

## Cordless 24-Volt Rotary Hammer

**DC223 SDS 24-Volt Cordless  
7/8-Inch Rotary Hammer**

**DeWalt**

**800/433-9258**

**dewalt.com**

**Street price: \$500**

by Kim Katwijk

While a rotary hammer isn't a tool that deck builders use every day, it is one that every deck builder needs occasionally. Nothing is faster for boring a foundation wall to attach a ledger, drilling holes to anchor a set of stair jacks to a slab, or setting post-base bolts in footings.



At full speed, DeWalt's 24-volt DC223 SDS cordless rotary hammer is really fast: I drilled a 1/4-inch by 3 1/2-inch-deep hole in 13 seconds flat and a 1/2-inch by 4-inch-deep hole in a minute. It has a variable speed switch, but for me there's only one speed — on.

The DeWalt weighs in at 8.4 pounds with its battery and is pretty comfortable to use. The L-shape design and handle placement puts its natural position in your hand at about 45 degrees —

halfway between drilling horizontally and vertically, so it works well either way. Its side handle rotates 360 degrees, allowing for easy two-hand operation with little fatigue.

Many high-torque drills such as this can twist out of the user's hand if they jam, sometimes spraining a thumb or finger. The DeWalt has a safety clutch that reduces torque when the bit jams, a feature that saved my finger. The switch is reversible to help get bits unstuck.

Putting the DeWalt through its paces at 40° F (the nicad battery's lowest recommended temperature), I was able to drill four 1/2-inch-by-4-inch holes into concrete with one battery charge. To test the range of its performance, I drilled 28 1/4-inch-by-3 1/2-inch holes per charge, with the battery taking one hour to recharge. With the right bits, the DC223 SDS can also be used to chip tile, chisel wood, or do other light work.

When I tested the drill on a concrete wall, I found that drilling with a large bit could cause large sections of the back side of the wall to come off as the bit emerged. Drilling a smaller pilot hole, then drilling from each side solved the problem.

The tool has enough power for 1/4-inch and 1/2-inch holes, which should address most deck building needs. It's handy for small jobs, but because it's easy to run down one battery long before a second one charges, I'd stick with a corded rotary hammer for big jobs.

*Contributing editor Kim Katwijk is a deck builder in Olympia, Wash.*

## What Is an SDS Bit?

Introduced by Bosch ([boschtools.com](http://boschtools.com)) in 1975, SDS (Specific Drive System) bits are used in rotary hammers equipped with special chucks, primarily for boring holes in concrete.

SDS bits and chucks differ from a regular drill system. Where a regular bit has a round shank and is held in the chuck by friction, SDS bits have grooved shanks that positively engage with the chuck. No chuck key is needed — the bits are held in place by a spring-loaded collet, which makes swapping out bits a quick and easy task.



While SDS bits engage positively with the rotary function of the drill, the bits can move in line with the drill. According to Andrew Pompeii, product manager for concrete accessories at Bosch, “Rotary hammers rely on a piston to provide a more forceful hammer action than hammer drills offer. Also, the carbide used for SDS bit tips is both denser and more securely fastened to the shank than is typical for hammer-drill bits.” These factors combine to allow SDS bits to drill holes in hard materials much faster than a conventional hammer drill can.

There are three types of SDS chucks. Two of them, the SDS and the SDS Plus, take bits with 10mm shanks. SDS bits have two grooves and SDS Plus bits have four; either style is compatible with either type of chuck, but the four grooves of the Plus provide a heavier-duty system. The maximum bit size is 1<sup>1</sup>/<sub>8</sub> inches.

SDS Max bits have 18mm shanks with five grooves and are compatible only with Max chucks. The Max system is used in heavy-duty rotary hammers, with bit diameters up to 2 inches.

SDS drills are mainly intended to be used in concrete with a hammer action — and many rotary hammers have a hammer-only setting that lets them be used as small jackhammers — but there are chuck adapters available that allow SDS drills to power standard bits. — *Andy Engel* ❖