

POCKET FRAMES

Space-Saving Answer to Privacy



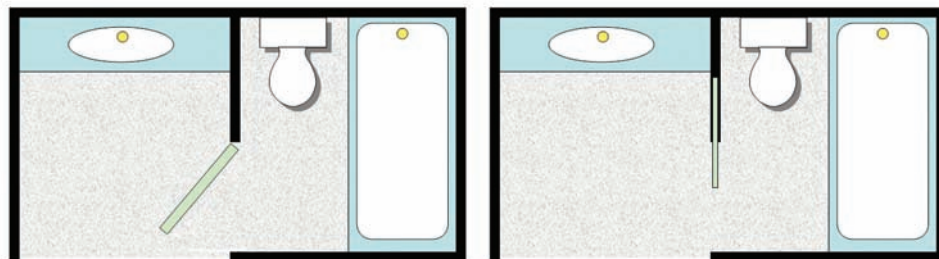
WITH AN INCREASING FOCUS ON SMALLER living spaces and more efficient use of room in commercial buildings, many architects are looking for ways to maximize every square foot in their designs. A popular space-saving solution is the pocket door, which slides along its length—often on an overhead track—and disappears into a compartment (or pocket) in the adjacent wall. These are wonderful space savers compared to a hinged door; a single pocket door can add an average of 10 square feet of floor space.

Many people have seen these in older homes, especially Victorian Style Homes and the elegant homes of the 1890s. In these structures, there are often wood pocket doors between the foyer and the drawing room or going into the dining rooms. These show up so well in the old black-and-white films and make for a dramatic moment when the double pocket doors are either opened or closed by the “man or woman” of the house.

Modern residential uses include bathrooms, closets, laundry or utility rooms, or offices. The writer of this article has one between the laundry and kitchen areas of her home.

By Rachel S. Smith

DIAGRAM #1



Hinged Door

Pocket Door

This allows easy access with minimal required floor space in between these areas, and the laundry room can be easily closed off to minimize sound travel into the living areas of the house. There is a nice architectural effect offered by the use of pocket doors, and they are also recommended for homes with disabled residents to make it easier to move from room to room.

Commercial Use of Pocket Frames

But what about the use of pocket doors and frames in modern commercial applications? Although some of the uses are similar to residential (bathrooms, closets, etc), the type of building is, of course, different.

For instance, many hotels now have pocket frames between the bathrooms and the guest bedrooms. (See Diagram 1.) This is a huge space-saving advantage for buildings with multiple units and high construction costs. Figure a 200-room hotel x 10 square feet per room in space savings and you have 2,000 fewer square feet of construction costs.

Another application is in doctors' offices and hospitals—quite often in the examining rooms—and in small offices, such as going into a small break area. (See photo.)

It must be noted at this point, that these frames typically cannot bear a fire label; they do not meet the criteria of being self-closing, or self-latching. But the typical applications as mentioned above do not need to have labeled openings.

Facia

The facia on the pocket frame is used to hide the track from view after installation. The typical facia

height on a Karpen Steel pocket frame is 2½". Based on the track and the head being used, this will cover the track. It's important to match the average track height of the track with the correct head detail, or the facia will not cover the track.

Track Selection:

Many of the tracks available for pocket doors are designed for use with residential 1 3/8" thick hollow-core wood doors weighing less than 75 pounds. Make sure that the track you select can accommodate the weight of the door you are using. There are tracks on the market that can easily support the weight of a 200-pound hollow metal door.

