



## LARGE-FORMAT TILES – NOW MADE IN SOUTH AFRICA

We were very excited to fire up production for the first time at our Gryphon factory's second phase recently. We're now able to produce tiles in the large formats that South African customers are beginning to ask for. Read all about how our new MegaTec tiles are made, and how to install them.

CERAMIC NEWS • GRYPHON PHASE II



**GRYPHON**  
**PHASE II**





*“We planned the second phase at Gryphon after identifying a trend for large-format tiles internationally,” says Ceramic Industries CEO, Lance Foxcroft. “It’s a trend that’s beginning to show itself in the South African market too.”*

### **A new dimension in style**

Our new, large-format tiles are being produced under the MegaTec label. They offer a modern look that’s clean and uninterrupted. Because they’re larger, they can be installed without as many grouting lines between the tiles. Now customers will be able to use MegaTec tiles to create open spaces that are nearly seamless, striking and contemporary.

Our CEO, Lance Foxcroft, says that customers first see these sophisticated tiles in hotels, restaurants and malls. “Now they’re seeing the possibilities for this high-end, designer look in their own homes, and don’t have to resort to expensive imports.” Since we can produce these large tiles locally at our very own factory, South Africans can afford to put these fashionable tiles in their own houses and offices.

### **High-definition, low cost**

MegaTec makes it much easier, and cheaper, to get the look of luxury stone slabs. High-definition printing at Gryphon allows us to copy exactly the fine details in expensive materials like Carrara marble and exotic wooden floorboards. That means South Africans can have access to finishes that were previously too expensive for most budgets. And since the tiles are bigger, they’re perfect for showing off these graphics effectively.



The factory’s new Creadigit printer, supplied by Italian manufacturer, System, features seven bars for colour and special-effect printing. With a resolution of 400DPI, it’s able to recreate natural finishes as well as new, creative designs in minute detail. The printer allows us to apply transparent, glossy, matt and even reactive inks that produce special textures and raised details. It’s 225m-long, large-format glazing line is suitable for tile widths of up to 1 000mm, and is coupled to an extra application booth for further special effects and finishes.

### **Rectangles are big too**

Designers and certain customers are starting to choose rectangular tiles over more traditional square tiles. These tiles create visual interest with their long lines and offer different layout options. Besides the large 800 x 800mm square format, the new phase at Gryphon will give customers 600 x 1 200mm and 450 x 900mm rectangular tiles to choose from in a range of designs and finishes.

### **Machinery to match**

Producing these larger formats requires some pretty large pieces of equipment. Gryphon now has two brand-new PH6500 presses from SACMI, the world’s leading technology supplier for the ceramic industry. Weighing 154 tons each, they’re the largest presses in the Ceramic



Industries group, able to produce the large-format tiles that were previously only available in South Africa as imports. Each machine can produce up to 64 000kN of pressing force, and with an inter-column clearance of 2 450mm, they're ideal for making large-format tiles. They use SFS mould technology that's well suited for the larger formats, and for producing superior quality, complex and structured surfaces.

Quality control is governed by a Management Information System, with inputs from a Qualitron imaging machine with high-res cameras, and infrared and laser sensors. Meanwhile, the lab makes use of an X-Ray Fluorescence (XRF) analyser to determine the exact elemental chemical composition of all incoming raw materials.

### Eco innovation

For over 40 years, Ceramic Industries has pushed innovation in its processes, and Gryphon continues that tradition as the most technologically advanced and sustainable factory of its kind in Africa. The factory's Eko kiln reduces gas consumption and recycles heat for drying and other processes. An improved burner design also ensures more consistent and stable firing



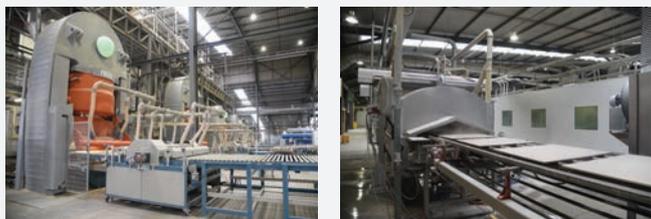
across the kiln width, while more efficient cooling allows for easier handling of the tile during quality control inspection and packaging. In addition to energy reuse, all process water at Gryphon is recovered and used in clay processing. Natural lighting, low-wattage bulbs and sensor lights help reduce energy consumption even further at the plant.

