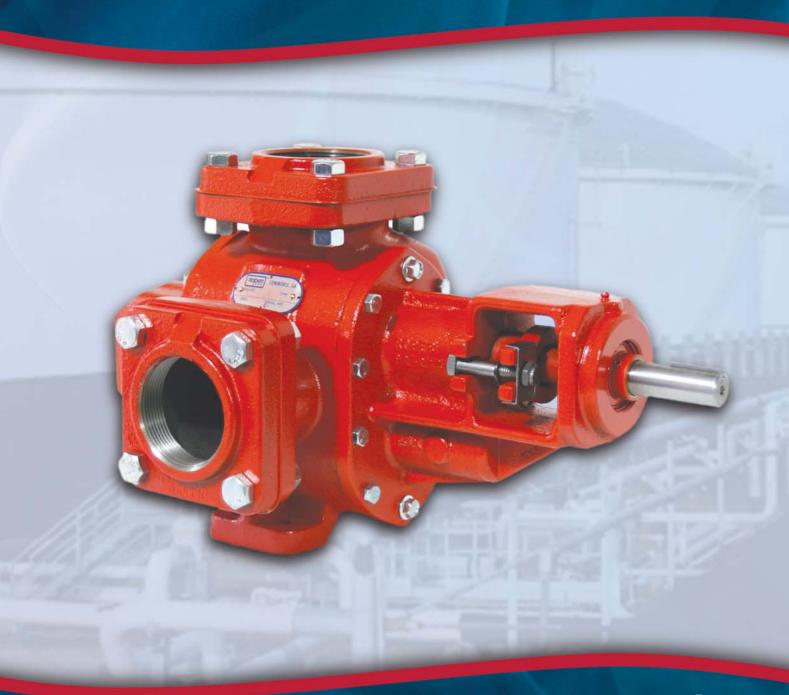


THE LEADING FORCE behind liquids™ since 1857



3600 Series Heavy Duty Pumps General Purpose Pumps for Mixing, Blending, Recirculating, Fixed and Mobile Transfer

The Roper Pump Family of Gear Pumps

	Typical Applications	Primary Features
3600	 Mix, circulate, and transfer viscous liquids Gasoline, asphalt, molasses Ink, roofing compounds, oils 	 Precise tolerances for maximum efficiency Direct drive or built-on gear reducers Bi-directional rotation* Configurations available for close coupled drive and close coupled hydraulic drive
Z	■ Industrial applications requiring a special mechanical seal	 ANSI Flanges Many parts interchangeable with 3600 Series Direct drive or built-on gear reducers Bi-directional rotation* Configurations available for close coupled drive and close coupled hydraulic drive
3800	■ Oilfields including light & heavy crude oil ■ Kerosene mixtures, condensates and hot oils	 Sealed ball bearings Quadruple grease purged lip seals Helical gears for quiet operation Bi-directional rotation*
Bulk	■ Fuels, solvents, petrochemicals ■ Residual fuel oils, molasses, resins ■ Tankers, barges, process plants, refineries	 Large ports (6" and 8" available) allow more efficient transfer of fluids Thru port design allows for lower inlet and outlet losses
5600	 Hydroseeding Grouting, seal coating, oil and sand Wastewater, waste oil, sludge, slurries Brine, paper pulp, fertilizer feeds 	Rubber covered gears Bi-directional rotation Abrasive applications; up to pea size particles
٧	 Pressure lubrication Hydraulic service General transfer applications 	■ Operates at motor speeds ■ Bi-directional rotation* ■ Close coupled capability
2835	■ Roofing Compounds ■ Molasses ■ Feed Supplements	■ Operates at standard motor speeds ■ Large ports allow easier fluid entry ■ Built-in relief valve
^	 Hazardous liquid transfer "Zero leakage" applications due to environmental concerns Chemical and petroleum applications 	 Mag-drive, sealless design eliminates seal repair costs and down time C-face mount eliminates misalignment Bi-directional rotation and self-priming
F	 Hydraulic power for lifts, machine actuation, fuel burners, and blenders General transfer of oil and petroleum fluids 	 2 inlet ports, 2 outlet ports allows multiple piping arrangements (except F150 - F300) High Pressure Range Maintain pump without pipe removal
ROC	 Chemical processing Pharmaceutical industry Injection or transfer of acids & solvents 	■ Stainless steel construction ■ Bi-directional rotation* ■ Mag-drive, sealless option (X5-03 only)
9622	■ Chemical and transport applications ■ Corrosive liquid transfer	■ 316SS Housing ■ 17-4 PH SST Gears / Shafts ■ Built-in Relief Valve
PC	■ Viscous, abrasive and solids-containing liquids ■ Transfer of wastewater sludge, polymers, grouts, paints and adhesives	■ Pulsation free pumping ■ High suction lift capabilities ■ Ideal for shear sensitive liquids

*Pump reconfiguration may be required.



3600 Series Heavy Duty Pumps

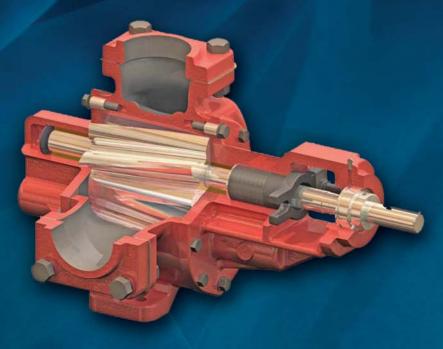
General Purpose Pumps for Mixing, Blending, Recirculating, Fixed and Mobile Transfer

Up to 468 GPM • Up to 125 PSI

These pumps operate smoothly and with equal efficiency in either direction of rotation. They effectively handle heavy, viscous materials such as asphalt, molasses, roofing compounds, and printing inks, as well as fuel oils, gasolines, and similar thin liquids.

Pumps can be supplied in several materials of construction, with or without built-in relief valves.

Pumps can be assembled either hi-drive or low-drive, and are available with conventional packed box or lapped-face mechanical shaft seal. They can be direct driven or driven through a built-in gear reduction with a wide range of ratios. These pumps operate equally well regardless of the mounting configuration or the direction of rotation.



MATERIALS OF CONSTRUCTION

Standard Fitted

Housing	Cast Iron
Gears	Cast Iron
Bearings	Bronze
Shafts	Steel

Optional Materials*

Gears	Bronze
	Stainless Steel Delrin® (Idler only)
Bearings	Iron
	Carbon
Shafts	Stainless Steel

^{*}Some of the optional materials may not be available for all sizes.

Delrin® is a registered trademark of E. I. du Pont de Nemours and Company.

FEATURES

Quiet-Running Helical Gears

- Heat treated cast-iron pumping gears are accurately machined for quiet, efficient operation and long life.
- The pumping gears are keyed to their shafts with a sliding fit and are easily replaced.
- Accurate machining insures proper meshing, and reduces friction and vibration.

Long-Lasting Bearing Surfaces

- Bearings are special wear-resistant, high-lead bronze. Iron and carbon bearings are available.
- Four heavy duty sleeve bearings give positive support to pumping gears and insure long, efficient service.
- Bearing grooves allow circulation of the liquid being pumped for lubrication & control of bearing temperature.
- Outboard drive shaft bearing supports external radial loads and absorbs thrust loads.

Precision-Ground Shafts

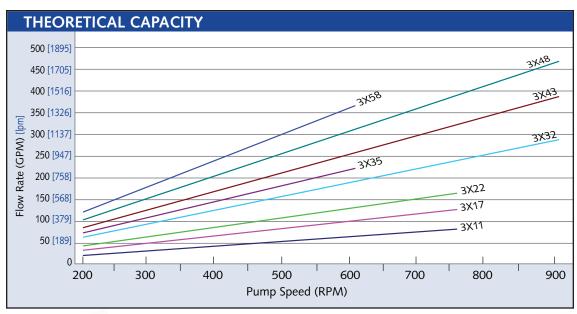
- The steel shafts are induction hardened in the bearing and sealing areas and are precision ground to exacting standards for maximum life.
- Hardened stainless steel shafts available.

Rugged Housing

- Standard castings are cast iron.
- Precise manufacturing tolerances provide minimum clearances for maximum pumping efficiency.
- Large, hardened steel dowel pins insure positive alignment between the faceplate, case, and backplate.

