

HYBRID DYNAMIC PRESSURE GAS RADIAL BEARING

A hybrid dynamic pressure gas radial bearing, which comprises a bearing outer sleeve, an inner sleeve and a foil type elastic part arranged between the bearing outer sleeve and the inner sleeve, the outer circumferential face and the left and right end faces of the bearing inner sleeve are respectively provided with regular groove-type patterns, and the groove-type patterns in one end face is in mirror symmetry with the groove-type pattern in the other end face, and the axial contour lines of the groove-type patterns in the outer circumference face and the radial contour lines of the groove-type patterns in the left and right end faces are in one-to-one correspondence and are connected with each other, has the rigidity characteristic of the high-limit rotating speed of the radial bearing of the groove-type dynamic pressure gas, and has the flexible characteristic of the high impact resistance and the load capacity of the foil type dynamic pressure gas radial bearing, so the present invention can realize the application of dynamic pressure gas radial bearings in ultra high-speed areas under larger loads.

[Fig. 1]