

The Future of Facade Fixing Technology



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smartfix® Fixing System




The smartfix® fixing system has been developed to introduce a more efficient way of creating a facade free of exposed fixings and sealants, acknowledging the importance of architectural and aesthetic demands.

With an emphasis on flexibility, a wide range of smartfix® aluminum extrusions have been developed to provide the designer with a number of fixing options for both internal and external applications.



The John Curtin School of Medical Research
Architect: Lyons Architects



smartfix® Advantages

Bastow Institute of Educational Leadership - Melbourne
Architect: Maddison Architects

Association of Walls and Ceiling Industries (AWCI)
National Award for Best Façade 2012 Australia & New Zealand

- Concealed fixed facade system for internal and external applications.
- The smartfix® system has been specifically designed and engineered to suit Australian conditions.
- Suitable for commercial and residential applications.
- Cosmetically and structurally the smartfix® system has set the benchmark for facade design.
- Design flexibility is provided by the many different jointing and corner profiles.
- smartfix® profiles available in unlimited finishes. Included are Powdercoat finishes, Anodised finishes, Mill and Metallic finishes.
- Heavy silicones and double sided tapes are a thing of the past with the use of the new smartfix® fixing technology.
- The smartfix® range of pre-finished panels provides great versatility, all encompassed by the superior fixing system of smartfix®.
- Wide range of external and internal pre-finished panels available. Award winning Aluminium composite panel and timber veneer panels. Acoustic panels also available.
- Pre-finished panels help eliminate the hazards of on-site painting
 - Dust.
 - Inclement weather (lost time).
 - Cost of scaffold.
 - Contamination of nearby sensitive surfaces.
 - In factory painting allows maximum control of all variables to ensure optimum long-term performance.
 - Easy to clean in the course of cyclic maintenance.
- The well designed smartfix® Boot Seal Gasket assists with acoustic performance as well as providing a water tight seal.
- The smartfix® fixing system is sold as a complete system with each nominated panel.



- Extensive warranties provided for the complete system with recommended panels.
- smartfix® is fully patent protected. smartfix® can only be used on panels which have been fully tested encompassing the smartfix® system.
- Recommended contractors & installers reside in each state of Australia.
- All contractors undergo inhouse training prior to the installation of the smartfix® system. This protects the quality of the finished product.
- smartfix® can assist with design solutions and provide samples for both architects and clients.
- The smartfix® Facade system has been tested and far exceeds Australian Standards requirements.
- Undoubtedly the smartfix® system adds exceptional value to the building.
- The team at smartfix® Industries provide on-site backup and free technical advise.
- In the context of outstanding performances, smartfix® have been awarded an honourable mention for successful detail solutions by an international jury in Essen Germany. This goes hand in glove with the privilege of carrying the "honourable mention 2008" quality seal which stands for outstanding design and belonging to the best in the industry.



reddot design award
honourable mention 2008

smartfix® Colour Options

Unlimited choice of colours in Anodised or Powder Coating



Hume City Council
Architect: Lyons Architects

Anodising

Smartfix® is supplied in Natural Anodised as standard.

Anodising is an electro-chemical process used to create a protective film. A wide range of colours and shades can be obtained on the surface of aluminium profiles through the process of electrocolouring. The coating grows from the base aluminium metal by this electro-chemical process. The coating is integral to the metal and can not peel or flake. The structure of the coating is made up of many small hexagonal pores, which are filled with a “seal” that hydrolyses these pores to fill them with inert aluminium oxide. The anodised profile has excellent weatherability and is abrasion resistant. Anodising gives aluminium a deeper, richer metallic appearance.

Powder Coating

There are unlimited colours available to provide a wide leeway for the designers. It has stable properties and strong coating film adhesion. It cannot easily peel off. It is acid, salt and slurry corrosion resistant and has outstanding durability and weatherability. The powder coating film is not volatile or oxidised in the air. It is environmentally friendly and causes no pollution.

Untreated Profiles (Mill Finish)

Aluminium profiles without surface treatment. Extrusions of various industrial and architectural aluminium profiles are available



Extrusion Grade: Aluminium 6063 T6 (Temper 6) Standard
Standard Finish: Natural Anodised



Cairns Botanic Garden Visitor Centre
Architect: Charles Wright Architects

Sustainability

Recycling

The aluminium economy is a circular economy. For most aluminium products, the metal is not actually consumed during the product's lifetime, but simply used with the potential to be used again through recycling. Aluminium can be recycled again and again without any loss of its inherent properties, since its atomic structure is not altered during melting. Therefore, the life cycle of an aluminium product is not the traditional "cradle-to-grave" sequence, but rather a renewable "cradle-to-cradle".

Energy Saving

The high value of aluminium scrap is a key incentive and major economic impetus for recycling, independent of any legislative or political initiatives to encourage recycling. Aluminium scrap has considerable market value because most of the energy required for the production of primary aluminium is embodied in the metal itself and, consequently, in the scrap. Therefore, the energy needed to melt aluminium scrap is only a fraction of that required for primary aluminium production. Recycling of aluminium products needs only 5% of the energy needed for primary aluminium production.

Greenhouse Gas Reduction

In addition, recycling of aluminium products only emits 5% of the greenhouse gas emitted in primary aluminium production. Recycling of scrap from used products ("old scrap") saved over 70 million tonnes of greenhouse gas emissions worldwide in 2005. Since its inception, the recycling of old scrap has already avoided over one billion metric tonnes of CO₂ emissions.

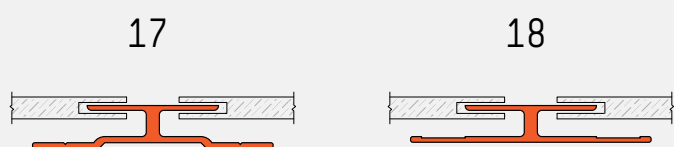
smartfix® Aluminium Fixing Profiles

Standard smartfix® Profiles



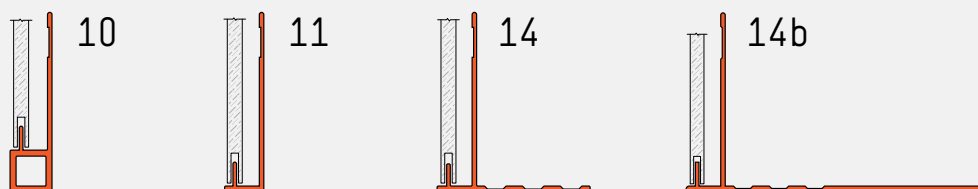
Joiner Extrusions

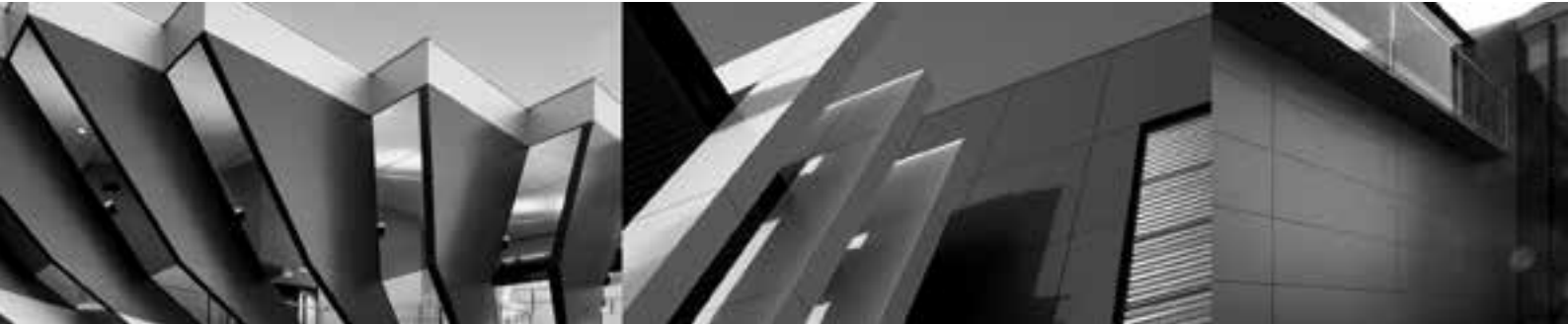
Horizontal and Vertical (See Joining Options)



Starter, Abutment & Window Extrusions

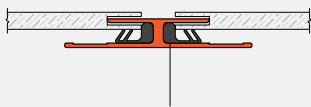
(See Capping & Abutment Details)





Waterproof Gaskets

Primary Gasket



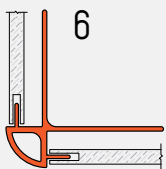
EPDM Boot Seal Gasket



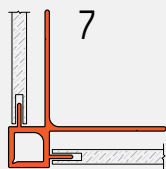
EPDM Boot Seal Gasket No. 1

Corner Extrusions

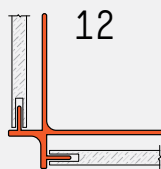
Internal & External (See Corner Alternatives)



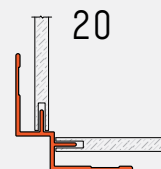
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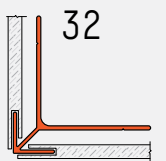
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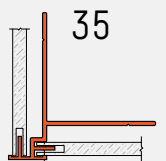
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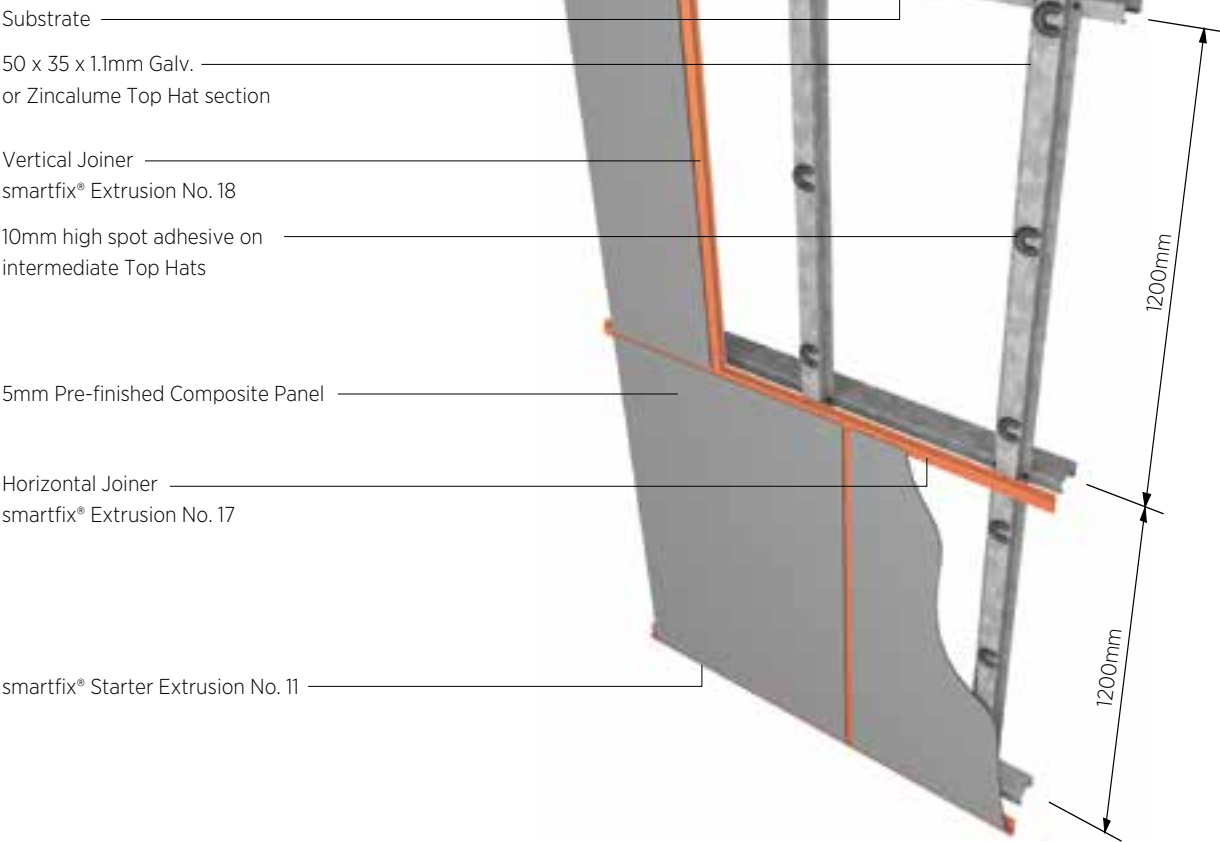
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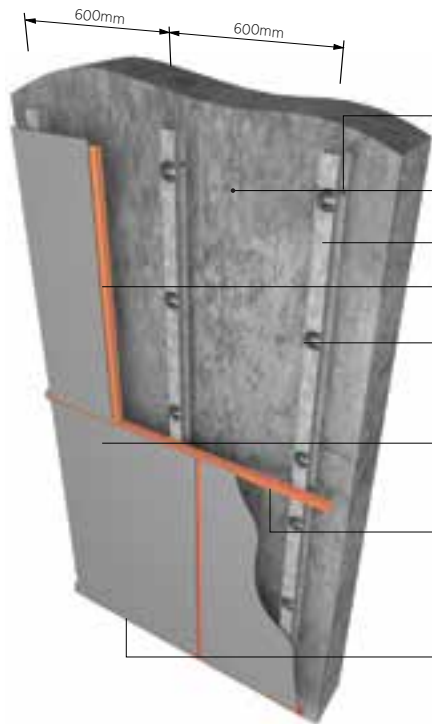
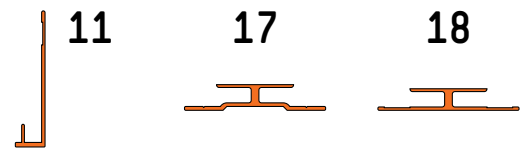
35

Substrate Details

STEEL FRAME SUBSTRATE



See it online and download details
www.smartfix.com.au/substrate



PRECAST WALL SUBSTRATE

8mm Mungo plugs type 17 x 50mm

Precast Substrate

50 x 35 x 1.1mm Galv. or Zinalume Top Hat section

Vertical Joiner smartfix® Extrusion No. 18

10mm high spot adhesive on intermediate Top Hats (refer Design Wind Load Table).

