



**Sandwich Wall**

**HunterDouglas**

FAÇADES

# Design performance

## A total system for Façades



Cover : Bioscience Lab, Manchester, United Kingdom  
Architect: Fairhurst & Partners  
Product : Sandwich Wall

Below : Federal Express (Fedex), Charles de Gaulle Airport, Roissy Paris, France  
Architect: ADP, Paris  
Product : Sandwich Wall, module 571 mm, thickness 75 mm, with microrib

For over 40 years, Hunter Douglas Façades have produced thousands of square meters of durable Sandwich Wall panels: an innovative product with superior performance.

To meet exacting architectural designs, the panels are custom produced - cranked or curved in practically any angle or radius to meet the building specification. Since the panel skins are coil coated; any colour desired (uni, dual tone or even patterns) can be selected to create a unique exterior.

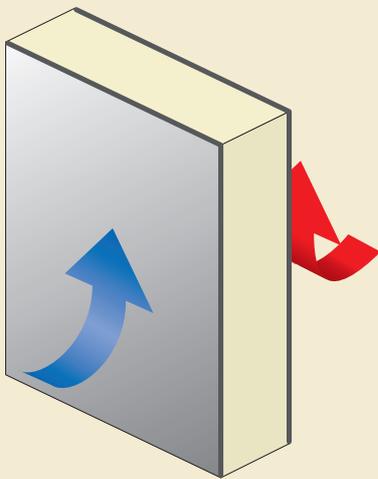
Our 'total' façade system includes a concealed fixing method, integrated windows, doors and sun control systems, ensuring the architect has the solutions needed to create an individual aesthetic with unprecedented quality and performance.



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# Design, Functionality and Comfort

Choosing the right façade system can be challenging. With Hunter Douglas Façades, you will find a system that effortlessly blends form and function, whilst enhancing the building's comfort and performance levels.



## DESIGN: CREATIVE FREEDOM

Our façades offer unparalleled freedom in design. The option of standard and special panels, coated aluminium and other plain or patterned materials, ensures that the appearance is just as impressive as its performance.

## FUNCTIONALITY: COMMITMENT TO QUALITY

Hunter Douglas Façade systems are founded in a relentless commitment to quality, as well as more than 40 years of worldwide experience in the development and manufacturing of aluminium façades. All of our products have been extensively tested for corrosion resistance, insulation, ventilation, fire resistance and wind-load performance.

## COMFORT: INTERNAL & EXTERNAL PERFORMANCE

Sandwich Wall façade systems significantly improve the performance and comfort level for the building and its occupants. They protect buildings against heat, noise and shield from rain, wind and snow whilst providing consistent interior temperatures and humidity levels.

You can evaluate all aspects of the façade from visible surfaces to construction, enabling you to create the ideal Sandwich Wall system for your building's specifications without costly adaptations. Be assured, our façades look great, consistently perform and are built to last.

## WEATHER RESISTANT

The aluminium Sandwich Wall façade systems were created to face the elements. Produced from durable pre-coated aluminium, the panels are rollformed, producing strong, lightweight made-to-measure façades.

## 100% RECYCLABLE

Hunter Douglas uses the scrap which remains from old aluminium products to remeld and re-use again.



