

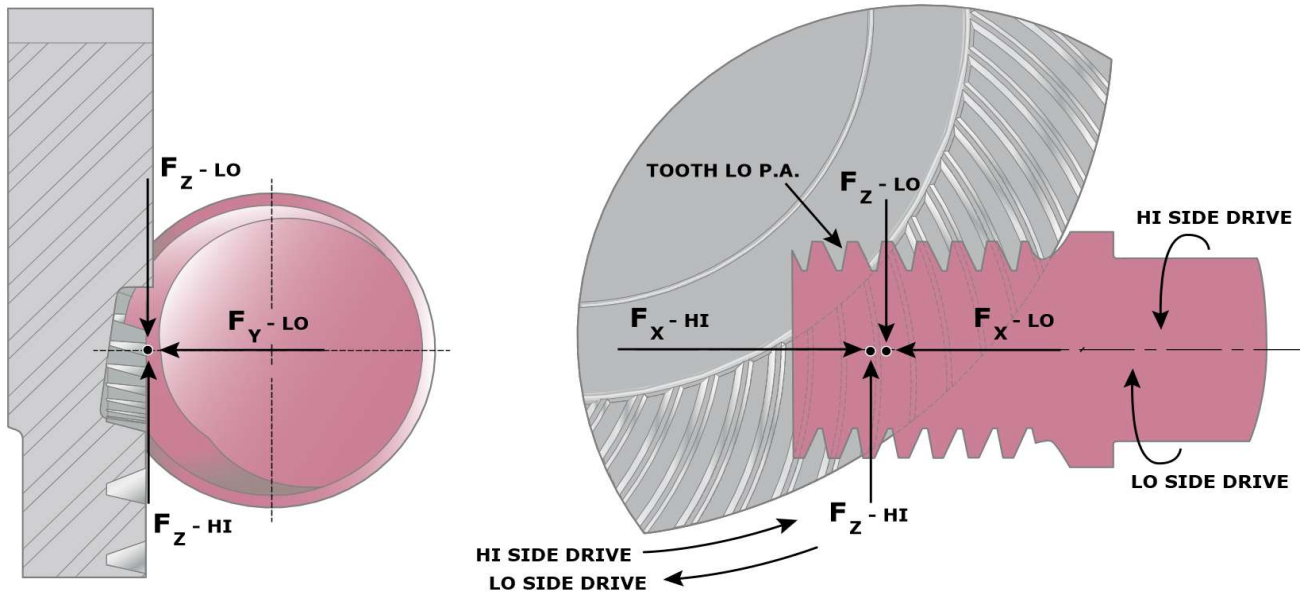
# TOOTH LOAD COMPONENTS

CUSTOMER

CUSTOMER NAME

PROJECT

CUSTOMER PROJECT



When selecting bearings, it is necessary to know the direction and magnitude of the tooth forces so that bearing relations may be determined. The tables below convey both unit- and operational-tooth loads for:

- $F_x$  - axial force acting on pinion
- $F_y$  - separating force acting on pinion
- $F_z$  - tangential force acting on pinion

Hi-Lo side forces are shown acting on the gear.

Forces act on the gear tooth at mid-tooth depth and at mid-face on center distance.

Forces on the pinion are in the reverse direction from those shown.

Operating Speed (rpm)

5,000

Torque @ Operating Speed (in-lb)

62

## Tooth Load Component

	LO	HI
$F_x$	1.198	-1.200
$F_y$	-0.292	-0.809
$F_z$	0.405	-0.343

pounds per in-lb of output torque

## Tooth Load @ Operating Speed & Torque

	LO	HI
$F_x$	74.3	-74.4
$F_y$	-18.1	-50.2
$F_z$	25.1	-21.3

pounds

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GEAR O.D.

1.875

RH / LH

RH

RATIO (TO 1)

31

GEAR MATERIAL

STEEL

GEAR TYPE

HELICON

CUTTING TOOL

52-417

**SPIROID**  
HIGH TORQUE GEARING

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