ROYAL MHB

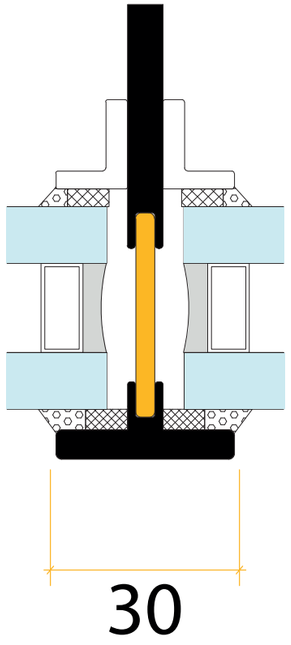


MORE LIGHT!

Ultra-slim thermally broken solid steel profile systems for windows, doors and facades



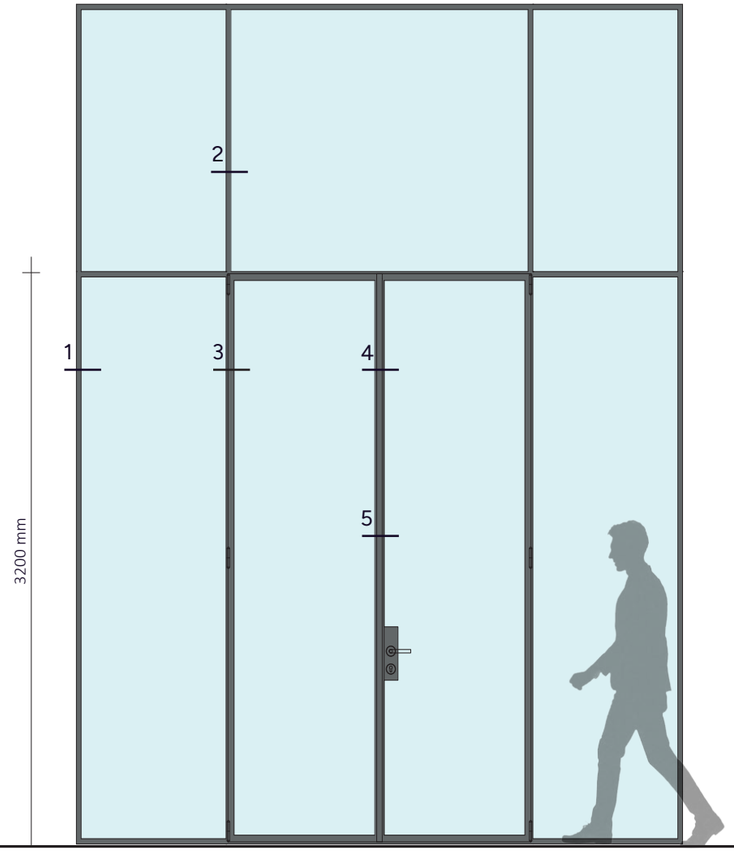

PURE
SOLID
STEEL



THE WORLD'S SLIMMEST...

" The SL30-ISO® profile is one of Royal MHB's most valued innovations. It makes use of the specific qualities of steel to create a very slim, strong and durable profile that is highly wind and watertight and has insulation values few others can match.

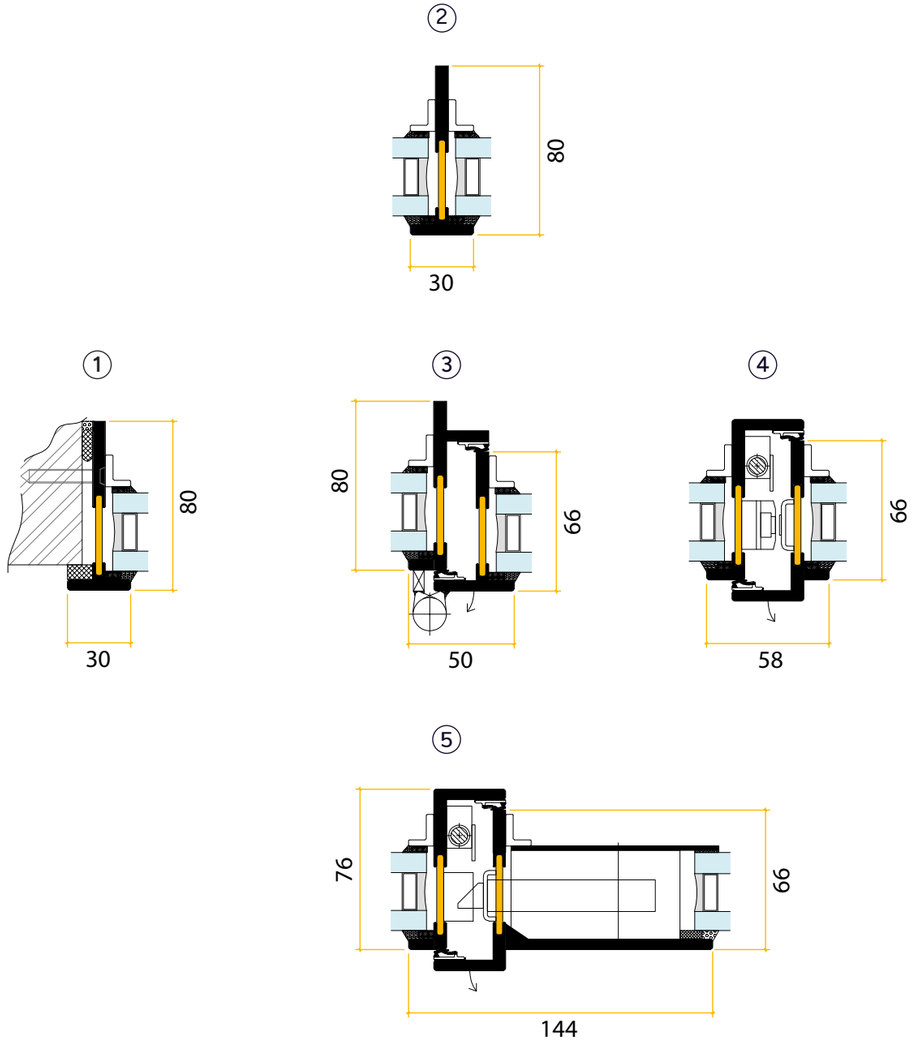
With a sight line of 30 mm it makes it the slimmest steel profile system on the market today. "



... IN EVERY DETAIL

The Royal MHB sharp-edged steel profiles allows for the creation of ultra-slim facades, windows and doors. The combination of the inherent strength of steel with smart design gives architects the freedom to play with large glazing areas.

