



## **Technical Tip #113 – Gaging NPT Internal and External Pipe Threads**

Gaging NPT pipe threads is a single-step process, compared to the multiple steps involved with gaging NPTF threads.

**Internal NPT Gaging Process:** Using an L-1 NPT plug gage, rotate the gage into the threaded hole until it stops. This is referred to as “hand tight.” If the notch on the gage stops flush with the top of the threaded opening, the part is “basic size.” The threaded opening is allowed +/- 1 full rotation to still be considered basic size. Note that minus 1 turn above the notch is the minimum size allowable and 1 full turn below the notch is the maximum size allowable.

**External NPT Gaging Process:** Using an L-1 NPT ring gage (which is the total thickness of “hand tight”), rotate the gage onto the threaded section until it stops. If the small end is flush to the end of the threaded section, it is considered to be “basic size.” The gage may stop up to 1 turn short of the thread and be considered maximum basic size. The gage may stop 1 turn beyond the end and still be considered minimum size.

Remember that NPT-class threads require sealant or tape wrap to prevent leakage.