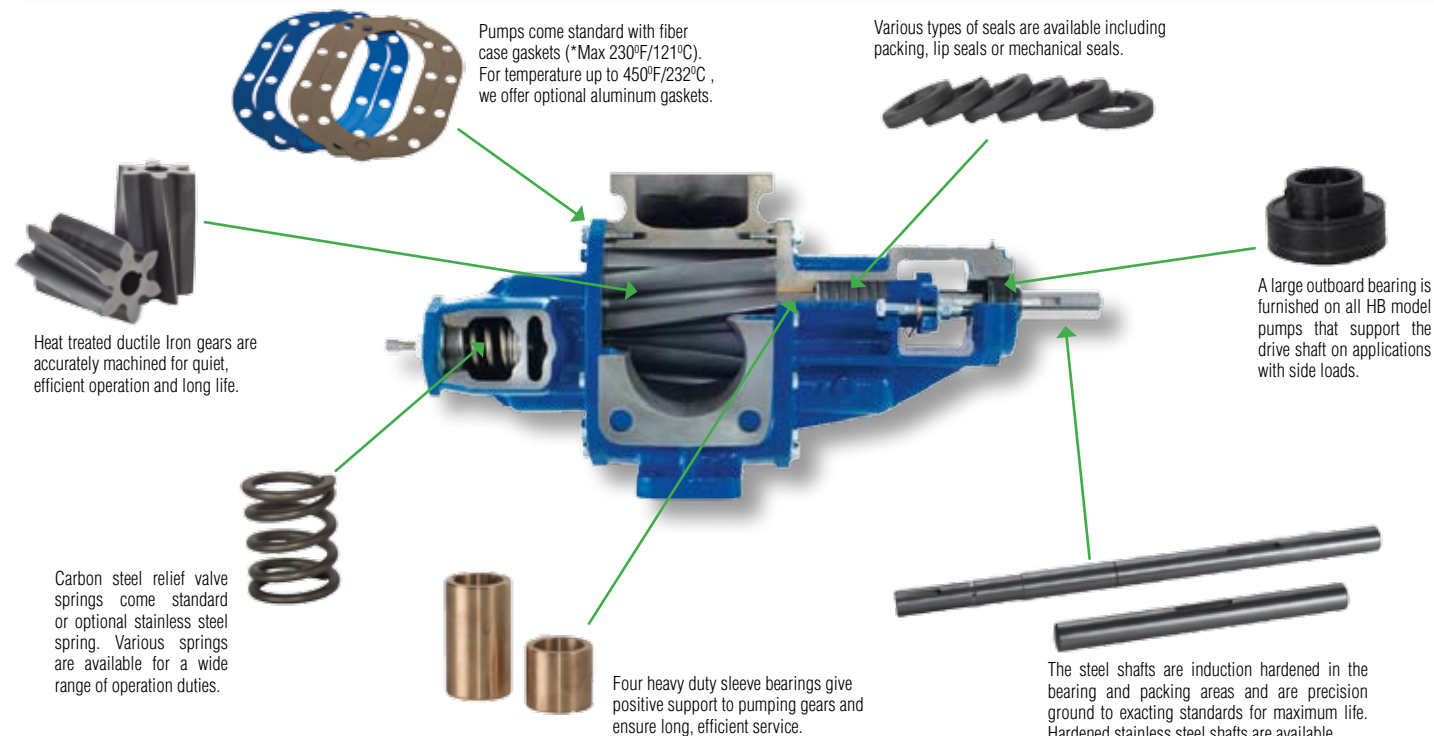
Ranger Pumps can be supplied with a combination lip seal and back-up packing as shown above. This can be easily converted from the lip seal combination to packing only or a mechanical seal.

## 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 lip seal. 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.

