EKENA MILLWORK

EnduraCore Shutters
General Installation Guide

METHOD 1: INSTALLING WITH HINGES

1. Match shutters together properly for each window.
2. Fasten hinges even with the outside edge of shutter. Pre-drilling holes is recommended. (Figure 1). Use caution not to drill all the way through shutters.
3. Place shutters with hinges installed against opening. Use shims or spacers and a level as necessary to ensure proper spacing, alignment, and level (two persons may be required). Test to ensure shutters open and close properly.
4. With shutters properly placed against the structure, slide pintels into hinges and mark holes where pintels will be installed. (Figure 2)
5. Drill pilot holes for pintels, then fasten pintels.
6. Slide shutter and hinges over pintels (Figure 3).
7. Install acorn holdbacks by screwing the clasp to the back of the shutter. Mark where acorn will be installed to the structure, pre-drill, then fasten acorn to the structure.
8. Install S or rat-tail holdback. If using holdback support, slide the holdback support over the lag bolt, then place the S or rat-tail holdback below the shutter with the bottom of the shutter resting on the holdback support. Mark and pre-drill into structure, then fasten lag bolt to structure.

INSTALLATION NOTES:

- Pintels illustrated are 'pintel on plate' intended for flat surfaces. Lag pintels are available for for uneven surfaces such as stone, or jamb pintels are available for installation on side of the jamb.
- Variety of offset hinges and pintels are available to accomodate varying window/opening types.
- Instructions are intended to be general in nature. Applications, techniques, and requirements may vary.
- Use discretion when penetrating surfaces.

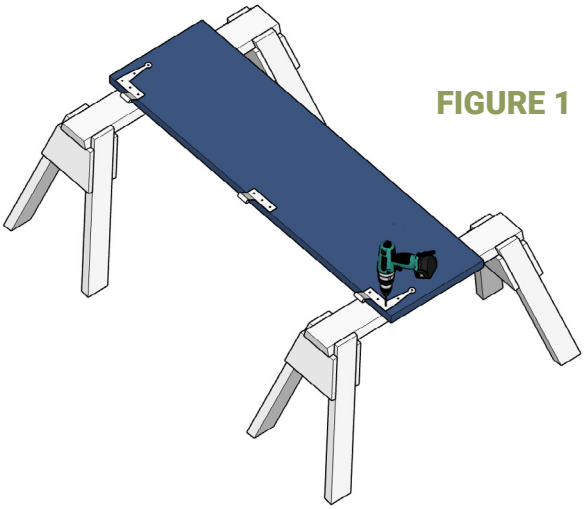
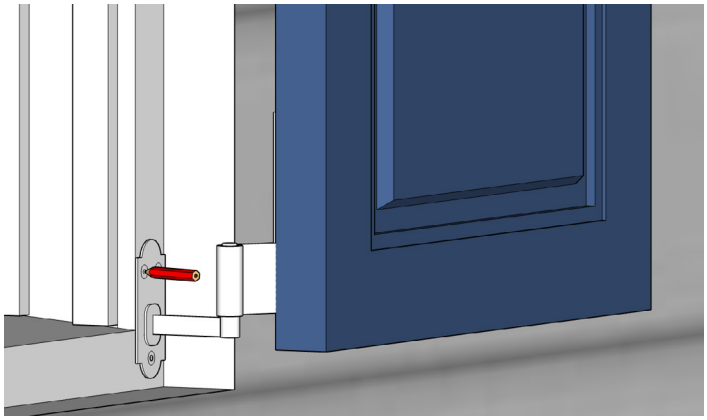


FIGURE 1

FIGURE 2



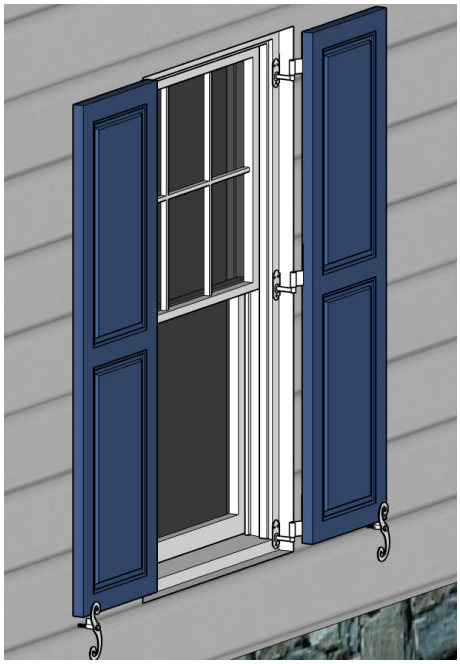


FIGURE 3

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FUNCTIONAL MOUNTING REQUIREMENTS

Shutters require a specific number of connection points depending on the size of the shutter. The larger the shutter, the greater number of connection points required to support the weight of the shutter. Connection points include hinges/ pintels, and holdback supports. Ekena Millwork's SteelTek brand hardware is required on all EnduraCore shutters to maintain warranty coverage.

