

NexBot Vision MA012-003 6-Axis Robot Arm 25kg Payload

NexBot
Robotics

SKU: NXB-ROB-MA012-003 | Category: Robots
> Articulated Robots > Medium Articulated
(10-50kg)

Overview

The NexBot Vision MA012-003 is a high-performance six-axis articulated robot arm engineered for demanding industrial automation applications requiring a balance of payload capacity, reach, and precision. This robot arm is designed to enhance productivity and flexibility in manufacturing, logistics, and processing environments. Its robust construction and advanced motion control capabilities make it a reliable solution for complex, repetitive tasks. The primary benefit of the MA012-003 is its versatile performance envelope. With a substantial 25 kg payload capacity, it can handle a wide range of parts, components, and end-of-arm tooling, from heavy workpieces to complex multi-function grippers. The six degrees of freedom provide exceptional dexterity, allowing the arm to reach confined spaces and perform intricate movements that mimic human motion. This flexibility is crucial for applications like complex assembly, arc welding support, and machine tending where precise orientation is critical. The robot's impressive 1,700 mm horizontal reach creates a large, optimized work envelope, maximizing its utility within a workcell and reducing the need for additional linear tracks. Key to its performance is a position repeatability of ± 0.03 mm, which ensures consistent and accurate execution of programmed paths, cycle after cycle. This level of precision is vital for quality-critical tasks such as dispensing, inspection, and intricate pick-and-place operations. The arm's structure is rated to IP67, providing complete protection against dust ingress and resistance to water immersion, making it suitable for deployment in harsh industrial settings that involve dust, debris, or fluids. The base of the robot is rated to IP54. The MA012-003 is engineered for durability and long service life, with a rigid mechanical design that minimizes vibration and ensures stable operation even at high speeds. Installation is streamlined with a standardized base mounting pattern, and the unit integrates seamlessly with NexBot Vision C-series controllers.

Technical Specifications

Parameter	Value	Unit
Weight	275.0	kg

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Material	High-Strength Cast Aluminum Alloy	
Voltage	400-480VAC 3-Phase	
IP Rating	IP67 (Arm) / IP54 (Base)	
Country of Origin	JP	
Protocol	EtherCAT	
Dimensions	680 x 550 mm (Base Footprint)	
Reach	1700 mm	
Payload	25 kg	
Axes	6	
Repeatability	±0.03 mm	

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