THE LEADING FORCE behind liquids[™] since 1857

Capacities & Nomenclature





NOMEN	CLATURE – 3	B611 GHBFRV	
3	Port Location	3 – Right Angle Ports	
3	Port Location	4 – Straight Through Ports	
		5 – Triple Lip Seal	
6	Caal Ontion	6 – Packing	
ь	Seal Option	7 – Mechanical Seal	
		8 – Lip Seal with Ball Bearings	
		11 – 11 Gal/100 Rev [41.6 L/100 Rev]	35 – 35 Gal/100 Rev [132.5 L/100 Rev]
44	C:	17 - 17 Gal/100 Rev [64.4 L/100 Rev]	43 – 43 Gal/100 Rev [162.8 L/100 Rev]
11	Size	22 – 22 Gal/100 Rev [83.3 L/100 Rev]	48 – 48 Gal/100 Rev [181.7 L/100 Rev]
		32 – 32 Gal/100 Rev [121.1 L/100 Rev]	58 – 58 Gal/100 Rev [219.6 L/100 Rev]
	Н	Pump Head without Outboard Ball Bearing	
	НВ	Tapped Port Case with Outboard Ball Bearing	5
*=	HBF	Flanged Ports with Outboard Bearing	
ratic	HBFRV	Flanged Ports with Outboard Bearing and Re	lief Valve
igi	GHBFRV	Flanged Ports with Outboard Bearing, Relief	Valve, and Gear Reducer
Configuration*	BH	Tapped Ports, No Outboard Bearing, Mounti	ng for Hyd. Drive or CCD Bracket
	BHF	Flanged Ports, No Outboard Bearing, Mount	ing for Hyd. Drive or CCD Bracket
	BHFRV	Flanged Ports, No Outboard Bearing, Mount	ing for Hyd. Drive or CCD Bracket, Relief Valve

^{*} There are over 40 basic configurations and several thousand custom designs.
Please consult your local Roper Pump distributor to decide which configuration best fits your needs.

Key Components



BEARINGS

Four heavy duty sleeve bearings give positive support to pumping gears and ensure long, efficient service. A special wear-resistant, high-lead bronze bearing is standard on 3600 Series Pumps. For thin non-abrasive liquids we offer optional carbon bearings, as well as iron bearings for abrasive liquids. The bearings are grooved to allow circulation of the liquid being pumped for lubrication & control of bearing temperature.



GEARS

The helical pumping gears are machined from heat treated cast iron because of its excellent wear resistance.

For chemical pumping applications, the standard gears can be replaced with stainless steel or bronze. An optional Delrin® idler gear can be used for quieter operation when running thin liquids.



SHAFTS

Standard steel shafts are induction hardened in the bearing and sealing areas, and are precision ground to exacting standards for maximum life. Hardened stainless steel shafts are also available upon request.



HOUSING

Our rugged cast-iron housings are manufactured to precise tolerances, providing minimum clearances for maximum pumping efficiency. Large, hardened steel dowel pins ensure positive alignment between the faceplate, case, and backplate.



GASKETS

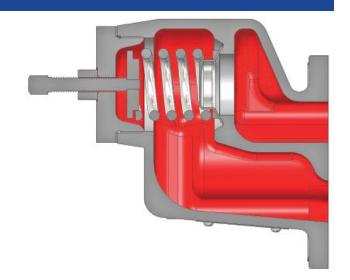
3600 Series Pumps come standard with fiber gaskets that are used up to 212°F/100°C. For higher temperature applications (up to 450°F/232°C) we offer other optional gasket materials.

Relief Valves & Jacketing

RELIEF VALVE

In the event of overpressure situations, our adjustable relief valve protects personnel and equipment by returning liquids to the suction side of the pump. Various spring sizes can be specified to handle a wide range of operating conditions.

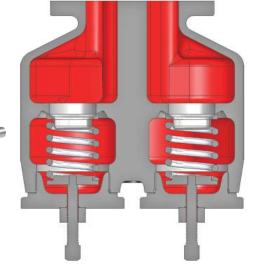
Roper Pump's inverted poppet relief valve is designed without close fitting guides that can clog and cause excessive pressures when the valve does not open freely. The valve will provide protection in only one direction of rotation. However it can be positioned easily to either side of the pump to accommodate flow direction.



BI-DIRECTIONAL RELIEF VALVE*

Roper Pump's integral bi-directional pressure relief valve offers reliable protection of your personnel and equipment, regardless of which direction you are pumping. You can reverse flow without disabling pressure relief operability, or compromising operator safety. Based on our rugged and time proven standard relief valves, this offers you a lighter weight, lower cost alternative compared to externally plumbed systems.





*Available on 11, 17 and 22 sizes

JACKETING**

Whether the fluid to be pumped must be heated, cooled, or maintained at a specific temperature, a jacketed Roper pump will handle difficult-to-pump materials such as Bunker C, molasses, asphalt mixes, refined sugars, creosote, printing ink, and other viscous fluids which require temperature control for satisfactory handling.

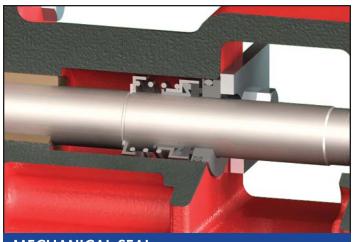
Roper Pump jacketed pumps provide efficient heat transfer to the packing, seal relief valve, bearing areas, and endplates of the pump. The jackets are suitable for use with steam, hot or cold water, heat transfer oil, etc., as heating or cooling mediums.

Jacketing is available on the faceplate only, backplate only, or on both.



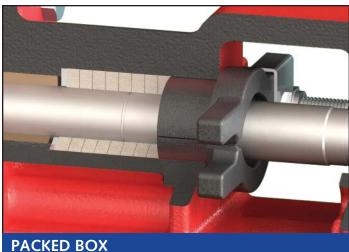


Pump Seals

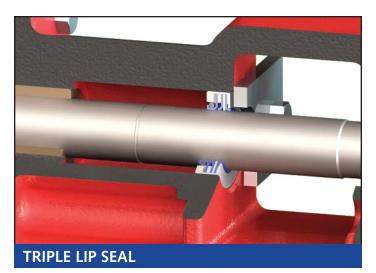


MECHANICAL SEAL

Mechanical seals are for those applications where product leakage is unacceptable. Under proper conditions the mechanical seal has a longer service life than the packed box and does not require adjustment. The standard mechanical seal is an elastomeric bellows type seal. A PTFE wedge seal is also available.



Our standard packing is suited for general purpose applications, and is easily replaced with split ring packing. For optimum performance, the gland should be adjusted to allow slight seepage. Standard packing is graphite, with several optional packing materials available for applications involving high temperatures or mildly corrosive liquids, or those requiring compatibility with food products.

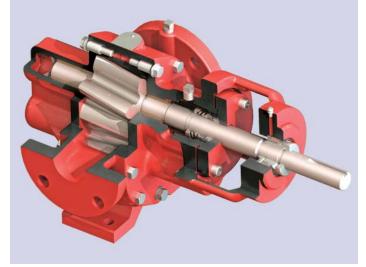


Offering the same high degree of sealing reliability as a mechanical seal, triple lip seals are better suited for viscous products that tend to set up while the pump is idle, such as resins, glues and paints. The lips create an effective barrier to product leakage, and will move freely upon resumption of pumping a thickening substance. In cases where extreme circumstances can cause catastrophic failure of mechanical seals, the resilient nature of the triple lip seal makes it relatively immune to sudden failure.

Need More Seal Options?

OUR Z SERIES...

Based on our 3600 Series, the Roper "Z" Series features a larger seal chamber in a two-piece backplate that allows for virtually unlimited options, and facilitates easy seal maintenance. Many parts are interchangeable with the 3600 Series.



Gear Reduction (GHB) Unit

Totally enclosed and running in oil, the reduction gears are made of steel to assure longer life. Antifriction bearings are used throughout. Three interchangeable gear ratios are available in each size. For additional ratios look at using a Roper Pump CCD bracket and an industrial standard gearmotor.

PERFORMANCE CHARTS

Performance figures show maximum horsepower requirements for minimum rated gallons per minute at the various speeds, viscosities and pressures. The charts are intended as a guide for conditions at the pump. In determining the proper conditions of operation for the pump, many factors must be considered including inlet conditions, liquid characteristics, and temperature.

If there is any question concerning these charts or the recommended operating conditions, please consult your Roper distributor, district representative, or the home office.

GEAR RATIC	S AND C	CAPACITI	ES FOR (GHB UNITS
	Motor RPM	Gear Ratio	Pump RPM	Max. Permissible HP
11	1150	4.60:1 3.94:1 3.20:1	250 290 360	5.5 6.5 8.0
through 22	1750	4.60:1 3.94:1 3.20:1	380 445 545	8.5 10.0 10.0
	3450*	4.60:1	750	10.0
32	1150	5.66:1 4.88:1 4.26:1	203 235 270	8.5 10.0 11.0
through 58	1750	5.66:1 4.88:1 4.26:1	309 360 410	13.0 15.0 15.0
	3450*	5.66:1	609	15.0

^{*3450} RPM motors are used in handling low viscosity lubricating liquids.