5mm Pre-finished Composite Panel

Horizontal Joiner smartfix® Extrusion No. 17

smartfix® Starter Extrusion No. 11

RE-CLAD SUBSTRATE

Substructure to existing facade

12 x 14 x 30mm Hex Head Screw class 3

Existing Facade Substrate

50 x 35 x 1.1mm Zinalume Top Hat section

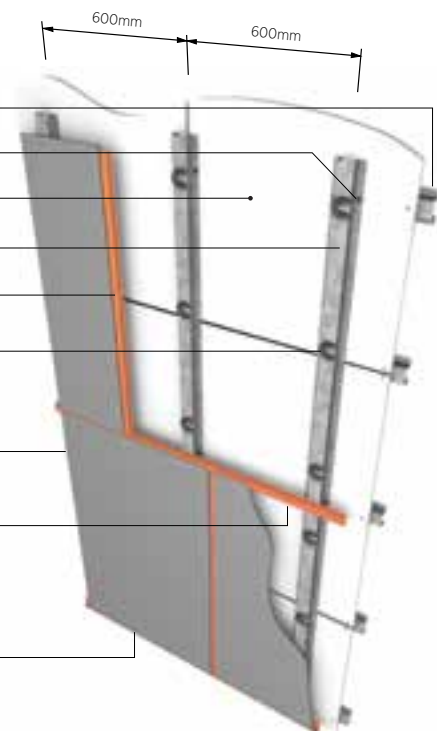
Vertical Joiner smartfix® Extrusion No. 18

10mm high spot adhesive on intermediate Top Hats

5mm Pre-finished Composite Panel

Horizontal Joiner smartfix® Extrusion No. 17

smartfix® Starter Extrusion No. 11



Horizontal & Vertical Panel Layout

Substrate Details



Pfizer Pharmaceutical
Architect: Project Control Group



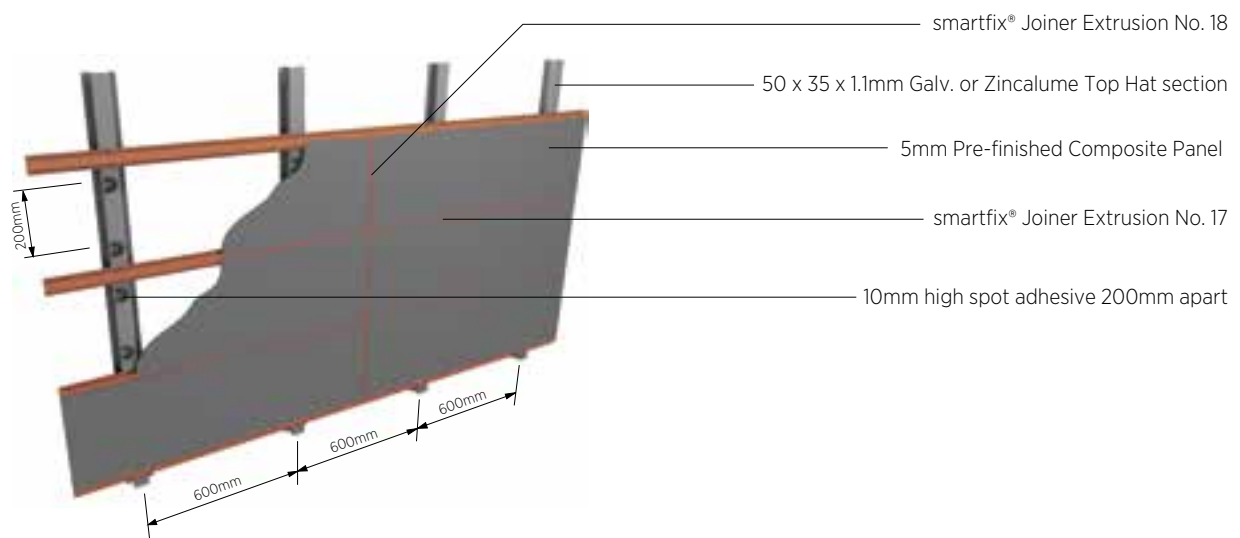
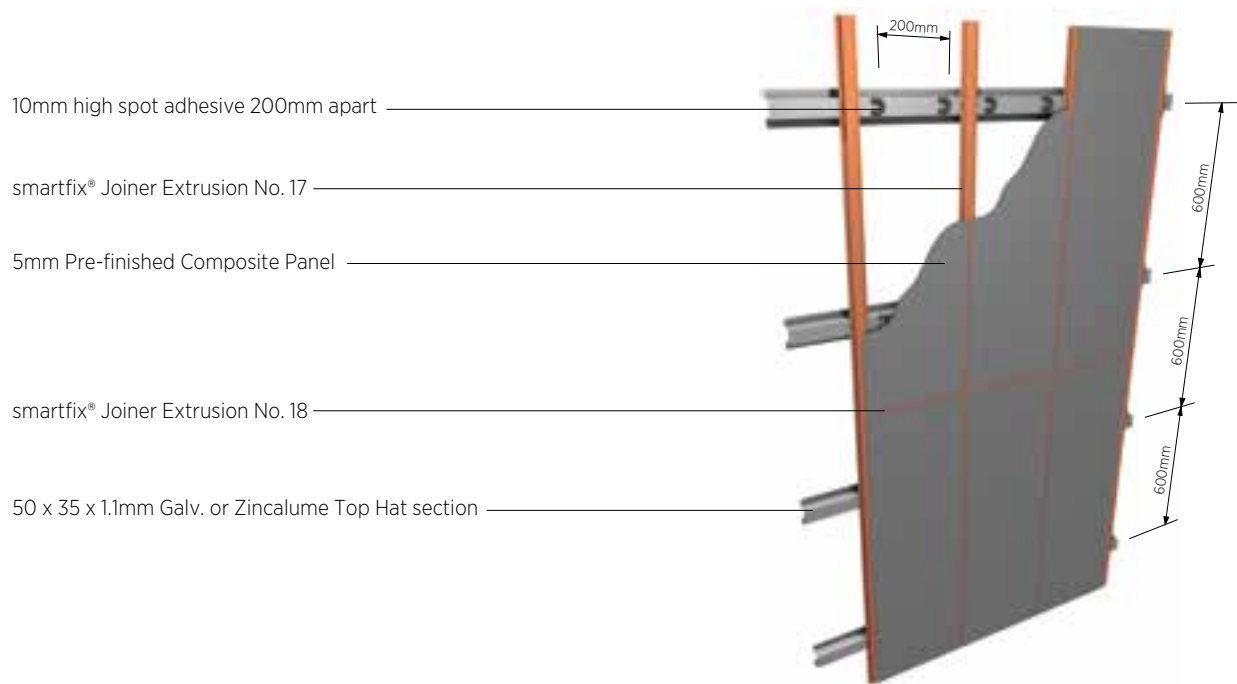
See it online and download details
www.smartfix.com.au/horizontal-vertical

17

18



As illustrated, smartfix® Extrusions 17 & 18 can be used in both vertical and horizontal facade systems.



Jointing Options

smartfix® Extrusion No. 17 and 18 Horizontal and Vertical Joiners



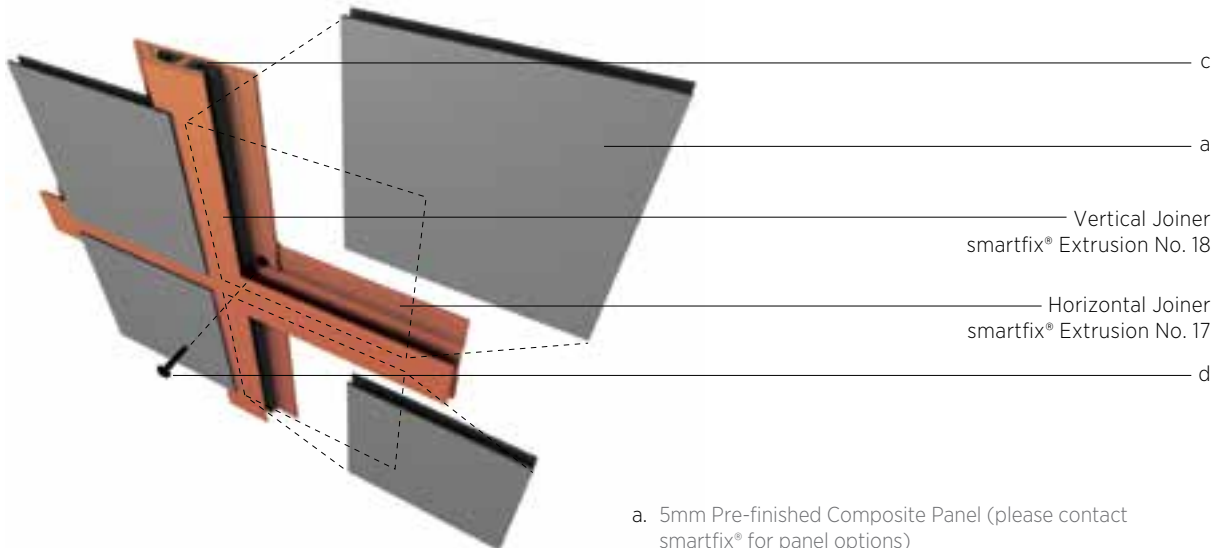
Fairfax Building, Sydney
Architect: Mirvac



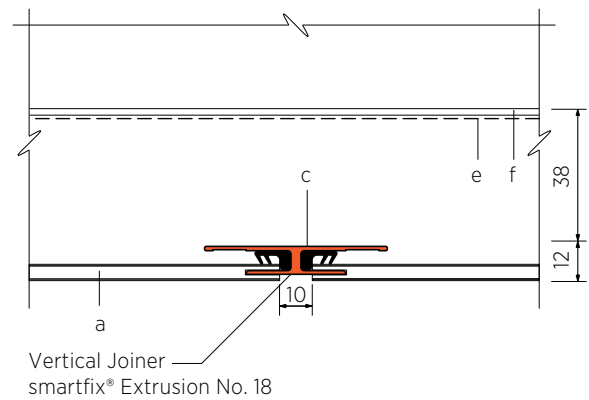
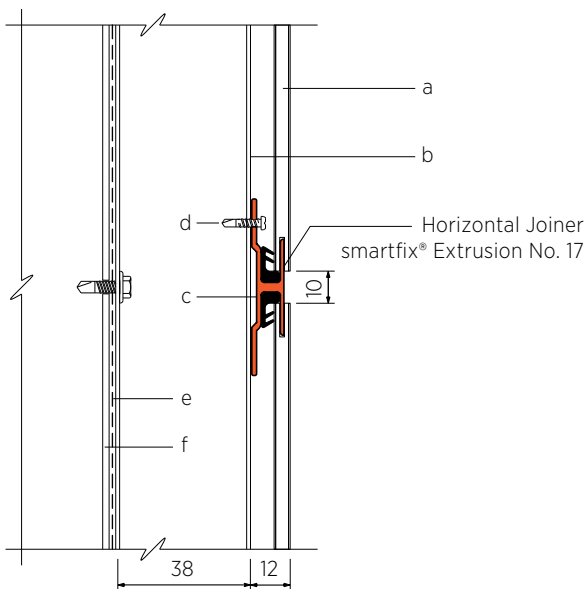
See it online and download details
www.smartfix.com.au/jointing