## Key Components



## 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

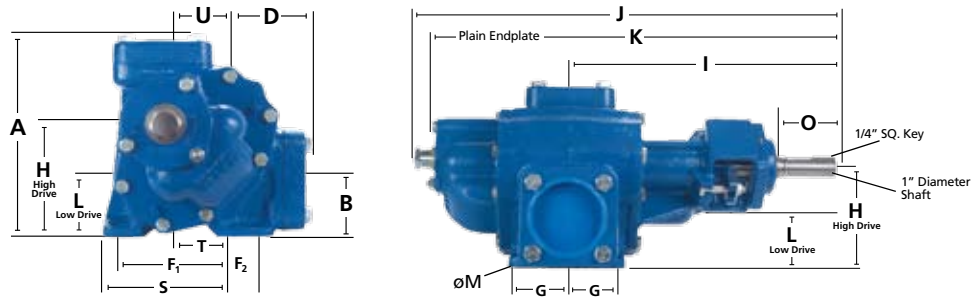
- 125 PSI (862 KPA) maximum inlet and discharge pressure
- 750 RPM maximum for 11, 17 & 22 series. (See speed vs. viscosity curve for maximum RPM).
- 900 RPM maximum for 48 series. (See speed vs. viscosity curve for maximum RPM).
- 350°F (177°C) maximum temperature for standard packing.
- 500°F (260°C) 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



