

4.1. Spline Shaft Receiving a Bending Load

When a bending load is applied to the spline shaft of a Ball Spine, obtain the spline shaft diameter using the equation (1) below.

$$M = \sigma \cdot Z \text{ and } Z = \frac{M}{\sigma} \dots\dots\dots(1)$$

M : Maximum bending moment acting on the spline shaft
(N·mm)

σ : Permissible bending stress of the spline shaft
(98N/mm²)

Z : Cross-section factor of the spline shaft (mm³)
(See table 3 on page B-13 and table 4 on page B-14)