The very slim sight line of the SL30-ISO® profile integrates perfectly into the outlines of a building. Being almost invisible, it allows huge amounts of light to flood in.





Distillery Monkey 47, Germany

DUTCH MASTERS OF STEEL SINCE 1667

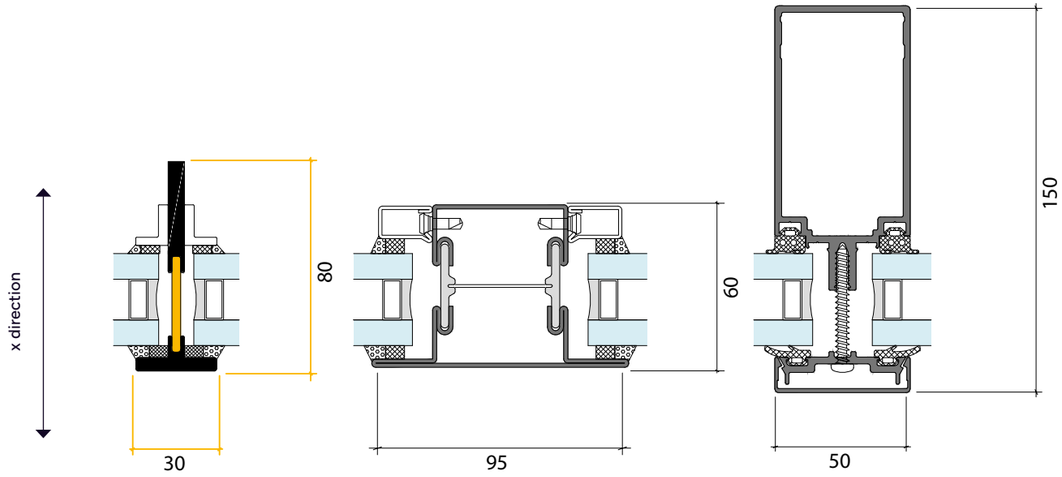


THE POWER OF SOLID STEEL

The exceptional structural strength of Royal MHB's solid steel thermally broken profiles allows for the largest glass surfaces and operable elements, without having to compromise on its ultra slim features.

STRENGTH COMPARISON

Standard Royal MHB profiles have a very high bending resistance value in comparison with other common profile systems.



SL30-ISO®, solid steel

Ix = 35,89 cm^4

Folded sheet metal

Ix = 22,1 cm^4

Aluminum curtain wall

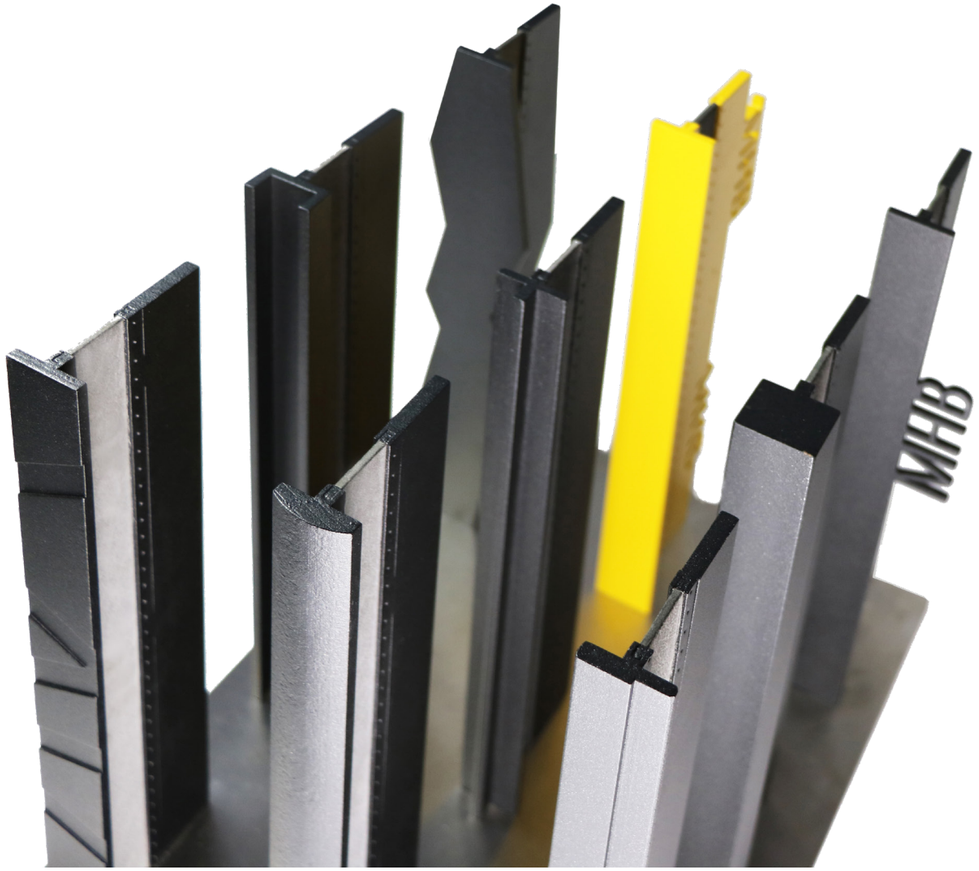
Ix = 29,8 cm^4 **

* The strength of glazing systems is determined by the ability to resist bending. This stiffness is expressed in the Ix value. The higher the Ix value, the stronger the profile system is in the direction of X.

