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2009 TOOLS & EQUIPMENT Buying Guide

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Getting a Grip on Comfort

Tool fit and feel are as important as function. Here's what to look for.

By Paul Holstein

Drop into any hardware store or home-improvement center, and you'll find aisles full of tools labeled "ergonomic." But what exactly does that mean for the contractor who needs to buy (and use) them?

Simply put, *ergonomics* is the science of designing and producing tools and other implements that improve efficiency while reducing discomfort, fatigue and risk of injury. With tools, this means features like angled handles, padded handgrips and non-slip coatings.

Because every person and project are different, it is almost impossible for any tool to be universally ergonomic. The most important factor in what makes a tool ergonomic is, ultimately, you.

The key considerations are:

- Whether the tool fits your hand
- How well it suits the job being done
- Whether it eases your work and prevents strain in ways that could lead to injury

To make the decisions a little easier, here are some guidelines:

- Because each person's finger size and placement differ, avoid using tools with built-in finger grooves. When fingers don't fit the grooves, pressure from the raised edges can cause discomfort and injury.
- Choose tools with handles covered in foam, flexible plastic or other soft material. These are more comfortable and provide a much firmer grip. Hard-handled tools can be quickly and inexpensively converted by adding a sleeve.
- Make sure tool handles are free of sharp edges and seams that can irritate or cut the hands.
- When choosing double-handed gripping and cutting tools, look for spring-loaded handles that automatically return to the open position.
- If you need to pinch or grip an object for an extended period, prevent muscle strain by using a clamp or grip rather than pliers.
- Only use tools that allow you to work with your wrist in a straight position.
- For torquing screws, hammering, chiseling and other tasks that require force, choose single-handle tools with handle diameters from 1¼ to 2 inches. Larger handles allow fingers to wrap around comfortably.



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Padded grips and a good fit improves productivity and eases fatigue.

- For tasks that call for more precision and delicacy, choose single-handle tools with grips within ¼ to ½ inch. The smaller diameter handles make it easy to grip tools without overexertion.
- For double-handled tools, choose those with a maximum open grip of 3½ inches and closed grip span no less than 2 inches.
- Detailed jobs that involve grasping small parts are best done with double-handle tools with grip spans from 1 to 3 inches.
- When work space is tight but the task requires force, opt for "power grip" tools with handle diameters from 1¼ - 2 inches that allow you to grasp with the entire hand instead of pinching between the fingertips. Also, choose short-handled tools that allow you direct contact with the work area while keeping your wrist straight.
- The palms of your hands are full of pressure-sensitive nerves and blood vessels, easily damaged during high-force tasks. Make sure tool handles are longer than the widest part of your hand, so that their ends won't press into your palms.

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