



“STICK A BRICK” Guidelines

First published April 2003 - this update – Dec 2016

This document is not designed to be an installation manual for every situation, as the “Stick a Brick” facings can be applied in so many different places that they cannot all be covered in a document such as this.

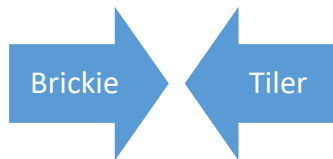
There are many circumstances where a number of possible solutions are applicable and the installer has to use his or her own judgement and/or trade training.

We attempt in this document to set out possible circumstances and solutions as best we can, but a guide such as this cannot cover all possibilities or the interaction with every possible other building component.

This Guideline is related, generally, to the installation of Empire “Stick a Brick” facings onto timber or steel framed structures with a variety of wall boards affixed. It is up to you to ascertain the right adhesive for the particular type of wall board you are fixing to.

Whilst there are certain fundamentals that apply to installing Empire “Stick a Brick” anywhere, for specific installation questions, please contact your nearest Empire Ceramics outlet...and remember...

THERE IS NO SUBSTITUTE FOR COMMON SENSE



Why is it that these 2 trades have trouble understanding each other's products and how to use them?

Both use:

Fired Clay Products.
Sand & Cement mixes
Adhesives & Admixtures of all sorts
Specialist Tools

And both want to end up with:

Level & plumb walls
Good Presentation
Good workmanship
... more work

Hopefully, this guideline will help because...
Sliced Brick facings look like Tiles - feel like Tiles
are stuck to the walls like Tiles...

but are **DIFFERENT TO CERAMIC TILES** in many ways.



What is “STICK A BRICK”?

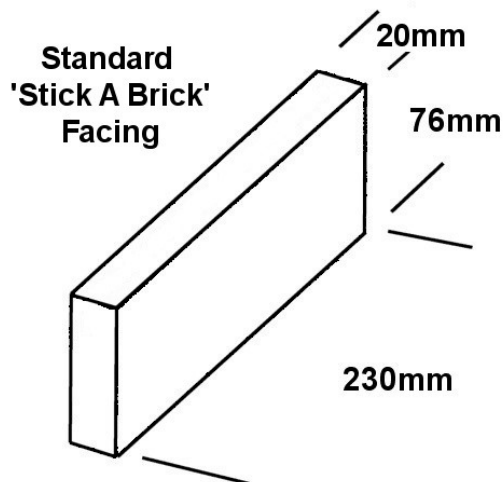


We simply slice standard 230mm long x 76mm high bricks and cut the faces off them...

Different thickness “slices” or “facings” or “brickslips” can be cut from various brick types but we have found 20mm thick slices are the best as they transport and handle well.

THEY ARE STILL REAL BRICKS... JUST MADE EASIER TO HANDLE IN CERTAIN AREAS

NOMINAL SPECIFICATIONS



STICK A BRICK Facings

Length 230mm, Height 76mm,

Thickness 15 – 20 – 25 – 35mm thick

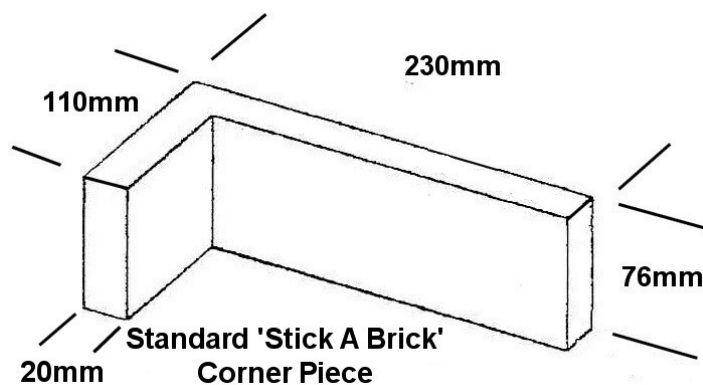
Tolerance of standard DW bricks as per Australian Standard:

Length $\pm 60\text{mm}$ over 20 bricks. Height $\pm 40\text{mm}$ over 20 bricks

Some brick types are intentionally manufactured to be very rustic and uneven and in such cases the Australian Standard specifies no real tolerances. Often, recycled bricks are cut at 25mm thick to allow for the odd shapes.

