Method Statement for installation of Equitone

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Introduction

The Method Statement outlined the supply and install Equitone Façade Materia .

RESOURCES

Tools and Equipment

(a) Circular Saw (Mafell , Festool, Makita)

(b) Saw Blade (Panel sizing sawblades)

(c) Sanding Paper (80 Grit)

(d) 11 mm drill bit for Panel and 4.3 mm drill bit for profile.

(e) Drill

(f) Guard Rail

(g) pnemuatic rivet gun, Air Compressor.

Materials

(a) Equitone Panel , Uni Rivet (Gliding point), Sleeve (fixed point)

(b) Galvanised Iron (≥ 1.5 mm thk) ,Hollow profile

(c) Galvanised Iron (3mm thk), L profile

(d) Foam Tape

Transportation, Delivery and Offloading

Advance arrangement to be made during the daily site meeting and to check with Main Contractor's site supervisor on arrival to site.

Work SEQUENCE

The construction works include the following activities.

1 Delivery to work area

2 On site Storage

3 Handling

4 Schedule of tool and equipment.

5 Electricity and power supply

6 Scaffolding

7 Method of Works

(a) Installation of Frame.

(b) Cutting Panel

(d) Edge treatment with Sand Paper

(e) Drilling the hole on Panel.

(f) Panel Installation.

(g) Handing over of completed Equitone Façade

(1) Delivery to work area

From the designated offloaded area, the material shall be manually carried by the installers or using mechanical means whenever possible to the work area or rooms where installation is to be carried out.

(2) On-site storage

1. All panel material must be stored flat on pallets, inside and uncover in dry conditions, protected from weather and potential influence of other trades.

2. Stack the pallets in a way so that the panels are ventilated.

3. Do not deliver any panels to site which cannot be installed immediately or unloaded into a suitable well protected storage area.

4. Stack the panels' front face or rear surface- rear surface. The panels should not be placed

(3) Handling

(1) Always life panels off each other, never slide them over one another, since scratching may occur.

(2) To carry the panels, stand them on their back edge and lift with two people (one person at each end) protecting the face from scratching or damage.

(4) Schedule of tool and equipment.

All equipment to be tested for safety and all hand tools / electrical equipment's are to be in proper working conditions.

(5) Electricity and Power Supply

Electricity and power supply are needed for cutting Equitone Panel, frame installation and Panel Installation by air rivet gun with compressor.

(6) Scaffolding

Tube and Clip Scaffolding is needed for frame installation and Panel Installation to reduce the risk of damage panel and resist the weight of Panel..

(7) Method of Installation

(a) Installation of Frame

1. Metal supporting Frame can be vertically used whether aluminium, galvanised steel or stainless steel. For vertical joint profile, 100mm x 50 mm (1.4thk) of GI Hollow can be uesd .Minimum width of Vertical Profiles should be greater than 90mm. For Intermediate profiles, 50mm x 50 mm (1.4 thk) 0f GI Hollow can be used. Minimum width of Intermediate Profiles should be greater than 40mm.
2. Angle bracket (50x50 mm, ≥ 3mmthk) is used to fix profile and exciting wall.
3. 20mm gap is needed for air cavity between profile and existing wall.
4. To obtain a stable supporting structure, the angle brackets can alternately be fitted left and right of the support frame profile.
5. Maximum distance between angle : 1.5m.
6. Maximum distance from last bracket to end of profile: 250mm
7. Minimum spacing of profile : **600 mm**
8. Overall distance between panel finishing and existing wall : 8**0~100 mm**
9. Clean the surface of GI frame. Bursh primer on frame surface. Let the primer dry completely. This may taken from 2- 6hours depended on the product used. Apply the topcoat the same way you did the first. Two coats will usually be enough for the majority of projects. Take your time to ensure that there are no inconsistencies in the topcoat —any imperfections may be visible once the paint has dried. Need to prime the surface before painting. Paints that are made for galvanized surfaces will require less prep work and will adhere better than other kinds of paint.
10. Joints between profiles must also coincide with horizontal joints between panels.
11. Panel never fixed to two separate profiles.

