END EFFECTOR AND METHOD FOR LOADING AND UNLOADING DISKS AT A PROCESSING STATION

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Abstract of the Disclosure

A robotic end effector for loading and unloading a magnetic information storage circular disk on a grinder or polisher carrier surface includes an effector block, an annular vacuum cup, including vacuum apertures, attached to and extending from the block and a vacuum source for attaching the cup to the disk. The cup surrounds and abuts against a periphery of a central aperture of the disk. A bore in the block conveys pressurized air through the cup axial interior, through the disk central aperture to overcome surface tension (stiction) between the carrier surface or platen of the grinder or polisher and the disk underside during unloading. A disk-carrying effector is aligned by including a lens surrounded by a ring of light-emitting diodes directed to fiducial holes on the carrier surface providing for a comparative reflection of light from the diodes by dark holes and a light colored carrier surface. The lens is protected from impingement of water droplets and grinding debris by an air flow within the ring, past the lens and through a an apertured cap in the interior of the ring.

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