** Expressed in Ix of steel.



Mountain home, USA



ROYAL MHB COMPANY

Focus on steel

Royal MHB comprises of 200 people focusing exclusively on the development and production of steel windows, doors and facades.

Inhouse design and development

Royal MHB is the sole designer and developer of all its windows, doors, and facades. This allows for the integration of in-depth product knowledge and experience from manufacturing into the development and continuous improvement of its systems. More over, it allows for unique, project specific solutions.

Exclusive manufacturer

All products are exclusively manufactured by Royal MHB allowing for optimal quality control and the crucial specialization and optimization of craftsmen skills.

ROYAL MHB PRODUCTS

Strength

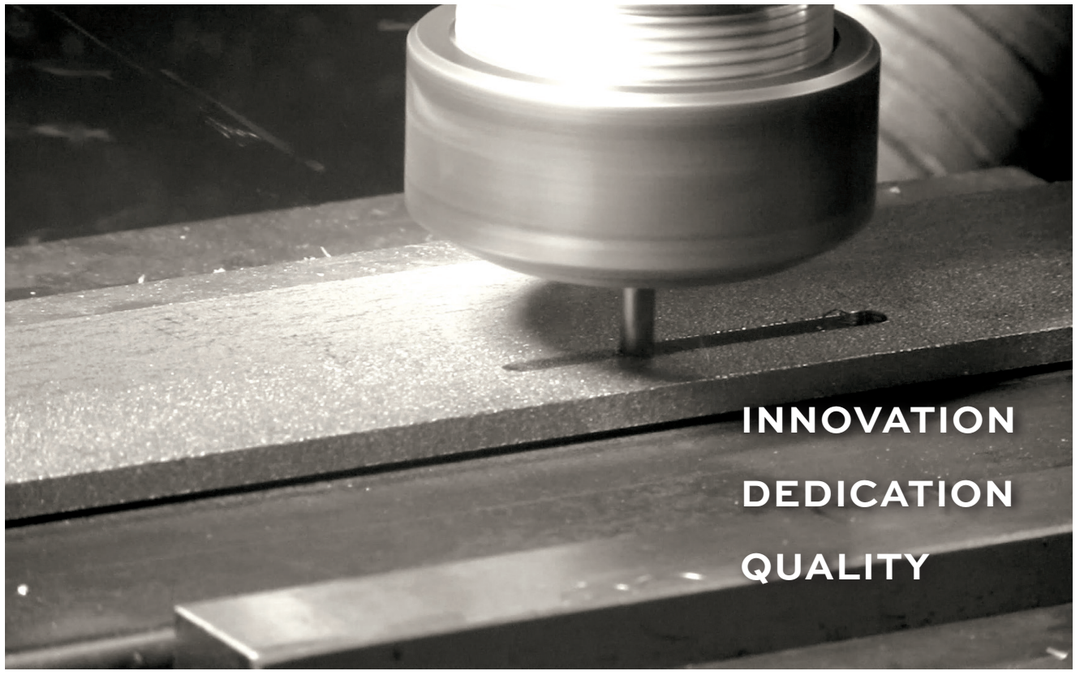
The Royal MHB profile system is the slimmest and strongest profile system in the world. The patented crimping technology allows the thermally broken profile to maintain the strength of solid steel.

Aesthetics

The structural strength and design of Royal MHB's profile systems allows architects to create transparent steel facades with exceptional design freedom. Even for the largest units, in every configuration, the narrow sightlines of 30 mm (fixed frame) and 50 mm and 58 mm (inward- and outward opening elements) can be maintained. Different elements can be combined and connected without the need for additional stiffeners or structural mullions allowing the narrow sightlines to continue throughout the facade.

Performance and durability

Royal MHB can guarantee the maximum performance values in terms of wind-and water tightness, burglar resistance and thermal insulation based on most stringent European standards and certifications. The solid steel (5 and 6 mm) profiles combined with the best surface treatment available for steel, result in a service life of 100 years.



Versatility

Royal MHB systems are available in various depths allowing for a wide array of technical possibilities in every possible configuration. Adapting or creating custom made profiles is not an obstacle to the realization of specific projects.



Brookview, USA

DUTCH MASTERS OF STEEL SINCE 1667





Remko, Mark and Simon Mathijssen



MHB head office and production facility, located in Herveld, the Netherlands

A TRADITION OF CRAFTSMANSHIP & INNOVATION

> " Our mission to bring more light into this world comes from the heart. It is what we stand for as a company and is translated in everything we do. "

Simon Mathijssen, Managing Director Royal MHB

In the year 1667, Mathijs Henricx started paving the way for the company as a master blacksmith in the centrally located Dutch village of Herveld. For more than 350 years, the age-old craft of steel mastery has been passed on from father to son. Today, Royal MHB employs over 200 steel masters focused on the development and production of steel doors, windows and facades.

Royal MHB has reinvented the door- and window industry with its thermally broken steel profile series and is leading the revolutionary reintroduction of steel as integral part of the most beautiful buildings. We combine a constant focus on innovation with top of the line craftsmanship. We do not settle for anything less than making the best and most beautiful doors and windows in the world. We believe in close collaboration with great partners.

It is our mission to bring more light into this world. We do this by creating the best steel windows, doors and facades in a true and meaningful way, contributing to a better world for everyone.



Bauhaus Dessau, DE

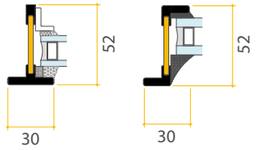
ROYAL MHB STEEL PROFILE SYSTEMS

The Royal MHB thermally insulated steel system consists of profiles with different lengths and multiple configurations offering an ideal engineering solution for every project.

2011

Classic-ISO®

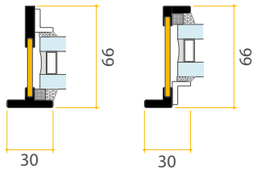
In 2011, Royal MHB designed a new steel window profile for the renovation of the Bauhaus buildings.
Classic-ISO is an adaptation of the SL30-ISO® system to meet the aesthetics of the original Bauhaus profiles while preserving its outstanding insulation performance.



