veritas®

Drywall Nuts

U.S. Des. Pat. No. D739,220

These specialized insert nuts are designed for use in drywall-covered studs to not only create a stable mounting location for heavy objects, but also act as a support to keep attachments from crushing the drywall. Made from stainless steel, the drywall nut is tapped for a machine screw so you can reliably remove and reinstall objects as often as needed.

Drywall nuts can be used individually for mounting a heavy but thin (less than 2″ or 50 mm thick) object, such as a mirror or painting, or in pairs for securing shelf brackets, mounting electronics and installing cabinetry.

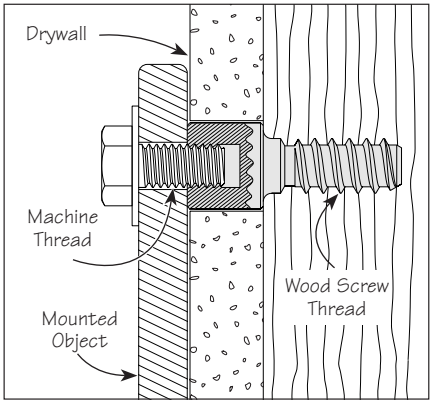

Figure 1: Cross-sectional view of drywall nut installation.

Note: *These drywall nuts are designed to be driven* ***only*** *into wood studs. They are* ***not*** *to be driven into concrete or masonry, or into metal studs.*

Selecting a Drywall Nut

The 5/8″ diameter drywall nut has a cylindrical head with a thickness of either 1/2″ or 5/8″ to suit the most common thicknesses of drywall. A drywall nut with a 1/2″ diameter head is available so that the head can be hidden, even if it is placed close to the edge of the object being fastened to the wall. Consult **Table 1** to determine the drywall nut size required.

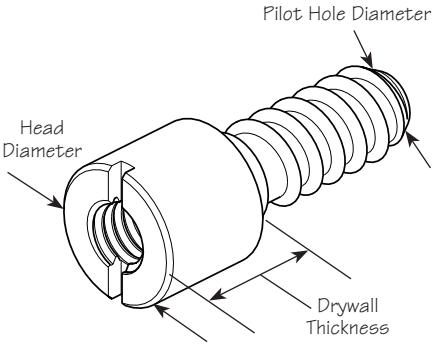

Figure 2: Drywall nut.

Table 1: Key Factors for Determining Required Drywall Nut Size

Drywall Nut	Drywall Thickness	Head Diameter	Pilot Hole Diameter	Internal Thread	Load Capacity*
05H12.01	1/2″	1/2″	1/4″	1/4-20	450 lb shear 350 lb tension
05H12.03	1/2″	5/8″	1/4″	1/4-20	450 lb shear 350 lb tension
05H12.05	1/2″	5/8″	5/16″	5/16-18	700 lb shear 350 lb tension
05H13.03	5/8″	5/8″	1/4″	1/4-20	450 lb shear 350 lb tension
05H13.05	5/8″	5/8″	5/16″	5/16-18	700 lb shear 350 lb tension

**The shear load capacity refers to a weight hanging close to the wall, such as a large painting or other heavy flat object. Tension load capacity refers to the amount of force required to pull a drywall nut out of a wall, whether from a direct pull or leverage from a shelf or other projecting object.*

***Note:** The actual thickness of the drywall nut head is about 3/64″ (1.2 mm) **greater** than that of the drywall to ensure that the weight of the object is being taken up by the drywall nut.*

Installation

To install the drywall nuts, you will need a brad-point drill bit sized to match the head diameter (1/2″ or 5/8″), a twist drill bit sized to match the internal thread diameter (1/4″ or 5/16″), and an insert nut driver (or a machine screw with matching driver).

***Note:** It is important that the larger-diameter hole be drilled only through the drywall board. If the larger-diameter bit cuts into the wood stud, the drywall nut will not sit at the correct depth.*

1. Select and mark the location for the drywall nut.
2. Chuck the brad-point bit into your drill. With the drill set in **reverse**, **slowly** advance the bit such that the brads score and break through the paper cover. This will prevent the paper from tearing, leaving a clean hole.
3. Switch the drill to **forward** and **slowly** drill through the drywall. The drywall will yield readily to the drill bit. An increase in resistance indicates that the bit has removed the bulk of the material and is now slicing through the paper backing. Allow the brads to cut through the paper. A slight jerk, coupled with a drop in the resistance, means that the paper has been fully sliced through.

   Retract the bit from the wall and check to see that the paper disc has been removed as well – it will likely be stuck to the bit.

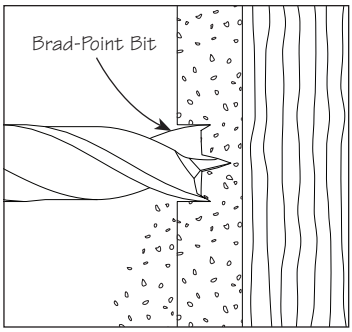

Figure 3: Drilling the hole for the drywall nut head.

4. Change the brad-point drill bit to the smaller twist drill bit. Align the center of the twist bit with the center divot created by the brad-point bit. Drill the pilot hole about 1″ deep.

Note: *The length of the wood screw on the drywall nut is 1" deep so that it cannot reach any wiring in the wall.*

5. Blow out any wood chips left in the hole and drive the drywall nut into place with an insert nut driver or a machine screw.

Mounting the Object

The length of the machine screw required will depend on the size of the drywall nut used as well as the thickness of the object. The 1/4-20 drywall nut requires a 1/4-20 machine screw that **must** be between 5/16″ and 7/16″ **longer** than the thickness of the object. The 5/16-18 drywall nut requires a 5/16-18 machine screw that **must** be between 7/16″ and 9/16″ **longer** than the thickness of the object.