## MULTIPLE OPTIONS

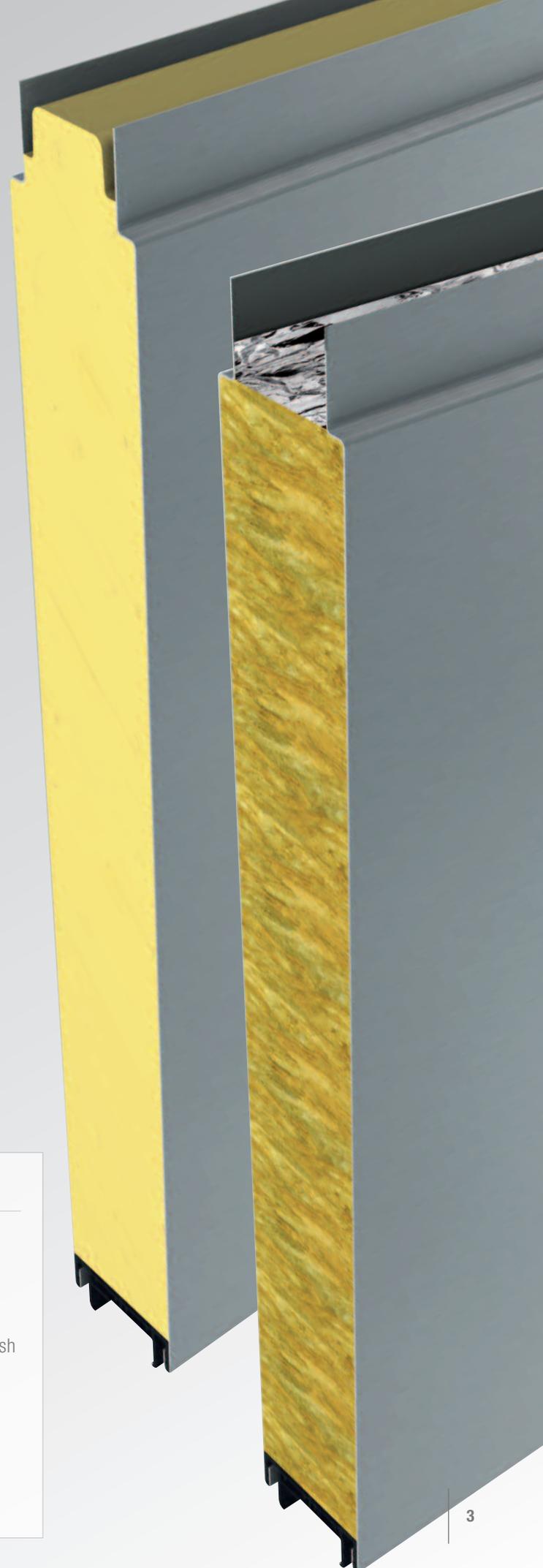
The different panel modules and the option to curve, crank or close panel ends allow the application of Sandwich Wall façades to almost any new or existing superstructure in need of simple fixings.

## UNIVERSAL APPLICATIONS

From single story buildings to high-rise structures, Sandwich Wall façades provide a robust exterior solution. The system resists high wind loads and includes cranked corners that are precisely integrated with the existing support systems.

### SANDWICH WALL: KEY FEATURES

- Horizontal, vertical and diagonal applications
- Unmatched panel flatness
- Curved and cranked panels
- Unique and secure mounting system
- Outstanding corrosion, scratch and UV resistant attractive finish
- Mineral wool or foam core
- Made-to-measure
- Modules from 200 mm up to 1500 mm
- Thicknesses include 35, 50, 60, 75 and 100 mm
- Total façade system including windows, doors and louvres



# Perfection in detail

## Endless possibilities

The Hunter Douglas Sandwich Wall façade system is the result of in-depth research and architecturally orientated developments.

Extremely flat panel surfaces in aluminium or steel are available in a variety of colours, surface finishes and shapes. Several joint systems, concealed fixing and glazing systems perfect the detailing and expand the architectural possibilities.

Sandwich Wall panels are composed of two metal skins surrounding an insulating core of either foam or high density mineral wool. The panels are available with Country Standard fire ratings as well as FM and LPCB approvals. The Pyropanel version provides one hour resistance with aluminium panel skins.

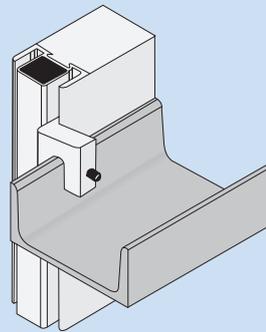
*Right* : Rolls-Royce, Glasgow, United Kingdom  
Architect: Bradford Robertson Architects  
Product : Sandwich Wall



### UNIQUE FIXING METHOD

With patented clamps, Sandwich Wall provides a completely concealed fixing method for panels, windows and doors. Without drilling in the panels or the substructure and only a few turns with a hexagonal key, the panels can be securely fixed to supporting framework.