2014

Classic-ISO-PLUS®

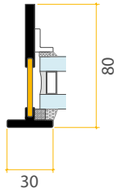
Available since 2014, Classic-ISO-PLUS® is a deeper and stronger profile which permits operable elements with bigger dimensions than with Classic-ISO while preserving the same appearance.



2009

SL30-ISO®

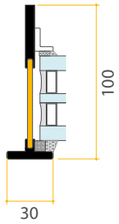
On the market since 2009, this profile is ideal for new, contemporary designs due to its minimal dimensions. Nevertheless it can also be used to renovate historical and listed buildings that have to meet today's technological performance standards. It allows double glazing and highly glazed panels.



2013

SL30-ISO-PLUS®

This variation on SL30-ISO® has been available since 2013. The profile is deeper and stronger. It can also be fitted with triple glass for an even better insulation performance.





Taula house, USA

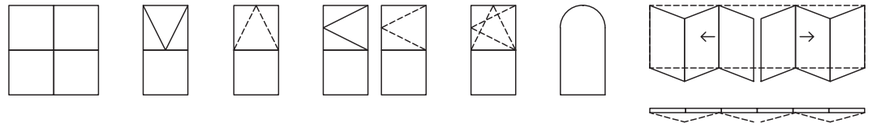


Cook Ranch, USA - Farmer Payne Architects

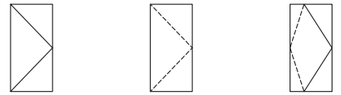
SYSTEM CONFIGURATIONS

This is an overview of the baseline configurations of Royal MHB's profile systems. Bespoke solutions outside the baseline product range and sizes are also possible.

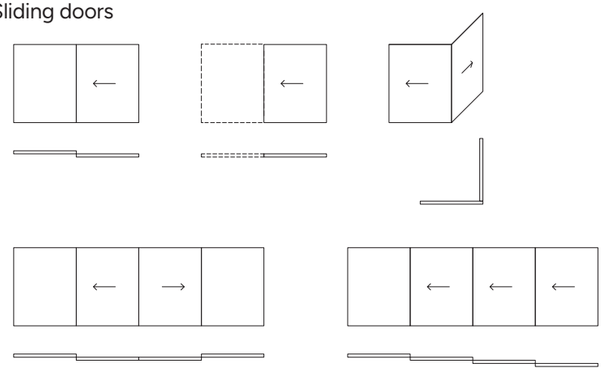
Windows



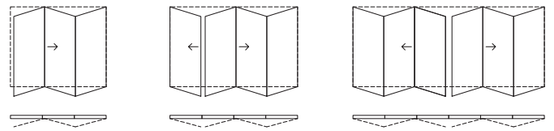
Doors



Sliding doors

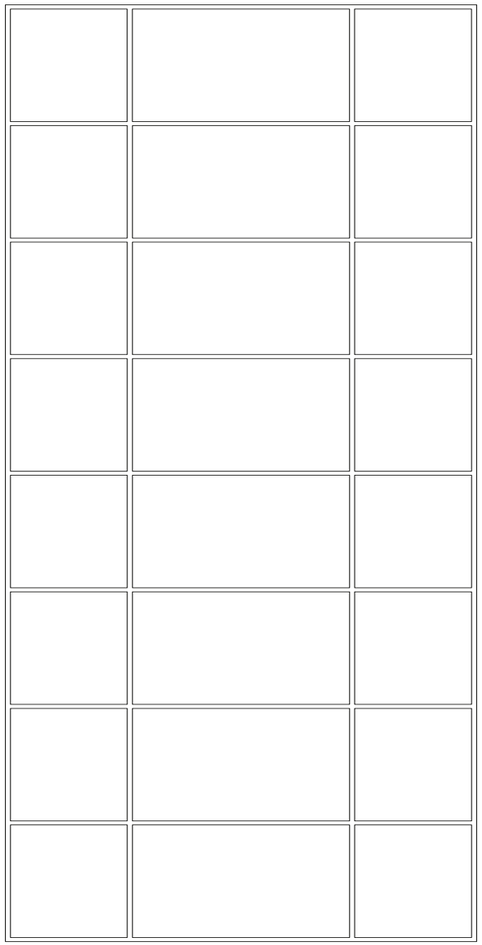


Folding doors





Summit star, USA

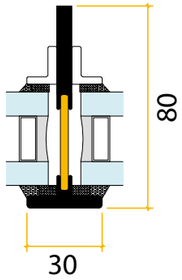


FIXED GLAZING

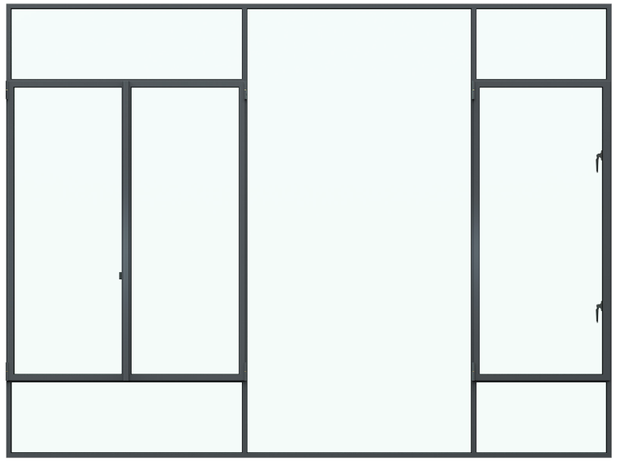
Royal MHB's fixed glazing window profiles make it possible to realize transparent steel facades with large (True Divided Lite) glass surfaces with minimal sightlines of 18 mm (building to glass) and 30 mm (glass to glass).

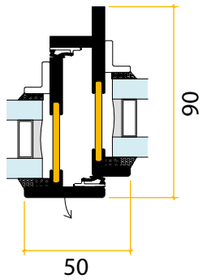
The exceptional structural aspects of Royal MHB steel profiles allow architects to design bigger and higher frames for large glass panes, bringing in more light and creating breathtaking views.