17

18



- a. 5mm Pre-finished Composite Panel (please contact smartfix® for panel options)
- b. 50x35x1.1mm top hat section or structure as required
- c. EPDM gasket or appropriate sealant for concealed weather seal
- d. Wafer head tek screws
- e. Vapour barrier between top hat and support structure
- f. Main support structure



Joint alternative Details

Joining Alternatives Using smartfix® Joiner Extrusions No. 27 & 39



GCUH Mental Health Building
Architect: Hassell Architects

27

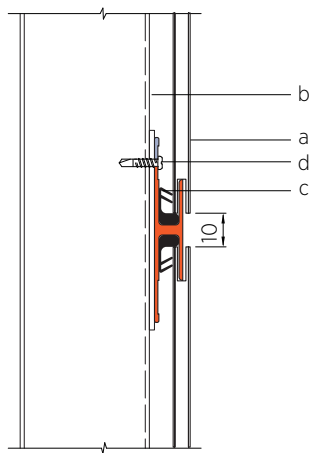


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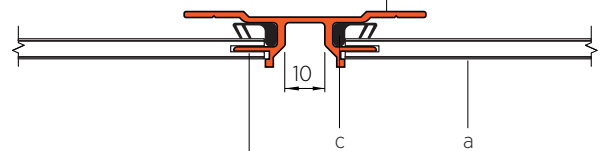
Note: smartfix® Joiner extrusions No. 27 & 39 can be used in horizontal or vertical orientations. Vertical orientation shown here

smartfix® Joiner Extrusion No. 18

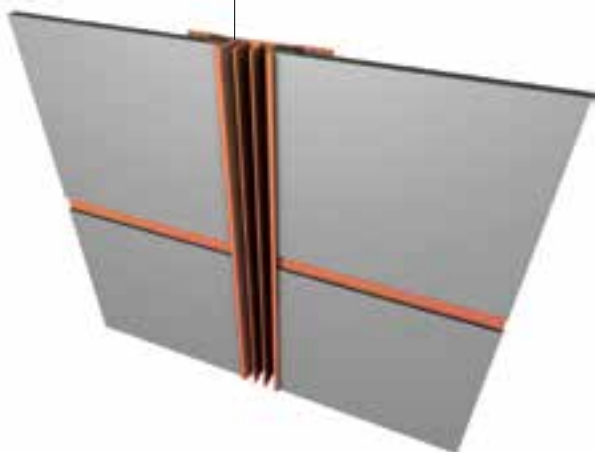
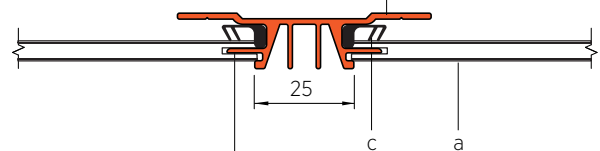


- a. 5mm Pre-finished Composite Panel (please contact smartfix® for panel options)
- b. 50x35x1.1mm top hat section or structure as required
- c. EPDM gasket or appropriate sealant for concealed weather seal
- d. Wafer head tek screws

smartfix® Joiner Extrusion No. 27



smartfix® Joiner Extrusion No. 39



Starter & Abutment Details

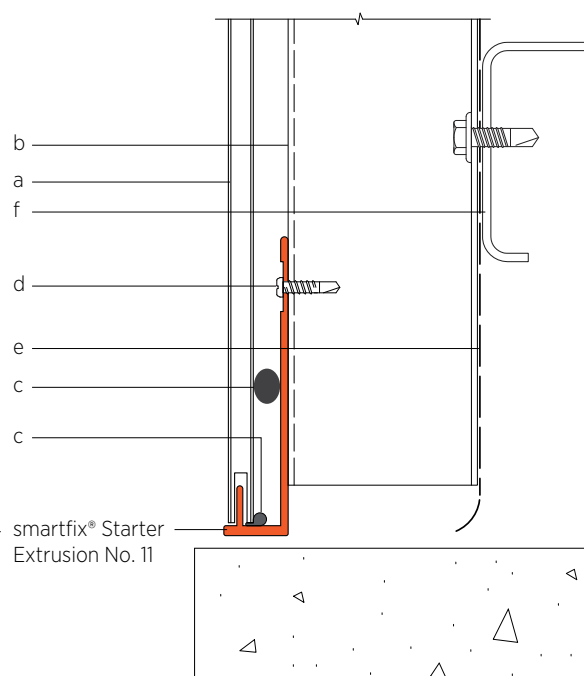
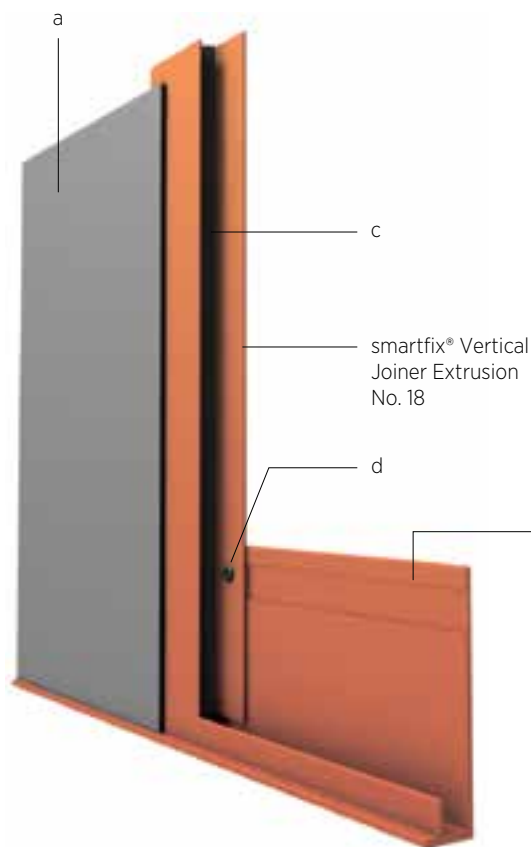
Typical Starter & Abutment Details Using smartfix® Starter Extrusion No. 11



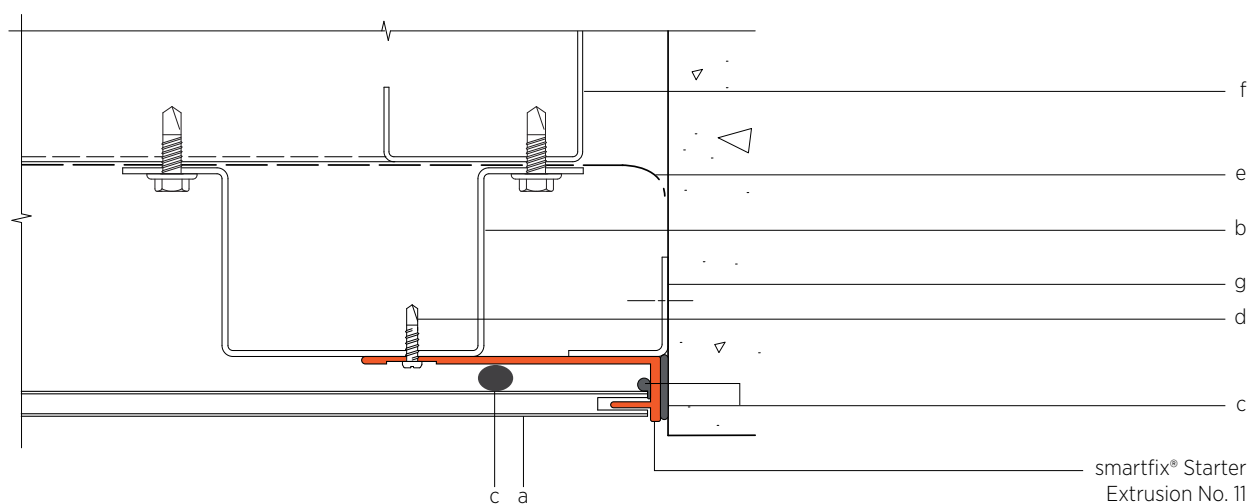
Cairns Botanic Garden Visitor Centre
Architect: Charles Wright Architects



See it online and download details
www.smartfix.com.au/starter-abutment



- a. 5mm Pre-finished Composite Panel (please contact smartfix® for panel options)
- b. 50x35x1.1mm top hat section or structure as required
- c. EPDM gasket or appropriate sealant for concealed weather seal
- d. Wafer head tek screws
- e. Vapour barrier between top hat and support structure
- f. Main support structure
- g. Support Angle

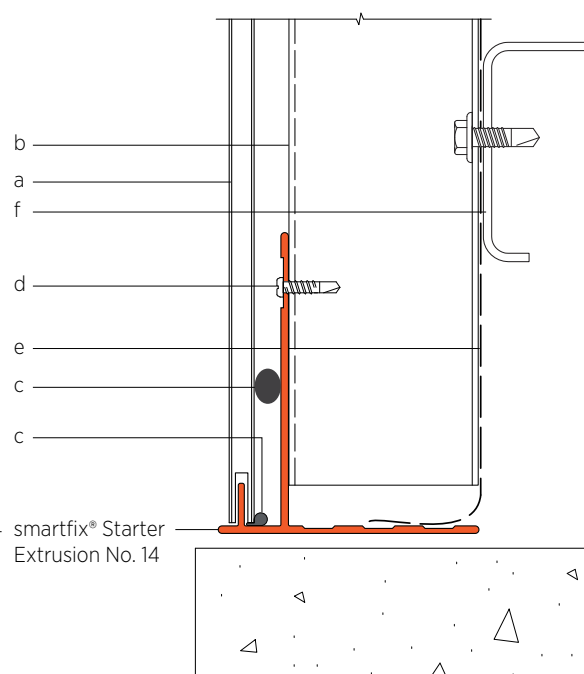
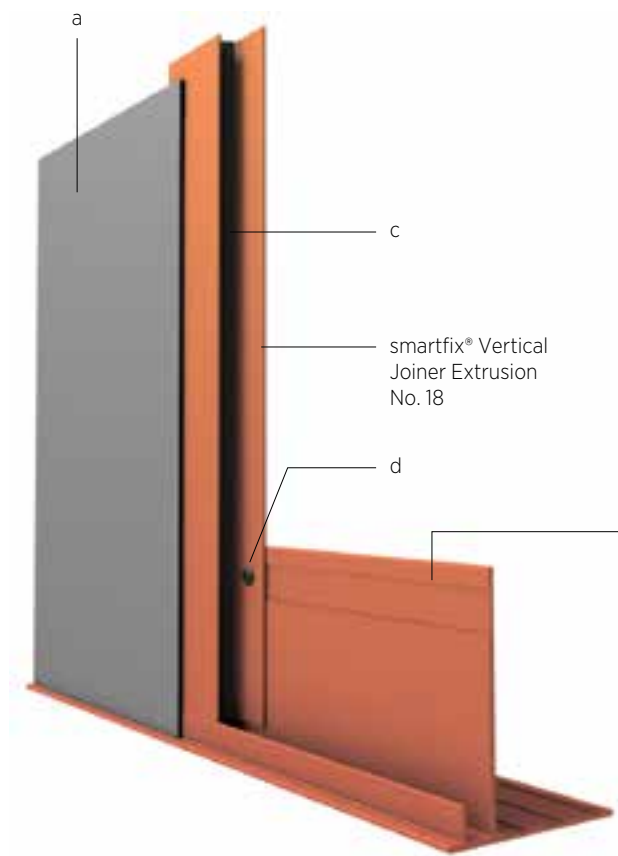


