

Thrust bearing support

[Thrust bearings](#) are mainly divided into three types: rigid strut type, hydraulic strut type and balance block strut type according to the type of strut. In addition, there are elastic pads, springs, pistons, elastic disc posts and the like. details as follows:

1. Rigid strut type (anti-heavy bolt support)

The rigid strut thrust bearing generally consists of a thrust head, a mirror plate, a bearing bush, a strut bolt, a bearing housing, an oil groove and a cooler. The utility model is characterized in that the thrust bush is supported by the pillar bolt whose head is spherical, and the bearing bush is maintained at the same horizontal plane by adjusting the height of the bolt, so that the force of each tile is uniform. The advantage of the rigid pillar is that the structure is simple and the processing is easy. The disadvantage is that the level is adjusted during installation, the force is not easy to adjust, and the adjustment workload is large. The load of each tile is not balanced during operation (this phenomenon is caused by processing and installation errors and load changes), and is generally applied to medium and small capacity units.

2. Hydraulic strut type (elastic tank support)

[The hydraulic strut type thrust bearing](#) is characterized in that the thrust bush is supported by an elastic oil tank, and each fuel tank is connected by an oil passage and filled with a certain pressure oil. During installation, the height and level adjustment accuracy of each tile surface is not high, and the uneven load between the tiles is balanced by oil pressure. The uneven load of each tile during operation is balanced by the elastic oil tank, so that the force of each tile is even. Therefore, the hydraulic strut type thrust bearing has the advantages of being able to automatically adjust the bearing load, large carrying capacity, simple adjustment, convenient maintenance, small temperature difference between the temperature and temperature, and long life. This type of thrust bearing has been used more and more in large units.

3. Balance block strut

The balance block strut type thrust bearing uses the upper and lower rows of balance blocks to overlap each other (the upper and lower balance block contact faces and the lower balance block and the oil pan upper plate contact faces, both of which are in contact with the flat surface), when subjected to force. Due to the principle of leverage, the balance blocks move each other, and the force of each tile is automatically adjusted continuously to make the load of each tile uniform. The utility model has the advantages of simple structure, convenient processing and easy installation and adjustment; the disadvantage is that the hinge point (line) with high compressive stress during operation may have sliding friction phenomenon due to the precision of the limit pin, so that the ability to balance the load is unstable. . It was found in the test that the sensitivity of the weight is reduced as the number of revolutions increases. The balance block structure thrust bearing has been tested in China for many years, which proves that this structure can adapt to various working conditions of medium and low speed thrust bearings, and the running performance is good.