On standard bricks, our manufacturing tolerance is aimed at $\pm 2\text{mm}$ in thickness.

Rustic or uneven bricks may vary by up to 5mm in thickness.



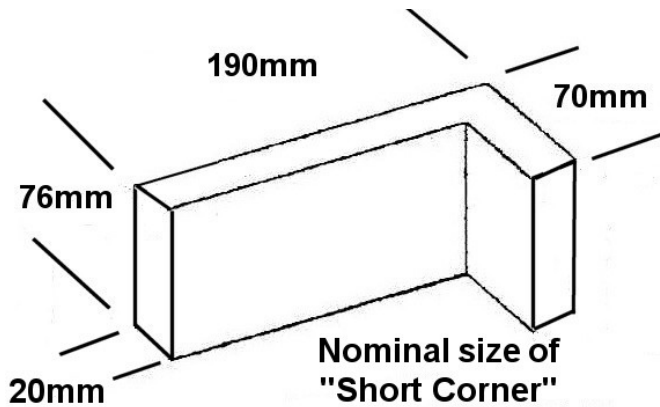
STICK A BRICK Corner Pieces

For use at external corners and can also be used as reveals on the vertical sides of windows and doors.

Standard 110 Corner Brick

Length 230mm, height 76mm, return 110mm, thickness to suit facings.

These are cut from a standard size Australian brick.

**Short 70 Corner Brick**

Length 190mm, height 76mm, return 70mm, thickness to suit facings.

Some bricks are made only as 70mm types, therefore we have no option but to supply corners of this smaller size trimmed down in length.

ACCESSORIES

1. EMPIRE MORTAR BAGS.

a) Disposable – Plastic



b) Reuseable - Blu-Tip Plastic coated fabric.



Mortar Bags have been used for many years to fill joints in brick and stonework.

Simple, efficient, economical.

<https://www.youtube.com/watch?v=1MQnpymey8I>

The mortar mix used in this video uses USA products. Our 4:1:1 mix + mortar additive works well.

THIS IS HOW YOUR MORTAR SHOULD FLOW!!!

2. EMPIRE PLUNGER GUN.



Simple to load
simple to use
few moving parts.

<https://www.youtube.com/watch?v=fzJrmoAJO1s>

(This video is of a similar gun, same sort of mortar mix)

3. EMPIRE MORTAR ADDITIVE.

The main problem encountered by trades and DIY customers is that the mortar does not 'flow' properly. We often hear:



"I've added a heap of bycol and the water goes one way and the sand/cement stays in the bag/gun".

Bycol is an air entraining admixture... great for conventional bricklaying... but you are NOT bricklaying with "Stick a Brick", you are pressure filling a joint.

- so you need a suitable mortar mix and an additive that fixes this 'flow' problem.

This additive binds the water and sand/cement mix together and makes it flow easily... plus it gives you more working time as it dries out slower

- "Just add it to the mix"

4. **EMPIRE “BRICK-LIPS”** – Mechanically fixable spacers.

Stick a Brick facings are usually 20 or 25mm thick and therefore much heavier than a standard ceramic wall tile.

Also, the mortar joints for brick facings are the same as conventional brickwork 10mm.



So.. (dependant on the application)
Stick a Brick facings can have a tendency to want to obey gravity and slide down the

wall while the adhesive is going off.

To overcome this annoyance...

Empire Ceramics designed & created “BRICK-LIPS” to specifically act as multi purpose 10mm joint spacers.

These BRICK-LIPS spacers have the following advantages:

- They are able to be used like a standard removable 10mm spacer.
 - The spacers can be ‘buried’ into the notched trowel adhesive spread and stay there.
 - They can be mechanically fixed (screwed) to the substrate to hold the Stick a Brick facings in position (particularly handy where you have bricks of differing sizes)
 - You can simply LEAVE them screwed into the joint and insert mortar over them.
- (They are made from the same steel as used in the Empire Brick & Steel Rail System)

5. **EMPIRE ULTRAPOINT MORTAR GUN.**

Made in England.

Professional Applicator with removable barrels and nozzles.

Spare parts available.



<https://www.youtube.com/watch?v=yRKcAW1OTnk>

(the mix on this video is not right and the demonstration is unbelievably slow...
but you will get an idea of how the gun works...)

