

PT1 In-line Diameter Gage

Precise size control of small parts and spools at production rates

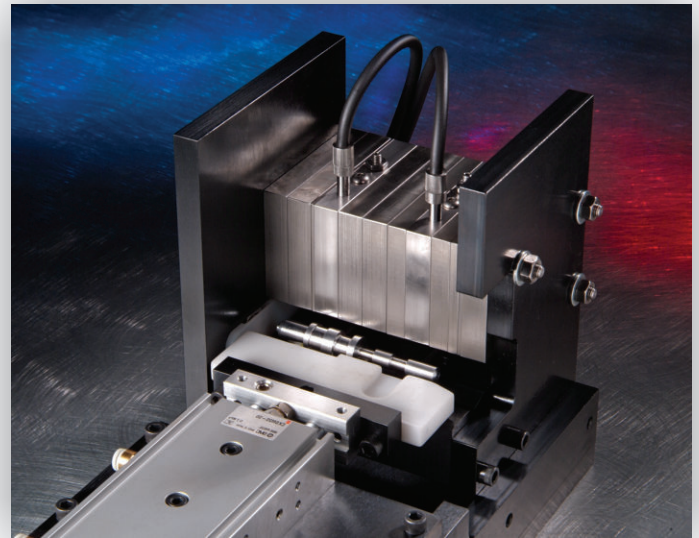
The PT1 In-line Gage is a unique solution to a difficult problem - how to automate size control on automotive transmission spools and similar small, multi-diameter parts. The PT1 provides the accuracy and throughput, as well as the flexibility for changeover, that manufacturers of these parts have been looking for.

The gage station is mounted adjacent to the infeed grinder, turning center, or screw machine. Parts are fed from the machine output chute directly into the gage magazine. When a switch confirms that the part is located, it is pushed through the measuring zone located between the reference rails and the probe contacts.

As the part passes through, the D500 Gage Controller samples the probe data at high speed for each measured diameter. Special software resolves the dynamic data into accurate size values. These values are used for accept/reject decisions and are analyzed for trends to see if a machine compensation output is needed.

The PT1 has demonstrated dynamic repeatability of .0003mm (.000012") at throughput rates of 12-15 parts per minute.

The gage station can be reconfigured for different parts by adding, subtracting, or re-positioning probe units and spacers. Sets of probes and spacers can be pre-assembled off-line to provide quick-change capability.



PT1 Specifications:

Diameter range: 7.6mm to 14.2mm
.30" to .56"

Length range: 50mm to 110mm
2.0" to 4.3"

Cycle time: 5 seconds part-to-part

Repeatability: .0003mm/.000012"

D500 Gage Controller



The D500 provides a range of software methods for trend-based machine compensation. The advanced IPC option (Intelligent Process Control) significantly outperforms all other techniques, and can control a machine statistically to its best possible operating capability.