Important: *A machine screw that is **too long** will bottom out in the drywall nut before the head contacts the object, and a machine screw that is **too short** will not have enough thread engagement to provide sufficient holding power.*

Tip: *You can also use a large slot screwdriver to adjust how far the drywall nut projects from the wall.*

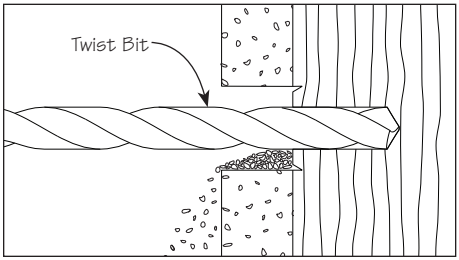

Figure 4: Drilling the pilot hole for the wood screw thread.

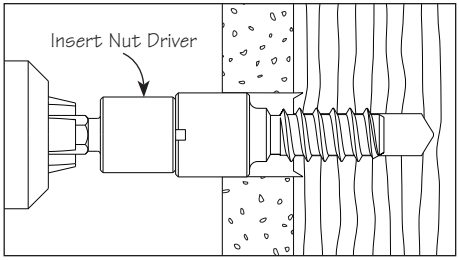

Figure 5: Installing drywall nut with an insert nut driver.

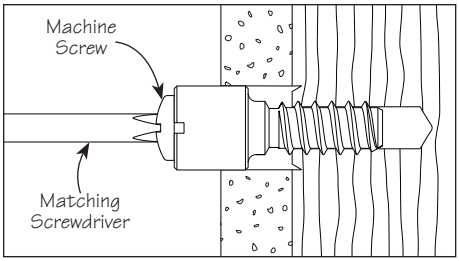

Figure 6: Installing a drywall nut with screwdriver and machine screw.

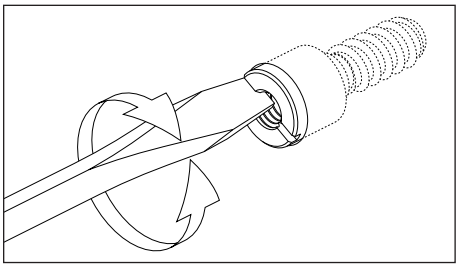

Figure 7: Adjusting the drywall nut projection.

Example Applications

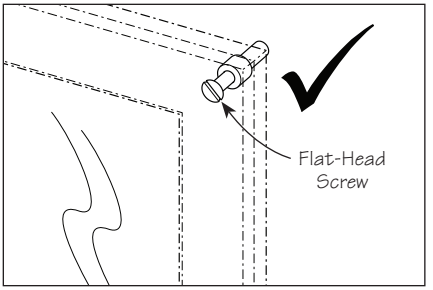

Figure 8: Hanging a flush object.

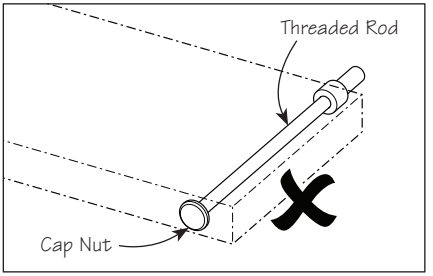

Figure 9: Not for use for installing a shelf without brackets.

Important: *Do* ***not*** *build a shelf in this manner. The drywall nuts will get pulled out of the wall.*

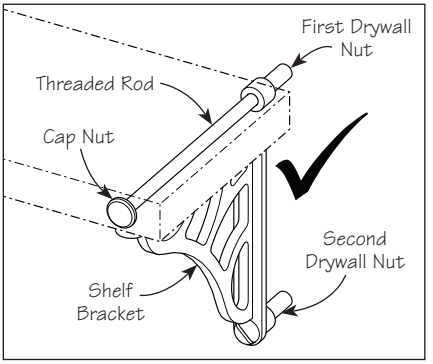

Figure 10: Installing a shelf with brackets.

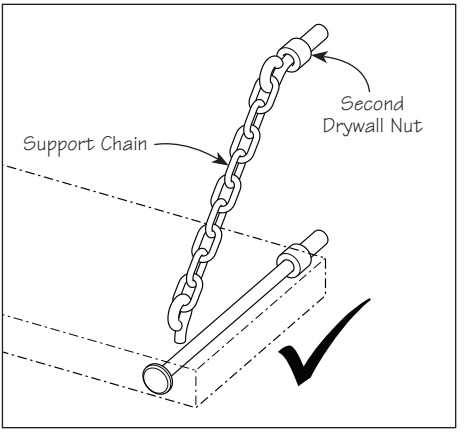

Figure 11: Installing a shelf with chains.

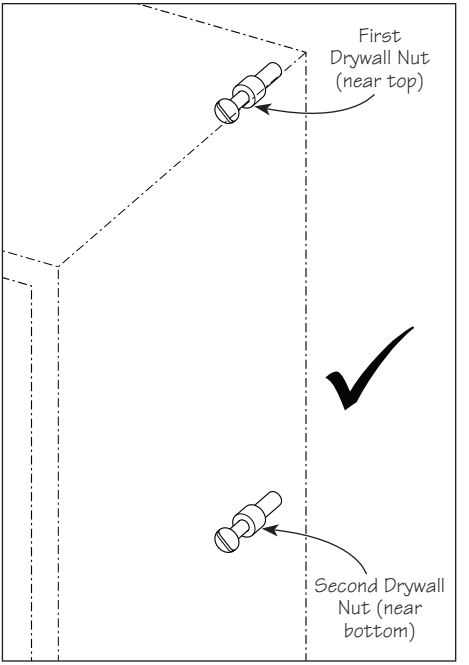

Figure 12: Hanging cabinetry.