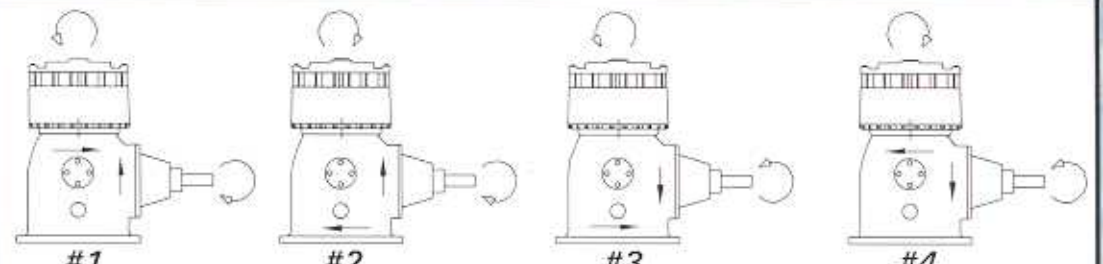
Gear Drive Selection

The Following Information Should Be Supplied When Ordering Gear Drives:

Model number and ratio (input to output speed). Thrust requirements, rotation, horsepower requirements and pump head shaft size. (We define the ratio as the ratio of the horizontal input RPM to the vertical output RPM). EXAMPLE: A 2:3 ratio gear drive operating at 1760 RPM output would have 1173 RPM input.

ROTATION: Shown below are four possible rotations. Number 1 is considered standard. Unless noted differently, the drive will be manufactured to this configuration. Numbers 2, 3 and 4 are special rotations and are manufactured when specifically requested.



#1
Horizontal – CW
Vertical – CCW

#2
Horizontal – CW
Vertical – CW

#3
Horizontal – CCW
Vertical – CCW

#4
Horizontal – CCW
Vertical – CW

Table 1 — Minimum Thrust Requirements For Standard Bearing Arrangement

For the following Gear Drive (No. 1 Rotation):
$\text{Minimum Downthrust} = \frac{\text{Constant} \times \text{Horsepower}}{\text{Pump Speed}}$

Example: Model 80 – 5:6 Ratio, 72 HP, 1800 Pump Speed
$\frac{19,518 \times 72}{1800} = 781 \text{ Lbs. Min.}$

MODEL	1:2	4:7	2:3	3:4	4:5	5:6	10:11	1:1	11:10	6:5	5:4	4:3	3:2	7:4	2:1
M40/G40 M60/G60 M80/G80 M100/G100 G125 M150	25,643	23,390	20,486	20,434	20,381	19,518	19,589	18,462	1,000	17,585	17,442	17,428	15,330	13,605	13,253
G150 M200 G200A G250 G300 G350 G400	18,638	16,386	17,424	15,556	14,502	15,224	14,907	13,130	1,000	1,000	1,000	1,000	1,000	528	1,074
G450 F500 F590 F750 F1000 F1200 F1500	NO MINIMUM DOWNTHRUST														
P200	2:1	5:2	3:1												
	1074	2059	3080												
P16AH P20A P22 P24B P30B	NO MINIMUM DOWNTHRUST														

NOTE: For rotation numbers 2, 3 and 4, contact factory. Check Table 5 for 0 down thrust on all combination, solid shaft, opposed bearings and some extra heavy thrust bearings.

Table 2 — HORSEPOWER AND THRUST BEARING RATINGS

Vertical RPM	340	430	580	690	720	870	960	1160	1460	1760	2000	2200	2400	2600	2800	3000	3460	3600
Percent Of HP at 1760 RPM	33	38	46	53	54	61	65	74	89	100	105	111	116	122	*128	*133	*146	*150
Percent of Thrust	170	160	145	137	135	126	122	115	106	100	96	93	90	88	86	84	82	80

To obtain horsepower and thrust bearing ratings for the speeds listed, multiply the horsepower and thrust bearing rating at 1760 RPM by the percentage in Table 2.

* *Contact Factory*