



GLASSLINE

THE ACHIEVEMENT OF FRAMELESS ARCHITECTURE

BALARDO

core / core hd / hybrid / smart / steel / wave

ALL-GLASS RAILING SYSTEMS



FOREWORD

Dear Sir or Madam,

We are proud to present a new collection of outstanding innovations for 2019. The most important of these is also a world first: A glass railing with transparent edge protection – our BALARDO *firstglass* glass edge. As a result, the slogan we have chosen for the BALARDO all-glass railings is „The achievement of frameless architecture“. This slogan neatly summarises the exceptional design and functionality of our railing systems.

At the same time, we have improved our BALARDO series and expanded it through the addition of BALARDO *hybrid* and BALARDO *smart*. Our renowned BALARDO *alu* has been rebranded as BALARDO *core*.

With the entire BALARDO range, we now have the definitive answer to any challenges in buildings or for building shells. BALARDO has become synonymous with all-glass railing systems and the benchmark against which other products are measured – this is a source of great pride for us.

So why not challenge us yourself?

Kind regards,

A handwritten signature in blue ink, appearing to read 'Thomas Utsch'.

Thomas Utsch
Managing Director

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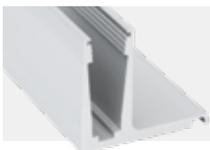
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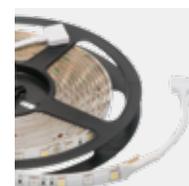
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PYLON



FLOOR-TO-CEILING GLAZING



PRIVACY GUARD



STADIUM / GRANDSTAND





PARAPET



BALCONY

BALARDO

*core / core hd / hybrid /
smart / steel / wave*



STAIRS /
SLOPE



CURVED
RAILINGS

Image credit:
BALCONY: 50 Hertz, Werner Huthmacher

BALARDO-FAMILY

A COMPARISON



BALARDO *core*

THE NUMBER ONE SOLUTION FOR FIXED ASSEMBLY

The lightweight all-glass railing system made of aluminium offers extreme application versatility and is a delicate and highly transparent all-rounder for both private and public construction projects.

From level surfaces to staircases and balconies right through to French balconies, BALARDO *core* knows no limitations.



BALARDO *core hd*

THE SECURE SYSTEM FOR HEAVY LOADS

In places where a sophisticated design is subjected to high loads, the aluminium all-glass railing system for heavy-duty environments is impressive thanks to its predominantly glass construction, exceptional safety and efficiency. It is specially designed for the stringent requirements of public buildings – such as galleries, sports halls or grandstands.



BALARDO *hybrid*

THE ROBUST SYSTEM WITH CONTINUOUS ADJUSTMENT

The adjustable aluminium all-glass railing has all the advantages of the BALARDO range and is sure to catch your eye thanks to its outstanding versatility. Thanks to its innovative adjustment elements with integrated adjusting screws, the panes of the railing can be adjusted to suit any installation situation – continuously, more precisely and more simply than ever before.

BALARDO

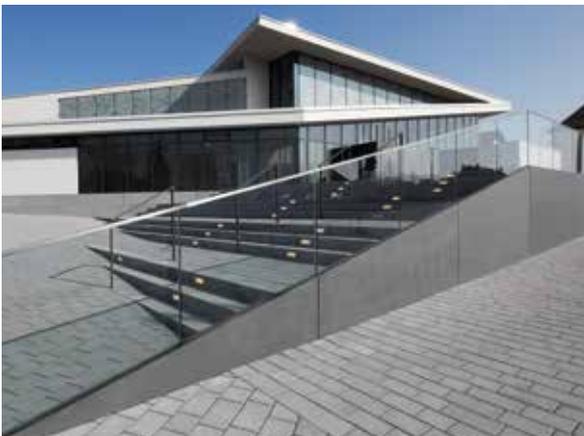
ALL-GLASS RAILING SYSTEMS



BALARDO *smart*

THE MINIMALIST SYSTEM FOR PRIVATE INDOOR AREAS

With BALARDO *smart*, GLASSLINE offers a minimalist system that is particularly well suited to private interiors. The new CLIP *smart* installation system provides ease of installation as usual. In addition to handrail and edge protection options, the system can also be protected with BALARDO *firstglass* glass edge protection, thereby offering maximum transparency.



BALARDO *steel*

THE SUCCESSFUL, TYPE-TESTED ALL-GLASS RAILING SYSTEM

This tried-and-tested, type-approved, modular steel all-glass railing system is an undisputed original. It is extremely flexible in both public and private construction projects and when used on level surfaces and staircases. Its structural strengths are particularly beneficial in the case of raised floor constructions and uneven substrates.