Size	Connection Points To Structure Required (Per Shutter)
Less than 36" High	3
36"- 60" High	4
60"-80" High	5

*For shutters less than 36" high, 3 connection points required including two hinges attached to structure and shutter supported by holdback support.

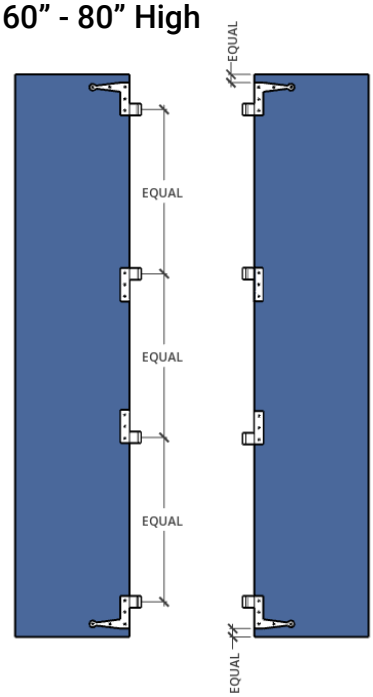
*For shutters >36"-60" high, 4 connection points required including three hinges attached to structure and shutter supported by holdback support.

*For shutters >12-80" high, 5 connection points required including four hinges attached to structure and shutter supported by holdback support.

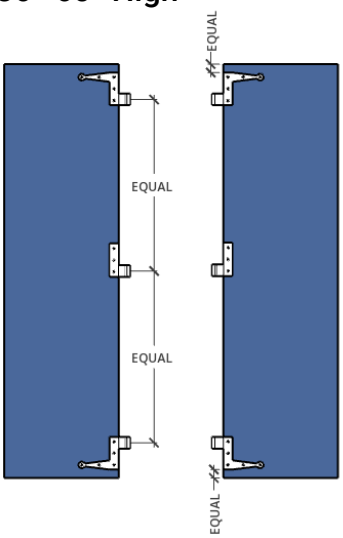
SHUTTER HOLDBACK SUPPORT

HINGE ATTACHMENT EXAMPLES

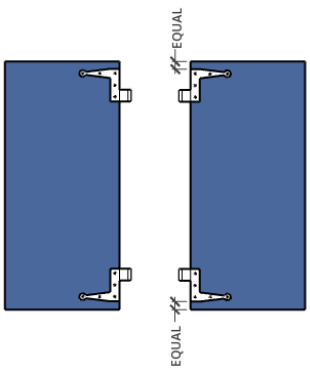
60" - 80" High



36"-60" High



36" and Under



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METHOD 2: INSTALLING WITH FRENCH CLEAT BRACKETS

1. Attach french cleat bracket to shutters. French cleat brackets should be fastened to shutters with holes on top. Pre-drill, then fasten with screws. (Figure 1). Repeat on bottom of shutters with holes remaining on top. NOTE: Ensure bottom of French cleat bracket does not exceed shutter.
2. Attach French cleat brackets to structure. French cleat brackets should be fastened to structure with holes on bottom. Pre-drill, then fasten with screws. (Figure 2)
3. Slide shutter with French cleat brackets installed, over the top of the French cleat brackets that are installed on the stucture. (Figure 3 Top and Figure 4 Bottom)

NOTE: EnduraCore Shutters over 48” require additional narrow French cleat brackets installed at center of shutters on both sides. Repeat same steps at center of shutter side rails if applicable.

