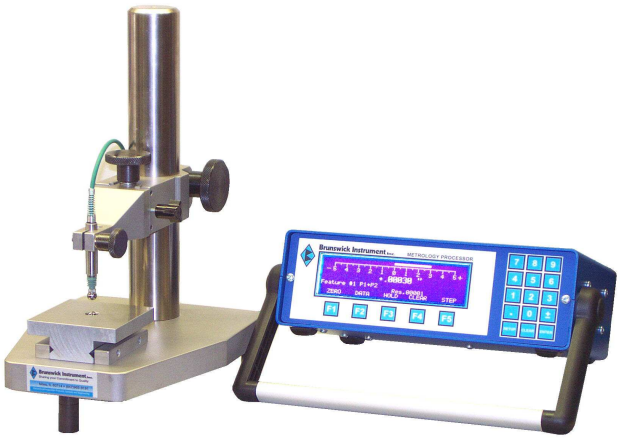
DUAL-PROBE
THICKNESS / FLATNESS GAGING

These systems provide improved thickness measurement in surface grinding and lapping operations through the use of an opposed pair of gage probes, one above and one below the part to be measured. By summing the measurement values of the two probes, the tip-to-tip dimension between the two probe contacts is calculated and displayed, effectively removing thickness errors caused by warp and twist in the part or irregularities in the part support surface. The Brunswick Instrument Metrology Processor display accepts the signals from both probes simultaneously and performs the summing of the two values.

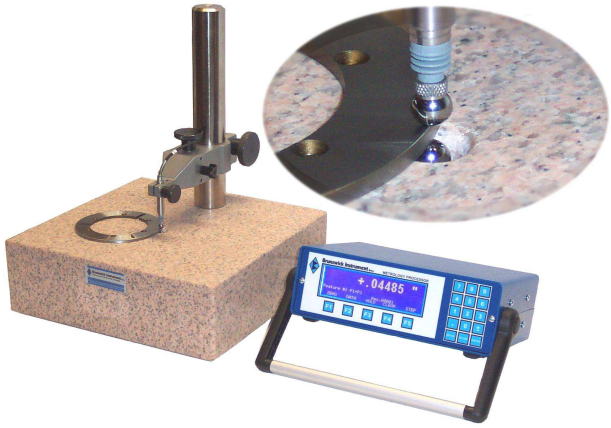


Model DPT-1

The value of the lower probe only can be used for flatness measurements. Set to read zero when the lower probe tip is held flush with the anvil surface, the lower probe value by itself will indicate deviation from the plane of the anvil surface.

The value of the upper probe only can be used for typical measurement of “height” above or “parallelism” to the anvil surface.

Measurement resolution can be set as fine as .000005” (five millionths of an inch) or .0002mm (one-fifth of a micron). Coarser resolution settings are selectable.



Model DPT-1212

The Brunswick Instrument Metrology Processor display unit offers both easy to read digital numeric readout and analog meter style display. Tolerance limits may be programmed into the unit with GO/ NO-GO indications displayed to the user for fast accept / reject decisions and sorting operations. MIN, MAX and TIR peak hold functions are also provided. RS232 serial output is included for data collection, reporting and SPC purposes.

The Model DPT-1 system consists of the MP-2 Metrology Processor, two Model DP/2/S Digital Probes each having a .312” diameter carbide ball contact and Model 258D Dual-Probe Comparator Stand having a 3” square smooth steel anvil, 4” of throat depth and 8” of height capacity. The Model DPT-1212 system is the same except a 12” square Grade AA granite surface plate replaces the steel stand base and anvil.

Larger, custom-made stands and special application anvils, both smooth and grooved, are available. All stands have heavy bases, backlash free vertical fine adjustment and hardened, plated posts.

Contact Brunswick Instrument for details on other system configurations.

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