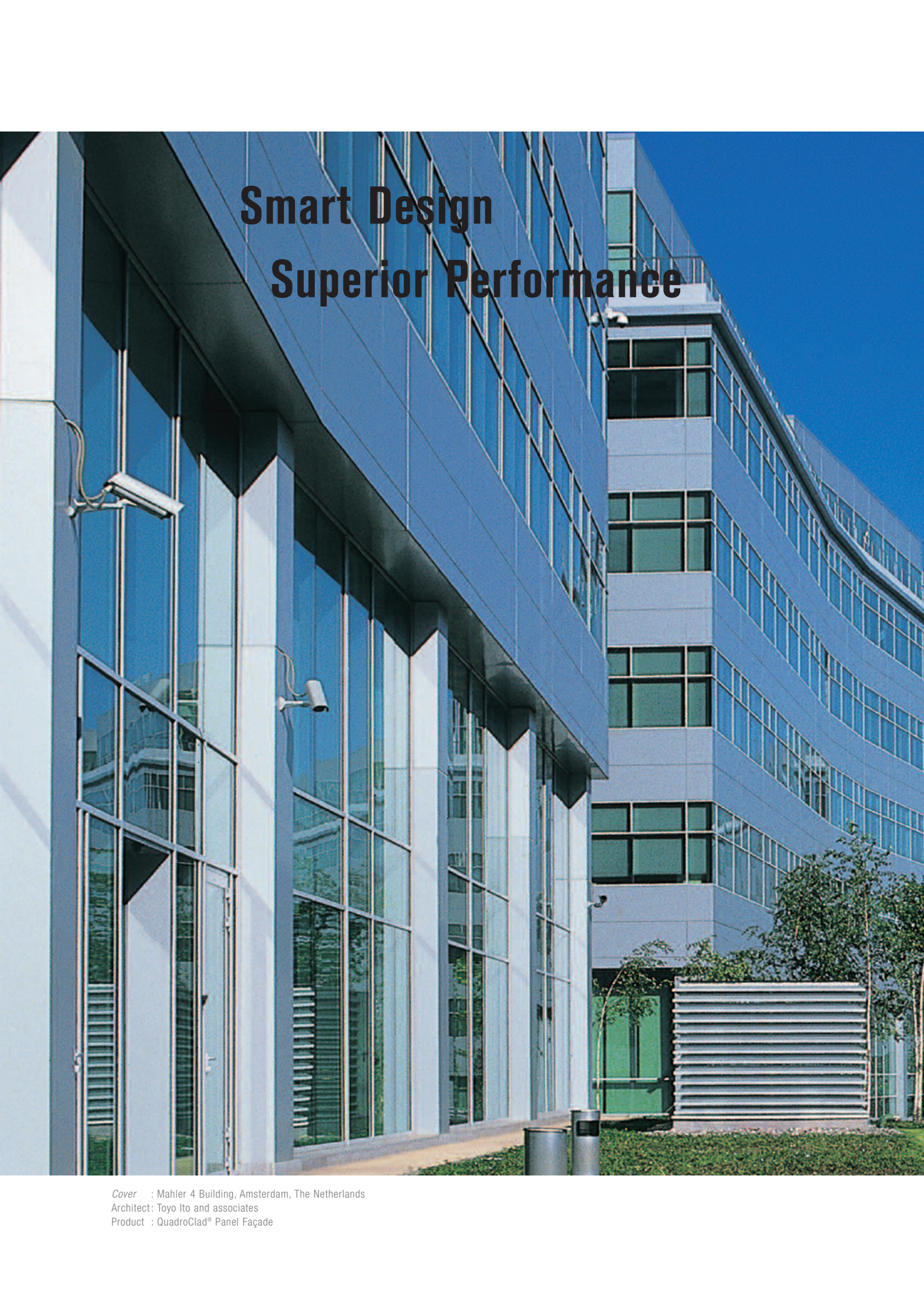




QuadroClad® Façade Systems

HunterDouglas

FAÇADES



Smart Design Superior Performance

Cover : Mahler 4 Building, Amsterdam, The Netherlands
Architect: Toyo Ito and associates
Product : QuadroClad® Panel Façade

Project : Krilatsky Hills business Park
Architect: A B D
Product : QuadroClad



HunterDouglas® Façade Systems are specifically engineered to enable you to create a unique design, whilst withstanding severe environmental conditions. Achieved by using technology originally developed for the aircraft industry, our Façade systems provide the perfect combination of smooth, flat and stylish looks with superior performance.

