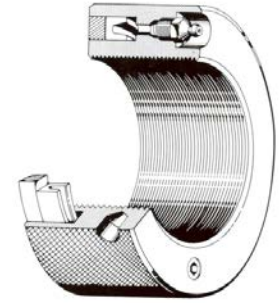


# Thread



Amtec Clamping Devices can, in principle, be manufactured to accept any thread form or size. Physical limitations, as to thread diameter in the bore, are covered in the respective data sheets for our various nut models and sizes. Minimal wall thicknesses, adjacent to the pressure chambers, must be respected for integrity of the nut body.

The most robust and the most highly recommended thread form, for industrial use, is Acme (Imperial) or Trapezoidal (Metric). The 29° included angle Acme or the 30° Trapezoidal provides the largest cross-section and top land area of all thread forms to resist mechanical damage and loading distortion.

Amtec Clamping Devices are supplied with OD centering internal threads for all thread forms with substantial OD land areas; i.e. Acme, Buttress, Trapezoidal. This feature allows very heavy devices to be rotated by hand due to the reduced rotational contact area between the internal and external threads.

Amtec can guarantee “proper fit” only by receiving accurate thread information, which complies with standard international specifications. (Machinery’s Hand Book or others) Test bolts are then made to exact standards for verification of thread fit after machining. Amtec maintains a large inventory of test bolts for every thread form, pitch and rotation (hand).

Thread gauges can verify thread form and pitch. Micrometers or pi tapes must be used to verify diameters. Variable diameters over a given thread length will indicate wear and may prevent proper fit between external and internal threads.

External thread diameters which vary by 0.5 mm (.02 inches) or more constitute “bastard” threads which can only be properly fitted by hand through a local machine shop. These applications must be considered on a case by case basis for best results.

Imperial thread forms are specified in 1/4”, 1/8” and 1/16” diametral increments. Metric thread forms are specified in 10, 5 and 2 millimeter diametral increments.

Thread pitch, (axial distance between adjacent threads) is specified by “threads per inch” (tpi) for imperial series and by actual “pitch in millimeters” (p) for metric series.

Threads in both imperial and metric series can be either right or left hand rotation to tighten. With Amtec Hydraulic Clamping Devices, threads can all be “right hand”, regardless of shaft/arbor rotation, without risk of “unwinding” during operation, as long as minimal pressure is maintained in the nuts.

Examples of properly detailed thread specifications, including (4) major features are as follows:

- UN 7.000” – 6 tpi RH (60° “V” thread)
  - UN – unified national thread form
  - 7.000” – major thread diameter
  - 6 – threads per inch
  - RH – right hand rotation
- ACME 8.500” – 4 tpi LH
- Butt (Buttress) 6.750” – 6 tpi RH
- M (Metric) 160 – 8p RH (60° “V” thread)
- TR (Trapezoidal) 330 – 6p LH

Consult Amtec Hydraclamp Inc. or our local agents for assistance in selecting the best thread for your application.