FACT SHEET:  What to Consider When Choosing Chisels & Brick Sets

Overview:

Chisels come in different sizes (both the grip and the blade), weights, and materials depending on their use (photos 1 and 2). Chisels are used with either a power or modified precision grip depending on the chisel’s size and an individual’s work preference. Some workers use a power grip (with their hand completely around the chisel stock) since that lessens fatigue, while others use a precision or pinch grip with some fingers resting on the materials being worked with to position the chisel more precisely.

Tips for what to look for:

⇒ Grip size. A chisel’s diameter or “stock” measurement will help you determine a chisel’s grip size. While the best handle diameter is the one closest to your hand’s actual grip size for a power grip, the diameter for a modified precision grip would be smaller, between 1” and 2” around (a diameter of 0.3” to 0.6”), or somewhat larger depending on how you typically grip the tool. Using a grip size that closely matches your own will reduce the amount of force needed to hold the chisel. Less force will reduce fatigue and risk of injury.

⇒ Striking area. Caps or hand guards on the top of chisels can protect your hand and fingers from overstrike injuries. Note: make sure when using a tool with a cap or guard that it does not reduce the visibility of the material being worked on or the positioning of the tool.

⇒ Shock and vibration. Striking a chisel creates vibration and increases your risk for injuries to the nerves in your fingers and wrists. Cushioning can help to reduce both vibration and cold.

⇒ Weight. Lighter weight tools are generally recommended, but in the case of chisels it is important to select one made out of a material that will be strong enough for the task to avoid chips, mushrooming, and related hazards.

Applying the tips:

⇒ Using a chisel with a cushioned grip can reduce the grip strength needed to hold the tool area. Some chisels come with cushioned grips or you can add one using a padding kit.

⇒ Cushioned grips can also reduce the risk of shock and vibration-related injuries. Another option to reduce vibration is to use a device that moves your hand away from the risk.

⇒ Devices that move your hand away from the vibration risk can also reduce the risk for overstrike injuries (such as bruising, fractures, etc.) Using a chisel that comes with a hand guard or allows you to add a guard is another option to protect your hands against overstrike injuries.

⇒ Wearing gloves may also help create a cushion, increase the size of the handle area, and reduce shock and vibration. Depending on the materials and products you are working with a specific type of glove may be recommended or required to avoid skin disorders, such as burns and dermatitis. Note: some workers have reported a reduced sense of touch and needing a stronger grip to hold on to tools when wearing gloves. Using a hand tool with a non-slip grip area or adding an anti-slip material may help.

⇒ If you already have a hand/arm injury or condition such as tendonitis, arthritis, or carpal tunnel syndrome, it is particularly important to consider using the lightest, smallest chisel for the job and one with features that reduce vibration risks.
Example:

Worker Hand Measurements = hand size (length from wrist crease to tip of middle finger) of about 7-1/4” (or 7.25”), with a grip diameter of about 1-2/5” (or 1.4”), a grip size of about 4-3/5” (or 4.6”), and a palm size of 3”.

Choices:

A 3” brick chisel with a diameter or stock of 1.1”, with a grip area of roughly 3-1/2”, and weighing 1.1lbs (17 oz).

Or

A 3” brick chisel with a striking cap and cushioned grip, a 1-3/8” diameter or stock a grip area of about 4 2/5” and weighing 1.6 lbs (22 oz).

What the worker in this example should consider:

⇒ The first option provides maximum visibility of the worker’s task and weighs less.

⇒ The second option includes features that reduce the risk for injury including: a striking cap to reduce overstrike injuries and a cushioned grip, which increases the grip size to more closely match the worker’s and reduces the amount of strength needed to hold and control the chisel, the risk of vibration-related injuries, and exposure to cold.

To learn more, visit www.choosehandsafety.org for information on how to determine your hand-size, use this information when selecting tools, examples of hand tools., and other ways to protect your hands.

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