

PATENT NO. 375918
**AN AIR ACTUATED RADIAL ROBOTIC GRIPPER ATTACHABLE TO A
ROBOT MANIPULATOR ARM**

APPLICATION NO. 6094/CHE/2014

APPLICANT

National Institute of Technology, Calicut

ABSTRACT

The present invention provides for an air actuated radial robotic gripper attachable to a robot manipulator arm. The robotic gripper includes two symmetric baseplates coupled together towards proximal end, wherein each of the base plates having two pairs of complementary slots providing for a pin to pass through each of the pair of complementary slots; a pair of complementary gripping jaw members having two pairs of complementary slots, which correspond to the pair of slots of the baseplates, are mounted in between the two symmetric baseplates by the pins threaded via one or more bearings fitted in each of the two pairs of complementary slots allowing easy rotation of the jaw members about the pin; and a spring loaded lever piston mechanism. The unique design allows the gripper to operate more efficiently and with appropriate fail-safe mechanisms, while consuming lesser power, during the work cycles.

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CLAIM 1

An air actuated radial robotic gripper attachable to a robot manipulator arm, comprising two symmetric baseplates (1) coupled together towards proximal end, wherein each of the base plates having two pairs of complementary slots (9) providing for a pin (7) to pass through each of the pair of complementary slots (9); a pair of complementary gripping jaw members (20) having two pairs of complementary slots (9), which correspond to the pair of slots (9) of the baseplates, are mounted in between the two symmetric baseplates (1) by the pins (7) threaded via one or more bearings (8) fitted in each of the two pairs of complementary slots (9) allowing easy rotation of the jaw members about the pin (7); and a spring loaded lever piston mechanism.