

Buying Guide: Types of Screws and Their Purposes



When it comes to tightening and fastening materials together, you can't just rely on any old screw to get the job done. Some projects may require specialized **hardware** to ensure long-term durability and reliability. Whether you're a DIY enthusiast wanting to transform an old piece of furniture, or a professional needing the right tools to complete jobs efficiently, browse through our **screw** options at Tractor Supply.

Types of Screws

There are many things to keep in mind before buying a set of screws for your project. For starters, you must think about the type of project you're working on, the material you're using and how your project will be utilized after it's complete. This is because different screw types work better for certain materials and applications, meaning you want to find one that matches your project best.

Additionally, some building codes may also require that you use certain **fasteners**, depending on the project. To meet all requirements of your area, you should know these codes to find the best screw option.

The different kinds of screws include:

Deck Screws

While in the name, **deck screws** can be used for much more than just decking. Their durable, resistant construction means you can also apply them to fencing and other outdoor projects.

Choose from wooden deck screws, which come with an unthreaded shank and **coarse** threads, as well as composite options equipped with smaller-sized heads and fine threads. We also carry screws with a second thread set to add structural durability. Our deck screw lengths range from **1 inch** to **12 inches**, meaning you can find a compatible size.

Drywall Screws

Use **drywall screws** for interior tasks, such as attaching drywall to studs, featuring a fully threaded shaft. **Fine-threaded** options work better for metal studs, and **coarse-threaded** screws allow for easy drywall hanging on wooden studs. You shouldn't use these screws for materials needing high-strength fasteners, such as tile and cement board, as they are not strong enough to handle them.

Machine Screws

Machine screws are designed to attach metal parts together, typically in machinery for making repairs and replacements. They come without a pointed end, as well as fully threaded for stable fastening. These screws feature SAE sizing, from **5/16 inches** to **2-1/2 inches**, and metric sizing, from **6mm** to **40mm**. They are typically smaller than other fastener types, and can easily screw into tapped holes, as well as unthreaded holes with help from added **nuts** or **washers**.

Socket Head Cap Screws

Socket head cap screws (also called an Allen bolt or screw) are a type of machine screw with a socket head type, installed using an Allen wrench or **hex key**. Socket heads usually sit raised from the surface, and they come with a traditional cylindrical screw shape. The shank is threaded, meaning it offers more durability and a stronger hold than your typical machine screw.

Self-Drilling Screws

When you need efficient, quick methods for fastening materials together, rely on a **self-drilling screw**, which eliminates the need to pre-drill a hole (called a pilot hole) before drilling into materials. These screws are especially ideal for driving into wood, as the point is designed to jut in without splitting it. Typically equipped with a **star-drive head**, our screw sizes range from **5/8 inches** to **3 inches**.

Sheet Metal Screws

If your project requires that you work with **sheet metal**, use a compatible screw type, such as a **sheet metal screw**. Featuring a variety of sizes, from **5/8 inches** to **2-1/2 inches**, we also offer **assorted** options, including many different sizes in one package to accommodate any project need.

Sheet metal screws are not only useful for fastening sheet metal pieces together, but also for attaching sheet metal to softer materials. Screws may feature self-drilling points, and you can find screws specifically intended for use with pre-drilled holes.

Wood Screws

Wood screws come with a sharp point and **coarse** threads, making them suitable for fastening wood materials to wood in nonstructural projects. These screws may feature an unthreaded portion, which sits close to the head and offers a tighter hold when securing materials together. Screw sizes are available in anywhere from **5/8 inches** to **10 inches**, making it easy to find what you need.

How to Find the Right Screw for You

While many beginners assume that you can use any screw to fasten materials together, this is simply not true. In fact, finding the right type and size of screw will make a difference in your project's results and long-term stability. Alongside screw type, other aspects you must consider include:

Screw Size and Gauge

When shopping for screws, you must think about both their thickness and length. The diameter is the entire width of the screw, including the threads – this is called the major diameter. You may notice measurements mixed with the '#' sign, followed by a number. This indicates the diameter of your screw. For example, a #10 screw would tell you it has a 3/16-inch major diameter. Keep in mind that the smaller the number, the smaller your screw's diameter will be.

The length of your screw includes anything from the point to where the material's surface will meet on the head. In other words, if your screw head is large and bulgy, it won't sit completely flush with materials. However, the bottom of the head will. In this case, you would measure from the screw's point to the bottom of the head to find the length.

Screw Finish

While we may not think it, the finish of your screw is essential to keeping projects durable and reliable. This is because different **coatings** may handle certain materials better, or stand up to certain elements with ease, such as moisture.

For outdoor projects, you want something with rust and corrosion resistance, allowing all parts to stay durable and functional for years to come. For instance, while steel is a popular screw material, it may not hold up well against moisture, causing it to erode and rust over time.

Zinc-plated and **galvanized** finishes, as well as **stainless steel**, are best for resisting moisture and other elements. You can also find decorative finishes, such as **black**, to match the color of your project, giving hardware an invisible appearance. If using screws with decorative finishes, ensure to keep projects indoors, as these offer minimal corrosion protection.

