

BRIKclad OVERVIEW

Thank you for using BRIKclad. Our clay brick and stainless-steel fastening system is a great product for installing on all wall types. With having a Mortarless Dry-Stack version and a Traditional Mortared version, BRIKclad can give you a durable cladding product that requires no maintenance to the actual product for many years. The clay brick will remain color steadfast and will perform great at the lower base elevations of buildings and many other areas on all types of buildings. The drainage layer behind BRIKclad over top of the protective code approved membrane (Tyvek type or others) allows the wall to drain and ventilate.



Tools Required

BRIKclad requires typical construction tools used for most siding/cladding installations. A diamond masonry blade for a grinder will work for smaller projects while a proper masonry saw will speed up the project for larger jobs.



Safety is always imperative and using proper safety equipment of glasses, dust masks and gloves is recommended.



Brick Prep

The production of Clay Brick is unique and has been around for many centuries. Modern production facilities have greatly improved the way we produce clay brick today, however there are still challenges to dimensional tolerances and other factors in the organic process of clay brick production. The North American Clay Production plants that can produce clay brick to the required standards for BRIKclad are a few of the best plants. The clay brick meet strict ASTM and CSA standards for quality that are required by BRIKclad.

In the odd instance, some of the raw material gets dragged into the dovetail core when the bricks are formed and cut into individual brick. These drag pieces generally break free when inserting the clip into the brick, however there are some stubborn ones that may need a scraper to pop them free. When preparing to insert the QS Stainless Steel anchors into the dovetail in the brick, this is your time keep an eye on the brick. Due to the way clay brick is packaged, some breakage can happen in transportation and is part of the ASTM/CSA standards permitting breakage. In the odd cases where there are few broken bricks, set them aside as they can be used for 1/2 cuts and smaller pieces for fitting around window and door openings. The QS anchor is designed to be over-sprung slightly to ensure that it has a snug fit into the dovetail in the brick. Simply pinch the lower opening slightly and start to insert the clip into the dovetail and push it down until the top flanges rest on the top edge of the brick. You will get a rhythm of this and find that it is a very fast process to insert the QS anchors.





Sheathing and Wall Preparation

Always make sure that the wall you are attaching BRICKclad to is built according to the local building code and is sheathed with a minimum 7/16 OSB sheathing or ½ inch plywood to support exterior cladding that weighs 15 LBS/sq. foot. The sheathing needs to be fastened into the framing studs as per your local building code.

Generally, it is using a 2-inch nail or screw every 6 inches on the perimeter of the sheet and every 12 inches on the vertical studs that are spaced 16 inches on center. Try to keep the edges of the sheathing flush with one another.

For walls that require a non-combustible wall it is important to use a sheathing that has the required fire rating and also has an approved fastener capacity rating to support the fasteners attached to it the same way that OSB or plywood performs. There are a few readily available non-combustible sheathings that have fastener capacity like OSB and plywood (Nocom, Flamegard or Versaroc types).

For installing overtop of continuous insulation, there are many ways to accomplish fastening the exterior sheathing into the framework of the structure. The “Green Girt” system by Smart CI and the “Cascadia Clip” system both offer a true mechanical connection to the framework. The “Zip System” is a structural insulated panel that also does not thermally bridge and the exterior sheathing has the fastener capacity to support mechanically fastened brick and stone facades. Zip Systems will provide a nailing/fastening pattern to support thin brick and stone. Since the continuous insulation rule has become code, many installations are using longer screws to attach the exterior sheathing through the insulation. It is important to get a nailing/fastening pattern to achieve this to support an exterior cladding that weighs 15/LBS/sq. foot as this is what BRICKclad and most thin stone and other mechanical attached stone and brick cladding typically weigh.



