

TUBING & CASING THREAD INSPECTION - Internal Crest Diameter



GAGEMAKER®



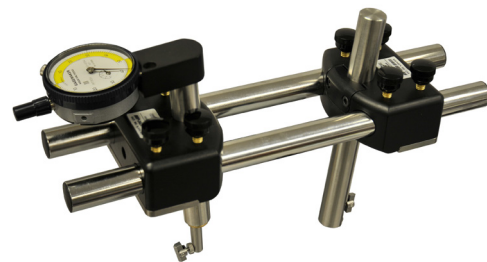
Crest Diameter Gage - MRP-1000/2000/3000

Crest Diameter:

Crest diameter is the most critical measurement in machining threads. Since pipe is not perfectly round, measuring dimensional changes across the face of connectors is critical in determining the proper fit of the connector.

Gage Description:

The MRP® gages inspect the crest diameter and ovality of internal and external tapered threads ranging from 1½" - 20". The MRP® gage includes three models, which gives the gage its versatility. The gage uses two pivoting shoes that rest on the crests of the threads during inspection. Any variations in pitch diameter detected during inspection are shown on the gage's indicator.



MRP-2000



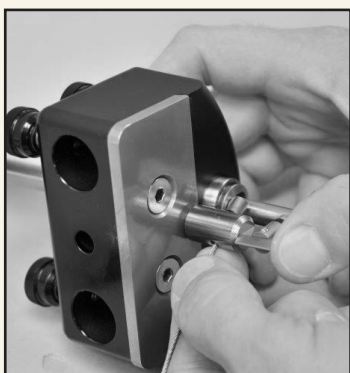
Crest Diameter Inspection with MRP® Gage

Zeroing the Gage

1. Loosen the set screws on the upper and lower blocks of the gage with a hex wrench and loosen all locking knobs.



2. Place the B rod on the gage's wear pad and move the upper arm until the pivot shoe contacts the standard.



3. Using a hex wrench, tighten the two set screws on the upper and lower blocks to secure the arms.



4. Place the A standard on the outside of the pivot shoes and adjust the upper arm until the shoes contact the standard.



5. Slide the upper block .050" or one indicator revolution closer to the lower block to provide preload. Tighten the locking knobs.

6. Sweep the standard from side to side to find the smallest indicator reading.

7. Turn the indicator dial to align the needle with zero and tighten the indicator clamp.

Inspecting a Part

1. Place the gage on the part so the wear pads rest on the face of the part and the pivot shoes ride on the crests of the threads.



2. Ensure that the pivot shoes on the MRP gage are properly positioned on the threads of the part.



3. Using the lower shoe as a pivot, sweep the MRP gage from side to side to locate the largest indicator reading on the part.



4. Rotate the gage 90° and sweep for the largest reading again. If your second reading is greater or less than the first, sweep 180° around the part to find the largest and smallest values.



5. To calculate the crest diameter, add the largest diameter reading to the smallest diameter reading and divide the total by 2.

6. To calculate the ovality, subtract the smallest indicator reading from the largest indicator reading.

7. Record any deviations on an inspection report.

8. Verify repeatability periodically by placing the gage on the standard.