All our Façade Systems provide the flexibility of a limitless variety of design options and finishes that integrate with doors, windows and sun control systems.

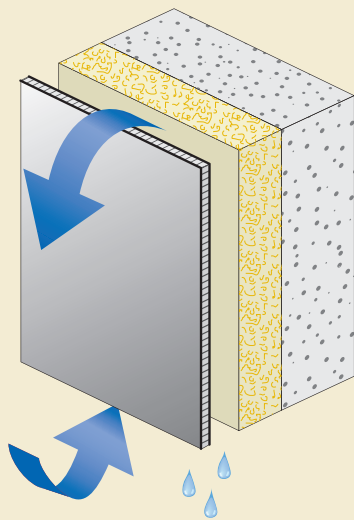
HunterDouglas® Façade Systems are the smart way to make your mark on the environment.

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Design, Functionality and Comfort

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

QuadroClad® Panels have a coil-coated aluminium skin that can be applied in straight, curved or cranked forms. Materials and finishes such as stainless steel, anodized aluminium and glass create endless design combinations bringing a whole new dimension to building façades.



Our 'total' Façade system includes an adjustable support system, integrated windows, doors and sun control, ensuring you achieve a unique aesthetic with optimal performance.

The QuadroClad® Façade System also minimises maintenance, as dirt is evacuated through an integrated channel at the back of each panel.

DESIGN: CREATIVE FREEDOM

Custom shapes, curved and tapered panels, a variety of joint options and an extensive range of colours and materials give you unparalleled creative freedom.

FUNCTIONALITY: SYSTEMS THAT LAST

Our façade systems have been tested for over 40 years and are built to last. We allow you to evaluate all aspects of the façade from visible surfaces to construction,

enabling you to create the QuadroClad® System that meets the individual building specification without costly adaptations.

No surprises; you will know in advance exactly what you will get.

COMFORT: THE PERFECT PROTECTION

QuadroClad® 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.

BUILT TO LAST

The aluminium QuadroClad® Ventilated Rainscreen Façade System was designed to withstand the elements. Produced from pre-coated aluminium, it is formed and combined with aluminium honeycomb reinforcement. The result: a strong, flat, lightweight, made-to-measure façade made to withstand the most severe environmental conditions.

100% RECYCLABLE

Hunter Douglas uses the scrap which remains from old aluminium products to remelt and re-use again. All components of the QuadroClad® System are aluminium.

COMMITTED TO QUALITY

A relentless commitment to quality, as well as more than 40 years of worldwide experience in the development and manufacturing of aluminium façades, create the foundation for all HunterDouglas® Façade Systems. All of our products have been extensively tested for corrosion resistance, insulation, ventilation, fire resistance and wind-load performance. Be assured, our façades look great, consistently perform and are built to last.

OPTIONS FOR EVERY APPLICATION

The flexibility in panel size and shape, as well as the option of curving and cranking, allows the QuadroClad® Façade System to be applied to almost any new or existing superstructure with simple and adjustable fixings.

COVERAGE AT ANY HEIGHT

The QuadroClad® Façade System, which includes windows, doors and louvers, is ideally suited to any building no matter what size - from low to high rise - and can be applied to any location within the building. Where large panels are vital to the design concept, QuadroClad® Panels offer a flexible solution in sizes up to 1,500 mm x 10,000 mm.



QUADROCLAD® FAÇADE SYSTEMS - KEY FEATURES

- Durability
- Excellent wind-load performance
- Large façade elements
- Low weight per m²
- 'Total' façade system including windows, doors and louvers - for both flush and recessed façade designs
- Suitable for any building size - high or low
- Extreme panel flatness combined with 'crisp' edges
- Attractive, multi-optional finishing
- Individual panel mounting
- Low maintenance
- Endless possibilities for combining material and finishes
- Made to measure product
- Almost any panel shape possible: trapezoidal, curved, cranked etc.