The panels are connected by means of a hidden fixing at the panel joint, which has the ability to accommodate thermal movement.



*Below* : Childrens Hospital, Birmingham, United Kingdom  
Architect: RPS Design  
Product : Sandwich Wall

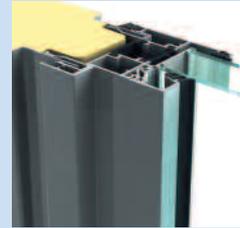




*Left* : Anne Summers, Whyteleaf, Surrey, United Kingdom  
 Architect: MacKenzie Architects  
 Product : Sandwich Wall



*Window Solution (Bi-Modular)*



*Window Solution (Detail)*

### JOINTS & BI-MODULAR PANELS

For façades where the panel joint pattern has a major influence on the design, Hunter Douglas Façades offer many panel joint details and features providing an infinite number of aesthetic options. In addition, false joints can be integrated across the width or the length of a panel, increasing the design possibilities.

For designs requiring the same 3-side connection for joining panels or windows, Hunter Douglas Façades offers a unique concept: the Bi-Modular Sandwich Wall system.

### WINDOWS, DOORS AND LOUVRES

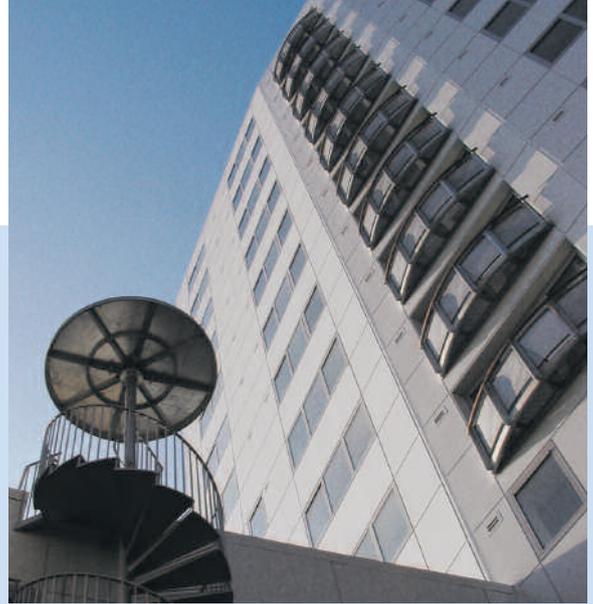
Hunter Douglas Bi-Modular windows, doors and louvres complete the architectural solution for a totally integrated, tested and proven design concept.

The different elements are fixed by the same joining method - concealed fixing clamps to support surrounding openings. The frames are supplied in coated or anodized aluminium - all with thermally improved sections and twin colour options. Windows, complete with concealed drainage, are available with top-hung, side hung, and tilt/turn opening mechanisms. Additionally the glazing rebate accommodates most insulated glass specifications.

*Below* : Malvern Hills Science Park, Malvern, United Kingdom  
 Architect: Rubicon Design Limited  
 Product : Sandwich Wall



*Right* : Cranbrook House, Nottingham, United Kingdom  
Architect: Burke Richards Architects, Oxteo  
Product : Sandwich Wall



## HIGH PERFORMANCE PANELS

The Sandwich Wall line also offers four high performance panels - each with unique properties:

### Pyropanel:

A panel with aluminium skins, a mineral wool core and a steel connection profile with which achieves one hour fire (72 minutes) resistance when tested to BS 476 part 22 by Warrington Fire Research.

### HP panel:

A panel (aluminium skins and a foam or mineral wool core) in combination with the integrated windows tested by the Centre for Window and Cladding Technology (CWCT) for air permeability, water tightness (static and dynamic) and wind resistance (serviceability and safety up to 3600Pa).