SIZE		RPM		250 R	PM			290	RPM	
Pump	PSI [bar]	SSU	30	100	1000	10,000	30	100	1000	10,000
	25 [1.7]	GPM [lpm] HP [kw]	25 [95] .7 [.52]	26 [98] .7 [.52]	27 [102] .9 [57]	27 [102] 1.3 [.97]	29 [110] .9 [.67]	30 [114] .9 [.67]	31 [117] 1.2 [.89]	31 [117] 1.5 [1.12]
11	50 [3.4]	GPM [lpm] HP [kw]	23 [87] 1.1 [.82]	25 [95] 1.1 [.82]	27 [102] 1.3 [.97]	27 [102] 1.7 [1.27]		29 [110] 1.3 [.97]	31 [117] 1.5 [1.12]	31 [117] 1.9 [1.42]
	100 [6.9]	GPM [lpm] HP [kw]		23 [87] 1.9 [1.42]	26 [98] 2.1 [1.57]	27 [102] 2.5 [1.86]		27 [102] 2.2 [1.64]	30 [114] 2.4 [1.79]	
	125 [8.6]	GPM [lpm] HP [kw]		22 [83] 2.2 [1.64]	26 [98] 2.4 [1.79]	27 [102] 2.8 [2.09]		26 [98] 2.7 [2.01]	30 [114] 2.9 [2.16]	31 [117] 3.5 [2.61]
	25 [1.7]	GPM [lpm] HP [kw]	38 [144] .8 [.6]	40 [151] .8 [.6]	41 [155] 1.1 [.82]	42 [159] 1.8 [1.34]		47 [178] 1.0 [.75]	48 [182] 1.3 [.97]	49 [185] 2.2 [1.64]
17	50 [3.4]	GPM [lpm] HP [kw]	33 [125] 1.4 [1.04]	38 [144] 1.4 [1.04]	41 [155] 1.7 [1.27]	42 [159] 2.4 [1.79]		45 [170] 1.6 [1.19]	48 [182] 1.9 [1.42]	49 [185] 2.8 [2.09]
' '	100 [6.9]	GPM [lpm] HP [kw]		34 [129] 2.5 [1.86]	40 [151] 2.9 [2.16]			41 [155] 3.0 [2.24]		48 [182] 4.2 [3.13]
	125 [8.6]	GPM [lpm] HP [kw]			39 [148] 3.4 [2.54]	41 [155] 4.1 [3.06]			46 [174] 4.0 [2.98]	48 [182] 4.9 [3.65]
	25 [1.7]	GPM [lpm] HP [kw]	52 [197] 1.1 [.82]	53 [201] 1.1 [.82]	55 [208] 1.4 [1.04]			61 [231] 1.3 [.97]	63 [238] 1.7 [1.27]	63 [238] 2.5 [1.86]
22	50 [3.4]	GPM [lpm] HP [kw]	52 [197] 2.0 [1.49]	52 [197] 2.0 [1.49]	54 [204] 2.3 [1.72]	55 [208] 2.8 [2.09]		60 [227] 2.3 [1.72]	62 [235] 2.6 [1.94]	63 [238] 3.4 [2.54]
	100 [6.9]	GPM [lpm] HP [kw]	44 [167] 3.5 [2.61]	50 [189] 3.5 [2.61]	53 [201] 3.8 [2.83]	55 [208] 4.3 [3.21]		58 [220] 4.2 [3.13]	61 [231] 4.5 [3.36]	63 [238] 5.3 [3.95]
	125 [8.6]	GPM [lpm] HP [kw]		49 [185] 4.2 [3.13]	53 [201] 4.5 [3.36]	55 [208] 5.0 [3.73]		57 [216] 5.2 [3.88]	61 [231] 5.5 [4.1]	63 [238] 6.3 [4.7]

CIZE		DDAA		202.	DAA			225	DDAA	
SIZE	_	RPM		203 I	KPM			235	KPM	
Pump	PSI [bar]	SSU	30	100	1000	10,000	30	100	1000	10,000
	25 [1.7]	GPM [lpm] HP [kw]	54 [204] 1 [.75]	57 [216] 1.2 [.89]	61 [231] 1.4 [1.04]	65 [246] 1.8 [1.34]	64 [242] 1.3 [9.7]	67 [254] 1.5 [1.12]	71 [269] 1.8 [1.34]	75 [284] 2.3 [1.72]
32	50 [3.4]	GPM [lpm] HP [kw]	41 [155] 2 [1.49]	47 [178] 2.2 [1.64]	55 [208] 2.4 [1.79]	59 [223] 2.8 [2.09]	51 [193] 2.3 [1.72]	57 [216] 2.5 [1.86]	66 [250] 2.8[2.09]	70 [265] 3.3 [2.46]
<i>32</i>	100 [6.9]	GPM [lpm] HP [kw]			44 [167] 4.4 [3.26]	52 [197] 4.8 [3.56]			54 [204] 5.1 [3.8]	62 [235] 5.6 [4.18]
	125 [8.6]	GPM [lpm] HP [kw]			[0.20]	49 [185] 5.8 [4.33]			46 [174] 6.6 [4.92]	59 [223] 7.1 [5.29]
	25 [1.7]	GPM [lpm] HP [kw]	71 [269] 2.6 [1.94]	72 [273] 2.6 [1.94]	73 [276] 2.8 [2.09]	75 [284] 4.3 [3.21]	83 [314] 3.1 [2.31]	84 [318] 3.1 [2.31]	85 [322] 3.3[2.46]	87 [329] 5.2 [3.88]
25	50 [3.4]	GPM [lpm] HP [kw]	67 [254] 3.7 [2.76]	69 [261] 3.7 [2.76]	71 [269] 3.9 [2.91]	73 [276] 5.4 [4.03]	79 [299] 4.4 [3.28]	81 [307] 4.4[3.28]	83 [314] 4.6[3.43]	85 [322] 6.5[4.85]
35	100 [6.9]	GPM [lpm] HP [kw]	3.7 [2.70]	61 [231] 5.8 [4.33]	68 [257] 6 [4.47]	71 [269] 7.5 [5.59]	4.4 [3.20]	73 [276] 6.8[5.07]	80 [303] 7 [5.22]	83 [314] 8.9[6.64]
	125 [8.6]	GPM [lpm] HP [kw]		J.0 [4.33]	65 [246] 7.2 [5.37]	70 [265] 8.7 [6.49]		0.0[3.07]	77 [291] 8.3 [6.19]	82 [310] 10.2[7.61]
	25 [1.7]	GPM [lpm] HP [kw]	76 [288] 1.8 [1.34]	79 [299] 2 [1.49]	83 [314]	85 [322] 3 [2.24]	90 [341]	93 [352]	97 [367] 2.8[2.09]	99 [375]
40	50	GPM [lpm]	62 [235]	68 [257]	2.3 [1.72] 77 [291]	81 [307]	2 [1.49] 76 [288]	2.3 [1.72] 82 [310]	91 [344]	3 [2.24] 95 [360]
43	100	HP [kw]	2.5 [1.86]	2.7 [2.01]	3 [2.24] 62 [235]	3.7 [2.76] 72 [273]	3.2 [2.39]	3.5 [2.61]	4 [2.98]	4.2 [3.13] 86 [326]
	[6.9] 125	HP [kw] GPM [lpm]			5.5 [4.1] 56 [212]	6.2 [4.62] 69 [261]			7 [5.22] 70 [265]	7.2 [5.37] 83 [314]
	[8.6] 25	HP [kw] GPM [lpm]	94 [356]	97 [367]	6.6 [4.92] 101 [382]	7.3 [5.44] 103 [390]	111 [420]	114 [432]	8.5 [6.34] 118 [447]	8.7 [6.49] 120 [454]
	[1.7] 50	HP [kw] GPM [lpm]	2.5 [1.86]	2.8 [2.09]	3.2 [2.39] 93 [352]	3.8 [2.83] 99 [375]	3 [2.24]	3.4 [2.54] 103 [390]	3.9 [2.91] 110 [416]	4.6 [3.43] 116 [439]
48	[3.4] 100	HP [kw] GPM [lpm]			4.7 [3.5]	5.3 [3.95] 88 [333]		5.1 [3.8]	5.6 [4.18]	6.3 [4.7] 105 [397]
	[6.9] 125	HP [kw] GPM [lpm]				8.5 [6.34]				10 [7.46]
	[8.6]	HP [kw]	446 [420]	440 [450]	424 [450]	422 [466]	426 [545]	420 [526]	444 [524]	11.7 [8.72]
	25 [1.7]	GPM [lpm] HP [kw]	116 [439] 2.7 [2.01]	119 [450] 2.7 [2.01]	121 [458] 2.8 [2.09]	123 [466] 4.8 [3.58]	136 [515] 4.3 [3.21]	139 [526] 4.3[3.21]	141 [534] 4.6 [3.43]	143 [541] 7 [5.22]
58	50 [3.4]	GPM [lpm] HP [kw]	106 [401] 5.6 [4.18]	114 [432] 5.6 [4.18]	120 [454] 5.7 [4.25]	122 [462] 7.7 [5.74]	126 [477] 6.3 [4.7]	134 [507] 6.3 [4.7]	140 [530] 6.6 [4.92]	142 [538] 9 [6.71]
20	100 [6.9]	GPM [lpm] HP [kw]			117 [443] 9.4 [7.01]	121 [458] 11.4 [8.5]			137 [519] 11 [8.2]	141 [534] 13.4 [9.99]
	125 [8.6]	GPM [lpm] HP [kw]			115 [435] 11.1 [8.28]	120 [454] 13.1 [9.77]			135 [511] 13 [9.69]	140 [530] 15.4 [11.48]