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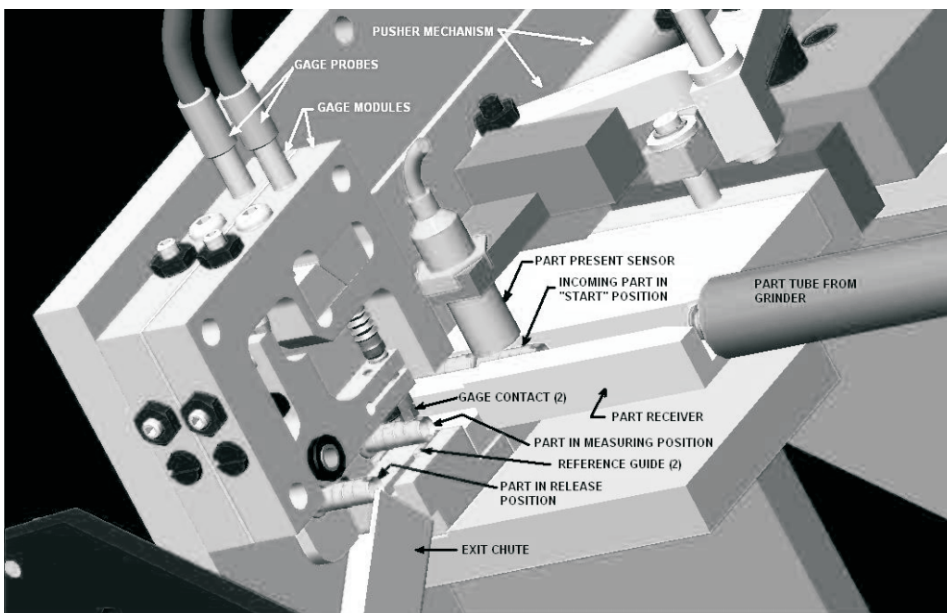
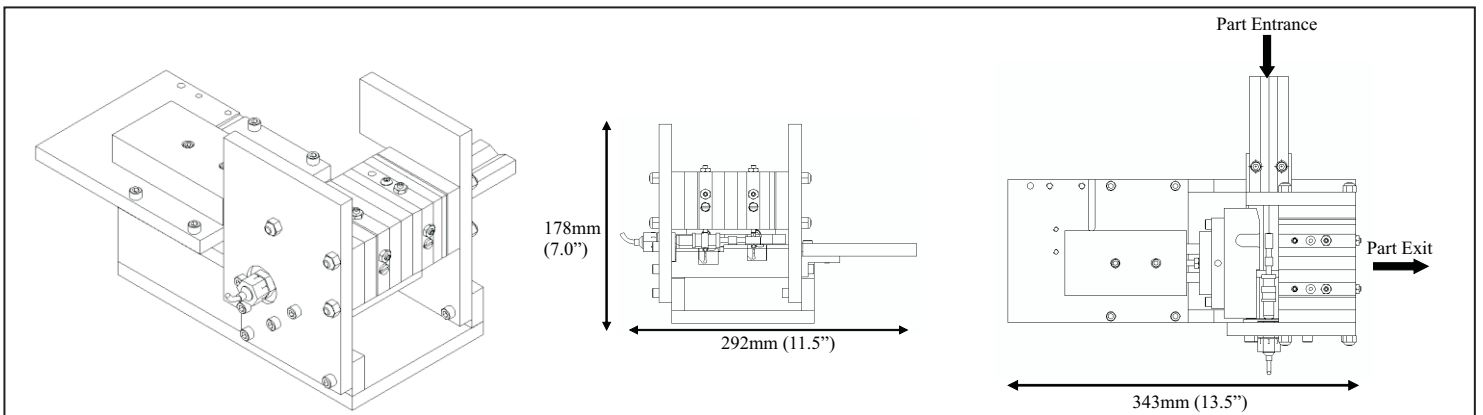
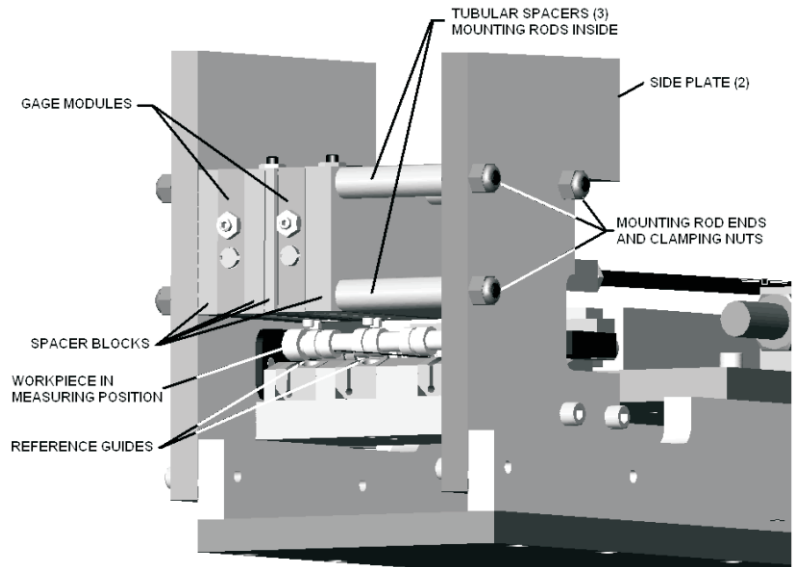
PT1



The PT1 is designed for flexibility with simple configurable tooling

Position of the gage modules along the length of the part is established by inexpensive spacers that are placed between them. A set of spacers for a specific part can be ready at changeover for quick assembly onto the mounting rods.

Up to four gage modules can be used on a single part, giving two true diameters and two extrapolated ones (from radius).



Gaging parts dynamically reduces mechanism, cuts measuring time

Control Gaging is a world leader in measuring parts “on-the-fly” as they exit machines tools . Thirty years of development have constantly improved both elements needed: the “Micropeak” electronics (that can accurately analyze the gage signal of a fast-moving part) and the dynamic fixturing (that provides accurate positioning of the parts in motion).

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