

HEAD
Phillips or Slotted



SHANK
Same diameter
as the threads

THREADS
Deeper at the tip
than near
the shank

TIP
Almost blunt

Then...

Choose the Right Screw for the Job Today's

HEAD
Phillips/Square Combination,
Square, or Torx (star)
for less bit-slippage.



SHANK
Straight down to
the tip—no shank
holes needed.

THREADS
Deep along the
entire length for
greater grip.

TIP
Sharp, some with
auger notches
or serrations for
easier starting.

...Now

The days when slotted or Phillips was your only choice ended years ago. Now you've got better everyday screws and problem-solving specialty fasteners.

If you still rely on traditional wood screws to assemble projects, it's time to get the right fasteners for the job: screws that resist breaking, don't eject their driver bits, and require just one shank/pilot hole. To sort through the fasteners available, ask yourself a few questions about the task at hand.

1 Indoors or outdoors? Outdoor screws need corrosion resistance. A zinc coating provides minimal rust protection. For pressure-treated lumber, use screws with coatings that withstand corrosive treatment chemicals. For maximum corrosion resistance, choose silicon-bronze or stainless-steel screws.

2 Exposed or concealed? If the screw must sit flush with or below the surface, use a countersunk flathead screw. To hide a flathead screw, add a counterbore and cover the screw with a wooden plug. If the screwhead can rest above the surface, use a panhead screw to reduce splitting or pull-through.

3 What size? Screw diameters are measured in gauges, mostly from #4 to #14. A #8 screw handles most projects. Use #10–#14 screws for big jobs, such as an arbor, and #6 screws for tabletop projects. Screws should reach at least 3/4" into the bottom part you're fastening and preferably two-thirds the screw length.

Must-Have Screws

FLATHEAD

Today's flathead screws use square and Torx/star driver bits instead of just Phillips drives. Most have straight shafts with deep threads, and enough unthreaded shank to help the head pull the top workpiece tight against the lower piece. Some have serrated threads or augering grooves at the tip (detail) to cut through wood fibers around the pilot hole for easier driving.



PANHEAD

Use panhead, or sheet-metal, screws to attach hold-downs and other jig hardware plus project hardware such as drawer slides. The threads extend up to the head. When joining two pieces of hardwood, you may need an oversize shank hole in the top piece to keep the threads from pushing pieces apart. A flat-top panhead (or "pocket-hole screw," named for its primary use) comes with fine threads for hardwoods or coarse threads for softwoods.



STAINLESS-STEEL

Stainless steel resists corrosion and discoloration on outdoor projects. Look for "300 series" steel with 18 percent chromium and 8 percent nickel that resists corrosion under normal circumstances. A 316 stainless adds molybdenum for greater protection against salt-air corrosion. An auger point doesn't eliminate the need for pilot holes, but makes driving the screw easier. Some types have colored heads to blend better with deck boards or trim.



Specialty Screws

TRADITIONAL WOOD SCREW

The tapered shaft of a traditional wood screw requires drilling one hole for the shank, a smaller pilot hole for the threads, and finally a countersink. Or use a tapered bit, shown at *far right*, to drill all three at once. Keep these handy for restoring or re-creating antiques. To drive brass screws, drill pilot holes, and cut the wood fibers for the threads by driving and removing a steel screw of the same size. Then insert the brass screw.



WASHER-HEAD

The wide, flat underside of the washer-head screw disperses force over a larger area than even a panhead screw. Use #10 versions up to 3" long to hang cabinets. For attaching drawer fronts or mounting wooden drawer and door pulls, versions with extra-wide washer heads let you make minor adjustments within an oversize shank hole.



CABINET-CONNECTING

Developed in Europe during the 1970s as the Confirmat screw, these fasteners grip medium-density fiberboard or particleboard without splitting it. The 7x50mm size handles most 3/4" materials. A stepped pilot-hole bit made for these screws drills a wider hole for the shank plus a countersink. When appearance matters, hide the PoziDrive screwheads (see *Common drive types, next page*) with plastic caps.

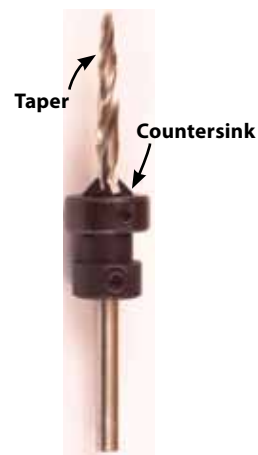


The right tools yield faster fastening

Whether you use traditional or modern screws, today's countersink/counterbores drill a pilot hole, shank hole, and countersink all at once.

FOR TRADITIONAL WOOD SCREWS

Tapered drill bits with movable countersinks match a traditional screw's shape and length.






















































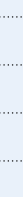



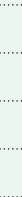
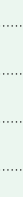
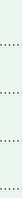

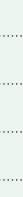


FOR MODERN SCREWS

Use a countersink/counterbore combination sized for #4, #6, #8, or #10 screws. To match the pilot-hole depth to the screw length, just shorten or extend the drill bit. Counterbore diameters measure 3/8" or 1/2" for standard wooden plugs.



To order either style countersink/counterbores, visit Lee Valley, 800-871-8158, leevalley.com; or McFeely's, 800-443-7937, mcfeelys.com. 🌲

Flathead and panhead screw specs at a glance

		Flathead Screws						Panhead Screws					
Gauge		4	6	8	10	12	14	4	6	8	10	12	
Head Diameter		1/4" 	21/64" 	11/32" 	23/64" 	7/16" 	1/2" 	7/32" 	9/32" 	5/16" 	3/8" 	27/64" 	
Pilot-Hole Diameter*	Hardwood	5/64" 	7/64" 	1/8" 	9/64" 	5/32" 	3/16" 	3/32" 	7/64" 	1/8" 	9/64" 	5/32" 	
	Softwood	1/16" 	3/32" 	7/64" 	1/8" 	9/64" 	5/32" 	5/64" 	3/32" 	7/64" 	1/8" 	9/64" 	
Range of Commonly Available Lengths		3/8" 											
		1/2" 											
		5/8" 											
		3/4" 											
		1" 											
		1 1/4" 											
		1 1/2" 											
		1 3/4" 											
		2" 											
		2 1/4" 											
		2 1/2" 											
		2 3/4" 											
		3" 											
		3 1/2" 											
		4" 											
		Square-Drive Bit		#0	#1	#2	#2	#3	#3	#0	#2	#2	#2
Phillips-Drive Bit		#1	#2	#2	#3	#3	#3	#1	#2	#2	#3	#3	

* Shank holes are seldom needed for today's screws. If the screw needs to turn freely, drill an oversize hole the next pilot hole size up.

Common drive types from dependable to difficult

Very little driver-bit slippage



Torx/star

For fewest hassles, use Torx/star or square-drive screws. The square-drive design is available on a wide variety of flathead and panhead screws.



Square

Some slippage in tough applications



PoziDrive

PoziDrive and square/Phillips combinations are widely available at home centers on screws meant for building decks and outdoor projects.



Square/Phillips

You're in for slippage



Phillips

Because of these slippery culprits, woodworkers have long wanted ways to prevent screwdrivers from jumping loose from screwheads, or cam-out.



Slotted