

NexBot Robotics

643-001 Linear Rail Track, 3m Length

NexBot
Robotics

SKU: NXB-GEN-643-001 | Category: Safety Systems > Robot Mounts & Bases > Linear Rails & Tracks

Overview

The NexBot Robotics 643-001 Linear Rail Track is a high-precision ground transportation axis designed to extend the effective working range of industrial robots, effectively creating a 7th axis of motion. This robust system enables a single robot to service multiple workstations, tend to larger machines, or perform tasks over a significant distance, maximizing asset utilization and floor space efficiency. Constructed from high-strength structural steel, the track provides exceptional rigidity and stability, which is critical for maintaining accuracy during high-speed movements. The precision-ground V-groove guideways and helical rack-and-pinion drive system ensure smooth, low-vibration travel and deliver a positional repeatability of ± 0.05 mm, making it suitable for demanding applications like welding, dispensing, and inspection. Key benefits include a modular design that allows for track lengths to be configured to specific application needs, starting with this standard 3-meter section. The moving carriage is engineered to support a maximum dynamic payload of 1200 kg, accommodating a wide range of NexBot Robotics arms and their associated tooling. An integrated cable carrier system is included to protect robot and power cabling from wear and environmental hazards, reducing downtime and maintenance costs. This linear track is ideal for automating processes such as large-part machine tending, extended-reach palletizing, arc welding of long seams, and transferring items between distant conveyor lines. Installation requires a prepared, level concrete surface, and the system is designed for straightforward integration with standard NexBot Robotics controllers.

Technical Specifications

Parameter	Value	Unit
Weight	450.0	kg
Material	Structural Steel, Powder Coated	
Voltage	480VAC	
IP Rating	IP54	

Parameter	Value	Unit
Country of Origin	SE	
Dimensions	3000 x 500 x 250 mm	
Payload	1200 kg	
Repeatability	±0.05 mm	

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