### A large investment in large-format

Ceramic Industries spent R530 million in developing Gryphon's first phase last year, which our CEO believes is necessary to continue to lead the industry and service their market.

**"The new technology we've invested in allows us to continue providing our customers with world-class ceramic products, in terms of both design style and quality," says Lance.**

With an output capacity of 13 000m<sup>2</sup> per day, and the capability to produce a variety of novel, appealing special effects and finishes, the new line at Gryphon should give lovers of large-format tiles exactly what they want.



# Installing MegaTec Tiles

Now that you know how they're made, let's learn how to install them. These new, larger tiles require a higher level of precision in installation than for tiles that were considered large-format in the past. Proper techniques and specifications must be followed for installation.

**THIS GUIDE SHOWS YOU HOW TO LAY LARGE-FORMAT TILES IN A DIAMOND FORMATION.**

## 1 Preparation

- The new large-format tiles require a much more level substrate surface than for smaller tile formats
- The new specifications for flatness for large-format tiles is no more than 3mm change in 3m
- Do a proper inspection of the floor before beginning
- Put aside plenty of time in case levelling is required
- Flatten the floor by filling low spots and removing high spots
- Use self-levelling and patch products to make the job easier
- Clean the floor



Flattening the floor

## 2 Laying out the floor

### Find the centre of the room:

- Find the midpoint along the longest wall and mark it
- Mark the midpoint of the opposite wall and snap a chalk line between the two points
- Repeat the process on the perpendicular walls
- Check whether the two lines are at perfect right angles – mark at 300mm from the intersection on one line and at 400mm from the intersection on the other line. Draw a diagonal line between those two points and measure it – if it measures 500mm, the lines are square (thank you, Pythagoras)
- If they're not square, the tiles won't be laid straight and the room will look unbalanced

- You can use a clear polyurethane coating over the chalk line to prevent it from being accidentally erased

## 3 Planning out grids

- Lay a tile (with no adhesive) with one corner at the intersection along one line so the other corner of the tile meets the line (remember we're laying out in a diamond formation)
- Still without adhesive, lay out a pattern of four tiles based on the position of the first tile
- Separate the tiles with suitable tile spacers
- Outline these four tiles with a carpenter's pencil
- This is the first grid from which we will build out and across the room (some installers use chalk lines across the entire floor to mark out grids)
- Continue to dry-fit the tiles across the floor until the distance to the wall is less than one tile wide
- If the space between the last full tile and the wall is less than half a tile wide (corner-to-corner of the tile), move the centre layout line until the remaining space at both ends are equal width. This remaining distance is the size the tiles will need to be cut
- Measure this distance and mark out the tiles to be cut – remember to cut your piece about 6mm smaller than measured to allow for easy placement and expansion room
- Carefully remove the dry-fitted tiles and spacers from the marked floor



