

ABSTRACT

MOTOR AND HARD DISK DRIVE LOADED WITH THIS MOTOR

It is an object of the present invention to provide a motor capable of reducing a loss as much as possible, and securing minimum vibration proof performance and reliability by definitely defining the upper and lower limits of a minimum shaft diameter in conformity with a disk load, the service number of revolutions or the like. In a shaft-fixed type motor of the fluid bearing specifications, the diameter d (mm) of a fixed shaft is set so as to satisfy the relation of $\alpha^3 \cdot M1 > d^3 > M1$, where $M1 = J1 \cdot (N/1000)^2 \cdot k^2 \cdot D$, $J1$ being a coefficient to be experimentally determined, N (rpm) the service number of revolutions, k the number of a disk-shaped recording media, D (inch) the diameter of the disk-shaped recording medium, and α a ratio of the maximum diameter to the minimum diameter of the fixed shaft.

Figure 1.