THIN TECH MASONRY PANELS, LLC
"Leading the Way in Thin Masonry Support Technology"

Thin Tech Thin Veneer Panel System

Material & Estimating Guidelines

A – Thin Tech Support Tie Ledge Panel

(w x h)	(mm x mm)
48”x 48”	1200 x 1200
48” x 24”	1200 x 600
48” x Custom	

Coverage – One panel = 16 sq ft.
Weight – 16 lb per each (1 lb. per square foot)
Packaging – 100 panels per skid.

B –Thin Tech Support Spacing

- 2 5/8” – 66mm
- 3”- 75mm
- 4”- 100 mm
- 8”- 200mm
- 12”- 300mm

C- Pre-Bent Corner Panels

48”x24”- 1200x600 mm
Weight – 16 lbs each
Packaging – 50 – 75 panels per skid

D- Adhesive

29 oz. tubes
Coverage - 16 sq ft per tube for thin brick stretchers.
Coverage - Corner brick will require 50 % more.
Weight per tube – 3 lbs each.
Packaging – 12 tubes per case

E- Pre-Blended Mortar

Standard Grey (Colored mortars are available in pre-blended bags)
Coverage – 60-70 sq ft per bag. (Coverage will vary depending on brick or stone)
Weight per bag – 80 lbs

F- Starter Angle

10’ length
Weight per length – 3.5 lbs each

Note: Sheathing, flashings, trims, felt paper, calk or sealants, fasteners must be compatible with Thin Tech thin veneer system (See Specifications)

Additional Materials, Tools, & Equipment

1- Screw gun, hammer, drill, or nail gun
2- Coated or galvanized screws or nails
3- Traditional level or laser level
4- Safety glasses
5- Extension cords
6- Chalk line
7- Utility knife
8- Quart size calking gun
9- Tin snips, or power shears
10- Circular saw or wet saw for cutting brick or stone
11- Ladders, scaffold, or jacks (OSHA Approved)
12- Mortar bag and tip or mortar gun, and whip
13- Acid brushes
14- Striker joint
15- Screen with ¼" opening to sift mortar if necessary
16- Water buckets
17- Sawhorse and support planks
18- Brick or stone cleaner
19- Mortar scoop
20- Template for cutting or holding brick
21- Two gallon water pail with quart measurements
22- Wheel barrel
23- Shovels and hoes
24- Cleaning brushes for tools only

Estimating Materials For Project

1. Figure panel square footage with a 2 % waste factor. This is based on square footage with openings omitted.
2. Figure lineal footage for doors, windows, floor lines, and or any openings when estimating for flashings, trims, or starter angles.
3. Each tube of adhesive will cover 16 square feet (approx 116 brick).Corner brick will use approximately 50 % more. Use a quarter size dab of adhesive on each end of the brick. Never stream adhesive across any masonry product. Larger stone will require more adhesive.
4. Flat and corner brick should be calculated using a 3 – 5 % waste factor.
5. Outside corner brick, multiply the lineal footage by 4 ½ brick.
6. Estimate approximately 70 – 80 square feet per bag of mortar when using an 80 lb. bag of pre-mixed Portland / lime/ latex additive mix.
7. Starter angles are 10 lineal feet per angle.

Estimating Labor

Labor Estimating Guidelines Are For Thin Veneer Only

1. **Allow extra man hours for flashings, trims, angles, and moisture barrier installations.**
2. **One story applications up to 10 feet, using power driven nails or screws, allow 125 square feet per man per day to install panels, brick, mortar, and clean down.**
3. **Add 10 percent for every story there above.**
4. **Allow extra time when using masonry fasteners.**
5. **Cutting of any masonry product should be done using a wet saw or circular saw with a masonry blade (Use safety glasses and gloves when cutting)**
6. **Calculations are based on a 3 man crew.**

Installation Instructions

A – Structurally sound wall; if in doubt, get owner or engineers approval prior to installation.
B – Please note that any thin veneer will follow the contour of the wall. Furring of the wall may be required for best results. Notify the owner prior to starting work.
C – Substrate will have a deflection design no greater than L/360 with corners braced, unless written consent is given by Thin TEC Masonry Panels LLC.
D – Corners are to be braced to meet code and design requirements in order to alleviate shrinkage, raking, settling, and movement. Walls are to be plumb within a ¼" per 10 lineal feet.
E – Sheathing shall be approved type for installation and installed per manufacturers recommendations and specifications.
F – Starter angles, flashings, and trims in place as per detail drawings and /or BIA Technical Note 7A on flashing of brick walls.

