

SPEED AND SKEW INDEPENDENT AIR BEARING SLIDER

ABSTRACT

An air bearing slider incorporating the invention has both front and rear pads (22, 24) extending from a generally planar body (21). Both pads (22, 24) have bearing faces (26, 30) separated by a gap that is substantially in excess of any fly height of the slider. The sides of both pads are oriented at a rake angle that is approximately equal to the maximum expected skew angle. The separation of the pads (22, 24) enables the slider (20) to exhibit good pitch stability, and the pad rake angles provide resistance to roll effects that occur at large skew angles. Both pad faces (26, 30) exhibit extremely small taper angles that enable "inlet throttling" of air entrained by the slider (20). Such inlet throttling provides the slider (20) with a fly height that is substantially independent of relative speed changes between the slider (20) and a recording medium. A further embodiment includes a rear slider for contact recording applications.

Fig. 8