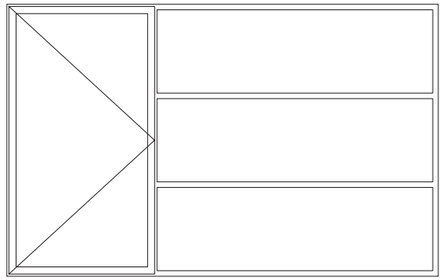




WINDOWS







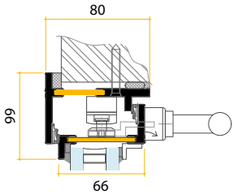


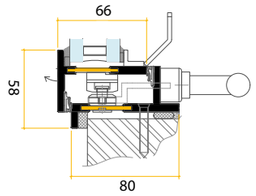
Edge of wild, USA



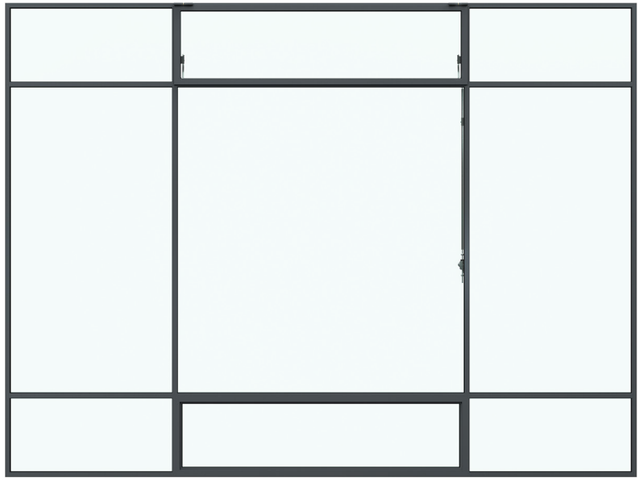
Laren, NL

TOP & BOTTOM HUNG WINDOWS

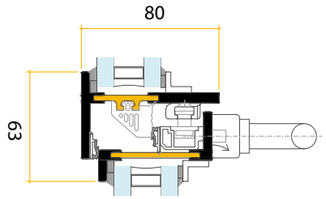




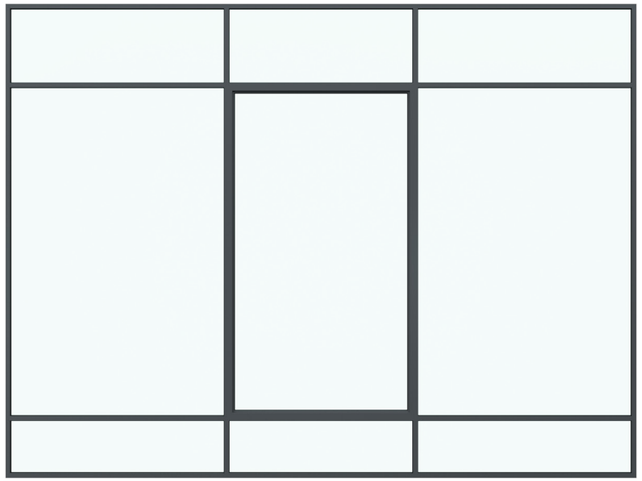




TILT & TURN WINDOWS





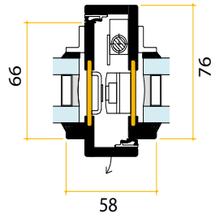


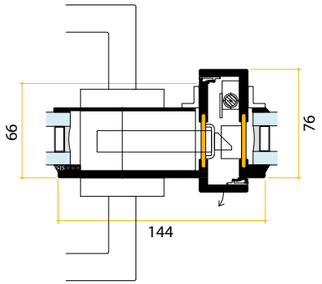
Utrecht, NL

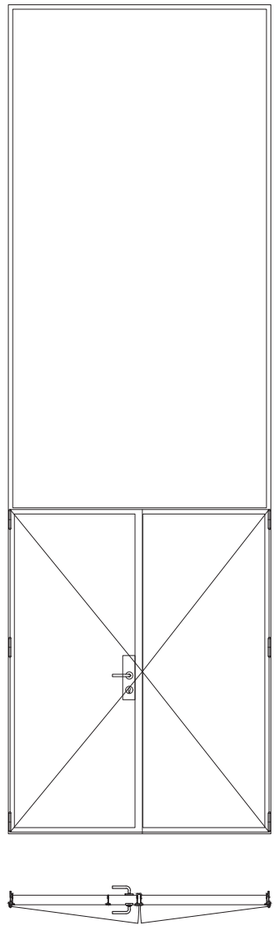


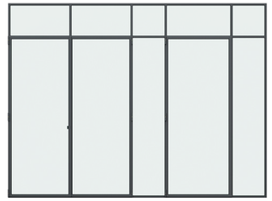
Cook Ranch, USA - Farmer Payne Architects