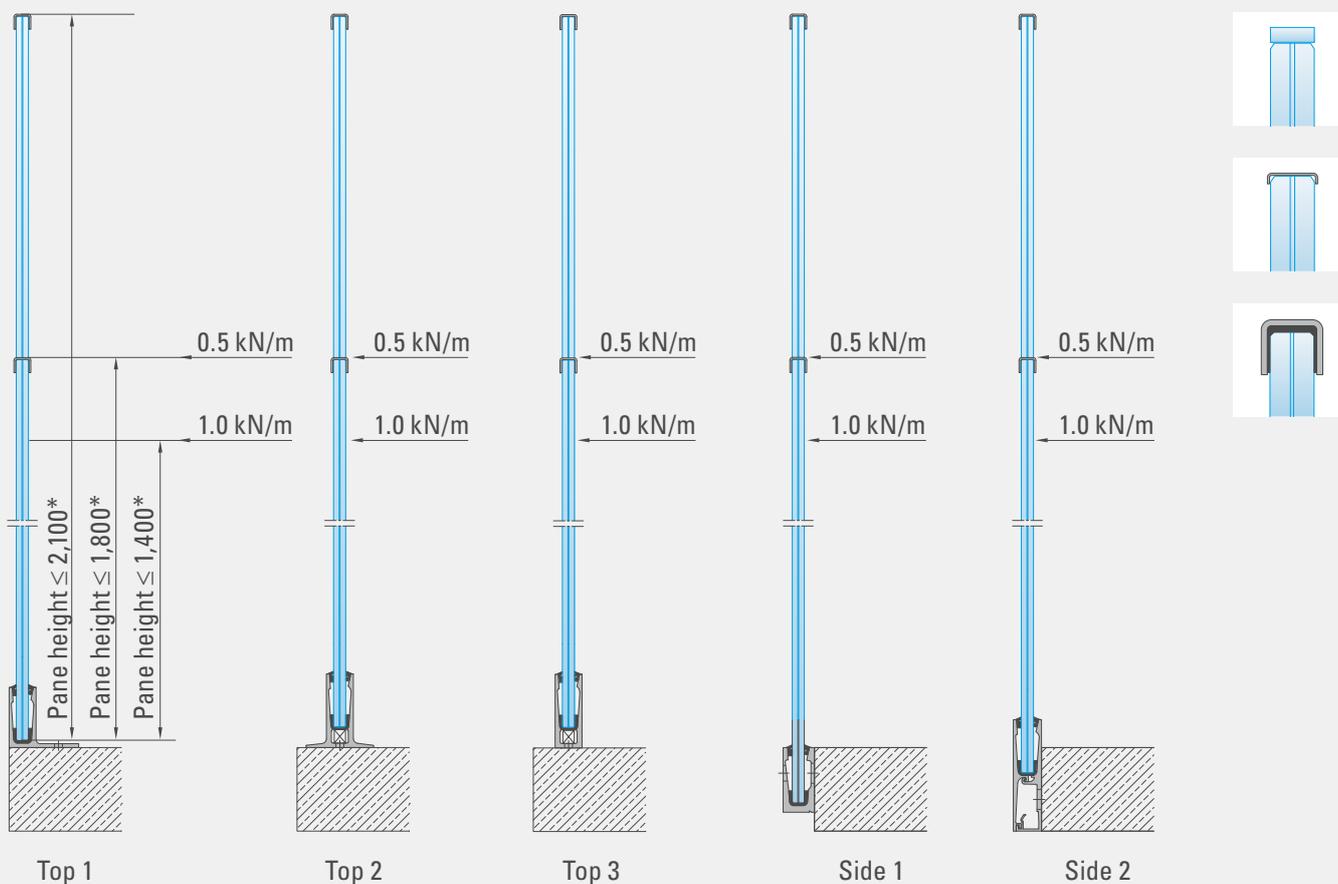


BALARDO *wave*

CURVED ALL-GLASS RAILING SYSTEMS

With its curved floor and handrail profiles, the system works well with elegantly curved building geometries and uses the aesthetic properties of the glass to turn these into highly transparent railings. Whether in public or private buildings, whether indoors or outdoors, the aluminium and steel design of BALARDO *wave* creates an atmosphere flooded with light.

BALARDO *core* (formerly **BALARDO** alu)
 THE NUMBER ONE SOLUTION FOR FIXED ASSEMBLY