*Mineral Wool core*



*Foam core*

### HP+ panel:

A panel with steel skins and a foam core. As with the HP panel, this HP+ panel, in combination with integrated windows was tested by the CWCT, meeting the highest standard of weather tightness, eliminates almost all thermal bridging and has a series of compliant construction details that interface with other elements of the building. The panel has gained approval to LPS 1181 through the Loss Prevention Certification Board (LPCB).

### FM Panel:

A panel with steel skins and a mineral wool core, inclusive intumescent strip meets the Factory Mutual Approval Standard 4880.

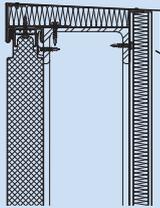
*Below* : Nedpack, Harderwijk, the Netherlands  
Architect: Bram Hannessen  
Product : Sandwich Wall, module 1500 mm



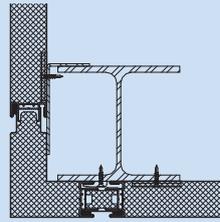
INSTALLATION DETAILS

The beauty and ease of installation is considered when detailing all junctions and interfaces with other building elements. Note: The shown details are a small selection. More details on request.

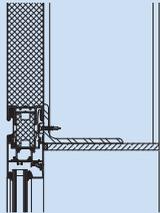
Parapet



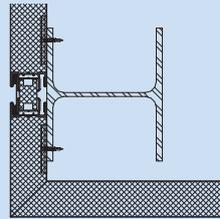
External corner



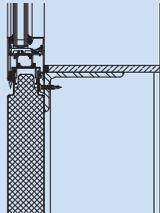
Flush Window head



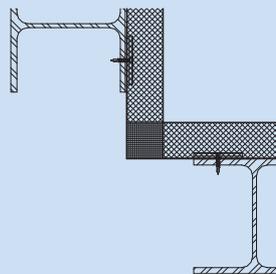
External corner



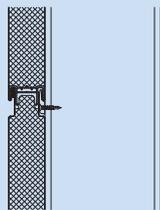
Flush Window cill



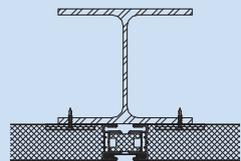
Internal corner



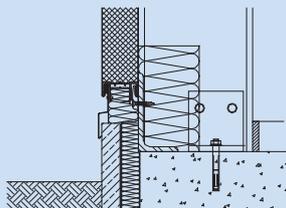
Joint



Bi-Modular joint

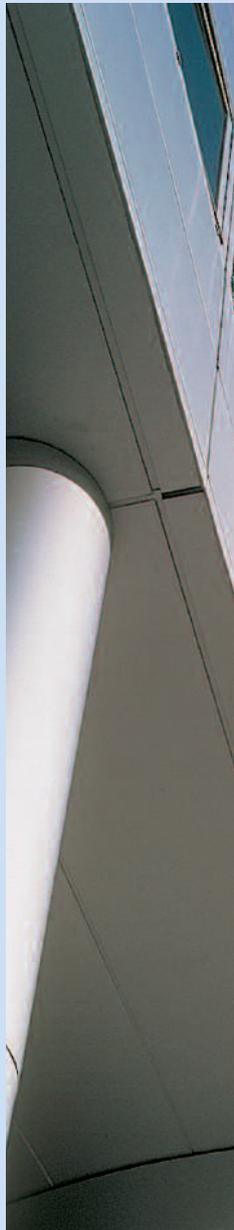


Cill



Vertical section

Horizontal section



Right : Porsche, Bucharest, Romania  
 Architect: Architect Service Bucharest  
 Product : Sandwich Wall, several modules



