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DISC DRIVE TURBULENT WIND MANAGEMENT

Abstract of the Disclosure

The disc drive housing encloses a spindle motor carrying a disc having a data surface. An
5 actuator assembly includes an actuator arm carrying a head. The housing includes a first surface
portion adjacent to the data surface of the disc. The housing also includes a plurality of surface
portions that define a recess, which allows the actuator arm to move over the data surface of the
disc. The plurality of surface portions include a sloped surface portion sloping away from the
data surface and preventing wind generated by the disc rotating about an axis from separating
10 from the sloped surface portion. Alternatively, a disc drive includes a housing that defines a
recess. The housing encloses a disc mounted on a spindle motor that rotates the disc about an
axis and thereby generates wind within the housing. An upstream surface portion and a
downstream surface portion of the housing both face toward a data surface of the disc. A
discontinuity, such as a step, between the upstream surface portion and the downstream surface
15 portion causes a wind recirculation region within the recess. The disc drive also includes an
actuator arm that carries a head, which the recess allows to move over the data surface of the disc.
An actuator limiting device prevents the actuator arm from entering the wind recirculation region.

Fig 2