Starter & Abutment Details

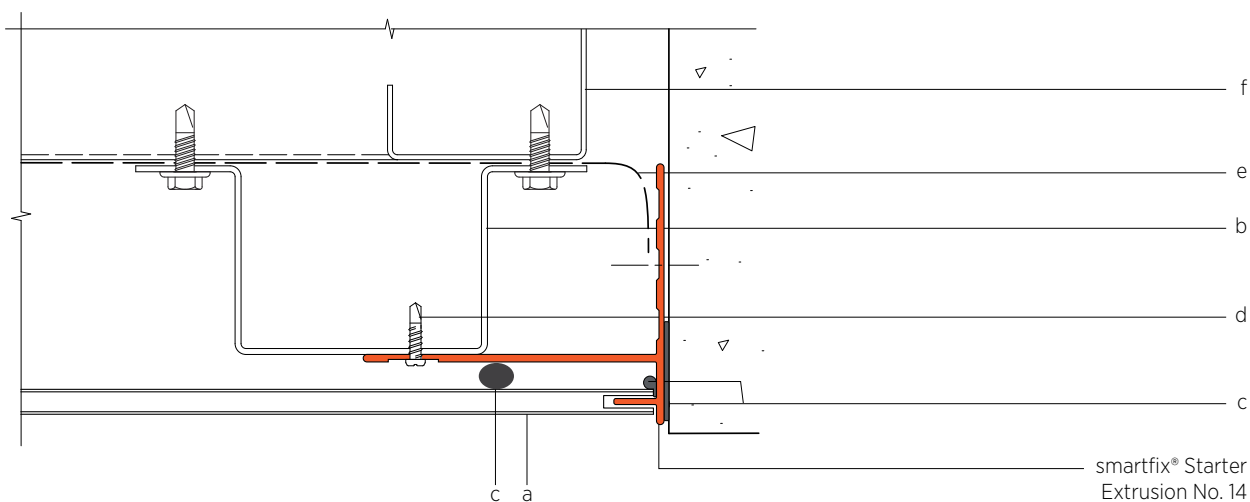
Typical Starter & Abutment Details Using smartfix® Starter Extrusion No. 14



JCU Educational Facility
Architect: Wilson Architects



- a. 5mm Pre-finished Nu-core® Geo-composite Panel
- b. 50x35x1.1mm top hat section or structure as required
- c. EPDM gasket or appropriate sealant for concealed weather seal
- d. Wafer head tek screws
- e. Vapour barrier between top hat and support structure
- f. Main support structure



External Corner Details

smartfix® Extrusion No. 12 External Corner Detail

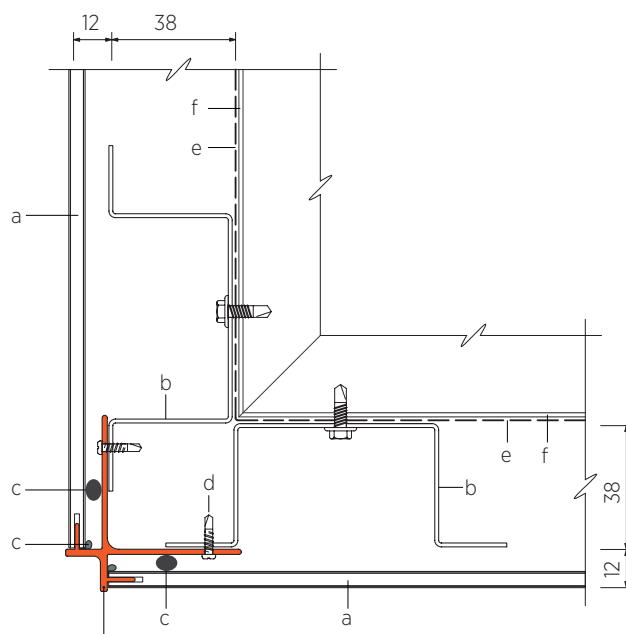


The John Curtin School of Medical Research
Architect: Lyons Architects



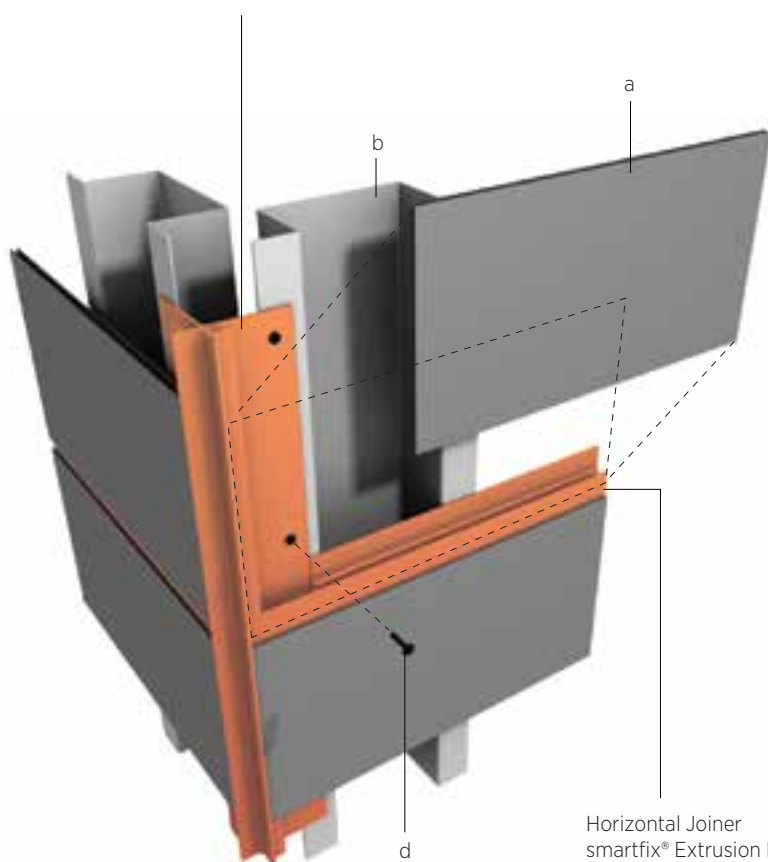
See it online and download details
www.smartfix.com.au/external-corner

- a. 5mm Pre-finished Composite Panel (please contact smartfix® for panel options)
- b. 50x35x1.1mm top hat section or structure as required
- c. EPDM gasket or appropriate sealant for concealed weather seal
- d. Wafer head tek screws
- e. Vapour barrier between top hat and support structure
- f. Main support structure



Negative Corner
smartfix® Extrusion No. 12

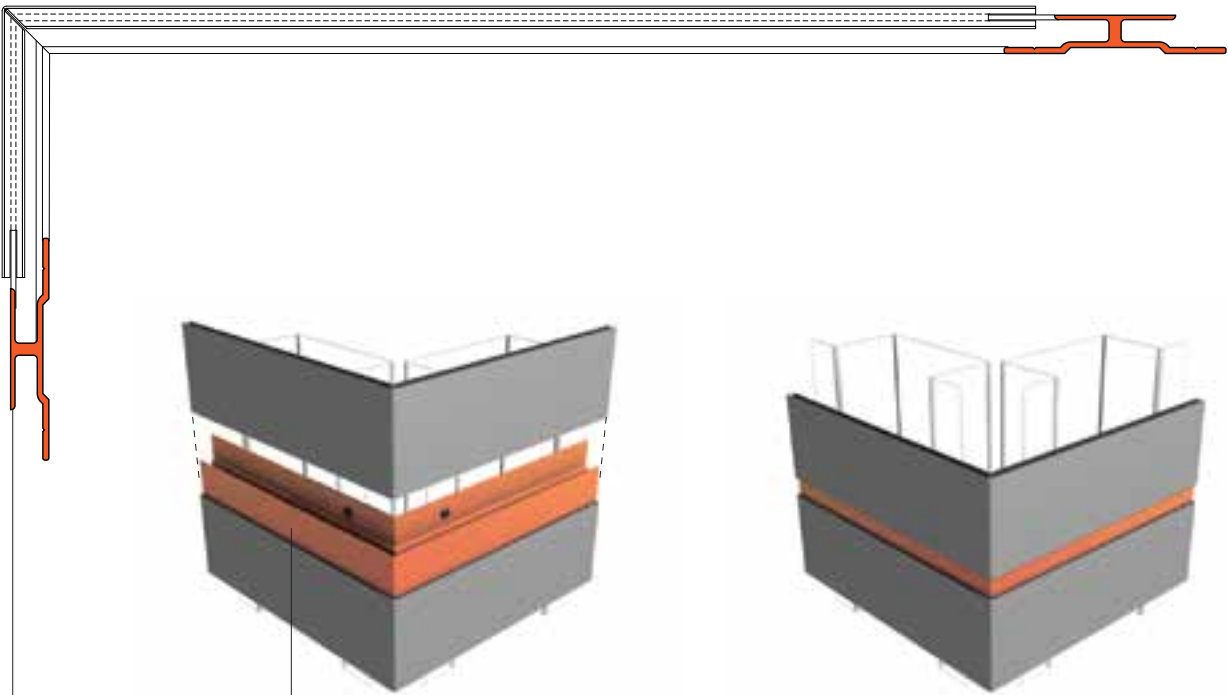
smartfix® External Corner
Extrusion No. 12



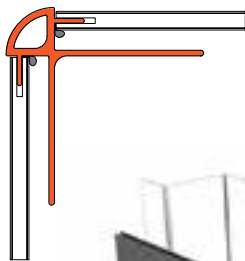
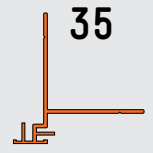
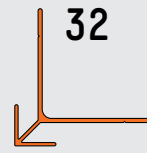
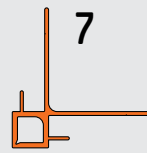
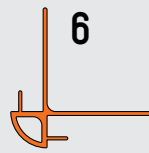
Horizontal Joiner
smartfix® Extrusion No. 17

External Corner Alternatives

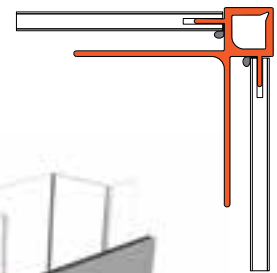
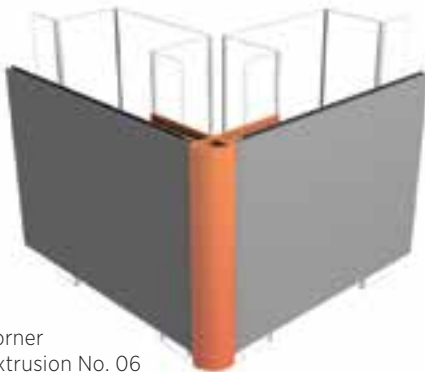
Folded panels for external corners



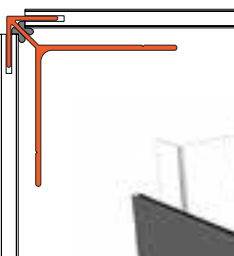
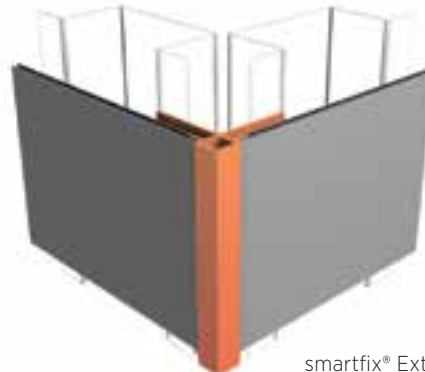
Mitered Horizontal joiner
smartfix® Extrusion No. 17



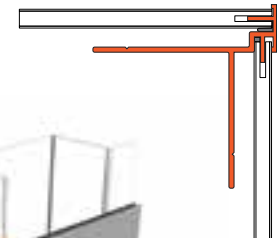
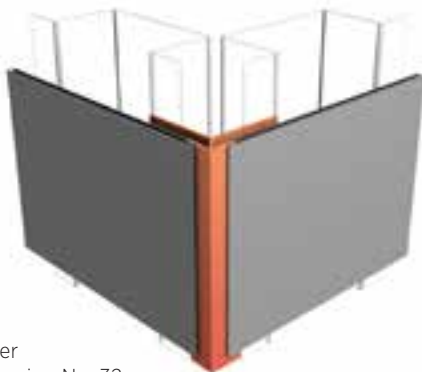
Rounded corner
smartfix® Extrusion No. 06



Box corner
smartfix® Extrusion No. 07



Barrbed corner
smartfix® Extrusion No. 32



Staggered corner
smartfix® Extrusion No. 35



Internal Corner Details

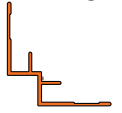
smartfix® Extrusions No. 20 Internal Corner Details



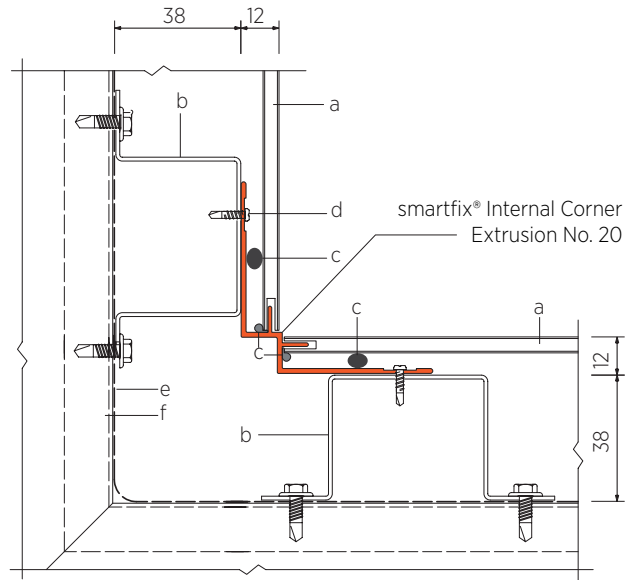
Centra Plaza, Canberra
Architect: Bligh Voller Nield