Protective Membranes and Flashings

A code approved weatherproof membrane is a very important element for the installation of all siding types. It prevents water from entering the walls and allows moisture to escape as the membranes are breathable. Once the exterior sheathing has been checked for the required type and properly attached to the framing, a code approved weatherproof membrane needs to be applied to keep water out of the building. The weatherproof membrane is installed over top of the sheathing and attached with code and manufacture approved staples or nails. All window, door and other openings through the weatherproof membrane need to be flashed and sealed with the code and manufacturer approved tape. Refer to most manufacturers’ websites for these details on how to flash window, door and other openings in the wall. Seams need to be overlapped and sealed with code and manufacture approved tape. Any tears or punctures also need to be covered with the same tape or patches applied and sealed with the tape. There is a time limit for the exposed weatherproof membrane, generally 6 months if exposed to UV. Check with the membrane manufacture and re-wrap the building if it has been exposed to weather and UV past the time allowed. It is important to keep the approved tape ready as you install the BRICKclad or other siding products to be able to cover any punctures, tears or open seams in the membrane as you install the siding. Metal flashing should be installed, and counter flashed over the weatherproof membrane at the base elevation and above any window and door openings. It should extend down over the transition from framing to concrete foundation. A bead of caulking behind the metal flashing is advised to help prevent any insects from entering the wall.



Leveling Angle

BRICKclad uses a stainless-steel leveling angle that levels and supports the first row of brick at the base elevation and above any window and door openings. Install it with stainless steel screws with the drainage holes on the lower flange across the bottom to allow water to drain out of the wall. The leveling angle needs to be installed 1/2 inch above the metal flashing to allow for the any water or moisture

to drain out the bottom and be directed away from the building with the metal flashing. Using either 4-foot level or a laser level, start at the lowest corner elevation. If the grade rises, step up the leveling angle in equal brick height increments to maintain the ability for the BRICKclad leveling angle to drain out the bottom.



Drainage Rain-Screen

Attach the approved Rain-Screen drainage panel (Keene or Mortairvent) using staples to temporarily hold it in place. The BRICKclad attaches over top of the drainage panel so you only require enough staples to hold in place and flat to the wall.

There is an overlapping material for joining the drainage material roll heights together. For the first row, wrap the overlapping seam around the bottom as it helps to prevent insects from entering the drainage panel through the bottom weep holes. Make sure the same material overlaps each of the horizontal joints where the drainage panel seams together.

It is advised to use 2 people for this process.

Refer to both Keene and Mortairvent for instruction on how to install the product.

QS Caulking String

BRICKclad Dry-Stack Mortarless uses a QS caulking string to hold the brick to the leveling angle for the first course of bricks. This is used on the first course of bricks for the Traditional Mortared version. The QS caulking string is 1/8-inch diameter and can be compressed down to almost zero. It allows you to make sure that the first row of brick is level.



Corner Selection

BRICKclad does not require special corners to be produced and uses the same brick for the corners. There are 3 ways to install the corner detail depending on the preference and skill level.

- Prominent Face corner
- Lapped corner
- Quirk Miter corner

It is important to always start installing BRICKclad at your lowest corner and building up your corners 1 to 2 rows and then filling in the brick in between the corners.



Lapped Corner

The Lapped Corner is relatively easy and several brick can be pre-cut to speed up the installation. The brick needs to be cut to the length that matches the thickness of the brick, a mortar joint and $\frac{1}{2}$ the length of a full brick which allows for the over-lapped corner plus $\frac{1}{2}$ the length to maintain the $\frac{1}{2}$ bond of the brick wall. The Traditional mortared version, the notch does not need to be removed and if using a non-beveled edge brick, there is no need to restore the bevel after cutting.



Prominent Face Corner

The Prominent Face Corner detail is the simplest to install. It uses the same philosophy as granite cladding where the prominent face extends past the corner and the continuous joint is hidden on the return edge of the corner. There are 2 ways to complete this corner detail BRICKclad is made with a notch in the backside which is designed to clear the screw attaching the Dry-Stack anchor to the wall. This recessed notch is visible on the return side of the corner and can either be remove with a saw cut or you can simply leave it as it is and get a caulking in a matching color to fill the recessed notch.



