



Translucent Facades

Express your creativity – start planning with Rodeca

Aesthetics
Functionality
Efficiency



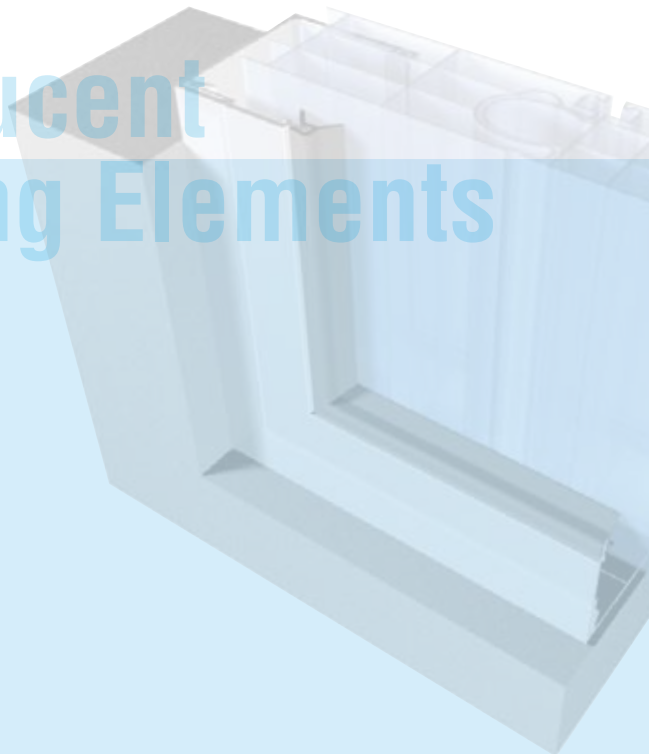
Translucent facades

Facades reflect in many ways the function of clothing. They should be aesthetically pleasing and underline the character of the respective building as well as to fulfil all functional requirements. The connection of ecology, economy and high tech broadens the creative possibilities for facade design and determine the architectonic character of the building.

Translucent Building Elements Requirements to modern facades:

- Stability
- Weather resistance
- Heat insulation
- Daylighting and solar shading
- Sound insulation
- Fire protection
- Design

Translucent Building Elements





Aesthetics. Functionality. Efficiency.

"Multi coloured is my favourite colour"*

Differently toned facades award buildings with unique effects. They leave a distinctive impression through viewing at translucent facades from the either exterior or interior side.

The specific application of coloured facade elements creates an individual design, which can be adjusted to the purpose of the building.



Rodeca Design-Series for translucent facades:

COLOR - Single coloured panels in standard and custom made colours

BI-COLOR - Interior panel layer differently coloured than exterior panel layers for 3D effects

DECO-COLOR - Exterior panel layer differently coloured than interior panel layers for design effects

HEATBLOC - Solar heat reflection – natural daylight yes, overheating no

REFLEXA - Panel surface with metallic look pigmentation

LUNA - Fluorescent surface that absorbs daylight and glows at night

DUO-COLOR - The colour division between the exterior and interior panel colour is half through the panels' thickness

* "Bunt ist meine Lieblingsfarbe": Walter Gropius (1883-1969),
Co-founder of the Bauhaus



Functionality

Functional facade glazing

Rodeca has been developing and producing wall and roof system for more than 35 years. Virtually imbreachable and insulating facades sometimes have to be resistant to extrem conditions, i.e. sport, industrial and commercial buildings. The highly impact resistant multi wall panels and sheets made from Polycarbonate have proven themselves reliable as large scale wall glazing and cladding all over the world.

Functions

- Break and impact resistance
- High fire safety
- Thermal insulation down to $0.35 \text{ W/m}^2\text{K}$
- Up to 43 dB sound insulation
- Reliable for temperatures up to 110 degree Celsius
- High stability
- Low weight
- Coextruded UV-protection layer for long term longevity





Translucent wall insulation

Ecological and economical demands for planning new wall and facades, as well as for renovations of existing walls and facades, are increasingly becoming prominent. For an energy efficient wall glazing the multi wall panels offer optimal heat insulation. Further cost advantages result from the low system weight as well the comparably large free spans that can be realised with rodeca translucent building elements.