RECOGNISE THE MAIN DIFFERENCE!



A Ceramic Tile is usually Glazed... over a softer 'body' of fired clay & filler mix.



This means that the **grout** (not mortar) can be simply rubbed into the joints then washed off with a damp sponge making the wall easily cleaned.

Being clean and tidy when grouting a glazed ceramic tile wall is easier than brick because you can always come back and clean up.



STICK A BRICK FACINGS ARE DIFFERENT TO TILES

The main thing you MUST do with a Brick facings wall is...

KEEP THEM CLEAN AT ALL TIMES!



INSTALLING STICK-A-BRICK FACINGS

IMPORTANT INFORMATION.

BRICK FACINGS SHOULD NOT BE ADHERED TO STANDARD 'GYPROCK' WALLS

Gypsum sheets are not designed for this purpose, they are designed to be painted or wallpapered.

You need to specify the correct substrate sheets for internal lining and / or external cladding.

Contact Empire Ceramics or Wall board manufacturers for advice on this.

Often a simple alternative is to leave the Gyprock there & use the Empire Brick & Rail System instead.

Depending on the scale of the job, many people are confident about installing Stick a Brick Facings as a DIY project, as the process is relatively fast and simple.

Empire Ceramics recommends that most consumers use only qualified tilers who have the knowledge to accurately assess the needs of the project, quote appropriately and trouble shoot when necessary.

This will ensure that the standards are met, the finished job looks good and will stand the test of time.

EXTERNAL WALLS or WALLS EXCEEDING 3 METRES IN HEIGHT

There are MANY instances where a higher quality installation system is needed to comply with the regulations governing building projects. Many builders, designers and specifiers mistakenly feel that an internal domestic tiling approach is suitable for external or high wall applications, this is not the case. For these walls you need a much better surface preparation and, often, a mechanical support must be added in to the adhesion matrix.

Empire Ceramics recommends 2 approaches for these walls.

- Consider using the mechanically fixed “Empire Brick & Rail System” as an alternative.
- Use a specific tiling system such as the Laticrete MVIS (Masonry Veneer Installation System)

So, for this Guide we will assume you are doing a simple wall and have the correct wall board installed.

Step 1: Prepare the wall for ‘Stick a Brick’ Facings



Make sure the walls are smooth, clean and plumb.

Dust and debris will make it more difficult for the adhesive to properly bond.

Then, use a level to instal the metal L-shaped “Starter Rail” from Empire Ceramics nailed into place with flat head cadmium or similar coated nails.. This Starter Rail is the datum line and will allow you to keep the bricks straight and level as you instal the brick facings.

You can also use a piece of timber for this and when you’re finished, the timber ‘ledge’ can be removed. As with traditional brickwork, the end of the brickwork is built up first and string lines are banded across to provide a straight edge for the top of the brick facings.

The ends can be in the form of a corner brick or facings cut to form a traditional stretcher bond.

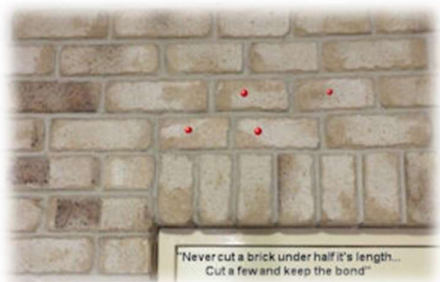
Cut some brick facings

If the design needs them, cutting some of the 230mm brick facings down to 110mm long pieces using a “wet saw” or a diamond blade angle grinder prior to installation will save time during the process so you’re not continuously stopping to cut the brick facings needed for set out.



Step 2: Set out the brickwork:

It is best to simply lay out a course of brick facings on the floor that lines up with your corner bricks or bricks on the wall already. Space them properly and you will see if you need to cut any to fit the wall properly.