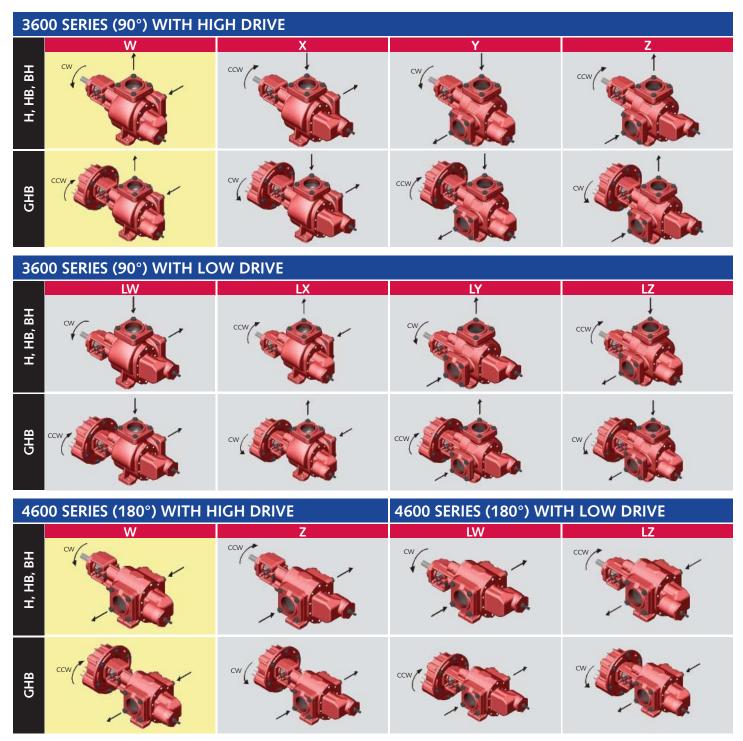
	360 F	RPM			380 I	RPM			445	RPM			545	RPM			750	RPM	
30	100	1000	10,000	30	100	1000	10,000	30	100	1000	10,000	30	100	1000	10,000	30	100	1000	10,000
37 [140] 1.1 [.82]	38 [144] 1.1 [.82]	39 [148] 1.4 [1.04]	39 [148] 2.2 [1.64]	40 [151] 1.1 [.82]	41 [155] 1.1 [.82]	42 [159] 1.5 [1.12]	42 [159] 2.3 [1.72]	47 [178] 1.4 [1.04]	48 [181] 1.4 [1.04]			58 [220] 1.9 [1.42]	59 [223] 1.9 [1.42]	60 [227] 2.7 [2.01]		80 [303] 2.8 [2.09]	81 [307] 2.8 [2.09]	82 [310] 3.8 [2.83]	
35 [132] 1.7 [1.27]	37 [140] 1.7 [1.27]	39 [148] 2.0 [1.49]	39 [148] 2.8 [2.09]	38 [144] 1.7 [1.27]	40 [151] 1.7 [1.27]	42 [159] 2.1 [1.57]	42 [159] 2.9 [2.16]	45 [170] 2.1 [1.57]	47 [178] 2.1 [1.57]	49 [185] 2.6 [1.94]		56 [212] 2.7 [2.01]	58 [223] 2.7 [2.01]	60 [227] 3.5 [2.61]		78 [295] 3.9 [2.91]	80 [303] 3.9 [2.91]	82 [310] 4.9 [3.65]	
	35 [132] 2.8 [2.09]	38 [144] 3.1 [2.31]	39 [148] 3.9 [2.91]	33 [125] 2.9 [2.16]	38 [144] 2.9[2.16]	41 [155] 3.3 [2.46]	42 [159] 4.1 [3.06]	40 [151] 3.5 [2.61]	45 [170] 3.5 [2.61]			51 [193] 4.4 [3.28]	56 [212] 4.4 [3.28]	59 [223] 5.2 [3.88]		73 [276] 6.3 [4.7]	78 [295] 6.3 [4.7]	81 [307] 7.3 [5.44]	
	34 [129] 3.3 [2.46]	38 [144] 3.6 [2.68]	39 [148] 4.4 [3.28]		37 [140] 3.5 [2.61]	41 [155] 3.9 [2.91]	42 [159] 4.7 [3.5]		44 [167] 4.2 [3.13]			48 [181] 5.4 [4.03]	55 [208] 5.4 [4.03]	59 [223] 6.2 [4.62]		70 [265] 7.5 [5.59]	77 [291] 7.5 [5.59]	81 [307] 8.5 [6.34]	
57 [216] 1.2 [.89]	59 [223] 1.2 [.89]	60 [227] 1.8 [1.34]	61 [231] 3.0 [2.24]	60 [227] 1.3 [.97]	62 [235] 1.3 [.97]	63 [238] 1.9 [1.42]	64 [242] 3.3 [2.46]	71 [269] 1.7 [1.27]	73 [276] 1.7 [1.27]	74 [280] 2.5 [1.86]		88 [333] 2.3 [1.72]		91 [344] 3.6 [2.68]		123 [466] 3.5 [2.61]		126 [477] 6.0 [4.47]	
52 [197] 2.1 [1.57]	57 [216] 2.1 [1.57]	60 [227] 2.7 [2.01]	61 [231] 3.9 [2.91]	55 [208] 2.3 [1.72]	60 [227] 2.3 [1.72]	63 [238] 2.9 [2.16]	64 [242] 4.3 [3.21]	66 [250] 2.9 [2.16]	71 [269] 2.9 [2.16]			83 [314] 3.6 [2.68]	88 [333] 3.6 [2.68]	91 [344] 4.9 [3.65]		118 [447] 5.4 [4.03]	123 [466] 5.4 [4.03]	126 [477] 7.9 [5.89]	
49 [185] 3.8 [2.83]	53 [201] 3.8 [2.83]	59 [223] 4.4 [3.28]	60 [227] 5.6 [4.18]	52 [197] 4.2 [3.13]	56 [212] 4.2 [3.13]	62 [235] 4.8 [3.58]	63 [238] 6.2 [4.62]	63 [238] 5.0 [3.73]	67 [254] 5.0 [3.73]	73 [276] 5.8 [4.33]		80 [303] 6.3 [4.7]		90 [341] 7.6 [5.67]		115 [435] 9.0 [6.71]		125 [473] 11.5 [8.58]	
49 [185] 4.6 [3.43]	51 [193] 4.6 [3.43]	58 [220] 5.2 [3.88]	60 [227] 6.4[4.77]	52 [197] 5.0 [3.73]	54 [204] 5.0 [3.73]	61 [231] 5.6 [4.18]	63 [238] 7.0 [5.22]	63 [238] 6.0 [4.47]	65 [246] 6.0 [4.47]			80 [303] 7.5 [5.59]		89 [337] 8.8 [6.56]				124 [469] 13.3 [9.92]	
76 [288] 2.0 [1.49]	77 [291] 2.0 [1.49]	79 [299] 2.6 [1.94]	79 [299] 3.9 [2.91]	80 [303] 2.2 [1.64]	81 [307] 2.2 [1.64]	83 [314] 3.0 [2.24]	83 [314] 4.3 [3.21]	94 [356] 2.7 [2.01]	95 [360] 2.7 [2.01]					119 [450] 4.4 [3.28]		162 [613] 5.1 [3.8]	163 [617] 5.1 [3.8]	165 [625] 7.2 [5.37]	
74 [280] 3.1 [2.31]	76 [288] 3.1 [2.31]	78 [295] 3.7 [2.76]	79 [299] 5.0 [3.73]	78 [295] 3.3 [2.46]	80 [303] 3.3 [2.46]	82 [310] 4.1 [3.06]	83 [314] 5.4 [4.03]	92 [348] 4.1 [3.06]	94 [356] 4.1 [3.06]				116 [439] 4.8 [3.58]	118 [447] 6.0 [4.47]		161 [609] 7.3 [5.44]		164 [621] 9.4 [7.01]	
68 [257] 5.4 [4.03]	74 [280] 5.4 [4.03]	77 [291] 6.0 [4.47]	79 [299] 7.3 [5.44]	72 [273] 5.7 [4.25]	78 [295] 5.7 [4.25]	81 [307] 6.5 [4.85]	83 [314] 7.8 [5.82]	86 [326] 6.8 [5.07]	92 [348] 6.8 [5.07]				114 [432] 8.2 [6.11]			154 [583] 12.0 [8.95]		163 [617] 14.1 [10.51]	
66 [250] 6.5 [4.85]	73 [276] 6.5 [4.85]	77 [291] 7.1 [5.29]	79 [299] 8.4 [6.26]	70 [265] 6.9 [5.15]	77 [291] 6.9 [5.15]	81 [307] 7.7 [5.74]	83 [314] 9.0 [6.71]	84 [318] 8.3 [6.19]	91 [344] 8.3 [6.19]	95 [360] 9.1 [6.79]			113 [428] 10.2 [7.61]		·	152 [575] 14.7 [10.96]		163 [617] 16.8 [12.53]	

