

# Thread Cutting and Thread Forming Screws

The use of tapping screws for fastening light metal parts is both fast and economical. They form their own mating threads when driven into pierced or punched holes . . . eliminating a separate and costly tapping operation. Made of special analysis steel and scientifically hardened, these fasteners are widely used for assembly of sheet metal, die castings, molded, laminated or fiber pieces. When used on these materials, they may be driven with any type of screw driver . . . even powered drivers. They may be removed or replaced in the hole without stripping, damaging the threads, or reducing their holding power. Tapping screws also have greater resistance to vibration since more perfect contact is established with the mating threads.



**TYPE A**

Called a sheet metal screw. A thread forming type used in punched or pierced holes where a gimlet starting point is needed . . . usually in sheet metal .015" to .050" thick.



**TYPE B**

A thread forming screw with a blunt Die Point for use in heavier sheet metal .050" to .200" thick. Also in soft metals, plastics, non-ferrous castings. An easy starting, easy driving screw.



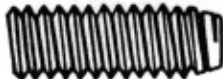
**TYPE AB**

A recent development. Thread forming screw similar to type B but with a gimlet point. Requires less driving torque than same size type A while providing a stronger joint and greater holding power.



**TYPE BP**

A thread forming screw possessing same thread as type B but with a Cone Point. Useful where a slight misalignment of holes exists in parts to be joined.



**TYPE C**

Thread forming screw with standard machine screw threads and a blunt Die Point. Used when a finer pitched screw is needed in metals .030" to 100" thick, with increased resistance to loosening.



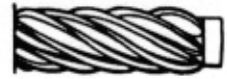
**TYPE F**

Thread cutting screw used in die castings, aluminum, zinc, stainless steel, etc. Machine screw threads with blunt Die Point. Has five cutting grooves with large chip cavities.



**TYPE FZ**

Thread cutting screw for use in brittle plastics die castings, etc. Thread is same as type B with a blunt Die Point. Has five evenly spaced cutting grooves and chip cavities.



**TYPE U**

Thread forming drive screw is hammered or forced into hole for permanent fastening. Has multiple threads and a blunt point. Not easily removable. Superior holding power and resistance to vibration.

## USE OF TAPPING SCREWS:

Recommended uses as outlined here will give best results. However, it should not be construed that other types of tapping screws cannot be used.

### SHEET METALS

.015" to .050" thick

Use type A or type AB in punched or pierced holes and type B or type C in clean punched or drilled holes.

### SHEET METALS

.050" to .200" thick

Recommended are type AB, type B, and type C used in proper size hole. Multiple thread type U drive screw may also be used.

### STRUCTURAL STEELS

.200" to 1/2" thick

The type F and type FZ cutting screws should be used here. Type U drive screws may also be used where a permanent fastening is desired.

### CASTINGS

In aluminum, brass, bronze, magnesium, zinc, etc., castings the type AB, type B, type C thread forming screws may be used. Also the thread cutting screws and type U drive screws.

### CASTINGS

In grey iron, malleable iron, steel, etc., castings the use of thread forming screws is not recommended. Thread cutting type F, type FZ and the type U drive screw is used.

### FORGINGS

In steel, brass, bronze, etc., forgings only the thread cutting screws type F and type FZ, or the type U drive screw should be used.

### PLASTICS

In general, the same rules apply as for metals. The thread forming screws are used in sheet plastics; the thread cutting and drive screws are used in solid and block plastics.

### COMPOSITION

All types of tapping screws may be used in treated plywoods. All types are recommended for use in insulating composition materials except the type U drive screw.

Refer to page 45 for recommended hole sizes for tapping screws.