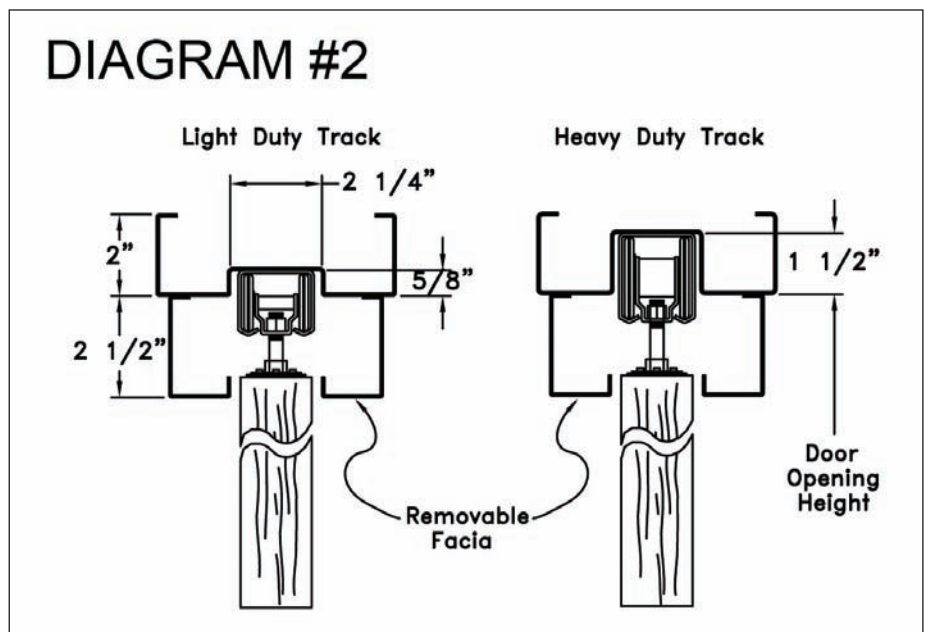
Average Track Height and Head Condition of Frames

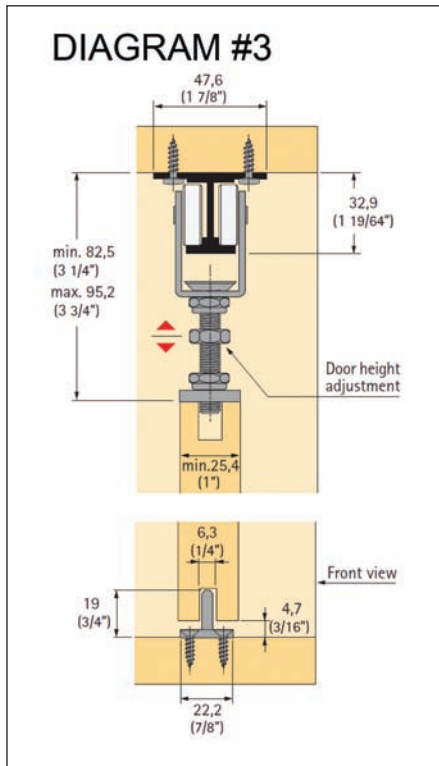
Tracks from different manufacturers have different average track heights. The adjustability makes it easy to adjust the bottom clearance depending on actual floor conditions, such as carpet or tile. So, depending on the average track

height being used, and the manufacturers head configurations, choose a combination that will assure that the track will be covered by the facia. On the example shown (see Diagram 3), an average track height of 3 ½" requires the use of a Heavy Duty Track Head with an inverted stop of 1 ½". This, along with the 2 ½" facia, will give a total coverage of 4"

Calculating Net Door Height

You'll need to figure out the total available height in the door opening. For instance, if there is a recessed head, add the amount of the recess to the nominal door opening height. Two of the typical inverted stop dimensions on hollow metal frames are 5/8" and 1½", depending on the average track height being used. For this example, we will use the 1½" inverted stop dimension in the head. This, added to the nominal 7'-0" door opening height, gives a total available height of 7'-1½". From this, subtract the door undercut, then subtract the average track height. (The typical door undercut





is 1/2", while the average track height varies by manufacturer and model of the track.) On Diagram 3, the track height ranges from 3/4" to 3/4", thus giving an average track height of 3/2". 7'-1 1/2" minus the 1/2" door undercut minus the 3/2" average track height gives a net door size of 6'10" (82").