Beam load up to 1.0 kN/m

- ✓ Public and private construction projects
- ✓ Indoor and outdoor spaces

Installation principle CLICK•N FIX

- ✓ Top / side connection
- ✓ Level surface / staircase

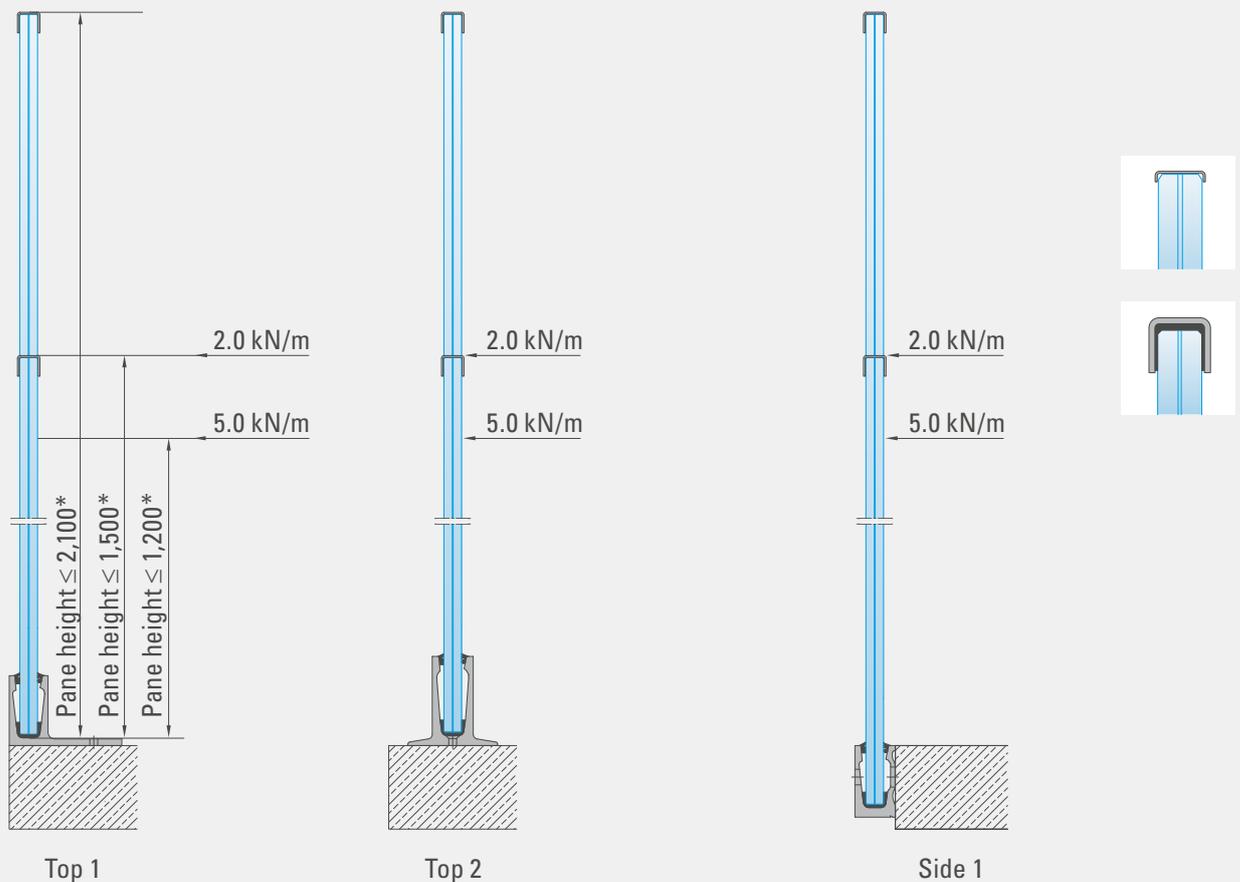
✓ **BALARDO *firstglass***

Additional product information can be found on page 12.



BALARDO core hd (formerly **BALARDO alu HD**)

THE SECURE SYSTEM FOR HEAVY LOADS



Beam load up to 5.0 kN/m

- ✓ Public construction projects
- ✓ Indoor and outdoor spaces

Installation principle CLICK•N FIX

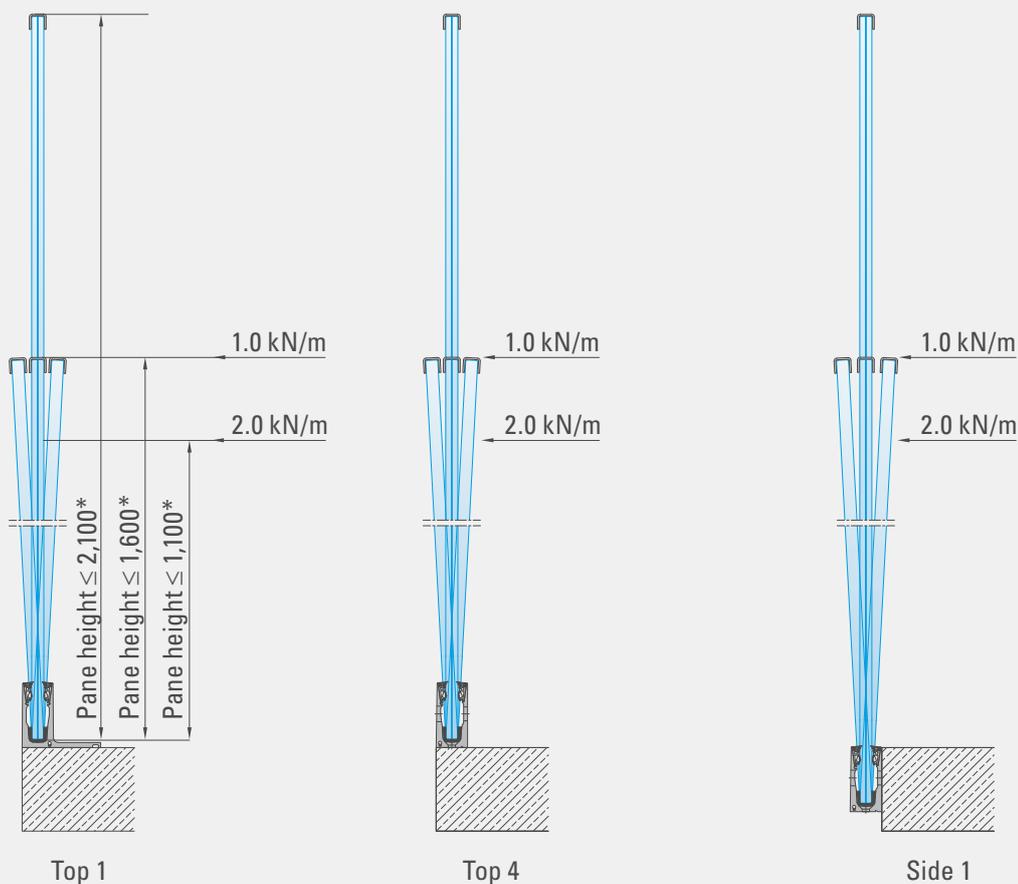
- ✓ Top / side connection
- ✓ Level surface / staircase

Additional product information can be found on page 14.



BALARDO *hybrid*

THE ROBUST SYSTEM WITH CONTINUOUS ADJUSTMENT



Beam load up to 2.0 kN/m

- ✓ Public and private construction projects
- ✓ Indoor and outdoor spaces

Installation principle CLEVERFIX

- ✓ Top / side connection
- ✓ Level surface / staircase

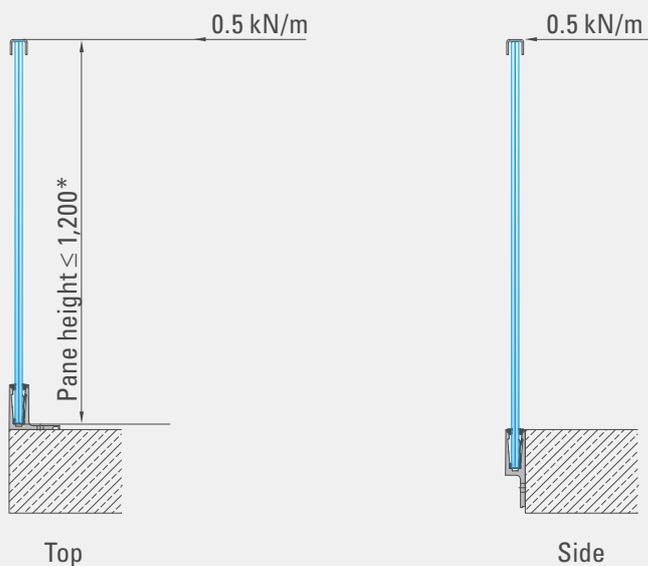
✓ **BALARDO** *firstglass* ✓ **BALARDO** *aqua control*

Additional product information can be found on page 16.



