03 Adjusting shims

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01. Introduction

A shim is a thin sheet-like part used to adjust the gap or position between mechanical parts. It is usually made of metal, plastic or other suitable materials with precise thickness and size to ensure that the mechanical device can operate as designed.

02. Classification

Adjustment gaskets can be divided into many types according to their shapes, uses and sizes, such as:
1. Flat gaskets: the most common type, with uniform thickness and shape, used to adjust plane gaps.
2. Corrugated gaskets: with a wavy surface, which can increase elasticity and sealing performance, suitable for occasions requiring sealing and buffering.
3. Conical gaskets: used to adjust the gap between conical parts, such as the fit between conical bearing seats and shafts.
4. Other special-shaped gaskets: such as annular gaskets, special-shaped gaskets, etc., used to meet the needs of specific application scenarios.

03. Material

The material selection of the adjustment gasket depends on its application scenario and requirements. Common materials include: copper, steel, stainless steel, etc., which have high strength and wear resistance and are suitable for harsh environments such as high temperature and high pressure.

04. Application areas

Adjustment shims are widely used in various mechanical devices and equipment, such as:
1. Automobile manufacturing: used to adjust the gap and position between components such as engines and transmissions.
2. Mechanical manufacturing: used for adjustment and positioning of equipment such as machine tools and CNC machine tools.
3. Aerospace: used to adjust the gap and position of key components in aerospace equipment such as aircraft and rockets.
Other fields: such as petrochemicals, power equipment, etc., also widely use adjustment shims to meet various needs.

05. Molding process

1. Adjusting the gap: Adjusting the gasket can be used to adjust the gap between two adjacent parts to ensure the matching accuracy and smooth operation between them.
2. Compensating for errors: During the manufacturing or assembly process, the dimensional error caused by various factors can be compensated by adding or adjusting the gasket.
3. Preload effect: In some mechanical devices, the adjustment gasket can be used to achieve preload force to ensure a close fit between parts and reduce vibration.
4. Positioning effect: By reasonably arranging and adjusting the gasket, the accurate positioning of the mechanical parts can be achieved.

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