

ROTARY SHOULDERED CONNECTION- Internal Taper



Internal Taper Gauge- IT-6000 Series

Purpose:

The IT-6000 Series of gages inspect variations in connection taper of internal threads. Each model covers a specific range of connection sizes, making the IT-6000 gages very versatile and economical. The IT-6000 Series use precision contact points that seat in the thread of the part during inspection. The gage's indicator reports actual measurement readings and each set of contact points is interchangeable to allow measuring different thread forms.



IT-6000 Series

Internal Taper Inspection with IT-6000 Series

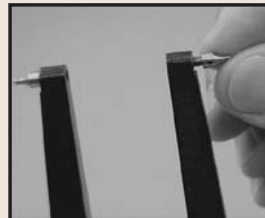
Gage Setup

1. Determine the size of contact points to be used, by the pitch of the thread and type of thread form being inspected.

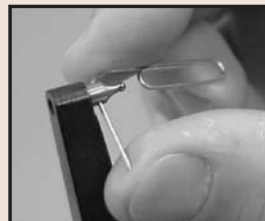


2. Using calipers, verify the size of the contact point.

3. Screw one contact point into the upper arm of the gage and the other contact point into the lower arm.



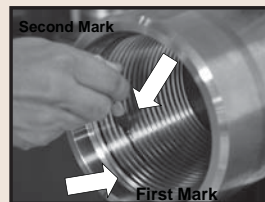
4. To secure the contact points, open a paper clip and insert it into the hole in the contact point's shaft. Rotate, using moderate pressure, to tighten the contact point.



***Do Not** use pliers to tighten the contact points, as damage may result.

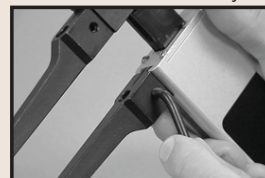
Gage Operation

1. Using a marking pen, draw one full revolution on the threads of the part being measured, starting at the first perfect thread.



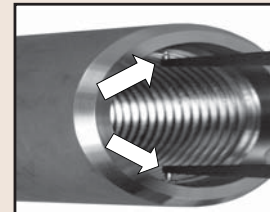
2. Mark another full revolution on the threads of the part one inch back from the first mark. For example, for a 8 pitch thread, count back 8 threads from where you first marked, and mark.

3. Loosen the bent bolt on the lower arm and adjust the lower arm of the IT-6000 gage so that it is able to fit inside the part.



Gage Operation (Continued)

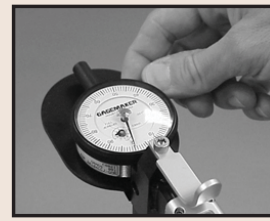
4. With the connector in a horizontal position, retract the gage's upper arm with your thumb, turn the gage upside down and place the movable ball contact into the first marked thread.



5. Adjust the location of the lower arm so that the upper arm and contact point are seated in the same marked thread of the part.



6. While holding the fixed ball contact at the marked location, sweep the upper contact point side to side to locate the largest indicator reading.



7. Turn the indicator dial on the IT-6000 gage to align the needle with zero.

8. Pull the retraction lever on the gage to remove the gage from the part.



9. Repeat step 4 and place the movable ball contact into the second marked thread.

10. Using the lower arm as a pivot, sweep the upper contact point side to side to locate the largest indicator reading.

11. Record the deviation on an inspection report.