FIGURE 1

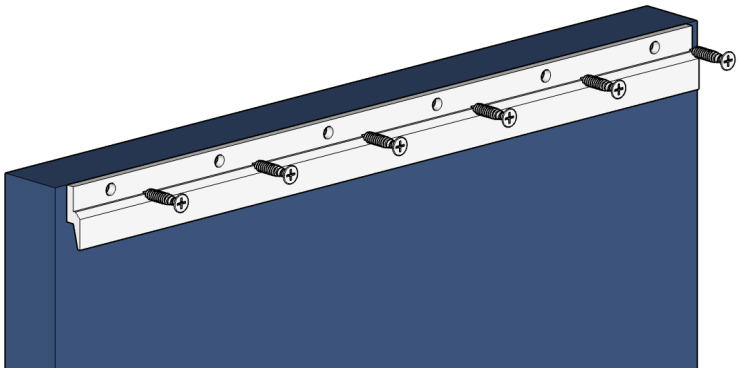


FIGURE 2

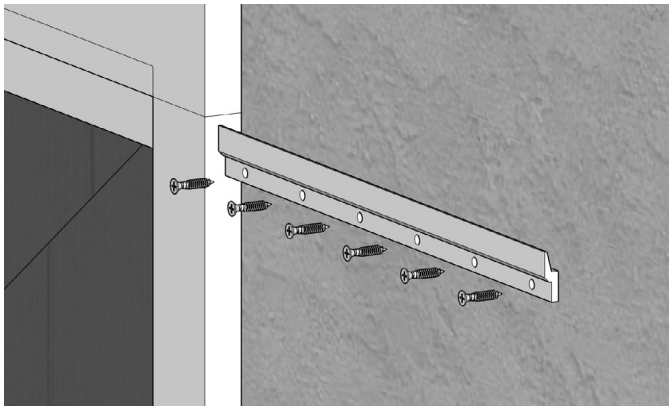


FIGURE 3 (TOP)

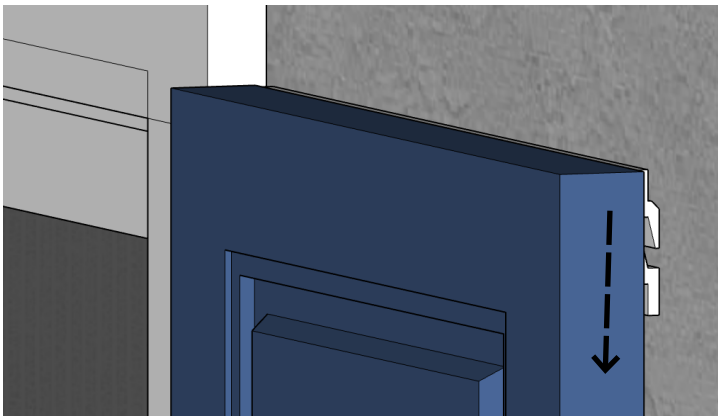
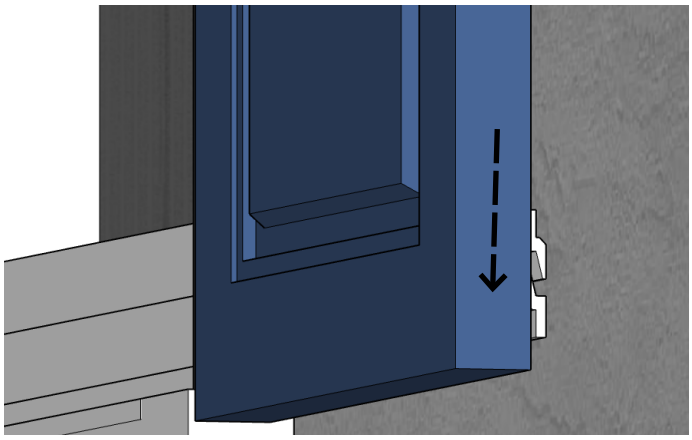


FIGURE 4 (BOTTOM)



