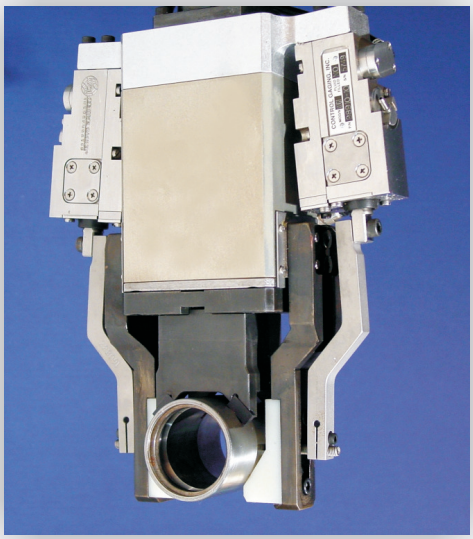
Grip-Gage-Go Measures Parts in Transit

Gaging in the gripper eliminates post-gage space and process steps

The Grip-Gage-Go approach from Control Gaging Inc. supports the goal of designing out all unnecessary space, time or motion in manufacturing systems. Grip-Gage-Go can eliminate the extra loader motions and wait time required by a post-process gage station - in fact, it can eliminate the free-standing gage itself and the floor space it occupies.

Grip-Gage-Go integrates the measuring heads into the automation either by adding gages and part-locating features to the gripper itself, or by moving the part into or through a fixture that is mounted directly to the machine tool. The concept can be applied to both robotic and gantry-style



"Gage in gripper" design measures diameter through the gripper jaws.

Robot gripper with two gage heads measures diameters while part is moved to next operation

Target Applications

- ☑ **Auto-loading grinders, turning centers, lathes**
- ☑ **1 - 2 diameters**
- ☑ **Closed-loop size control**
- ☑ **Bad part segregation**
- ☑ **SPC data collection**

Grippers can be designed with a combination of two-finger, single-finger, and chordal gages to access multiple diameters. Design integration of the machine, gaging and fixturing elements may be provided by Control Gaging or by the integrator with CGI assistance and review.

Repeatability of the gage heads used can be as fine as .0005mm/.000020". After 35 years of use in tough on-machine grinding applications, CGI gage heads have acquired a world-wide reputation for ruggedness and accuracy on the factory floor.

Control Gaging Incorporated
847 Avis Dr. Ann Arbor, Michigan 48108 Phone: +1 734.668.6750 Fax: +1 734.994.1335
www.controlgaging.com Email: sales@controlgaging.com