BALARDO *smart*

THE MINIMALIST SYSTEM FOR PRIVATE INDOOR AREAS



Beam load up to 0.5 kN/m

- ✓ Private construction projects
- ✓ Indoor spaces

Installation principle CLIP *smart*

- ✓ Top/side connection
- ✓ Level surface / staircase

✓ **BALARDO *firstglass*** ✓ **BALARDO *light control***

Additional product information can be found on page 18.



BALARDO *core* (formerly **BALARDO** *alu*)

THE NUMBER ONE SOLUTION FOR FIXED ASSEMBLY

The lightweight **BALARDO** *core* all-glass railing system is the tried-and-tested, delicate and highly transparent all-rounder for both private and public construction projects. In the most diverse range of applications and installation locations, the system, with its compact profiles made from high-grade aluminium, creates a well-lit and open ambience. Simply put, **BALARDO** *core* is opening up new opportunities for modern glass architecture in terms of safety, design and efficiency. From level surfaces to staircases and balconies right through to French balconies, **BALARDO** *core* knows no limitations.



THE ADVANTAGES

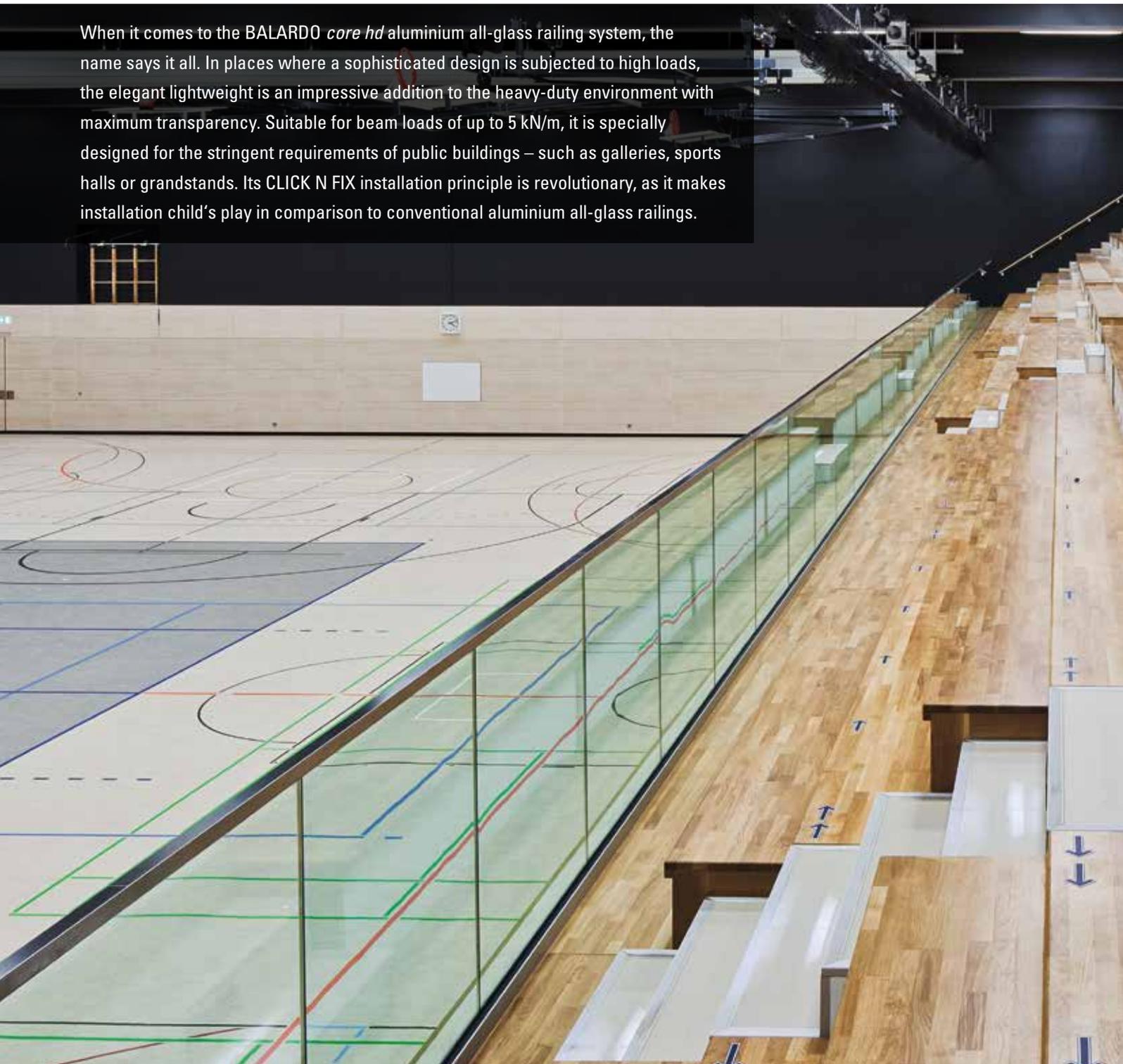
- ✓ With European Technical Approval (ETA)
- ✓ With general supervisory test certificate (AbP)
- ✓ With tested standard structural analysis
- ✓ Beam loads of up to 1.0 kN/m
- ✓ Can also be used in sports facilities, can withstand the impact of balls
- ✓ LGA-tested safety
- ✓ No approval required for each individual case
- ✓ With fall-proof function
- ✓ For railings: Pane widths of up to 6,000 mm, pane heights of up to 2,100 mm
- ✓ For public and private construction projects
- ✓ For indoor and outdoor spaces
- ✓ For level surfaces and staircases
- ✓ BALARDO *firstglass* glass edge protection optional

Specified values can be implemented with limitations.