Pocket Frame Units for Accessibility:

One of the advantages of the use of pocket frames is the greater ease of opening compared to traditional doors with hinges. Also, the clear opening required is easier to calculate, as there is no hardware sticking out from the door that would impede passage.

There are two major considerations in using pocket frames for handicap accessibility. The first is the required clear opening. The nice thing about this requirement is that the hardware sticking out of the face of the door does not interfere

with this clear opening, as is the case with swing doors. The clear opening is the width from the strike jamb to the edge of the door in its fully open position.

The second consideration is the ability of the person operating the door to open or close the unit. A traditional pocket door slides all the way back into the pocket. To pull it closed, a person needs to grab the door edge and pull—which is not ADA friendly. Instead, what we see happening is that the door unit is designed so that in the fully open position, the door sticks out 3"-4" into the door opening of the pocket frame. Accessible pulls are put onto both sides of the door for easy operation. (See Diagram 4.)

With the combination of the two factors discussed, a 34" clear opening requires either a 37" or 38" door opening width. In this case, the pocket is shorter than the door opening.

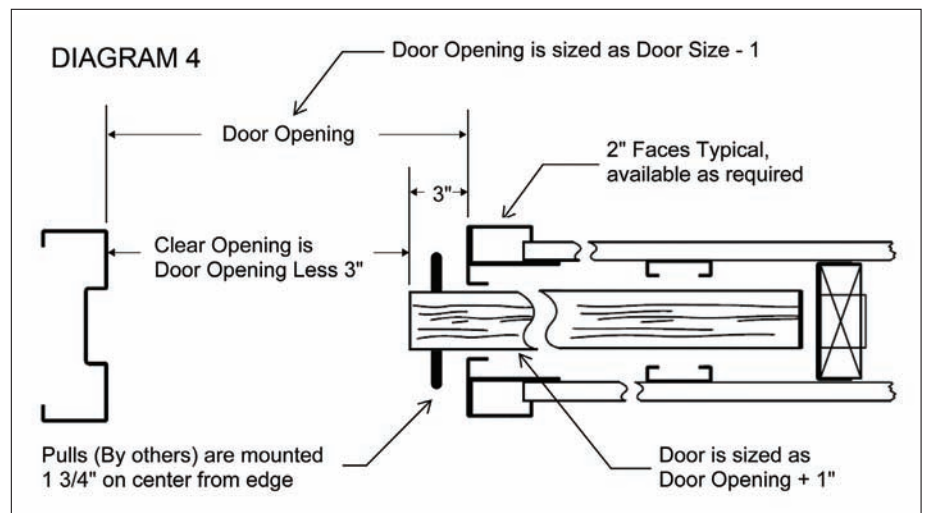
Installation Basics

Recently, the author was asked the following question regarding the installation of a pocket frame: "Do we need to have the track and door and hardware to install the frame?"

This question has a two-fold answer: no the track is not needed to do the actual frame installation; however, you cannot install the sheet rock on the pocket part of the frame until the track, bumpers and other associated hardware are installed. Of course the person on the other end of the phone smiled at that thought and said, "Oh, of course!" You lose the ability to attach the track into the head of the pocket once the pocket is covered up. Sometimes what seems logical regarding installation is not thought all the way through by the installers, many of whom are commercial installers without a lot of experience with pocket frames. We hope that we can change that thinking with the information supplied in this article.

1. Frame the Opening

The rough opening width for a pocket door seems very large because you are framing out for both the opening and the pocket. For instance, for a nominal door size of 3' 0" in width, a Karpen Steel pocket frame would have an overall width of 6' 4". Check with the manufacturer of the



pocket frame for their exact requirements. The rough opening required would be slightly larger than the overall width to allow installation of the frame. It is typically recommended to wait to frame the wall to the pocket frame after it is received on site, or only frame to the jamb side—leaving the pocket side open until frame is received.

