

All About Impact Drivers

Is there a place for them
in furniture-making shops?

BY ROLAND JOHNSON



Impact action offers advantages

On average, an impact driver generates four times the torque produced by the same-size cordless drill. What's better, the force comes in microbursts, so the bit won't come out of the screw head as easily. An impact driver also can provide added control, as the action rotates the bit relatively slowly. Be aware, though, that this tool is noisy when in impact mode.

At a quick glance, you might mistake a cordless impact driver for a common cordless drill. Both can drive screws and drill holes. A closer look shows critical differences, however. Curious to find out if those differences have any significance when making furniture, I gave several impact drivers—ranging in size from 9.6v to 18v—a workout in my shop.

Impact drivers crank out more torque

Torque is a measure of twisting force. Compared to a cordless drill with the same-size battery, an impact driver produces about four times the torque.

Under normal screw-driving torque, an impact driver operates exactly like a typical cordless drill. But when the driving gets tough, a spring-loaded cam and gear mechanism kicks in. Often, the driver works like a drill as you begin to drive a screw. As the screw goes farther into the wood, the driver switches to impact mode.

A few good things happen when the impact function is in action. You don't need to apply as much downward pressure on the screw head to keep the bit in place. You don't need a hold-on-for-dear-life grip. And because the screw rotates slowly when in impact mode, you have great control over the depth of the screw. No need to fret about the screw spinning out of control to a point well below the surface—you spin the screw head slowly until it's perfectly flush.

Be aware, though, that impact drivers don't have adjustable clutches like cordless drills have. When driving a screw that's too tight, the applied torque can twist the upper portion of the screw and snap it off. Granted, cordless drills have been known to snap screws, but it's more likely with impact drivers.

Also, because impact drivers are clutchless, you can drive a screw too far. That's most likely to occur with



DRIVE LARGE SCREWS

Long screws can be a challenge for cordless drills, but impact drivers send them home with little fuss.



DRILL BIG HOLES

Cordless drills sometimes stall when drilling big holes; impact drivers keep on turning.

a small screw. Because it takes little torque to drive a small screw all the way, the impact mode doesn't kick in and the driver behaves like a regular drill.

One more point: Impact drivers have a quick-change chuck, so it takes seconds to add or remove a drill-driver or bit. But the chucks accept only hex-shank bits, which don't slip but are harder to find and are more expensive than bits with round shanks.

Power to suit every need

Cordless impact drivers come in a range of battery sizes; typically 9.6v, 12v, 14.4v, and 18v. Surprisingly, the size and weight of the tool don't change much as the battery size increases.

After using each tool in my shop for several weeks, I concluded that they all have more power than most furniture makers need. That said, if I had to pick a size, I'd want an 18v driver. It's relatively light, yet drives 3-in.-long screws with little fuss.

Do you need one?

At the end of the day, there's a lot to like about cordless impact drivers. Their compact size, light weight, added torque, quick chuck, and driving control give them plenty of appeal. Indeed, for almost all screw-driving or hole-drilling tasks, I reach for an impact driver. If I were buying my first cordless drill, I'd spend the extra 10% to 20% for an impact driver.

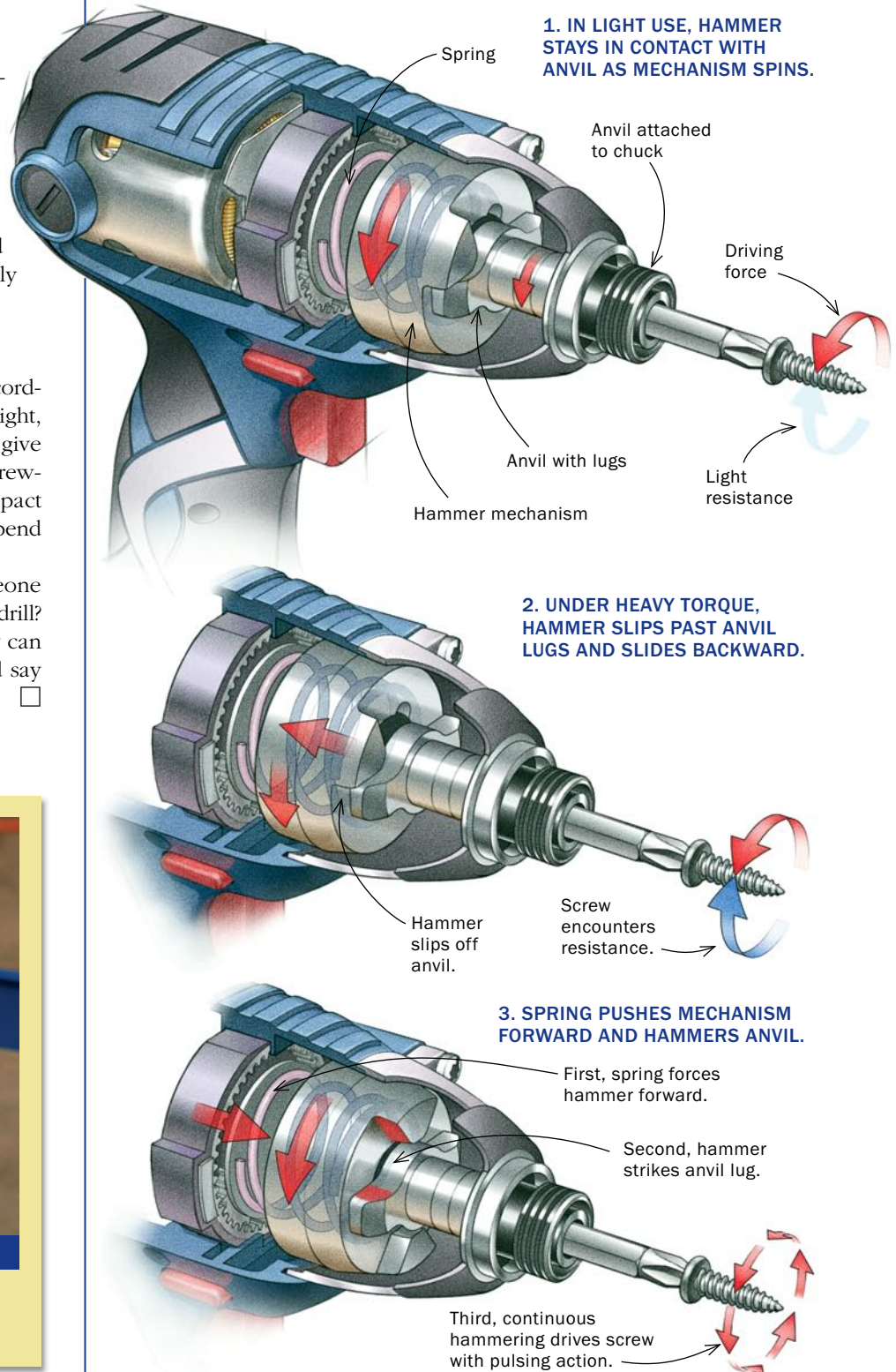
Is an impact driver a must-have tool for someone on a tight budget or who already has a cordless drill? When you consider that a cordless drill probably can do 90% of the work an impact driver can do, I'd say that for most furniture makers the answer is no. □

Roland Johnson is a contributing editor.



How an impact driver gets its drive

Much like a hammer smacking against an anvil, two components of the impact driver meet—at up to 3,000 times per minute—with considerable force. The pulsing action created by the contact creates a good measure of extra torque, one of the main advantages of an impact driver. It's noisy, though, so ear protection is a good idea.



TURN NUTS AND BOLTS

With a nut-drive in the chuck, an impact driver can tighten a bolt in no time.