
Overview:

Brushes come in a wide variety of styles, sizes, weights, and bristle types. Handle shapes and positions vary with most positioned straight up from the bristles or at a right angle to the brush. Some craft workers use brooms, such as a push broom, with the entire or a portion of the handle cut-off.

The type of grip used varies depending on the handle shape and the way the brush is being held. In photo 1, for example, the brush is being held with a power grip.



Photo 1 – Brush with power grip

A brush with a narrow handle (photo 2), or when part of a brush other than the handle is held, will require more of a precision grip or a modified power grip (photo 3) and greater grip strength. Depending on the shape of the handle and the task being performed a worker may have to work with their wrist bent, which will also increase the grip strength needed.



Photo 2 – Brush with narrow handle

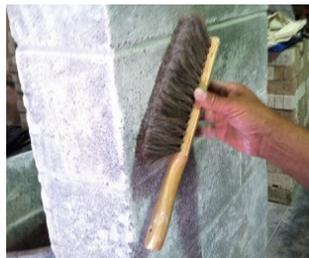


Photo 3 – Brush used with precision grip

Selecting the right brush depends on the type of work being performed, but the handle size depends on your hand measurements and how you hold and use the brush.

Tips for what to look for:

- ⇒ **Grip size & shape.** Using a brush handle designed for use with a power grip, with a handle size that matches or is close to your grip size, will allow you to use the least amount of force. A handle that requires a precision or pinch grip takes much more force. A non-slip grip can also help you use less hand force.
- ⇒ **How you hold the brush.** Handles that are designed to allow you to work with your wrist straight will reduce the stress on your wrist. Working with your wrist bent creates an awkward grip and increases stress on the wrist, fatigue, and risk for injury. Try to observe your wrist when using a brush for a common task to see if your wrist is straight or bent most of the time. If your wrist is frequently bent, if possible, use a brush with an angled handle.

Applying the tips:

If you have a choice, a brush with power grip handle will reduce the amount of force needed and may allow you to minimize the time spent with your wrist in a bent position. If there are two handle grip sizes available and your grip is in between, consider modifying the handle or handle area to fit.

⇒ **Modify the grip --**

- ◇ **If the handle is *too large for your hand***, you might be able to sand down a wood handle to a smaller grip size. But be careful, reducing the size could affect the handle's strength and increase the chance of it breaking.
 - ◇ **If the handle grip size is *too small for your hand***, you can apply a tool sleeve or use a padding kit to increase the size of the handle. Wearing gloves may also help since they typically reduce your effective grip size. 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. Gloves can also protect your hands from vibration and from the cold. *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 use a broom end in place of a brush** and do not have a clear grip area, try to find one that has a space for a secure hand grip (for example, a thicker wood or plastic end), attach tape or a padding material that is less slippery than the handle material, or use non-slip, well-fitting gloves so that you don't have to grip as hard. Having your hand centered over the broom end may also give better balance and reduce the grip strength needed to use the brush.
 - ⇒ **If you already have a hand/arm injury or condition such as tendonitis, arthritis, or carpal tunnel syndrome**, using a power grip, along with non-slip, well-fitting gloves or an anti- or non-slip grip will allow you to use the brush with the least amount of force.
- 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.**

Photos: Tools supplied for photos courtesy of the Masonry r2p Partnership (BAC, ICE and IMI).

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