Cost arguments

- Energy efficient facades through multi wall panels
- Cost efficient primary structure through large free span
- Optimal heat insulation in all climatic zones
- U-Values < 0.8 with the new ISOCLEAR product line
- Easy and economic installation through low weight with tongue and groove system
- Solar gains
- Electricity savings from natural daylight

Energy efficient heat insulation

Ug-Value ISOCLEAR, < 0.8 W/m²K

Ug-Value double glazing, 2.8 W/m²K

Ug-Value single glazing, 5.8 W/m²K

Depending on the kind of installation and the initial situation ISOCLEAR surfaces can reduce energy losses by up to 80%.

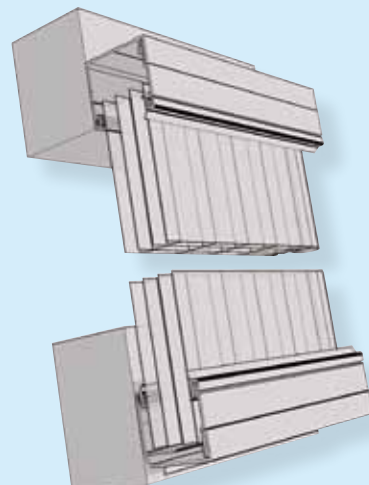
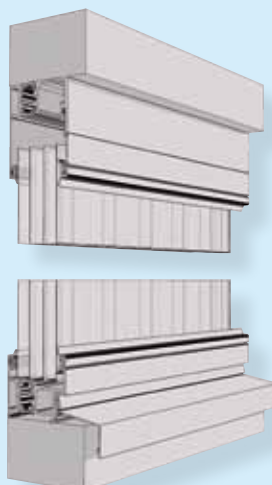
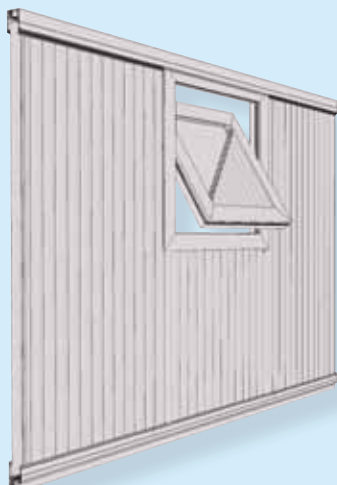
Energieeffizienz



Rodeca is member the "Exportinitiative Energieeffizienz" (export initiative energy efficiency) of the German Ministry for Economy and Technology

System

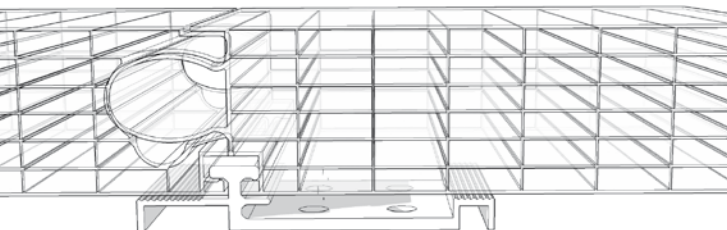
Rodeca product range



Rodeca Facade Systems, more than just the sum of its components

The combination of well proven system components results in a manifold of possibilities for facade design, for example for:

- Curtain facades
- Daylight facades
- Decorative facades
- Function facades
- Translucent heat insulated walls/facades



The facade system

The Rodeca facade system has proven itself reliable in numerous projects from the cold of Siberia to the heat of Australia. The facade systems' main component are the modular interlocking polycarbonate panels:

- Multi wall panels from polycarbonate with up to 12 layers, tongue and groove coupling, fastening slot and cover lip
- Thermally broken frame profiles
- Combination with natural smoke-heat evacuation
- Variable window and door elements
- Fasteners, gaskets and system accessories

Summary of Advantages

- Virtually imbreakbale, 200 x tougher than glass
- Light transmission from 5 to 80% depending on type and colouration
- Excellent heat insulation $U_g < 0.8 \text{ W/m}^2\text{K}$ for energy efficient facades
- Lean facade construction through large free span capacity
- UV-coextrusion for long term durability
- Solar heat reflection with HEATBLOC surface
- Sound insulation from 21 to 43 dB
- Fire safety according to German and European norms
- G-Values down to 0.12 depending on type and colouration

Make use of our long term experience for the development of innovative facade concepts or for the renovation of existing facades.