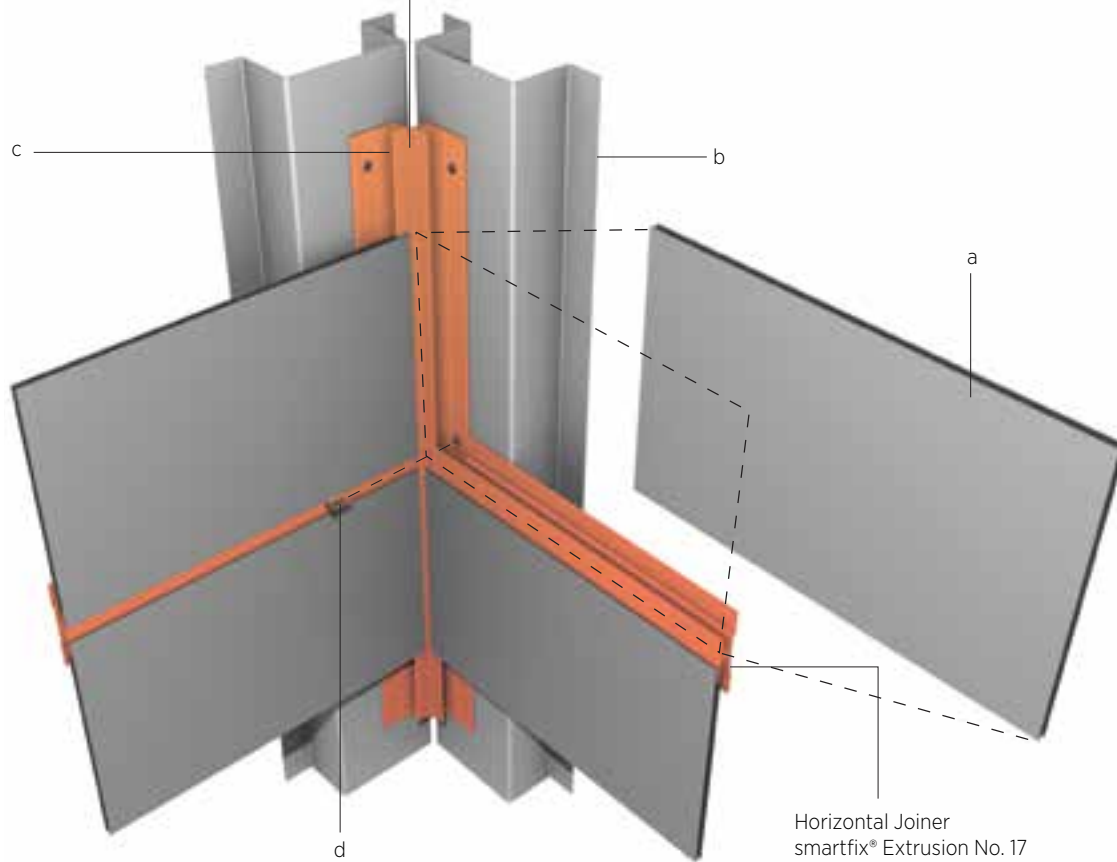
See it online and download details
www.smartfix.com.au/internal-corner



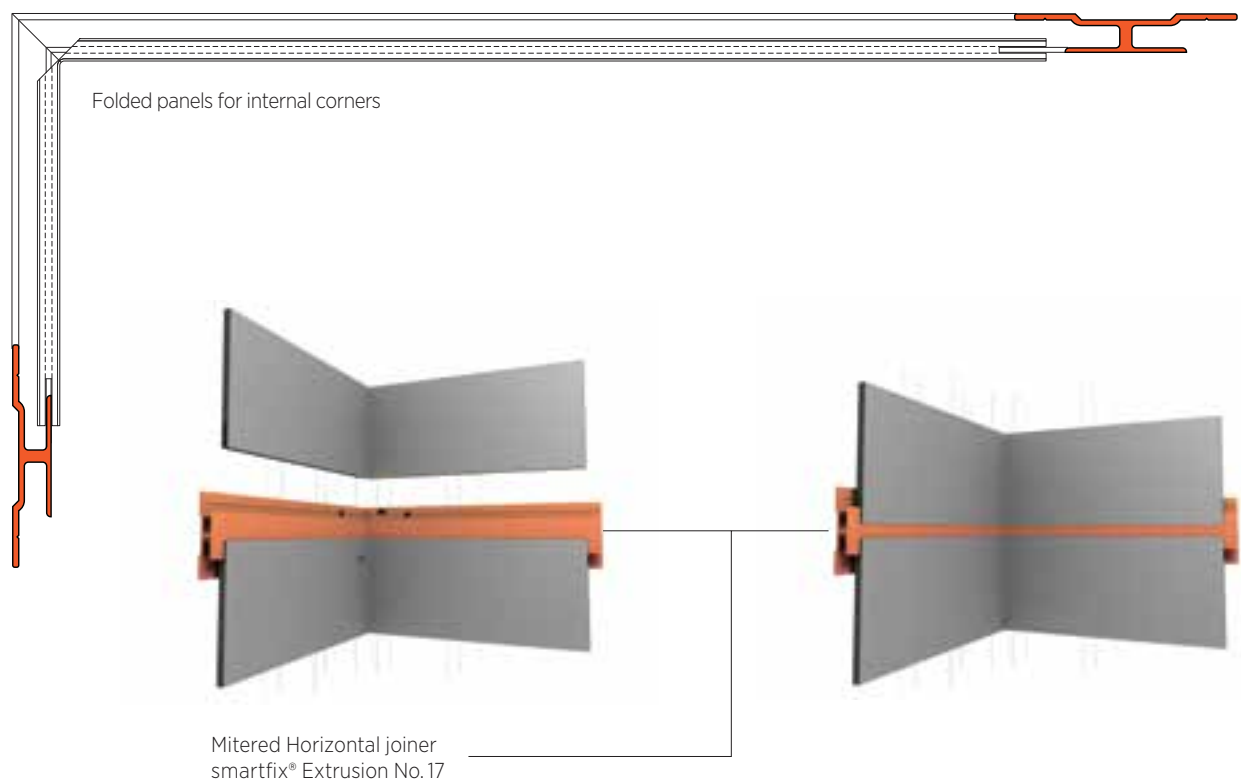
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- b. 50x35x1.1mm top hat section or structure as required
- c. EPDM gasket or appropriate sealant for concealed weather seal
- d. Wafer head tek screws
- e. Vapour barrier between top hat and support structure
- f. Main support structure

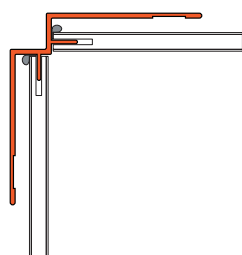
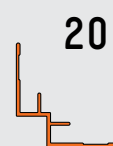


smartfix® Internal Corner
Extrusion No. 20

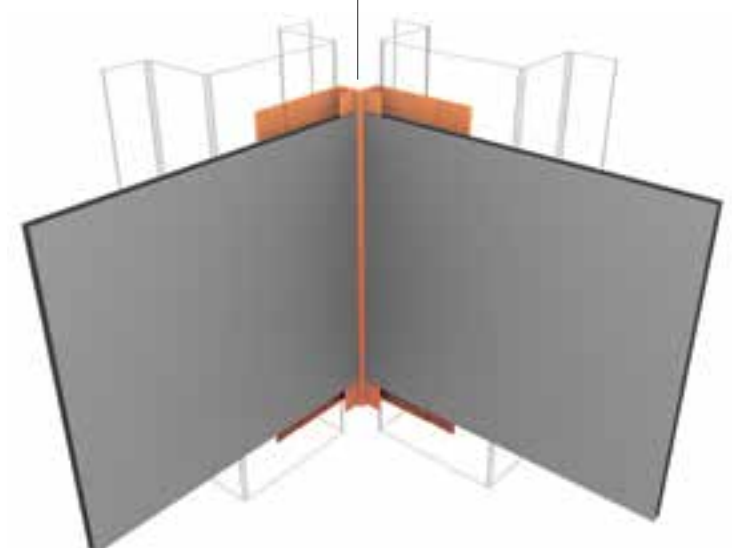


Internal Corner Alternatives





Internal corner
smartfix® Extrusion No. 20



Soffit Details

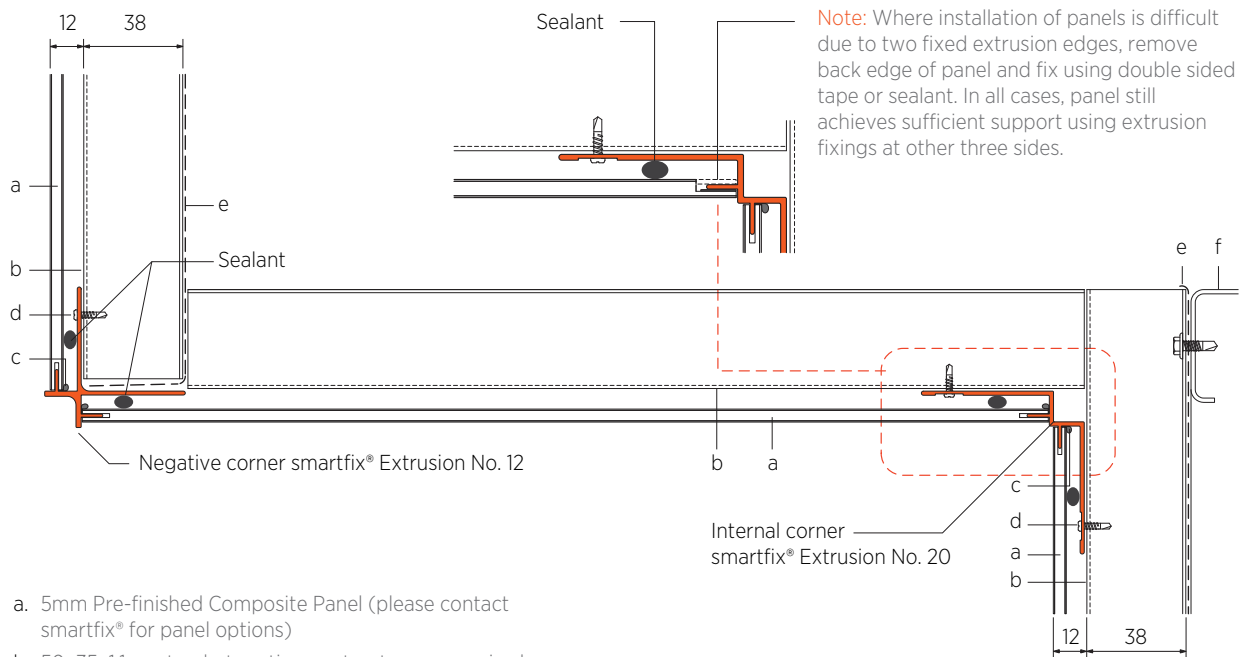
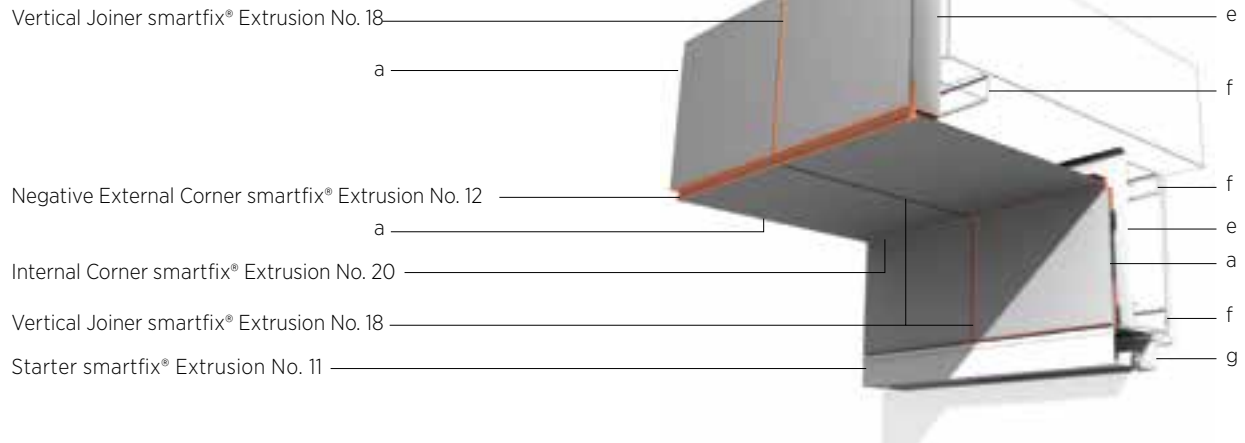
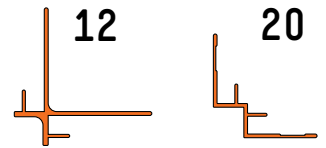
smartfix® Extrusion No. 12 & No. 20 Soffit Detail



