

NexBot Robotics MAG414-005

Magnetic Gripper 140N

NexBot
Robotics

SKU: NXB-GEN-MAG414-005 | Category: End-of-Arm Tooling > Grippers > Magnetic Grippers

Overview

The NexBot Robotics MAG414-005 is an electromagnet-based gripper designed for secure and efficient handling of ferrous workpieces in demanding industrial environments. This end-of-arm tool is engineered for applications requiring rapid pick-and-place cycles, such as machine tending, CNC loading/unloading, sheet metal handling, and automated assembly. Its primary function is to provide a reliable grip on components without the mechanical complexity of traditional jaw grippers, making it ideal for parts with uneven surfaces or those where surface marking must be avoided. Key to its performance is the powerful electromagnet core, which generates a consistent holding force of 140 N, ensuring a secure grip on parts even during high-speed robot movements. The gripper features fast activation and deactivation times, minimizing cycle times and maximizing throughput. Unlike permanent magnet grippers, the MAG414-005 consumes power only when energized, and its residual magnetism is minimal, ensuring clean part release. The gripper's robust construction features a hard-anodized aluminum body, providing excellent durability and heat dissipation. With an IP67 rating, this magnetic gripper is fully protected against dust ingress and can withstand immersion in water, making it suitable for use in harsh conditions involving coolants, lubricants, or washdown procedures. Integration is simplified through its standard ISO 9409-1 mounting pattern and integrated IO-Link connectivity. The IO-Link interface provides real-time diagnostic feedback on gripper status, temperature, and switching cycles, enabling predictive maintenance and advanced process control. Weighing only 1.2 kg and featuring a compact form factor of 80 x 80 x 55 mm, the MAG414-005 minimizes its impact on the robot's payload capacity and inertia, allowing for faster and more precise movements. It operates on a standard 24VDC power supply, common in industrial control cabinets, simplifying electrical installation. The combination of high holding force, rugged design, and intelligent communication makes this magnetic gripper a versatile and reliable solution for a wide range of automation tasks.

Technical Specifications

Parameter	Value	Unit
Weight	1.2	kg
Material	Anodized Aluminum 6061-T6	
Voltage	24VDC	
IP Rating	IP67	
Country of Origin	US	

Parameter	Value	Unit
Protocol	IO-Link	
Dimensions	80 x 80 x 55 mm	
Torque	5 Nm	

Safety Notice: This product must be installed and operated by qualified personnel in accordance with applicable safety standards (ISO 10218, IEC 61508).