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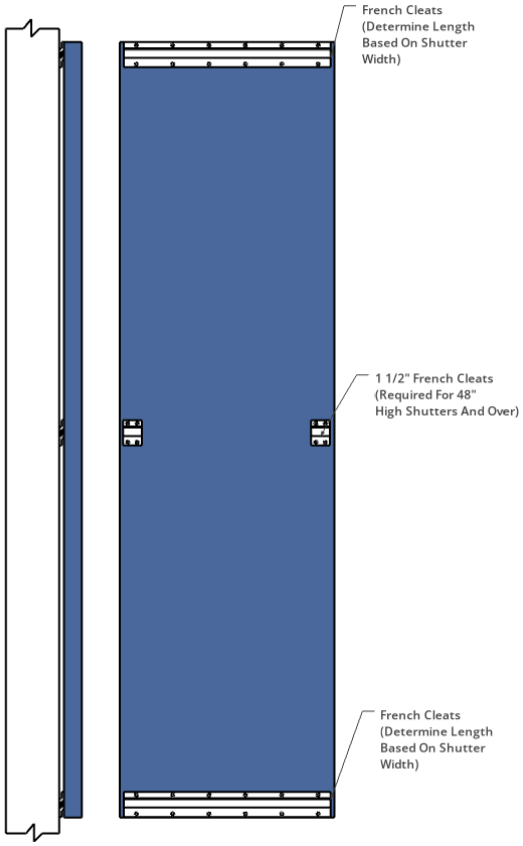
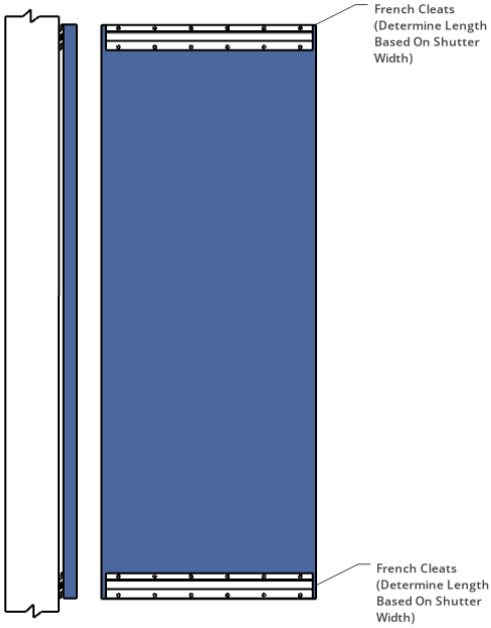
FRENCH CLEAT EXAMPLE 48” HIGH AND OVER)

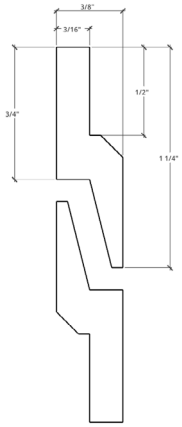


FRENCH CLEAT EXAMPLE (UNDER 48” HIGH)

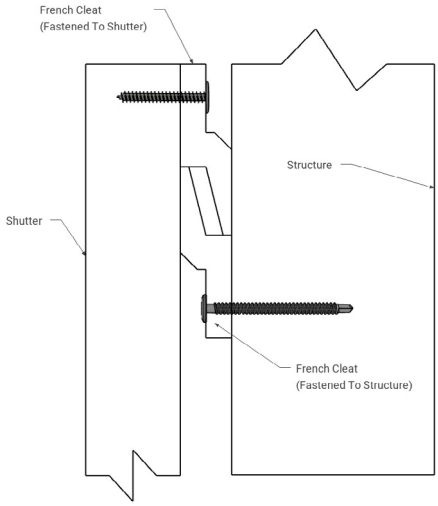


NOTE: Cleats may be inset from edges of shutters. Use closest size down French cleats. For example, if shutters are 18” wide, use closest size down 17 1/2” French cleats.

FRENCH CLEAT DETAIL



FRENCH CLEAT ATTACHMENT DETAIL



INSTALLATION NOTES

- French cleat brackets are intended for flat surfaces only and will not install properly on uneven siding, stone, or other uneven surfaces. If surface is uneven, install with hinges/pintels, or use screws through the front of the shutter into the structure. Touch up may be requried if using alternate method of mechanically fastening shutters to structure with screws.
- Masonry surfaces require anchors for screws to properly secure the brackets to the structure. Anchors are not provided, but may be sourced through a local hardware supplier. Screw type and length may vary depending on install surface. Installer to determine screw type, length, and anchoring methods.
- French cleat brackets do not mechanically fasten the shutter to the structure and rely on the weight of the shutter and gravity to hold the shutters in place, similar. This method provides the most concealed where fasteners are not visible with no touch up required.
- Instructions are intended to be general in nature. Applications, techniques, and requirements may vary.
- Use discretion when penetrating surfaces.

