

NexBot Safety PNU411-012 Pneumatic Gripper 30mm Stroke

NexBot
Robotics

SKU: NXB-GEN-PNU411-012 | Category: End-of-Arm
Tooling > Grippers > Pneumatic Grippers

Overview

The NexBot Safety PNU411-012 is a parallel pneumatic gripper engineered for precision and durability in demanding industrial automation applications. This end-of-arm tool provides reliable material handling for tasks such as machine tending, assembly, and packaging. Its robust, double-acting mechanism ensures consistent performance and rapid cycle times, which is critical for maintaining high throughput in production environments. Key features include a high gripping force-to-weight ratio, allowing smaller robots to handle heavier parts without sacrificing speed or accuracy. The gripper delivers a total gripping force of 410 N, suitable for securely handling a wide variety of component sizes and materials. The housing is constructed from a hard-coated aluminum alloy, providing excellent resistance to wear and corrosion in typical factory settings. With a total stroke of 30 mm (15 mm per jaw), it offers flexibility for parts with slight dimensional variations. The PNU411-012's design also incorporates T-slots for easy mounting of custom fingers and proximity sensors to verify part presence. Designed for seamless integration, the gripper features a standard ISO 9409-1 mounting pattern, making it compatible with a broad range of NexBot Robotics arms. Its compact dimensions allow for operation in confined spaces, a common requirement in complex assembly cells. The gripper is rated IP65, ensuring protection against dust ingress and low-pressure water jets, making it suitable for environments with moderate exposure to contaminants. Installation is straightforward, requiring a connection to a standard 24VDC solenoid valve and a regulated air supply. The combination of high repeatability (± 0.02 mm) and strong gripping force makes the PNU411-012 an effective solution for applications requiring both precision and strength.

Technical Specifications

Parameter	Value	Unit
Weight	1.2	kg
Material	Anodized Aluminum Alloy	
Voltage	24VDC	
IP Rating	IP65	
Country of Origin	US	
Dimensions	155 x 90 x 75 mm	

Parameter	Value	Unit
Repeatability	±0.02 mm	
Torque	12 Nm	

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