TAP STYLE GUIDE

HAND TAP #1

These standard style taps have straight flutes of a number specified as either standard or optional. Hand taps are for general purpose applications such as production tapping or hand tapping operations. Taper, plug and bottoming styles provide versatility in tough materials, blind and through holes.

SPIRAL POINT TAP #2

As to general physical dimensions, spiral point taps are identical with the standard hand tap. However, the spiral point tap has the cutting face of the first few threads cut at a predetermined angle relative to the tap's axis angle to force the evacuation of chips ahead of the cutting action. This feature, plus the excellent shearing action of the flute, make spiral pointed taps ideal for production tapping of through holes. Typically, this type of tap has a shallower flute passage than conventional taps. This gives the spiral point tap more cross-sectional area, which means greater strength, allows higher tapping speeds, and requires less power to drive.

S.T.I. TAP #3

S.T.I. (Screw Thread Insert) Taps are special taps for helical coil wire screw thread inserts, which provide positive means for protecting and strengthening tapped threads in any material. These STI taps are correctly sized to produce an internal thread that accomodates a helical coil wire screw thread insert. The insert, in turn, will accept a screw thread of the nominal size and pitch at final assembly. Screw thread inserts provide stronger tapped threads (stronger assemblies) due to a more balanced distribution of loads throughout the length of thread engagement.

EXTENSION TAP #4

These taps are made to conventional tap dimensions, except that they have an extended shank to tap hard to reach or holes that are inaccessible with standard length taps. Thread length, shank diameter, and shank square are made to standard specifications listed on **Page 198**. Extension taps are available in both hand and spiral point styles, and in small shank style.

THREAD FORMING TAP #5

These taps have no flutes except as optionally designed with one or more lubrication grooves. The thread form is lobed so there is a finite number of points contacting the work. This tap does not cut metal, so it is 'chipless', and consequently will not cause a chip problem. The tool forms the thread by extrusion, thus thread size can be closely maintained. The fluteless design allows high quality threads, faster tapping speeds, higher production, and generates no chips which simplifies tapping of blind bottoming holes (threads can be formed the full depth of the hole).

SPIRAL FLUTED TAP #6

These taps, as the name implies, are made with spiral flutes instead of straight flutes. This spiral fluting feature aids in drawing chips out of a hole, or serves to bridge a gap inside the hole such as a keyway or cross-hole. Commonly available in slow spiral (25-30° helix angle) or fast spiral (45-60°).