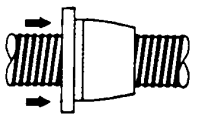




# MOUNTING REQUIREMENTS

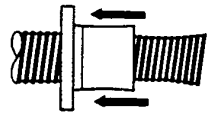
## Load Conditions

When selecting a ball bearing screw, a number of load conditions must be considered. Excessive compression and tension loads should be avoided. Radial and Eccentric loads can greatly reduce a ball bearing screw's rated life as well.



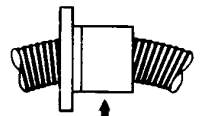
### Compression Load

Compression load is a load which would tend to compress or buckle the ballscrew shaft.



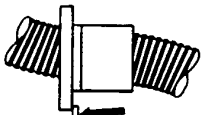
### Tension Load

Tension load is a load which would tend to stretch the ballscrew shaft.



### Radial Load

A load from the side that will reduce the rated life.

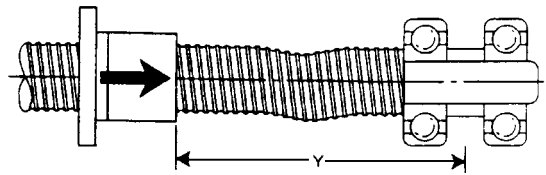


### Eccentric Load

A load tending to cock the ball nut on the screw, reducing the rated life.

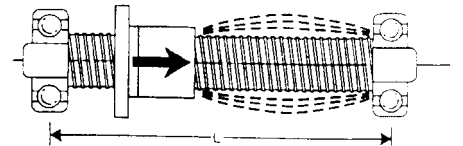
## Compression (Column) Load

Compression loading has a tendency to buckle the screw and is dependent on screw length, load and type of mounting. The applied load on the screw cannot exceed the safe compression load for the unsupported length and type of bearing support arrangement shown.



## Critical (Safe) Speed

Critical speed is the speed at which the nut or screw has a tendency to develop severe vibrations. This is dependent on the screw length between bearing supports. The desired speed cannot exceed the safe RPM for the unsupported length and type of mounting shown.

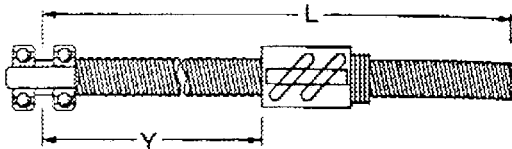


## MOUNTING METHODS

These four combinations of bearing supports are used in the calculation of critical speeds.

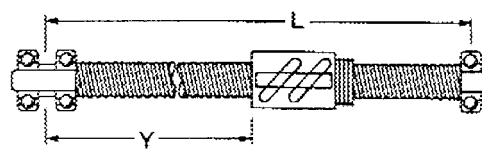
### Rigid/Free

One Fixed — Other end free.



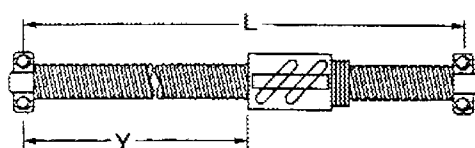
### Rigid/Simple

One fixed — Other end supported.



### Simple/Simple

Both ends supported.



### Rigid/Rigid

Both ends fixed.