BALARDO *core hd* (formerly **BALARDO** *alu HD*)

THE SECURE SYSTEM FOR HEAVY LOADS

When it comes to the BALARDO *core hd* aluminium all-glass railing system, the name says it all. In places where a sophisticated design is subjected to high loads, the elegant lightweight is an impressive addition to the heavy-duty environment with maximum transparency. Suitable for beam loads of up to 5 kN/m, it is specially designed for the stringent requirements of public buildings – such as galleries, sports halls or grandstands. Its CLICK N FIX installation principle is revolutionary, as it makes installation child's play in comparison to conventional aluminium all-glass railings.



THE ADVANTAGES

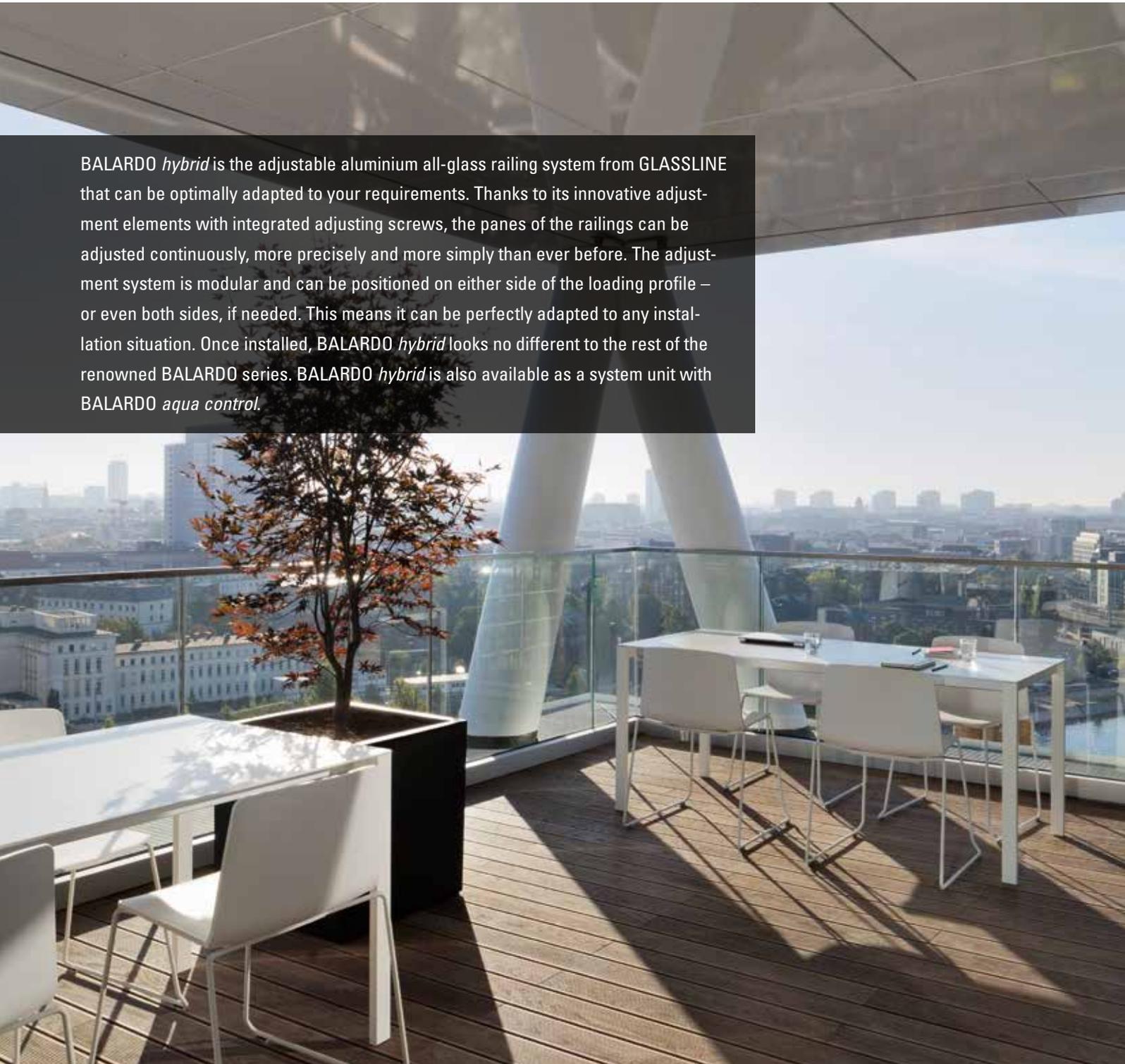
- ✓ With European Technical Approval (ETA)
- ✓ With general supervisory test certificate (AbP)
- ✓ With tested standard structural analysis
- ✓ Beam loads of up to 5 kN/m
- ✓ Can also be used in sports facilities, can withstand the impact of balls
- ✓ LGA-tested safety
- ✓ No approval required for each individual case
- ✓ With fall-proof function
- ✓ For railings: Pane widths of up to 6,000 mm, pane heights of up to 2,100 mm
- ✓ For public construction projects
- ✓ For indoor and outdoor spaces
- ✓ For level surfaces and staircases

Specified values can be implemented with limitations.

BALARDO *hybrid*

THE ROBUST SYSTEM WITH CONTINUOUS ADJUSTMENT

BALARDO *hybrid* is the adjustable aluminium all-glass railing system from GLASSLINE that can be optimally adapted to your requirements. Thanks to its innovative adjustment elements with integrated adjusting screws, the panes of the railings can be adjusted continuously, more precisely and more simply than ever before. The adjustment system is modular and can be positioned on either side of the loading profile – or even both sides, if needed. This means it can be perfectly adapted to any installation situation. Once installed, BALARDO *hybrid* looks no different to the rest of the renowned BALARDO series. BALARDO *hybrid* is also available as a system unit with BALARDO *aqua control*.