Smartfix Head Office
Architect: Turco Hunter



See it online and download details
www.smartfix.com.au/soffit



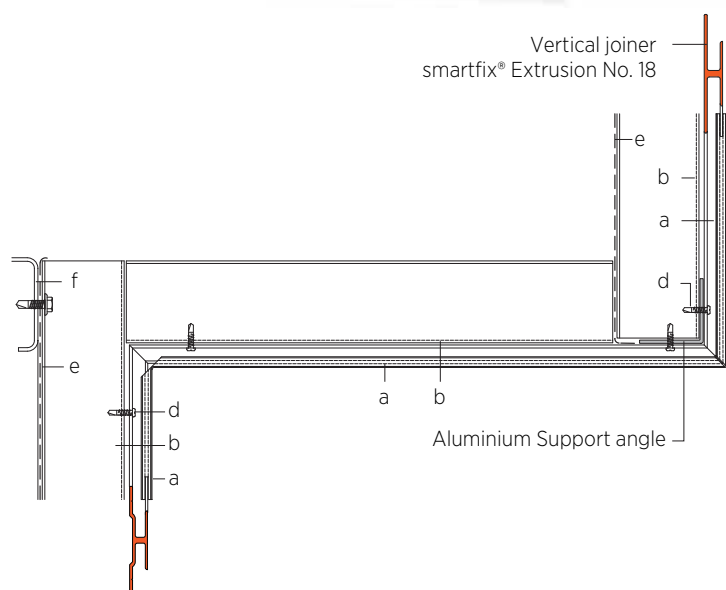
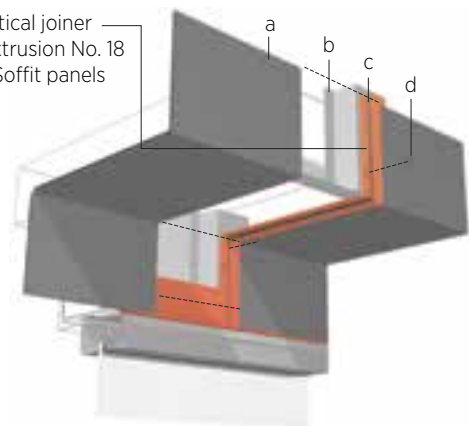
- a. 5mm Pre-finished Composite Panel (please contact smartfix® for panel options)
- b. 50x35x1.1mm top hat section or structure as required
- c. EPDM gasket or appropriate sealant for concealed weather seal
- d. Wafer head tek screws
- e. Vapour barrier between top hat and support structure
- f. Main support structure
- g. Glazing frame. Refer to Window Details for further details

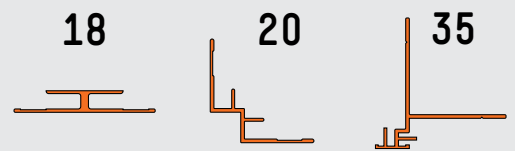
Alternative Soffit Details

Folded Soffit panels fixed using smartfix® Extrusions No. 18

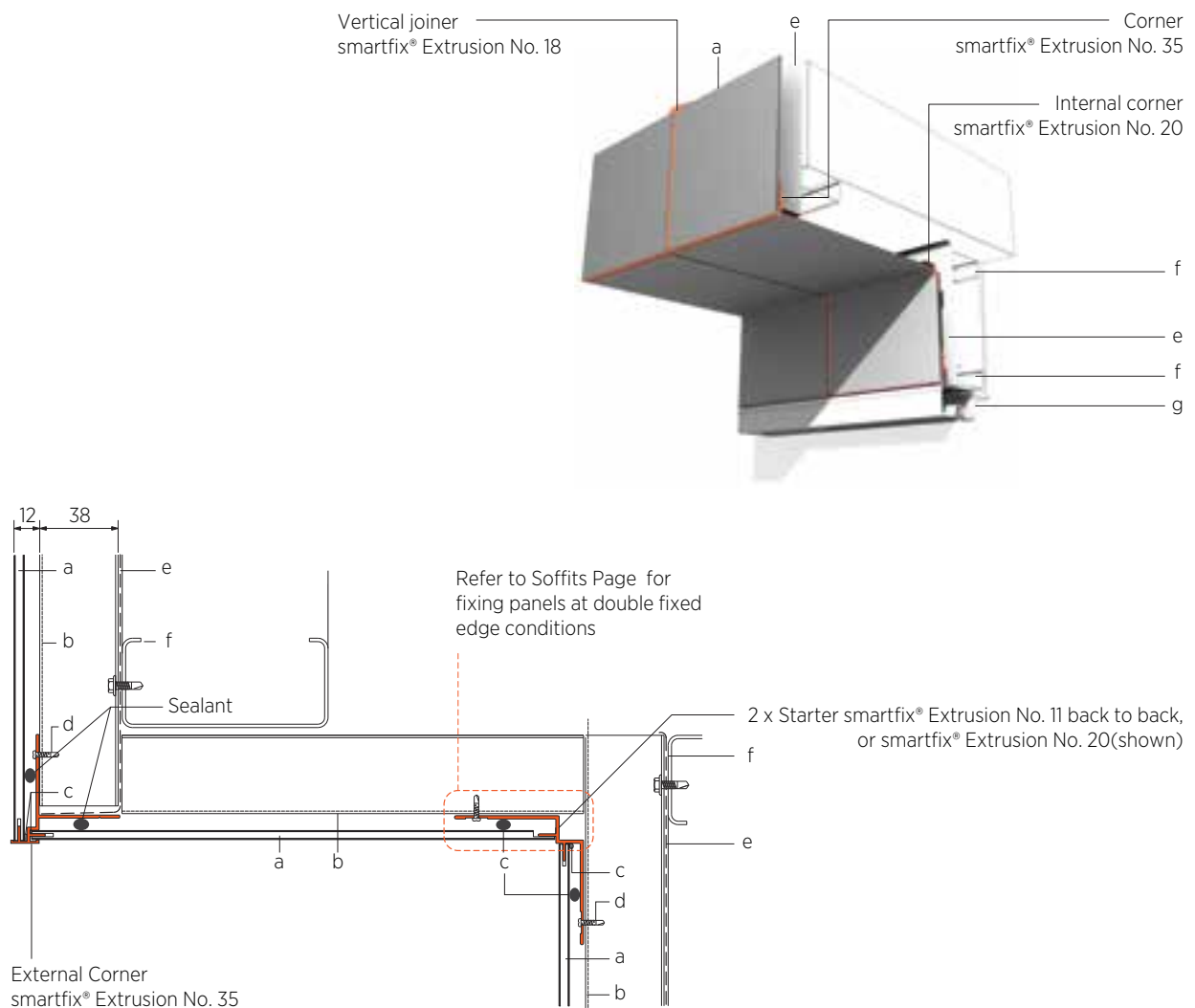
- a. 5mm Pre-finished Composite Panel (please contact smartfix® for panel options)
- b. 50x35x1.1mm top hat section or structure as required
- c. EPDM gasket or appropriate sealant for concealed weather seal
- d. Wafer head tek screws
- e. Vapour barrier between top hat and support structure
- f. Main support structure
- g. Glazing frame. Refer to Window Details for further details

Mitered Vertical joiner
smartfix® Extrusion No. 18
to support Soffit panels



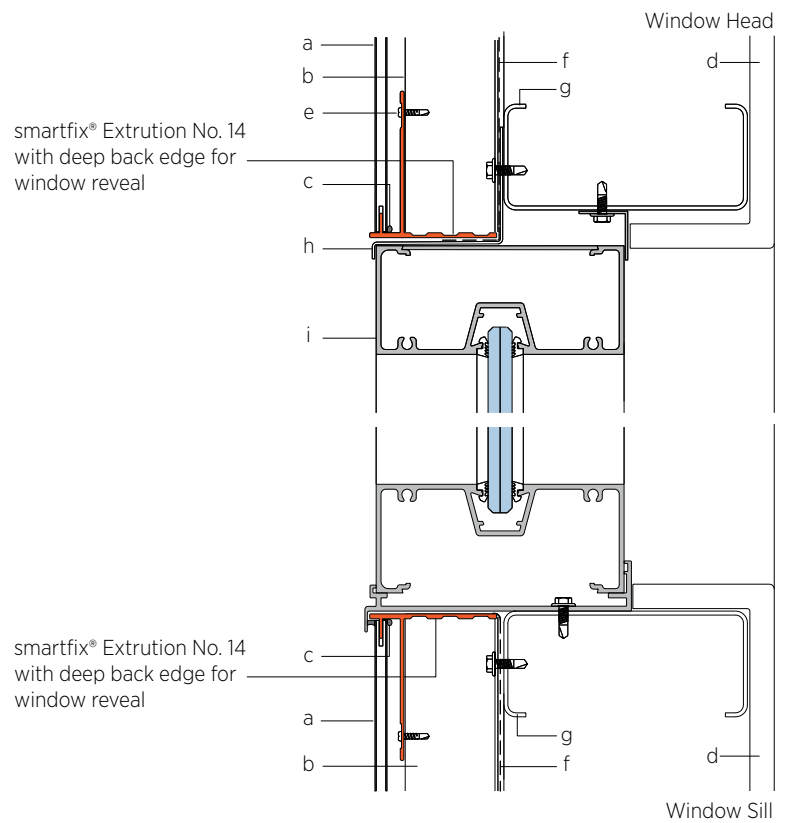


Soffit panels fixed using a combination of smartfix® Extrusions No. 20 & 35



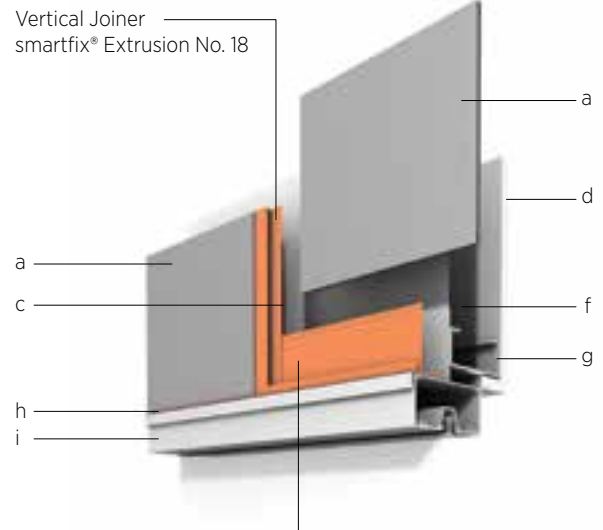
Window Frame Details

Window head and sill detail using smartfix® Extrusion No.14

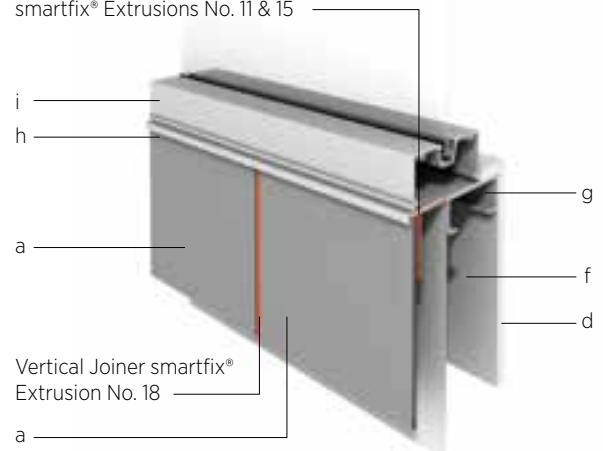


See it online and download details
www.smartfix.com.au/window

- a. 5mm Pre-finished Composite Panel (please contact smartfix® for panel options)
- b. 50x35x1.1mm top hat section or structure as required
- c. EPDM gasket or appropriate sealant for concealed weather seal
- d. Internal lining
- e. Wafer head tek screws
- f. Vapour barrier between top hat and support structure
- g. Main support structure
- h. Vapour barrier flashing
- i. Glazing head & sill frame fixed using smartfix® Extrusion No. 14