Looking Smart

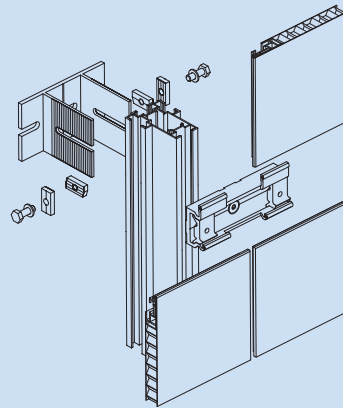
The QuadroClad® System is a unique, open-jointed cladding system based on rainscreen technology. Integrated channels provide ventilation that enables rain and condensation to drain behind the cladding surface, ensuring a much cleaner façade with lower maintenance costs.

Right : Airport Control Tower, Bahrain, UAE
Architect: Ahmed Janahi Architects
Product : QuadroClad® Panel Façade



UNIQUENESS OF INSTALL

The unique and patented installation method of the QuadroClad® Façade System offers a simple and proven installation method. First step is to install the flush or recessed QuadroClad® Window Frames and to seal these to the structure using the integrated damp-proof membranes. Once the thermal insulation is installed, the QuadroClad® Façade Panels are 'hung' from the window frames, or the QuadroClad® Support Track if necessary. After final placement, the panels are 'locked' in place, to control thermal expansion. Panels are installed or removed individually.



SIMPLICITY OF DESIGN

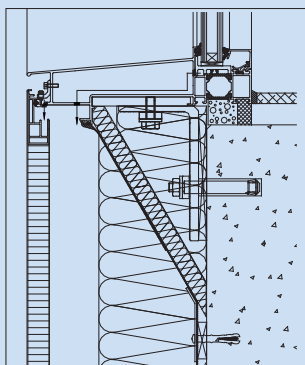
- Extremely flat panels
- Panels available in curved, cranked and triangular shapes
- Low weight (approximately 6 kg/m²)
- Large panel sizes up to 1,500 mm x 10,000 mm
- Inherent strength of honeycomb panel reduces the required number of supports
- Tightly controlled joint widths
- Joints provide ventilated cavity (reducing surface wind-load effect by pressure equalisation)
- No thermal-bow in panels due to aluminium honeycomb construction
- Quick installation methods with minimum fixings to structure
- Easy individual panel installation or replacement; in any other sequence that suits the construction programme
- Wide range of system solutions for parapets, cills, corners and more
- Choice of coatings (Luxacote®, PVF2, dual tone, 'look-alike' finishes, and anodised aluminium)
- Suitable for sloping façades, external soffits and ceilings
- Window programme offers practical system solutions for integrated flush or recessed window designs
- Windows can be installed first in order to achieve a wind- and waterproof condition at an early stage



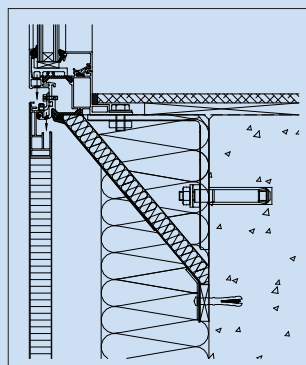
Left : HGG Profiling Equipment BV, Wieringerwerf, the Netherlands
 Architect: Architectenbureau Koorn bv te Hoorn
 Product : QuadroClad® 25-10 Panel Façade

Hunter Douglas introduced the first QuadroClad® Façade System over 15 years ago. Since then, advancement in the product and its application have made QuadroClad® System the most complete generation of façades available.