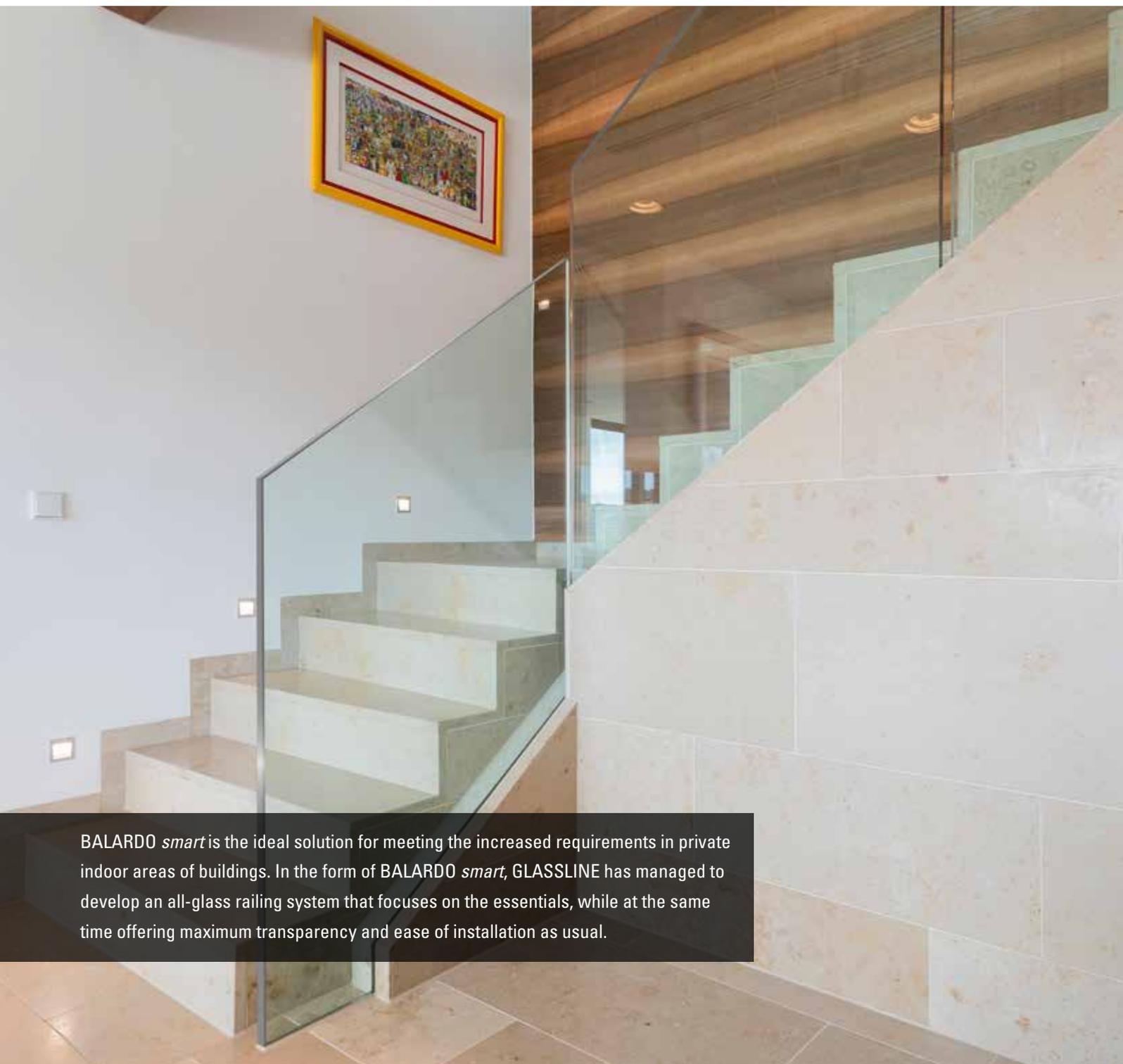
THE ADVANTAGES

- ✓ With general supervisory test certificate (AbP)
- ✓ With tested standard structural analysis
- ✓ Beam loads of up to 1 kN/m
- ✓ With integrated adjustment system
- ✓ LGA-tested safety
- ✓ No approval required for each individual case
- ✓ With fall-proof function
- ✓ For railings: Pane widths of up to 6,000 mm, pane heights of up to 2,100 mm
- ✓ For public and private construction projects
- ✓ For indoor and outdoor spaces
- ✓ For level surfaces and staircases
- ✓ BALARDO *firstglass* glass edge protection optional

Specified values can be implemented with limitations.

BALARDO *smart*

THE MINIMALIST SYSTEM FOR PRIVATE INDOOR AREAS



BALARDO *smart* is the ideal solution for meeting the increased requirements in private indoor areas of buildings. In the form of BALARDO *smart*, GLASSLINE has managed to develop an all-glass railing system that focuses on the essentials, while at the same time offering maximum transparency and ease of installation as usual.

THE ADVANTAGES

- ✓ With general supervisory test certificate (AbP)
- ✓ With tested standard structural analysis
- ✓ Beam loads of up to 0.5 kN/m
- ✓ LGA-tested safety
- ✓ No approval required for each individual case
- ✓ With fall-proof function
- ✓ For railings: Pane widths of up to 6,000 mm,
pane heights of up to 1,200 mm
- ✓ For private construction projects
- ✓ For indoor spaces
- ✓ For level surfaces and staircases
- ✓ BALARDO *firstglass* glass edge protection optional

Specified values can be implemented with limitations.