**PANEL WEIGHT (with aluminium skins)**

Panel thickness	Foam	Mineral Wool
	Panel weight (kg/m <sup>2</sup> )	Panel weight (kg/m <sup>2</sup> )
35 mm	6.1	9.7
50 mm	7.0	12.1
60 mm	7.7	13.8
75 mm	8.6	16.2
100 mm	10.0	20.3

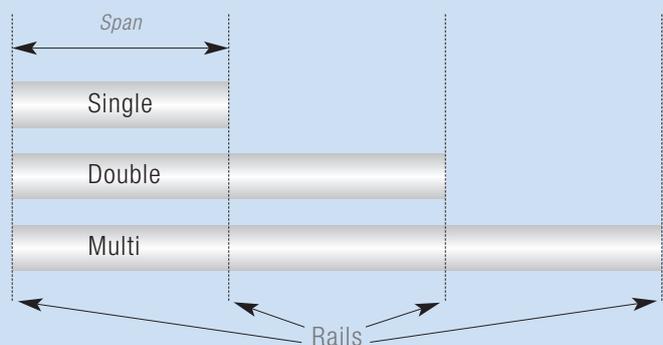


**SPAN TABLE FOR SANDWICH WALL SYSTEM**

*(other configurations on request)*

Panel Module	: 1200 mm
Panel Thickness	: 60 mm
Core material	: Foam
Skin material	: Aluminium (0.7 mm thick)
Panel execution	: Standard
Temperature difference	: 35 °C (RAL 9006 as external skin)
Maximum deflection	: 1/150

Windload N/m <sup>2</sup> <i>(working load)</i>	Span (for module 1500 mm) <i>(horizontal distance between the vertical rails)</i>		
	Single (span in mm)	Double (span in mm)	Multi (span in mm)
800	3150	2450	2850
1000	2450	1950	2250
1200	1950	1600	1900
1500	-	1300	1500
1750	-	1150	1300
2000	-	1000	1100



**QUALITY ASSURANCE**

The Hunter Douglas Sandwich Wall panel and the integrated window system have been tested for air leakage, water penetration and fire resistance characteristics in many countries, at institutes such as LPCB (the Loss Prevention Certification Board) and CWCT (UK Centre for Window and Cladding Technology).

More information is available upon request.

**COIL-COAT TECHNOLOGY**

Hunter Douglas coats flat metal strips in a continuous process before the metal is given its final shape.

*Advantages:*

- Coil-coated materials comply with the highest European quality standards (EN 1396)
- Coil-coating takes place under optimum factory-controlled conditions
- High grade pre-treatment (adhesion & protection)
- Optimum control over coating thickness
- High level of colour continuity

**SPECIFICATIONS**

For the Hunter Douglas Sandwich Wall panels, the integrated windows, doors and louvres, specification texts are available upon request.

**ROLL-FORMING TECHNOLOGY**

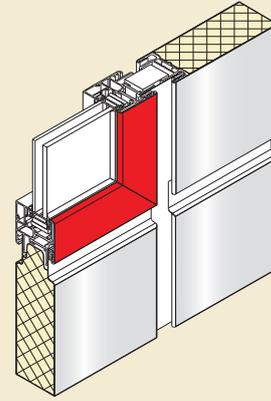
Roll-forming, as opposed to press-brake techniques, allows pre-coated metal to gradually form into its final shape in a continuous process.

*Advantages:*

- The molecular structure of the metal stays intact, making the end product more durable
- Continuous production allows for cost-efficient manufacturing and quick delivery
- High levels of precision throughout the entire production process