Layout

A- Expansion and control joints
1- Space and stop panel and veneer at building control joints.
2- Control joints should be to regional specifications and not to exceed 16' spacing in walls without openings.
3- Control joints should occur 2-4 feet from an outside corner
4- Control joints should be 3/8" wide to accommodate movement of the veneer and panel. Larger control joints may be required to accommodate building movement. These should be specified by the architect or engineer.
5- Thin Tech Masonry Panels LLC recommends the location of the horizontal control joint should occur every 1-2 stories for steel framing and every 1 story for wood framing. Control joints should be to regional building code standard, but not to exceed 24" in height.
6- Stop panel and veneer ¼" to 3/8" from inside corners.

7- **Expansion joints in the panel and veneer should be ¼” to 3/8” away from doors, windows and unlike materials to allow for movement.**

8- **All areas where brick or stone meets unlike products, must be calked with a high performance calk/sealant**
9- **Weep holes should be ¼” in diameter. Install through grout. Place weep holes 16” on center at the base of the wall and above all openings.**
10- **Leave the lowest joint where the panel meets the starter angle open for proper water drainage.**
11- **Starter angles may be used in lieu of weep holes at base, floor lines, windows, and doors.**
12- **For ease of installation, window or door frames should be within 3” of surface for veneer returns using outside corners.**
13- **Lowest common corner of the building is the starting point. Then level the installation corner to corner.**
14- **Align relief support ties at corners and all points.**
15- **Adjust panel if possible so a full course fits under or over windows, doors, or openings.**
16- **If a full course is not possible, consider rowlocks, soldiers, or trim pieces.**

Panel

- **Clean if necessary, with a non-oil base cleaner. Dirt or film residue will interfere with adhesion of adhesive, and mortar.**
- **Panel edges to end or begin on stud or girt.**
- **Corner panels may be used on outside corners.**
- **Stagger Thin Tech panels joints over joints in sheathing.**
- **Panels are butted at edges. For optimal stress relief, a 1/16” – 1/8” gap between the sides of the panels is recommended.**
- **Panel should be fastened as flat to wall as possible.**
- **For “Elite” Series, fasten screws through the vertical channels**
- **Fasten center of panel and work to the edges.**
- **Fasteners should occur every square foot.**
- **Panel may be cut with snips, power shears, or table saw with metal blade (always use protective eye wear and gloves when cutting panel).**

Remove 3/8” lip at the bottom of panel at starter course and above all openings

Fasteners

- **Fasteners shall be non-corrosive type with a waffle head design.**
- **Fasteners shall extend into the sub straight 1” if wood or masonry, or ¼” if metal. Use nails, screws, or masonry anchors # 8 or larger.**
- **Fasten every square foot. 8 inches vertically, and 16 inches horizontally. Additional fasteners may be required for masonry sub straights.**
- **If in doubt to correct fastener, contact manufacturer, or Thin Tech Masonry Panels LLC.**

Veneer

- **Veneer colors may vary in shade and texture. Mock up panels are suggested prior to installation**
- **Brick or stone should be applied out of 2-3 skids at one time so that a blend of color ranges may be achieved.**

Water Infiltration Barrier

- **Barrier shall meet all building codes, project specification requirements, and Thin Tech requirements.**

Fasteners

- **Non-Corrosive fasteners with a waffle head or flat back design.**

Flashings and Trims

- **Material shall meet building code and project specification guidelines.**

Calking

- **As per project specifications and building codes.**

Cleaning Agents

- **As per veneer manufacturers specifications and guidelines for installation.**

Starting Point

- **Install master row.**
- **Start at the outside corner of the wall.**
- **Apply corner brick or stone to the wall alternating the long and short legs to maintain running bond pattern**
- **Run one row of veneer the length of the wall to the next outside or inside corner, under or over window or door line with a 3/8” joint opening between veneers.**
- **For veneers not using corner pieces, the wall will be started with a full brick or stone for the master row, the next course is started with a half piece.**
- **To install brick vertically, creating a soldier course, flatten two rows of relief angles into openings, and install brick vertically into place.**
- **Veneers should be stopped ¼” – 3/8” from door or window trims.**
- **Remove 3/8” lip at the bottom of panel at starter course and above all openings.**