INTEGRATED WINDOWS



Recessed



Flush

A History of Innovations:

- New fixing and execution systems provide a complete substructure which can be adhered to almost any wall
- Flexible panel systems to match your specifications
- Integrated windows, both flush and recessed, result in a diminished use of substructure components
- Three dimensional panel shapes with endless design possibilities
- Multiple materials can be applied in the same façade on the same substructure

QuadroClad® Systems

	QC25-10	QC25-15	QC25-25
Joint width	10 mm	15 mm	25 mm
Maximum panel dimensions	1500 * 4500 mm	1500 * 6000 mm	1500 * 4500 mm
Horizontal panel orientation	✓	✓	-
Vertical panel orientation	✓	✓	✓
Proprietary substructure	✓	✓	-
Curved	✓	✓	-
Cranked	✓	✓	✓
Combination possible with:			
- QuadroClad® Glass (maximum dimension 1200 x 4000 mm)	✓	-	-
- QuadroClad® Frame (maximum dimension 1300 x 2800 mm)	✓	-	-
Integrated windows, doors and louvres available	-	✓	-
Special panel shapes (racked ends, triangular forms a.o.)	✓	✓	-
Joint profile	-	-	✓

The following outlines the QuadroClad® Systems, possibilities and the new materials which can be incorporated in the façade. Be inspired!

Above : Almeria, Zagreb, Croatia
Architect: Mr. Marijan Pivac, Office 3P
Product : QuadroClad® Panel Façade