Remember the “Brickies Law”

**Never cut a brick under half its length.
Cut a few and keep the bond going**

< see the example in the photo

**THINK about the set out.
You cannot change it later!**

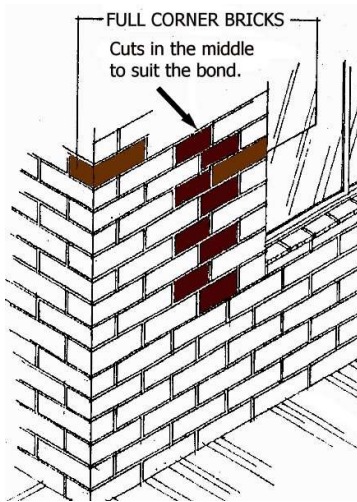


There is NO book that that shows the ideal way to set out brickwork in every situation, it is a practical thing gained by experience... but it is also common sense.

If not sure, go and look at some conventional brickwork on a house or building somewhere.. you will start to see how easy it is but there are certain things about brickwork which are worth noting before you start.

- Bricks are not totally uniform in length so don't try to gauge the facings accurately with a 10mm joint measure.
- Unless absolutely necessary in a very tight area, you should not use facings that are cut to less than a half facing (110mm) and wherever possible cut facings should be at least 170mm in length.

- Anywhere a cut brick is required it should not be, unless unavoidable, too close to a corner and unless absolutely necessary you should never cut a corner brick.
- Down the sides of openings should be halves and full facings.
- Whilst it is best to try to keep perpendicular mortar joints (perps) as close to vertically aligned as possible, it should not be seen as the most important issue.
- It is always best to set out two courses of brickwork around the entire job.
The two courses should be at a level which will run through all, or the majority of, the openings. A little time spent working on these two courses can save hours later.
- Corners should be installed first, before the facings in the bulk of the wall.
- Remember that corners can be installed facing either direction.
A lot of cutting can often be avoided by turning a corner at one end or the other of a section of wall, or perhaps by turning them both.



- Install the brick facings between the corners and the openings, checking how the brick spacing works.
- The object is a balanced look with minimal cutting.
- If necessary, it is quite appropriate to tighten up the perp joint in a section of the wall, or indeed, to spread the facings a little to take up a gap in the brickwork.
- Consider vertical areas between openings and vertical areas beneath and below openings as sections of brickwork independent of other areas. If a cut facing (or "3/4" facing) is required to work the facings between two openings, the same size facing should be used in courses above and below in the same area
- Once the layout around openings has been determined, install the brick facings in line with the first two courses, starting immediately above and below these first two courses.

So, the set out is decided...

Step 2: Install Corner Bricks



Start your installation at the bottom corner of the wall. Use a notched trowel to spread the suitable cement based tile adhesive over a small section of the wall.

**Some people use an adhesive & 'spot stick' >>>
WE DO NOT ADVISE YOU USE THIS METHOD.**



Next, press a full brick or corner piece to the outer edge of the lower corner of the wall.



Then continue up the corner with a 110mm cut brick facing or corner piece with the same application technique.

The use of Empire "Brick-Lips" here will make this part easier.

Then fill in with full bricks each side of the corner, this creates the start of your "Stretcher bond" pattern which is the most common bond used in brick walls of all sorts.

Then do the same at each corner of the project...

Step 3: Install Full Courses



Now to start filling in the wall area:

An easy method is to use the Empire Brick-Lips and insert or screw them in as needed as you go up the wall...

You can also use the conventional brickies method of a string line and lay out a single course at a time or a laser level. Bricks vary in height & length so use your eye to make sure the joints are kept relatively even.

Continue this technique about halfway up the wall to start.

Then, go back down to the bottom of the wall and start running the full bricks to complete the first “course.” You can work your way up the wall, row by row or do smaller sections at a time...

Make sure the courses are level.

Check that the courses are running straight by using a 1.5 metre long level about every 2-3 courses. You have about 15-20 minutes to adjust the Stick a Brick Facings before the adhesive begins to set.

Instal the remaining Stick a Brick facings

Once you’ve reached the halfway point, continue with the corner bricks the same way as Step 2. You may finish the remainder of the wall to the ceiling height.

Continue the laying of full bricks to complete the remaining rows.

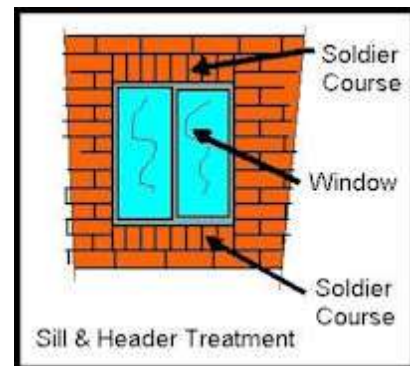
Stand back from the wall every so often to “size up” the job and to check for even running courses.

