ABSTRACT OF THE DISCLOSURE

An improved spindle motor is disclosed which includes a rotating hub for supporting one or more discs in a disc drive. Also disclosed is a hydrodynamic bearing system for supporting a hub for rotation, the bearing system includes a sleeve and a shaft fitted into an axial bore of the sleeve. The shaft and the sleeve rotate freely relative to one another, and together, define a journal bearing. The shaft supports an annular thrust plate. The thrust plate extends into a recess formed by an axial face stepped into the sleeve and a counterplate parallel to the axial face and the thrust plate and attached to the sleeve. A first surface of the thrust plate faces the axial face of the sleeve which has a groove pattern formed on it. A surface of the counterplate faces an opposed, second surface of the thrust plate which has a groove pattern formed on it, to form an effective fluid pumping system in the hydrodynamic bearing.

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