1. A hybrid dynamic pressure gas thrust bearing, comprising:
two outer discs, and
an inner disc clamped between the two outer discs,
characterized in that
foil type elastic parts are arranged between each one of the two outer discs and the inner disc;
two end faces of the inner disc are respectively provided with regular groove-type patterns;
the regular groove-type patterns on one of the two end face is in mirror symmetry with another one of the regular groove-type patterns on another end face;
the regular groove-type patterns are also arranged on the outer circumferential face of the inner disc;
a shape of the regular groove-type pattern on the outer circumferential face is the same as a shape of the regular groove-type pattern on a left end and a right end of the two end faces; and
axial contour lines of the regular groove-type patterns on the outer circumferential face and radial contour lines of the regular groove-type patterns on a left end and a right end of the two end faces are connected with each other in one-to-one correspondence.

2. The hybrid dynamic pressure gas thrust bearing according to claim 1,
characterized in that
axial high-position lines of the regular groove-type patterns on the outer circumferential face correspond to radial high-position lines of the regular groove-type patterns on the left end face and the right end face, and are connected with each other in front of a circumferential chamfer on one of the two end faces;
axial middle-position lines of the regular groove-type patterns on the outer circumferential face correspond to radial middle-position lines of the regular groove-type patterns on the left end face and the right end face, and are connected with each other in front of the circumferential chamfer on one of the two end faces; and
axial low-position lines of the regular groove-type patterns on the outer circumferential face correspond to radial low-position lines of the regular groove-type patterns on the left end face and the right end face, and are connected with each other in front of the circumferential chamfer on one of the end faces.

3. The hybrid dynamic pressure gas thrust bearing according to claim 1 or 2, characterized in that:
the regular groove-type patterns are of impeller shape.

4. The hybrid dynamic pressure gas thrust bearing according to any of the preceding claims,
characterized in that
a fit clearance between the foil type elastic parts and the inner disc is 0.003-0.008 mm substantially.

5. The hybrid dynamic pressure gas thrust bearing according to any of the preceding claims,
characterized in that
at least one end of the foil type elastic parts is fixed in an inner end face of the two corresponding outer discs.

6. The hybrid dynamic pressure gas thrust bearing according to claim 5,
characterized in that
a number of the foil type elastic parts on each one of the corresponding outer discs is multiple, and the foil type elastic parts are uniformly distributed along the inner end face of the two corresponding outer discs.

7. The hybrid dynamic pressure gas thrust bearing according to claim 5 or 6,
characterized in that
the foil type elastic parts fixed on one of the two outer disc are in mirror symmetry with the foil type elastic parts fixed on another one of the two outer discs.

8. The hybrid dynamic pressure gas thrust bearing according to claim 5 or 6,
characterized in that
a clamping groove used for fixing the foil type elastic parts is formed on the inner end face of the two corresponding outer discs.

9. The hybrid dynamic pressure gas thrust bearing according to any of the preceding claims,
characterized in that
the foil type elastic parts are subjected to surface heat treatment.

10. The hybrid dynamic pressure gas thrust bearing according to claim 1, 4, 5, 6 or 9,
characterized in that
the foil type elastic parts comprise a wave foil and a flat foil;
a top end of an arc-shaped protrusion of the wave foil is attached to the flat foil; and
a transition bottom edge between wave arches of the wave foil is attached to the inner end face of the two corresponding outer discs.