

TAP TERMS DEFINED

Angle of Thread—The angle included between the sides of the thread measured in an axial plane.

Axis of Tap—The longitudinal central line through the Tap.

Back Taper—A gradual decrease in pitch diameter in the direction of the shank, usually about .001 per inch of thread length. For this reason pitch diameter measurements should be taken immediately behind the chamfer of the first full thread.

Base of Thread—The bottom section of the thread; the greatest section between the two adjacent roots.

Basic Size—The nominal of theoretical size of the major diameter, pitch diameter, or minor diameter. Pitch diameter is computed by subtracting the basic thread depth from the basic major diameter. The minor diameter is computed by subtracting twice the basic thread depth from the basic major diameter.

Chamfer—The tapering of the end of the Tap by cutting away the crest of the first few threads to distribute the cutting action over several teeth. It, also, acts as a guide in starting a Tap into a hole. The three common chamfers are taper, plug, and bottom; they are approximately nine threads, four threads, and two threads long respectively.

Crest—The top surface joining the two sides of the thread.

Face—The cutting surface or front edge of the land.

Flute—The portion of the body which is removed to provide a cutting surface and passage for chips and lubricants.

Heel—The rear edge of the land.

Helix Angle—The angle made by the advance of the thread as it wraps around an imaginary cylinder.

Hook—The undercut on the face of the teeth.

Land—The part of the body which remains after the flutes are cut away and on which the threads are finally ground.

Lead—The distance a tap will advance along its axis in one complete turn. On a single thread the lead and the pitch are identical; on a double thread the lead is twice the pitch.

Major Diameter—Commonly known as the outside diameter. It is the largest diameter of the thread.

Minor Diameter—Commonly known as the "Root Diameter." It is the smallest diameter of the thread.

Pitch—The distance from a point on a thread to a corresponding point on the next thread measured parallel to the axis.

Pitch Diameter—On the full threaded section the pitch diameter is the diameter of an imaginary cylinder which would pass through the threads at such points as to make the width of the thread and the width of the spaces between the threads at these points equal.

Rake—The angle of the cutting face of the land in relation to the straight line from the point of the cutting face to the axis.

Relief—A condition whereby metal is removed from behind the cutting edge to produce clearance and reduce friction.

Root—The bottom surface joining the sides of two adjacent threads.

Tolerance—The amount of variation permitted a manufacturer in producing a Tap to given specifications.