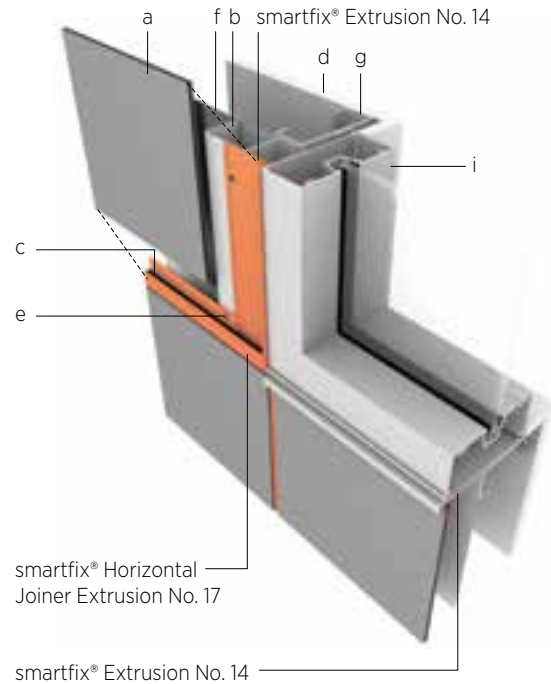
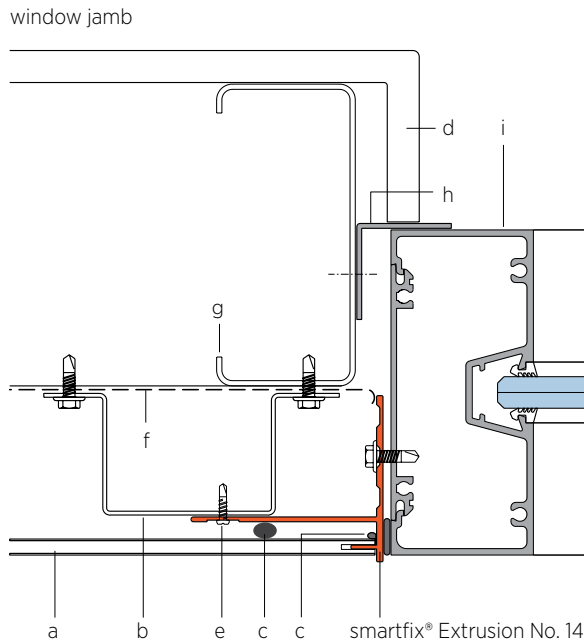
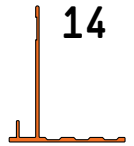


smartfix® Starter Extrusion No. 14
can be substituted with
smartfix® Extrusions No. 11 & 15



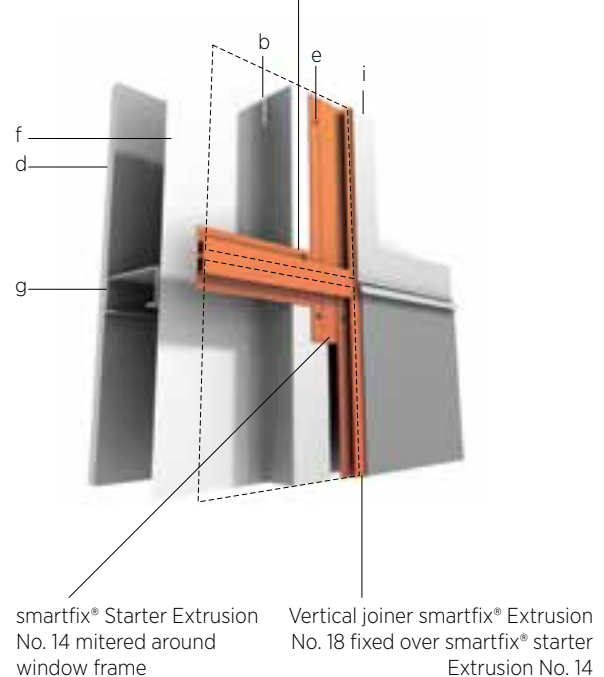
Window Jamb Details

Window jamb detail fixed using smartfix® Extrusion No. 14



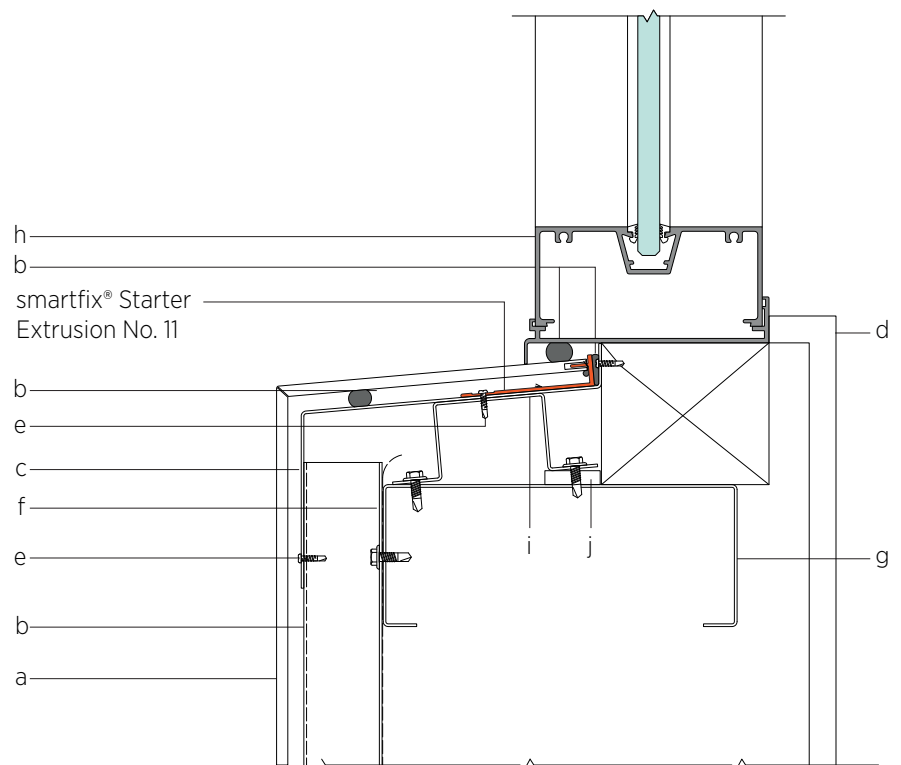
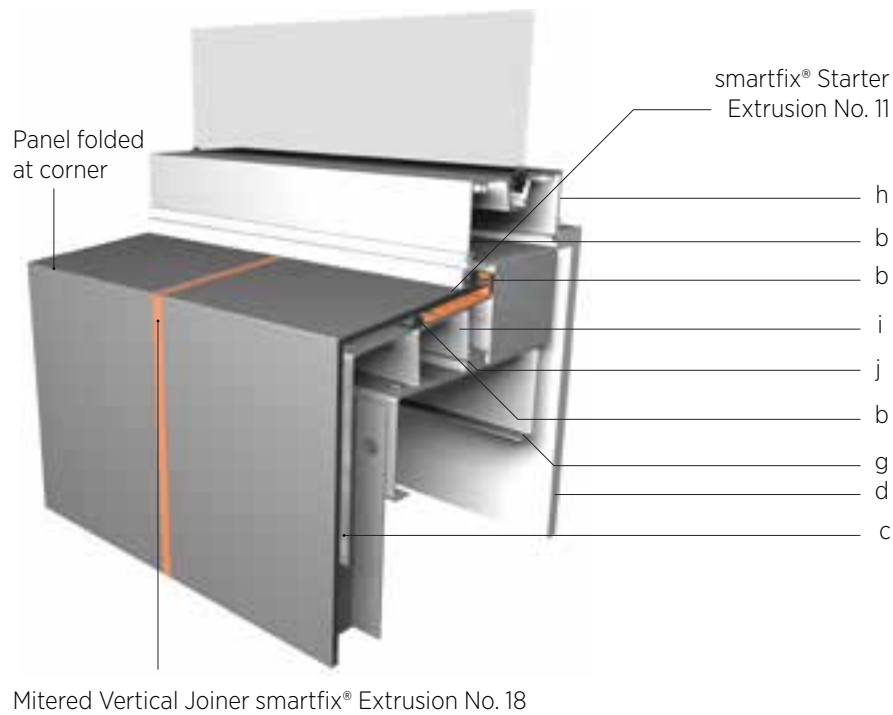
- a. 5mm Pre-finished Composite Panel (please contact smartfix® for panel options)
- b. 50x35x1.1mm top hat section or structure as required
- c. Appropriate sealant for concealed weather seal
- d. Steel angle
- e. Internal lining
- f. Wafer head tek screws
- g. Vapour barrier between top hat and support structure (not shown in image above)
- h. Main support structure
- i. Glazing head & sill frame
- j. 50x35x1.1mm top hat section or structure as required
- k. Plastic packer

smartfix® Horizontal Joiner Extrusion No. 17.
Back tags removed where joining to starter
smartfix® Extrusion No. 14



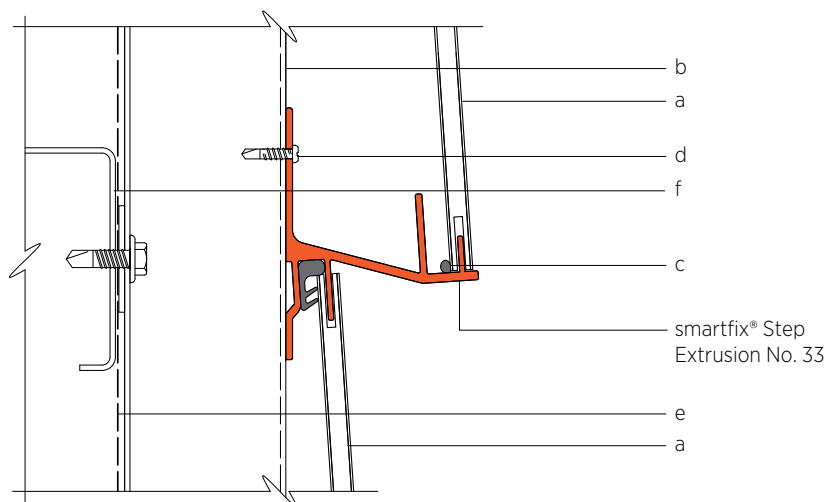
Window Sill Details

Window Sill Details Using smartfix® Extrusion No. 11



Step Facade Details

Step Facade Details Using smartfix® Extrusion No. 33

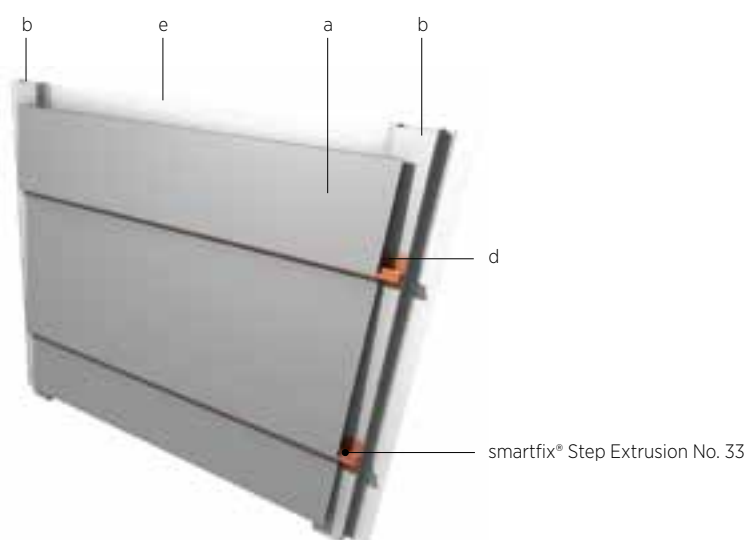


- a. 5mm Pre-finished Composite Panel (please contact smartfix® for panel options)
- b. 50x35x1.1mm top hat section or structure as required
- c. Appropriate sealant for concealed weather seal
- d. Wafer head tek screws
- e. Vapour barrier between top hat and support structure
- f. Main support structure



See it online and download details
www.smartfix.com.au/step-facade

Horizontal Panel Layout

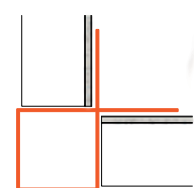


Vertical Panel Layout

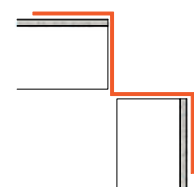


Extrusions can be installed both horizontally or vertically to create a unique and stylish look.