	270 R	PM			309 I	RPM			360	RPM			410	RPM			609	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
75 [284] 1.7 [1.27]	78 [295] 1.9 [1.42]	82 [310] 2.5 [1.86]	86 [326] 3 [2.24]	88 [333] 2.1 [1.57]	91 [344] 2.3 [1.72]	95 [360] 2.8 [2.09]	99 [375] 3.4[2.54]	104 [394] 2.8 [2.09]	107 [405] 3 [2.24]	111 [420] 3.6 [2.68]	115 [435] 4.3 [3.21]	120 [454] 3.5 [2.61]	123 [466] 3.7 [2.76]	127 [481] 4.3 [3.21]	131 [496] 5.2 [3.88]	184 [697] 6 [4.47]	187 [708] 6.7 [5.0]	191 [723] 8 [5.97]	195 [738] 10 [7.46]
62 [235] 3 [2.24]	68 [257] 3.2 [2.39]	77 [291] 3.8 [2.83]	81 [307] 4.3 [3.21]	75 [284] 3.5 [2.61]	81 [307] 3.7 [2.76]	89 [337] 4.2 [3.13]	93 [352] 4.8[3.58]	91 [344] 4.5 [3.36]	97 [367] 4.7 [3.5]	106 [401] 5.3 [3.95]	110 [416] 6 [4.47]	107 [405] 5.5 [4.1]	113 [428] 5.7 [4.25]	122 [462] 6.3 [4.7]	126 [477] 7.2 [5.37]	171 [647] 9 [6.71]		185 [700] 11 [8.2]	189 [715] 13 [9.69]
	47 [178] 5.9 [4.4]	65 [246] 6.5 [4.85]	73 [276] 7 [5.22]		60 [227] 6.7 [5.0]	78 [295] 7.2 [5.37]	86 [326] 7.8 [5.82]	65 [246] 7.5 [5.59]	76 [288] 7.7 [5.74]	94 [356] 8.3 [6.19]	102 [386] 9 [6.71]	81 [307] 9.5 [7.08]		110 [416] 10.3 [7.68]		145 [549] 14.5 [10.81]		174 [659] 16.5 [12.3]	182 [689] 18.5 [13.8]
		57 [216] 8 [5.97]	70 [265] 8.5 [6.34]			70 [265] 8.7 [6.49]	83 [314] 9.3 [6.94]	45 [170] 9.2 [6.86]	65 [246] 9.4 [7.01]	86 [326] 10 [7.46]	99 [375] 10.7 [7.98]		81 [307] 11.5 [8.58]	102 [386] 12.1 [9.02]	115 [435] 13 [9.69]		145 [549] 17.8 [13.27]	166 [628] 19.1 [14.24]	179 [678] 21.1 [15.73]
96 [363] 3.7 [2.76]	97 [367] 3.7 [2.76]	98 [371] 3.9 [2.91]	100 [379] 6.2 [4.62]	110 [416] 4.4 [3.28]	111 [420] 4.4 [3.28]	112 [424] 4.6 [3.43]	114 [432] 7.5 [5.59]	129 [488] 5.3 [3.95]	130 [492] 5.3 [3.95]	131 [496] 5.7 [4.25]		148 [560] 6.2 [4.62]	149 [564] 6.2 [4.62]			221 [837] 10.9 [8.13]	222 [840] 10.9 [8.13]	223 [844] 11.9 [8.87]	
92 [348] 5.1 [3.8]	94 [356] 5.1 [3.8]	96 [363] 5.3 [3.95]	98 [371] 7.6 [5.97]	106 [401] 6 [4.47]	108 [409] 6[4.47]	110 [416] 6.2 [4.62]	112 [424] 9.1 [6.79]	125 [473] 7.1 [5.29]	127 [481] 7.1 [5.29]	129 [488] 7.5 [5.59]	131 [496] 11.2 [8.35]	144 [545] 8.4 [6.26]	146 [553] 8.4 [6.26]	148 [560] 8.9 [6.64]		217 [821] 14.2 [10.59]	219 [829] 14.2 [10.59]	221 [837] 15.2 [11.33]	
82 [310] 8 [5.97]	86 [326] 8 [5.97]	93 [352] 8.2 [6.11]	96 [363] 10.5 [7.83]	96 [363] 9.4[7.01]	100 [379] 9.4 [7.01]	107 [405] 9.6 [7.16]	110 [416] 12.5 [9.32]			126 [477] 11.4 [8.5]	129 [488] 15.1 [11.26]			145 [549] 13.4 [9.99]				218 [825] 21.8 [16.26]	
	83 [314] 9.5 [7.08]	90 [341] 9.7 [7.23]	95 [360] 12.0 [8.95]			104 [394] 11.2 [8.35]	109 [413] 14.1 [10.51]			123 [466] 13.4 [9.99]	128 [485] 17.1 [12.75]			142 [538] 15.6 [11.63]				215 [814] 25.2 [18.79]	
105 [397] 2.4 [1.79]	108 [409] 2.9 [2.16]	112 [424] 3.3 [2.46]	114 [432] 3.7 [2.78]	122 [462] 3 [2.24]	125 [473] 3.2 [2.39]	128 [485] 3.7 [2.76]	131 [496] 4.4 [3.28]	144 [545] 3.7 [2.76]	147 [556] 3.9 [2.91]	150 [568] 4.7 [3.5]	153 [579] 5.6 [4.18]		168 [636] 4.9 [3.65]	172 [651] 5.7 [4.25]	174 [659] 7 [5.22]		254 [961] 9 [6.71]	257 [973] 11 [8.2]	260 [984] 14 [10.44]
91 [344] 4 [2.98]	97 [367] 4.5 [3.36]	106 [401] 4.9 [3.65]	110 [416] 5.3 [3.95]	108 [409] 5 [3.73]	114 [432] 5.2 [3.88]	123 [466] 5.7 [4.25]	127 [481] 6.4 [4.77]	130 [492] 5.8 [4.33]	136 [515] 6 [4.47]	145 [549] 6.8 [5.07]	149 [564] 7.7 [5.74]	151 [572] 7.1 [5.29]	157 [594] 7.6 [5.67]	166 [628] 8.4 [6.26]	170 [644] 9.7 [7.23]	237 [897] 12 [8.95]	243 [920] 12.8 [9.54]	252 [954] 14.8 [11.04]	256 [969] 17.8 [13.27]
	73 [276] 8 [5.97]	91 [344] 8.4 [6.26]	101 [382] 8.8 [6.56]		90 [341] 9.2 [6.86]	108 [409] 9.7 [7.23]	118 [447] 10.4[7.76]	95 [360] 10.6 [7.9]	112 [424] 10.8 [8.05]		140 [530] 12.5 [9.32]	116 [439] 12.2 [9.1]		151 [572] 13.5 [10.07]	161 [609] 14.8 [11.04]	202 [765] 19.4 [14.47]		237 [897] 22.2 [16.55]	247 [935] 25.2 [18.79]
		85 [322] 9.5 [7.08]	98 [371] 9.9 [7.38]			102 [386] 11.2 [8.35]	115 [435] 11.9 [8.87]	55 [208] 13.1 [9.77]	97 [367] 13.3 [9.92]	124 [469] 14.1 [10.51]	137 [519] 15 [11.19]		118 [447] 15.4 [11.48]	145 [549] 16.2 [12.08]	158 [598] 17.5 [13.05]		204 [772] 24 [17.9]	231 [874] 26 [19.39]	244 [924] 29 [21.63]
129 [488] 3.7 [2.76]	132 [500] 3.9 [2.91]	136 [515] 4.7 [3.5]	138 [522] 5.7 [4.25]	149 [564] 4.4 [3.28]	152 [575] 4.7 [3.5]	156 [591] 5.7 [4.25]	158 [598] 6.9 [5.15]	176 [666] 5.4 [4.03]	179 [678] 5.9 [4.4]	183 [693] 7 [5.22]	185 [700] 8.5 [6.34]	202 [765] 6.3 [4.7]	205 [776] 6.8 [5.07]		211 [799] 10.3 [7.68]	305 [1155] 10.9 [8.13]		312 [1181] 16.8 [12.53]	314 [1189] 19.7 [14.69]
	121 [458] 5.9 [4.4]	128 [485] 6.7 [5.0]	134 [507] 7.7 [5.74]	133 [503] 6.8 [5.07]	141 [534] 7.1 [5.29]	148 [560] 8.1 [6.04]	154 [583] 9.3 [6.94]	160 [606] 8.0 [5.97]	168 [636] 8.5 [6.34]	175 [662] 9.6 [7.16]	181 [685] 11.1 [8.28]	186 [704] 9.5 [7.08]	194 [734] 10 [7.46]	201 [761] 11.6 [8.65]	207 [784] 13.5 [10.07]	209 [791] 15.4 [11.48]	297 [1124] 16.5 [12.3]	304 [1151] 19.3 [14.39]	310 [1173] 24.2 [18.05]
			123 [466] 11.1 [8.28]			132 [500] 12.7 [9.47]	143 [541] 13.9 [10.37]			159 [602] 15.1 [11.26]	170 [644] 16.6 [12.38]			185 [700] 17.7 [13.2]	196 [742] 19.6 [14.62]		266 [1007] 25.6 [19.26]	288 [1090] 28.4 [21.18]	299 [1132] 33.3 [24.83]
			119 [450] 14 [10.44]				139 [526] 16.2 [12.08]				166 [628] 19.2 [14.32]			176 [666] 20.8 [15.51]	192 [727] 22.7 [16.93]			279 [1056] 32.9 [24.53]	
157 [594] 5 [3.73]	160 [606] 5 [3.73]	162 [613] 5.5 [4.1]	164 [621] 9.8 [7.31]	181 [685] 6 [4.47]	184 [697] 6 [4.47]	186 [704] 6.7 [5.0]	188 [712] 11 [8.2]	212 [803] 6.3 [4.7]	215 [814] 7.1 [5.29]	217 [821] 8.2 [6.11]	219 [829] 13.5 [10.07]	243 [920] 8.3 [6.19]	246 [931] 8.4 [6.26]		250 [946] 18 [13.42]			369 [1397] 18.8 [14.02]	
147 [556] 7.3 [5.44]	155 [587] 7.3 [5.44]	161 [609] 7.8 [5.82]	163 [617] 12.1 [9.02]	171 [647] 8.7 [6.49]	179 [678] 8.7 [6.49]	185 [700] 9.4 [7.01]	187 [708] 13.7 [10.22]	202 [765] 10.1[7.53]	210 [795] 10.4 [7.76]	216 [818] 11.5 [8.58]	218 [825] 16.8 [12.53]	233 [882] 11.9 [8.87]	241 [912] 12 [8.95]	247 [935] 13.8 [10.29]	249 [943] 21.6 [16.11]			368 [1393] 24.3 [18.12]	
		158 [598] 12.6 [9.4]	162 [613] 16.9 [12.6]			182 [689] 14.9 [11.11]	186 [704] 19.2 [14.32]			213 [806] 17.8 [13.27]	217 [821] 23.1 [17.23]			244 [924] 21 [15.66]	248 [939] 28.8 [21.48]			365 [1382] 35 [26.1]	
		156 [591] 15.1 [11.26]	161 [609] 19.4 [14.47]			180 [681] 17.8 [13.27]	185 [700] 22.1 [16.48]				216 [818] 26.3 [19.61]			242 [916] 24.7 [18.42]	247 [935] 32.5 [24.24]			363 [1374] 40.5 [30.2]	

