

Automated Robotic Assistant (A.R.A.)

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Abstract

The Automated Robotic Assistant (A.R.A.) is a CNC part flipper designed to reduce overall processing time, eliminate redundant operator motion, and improve overall efficiency. It addresses the high costs smaller manufacturing businesses face when implementing automation. Smaller shops often lack the resources to implement lean methodologies like streamlining workflows and invest in automation, which limits their competitiveness. Automation is key to increasing output, profitability, and reducing human injury. By creating a cost-effective product, the A.R.A. supports small to mid-size businesses while improving machine & workforce utilization. A.R.A. utilizes topological optimization to reduce the material required and make the structure more robust.

Keywords

Automated Robotic, CNC, ARA