

ITC™ MODEL 100 ZERO SYSTEMS – A PRODUCT OF SOUTHERN GAGE INC.

OPERATING INSTRUCTIONS FOR INTERNAL THREAD COMPARATOR

MOUNTING GAGE SEGMENTS

Clean mounting surface on frame and segments. Locating surfaces must be free of any lint or dirt to avoid incorrect seating of segments. Attach segments to frame with mounting screws. Segments are interchangeable top to bottom. Depress operating lever to be sure bottoms of segments match face to face (not cocked)

SETTING THE ITC THREAD COMPARATOR

The comparator is set with a single master ring gage. To engage the master ring gage, depress the operating lever at the back of the comparator and place the master ring gage on the segments. Gently rock the master ring gage to ensure that it is seated correctly.

MOUNTING THE ELECTRONIC INDICATOR

The digital electronic indicator is held in place by a clamp nut. Preload the indicator to .250" on the digital readout. Lock the indicator with the clamp nut. Push the clear button or zero button to zero the indicator. Rock the master ring gage slightly to check seating and push the zero or clear button again to ensure ITC is set.

Depress operating lever and remove master ring gage. If SPC operation is required consult with indicator manual for data management and programming.

MOUNTING DIAL INDICATOR

The dial indicator is held in place by a clamp nut. Preload the indicator at least one full revolution and adjust the indicator to read zero. Lock the indicator in place with the clamp nut. Rock the master ring very slightly to check seating. Loosen the bezel clamp on the indicator face and locate indicator pointer at zero. Adjust indicator tolerance hands (if available) to tolerance limits. Tighten the bezel lock screw.

CAUTION

DO NOT ROTATE THE MASTER RING GAGE OR THE PART ON THE SEGMENTS AS THIS COULD CAUSE DAMAGE AND WEAR TO THE GAGE AND OR SEGMENTS. Erroneous readings may result from rotating the gage or the part due to the helical pull of the thread path.

After placing the master ring or the part on the segments they should be rocked slightly to ensure that they are seated properly. If readings at multiple locations are required the operating lever should be depressed to remove the gaging pressure and relocate the part and then release operating lever to read size.



1. Base w/adaptor – One base is applicable to all frames
2. Segments – Functional segments or single element pitch diameters segments to check the maximum or minimum limits of size.
3. Gage Frame – 3 gage frames are available from .189 up to 8.00 inches in diameter
4. Indicators – Digital electronic indicators w/output or AGD dial indicators w/ .0001" graduations and adjustable tolerance hands
5. Indicator Clamp Nut – Supplied with frame
6. Handle – For hand held applications



Master Set Ring Gages are supplied with a functional diameter value and pitch diameter value. The functional diameter is the actual measured pitch diameter of a thread adjusted by the cumulative effects of lead error and angle error, which is always added to external threads and subtracted from internal threads. The pitch diameter is the theoretical diametrical plane which passes through a thread at the point where the width of the thread tooth and groove are equal.