

INSTALLATION MANUAL KEY CONSIDERATION GUIDELINES

genesis™

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PREFINISHED COMPRESSED FIBRE CEMENT / MANUFACTURED BY FAIRVIEW

This Genesis Installation Manual covers the critical installation guidelines that must be met in order to ensure a quality, attractive and durable installation. Failure to follow these quidelines could result in an installation that is not warranted. This manual should be used in conjuction with the full Fairview Genesis Installation Manual and safety equipment must be used as outlined below.

IMPORTANT - During the installation process, the three critical elements to get right include:

- 1. Ensuring you meet the edge distances requirements for fixing;
- 2. Ensuring you meet the fixed and floating requirements;
- 3. Ensuring you allow a minimum 35mm ventilation gap behind the facade.

# HEALTH & SAFETY

## WARNING - DO NOT BREATHE DUST AND CUT ONLY IN WELL VENTILATED AREA

Genesis products contain sand, a source of respirable crystalline silica which may cause cancer. Breathing excessive amounts of respirable silica dust can also cause a disabling and potentially fatal lung disease called silicosis, and has been linked with other diseases.

During installation or handling:

- 1. Work in outdoor areas with ample ventilation;
- 2. Minimise dust when cutting by using a dust-reducing circular saw attached to an appropriate, well maintained, filtered vacuum;
- 3. Warn others in the immediate area to avoid breathing dust;
- 4. Wear a properly-fitted, approved dust mask or respirator (e.g. P1 or P2) in accordance with applicable government regulations and manufacturer instructions to further limit respirable silica exposures.

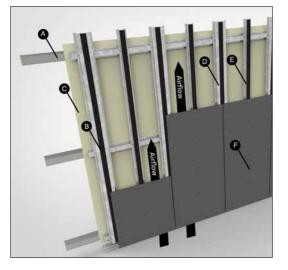
During clean-up use a vacuum and filter, both of which are well maintained and appropriate for capturing fine (respirable) dust. Alternatively, use wet clean-up methods never dry sweep. For further information, refer to our Safety Data Sheets.

FAILURE TO ADHERE TO OUR WARNINGS, SAFETY DATA SHEETS, AND INSTALLATION INSTRUCTIONS MAY LEAD TO SERIOUS PERSONAL INJURY OR DEATH.

# VENTILATION

Genesis façade boards are installed as a naturally ventilated façade, resulting in a temperature difference between the face of the cladding panel and the air cavity behind. This in turn creates variation in air density causing air to flow upwards within the cavity resulting in a chimney effect.

Air enters at the base of the cladding creating an airflow that transports heat from the cavity out through openings at the top of the wall, reducing humidity and increasing the efficiency of insulation.



#### FIGURE 1

- A. Structural Support
- Genesis Gasket Tape B.
- C. Vitrafix Sarking
- D. Genesis Joining Top Hat
- E. Genesis Intermediate Top Hat
- F. Genesis Façade Board



FIGURE 2. Ventilation air flow

# **GENERAL DISTANCES**

Ensure to install according to the following guidelines regarding distances described in this manual.

- The façade board should finish between 10 and 30mm below the bottom end of the substructure.
- · For overhang and similar, the maximum distance is 100mm.
- The distance to terrain from the bottom edge of the façade board should be a minimum of 150mm. • The distance to flat roofs, balconies and other horizontal structures, where the water can drain away, should be a minimum of 50mm.
- · Vertical clearance to profiles such as Genesis Back Flashing or corner profiles should be a minimum of 4mm.
- For horizontal clearances at windows and doors etc., you must leave a minimum of 10mm for ventilation.
- The clearance to other building materials should be minimum 8mm for movement and water drainage.

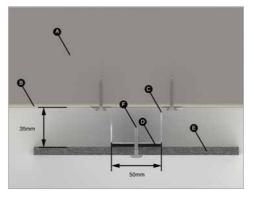
# PANEL JOINT

# VERTICAL JOINTS

Genesis façade boards are always joined vertically on a continuous top hat. Genesis Façade Gasket Tape is applied to the central section of the Genesis Joining Top Hat for the full extent of the panels, creating a black-out of the vertical joint (see Figure 5).

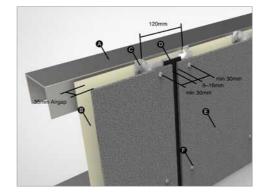
Genesis Facade Gasket Tape is also applied to the Genesis Intermediate Top Hat to assist with movement and minimize any vibration in the panels (see Figure 4).

#### HORIZONTAL CROSS SECTION INTERMEDIATE TOP HAT



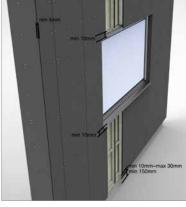
#### FIGURE 4.