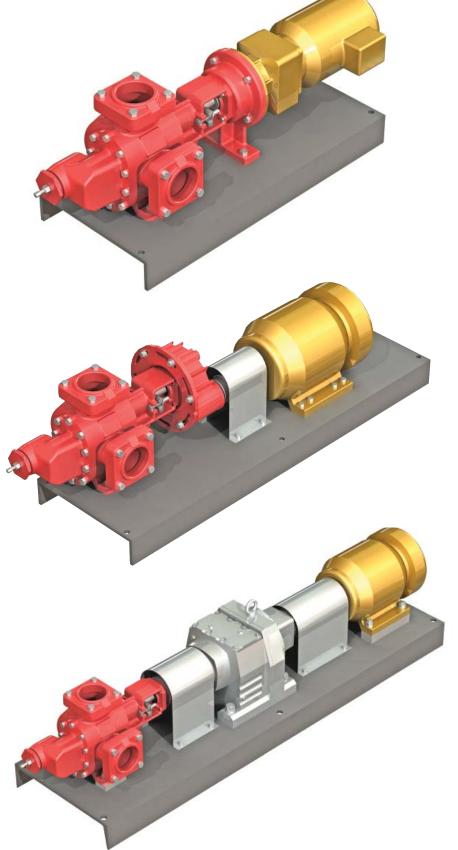
Direction of Rotation

Rotation direction is determined when facing the drive shaft. The diagrams will serve as a helpful basis for you to determine the direction of rotation wanted according to your piping system. We can build the pump at the factory to meet your installation requirements. If the pump build is not specified, it will be shipped the standard "W" configuration. Once in the field, if you need to change the configuration, it can be done easily by disassembling the pump and rebuilding it to your desired arrangement. No new parts are needed.

Note: Top picture in each section is a standard pump, and the bottom picture is the same pump with gear box added.



Base Mounted Units



CLOSE COUPLED DRIVES (CCD)

The close coupled drive configuration provides an enhanced level of safety in a compact package. Guards and alignment are not required because this complete drive package easily mounts to DIN flanged gear motors.

Since the CCD bracket creates a unified system from the motor to the pump, the baseplate becomes an optional component to the system. These units will attach to our standard 3600 BH pumps.

ROPER GHB GEARBOX

The versatile GHB gearbox configuration features a built-on gear reduction unit that allows minute adjustments for various driver shaft heights.

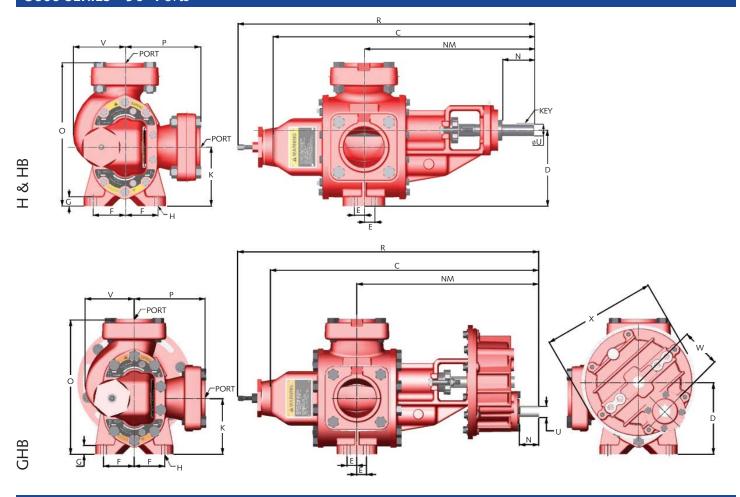
This feature makes alignment to the motor shaft very simple. The carefully selected ratios convert standard motor speeds to ranges suitable for most pumping applications. See page 8 for more information on available gear ratios.

