

## What is the preloading method and quantity of NTN bearing?

The most common method of applying preload on a bearing is change the relative position of the inner and outer rings of the bearing in the axial direction while applying an axial load between bearings on opposing sides. There are two forms of preload: fixed position preload and constant pressure preload.

### Preload and rigidity

The increased rigidity effect preloading has on bearings is welcomed Fig. 8.2. When the offset inner rings of a couple of paired angular contact ball bearings are compressed, each inner ring is displaced axially by the amount  $\delta_0$  and is thus given a preload,  $F_0$ , in the direction. Under this condition, when external axial load

The basic pattern, purpose and characteristics of bearing preloads are shown in Table 8.12. The fixed position preload is effective for positioning they both bearings and also for increasing the rigidity. Due to using a spring for the constant pressure preload, the preloading amount can be kept constantly, even when the distance between both bearings fluctuates under the influence of intoxicating liquor of operating heat and load.

Also, the standard preloading amount for the paired angular contact ball bearings is ushered Table 8.13. Light and normal preload is regarded prevent general vibration, and medium and heavy preload is applied especially when rigidity is required.

$F_a$  is applied, bearing! will have an increased, displacement by the amount  $\delta_a$  and bearing @s displacement will decrease. Right now the loads applied to bearing! and @ are  $F!$  and  $F@$ , respectively.

Under the condition of no preload, bearing! will be displaced due to the amount  $\delta_b$  when axial load  $F_a$  is applied. Since the amount of displacement,  $\delta_a$ , is lower than  $\delta_b$ , it indicates a higher rigidity for  $\delta_a$ .