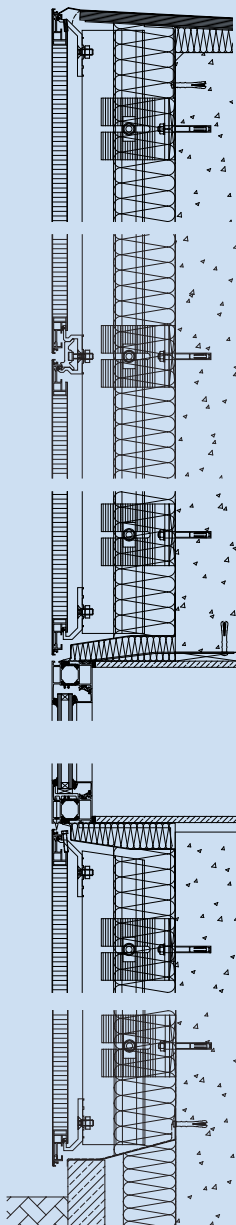
Parapet

Joint

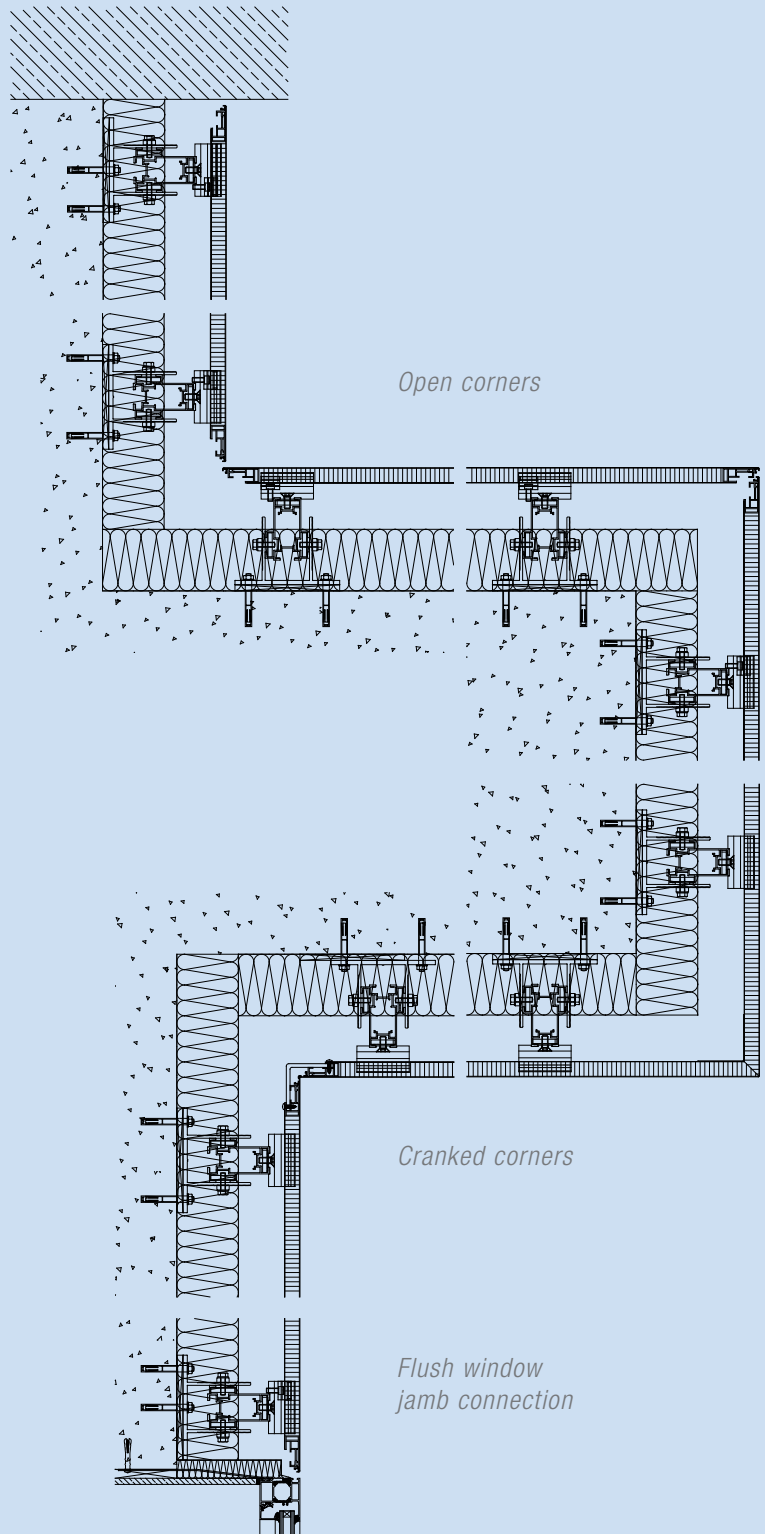
Flush
Window
head

Flush
Window
cill

Cill



Vertical section



Open corners

Cranked corners

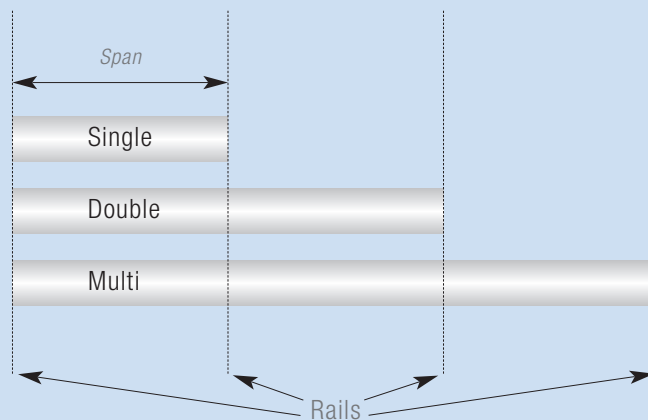
Flush window
jamb connection

Horizontal section



SPAN TABLE FOR QC25-10 SYSTEM *(for other systems on request)*

Windload N/m ² <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)
	Single (span in mm)	Double (span in mm)	Multi (span in mm)
< 1000	1900	2050	2050
1000 - 1500	1750	1350	1350
1501 - 2000	1650	1000	1000



Expanded Design Possibilities



An addition to the QuadroClad® Façade System is QuadroClad® Glass.

A new frameless panel on which an aluminium extrusion is bonded, QuadroClad® Glass, installation is executed on the same substructure as the standard QuadroClad® Panels and in the same concealed method.

Right : Schulhastrakt MPS Siebenen, Zürich, Switzerland
Architect: Stähli AG
Product : QuadroClad® Panel Façade and QuadroClad® Glass



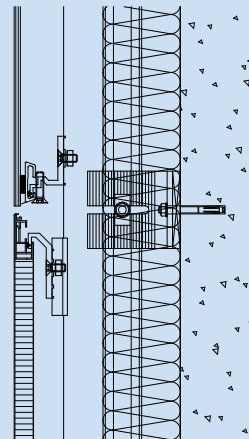
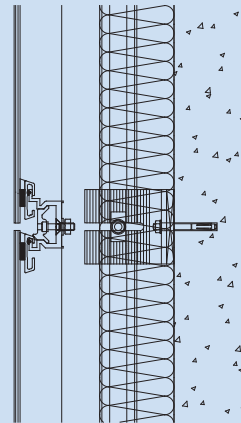
QUADROCLAD® GLASS

The large variety of glass types available reflect your unique building design aesthetic.