(b) Cutting Panel

Require Tools for cutting are as follows.

(1) 4' x 8' Table

(2) Saw Blades

(3) Circular Saw

(4) Suction Clamp

(5) Dust Exhauster

(6) sanding Paper (80) Grit

Equitone Panel must be cut as the following methods.

(1) Depending on the diameter and thickness of blade, set up the speed of blade.

(2) Set the correct speed relative to recommended saw blade size.

(3) Guard Rail can be used to be straight on Panel.

(4) Be care not to move panel. Suction Clamp can be used.

(5) Saw Blades reaches 5mm below panel thickness.

(6) One Panel is cut at one time.

(d) Edge treatment with Sand Paper

(1) Use 80- grit sand paper to reduce possibility of damage and improve panel Edges and after cutting panels to size.

(e) Drilling the hole on Panel.

(1) drill an 11mm rivet hole in Panel. 30mm to 100 mm spacing from Horizontal edge of panel to the centre of hole. 70mm to 100 mm spacing from Vertical edge of panel to the centre of hole.

(2) Drill all holes with recommended Equitone drill bit.

(3) Immediately clean all dust and pencil marks from panel.

(f) Panel Installation (Visible rivet fasteners)

(1) Place the drilled Equitone Panel on profile. Mark and drill the 4.3mmØ hole on profiles.

(2) The Stainless steel rivet is used for Gliding point that resists wind load, and allows total free movement of the panel. It is installed between panel and metal frame by using Air Rivet Gun with compressor. Minimum spacing of each rivet point should be 600mm by horizontally and vertically.

(3)Sleeve is used at least two point on a panel for fixed point that allows vibration and movement of panel and metal frame and prevent panel crack from Movement in profiles.

(4) 2mm thk Foam tape is used on the side of hole on profile when fixing panel to metal support frames. It is closed cell PVC foam tape and comes with self-adhesive strip. It reduces moisture infiltration at vertical joint. It fills space between the panel and frame. Cushion panel against sudden impact. It allows additional flexing movement of the frame and separate panel from metal frame, reducing risk of surface condensation forming on cool mornings.

(5)Starting at the top of the façade, mark bottom edge of the top panel on the profiles and align this position mark across the façade.

(6) Lift and slide next panel into place. Use 5mm spacers of a type not to cause damage when being removed, and to create a consistent vertical joint gap.

(7) **Handing over of cmpleted Equitone Façade Work**

After Frame and Equitone panels are installed and handed over to the Main Contractor, he must take appreciate steps to protect them. Hand over inspection lists are used to handover the Equtione Façade work accordingly with the Main Contractor.

Legend

1 EQUITONE Panel
2 EQUITONE UNI-Rivet
3 Vertical L or T profile
4 Horizontal open joint
5 Vertical open joint
6 T profile
7 L profile
8 11mm pre-drilled rivet hole
9 Expandable foam tape

