Ball Splines Guide

- Guide -

Features

Ball spline is a linear motion structure using rolling motion of balls.
Due to its ability to load both radial loads and torques at the same time, it is widely used in areas such as transfer equipment or robots etc...

Structure

Spline Nut

Support Portion (Perpendicularity of Shaft) (Max.)

Lithium-soap-base grease or lubrication oil is filled in the ball spline before shipping. Refill as necessary depending on the operating conditions.

Operating Temperature

Parts for ball splines are made of resin. Please avoid high temperatures, do not exceed 80°C.

Load Rating and Life Span

The value for the material SUS440C is in ( ).

Load Coefficient (fw)

When computing the load that is acting on a linear system, the following needs to be thought about the coefficients that have consideration of actual operating situations.

Lubrication

No.4 No.10 No.13 No.40

Stainless Steel No.6 Stainless Steel No.10-13 Stainless Steel No.16 Stainless Steel No.16

Attached Nuts for Ball Splines

Straight Nuts

Round Flange Nuts

Notes:

As the pre-load is still applied when pulling out the spline nut from the spline shaft, assemble and fit slowly in order not to create damage (when compensation arises, it may cause the ball to be damaged and fail off).