

# NexBot Robotics 712-004 Shaft Seal 60x80x8 mm

NexBot  
Robotics

SKU: NXB-GEN-712-004 | Category: Wear Parts & Consumables > Bearings & Seals > Shaft Seals

## Overview

The NexBot Robotics 712-004 Shaft Seal is a critical component designed to maintain the operational integrity of robot joints by preventing lubricant leakage and protecting internal mechanisms from contamination. This precision-engineered seal is manufactured to exact specifications, ensuring a perfect fit and reliable performance in demanding industrial automation environments. Its primary function is to create a secure barrier between the robot's lubricated gearbox and the external environment, which is essential for maximizing uptime and extending the service life of the robotic arm. **Key Features & Benefits:** The seal features a durable housing constructed from high-grade Nitrile Butadiene Rubber (NBR), a material selected for its excellent resistance to oils, greases, and hydraulic fluids commonly used in robotics. This material choice ensures consistent performance across a wide operating temperature range of -30°C to 100°C, accommodating various factory conditions from cold storage to high-heat manufacturing processes. An integrated garter spring made of carbon steel provides constant radial force, maintaining a tight and consistent seal against the rotating shaft even under conditions of vibration and minor shaft runout. This design significantly reduces the risk of premature wear on gears by ensuring they remain properly lubricated. With precise dimensions of 60 mm inner diameter, 80 mm outer diameter, and an 8 mm width, the 712-004 seal is engineered for specific joint applications within the NexBot Robotics ecosystem. The dual-lip design offers enhanced protection; the primary lip retains the lubricant, while a secondary, non-spring-loaded dust lip acts as an excluder, preventing dust, debris, and moisture from entering the joint assembly. This dual-action protection is vital in applications such as CNC machine tending, welding, and material handling, where airborne particulates are common. **Installation & Maintenance:** As a standard wear part, this shaft seal is designed for straightforward replacement during scheduled maintenance intervals. Proper installation is crucial for its effectiveness. The seal should be pressed evenly into its housing, ensuring it is square to the bore and shaft. Using an appropriate installation tool prevents damage to the flexible sealing lip. Regular inspection for signs of wear, hardening, or damage is recommended to prevent joint failure and unplanned downtime. Replacing this seal as part of a preventative maintenance program helps ensure consistent robot performance, accuracy, and reliability over its entire operational lifespan. This component is specified for use in several joints across various NexBot robot series, including the R-50 and C-10 models.

## Technical Specifications

Parameter	Value	Unit
Weight	0.05	kg
Material		

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	Nitrile Butadiene Rubber (NBR), Carbon Steel Spring	
Country of Origin	CH	
Dimensions	60 x 80 x 8 mm (ID x OD x Width)	

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