- A. Steel Framing
- B. Vitrafix Sarking
- C. Genesis Intermediate Top Hat
- D. Genesis Gasket Tape
- E. Genesis Façade Board
- Genesis Façade Rivet F.

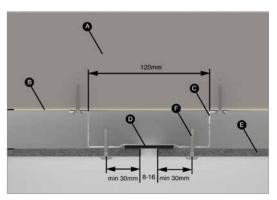


#### FIGURE 6.

- A. Steel Framing
- B. Vitrafix Sarking
- C. Genesis Joining Top Hat
- D. Genesis Gasket
- E. Genesis Façade Board
- F. Genesis Façade Rivet





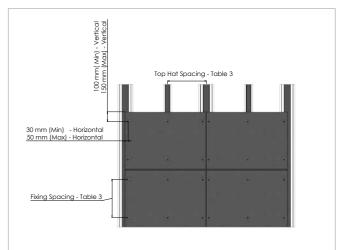


### HORIZONTAL CROSS SECTION VERTICAL JOINT

#### FIGURE 5.

- A. Steel Framing
- B. Vitrafix Sarking
- C. Genesis Joining Top Hat
- D. Genesis Gasket Tape
- E. Genesis Façade Board
- F. Genesis Façade Rivet

# **RIVET FIXING DISTANCES**

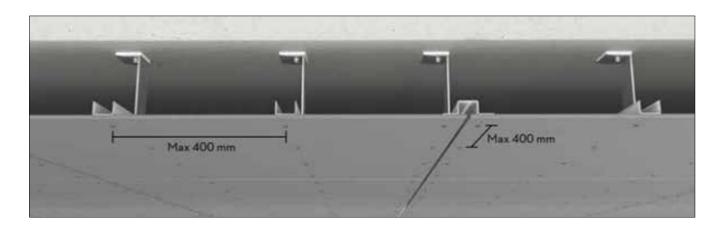


# PANEL INSTALLATION

## SOFFIT

Genesis façade boards are ideal for use as ceilings and soffits. The solution can be used for both exterior and interior applications. The boards can be installed on profiles directly mounted to a concrete deck or wooden structure, or they can be used as part of a solution with a suspended ceiling system. It is possible to change or remove the Genesis façade boards to access any hidden installations as the boards are mounted using visible rivets.

Installing 8mm Genesis façade boards on a steel structure - as ceiling or soffit Max support distances: 400mm Max rivet centres: 400mm. The edge distances when using Genesis façade boards as ceiling or soffit are in principle the same as for façade boards in which the direction of the sub-structure and the orientation of the board define the edge distances. This also applies to hole sizes, joints, and distances to other building materials.



Genesis façade boards are installed with an expressed joint between adjacent panels, vertically and horizontally. The joint is to be a minimum of 8mm and maximum of 16mm.

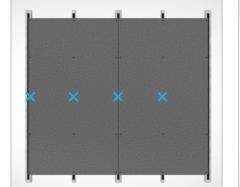
KEY

FIGURE 8.

FIGURE 10

- When installed in a vertical layout, the boards must have only two fixed points as close to the centre of the panel as possible. (see Figure 8 & 9)
- If the panel is installed horizontally or runs across two intermediate top hats, the board must have two fixed points as close to the centre of the panel as possible and must be aligned horizontally. (see Figure 10)
- All other fixing positions must be sliding points.
- Genesis facade boards must be fixed in accordance with Table 3 of the Genesis Installation Manual and minimum edge distances as specified in Figures 4-7. Appropriate panel fixing layout should be selected for the project Design Wind Pressure and Top Hat Spacing.
- All panels must be pre-drilled using a 9mm fibre cement drill bit.
- When installing Genesis, begin with the two fixed points (1 then 2), followed by the remaining gliding points above the fixing positions and finally the gliding points below. (see Figure 11)
- Genesis façade boards must never cross a joint in the top hat subframe, rather the panel joints should align with the top hat joints.

🗙 Fixed Point Sliding Point



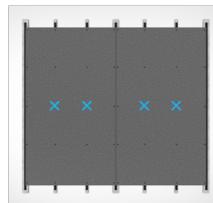
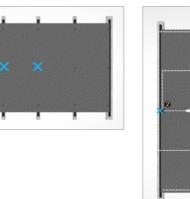


FIGURE 9.



PANEL FIXING

Genesis Façade Boards can be installed using Genesis Façade Rivets.

# **GENESIS FACADE RIVETS**

Genesis Stainless Steel Rivets are to be used when fixing Genesis façade boards to steel top hats.

For all fixed positions, the Genesis Fixing Sleeves must be used. Insert the rivet into the Genesis Fixing Sleeve.

## PRE-DRILLING BOARDS

For pre-drilling the Genesis boards it is recommended to use the Genesis Fibre Cement Drill Bit. This leaves you with the best results and the optimum number of drilled holes per drill bit. Dust from cutting or drilling must be removed immediately after the work has been completed, otherwise it can mark the surface of the boards.

