

Tech Toolbox

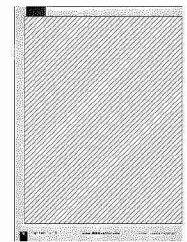
By Paul Holstein

# 12 Tips for Choosing Ergo



**D**rop into any hardware store or home improvement center, and you're likely to find aisles full of tools labeled "ergonomic." What exactly does that mean for employees in the shop? Simply put, it's the science of designing and producing tools, furniture and other work-related implements that improve a worker's efficiency, while reducing discomfort, fatigue and risk of injury.

Ergonomically enhanced tools can include helpful features like angled handles, padded handgrips and non-slip coatings. However, no matter how impressive a tool's design, it's almost impossible for it to be universally ergonomic, since human physiques and project applications vary greatly from one to the next. Whether you're shopping for ergonomic tools or just trying to select the right one for the job from an



# onomic Hand Tools

existing collection, the key things to consider are whether or not the tool fits the employee's hand, how well it suits the job being done and whether or not it eases the work and prevents the employee from straining in ways that could lead to injury.

To make the decision process a little easier, CableOrganizer.com offers these guidelines for choosing the right ergonomic hand tool:

**1.** Because finger size and placement differs from person to person, avoid using tools with built-in finger grooves.

**2.** Choose tools with handles that are covered in a soft material, like foam or flexible plastic. Cushioned handles are not only comfortable for long hours of use, they also provide a much firmer grip and cut down on slippage.

**3.** Ensure tool handles are free from sharp edges and seams that might irritate or cut hands.

**4.** When selecting double-handed gripping and cutting tools, opt for ones with spring-loaded handles that will automatically return to the open position.

**5.** If you need to pinch or grip an object forcefully for an extended amount of time, prevent muscle strain by switching from standard pliers to a clamp or grip.

**6.** Only use tools that allow you to work with your wrist in a straight position.

**7.** For tasks that require force, such as torquing screws and nuts, hammering and heavy chiseling, choose single-handle tools with handle diameters that range from 1 ¼ inches to 2 inches. Larger handles allow fingers to wrap comfortably around the tool in a power grip, which prevents slippage and reduces stress and impact on hands, fingers and wrists.

**8.** For tasks that call for more precision and delicacy (like fine chiseling and driving miniature screws), opt for single-handle tools with grips that fall within the ¼-inch to ½-inch range. The smaller-diameter handles make it easy to grip tools comfort-

ably between the fingertips without overexerting fingers, knuckle joints or hand muscles.

**9.** Just as grip diameter affects work with single-handle tools, the grip span of pliers, snips, cable cutters and other double-handled tools can either make your job easier or cause you hand fatigue. For maximum comfort and efficiency for tasks that require more force (like gripping with large pliers, cutting wires or snipping through sheet metal), choose tools with a maximum "open" grip span of 3 ½ inches and a "closed" grip span no less than 2 inches across.

**10.** When a work space is tight but the task at hand requires a good deal of force, opt for "power grip" tools (with handle diameters from 1 ¼ inches to 2 inches), which are grasped with the entire hand instead of just pinched between the fingertips. This type of grip lets you finish the job in far less time, with far less physical stress.

**11.** Tool length should also be matched to space constraints.

Excessively long tools can force you to assume awkward work postures and wrist positions when you're trying to reach components in cramped areas. Instead, choose short-handled tools that give you the freedom to meet the target work area directly, while keeping your wrist straight.

**12.** The palms of your hands are full of pressure-sensitive nerves and blood vessels. To avoid damaging these during high-force tasks, it's important to make sure that the handles of your tools are long enough that their ends won't press into your palms. To measure, hold your hand palm-up, with fingers together and thumb against the side of your hand. As long as the tool's handle is longer than the widest part of your hand (the span from the outer edge of your pinkie to the outer edge of your thumb), it's safe to use. **MHM**

Paul Holstein is chief operating officer of CableOrganizer.com. For more information on the subject of hand tools, visit [www.cableorganizer.com](http://www.cableorganizer.com).



Paul Holstein