Cutting

- **Score brick to ¼” depth with masonry blade of circular or cut off saw on face of brick. Break scored pieces off with tile nippers.**
- **Stone should be cut with a powered wet saw or circular saw with a masonry blade (Use protective eyewear and gloves when cutting)**

- **Install factory edges so as to be seen.**
- **If possible, grout joints should not be placed directly over panel seams or joints.**
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Adhesive or Mastic

- **Apply quarter size dabs of adhesive on each back end of the brick.**
- **Never stream adhesive. This will cause a damming effect, stopping moisture from running downward.**
- **When applying to corner brick, apply one dab on each end of the leg, and one dab on the head of the brick.**

- **Too much adhesive will cause the brick to push forward away from the wall. Vent the mastic by pulling the brick away from the panel for a few seconds. Then push the brick back in place. This allows solvent to escape faster and the mastic to become stickier.**
- **Mastic if kept warm can be applied to brick at 20 degrees (F) and rising. Mastic in hot weather can form a film. Slide brick on panel to break surface film and achieve a good bond. In direct summer heat, mastic will most likely have to be vented to release solvent faster to allow mastic to have a tackier set.**

Mortar

Field Mix Formulas

Option 1 – 1 part Portland Type 1, 1 Part Hydrated Lime, 2-3 Parts Sand
Option 2 – 1 80 lb. Bag of Mortar Mix Type S, 2-3 Parts Sand
Option 3 – 1 bag of Pre-Mixed Portland, Lime, Latex Additive Mix (Just add water)

1- **Screen mortar mix dry, through ¼" screen cloth. This will stop lumps or stones from plugging the tip.**
2- **Screen part of the wet mortar mixture through a ¼" screen cloth into a mortar tub to eliminate lumps.**
3- **Add additional water to screened mortar mix, if needed, so that the consistency is that of a milkshake, or so it just drips through the tip of the grout bag.**
4- **Adding to much water will liquefy the mortar mix, not allowing for proper application.**
5- **Fill 4 feet of horizontal joint courses first. After every fourth row, fill vertical joint. This will allow wall to dry evenly. Fill in all voids with damp mortar previously struck from wall.**
6- **Over-fill the joint with mortar. As the mortar dries it shrinks due to water volume loss.**
7- **When mortar becomes thumbprint dry to the touch (like wet beach sand), strike the joint with a slicker or jointer tool to pack the mortar in the joint (THIS WILL LOCK THE MORTAR THROUGH Thin Tech SUPPORT RELIEF TIE)**
8- **Struck mortar should be dry enough to fall away clean and tooled to a dull, gritty finish, not wet a shiny.**

9- **Upon initial set, brush excess mortar out of brick or stone face if necessary with a flat natural bristle brush. Be careful not to drag mortar out of joint or smear to wet mortar onto masonry surface.**
10- **Setting time will depend on drying conditions. In very hot weather, dampen brick or stone to prevent rapid absorbency of moisture from mortar.**
11- **Do Not install mortar in temperatures below 40 degrees (F). Use only approved grout.**
12- **Do not use winter additives.**
13- **Keep brick or stone as clean as possible. This will reduce the time needed for the cleaning process.**
14- **For Elite panel, do not fill mortar joints above all flashings where there is a break in the wall system.**

Note

Thin hairline cracks can occur in the grout joints for several reasons including striking to early, excess water in the grout mix, too rapid of grout curing in extremely in hot dry weather, and movement of the substrate. These small cracks will not effect the performance of the product and can be minimized by striking at the appropriate time, using a proper mix, and in weather above 70 degrees (F), wetting grouted surface daily for several days following grouting so as to extend the grout tempering process. Also, avoid walls which will be subjected to impact from within due to drywall or cabinet installation within one week of grouting. Prefabricated walls systems should be allowed to set for one week following grouting for shipment.

Cleaning

Thin Tech Masonry Panels LLC recommends cleaning brick or stone between 2 and 6 days (never to exceed 10 days).
BIA Tech Bulletin # 20 offers guidelines in the cleaning of masonry products.

CAUTION: DO NOT USE ACID BASE CLEANERS. PLEASE FOLLOW THE RECCOMMENDED CLEANER AS PER THE MANUFACTURERS SPECIFICATIONS.

FOR ANY QUESTIONS OR CONCERNS PLEASE CALL THIN TECH MASONRY PANELS LLC 631-630-6549

- **All manufacturer approved components of the Thin Tech System (See Warranty) must be purchased through an authorized dealer and installed by a certified installer for warranty to be valid.**