INDUSTRIAL STANDARD

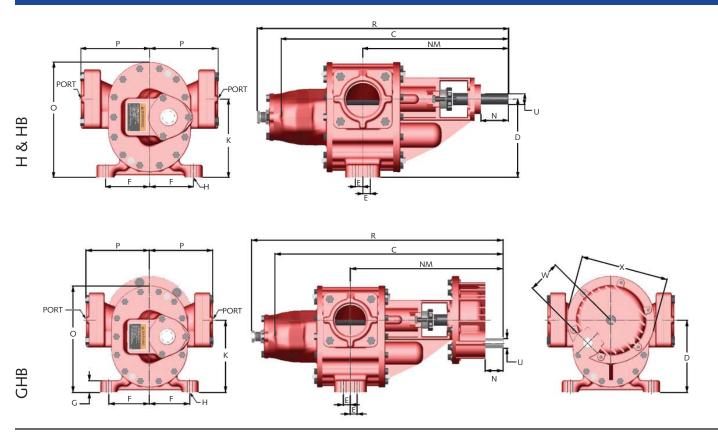
Using an industrial standard gearbox offers virtually unlimited gear ratio options, including the ability to easily change pump speeds by simply changing the gearbox.

Roper Pump offers extensive expertise in spacing, mounting and aligning the complete drive package of motor, gearbox and pump.

3600 SERIES - 90° Ports

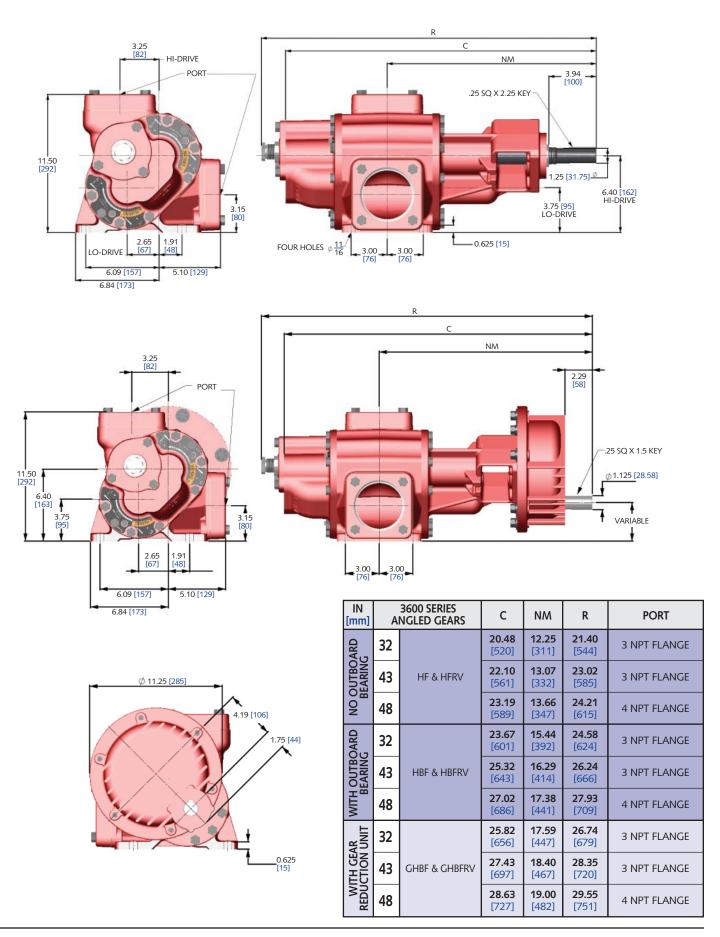


4600 SERIES - Thru Ports 180°

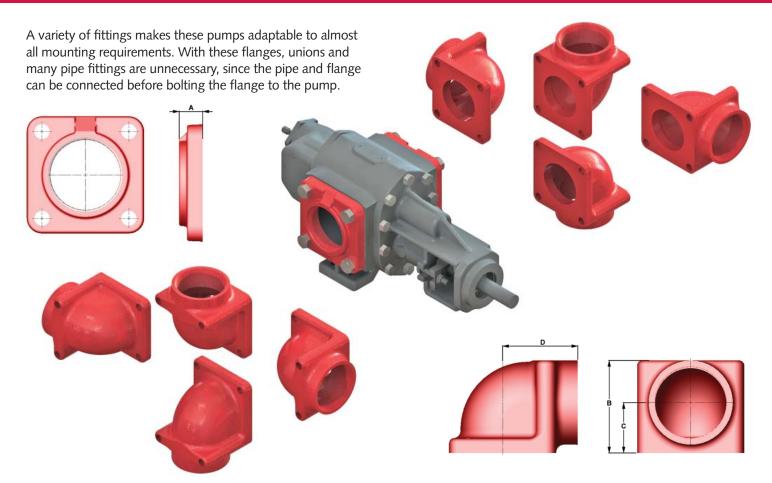


IN [mm]		3600 SERIES	С	D HIGH	E	F	G	H HOLE DIAMETER	К	N	NM	0	Р	R	U	٧	W	Х	KEY	PORTS
	11	H & HRV (SPEC G)	15.97							2.58		10.75 [273]	3.62 [91]	19.57						2 NPT TAPPED
٥	''	HF & HFRV (SPEC G)	[405]							[65]	10.34 [262]	11.54 [293]	4.3 [109]	[497]		4				2 NPT FLANGE
NO OUTBOARD BEARING	17	H & HRV (SPEC G)	16.72	6.44 [163]		2.75 [69]	0.75 [19]	0.56 [14]	5 [127]	1.83	[202]	10.75 [273]	3.62 [91]	20.33	1.06 [26.9]	[101]			.25 SQ. x 1.50	2 NPT TAPPED
RD B	''	HF & HFRV (SPEC G)	[424]							1.83 [46]		11.54 [293]	4.3 [109]	[516]			N/A	NI/A		2 NPT FLANGE
IBOA	22	HF & HFRV (SPEC G)	18.59 [472]		0.88 [22]					2.2 [55]	11.46 [291]	12.16 [308]	6.41 [162]	22.19 [563]		4.41 [112]	IN/A	N/A		3 NPT FLANGE
LNO (35	H & HRV	19.53							2.15	11.96	15.63 [397]	6.88 [175]	23.04		6				3 NPT TAPPED
NO		HF & HFRV	[496]	9.25 [234]		5.19 [131]	1.5 [38]	0.69 [17]	9.25 [234]	[54]	[303]	16.66 [423]	7.91 [200]	[585]	1.437 [36.5]	[152]			.38 SQ. x 1.62	3 NPT FLANGE
	58	HF & HFRV (SPEC G)	22.51 [571]							2.29 [58]	13.52 [343]	17.35 [441]	8.1 [205]	26.02 [660]		6.28 [159]				4 NPT FLANGE
	11	HB & HBRV	19.32				0.75 [19]	0.56	5 [127]	3.45		10.75 [273]	3.62 [91]	22.92						2 NPT TAPPED
SING		HBF & HBFRV	[490]				0.62 [15]	[14]	[12/]	[87]	13.69	11.54 [293]	4.3 [109]	[582]		4				2 NPT FLANGE
WITH OUTBOARD BEARING	17	HB & HBRV	20.07	6.44 [163]		2.75 [69]					[347]	10.75 [273]	3.62 [91]	23.67	1 [25.4]	[101]				2 NPT TAPPED
ARD		HBF & HBFRV	[509]		0.88		0.75 [19]			2.7 [68]		11.54 [293]	4.3 [109]	[601]			N/A	N/A	.25 SQ. x 1.50	2 NPT FLANGE
ЛТВО	22	HBF & HBFRV	21.57 [547]		[22]						14.4 [366]	12.16 [308]	6.41 [162]	25.17 [639]		4.41 [112]	14/74	14/74		3 NPT FLANGE
HOH	35	HB & HBRV	23.69								16.12	15.63 [397]	6.88 [174]	27.2		6				3 NPT TAPPED
M		HBF & HBFRV	[601]	9.25 [234]		5.19 [131]	1.5 [38]	0.69 [17]	9.25 [234]	3.25 [82]	[409]	16.66 [423]	7.91 [200]	[690]	1.25 [31.75]	[152]				3 NPT FLANGE
	58	HBF & HBFRV	26.53 [673]								17.54 [445]	17.35 [440]	8.1 [205]	30.04 [763]		6.28 [159]			.38 SQ. x 2.25	4 NPT FLANGE
	11	GHB & GHBRV	20.47				0.75 [19]				14.83	10.75 [273]	3.62 [91]	24.07						2 NPT TAPPED
LIND		GHBF & GHBFRV	[519]				0.62 [15]				[376]	11.54 [293]	4.3 [109]	[611]		4				2 NPT FLANGE
TION	17	GHB & GHBRV	21.97	6.44 [163]		2.75 [69]		0.56 [14]	5 [127]	1.74 [44]	15.58	10.75 [273]	3.62 [91]	25.57	1 [25.4]	[101]	3.523 [89]	10.24 [260]	.25 SQ. x 1.50	2 NPT TAPPED
DNC		GHBF & GHBFRV	[558]		0.88		0.75 [19]				[395]	11.54 [293]	4.3 [109]	[649]						2 NPT FLANGE
WITH GEAR REDUCTION UNIT	22	GHBF & GHBFRV	23.47 [596]		[22]						16.33 [414]	12.16 [308]	6.41 [162]	27.07 [687]		4.41 [112]				3 NPT FLANGE
H GE/	35	GHB & GHBRV	25.88								18.31	15.63 [397]	6.88 [174]	29.39		6			.25 SQ. x 1.50	3 NPT TAPPED
WIT		GHBF & GHBFRV	[657]	9.25 [234]		5.19 [131]	1.5 [38]	0.69 [17]	9.25 [234]	2.29 [58]	[465]	16.66 [423]	7.91 [200]	[746]	1.125 [28.58]	[152]	4.189 [106]	11.25 [285]	.23 3Q. X 1.30	3 NPT FLANGE
	58	GHBF & GHBFRV	28.72 [729]								19.73 [501]	17.35 [440]	8.1 [205]	32.23 [818]		6.28 [159]			.25 SQ. x 1.50	4 NPT FLANGE