**Coil Coating typical characteristics**

Coating thickness	EN 13523-1, ISO 2360	24-32 micron
Gloss level	EN 13523-2, ISO 2813	28 +/- 5 units
Gloss difference within batch	EN 13523-2, ISO 2813	+/- 3 units
Colour difference from standard	EN 13523-3, ISO 7724, part 3	$\Delta E < 2$ units
Colour difference within batch	EN 13523-3, ISO 7724, part 3	$\Delta E < 0.7$
Flexibility	EN 13523-7, ISO 1519	Depending on alloy/shape
Adhesion	EN 13523-5, ISO 6272 EN 13523-7, ISO 1519 ISO 2409	For impact/bending over 2T no loss of adhesion
Pencil hardness	EN 13523-4 ASTM D 3363	$\geq H$
Weather fastness	EN 1396, EN 13523-19	Can be used for all categories
Corrosion resistance	EN 1396, EN 13523-19	Highest class
Humidity resistance	EN 13523-9, ISO 6270 ISO 4628/2	Less blister than size 2
Salt/acid corrosion test	EN 13523-9, IS 4628/2	1,000 hours less than 2 mm creep
Saltspray	ISO 7253	Too mild for aluminium (No result)



## PRODUCT SPECIFICATIONS

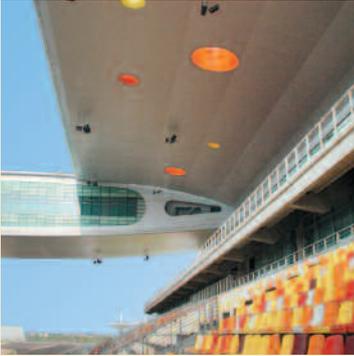
<b>Widths / modules</b>	: 200 mm, 300 mm, 600 mm, 900 mm, 1200 mm and 1500 mm. Apart from these standard widths, any panel module up to 1500 mm can be produced to order, even small quantities
<b>Thickness</b>	: 35 mm, 50 mm, 60 mm, 75 mm and 100 mm
<b>Lengths</b>	: Depending on the module, lengths up to 12 meters
<b>Core</b>	: Mineral Wool or Foam (CFC/HCFC free; Zero ODP)
<b>Skins</b>	: Aluminium (coated or anodized) and steel
<b>Coatings</b>	: Luxacote® or PVF2; both in an extensive range of colours
<b>Surfaces</b>	: Smooth or embossed
<b>Panel span</b>	: Depending on the shape, size and colour combined with expected wind loads, the maximum spans can be found from the span tables (available on request)
<b>Integrated windows</b>	: Twin-colour powder coated or anodized extruded aluminium profiles, thermally improved, incorporating a range of mullions and transoms to suit architectural requirements

Unprecedented Protection  
**LUXACOTE**  
 for exterior application



Our Luxacote® finish is specifically designed to withstand the severe external conditions. The topcoat contains a solid UV filter, which guarantees perfect colour and gloss stability. This topcoat provides resistance against scratches and abrasion while the alloy and pre-treatment ensure corrosion resistance. HunterDouglas products have been subjected to extensive laboratory and real-world testing to ensure the highest quality.

**HUNTER DOUGLAS** is a publicly traded company with activities in more than 100 countries with over 150 companies.



The origin of our company goes back to 1919, in Düsseldorf, Germany. Throughout our history, we have introduced innovations that have shaped the industry, from the invention of the continuous aluminium caster, to the creation of the first aluminium Venetian Blinds, to the development of the latest high-quality building products.

Today we employ more than 20,000 people in our companies with major operation centres in Europe, North America, Latin America, Asia and Australia.



Promoting sustainable  
forest management  
[www.pefc.org](http://www.pefc.org)

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### **ARCHITECTURAL SERVICES**

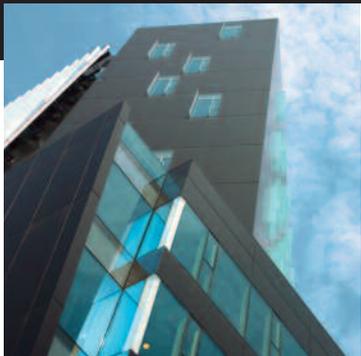
We support our business partners by providing a wide range of technical consulting and support services for architects, developers and installers. We assist with recommendations regarding materials, shapes and dimensions and colours and finishes. We also help create design proposals, visualisation and mount drawings. Our services to installers range from providing detailed installation drawings and instructions to training installers and advising on the building site.

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