The rough opening height would be the nominal door opening size plus the head face plus ¼" for installation clearance. For a 7' 0" nominal door opening, with 2" face head, the required rough opening would be 7' 2 ¼".

2. Install Pocket Door Hardware

Using a hacksaw, cut the pocket frame track to the exact required length, then install it using the brackets and fasteners supplied with the track.

If you have purchased a commercial pocket door hollow metal frame with attached pocket, the next step will not apply to your installation, as the attached pocket forms the stiffeners and acts as a steel stud at the end of the pocket, as shown in the following drawing. (See Diagram 5.)

If not, you will have to install the pocket door jamb stiffeners to the head and then fasten them to the floor. The installation instructions provided with your kit will explain the exact installation requirements for these pieces.

At this time, install the door pumper on the stud at the back of the pocket.

3. Prep the Door

Finish or paint the door before hanging in the pocket frame. Since part of the door will remain hidden (even when the door is closed), it is imperative that this step be done before door installation. Be sure to get all the edges—especially on wood doors—to keep the door from absorbing moisture and possibly warping after installation. If you are using a wood door—they always come with a closed top. However, if you are using a steel door, an inverted top end channel will not work; the door must have a closed top. And check with the hardware manufacturer to see if any reinforcement is needed in side the door for when the hardware is screwed into the door. Mount the

door plates that hold the hangers onto the top of the door. Then hang the door, check for plumb and adjust height as required using the built-in adjustability of the hanging hardware. Make sure to take into account any flooring that is yet to be installed in the opening.

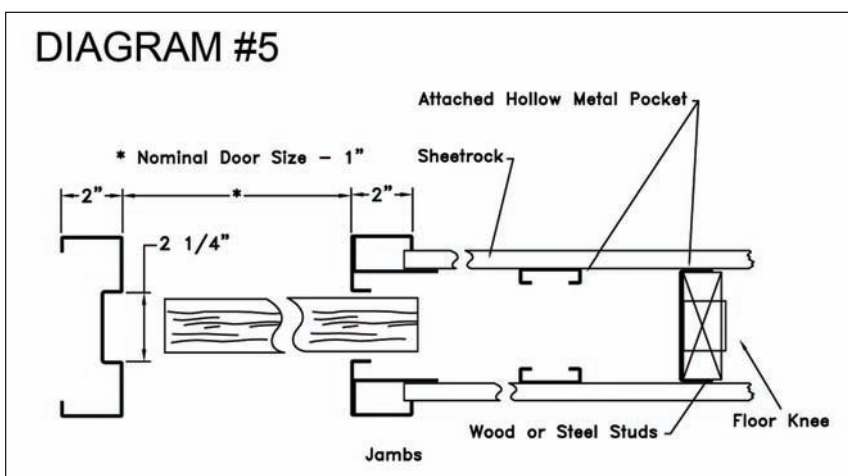
4. Install the Drywall (Sheetrock)

Install the drywall over the sheetrock using construction adhesive to attach it to the split jambs that make up the pocket. This prevents screws from going into the door area and thus marring the door when it travels back into the pocket. Use standard drywall procedures to tape the joints and finish the seams.

5. Finishing Touches.

There are just a few final steps to the installation. First, install the adjustable door guides at the mouth of the pocket. These will center the door in the pocket. Next, install the pocket facia. Put any required hardware such as strikes or locks on the frame and door and you are ready to start using your pocket door.

Pocket frames have been making a comeback with their practicality, ease of operation and ability to free up previously unusable floor space with a clean and modern appearance. Look at the plans of the next building that comes to you for bidding, and see where you can recommend the use of this often overlooked product. [ah](#)



About the Author: Rachel S. Smith is President of Karpen Steel Custom Doors & Frames. She has been at Karpen Steel for 23 years. Rachel has contributed a number of articles to Doors and Hardware and enjoys teaching others about custom products to fill openings.