

2.6.3 振动与噪音 Vibration and noise

轴承的振动和噪音分别被分为 V₁、V₂、V₃、V₄ 和 Z₁、Z₂、Z₃、Z₄ 各四个级别，各等级对比如下：

The vibration and noise of bearings are separately classified as four grades -- V₁、V₂、V₃、V₄ and Z₁、Z₂、Z₃、Z₄. These grades contrast as follow:

振动 Vibration (um/s)	等级 Grade	V ₁	V ₂	V ₃	V ₄
	对比 Contrast	普通级 Normal class	低于 V ₁ 级 Lower than V ₁	低于 V ₂ 级 Lower than V ₂	低于 V ₃ 级 Lower than V ₃
噪音 Noise (dB)	等级 Grade	Z ₁	Z ₂	Z ₃	Z ₄
	对比 Contrast	普通级 Normal class	低于 Z ₁ 级 Lower than Z ₁	低于 Z ₂ 级 Lower than Z ₂	低于 Z ₃ 级 Lower than Z ₃

2.6.4 润滑 Lubrication

轴承的润滑有两种方法----脂润滑和油润滑，而微小型深沟球轴承多采用脂润滑。

The lubrication of bearing has two methods----grease and oil lubrications, and the grease lubrication is mostly used for the micro deep groove ball bearings.

润滑方式 Lubricating method	润滑油 Lubricating oil	润滑脂 Lubricating grease
润滑特点 Lubricating feature	润滑效果更好，润滑结构复杂。 Better lubricating effect, but lubricating system is more complex.	润滑结构简单，使用方便。 Simple lubricating system, and use of bearing is more convenient
工作温度 Working temperature	一般情况下，工作温度为-30℃~+150℃，超出此范围，需使用高温或低温润滑脂(油) Generally, working temperature is -30℃~+150℃, and when working temperature is out of the range, high or low temperature lubricating grease (oil) must be used.	

2.6 技术说明 Technical explanation

2.6.1 公差等级 Tolerance grades

根据尺寸公差和形位精度，轴承的公差等级或精度被分为 P0、P6、P5、P4 四个级别，并且这个公差等级也符合 ISO 的标准要求。公差等级对比如下：

According to dimension tolerances and runout precisions, the deep groove ball bearings are divided into four grades ---- P0, P6, P5, P4, and these grades also accord with the standard requirements of ISO. These tolerance grades contrast as follow:

公差等级 Tolerance grade	P0	P6	P5	P4
等级对比 Grade contrast	普通级 Normal class	高于 P0 级 Higher than P0	高于 P6 级 Higher than P6	高于 P5 级 Higher than P5

2.6.2 径向游隙 Radial clearance

按照 ISO 的标准，深沟球轴承的标准径向游隙被分成 C2、C0、C3、C4、C5 五个组别及符合电机质量要求的电机专用组 CM，各组的径向游隙如下：

According to the standard of ISO, the radial clearances of deep groove ball bearings are divided into the five groups ---- C2, C0, C3, C4, C5 and the group used in motors in accord with electric motor quality standards ---- CM. The radial clearance values of every group are as follow:

内径 ID (mm)	径向游隙 Radial clearance (um)					
	C2	C0	C3	C4	C5	CM
3 < ID ≤ 6	0 ~ 7	2 ~ 13	8 ~ 23	-----	-----	3 ~ 10
6 < ID ≤ 10	0 ~ 7	2 ~ 13	8 ~ 23	14 ~ 29	20 ~ 37	3 ~ 10
10 < ID ≤ 18	0 ~ 9	3 ~ 18	11 ~ 25	18 ~ 33	25 ~ 45	4 ~ 11
18 < ID ≤ 24	0 ~ 10	5 ~ 20	13 ~ 28	20 ~ 36	28 ~ 48	5 ~ 20
24 < ID ≤ 30	1 ~ 11	5 ~ 20	13 ~ 28	23 ~ 41	30 ~ 53	5 ~ 20