

## **How To Install Your New Northernm Exterior Door**

**Here's what you'll need;**

### ***Tools***

Level, hammer, measuring tape, caulking gun, and a screw-gun.

### ***Materials***

Exterior caulking, wood shims, 3" screws (#9 x 2-1/2" are the minimum), insulation...either low expansion foam or pink insulation.

Keep in mind that exterior doors are likely to be heavy, and so a helping hand would make the project progress more smoothly.

### **Prepare the rough opening**

Remove the existing door and frame down to the rough opening (if applicable).

Check to see that the rough opening is plumb and that the sub floor is level. Level the sub floor if necessary by using a beveled board or shims. If the door must clear an unusually high floor surface such as very thick carpet, a spacer board may be necessary.

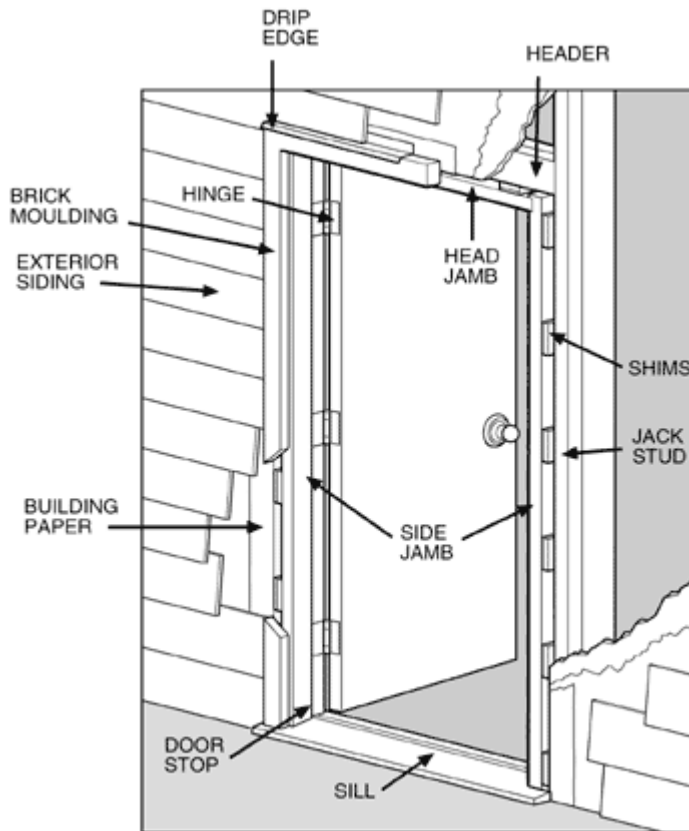
The rough opening should be at least 1 inch wider and taller than the outside frame dimensions of the door system to be installed.

Apply two generous beads of (exterior caulking) along the sub floor an inch inside the front and rear edges of where the sill will be placed. Extend the caulking a couple of inches up the sides of the rough opening. Latex and acrylic caulking are not recommended for this step.

Place the door into the opening. Put in the bottom first with the top facing outward toward you, then tilt the door into place.

Center the door in the opening and shim the frame tightly in place at the very bottom of the rough opening.

### **Square and secure the assembly**



EXTERIOR DOOR INSTALLATION

Now that the door is roughly in place, shim the rest of the door frame as necessary to hold it in place. During this step, place shims on the hinge side of the door behind any hinge attachment points in the door frame. You will be permanently attaching the door to the rough opening at these points later.

Adjust the shims and frame assembly until the jamb on the hinge side of the door is plumb in both directions. There should be a constant reveal (about 1/8 inch) between the jamb and the edge of the door. Check that the shims do not bow the jamb inwards.

After making these adjustments, temporarily screw the door in place through the hinge jamb near the hinge locations. Do not run the screws all the way in yet.

Open and close it to test its operation. It should operate freely.

From outside the house with the door closed, make sure there is an even contact between the door face and the weather-stripping attached to the frame opposite the hinge jamb. Make any adjustments if necessary by adjusting the jamb in or out at the top or bottom.

From inside the house with the door closed, examine the edges of the door. Adjust the lock-side jamb until there is an even gap (about 1/8" inch) all around between the door edges and the faces of the jambs.

**Install a solid shim behind the lock strike location.**

Permanently secure the jambs. Finish running the 3” inch screws through the shims at the hinge locations on the hinge jamb. Continue around the door, securing the remaining jambs with screws or nails driven through shims.

It is important that the screws or nails be installed through the shims to prevent distorting the door frame by putting pressure against an unsupported area. Check the door occasionally as you perform this step to assure that the door assembly remains properly adjusted. Install screws through the shim at the lock strike location.

**Finish it off**

Insulate around the edges of the door frame with loosely packed fiberglass insulation or low-expansion foam.

Install the interior trim. Caulk all joints and intersections of the trim and brickmould, particularly along the joints where the brickmould meets the exterior wall, with paintable caulking.

Congratulations...you did it!!! Your new Northern door is ready for operation.