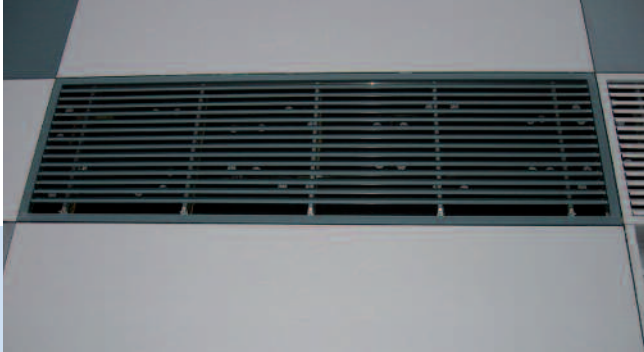
QuadroClad® Glass is heat strengthened or laminated to meet building codes and is also available for silk screen, enamelled or coated applications.

In the project shown left, different colours and types of glass were combined with aluminium panels in three colours. All panels were installed in the same plane.

- Large panel modules (up to 1,200 mm x 4,000 mm)
- Joint width 10 mm
- Several types of heat strengthened and laminated glass available
- Individual panel installation and replacement
- Quick installation
- Mixed façades of glass, stone and aluminium in the same plane



Above : Example drawings
Product : Combination of QuadroClad® Panels and QuadroClad® Glass Panel Modules

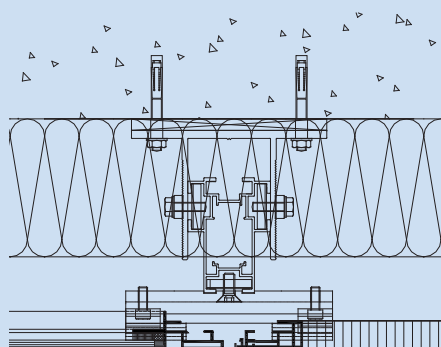


Left : Istragrafika, Istria, Croatia
 Architect: Prof. Kincl
 Product : QuadroClad® Frame with 70S louvre elements

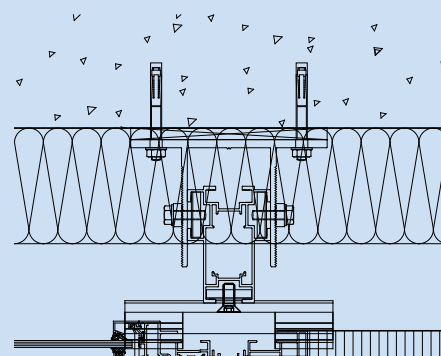
QUADROCLAD® FRAME

Another addition to the QuadroClad® Façade System is QuadroClad® Frame. QuadroClad® Frame can give a building a subtle change in its appearance by using a different material in a QuadroClad® Frame.

Two types of frames can incorporate multiple materials and be installed in exactly the same concealed method as the standard QuadroClad® Panels.



Glued



Clamped

The first frame is an elegant option in which different sheet materials can be bonded. Or, choose the second frame for a slightly more robust frame constraining the material, in which even more materials can be clamped.

- Panel modules (depending on the chosen frame type)
- Joint width 10 or 15 mm
- Integrated channels for rain and condensation drainage
- Designed to suit almost any material (thin natural stone, stretch metal, glass, wood, etc.)
- Quick installation
- Maximum design versatility



In the project shown above, single glazed QuadroClad® Frame panels were placed in front of the building's solid concrete walls. Interspersed with QuadroClad® Flush Windows with double glazing, QuadroClad® Frame helped to create a continuous ribbon of glass around the perimeter of the building.

Above : Arora International Hotel, Gatwick / Crawley, United Kingdom
 Architect : Arora Development
 Product : QuadroClad® Panel Façade and QuadroClad® Frame

COIL-COAT TECHNOLOGY

Hunter Douglas coil-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

HONEYCOMB COMPOSITE TECHNOLOGY

In our honeycomb composite technology, two metal skins sandwich an aluminium honeycomb structure that can accommodate high pressures and shear forces. The skin and the honeycomb are connected with high quality adhesives, forming a monolithic mechanical construction.