The hole diameter is to be ø9mm.

## CUT OUTS

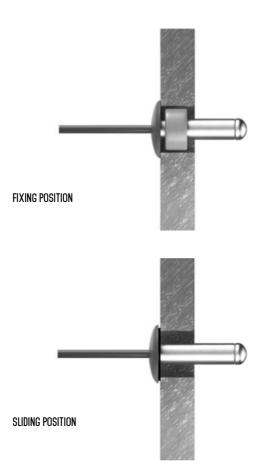
To avoid cracking the Genesis façade boards when installing around windows, doors and other openings, ensure the boards are installed in accordance with the following instructions:

- Avoid cutting single, exact apertures in boards, rather to cut smaller sections and install them individually.
- Ensure that there is support behind the joints, onto which the façade board can be mounted.
- If the small cut outs are no wider than 150mm, they can be mounted with one rivet fixing in the middle of the board width (see Figure 4).



Correct installation of Genesis façade boards at windows, doors and openings. a: If the small cut-outs are not wider than 150mm, they can be mounted with only one rivet in the middle of the board.

FIGURE 11.



Incorrect installation of Genesis façade boards at windows, doors and openings.

# FIXING DETAIL

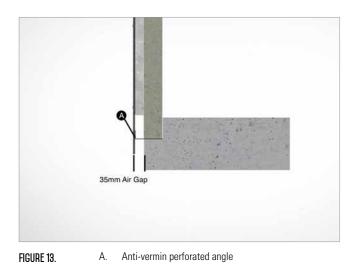


FIGURE 14. A. Anti-vermin perforated angle to sit flush against façade board

## TOP OF FACADE

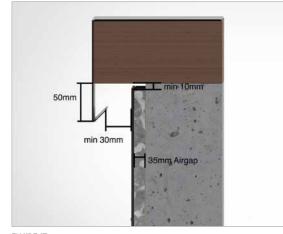


FIGURE 15.

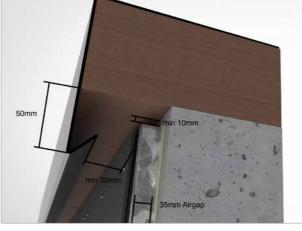


FIGURE 16.

#### SOFFIT

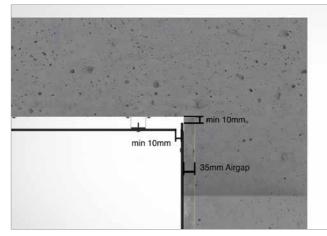


FIGURE 17.

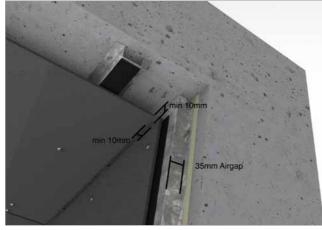


FIGURE 18.

WINDOWS

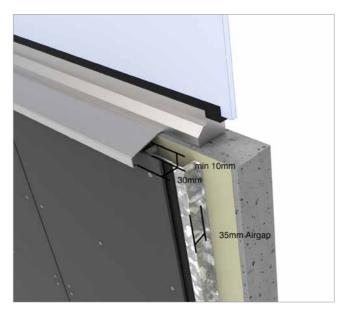


FIGURE 19.

Genesis facade panels are designed to be installed across the entire facade of a building. However, building elements such as floor slabs can move independently of building elements. It is important to ensure you do not fix Genesis across multiple elements in order to prevent damage to the facade panels.

The below installation details show how to install Genesis across expansion joints:

### EXPANSION JOINT CLOSED JOINT

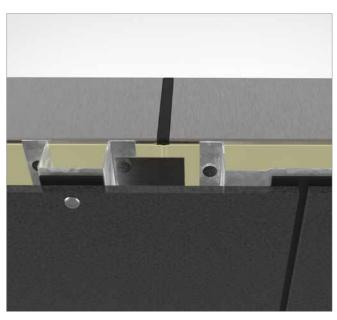
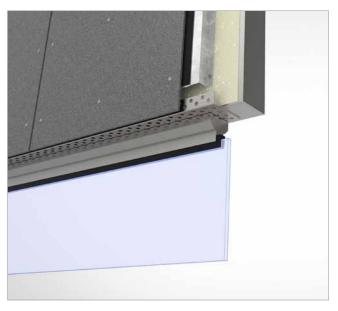


FIGURE 21.

#### 3D MODEL - WINDOW HEAD



## FIGURE 20.

\*Same detail above doors

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#### VERTICAL CROSS SECTION - HORIZONTAL JOINT

FIGURE 22.

- A. Steel Framing
- B. Vitrafix Sarking
- C. Genesis Intermediate Top Hat
- D. Genesis Façade Board
- E. Genesis 3.5mm Back Flashing





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