

New Scale Robotics

NSR-PG-10-20-UR_e Precision Parallel Gripper/Caliper for e-Series Universal Robots

Maximum performance for UR e-Series robots using the new high-speed interface

Faster all-digital communications increases measurement precision and supports multiple grippers on one robot

Highest measurement precision makes this gripper ideal for small part inspection and sorting

High finger motion precision enables intricate small part handling and assembly in tight spaces

Small and light for fast, precise movement of **one or more grippers** on a single robot

Quick connect to UR tool port or New Scale Multi-Tool Mount – *no cables* along the robot arm – *no external* controller

New URCaps application included – control one or more tools on a single robot using one simple teach pendant interface

Precision electric gripper + caliper combines part handling and measurement

The NSR-PG Precision Parallel Gripper/Caliper combines small part handling with precision measurement. Its compact design makes it ideal for small parts and tight spaces. It provides maximum performance for UR e-Series robots using the new high-speed interface.

Automate measurement inspection, gaging and metrology

The gripper/caliper continuously senses the absolute position of its fingers with 2.5 μm (0.1 $\text{in}/_{1000}$) resolution. You can automate inspection and gaging, make in-process decisions, and log the data for statistical process control.

Handle a wide variety of small parts

The tool's small size and light weight allow you to use cobots in confined spaces and **install multiple tools on a single robot arm**. Grip force and speed are programmable to handle a wide variety of delicate or rigid parts.

Enjoy plug-and-produce simplicity

The NSR-PG installs in minutes using the UR robot tool flange, tool port and teach pendant. It takes full advantage of the e-Series RS-485 interface for fast response and the ability to control up to three tools on one robot, using a single intuitive URCaps application.

SMART AUTOMATION for Flexible Manufacturing



Power and control with just one cable. Connect the NSR-PG to the UR tool port or NSR-MTM Multi-Tool Mount. No other cables or converters needed.



Fast setup, maximum flexibility

Simply **mount the NSR-PG** to your UR robot tool flange and **connect the single cable** to the UR tool port. No other cables or electronics are needed.

The NSR-PG ships with **factory fingers installed**. You can easily add metrology fingertips or swap in custom fingers.

Teach or program in minutes

The **NEW NSR Devices software** is a powerful URCaps application that installs on the UR teach pendant. Set speed, force, targets and other parameters with a few clicks in the interface. NSR Devices software automatically builds gripper and caliper processes based on your settings - no need to manually insert multiple program nodes.

NSR Devices software also supports multiple devices on one robot arm, using one simple teach pendant screen. *See the NSR-MTM-3-UR Multi-Tool Mount for details.*

NEW NSR Devices URCaps software included. Automatically build gripper and caliper processes for fast and easy set-up. Easily control multiple tools on one robot arm, too!



Specifications with factory fingers

Motion and Precision		
Adjustment range of standard fingers ¹	0-52 mm	0 - 2.0 in
Travel - gripper opening range	0-20mm	0 - 0.8 in
Position resolution (typical)	2.5 µm	0.1 in/1000
Position repeatability - same grip force	5 µm	0.2 in/1000
Position accuracy, linear	15 µm	0.6 in/1000
Speed – programmable	2 - 30 mm/s	0.1 - 1.2 in/sec
Force Control		
Grip force - programmable, bi-directional ²	3-10 N	0.7- 2.2 lb force
Grip force resolution (max)	0.5 N	0.1 lb force
Back drive force - no power	1-3 N	0.2-0.7 lb force
Mass - gripper with standard fingers, UR mounting plate and hardware	205 grams	0.45 lb
Workpiece Mass (max recommended) ³	100 grams	0.22 lbs
UR Robot Compatibility	e-Series UR3e, UR5e, UR10e	
Agency Approvals	CE, RoHS	

- ¹ Fingers can be repositioned by loosening two screws and using mounting pin locations. Custom fingers can be installed for wider adjustment range.
- ² Gripping force is bi-directional; parts may be gripped and measured on their inside or outside surfaces using appropriate fingers.
- ³ Maximum may be higher depending on finger friction and force setting.

Visit the website for additional specifications and drawings.