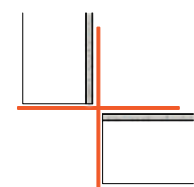
Trims & Accessories Natural & Anodised



External Box Corner



Internal Corner



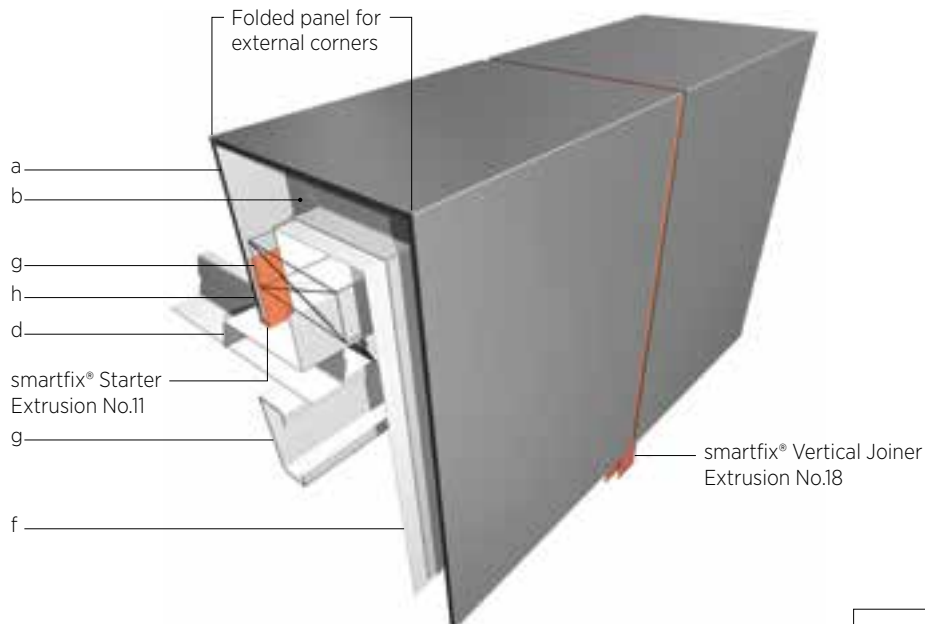
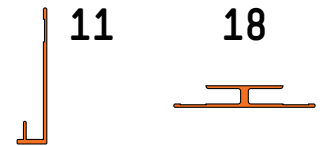
External Negative Corner



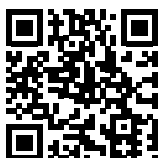
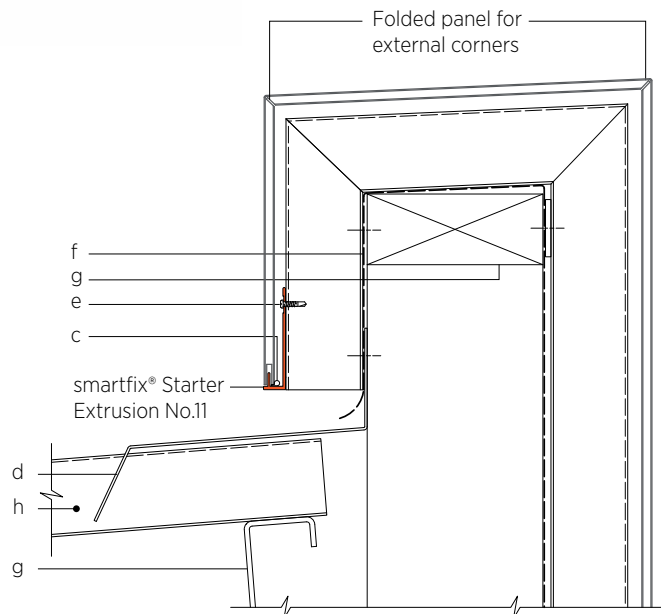
Angle Trim

Capping Details

Capping Details Using smartfix® Extrusion No. 11 & No. 18



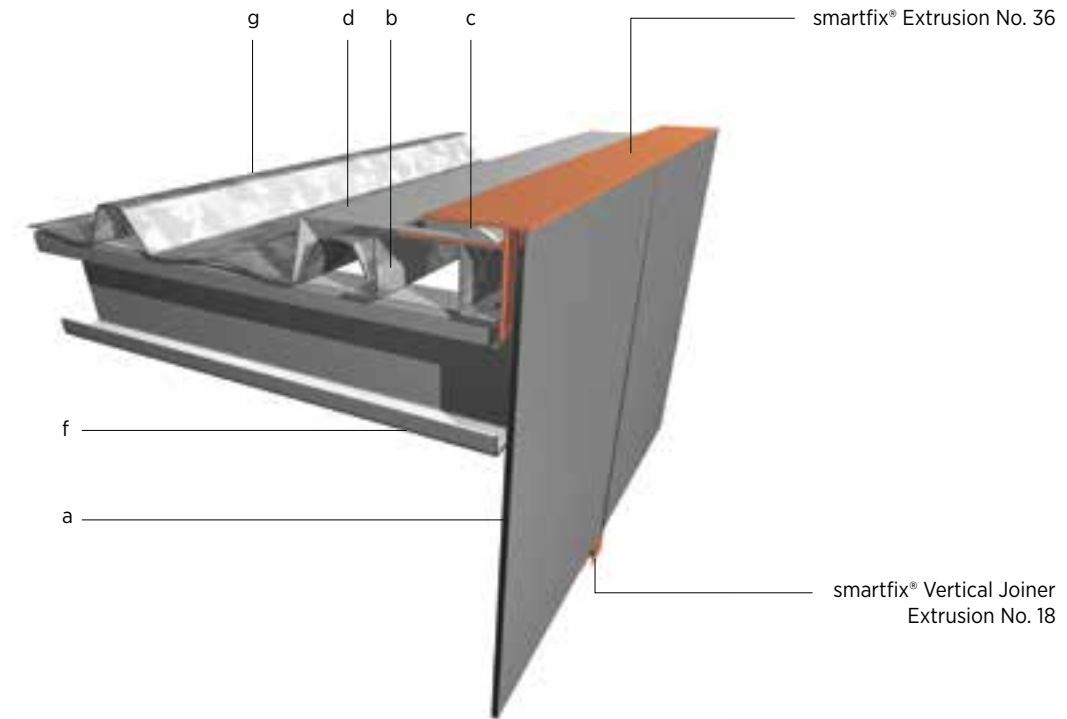
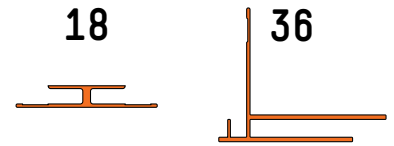
- a. 5mm Pre-finished Composite Panel (please contact smartfix® for panel options)
- b. 50x35x1.1mm top hat section or structure as required
- c. Appropriate sealant for concealed weather seal
- d. Flashing
- e. Wafer head tek screws
- f. Vapour barrier between top hat and support structure (not shown in image above)
- g. Main support structure
- h. Roofing



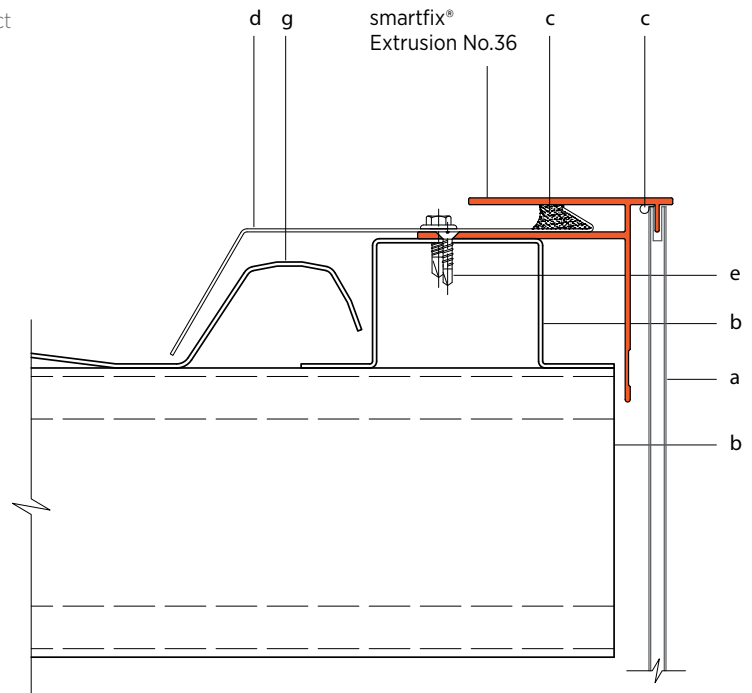
See it online and download details
www.smartfix.com.au/capping

Capping Alternative Details

Capping Alternative Details Using smartfix® Extrusion No.36 & No.18



- a. 5mm Pre-finished Composite Panel (please contact smartfix® for panel options)
- b. Top hat section to suit roofing material height
- c. Appropriate sealant for concealed weather seal
- d. Flashing
- e. Countersunk tek screw
- f. Main support structure
- g. Roofing



Optional smartfix® Aluminium Fixing Profiles

Joiner Extrusions
Horizontal and Vertical (See Joining Options)

3



4



25



Glazing Transom

26



Glazing Transom

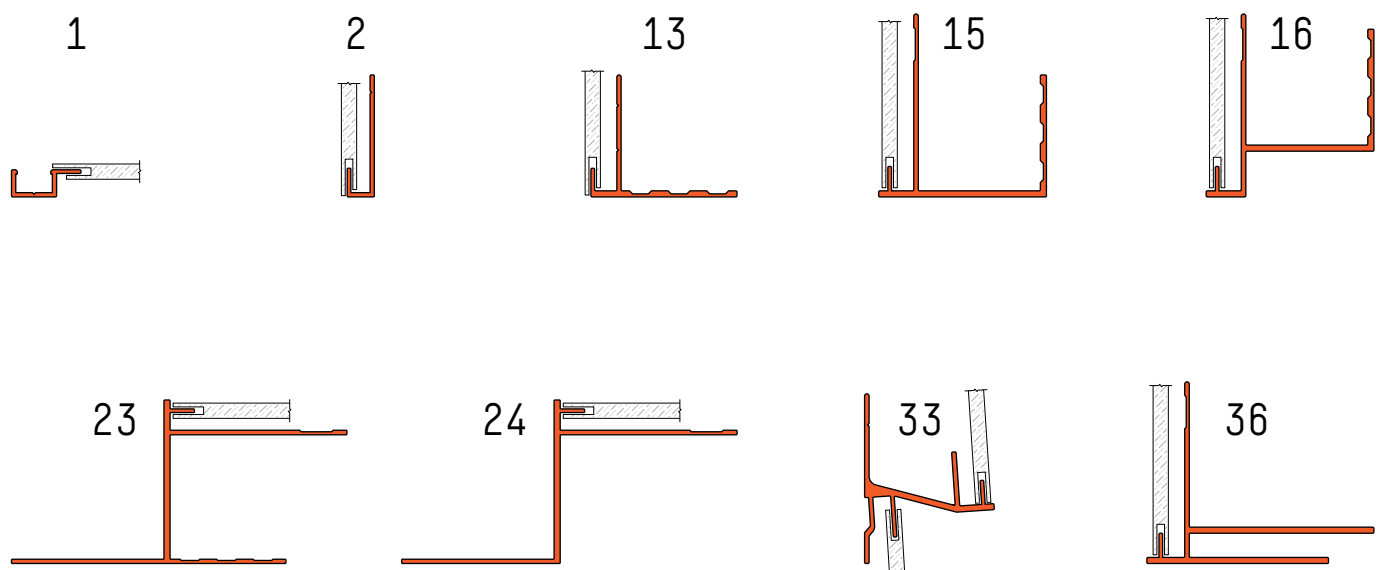
27



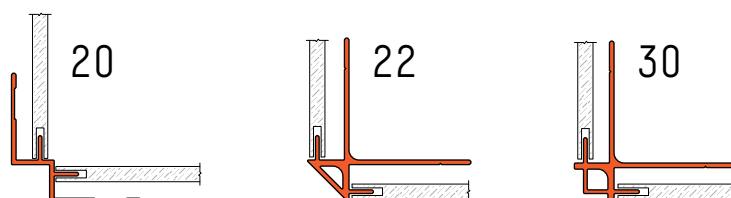
39



Starter, Abutment & Window Extrusions (See Window Frame Details)



Corner Extrusions Internal & External (See Corner Details)





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reddot design award
honourable mention 2008