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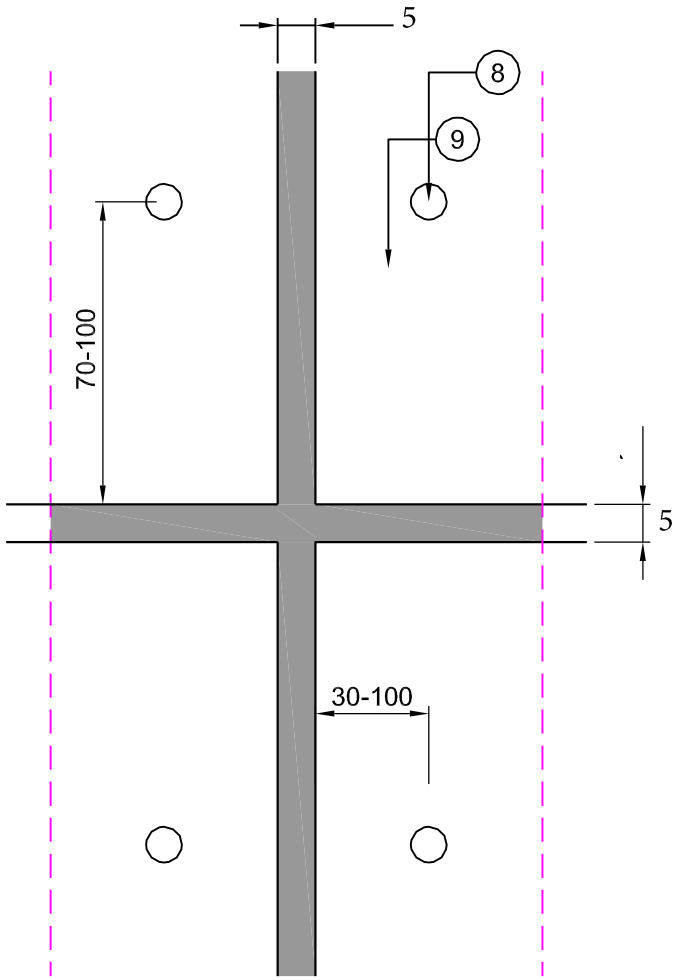
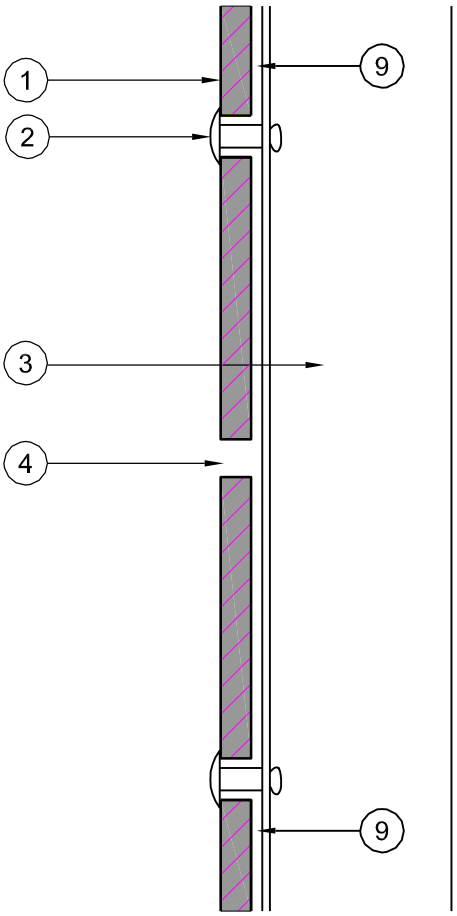
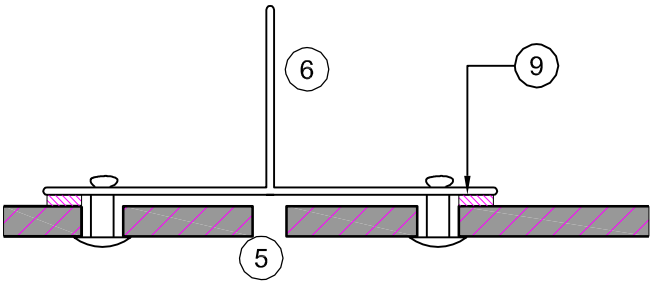
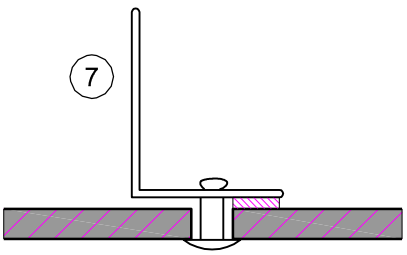








EQUITONE DETAILS	EQUITONE PANEL / METAL SUBFRAME		
DRAWING TITLE	OPEN JOINT DETAIL		
REF	**DATE** 2016_06	**SCALE** 1:2	

EQUITONE
Fibre cement facade materials

EQUITONE
Fibre cement facade materials

METAL SUPPORT FRAME SPECIFICATION FOR VENTILATED RAINSCREEN FAÇADES

This document acts as a general guideline & provides the minimum requirements to comply with our specifications. For project specific structural requirements, all system components & requirements must comply with local building codes & regulations. All structural calculations must be verified & endorsed by the structural engineer.