BALARDO *steel*

THE SUCCESSFUL, TYPE-TESTED ALL-GLASS RAILING SYSTEM

With the development of the modular **BALARDO *steel*** system, GLASSLINE has revolutionised the market and made all-glass railings more attractive and cost-effective than ever before. **BALARDO *steel*** is still the undisputed original and is shaping the global market with its unique properties. **BALARDO *steel*** is extremely flexible in both public and private construction projects and when used on level surfaces and staircases. Its structural strengths are particularly beneficial in the case of raised floor constructions, uneven substrates and in applications that require ETICS bridging.

THE ADVANTAGES

- ✓ With European Technical Approval (ETA)
- ✓ With general supervisory test certificate (AbP)
- ✓ With tested standard structural analysis
- ✓ Can also be used in sports facilities, can withstand the impact of balls
- ✓ LGA-tested safety
- ✓ No approval required for each individual case
- ✓ With fall-proof function
- ✓ For railings: Pane widths of up to 6,000 mm, pane heights of up to 1,400 mm
- ✓ For public and private construction projects
- ✓ For indoor and outdoor spaces
- ✓ For level surfaces and staircases

Specified values can be implemented with limitations.

BALARDO *wave*

CURVED ALL-GLASS RAILING SYSTEMS

Where contoured and curved shapes determine the building architecture, **BALARDO *wave*** offers efficient and flexible all-glass railing solutions. With its curved floor and handrail profiles, the system works well with elegantly curved building geometries and uses the aesthetic properties of the glass to turn these into highly transparent railings. Whether in public or private buildings, whether indoors or outdoors, the sophisticated design of **BALARDO *wave*** creates an atmosphere flooded with light in either aluminium or steel designs.

THE ADVANTAGES

- ✓ With European Technical Approval (ETA)
- ✓ With general supervisory test certificate (AbP)
- ✓ With tested standard structural analysis
- ✓ Can also be used in sports facilities, can withstand the impact of balls
- ✓ LGA-tested safety
- ✓ No approval required for each individual case
- ✓ With fall-proof function
- ✓ For railings: Pane widths of up to 6,000 mm, pane heights of up to 1,400 mm
- ✓ For public and private construction projects
- ✓ For indoor and outdoor spaces
- ✓ For level surfaces and staircases

Specified values can be implemented with limitations.

METAL HANDRAILS



System-adapted glass edge protection profile

BALARDO	<i>core, hybrid, smart</i>	<i>core hd</i>	<i>steel, wave</i>
For glass thickness:	VSG 2 x 8, 2 x 10 mm	VSG 2 x 12, 2 x 15 mm	VSG 2 x 8, 2 x 10 mm
Material:	stainless steel 1.4301	stainless steel 1.4301	stainless steel 1.4301
Surface:	polished	polished	polished
Delivery length:	3000 mm	3000 mm	3000 mm*
incl. adhesive attachment			

*BALARDO wave: arc length ≤ 2000 mm



U-profile

BALARDO	<i>core, hybrid, smart</i>	<i>core hd</i>	<i>steel, wave</i>
Edge protection:	U 30 x 27 x 3.0 mm	U 40 x 37 x 3.0 mm	U 30 x 27 x 3.0 mm
Groove dimensions:	24 x 24 mm	34 x 34 mm	24 x 24 mm
Material:	stainless steel 1.4301	stainless steel 1.4301	stainless steel 1.4301
Surface:	polished	polished	polished
Delivery length:	3000 mm	3000 mm	3000 mm*
incl. rubber attachment profile			

*BALARDO wave: arc length ≤ 2000 mm



Round Ø 42.4 mm | Ø 48.3 mm | Ø 60.3 mm

BALARDO	<i>core, hybrid, smart</i>	<i>core hd</i>	<i>steel, wave</i>
Diameter Ø:	42.4 und 48.3 mm	60.3 mm	42.4 und 48.3 mm
Groove dimensions:	24 x 24 mm / 30 x 27 mm	34 x 34 mm	24 x 24 mm / 30 x 27 mm
Material:	stainless steel 1.4301	stainless steel 1.4301	stainless steel 1.4301
Surface:	polished	polished	polished
Delivery length:	3000 und 5000 mm	3000 und 5000 mm	3000 und 5000 mm*
incl. rubber attachment profile			

*BALARDO wave: arc length ≤ 2000 mm

WOODEN HANDRAILS



Round, on U-profile

BALARDO	<i>core, hybrid, smart</i>	<i>core hd</i>	<i>steel</i>
Wooden handrail:	Ø 55 mm	Ø 75 mm	Ø 55 mm
Groove dimensions:	31 x 30 mm	41 x 40 mm	31 x 30 mm
Material:	steamed beech	steamed beech	steamed beech
Surface:	polished and varnished	polished and varnished	polished and varnished
Delivery length:	3000 mm	3000 mm	3000 mm



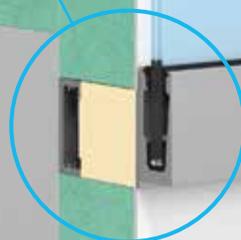
Rectangular, on U-profile

BALARDO	<i>core, hybrid, smart</i>	<i>core hd</i>	<i>steel</i>
Wooden handrail:	w/h 50/40 mm	w/h 75/55 mm	w/h 50/40 mm
Groove dimensions:	31 x 30 mm	41 x 40 mm	31 x 30 mm
Material:	steamed beech	steamed beech	steamed beech
Surface:	polished and varnished	polished and varnished	polished and varnished
Delivery length:	3000 mm	3000 mm	3000 mm