Quirk Miter Corner

This option is a little more difficult and will require a masonry saw for a more precision cut. The Quirk Miter is a 45-degree angle starting $\frac{1}{2}$ inch back from each edge. The 2 miters go together and a bead of colored matching caulking is applied in the $\frac{1}{2}$ inch x $\frac{1}{2}$ inch inside corner gap. It is important that all your corner selection details are cut to the proper length to maintain the $\frac{1}{2}$ bond of the wall. If the bond is thrown off slightly due to the corner cut length, it will affect the screw clearance that attaches the clip to the wall. You will need to adjust your cut to solve this for the mortarless dry-stack version.



Continue Installing Brick

Once the corners are installed continue to install the brick from both ends establishing a point to terminate either at the side of a door or an inside corner. Set the brick on top of the row below, typically in a $\frac{1}{2}$ bond pattern maintaining a gap for the mortar joint spacing.



Check for level and if any bricks or parts of the brick are out of level, you can pull the mortared clip up slightly out of the brick. The traditional mortared version clip can allow the brick to be installed to a string like with traditional brick masonry. You can increase the joint slightly if needed to level a part of the wall to hit a window/door opening by slightly pulling the mortared version clip up from the brick to the leveling string.



Shimming for Inconsistent Walls

One of the advantages of BRIKclad for both the Mortarless Dry-Stack and the Traditional Mortared version are the ability to shim and adjust to compensate for a wall that is inconsistent. With BRIKclad Traditional Mortared version having 4 fasteners per sq. foot, the cumulative strength is unrivaled for pull out testing. Simply install horseshoe shims behind the stainless clip and snug

the wall. Like with siding, the product is hung, not nailed, the screws and the cumulative strength of multiple fastening points make the BRIKclad a secure product.



Installing Mortar

A 1-1-6 pre-mixed mortar (1-part Portland, 1-part Lime, 6 parts sand) is recommended as it allows the most flex for mortar types. "Betomix plus" type N has performed extremely well on the completed walls. When working with mortar, planning and prep are important as well as working with temperature extremes. A mortar gun (Quick Point drill mate) and or mortar grout bag is required. When mixing the mortar, make sure that proper practices are followed. You can get tips from BIA.org of proper mortar mixing and grouting. When filling the spaces between the brick, fill the entire voids starting at the bottom with the vertical joints and alternating to the first horizontal

joint and repeat up the wall. Make sure that when filling both vertical and horizontal joints that the entire voids and dovetails get mortar grout entirely filled. The Drainage Rain-Screen maintains a cavity behind the brick and mortar to drain and ventilate. Tool the mortar joints when the mortar grout has reached thumbprint hard. Refer to cleaning brick practices on BIA.org if needed, however careful installation should prevent having to wash down the finished wall.



Transition Points

When using BRIKclad on lower elevations and transitioning to another type of siding (Vinyl, Stucco, Metal etc.) it is important to flash the material above and compartmentalize the BRIKclad below. This is done with a simple metal flashing over top of the BRIKclad which will direct any water away from the top edge and face of the brick. This same flashing needs to be installed on top of the B-clad sill if being used at the transition point as well flashing the wall above onto the sill and

allowing the sill to direct the water away from the top of the brick. There are detailed drawings that show how to achieve this. **Refer to documents on website for detailed drawings.** The metal flashing also needs to be counter-flashed and sealed with the approved tape to the weatherproof membrane. The other types of siding are then installed. Often a vertical strapping behind the other siding types will bring the face of the alternate siding flush or closer to the face of the BRIKclad.



Other Types of Siding

BRIKclad offers un-matched clay brick cladding as a siding product that can be installed with all other types of siding products. It solves durability and maintenance issues for most other types of siding as well as provides a way to cover concrete foundations easily without having a masonry contractor involved. Several other siding products require a 4 to 8-inch minimum grade separation for their warranty and BRIKclad can easily solve this lower elevation challenge.