FASTENER TERMINOLOGY

Bolt: Externally threaded, headed fastener. Difference between a bolt and a screw: a bolt is generally used through a hole with a mating nut. A screw is used in a threaded hole without a nut.

Class of Thread: A system to distinguish thread tolerance differences. Classes 1A, 2A, and 3A apply to external threads. 1B, 2B, and 3B apply to internal threads. Classes 2 and 3 apply to both external and internal threads.

Crest: Outermost tip of male thread from the fastener cylinder, or innermost tip of female thread.

Driving Recess: Recess in the fastener head designed to accept a driving tool.

External Thread: Male thread. Thread outside of the cylinder surface.

Internal Thread: Female thread. Thread on the inside surface of a cylinder or cone.

Left-Hand Thread: Thread that winds counter-clockwise from the starting end of a fastener.

Right-Hand Thread: Thread that winds clockwise from the starting end of a fastener (viewed from starting end).

Major Diameter: Largest diameter of a screw thread on a straight thread. It is the diameter of an imaginary cylinder which would pass through the crest of an external thread or the root of an internal thread.

Minor Diameter: On a straight thread it is the diameter of an imaginary cylinder bounding the root of an external thread or the crest of an internal thread.

Nominal Diameter: Basic diameter that determines the size and dimensional limits of fasteners.

Pitch: Distance from a point of a screw thread to a corresponding point on the next thread measured parallel to the axis.

Screw: Headed fastener which is externally threaded.

Sems®: Pre-assembled screw and washer assemblies. Washers are placed on screws before roll threading. Threads of larger diameter than the washer hole thus prevent the washer from slipping off the screw.

Stud: Threaded rod at both ends or for entire length.

Tapping Screw: Hardened thread screw made to cut or form its own mating thread in an untapped hole.

Teks®: Screw which drills its own hole and then threads in.

Thread Pitch: Distance from the crest of one thread to the crest of another.

PLATINGS AND FINISHES

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<td>Black Zinc</td>
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<td>Excellent: 48 Hour Salt Spray</td>
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<td>Cadmium (Chrome)</td>
<td>Bright Silver-Gray Dull or Burnished</td>
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<td>Phosphating</td>
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<td>Zinc Electrogalvanized</td>
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<td>Zinc Electroplated</td>
<td>Blue to Blue-White-Gray</td>
<td>Very Good: 24 Hour Salt Spray</td>
<td>All Metals</td>
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**HEAD STYLES**

- **Binding**: undercut unless otherwise specified. Not recommended for phillips recess.
- **Fillister**: deep slot used for counter bored holes.
- **Flat Fillister**: same as standard fillister without oval top.
- **Flat 82+**: used where flush surface is desired.
- **Flat 100+**: larger head than 82° used for thin metal soft plastic.
- **Flat Trim**: same as 82+ except diameter and countersink depth reduced.
- **Flat Undercut**: standard 82+ with lower 1/3 countersink removed for short screws.
- **Hexagon**: manufactured as trim hex or indented hex.
- **Hex Washer**: same as hexagon with washer section.
- **Oval**: same as flat head with rounded surface for appearance.
- **Oval Undercut**: similar to flat undercut with rounded surface.
- **Oval Trim**: same as oval, smaller diameter and countersink.
- **Pan**: recommended to replace round, truss binder.
- **Round**: general purpose (see pan head).
- **Round Countersunk**: bolts only. Similar to flat head with no driving recess.
- **Round Washer**: same as round head with integral washer for bearing surface.
- **Square**: bolts only. Large bearing surface for wrench tightening.
- **Square Countersunk**: for use on plow bolts.
- **Square (Set Screw)**: recommended for high torque assembly.
- **Truss**: similar to round head with larger diameter (see pan head).
- **Cross-Slot**:
- **Cross-Recessed** (Phillips)
- **Pozi Drive**
- **Frearson**
- **Phillips & Slot**
- **Slot**
- **Cross-Slot**

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**POINT STYLES**

- **Type AB**
- **Type 17**
- **Type BP**
- **Type A**
- **Type B**
- **Type BT(25)**
- **Type C**
- **Type T(23)**
- **Type D(1)**
- **Type F**
- **Type G**
- **Type BF**
- **Type U**
- **Type TT**
- **Type CA**
- **Dog Point**

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TAPPING SCREWS
Diameter, Head Size & Length Identification

Oval Head Tapping Screws

#4 Head  #4 x 1"
#6 Head  #6 x 1-1/4"
#6 Head  #8 x 2-1/2"
#8 Head  #8 x 2-1/2"
#6 Head  #10 x 2-1/4"
#8 Head  #10 x 2-1/2"
#10 Head #10 x 2-1/2"
#8 Head  #12 x 1-1/2"
#10 Head #12 x 1-1/2"
#12 Head #12 x 2"
#10 Head #14 x 1-1/2"
#12 Head #14 x 1"
#14 Head #14 x 1-1/2"

Pan Head Tapping Screws

#4 x 1"
#6 x 1-1/2"
#8 x 1-3/4"
#10 x 1-1/2"
#12 x 1-3/4"
#14 x 2-1/4"

How to Measure Tapping Screws

Place Pan Head, Hex Head or Hex Washer Head Screws at this end to measure the length (under the head)
Place Oval Head or Flat Head Screws in the blackened area to measure the length