DOORS





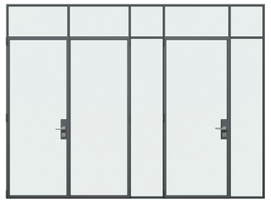




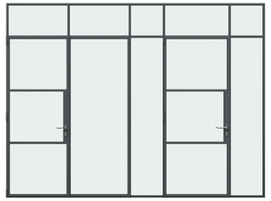
FRENCH DOOR



LOCKING CASE



FLOATING LOCKING CASE

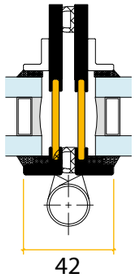


PARTIAL LOCK MULLION

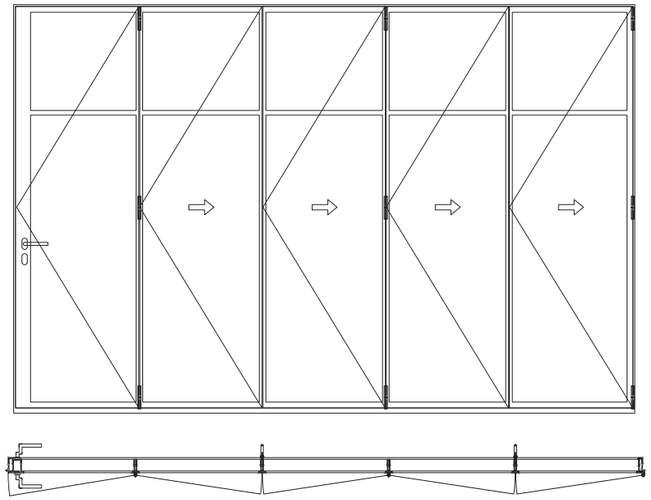


LOCK MULLION

FOLDING DOORS



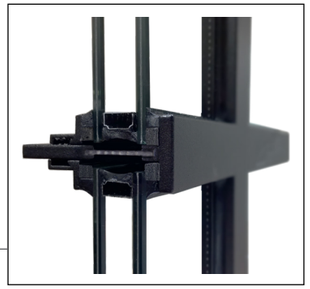




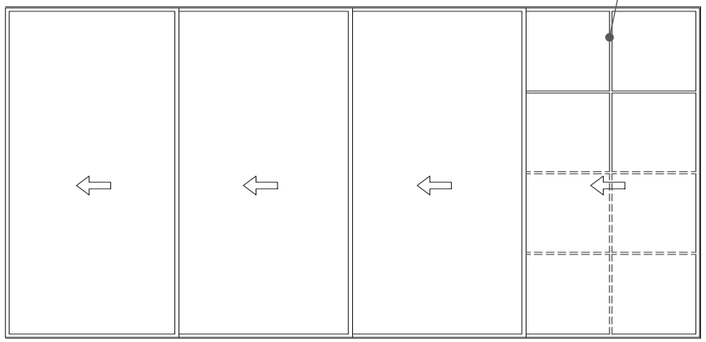
Rotterdam, NL

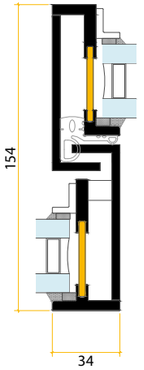


SLIDING DOORS



True Divided Lite





Pocket

Up to 3 tracks



Sidelight

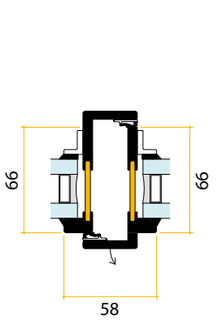
Up to 3 tracks

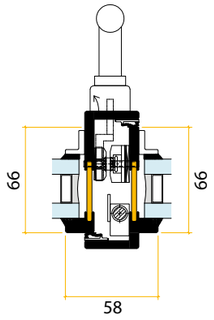


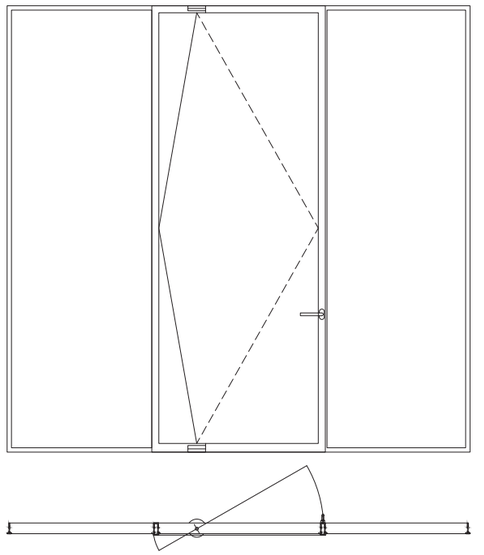


Brookview, USA

PIVOT WINDOWS & DOORS









Royal MHB folding door handle

HARDWARE FITTINGS

Royal MHB window and door systems come with a large variety of hardware. These are specifally designed and manufactured by Royal MHB to complement the high quality steel profile systems.

Made of solid stainless steel, Royal MHB fittings can be powder coated in our in-house surface treatment facilities.



