

Q&A

Question: How can we use Basic Static Load Rating, Coa?

The Basic Static Load Rating Coa is the Axial Static load at which the amount of permanent deformation (Ball + Raceway) occurring at the maximum stress contact point between the Ball and Raceway surface is 1/10,000 times the Ball diameter.

The Basic Static Load Rating Coa values apply to investigation of stationary state or extremely low Revolution conditions (less than 10rpm). However, in most cases the amount of permanent deformation causes absolutely no problems under the general conditions.

The maximum permissible load Fa max for the screw groove can be found by using the following formula.

$$Fa \text{ max} = \frac{Coa}{fs} \quad N \{kgf\}$$

fs : Static safety factor
fs=1~2 for normal operation
fs=2~3 for vibration, shock

Ball Screws are restricted by Static capacity even though they stop!!!