Head Style

Screw heads feature many styles and are designed with various patterns, shapes and configurations. Not only do they determine the kind of tool you need, but they also help you create the look and feel of your project.

For a rustic appearance, try an **oval head**, which sits noticeably above your material's surface to add an industrial, heavy-duty element. You can also try **hex washer** heads, which feature larger head styles to cover more area of the screw hole and offer a more stable hold. If you want something more invisible and less noticeable, opt for a screw that sits level with materials, such as **round**, **flat** or **pan head** styles, which simply sit atop the surface.

Other screw options fit into countersunk holes, which are small existing holes in materials. As screws drive into the hole, the head will fit flush and exact with materials. You can also find self-countersinking screws, such as **bugle head** choices, which create the depression in the material as you install them.

Drive Style

A screw's drive style is determined by the head type, and it indicates the type of tool you need to complete projects. For example, **slotted** drive styles should be used with flat screwdrivers, as the markings on the top of the head are compatible with the shape of the tool's end. Other drive styles include:

- **Phillips:** These come as a crisscross pattern on the head, making them suitable for use with **Phillips-head screwdrivers**.
- **Star:** Also called torx screws, these feature a star-shaped pattern on the head for use with torx-style tools and drill bits, offering higher torque.
- **Hex:** These include a hexagonal-shaped head and can be used with **hex keys** or Allen wrenches.
- **Socket:** These feature a square-shaped indentation on the head, keeping screws centered to allow for more force while driving and to prevent slipping.

For more versatile tightening, go with a **combination** drive style screw, which allows you to use either a **Phillips** or **flat head screwdriver** to fasten materials.

Thread Type

The thread of your screw includes the small lines that run down its length in a spiral fashion, helping to rotate and drive screws into materials. Different screws may have varying thread types and sizes, which are measured by the amount of gapping between threads. The main screw thread types are:

- **Coarse:** These threads come with larger gaps to attach softer drywall or wood materials. They are often quicker to install and remove than other options.
- **Fine:** These threads feature smaller gaps between threads, offering a tight fit against surfaces. These are most used with nuts or for metalworking projects with pre-tapped holes.
- **Standard:** For multipurpose projects, rely on this thread type, which offers easy drilling and can be used for most tasks. However, they aren't the strongest option, meaning you'll have to go with other options for heavy-duty tasks, such as sharp or dual action.
- **Sharp:** These threads provide specialized driving power, cutting into materials as you drill to ensure a tight, secure hold.
- **Dual-action:** These options come with two threading types, one on each half of the screw. The thread direction for one part is different from the other, offering more secure attachment when fastening materials together.

To determine the type of thread you need, you should note that the smaller the thread count, the finer the threads are, and not all screws will have threading.

Frequently Asked Questions About Screws

What's the best way to install a screw?

When installing a screw, it's essential to drill them exactly where you need them to go. To accomplish this, you should ensure you're holding onto your screw tightly and that it's in the right spot, keeping it upright even while you are drilling. You can't completely rely on a screw's threads to rotate and drive into materials – you also need to apply a small amount of pressure. Make sure to drive screws until they absolutely cannot move anymore, giving you tight, secure attachment.

If working with heavy-duty materials and tools, it's always a good idea to wear **safety gear**. Pick up a pair of **safety glasses** or **goggles** to keep eyes safe from flying debris, and make sure to have a durable pair of **work gloves**, preferably ones with grippy palm and finger surfaces to give you enhanced grip on screws and tools.

Do I have to pre-drill a hole before drilling a screw?

While not all projects require it, you should consider pre-drilling a hole into materials – called a pilot hole. This is especially true for projects involving wood, as pilot holes help to keep it from splitting and cracking during the drilling process. They also make it easy to guide screws exactly where you need them, allowing for smoother, more convenient and accurate driving.

To drill a pilot hole, you should find a drill bit that's the same diameter size as your screw. If you're having trouble finding a match, that's okay! Simply go with the drill bit that's slightly smaller than your screw. You don't want to choose something that's too large, as screws won't attach and will fall loosely into holes. You must ensure the threads of your screw can catch on materials as you drive, delivering a tight hold.

Can I reuse my screws?

While you can reuse screws, it's not always recommended. But if you do, you should inspect it for damages, such as bent threads, out-of-shape heads or stripping. If you notice any of these signs, you should not reuse the screw, as it won't hold to materials securely, meaning projects may fall apart in the future.

Before reusing your screw, you should clean it thoroughly, working to eliminate leftover paint and debris. After cleaning, make sure to dry it to prevent rust from forming and building up over time. This ensures no remaining debris impacts the hold and reliability of the fastener.

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From professional carpenters to homeowners, we have the supplies and tools you need to get creative and bring your most stunning visions to life. With a variety of options to choose from, we make it easy to find exactly what you need to finish your project and keep it looking great for years after it's finished. To learn more about our different screw products, visit your [local Tractor Supply store](#) today or browse online.