Product reference	Building width	Thick-ness	Number of layers	U-Value* depending on installation situation
PC-coex translucent building elements for mullion free wall and roof glazings				
PC 2540-4 MC	500	40	4	from 1.30 - 1.60
PC 2540-4	500	40	4	from 1.30 - 1.50
PC 2540-6	500	40	6	from 1.10 - 1.20
PC 2540-7	500	40	7	from 1.00 - 1.10
PC 2550-10	495	50	10	from 0.80 - 0.89
PC 2560-12	500	60	12	from 0.71 - 0.77
Einheit	mm	mm		W/m ² K

For additional information please refer to our technical manual

* according to DIN ,ISO 6946:2008 and 10077-2:2008



Design Series – Translucent building elements for the buildings of tomorrow

The combination of design and function offers almost unlimited possibilities in facade design. Numerous planners, domestic and abroad, use this freedom in creativity for unique buildings.

COLOR

In this range the multi wall panels are completely coloured. Apart from standard colours the panels can also be produced in custom made colours.

BI-COLOR

The interior panel side is coloured differently than the exterior panel side. This colouration with a special colour pigment creates three dimensional illumination and colour effects, which appear differently depending on level of daylight and perspective.

DECO-COLOR and DUO-COLOR

The exterior panel side is differently coloured than the interior panel side. This makes the façade non transparent from outside and offers non blinding daylight in the interior. A HEATBLOC surface prevents solar overheating during the summer.

CDC-Crystal Design Center
Asia's largest Lifestyle Design Center
BI-COLOR + HEATBLOC

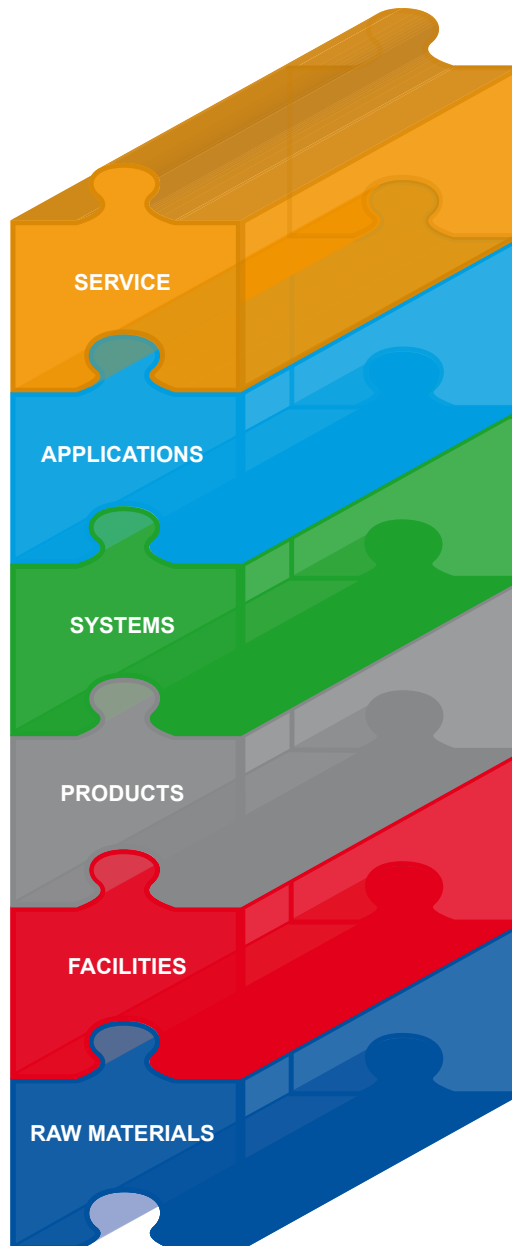
Laban Center, London – BI-COLOR
Architect: Herzog & de Meuron
Awarded the Stirling Prize 2003

Translucent Design



Rodeca Facade System – where everything fits together:

Raw materials **Facilities** Products **Systems** Applications **Service**



- Consultancy
- Development
- Planning
- Project management

- Walls and Facades
- Roof
- Renovation
- Design facades

- Solar facades
- Rooflight systems
- Translucent wall insulation
- Door and smoke-heat evacuation systems

- Translucent Building Elements
- Multi Function Panel
- Design Series
- Rooflight systems

- Engineering and construction
- Tooling development
- Complete Extrusion lines

- Development
- Refinement
- Recycling



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Further project references and applications for example for roof systems can be found on www.rodeca.de (page can be displayed in English, Italian, Russian)

... and when will you start planning with rodeca?