

Choosing the Right Screws and Drivers

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Most picture framers take their hardware for granted. Ask them what type of screws they use and they will say "regular screws." Unfortunately, that answer may be costing them time and money. There are several types of screws available for use, some better suited to one job than another. And one type in particular is best for most picture framing applications.

Types of Screws

There are five types of variables when dealing with screws: head type, thread type, driver type, material, and coating. Let's look at those in order.

First, let's consider head type. The majority of screws used are flat head screws. This type of screw has a flat head that is conically shaped as it tapers to a straight shank. (The shaft of the screw is called the shank.) These screws are used when the screw head will be set flush to the surface or countersunk.

Next are trim heads. The trim head is shaped like a flat head only it is smaller. It is like a finish nail in that it is essentially self sinking. Because of its small head care must be taken when driving it in, as the

bit tends to slip. Use only with a square drive.

Another type, round washer head screws, can be helpful if you need to support larger soft materials. It contains a washer as part of the head. This larger head area spreads the force of its holding power. Super round washer head screws allow for adjustment of the two members being attached.

Occasionally a framer may wish to use these so as to center or otherwise perfectly position one object in relation to another without having to be exact in drilling. I use this type of fastener when I have to float a frame centered on a large piece of matboard or fabric (see Photos 1 and 2).

Finally, there is the pan head screw. These screws provide a flat surface under a rounded head. This allows the framer to attach hardware to the back of the frame.



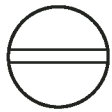
Photo 1. Round washer head screws can be used to center or position one object in relation to another without being exact when drilling.



Photo 2. The screw hole can be enlarged to ensure proper placement without being visible due to the large incorporated washer head.

Styles of Threads

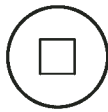
Second, consider thread styles. Deep thread screws are single lead. This means that one thread turns the screw one revolution. Deep thread screws offer better "pull out" resistance than other thread types. Wood screw threads are single lead tapered screws made to be easier to go into harder woods. Double lead screws have two threads wrapped around the shank. They go into wood faster than single lead but offer less "pull out" resistance. This is the type of thread used on a dry-wall screw since speed is more important for contractors and "pull out" on drywall is rarely a factor. They should not be used in picture



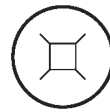
Slotted



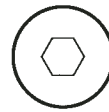
Phillips



Square (also called Robertson)



Combo



Hex

framing where “pull out” is disastrous. Sheet metal threads have a slightly different shape than single lead and are threaded all along the shank. While they are generally not used on wood, their narrower shank makes them appropriate for use in fiber or particle board products.

What’s In a Driver?

Driver type is of particular importance since most framers don’t use the optimal driver. There are four common types of drivers. Everyone has heard of both slotted (that’s the straight type) and Phillips drivers. Most framers are using Phillips because the slotted screwdriver always slipped out of the slotted screw.

The two other types of driver head are the square Robertson and the combo. The square head looks just like you would expect – a square hole centered on the head of the screw. The size of the hole varies according to the size of the screw. The main feature of the square head is that you can put the screw on the driver and it won’t fall off when the driver is held at a 90° angle. Also, it is extremely difficult to have your drill bit slip out of the square drive recess.

These reasons alone would make this type of driver head perfect for the framer save for the fact

that not everyone had a square driver at home. Our customers have to be able to remove the screws that we install and most of them won’t have the appropriate drivers. This is where the combo drive head comes in. It is a square head with wings and can be driven by either a square or Phillips driver, making it ideal for the framer.

Drivers come in different sizes, whether slotted, Phillips, or square. Be sure to have on hand a complete set of screwdrivers, including the less popular hex and security heads that haven’t been discussed. They only cost a few dollars and will make the shop prepared to deal with anything that comes across the bench.

Also, when buying driver bits for your drills or electric screwdrivers, buy extras. Though the square drive will spin less, increasing the lifespan of the bit, all bits wear out. Don’t use a bad driver bit, at best it will be frustrating and at worst it could cause injury.

(If you use a lot of screws, perhaps to attach d-ring hangers for wire, you owe it to yourself to try the square drive screws. You’ll be amazed at how much easier and faster they are to use.)

Screws are made of many different types of materials. Unplated hardened steel is the most popular

and least expensive. It is used primarily when not visible since it doesn’t look attractive. Stainless steel is corrosion proof but it is relatively soft (since it can’t be heat treated) and the steel must be formed into threads. Aluminum screws, which is what we picture framers use, are hardened as the threads are being formed. They don’t corrode. Solid brass screws look nice in cabinet hardware installation but are difficult to use because the brass is a very soft material. Be careful not to break brass screws when inserting them and pre-drill all screw holes.

A number of different finishes are available in screws. For the picture framer finish is generally not important. The exception is for work in a marine environment, where frames will be exposed to salt water condensation or spray. (Being on the coast of Massachusetts we sometimes frame signs and posters for the local marinas.) Then you should look for zinc plated or other proprietary non-corrosive finishes. With so many different things to consider in selecting screws, never take hardware for granted again. ■