Chalk line used to determine the centre of the room



Paco Crema 600 x 1200 mm

#### 4 Mixing and spreading adhesive

- Away from the installation area, lay out a tarpaulin or drop-sheet
- Mix the adhesive with the correct amount of water, as per instructions
- Once mixed to the correct consistency, begin at the centre of the layout area
- Trowel adhesive within the outline of the centre tile
- Holding the tile upside down with your hand, apply a thin coat of adhesive – this is called back-buttering and will provide an even bond between the tile and floor
- Lay the tile and work it into place with a rubber mallet
- Use a spirit level to check that the tile is flat and even
- Use a margin trowel to remove excess adhesive that oozes up when pressure is applied
- Apply more adhesive to the floor and the back of the next tile, and lay it next to the first one
- Work the tile into the adhesive to create a visually flat surface
- Check the installed tile with a spirit level
- Periodically, lift up one of the installed tiles and look at the underside – adhesive should cover no less than 80 – 85% of the tile back (95% for exteriors). If there's less coverage than that, more adhesive needs to be applied. If the tile has good coverage but is higher than ones around them, reduce the amount of adhesive applied
- Place spacers between the tiles to form grout lines
- Use a margin trowel and a damp sponge to remove excess adhesive that oozes up – don't let it dry
- Continue spreading adhesive and laying tiles in small sections
- Keep setting tiles until the wall is less than one tile width away
- Measure and cut the tiles that will fit against the wall and into corners
- Keep checking that the tiles are flat and level while removing any excess adhesive
- Once all the tiles are in place, let the adhesive dry completely – usually overnight (unless you're using a rapid-set adhesive)

- Once the adhesive has set, remove spacers
- Remove excess adhesive in grout lines with a utility knife or putty knife

#### 5 Grouting

- For the best look and the best fit, choose a grout gap of between 3 and 5mm
- Follow grout instructions, mixing with clean, cool water
- Use a grout that matches tile colour if you want a near-seamless look
- Spread the grout using a standard grout float and fill the grout joints completely
- Move the float diagonally across the tiles to avoid digging into the joints
- Begin spreading the grout from the back of the room moving towards an exit
- Once the grout is spread, allow it time to dry before the residue is removed



Spreading the grout

- Grout will usually become firm and be ready to clean within about 20 minutes
- Inspect grout lines to make sure grout has filled the joints with no gaps or pits
- Wipe tiles diagonally to clean them – rinse the sponge frequently in clean water
- Remove the residue and leave a clean, shiny surface
- Allow the grout to cure as per the instructions before allowing foot traffic



Quartz Fusion Beige 600 x 1200 mm

## 5 tips for a successful large-format tile installation

Large-format tiles are becoming increasingly popular. This flooring product gives designers the ability to create an open, roomy look-and-feel, thanks to fewer grouting lines. It's important that these tiles are installed correctly or the effect is easily spoiled. For successful project, keep these tips in mind:

### 1 Make sure the surface is completely level

- The new large-format tiles require a much more level surface than for tiles that were considered large-format in the past. The new specification for flatness is no more than a 3mm change in 3m, so make sure you flatten the floor by filling low spots and removing high spots.

### 2 Invest in the right adhesive and support

- Use a tile adhesive made for porcelain tiles, as these high-strength adhesives allow you to build up to 2cm of adhesive under a tile in order to support it, and can handle the increased weight of large-format tiles. Large 22mm-notch trowels are best for the job because they allow you to build up adhesive much more quickly, they make back-buttering easier and they help you deal with variations in the substrate.

### 3 Mind the gap

- A grout gap of between 3 and 5mm will provide the best look and fit. These measurements give you the close fit you're after while making sure you don't have any problems with installation. Remember to use a grout that matches your tile colour if you want the near-seamless look large-format tiles are so good at.

### 4 Use purpose-made equipment.

- Purpose-made equipment like a levelling system will give you a professional finish. Levelling systems fit between tiles like spacers, but can be screwed down to bring all adjacent tiles to the same level. They're usually affordable and reusable, and take the worry out of levelling your tiles.

### 5 Give large tiles a lift

- Invest in a set of suction cups as they make lifting the extra weight and wider proportions of large-format tiles much easier. Not only will you save your tiles from accidents, you'll save your back from the strain. And what's more, they allow you to place tiles more precisely.
- The MegaTec range can recreate near-seamless stone, wood and screed floors with superfine accuracy. With a little planning and preparation, and these insider tips, you'll be able to create the look you're after.

For more information, contact Ceramic Industries on  
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