Window, Door & Opening Treatments

The easiest method of treating these areas is to ‘butt finish’ the brickwork to the architrave of the window/door, above & below an opening can be a vertical ‘soldier’ course.

Sills

The simplest method is to take some facings and stand them up to form a ‘soldier course’ sill that engages into the normal brick coursing.



Step 4: Insert Mortar into the joints.

Allow the wall adhesive to dry for at least 24 hours.



MORTARING THE JOINTS

A general on-site mix is:

4 Sand (mixed particle sizes – Brickies mix is usually good)

1 Cement

1 Lime

plus some EMPIRE Water Additive.

**DO NOT USE BYCOL OR SIMILAR
AND DEFINITELY AVOID THE USE OF PVA
BONDING AGENTS SUCH AS BONDCRETE!**

Mortar can be inserted with a plastic bag shaped like a cone, or a mortar gun or pumped.

The easiest method of mortaring Stick a Brick Walling is:

- Place approx 40kg of your chosen mix in a standard wheelbarrow & add any colouring oxide, if required.
- Add water, as required, & also add the EMPIRE Water Additive admixture, then mix to a consistency similar to "yoghurt".
- The water addition rate is sensitive to the climate, so until you get used to the mixing it is better to add water slowly & mix thoroughly.

The best test to see if your mortar is "right" is to get a mortar bag & fill it over the barrow...

if the mortar "runs out" - it's too wet.

if the mortar "dribbles out" - it's OK.

if the mortar stays in the bag - it's too dry!



Put down some dropsheets around the job and with the mix now ready simply fill the joints. There is no "right" way to do this, it's just a matter of perseverance & keeping the wall as clean as you can.

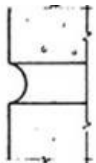
The idea is to 'over-fill' the joint slightly. Always fill the 'perps' (vertical joints) from the bottom up and ensure the mix gets right into the top of the joint. Lime mortars are not good for your hands, use gloves & eye protection. (& don't let the mix get inside your gloves while you're working).

Once you've got the 1st mix in, the walls should be ready for tooling, but keep your eye on this as you go.

Grinding out mortar joints because you let it go off before tooling is very difficult and costly!

Rather than use conventional steel brickies tooling equipment, experience has shown us that a simple piece of round timber (similar to a broom handle) will give the standard "ironed joint" finish and is excellent at forcing the mix into the joint.

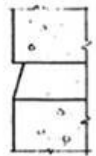
JOINT DESIGNS



By far the best is an **IRONED** or concave joint.

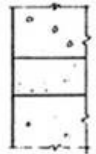
This pushes the mix into the joint and avoids any 'drumming' or voids.

With a tumbled style brick this will help take the mortar joint up to the brickwork face.



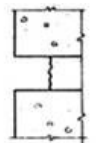
Next would be a **WEATHER-STRUCK** joint.

Same as above for compression but done with a trowel.



Then a **FLUSH** joint.

But there must be some compression so the joints must be slightly over filled.



Last of all a **RAKED** joint...

Not recommended as you must 'rip out' the mortar you have just injected...

And you end up with only a small depth of mortar... and expose the brick edges.



Once you've done the tooling in an area let it go off a little more & then brush it down.
If you brush it immediately after tooling...
you will smear the moist edges of the mortar all over the bricks.

IMPORTANT NOTE ON CLEANING

You CANNOT clean bricks the same way you do tiles !!!
Tiles are glazed and the mortar does not stick to them
STICK A BRICK is made from REAL bricks and the mortar WILL stick to them!!
So.. DO NOT SMEAR MORTAR OVER THE FACE OF THE BRICKS!

A light wash down of all the walls is advised
to remove all of the dust and dirt from the bricks and clean any mortar smears.

If you have installed the mortar correctly,
you SHOULD NOT NEED TO ACID WASH.
If you do need acid, make sure it is the right one, diluted properly and
wet the bricks down before applying ANY acid solutions.

Now, get your inspirations to work!



If you have any specific installation questions... Contact us:

Tel: 1800 959 683

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<http://www.empirebrick.com.au>



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