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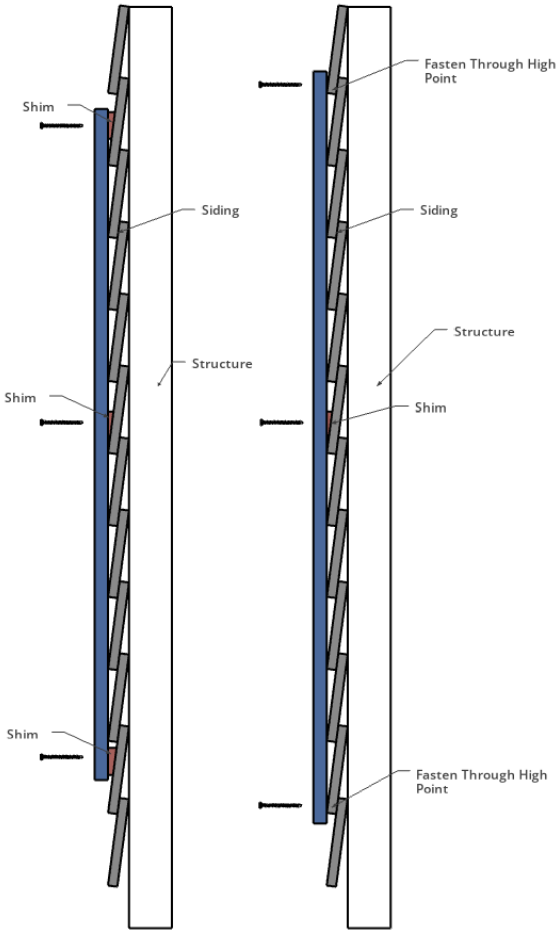
METHOD 3: INSTALLING WITH SCREWS (SCREWS NOT PROVIDED)

1. Place shutters against structure and mark holes where shutters will be installed with screws. If installing on uneven siding, be sure to mark where the higher part of the siding is located. If shutter overhang is excessive, shims should be used if necessary to create a level surface at top and bottom of shutter (See example diagram).
2. Pre-drill holes through shutter into structure.
3. Fasten shutters with screws. Do not to over-tighten.

UNEVEN SIDING EXAMPLES



IMPORTANT INSTALLATION NOTES

- Masonry surfaces require anchors for screws to properly secure the shutters to the structure. Anchors are not provided, but may be sourced through a local hardware supplier. Screw type and length may vary depending on install surface. Installer to determine screw type, length, and anchoring methods.
- Screw heads may be countersunk, patched, and touched up if desired, or screw heads may be left without touch up at customer's/installer's discretion.
- Instructions are intended to be general in nature. Applications, techniques, and requirements may vary.
- Use discretion when penetrating surfaces.
- Always store shutters laying flat and away from excessive heat build-up.
- Do not install inside of openings where shutters are not allowed space to expand/contract.

GENERAL SHUTTER INSTALLATION DISCLAIMER

Shutters are a decorative building product used in a wide variety of applications where techniques, methods, fasteners, surfaces, and finishes vary. This installation guide is intended to be general in nature. Installers should use judgement and discretion when installing all decorative building products including shutters.

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EnduraCore Shutters

Installation FAQ's

What surfaces can I install hardware on?

Ekena offers a solution for virtually any installation surface. The pintel on plate should be installed on level surfaces such as a flat window trim, or brick. For uneven surfaces like siding or stone, the lag pintel may be used, which includes a lag bolt in lieu of a flat plate, ideal for jagged/uneven surfaces. Or, a Jamb pintel may be used of there is a jamb on the window. Many surfaces require anchors for fasteners to hold properly and are not included with any shutter hardware components, but may be sourced through any local hardware supplier.

How do I measure properly?

If installing for operational purposes, measuring properly becomes more critical. It is generally recommended to include a 1/4" of clearance around the perimeter of the opening, plus an additional 1/4" of clearance between the shutters in the closed position. Start by measuring the rough opening width and height of the window. Then, subtract 3/4" from the rough opening width, and divide by two to determine the individual shutter width. Subtract 1/2" from the height of the rough opening to determine the shutter's height.

Are EnduraCore shutters impact rated?

No, EnduraCore shutters are not impact rated, but do offer inherent window protection when properly closed and secured.

What are EnduraCore shutters made out of?

EnduraCore shutters are manufactured using a high density composite material that is moisture, insect, and weather resistant. EnduraCore has a similar feel and density to wood but is virtually maintenance free. They are also more thermally stable than other materials such as wood or PVC.

What hardware do I need to use?

Ekena Millwork's line of SteelTek hardware manufactured from 304 stainless steel is recommended for use on all EnduraCore shutters. SteelTek hardware includes all necessary hinges, pintels, holdbacks, french cleats, and other hardware accessories to maintain warranty coverage.

Can I paint EnduraCore shutters?

Yes, EnduraCore shutters are available in a factory primed finish that can be painted in any color using a high quality 100% acrylic paint. Follow all paint manufacturers recommendations and instructions for painting. Or, choose from one of our beautful standard factory colors.