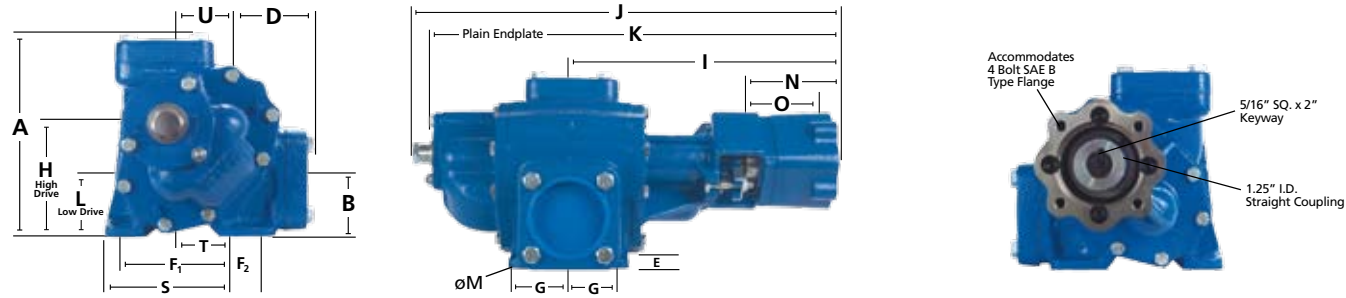


# ANGLED GEARS

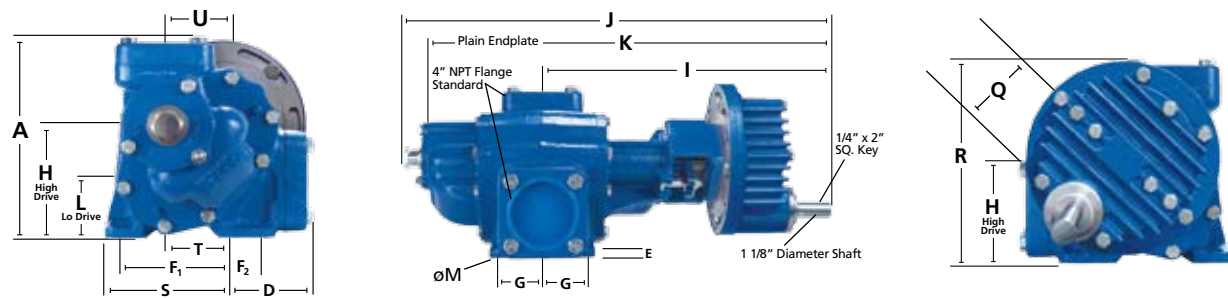
OUTBOARD BEARING - HB



HYDRAULIC - HH



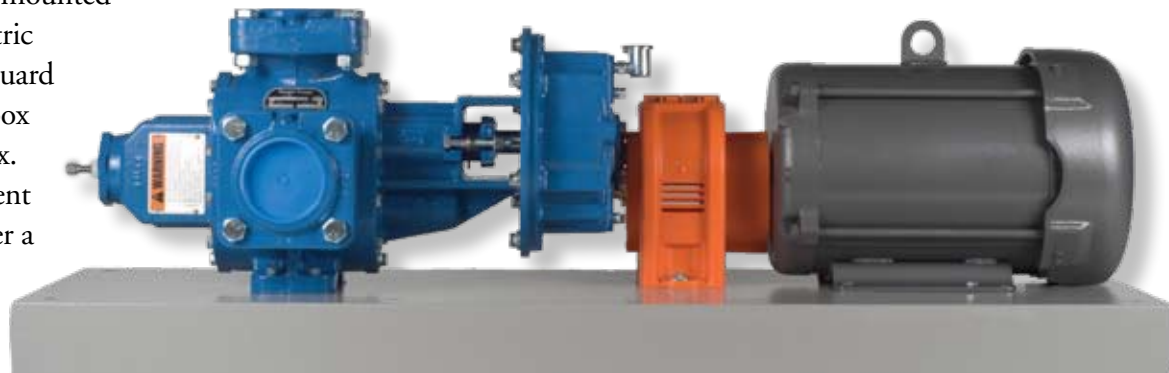
GEAR REDUCTION - GB



489 ANGLED GEAR	A	B	D	E	F <sub>1</sub>	F <sub>2</sub>	H	I	J	K	L	M	N	O	Q	R	S	T	U	PORTS		
489	HBF & 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					6.89	2.65	3.25	4\" NPT FLANGE STANDARD 3\" NPT FLANGE OPTIONAL
		mm	293	80	140	16	155	48	163	446	711	692	95	19					175	67	83	
	HHF & 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	1.00	2.00			6.89	2.65	3.25	
		mm	293	80	140	16	155	48	163	415	686	660	95	19	25	51			175	67	83	
GBF & 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		1.75	4.188	12.04	6.89	2.65	3.25		
	mm	293	80	140	16	155	48	163	566	864	838	95	19		44	106	306	175	67	83		

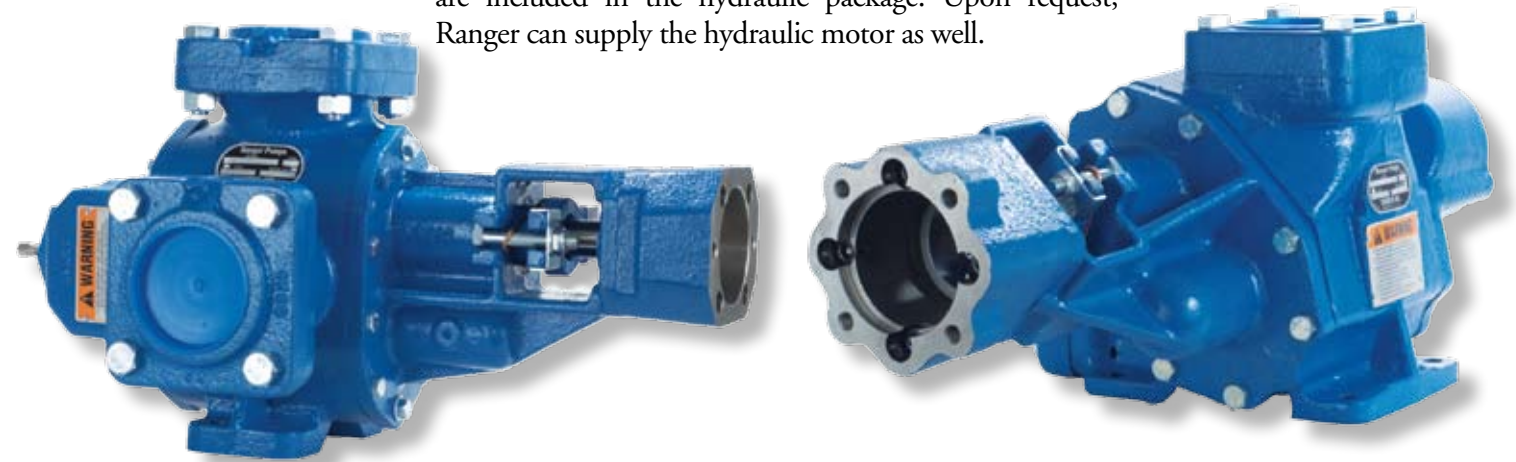
## Mounted Pump Systems

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 Computer 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.

6400 Shelby View Dr., Suite 110 • Memphis, TN 38134 • 800-264-4115 • 901-388-1257  
Fax 901-388-0470 • Email: [info@RangerPumps.com](mailto:info@RangerPumps.com) • [www.rangerpumps.com](http://www.rangerpumps.com)