Grip-Gage-Go

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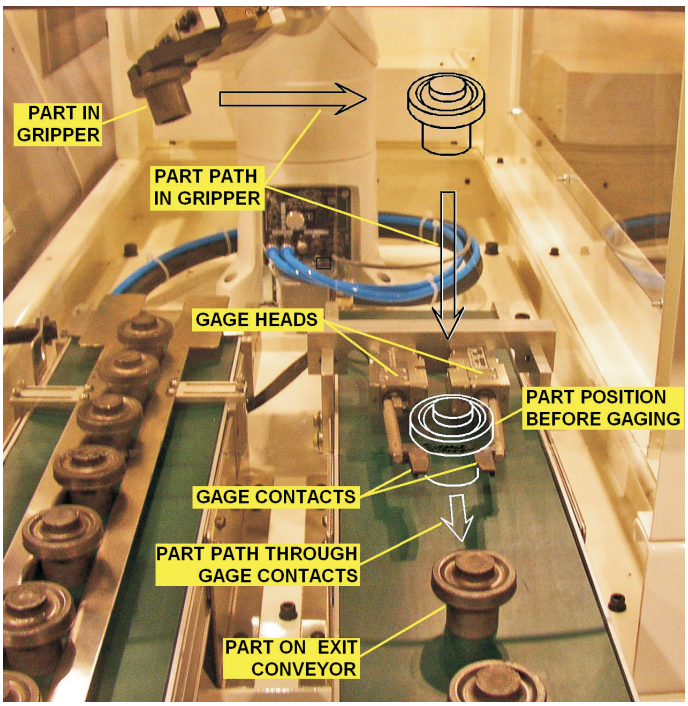
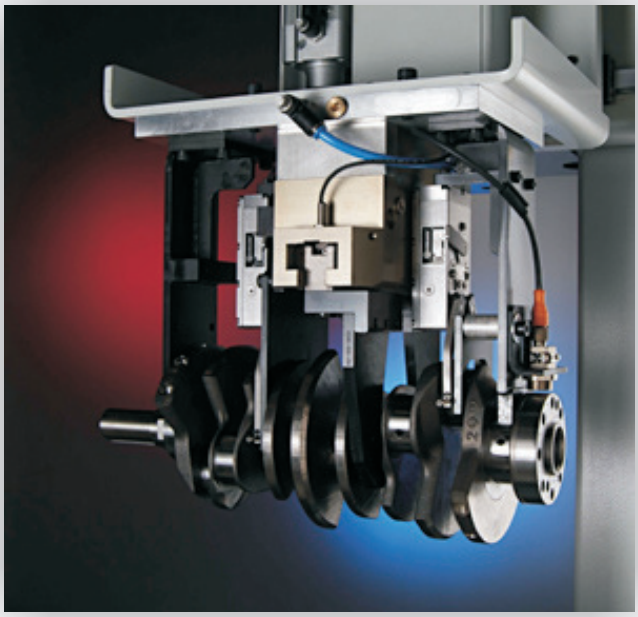


"Checkpoint Gage" measures part-in-gripper by "sliding" it through the contacts while moving to next position

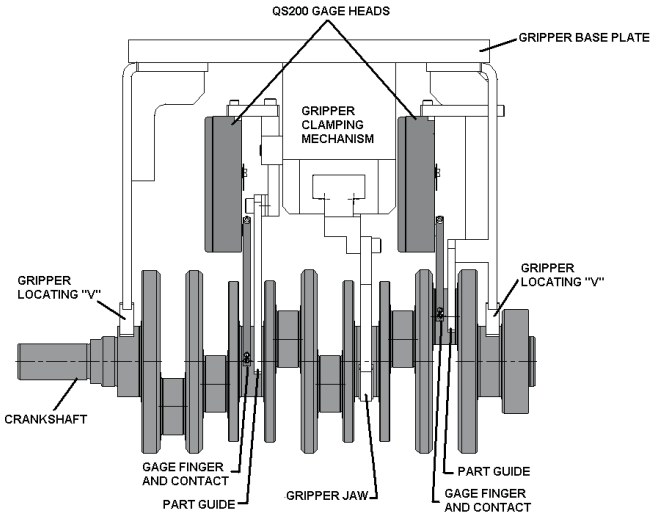
Measurements may be taken in the gripper using at least two techniques:

- by adding the gages and part-locating features to the gripper, as shown on the front page and at right
- by using the gripper to "swipe" the part through a gage station in the loader path - as shown in the photo above - to take a "dynamic" measurement.

The latter approach, known as "Checkpoint Gaging", uses CGI's "Micropeak" software, which applies 25 years of progressive experience in dynamic gaging. Micropeak takes high-speed data samples as the part moves through the contacts, then accurately selects the "peak reading" that represents the actual diameter .



This gantry-carried system measures one crankpin and one main bearing on an automotive crankshaft.



D500 Gage Controller

Grip-Gage-Go applications use Control Gaging's D500 controller. The D500 is designed for configurability - it is affordable for basic systems but has reserve power for demanding applications. Size control software for Grip-Gage-Go includes several field-proven, trend-based software packages, including "Intelligent Process Control" for optimizing machine capability.

TAKE CONTROL & SAVE MONEY

Control Gaging Incorporated
847 Avis Dr. Ann Arbor, Michigan 48108 Phone: +1 734.668.6750 Fax: +1 734.994.1335
www.controlgaging.com Email: sales@controlgaging.com