Advantages:

- Developed for the aircraft industry, aluminium honeycomb composites are a perfect combination of light-weight components working together to produce extreme strength

ROLL FORMING TECHNOLOGY

Roll forming, as opposed to press-brake techniques, allows pre-coated metal to be formed gradually 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

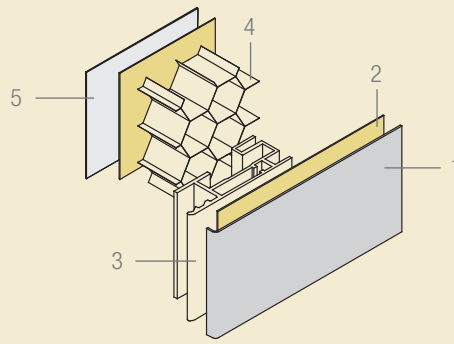
TECHNICAL DATA

The HunterDouglas® QuadroClad® Ventilated Rainscreen Façade Systems combine several manufacturing processes that together result in optimum quality control and maximum flexibility.



Coil Coating typical characteristics

Coating thickness	EN 13523-1, ISO 2360	24-32 micron
Gloss level	EN 13523-2, ISO 2813	28 +/- 3 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, ISO 4628/2	1,000 hours less than 2 mm creep
Saltspray	ISO 7253	Too mild for aluminium (No result)



COMPOSITE BUILD-UP

- 1 = Pre-coated and roll formed aluminium external skin
- 2 = Adhesive film
- 3 = Aluminium extrusion
- 4 = Aluminium honeycomb
- 5 = Pre-coated aluminium internal skin

PRODUCT SPECIFICATIONS

External skin	: Coil-coated aluminium with Luxacote® or PVF2 coating (other base metals and coatings available on request) 0.95 mm thick
Internal skin	: Coil-coated aluminium with protective coating 0.5 mm thick
Core	: Aluminium honeycomb
Edge extrusion	: Extruded aluminium, mitred and crimped to seal each panel; fixing recess integrated in panel
Wall bracket	: Type 100 (100 mm insulation thickness), Type 150 (150 mm insulation thickness) and Type 200 (200 mm insulation thickness); Slotted holes provide +/- 25 mm depth and +/- 10 mm horizontal adjustment
Support Rail	: Extruded aluminium profile for maximum rigidity (where required). Standard length 7,200 mm. The rail acts as a vertical drainage channel
Fixing plates	: Fully adjustable in vertical direction with integrated anti-vibration gaskets
Panel size	: Maximum modular size 1,500 mm x 10,000 mm
Windows	: Flush and Recessed. Twin-colour powder-coated or anodised 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 16,500 people in our companies with major operation centres in Europe, North America, Latin America, Asia and Australia.



Promoting sustainable
forest management
www.pefc.org



Hunter Douglas products and solutions are designed to improve indoor environmental quality and conserve energy, supporting built environments that are comfortable, healthy, productive, and sustainable.



Our paint and aluminium melting processes are considered to be one of the industry standards in terms of clean production processes. All aluminium products are 100% recyclable at the end of their lifecycle.



HunterDouglas

FAÇADES

ARCHITECTURAL SERVICES

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

Innovative Products Make Innovative Projects

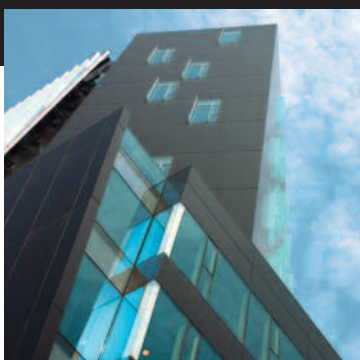
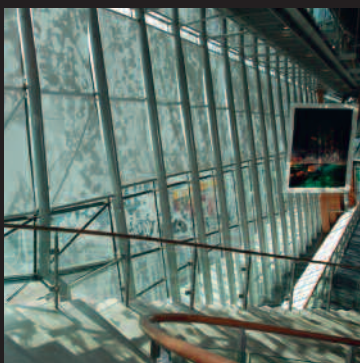


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WINDOW COVERINGS

CEILING

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