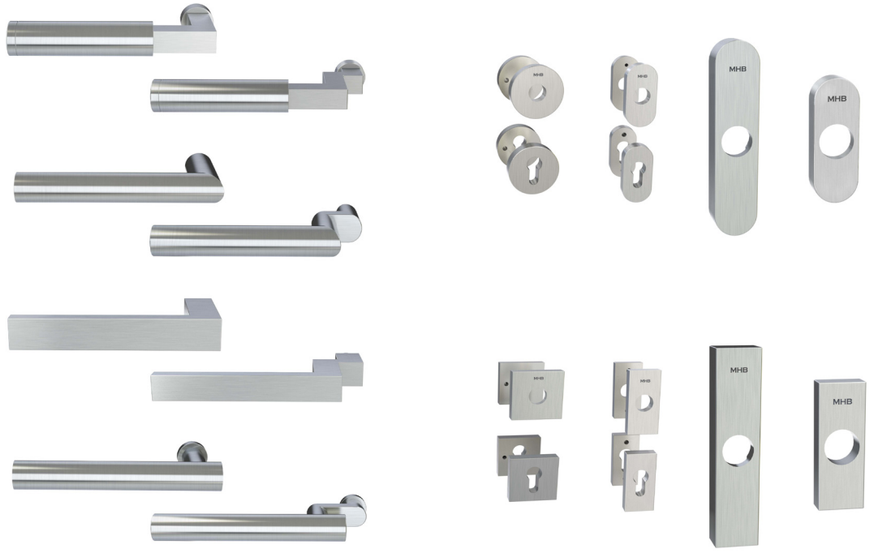


Royal MHB's multipoint lock system

ROYAL MHB HARDWARE LINE

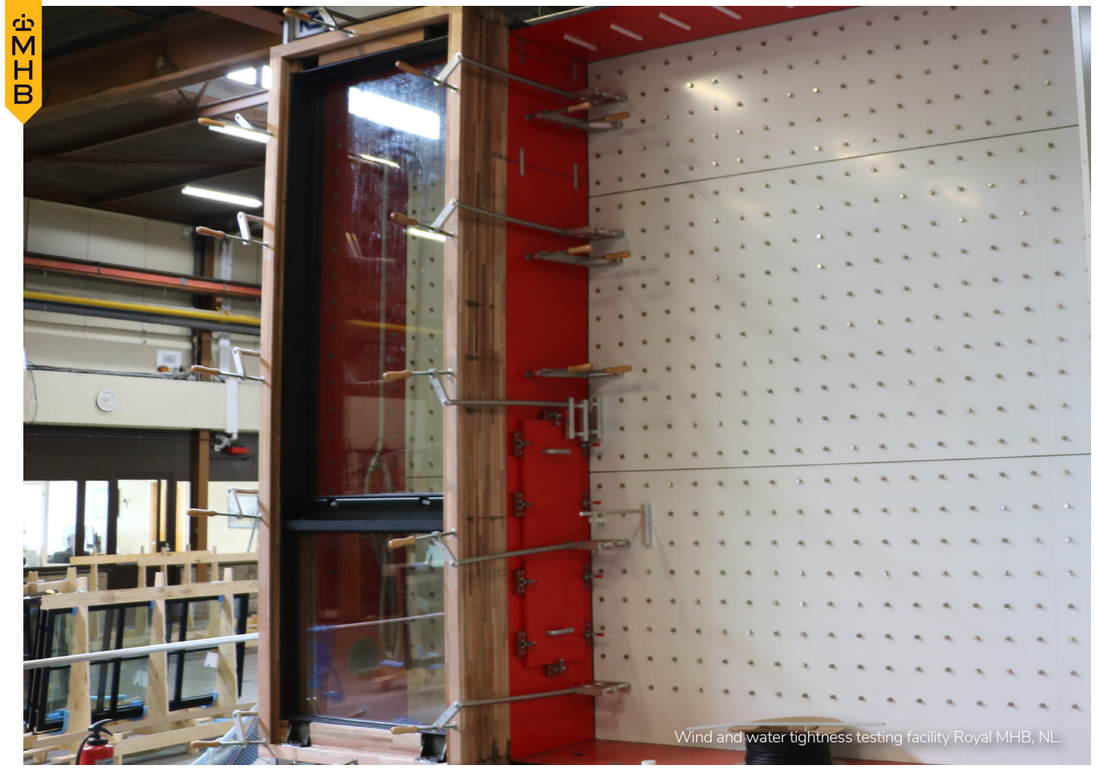
Royal MHB has designed a high quality, solid stainless steel line of handles and escutcheons with a unique advantage: they are all interchangeable. All the handles and escutcheons are incredibly durable and have a genuinely different touch. The Royal MHB hardware line is available for all Royal MHB concealed closing system configurations and can be powder coated in any RAL colour.

The design of our products is done completely in-house, this guarantees full adherence to the highest quality standards.









Wind and water tightness testing facility Royal MHB, NL.

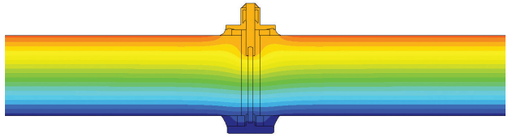
WIND AND WATER TIGHTNESS

The SL30-ISO® steel window system is able to conceal a fully integrated water drainage system within the profiles thanks to the system's superior sealing components. This results in a high level of wind and water tightness without any visible holes or rain caps.

All Royal MHB products comply at minimum with class 4A - 150Pa of EN12208 for water resistance (with sills) and with class 4 of EN12207 for wind resistance (sliding door with class 3). When required, Royal MHB can guarantee a higher performance.

THERMAL INSULATION

Royal MHB products achieve excellent insulation values thanks to the high performance thermal separation as well as its narrow sightline offering minimal exposure to the cold.



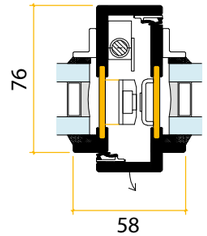
Royal MHB's window and door systems provide U-window values as low as 0.7 W/m2K in accordance with EN-ISO 10077-2.

Royal MHB'S window and door systems are also NFRC tested (100/200/500-2014)*
Here is a selection of performance values for fixed glazed windows (SL30-ISO®) achieved with three types of glazing according to NFRC standards. Test results as low as shown below:

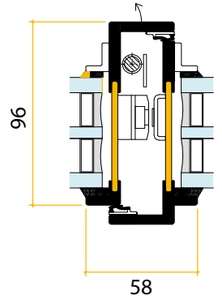
Glazing type:	Fixed glazing	Solar glazing	Low-E
U-factor:	0.16	0.27	0.27
SGHC:	0.22	0.16	0.30

National Fenestration Rating Council®

* NFRC certified products available exclusively in USA via Royal MHB distribution partners.