Recommended materials

- Aluminium: Minimum BS 1474 Grade 6082 T6, 6063 T5 or equivalent
- Galvanised steel: Minimum Sendzimir galvanized steel with galvanized coating of 275 g/m^2, or external grade galvanized steel in accordance to local building regulations.
- Stainless steel: Minimum Grade 304, 316 or equivalent; depending on project requirements

General Specification

Minimum profile thickness	**Aluminium** **Galvanised/** **Stainless steel**	≥ 1.7mm ≥ 1.15mm (≤ 10m high building) ≥ 1.5mm (>10m high building)
Minimum depth of profile		≥ 35mm
Minimum width of intermediate profile		≥ 40mm
Minimum width of joint profile		≥ 90mm
Recommended width of joint profile		≥ 120mm
Maximum allowable deflection		≤ Span/300
Recommended safety factor for calculation		3
Maximum length of profile		3m (Aluminium); 6m (Steel)
Movement joint between adjacent profile		20mm
Maximum unsupported length from last bracket/anchor		250mm

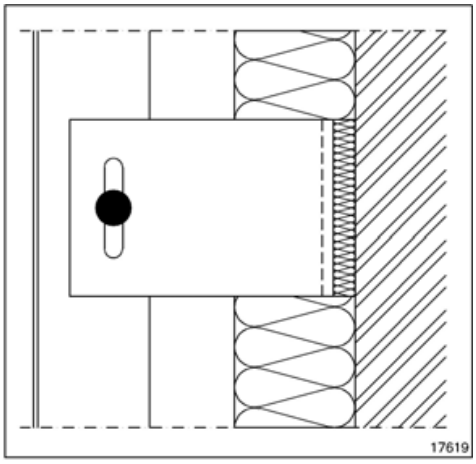
Anchoring

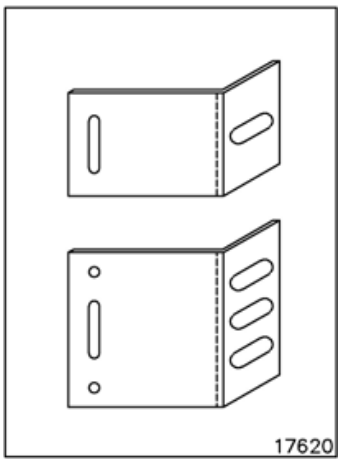
- Minimum pull-out value per fixing point: 3 kN (300 kg)
- The chosen anchor is able to accept the imposed loads.
- Allowance of an adequate safety factor, value of 3 is recommended.
- All anchors to be non-corrosive type, such as stainless steel.

Support frame profiles

Position	Section
Vertical joint profiles	Rectangular or square hollow 
	T-profile 
	Top hat, furring channel or Omega profile 
Intermediate profiles	Rectangular or square hollow 
	L-profile 
	C-profile 
	Top hat, furring channel or Omega profile 
	Z-profile 

Angle brackets

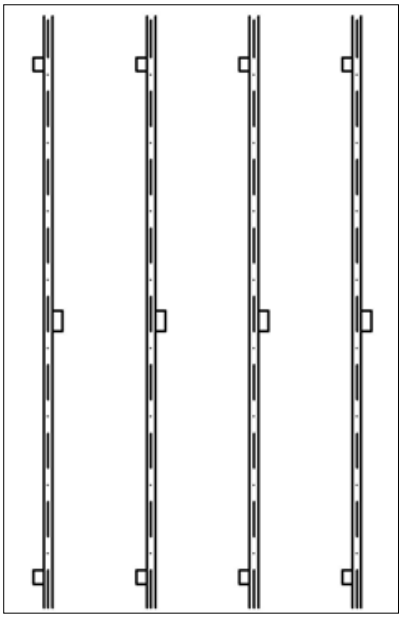




- Thickness: ≥ 3mm
- Length of slot: ≥ 20mm
- Span: ≥ 50mm (depending on cavity width and insulation requirements)
- Material:

Support frame material	Angle bracket material
Aluminium	Aluminium
Galvanised steel Stainless steel	Galvanised steel Stainless steel

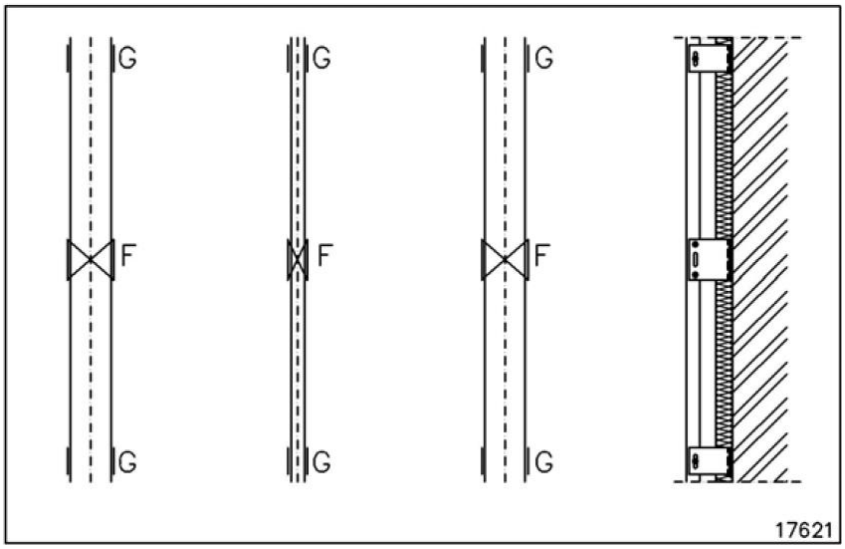
- All aluminium components in direct contact with cement surfaces such as concrete walls; must be coated or isolated with protective pads.
- Each section of vertical support frame must be supported by a minimum of 3 angle brackets.
- To obtain a stable supporting structure, the angle brackets can alternately be fitted left and right of the support frame profile.



- Maximum distance between brackets: 1.5m
- Maximum distance from last bracket to end of profile: 250mm

Fixed & gliding points

In view of the thermal coefficient of expansion of metal support frames, the metal support frames must be fixed in such a way that free movement is possible. The system for fixing the supporting brackets to the profile must accommodate the expansion of the metal support frame. This is achieved by fixing the sections with one fixed fastening point (F: fixed point) and at other places free fastening points (G: Gliding point).



F: Fixed points

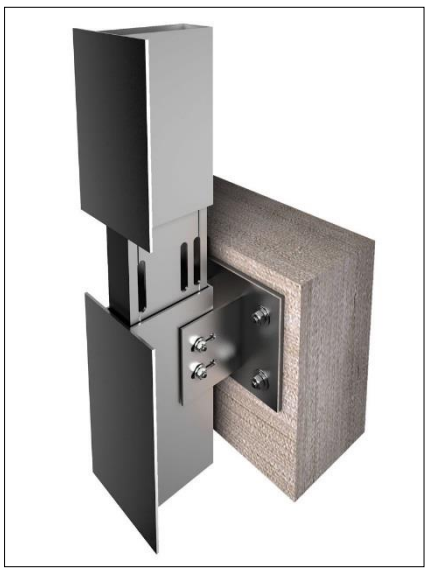
G: Gliding points

Note:

- The recommended position for the fixed points is at the middle of the profile; so that the thermal movement of the profile is restricted to half at both directions instead of full thermal movement in one direction.
- Never install panels over profiles with fixed points positioned at different levels.

Floor-to-floor systems

When considering a Floor-to-Floor system please note that heavy gauge brackets and profiles are needed. This must be designed by the design engineer or the façade consultant.



For further information, please consult with EQUITONE Asia Pacific Technical Department.

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