Perpendicularity
Gage Calibration
Instructions

Indicator model: 543-342BTL
Turn the indicator on by pressing the [ON/OFF] button.
If for some reason the gage is in inch units, press and hold the DATA/HOLD button until the units change to “mm”. “mm” means that the gage is reading in decimal degrees.

The Gage should display 0.0 and be in mm units.
Place the .2495” diameter probe, groove side first, into the gage by backing up the quick-connect collet.

Note: If needed, remove the bushing to provide easier access to the collet.
Pull in and out on the probe to ensure that it is in place.
Place the provided set-block on its normal surface (the nomenclature will be upside down) and insert the gage into the hole of the block until all feet contact the block surface. Wring in the gage to ensure all feet are contacting the surface.
Apply a little bit of downward pressure with one hand and press the Blue START/ZERO/ABS button with the other hand (be sure to not apply any side to side force as it could result in an inaccurate reading). This will “zero” out the gage.

Note: Remove the gage from the block and repeat steps 5 and 6 to ensure the gage is reading 0.0mm.
Once the “zero” is set, turn the calibration block over (the nomenclature will be right-side up). Insert the probe into the hole of the block until all feet are contacting the block surface. The indicator should display 3.0mm (±0.1mm).

Note: Do not be alarmed of the “mm” reading as the gage is in fact reading in decimal degrees.
The gage is now ready for use.

If you have purchased the full set of Master Blocks repeat steps 5-7 on the Master Blocks as shown above.

Note: It is recommended to repeat the calibration process before every use and periodically between measurements to ensure the most accurate readings.
GAGE MEASUREMENT
1. Select the probe closest to the hole inside diameter - for best accuracy, we recommend a maximum of .0005” clearance between the probe and the hole inside diameter. Insert the matched probe into the gage quick connect collet.

2. Insert the probe in the hole that is to be checked. Place all four base legs of the gage firmly on the work surface and read the indicator. If possible turn the gage slowly 10°-15° in both directions without lifting any leg from the work surface. The number displayed at each position should be the same.

3. Proceed to the next hole if it has the same diameter.