IN [mm]	4	600 SERIES	С	HIGH	LOW	E	F	G	H HOLE DIAMETER	К	N	NM	0	Р	R	U	٧	W	х	KEY	PORTS
\RD	11	HF & HFRV (SPEC G)	15.97 [405]					0.62 [15]			2.58 [65]	10.34		4.17 [105]	19.57 [497]						2 NPT TAPPED
OUTBOARD	17	HF & HFRV (SPEC G)	16.72 [424]	6.44 [163]	3.56 [90]	0.88	2.75 [69]	0.75	0.56 [14]	5 [127]	1.83 [46]	[262]	9.44 [239]	4.41 [112]	20.33 [516]	1.06 [26]	N/A	N/A	N/A	.25 SQ. x 1.50	3 NPT FLANGE
OU. BEAI	22	HF & HFRV (SPEC G)	18.59 [472]			[22]		[19]			2.2 [55]	11.46 [291]		4.85 [123]	22.19 [563]		IN/A	IN/A	IN/A		4 NPT FLANGE
NO	58	HF & HFRV (SPEC G)	22.51 [571]	9.25 [234]	5 [127]		5.19 [131]	1.5 [38]	0.69 [17]	9.25 [234]	2.29 [58]	13.52 [343]	9.25 [234]	8.1 [205]	26.02 [660]	1.44 [36]				.38 SQ. x 1.62	4 INFT FLAINGE
ARD	11	HBF & HBFRV	19.32 [490]					0.62 [15]			3.8 [96]	13.69		4.17 [105]	22.92 [582]						2 NPT TAPPED
WITH OUTBOARD BEARING	17	HBF & HBFRV	20.07 [509]	6.44 [163]	3.56 [90]	0.88	2.75 [69]	0.75	0.56 [14]	5 [127]	3.05	[347]	5 [127]	4.41 [112]	23.67 [601]	1 [25]	NI/A	NI/A	NI/A	.25 SQ. x 1.50	3 NPT FLANGE
H OU	22	HBF & HBFRV	21.57 [547]			[22]		[19]			[77]	14.44 [366]		4.85 [123]	25.17 [639]		N/A	N/A	N/A		4 NIDT EL ANICE
WIT	58	HBF & HBFRV	26.53 [673]	9.25 [234]	5 [127]		5.19 [131]	1.5 [38]	0.69 [17]	9.25 [234]	3.25 [82]	17.54 [445]	9.25 [234]	8.1 [205]	30.04 [763]	1.25 [32]				.25 SQ. x 1.62	4 NPT FLANGE
ION	11	GHBF & GHBFRV	20.47 [519]					0.62 [15]				14.83 [376]			24.07 [611]						2 NPT TAPPED
SUCT	17	GHBF & GHBFRV	21.97 [558]	6.44 [163]	3.56 [90]	0.88	2.75 [69]	0.75	0.56 [14]	5 [127]	1.74 [44]	15.58 [395]	5 [127]	4.3 [109]	25.57 [649]	1 [25]	N/A	3.523 [89]	10.24 [260]	.25 SQ. x 1.50	3 NPT FLANGE
WITH REDUCTION UNIT	22	GHBF & GHBFRV	23.47 [596]			[22]		[19]				16.33 [414]			27.07 [687]		IN/A				4 NPT FLANGE
WIT	58	GHBF & GHBFRV	28.72 [729]	9.25 [234]	5 [127]		5.19 [131]	1.5 [38]	0.69 [17]	9.25 [234]	2.29 [58]	19.73 [501]	9.25 [234]	8.1 [205]	32.23 [818]	1.25 [32]		4.189 [106]	11.25 [285]	.25 SQ. x 2.25	4 NET FLANGE



Flanges



PUMP SIZE	FITTING TYPE	PORT SIZE	ASSEMBLY NUMBER	FLANGE PART NO.	А	В	С	D
2644	Straight Flange (Std.)	2"	N14-14	P23-30	7/8	-	-	-
3611	Flanged Elbow (vertical)	2"	N14-15	P23-32	-	3 3/16	1 ¹¹ / ₁₆	3 ¹³ / ₁₆
4611	Flanged Elbow (horizontal)	2"	N14-16	P23-31	-	3 1/16	1 ¹⁵ / ₁₆	2 ½
	Straight Flange (Std.)	2"	N14-17	P23-12	7/8	-	-	-
2647	Flanged Elbow	2"	N14-19	P23-60	-	3 1/16	1 ¹⁵ / ₁₆	2 1/16
3617	Flanged Elbow	3"	N14-20	P23-36	-	4 7/16	2 3/8	4 ³ / ₁₆
	Straight Flange	2½"	N14-62	P23-72		-		
	Straight Flange (Std.)	3"	N14-18	P23-35	1 1/8	-	-	-
1617	Flanged Elbow	2"	N14-19	P23-60	-	3 1/16	1 ¹⁵ / ₁₆	2 1/16
4617	Flanged Elbow	3"	N14-20	P23-36	-	4 7/16	2 3/8	4 3/16
	Straight Flange	2½"	N14-62	P23-72	1 1/8	-	-	-
	Straight Flange	2"	N14-28	P23-18	1 1/8	-	-	-
	Straight Flange	2½"	N14-29	P23-22	1 1/8	-	-	-
3622	Straight Flange (Std.)	3"	N14-30	P23-10	1 1/8	-	-	-
	Flanged Elbow	3"	N14-31	P23-59	-	4 1/4	2 1/8	4 %
	Straight Flange	4"	N14-59	P23-19	1 ⁵ ⁄ ₁₆	-	-	-
3632	Straight Flange (Std.)	3"	N14-121	P23-150	1 1/8	4 1/16	2 3/8	4 3/16
2625	Straight Flange (Std.)	3"	N14-76	P23-35	4.1/	4.7/	2.3/	4.3/
3635	Flanged Elbow	3"	N14-77	P23-36	1 1/8	4 1/16	2 3/8	4 3/16
	Straight Flange	2"	N14-57	P23-18	1 1/8	-	-	-
4622	Straight Flange	3"	N14-21	P23-10	1 1/8	-	-	-
3643	Straight Flange (Std.)	4"	N14-22	P23-19	1 ⁵ / ₁₆	-	-	-
3648	Flanged Elbow	3"	N14-23	P23-59	-	4 1/4	2 1/8	4 %
	Flanged Elbow	4"	N14-24	P23-37	-	5 ½	2 3/4	5 ¾
3658, 4658	Straight Flange (Std.)	4"	N14-26	P23-52	¹⁵ / ₁₆	-	_	-

Each assemby includes: flange, gasket, and hardware.

For simplicity, the pump sizes above are only shown with PACKING ("6" in the model number).

Flanges are interchangeable with 3500 (triple lip seal), 3600 (packing) and 3700 (mechanical seal) variations.



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