

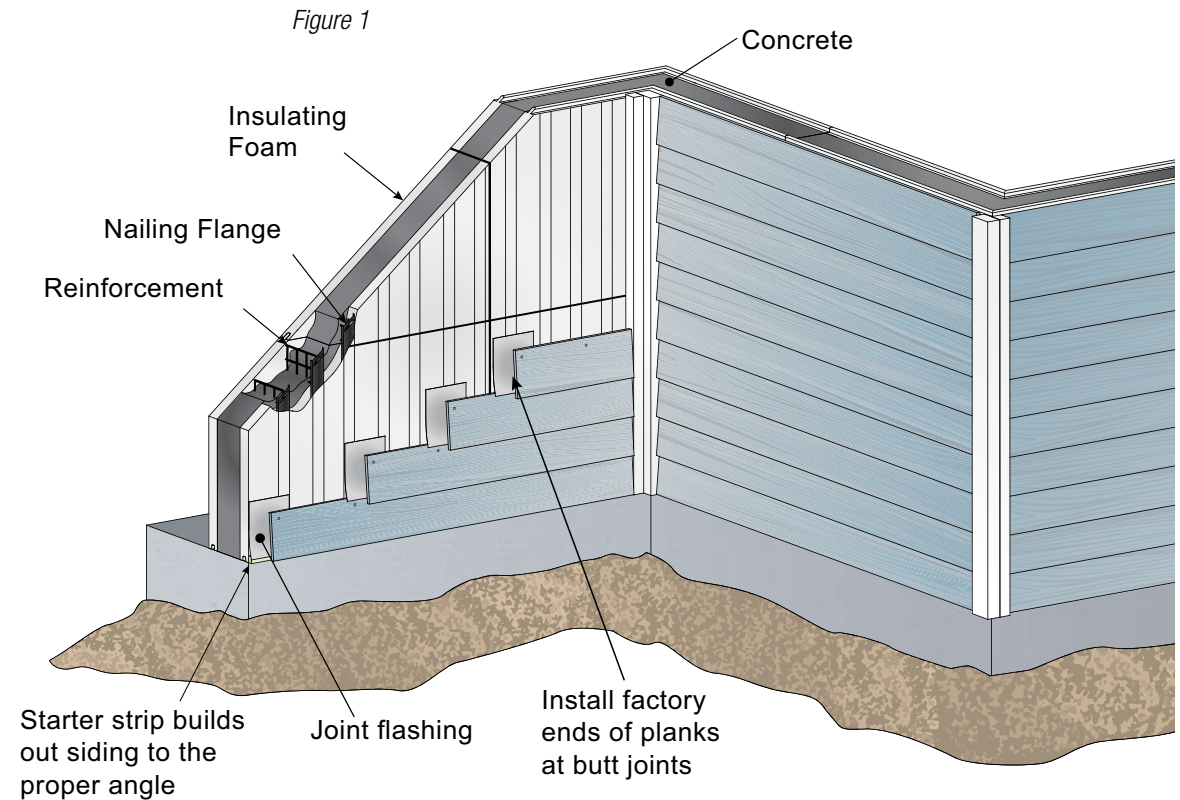
Technical Bulletins

Installing James Hardie Products Over Insulated Concrete Forms (ICF)



Scope:

Considering the proprietary nature of Insulated Concrete Forms (ICF) and the number of ICF manufacturers currently selling product in the US and Canada, James Hardie Building Products cannot calculate or determine the proper fastener for each type of plastic or metal cross-tie flange being used in the field. James Hardie offers the following as a guide to determine the correct siding fastening to be used with the respective ICF system chosen for the project in question.



Refer to ICF Manufacturer for compliant fastening

1. Determine the project's basic wind design, including basic wind speed, wind exposure category, and mean roof height.
2. Find the fastener, fastener schedule, and frame type within James Hardie's ICC-ES Product Evaluation Report (e.g. NER-405) that will meet the project's basic wind design.
 - a. Take note of the head diameter, shank diameter, and fastener length for the fastener.
 - b. Take note of the frame type and frame spacing.
3. Refer to the ICF system manufacturer and find a fastener that is similar in dimension to the fastener from step 2a above.
 - a. The bearing area under the ICF fastener head shall be the same as or greater than the bearing area under the James Hardie fastener head from step 2.

4. The James Hardie siding product must be attached to a structural member, in this case the ICF cross-tie flange. The steps below shall be followed:
 - a. The onus is on the ICF system manufacturer to demonstrate that the ICF cross-tie flange holds fasteners, screws or nails the same as wood or steel framing hold screws or nails.
 - b. ICF fastener allowable withdrawal load capacity (applicable factor of safety applied) may be found in an ICC-ES Product Evaluation for the given ICF manufacturer's products, OR
 - c. The ICF manufacturer may have testing that shows their fastener's allowable withdrawal load capacity (applicable factor of safety applied) from their cross-tie flange.
5. For the fastener from step 2, a registered design professional shall calculate the allowable withdrawal load (factor of safety applied) from the frame type noted in step 2b.
6. A registered design professional shall then make an equivalency statement comparing the ICF fastener withdrawal (step 4b or step 4c) versus the fastener withdrawal from step 5.
7. When the ICF cross-tie flange spacing differs from the James Hardie frame spacing in step 2b, a registered design professional shall calculate the maximum siding fastener spacing into the cross-tie flange needed to resist the applicable basic wind speeds published in James Hardie's ICC-ES Product Evaluation Report (e.g. NER-405) for the fastener and design from step 2.

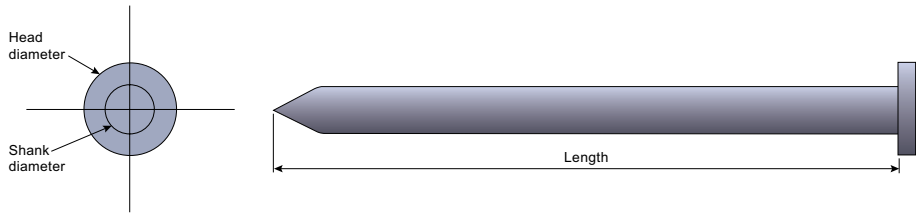


Figure 2: Fastener bearing area is equal to the head area less the shank area.

8. When required by the code official and once in possession of the information gathered in the steps above, it is the responsibility of the property owner, design professional, contractor, or installer to make his or her case to the Building Official¹.

¹The Building Official reserves the right to approve alternate materials, design and methods of construction, 2006 International Building Code® Section 104.11, 2006 International Residential Code® Section R104.11, and 1997 Uniform Building Code™ Section 104.2.8.

All national, state and local building code requirements must be followed and where they are more stringent than the James Hardie installation requirements, state and local requirements will take precedence.

Please be advised that James Hardie provides a limited product warranty covering the product only. James Hardie is not responsible for system design or installation.

IMPORTANT: Failure to install and finish this product in accordance with applicable building codes and James Hardie written application instructions may affect system performance, violate local building codes, void the product-only warranty and lead to personal injury.

DESIGN ADVICE: Any information or assistance provided by James Hardie in relation to specific projects must be approved by the relevant specialists engaged for the project eg. builder, architect or engineer. James Hardie will not be responsible in connection with any such information or assistance.