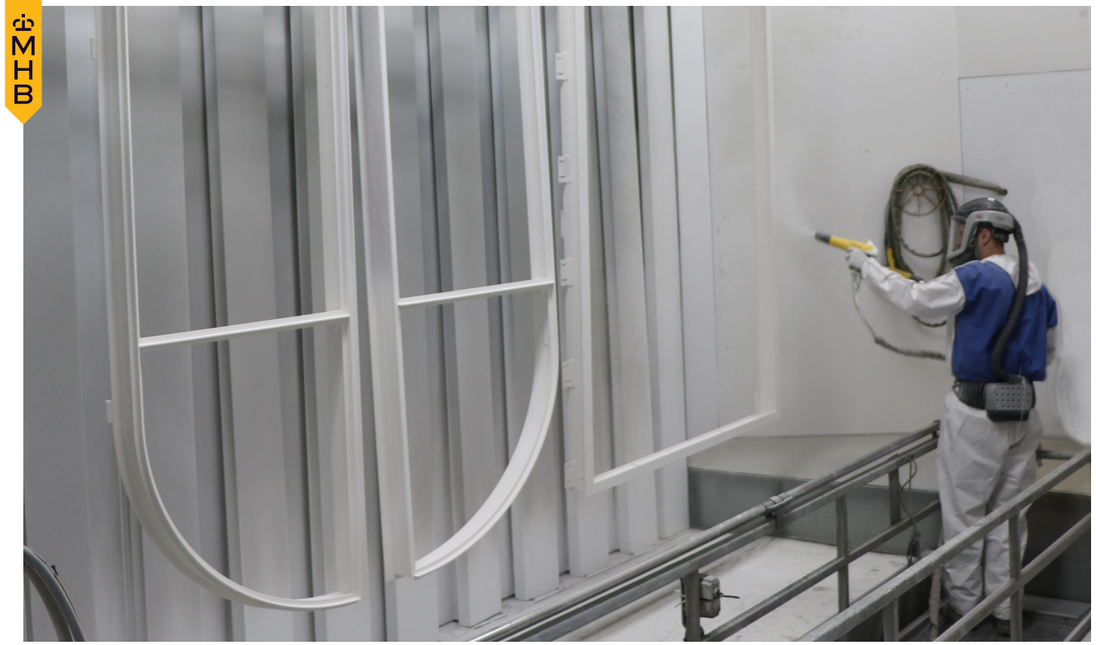
SL30-ISO®



SL30-ISO®-PLUS

Double and triple glazing

Royal MHB's profile systems are developed for standard use of double-pane and triple pane glazing with possible glass thickness (with glazing beads) ranging from 10 mm (Classic-ISO® IG) to 69 mm (SL30-ISO®-PLUS IG). The narrow sightlines are maintained for every configuration.



> By using the Qualisteelcoat certification we ensure our customers the best surface treatment possible. To achieve the highest quality we powder coat in-house.

SURFACE TREATMENT

Proper surface treatment is crucial for a product's life span. All Royal MHB windows and doors are powder-coated in Royal MHB's powder coating facility. Royal MHB only uses the "Super Durable Quality" of Axalta Coating Systems to ensure the best service treatment available.

Powder coating

Powder coating is the best available method of preserving steel. Out of all treatments, powder coating provides the thickest protective layer, with minimal required upkeep. Royal MHB is unique worldwide to have a Qualisteelcoat C5 certification as a steel windows and doors manufacturer, the highest possible certification for steel surface treatment.

Quality, efficiency, durability

All applied coatings and colors are certified as "super durable quality" and fulfill the requirements for outdoor applications worldwide, we offer all RAL colours.

"Super Durable" powder coatings have been specially developed for steel windows and door frames as well as facades and meet Qualicoat class 2 GSB master as well as AAMA 2604 - 2605 specifications.

Super Durable powder coatings have been tested according to the Florida tests (three years). They clearly exceed all Qualicoat specifications for gloss retention and colour stability.

Quali Steel Coat



SURFACE TREATMENT

Depending on the location of the project, MHB applies different surface treatments:
MHB distinguishes between 2 classifications:



1: Class C3 - Medium corrosive environment* - ISO 12944-2:2018

Gritblasting SA 2.5, a 3-layer powder coating:

- The first layer is a 60 µm thick zinc-containing primer.
- The second layer is a 60 µm thick sealing primer.
- The third layer is a 60 µm thick Super Durable top coating (see MHB colour collection).

2: Class C5 - Very high corrosive environment** - ISO 12944-2:2018

Gritblasting SA 3.0, followed by thermal spraying and a 2-layer powder coating:

- The first layer is thermal spraying of a 60 µm thick zinc layer.
- The second layer is a 60 µm thick sealing primer.
- The third layer is a 60 µm thick Super Durable top coating (see MHB colour collection).

* Medium corrosive environment: Applicable in urban and industrial areas with moderate pollution. Production halls with high humidity and some pollution: laundries, breweries, food processing industry.

** Very high corrosive environment: Applicable in industrial areas and coastal areas with high humidity, high salinity and aggressive atmosphere. Buildings or areas with almost permanent condensation or pollution.

ROYAL MHB REMBRANDT COLLECTION

The surfaces of Royal MHB's exclusive Rembrandt Collection finishes consist of the actual metal, for example bronze, in its solid form. These surfaces have the physical and optical properties of the metal used and will take on a unique and characteristic look. You can choose to further refine the characteristics by sanding, polishing, patinating or oxidising the surface.

The metal design surface will evolve in the same fashion as the metals would in its solid and original form. Color variation may occur between different frames as this is a normal characteristic of the metals used. Over time this will give the frame an even more unique appearance. Sanding, polishing, patinating and oxidising is very labour intensive and is real craftsmanship done by hand, giving every frame a unique character. Minor differences in color, color effect and texture may occur. Characteristic within its kind, but always different. For all configurations Royal MHB advises to use the aluminium L-shaped or triangle shaped glass stops, for optimal results.

Testing

Royal MHB prides itself on providing the highest quality surface treatment, to ensure the best customer experience. A key aspect of our high quality is testing. Royal MHB implements rigorous testing procedures to attain the highest quality finishes available, enabling Royal MHB to create products that last for generations.

Royal MHB exclusive finishes have successfully underwent 3.000 hours of rigorous independent QUV-Testing and 720 hours of Salt Spray Testing according to the most stringent European quality norms (NEN-EN ISO 4892-3 and NEN-EN ISO 9227 NSS respectively).




Amerongen, NL



Big Green Egg office, NL

100+ YEARS SERVICE LIFE PREDICTION

Royal MHB thermally insulated steel profile systems have received a “more than 100 years” Service Life Prediction (according to ISO 15686-2).

The SLP method for metal profile systems has a standard maximum set at 100 years, making the 100+ years SLP certification for Royal MHB unprecedented. The Service Life prediction has been audited by the external agency ABT.

The 100+ years SLP certification has been achieved based on the following unique Royal MHB steel profile system characteristics:

- ✓ Royal MHB uses solid steel and solid stainless steel instead of folded thin-walled sheet material.
- ✓ As solid steel is used, the surface treatment reaches and protects every inch of the profile system.
- ✓ All pre-treatment and surface treatments take place at the same production site; the Royal MHB factory. This also means there is no transport necessary between processing steps, decreasing the risk of contamination.
- ✓ Application of a sustainable top coating (Qualicoat 2).
- ✓ Royal MHB applies regular independent quality testing. This ensures the highest quality.



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