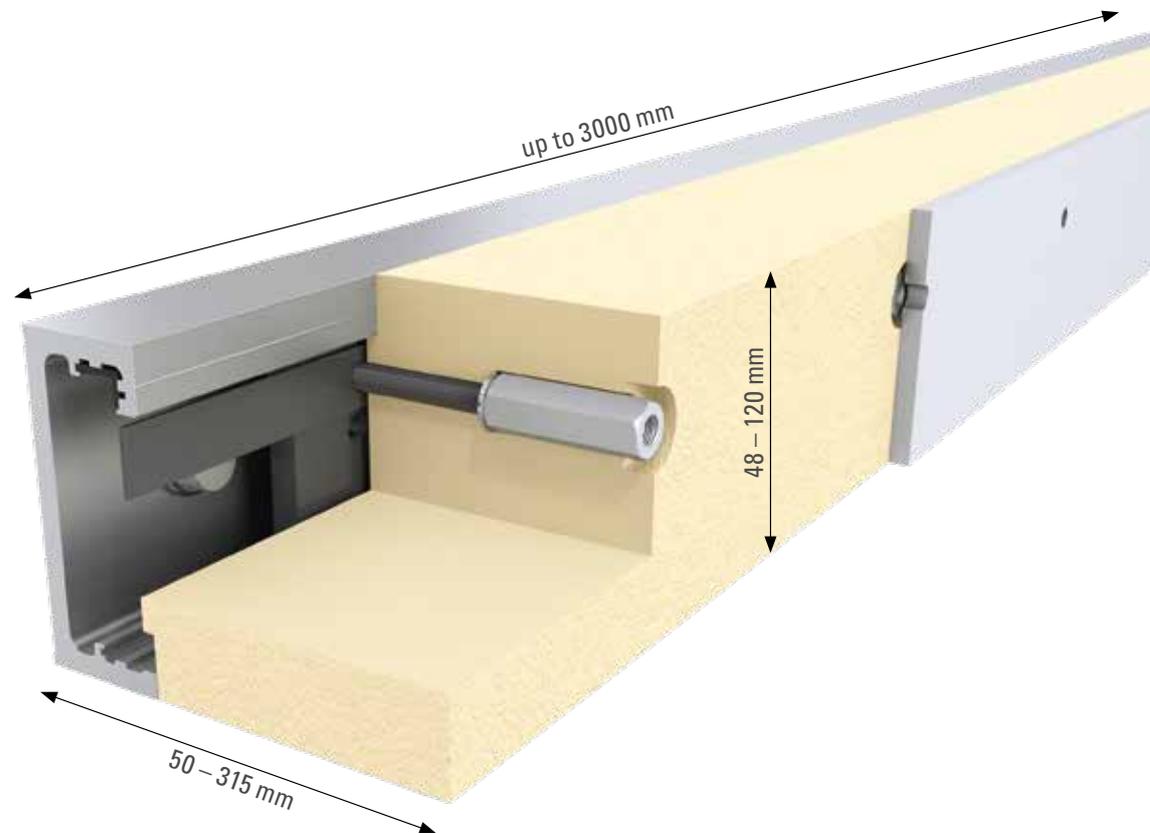
FIX'N SLIDE

SECURE ATTACHMENT TO ETICS

The new FIX'N SLIDE from GLASSLINE guarantees that mounting elements are securely attached to heat-insulated walls and façades. Thermal bridges are reduced. With few components and different insulating element sizes, you can effortlessly bridge any insulation thickness both thermally and statically. Whether in new buildings or existing constructions, FIX'N SLIDE is suitable for use as a rail for linear assembly or as a block for point-by-point assembly in any building situation. System widths from 48 to 120 mm for insulation thicknesses from 50 to 315 mm.



FIX'N SLIDE SECURE ATTACHMENT TO ETICS



The system for LINEAR connection

The system has a modular design and is as flexible as the job needs it to be. The main components are the aluminium mounting rail which is independent of the application and intended for pre-assembly and connection to the substructure; insertion plates made from stainless steel with high-strength threaded rods and threaded sockets; pressure-resistant insulating elements; and an optional aluminium connection plate. It is the perfect choice when installing our BALARDO all-glass railing systems.

- Reduction in thermal bridges
- Secure mounting of attachment elements
- Thermal properties/energy planning in accordance with the 2016 version of the German Energy Saving Ordinance (EnEV)
- Safe load transmission
- Variable mounting design
- Modular and flexible
- Insulating system is bridged regardless of application
- Safe in the event of fire
- Versatile – for new buildings or subsequent installation

World's first! **BALARDO *firstglass*** glass edge protection

PERFECTION IN FRAMELESS ARCHITECTURE

BALARDO *firstglass* is the world's first glass edge guard for a range of systems. An innovative product from GLASSLINE GmbH, which has become synonymous with passion and perfection in the frameless glass sector, BALARDO *firstglass* has reached the summit of frameless glass design.

BALARDO *firstglass* is a transparent glass edge guard that does not compromise on appearance – a style highlight. The new BALARDO *firstglass* glass edge can be used in combination with a range of GLASSLINE products. Depending on the pane thickness, it can be used with BALARDO *smart* or BALARDO *core* and is recommended for use with BALARDO *hybrid*. And of course, the BALMERO *French balcony* designs can be fitted with BALARDO *firstglass*.



BALARDO *aqua control* SYSTEM FOR CONTROLLED BALCONY DRAINAGE

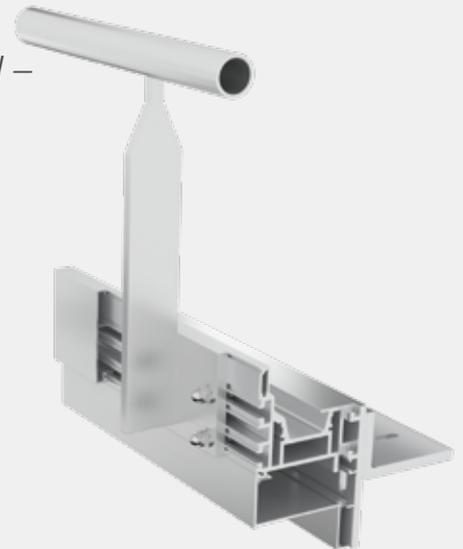
BALARDO *hybrid* with
BALARDO *aqua control* –

Precision-adjustable
all-glass railings
with drainage



BALARDO *aqua control* –

Non-system-specific
drainage profile

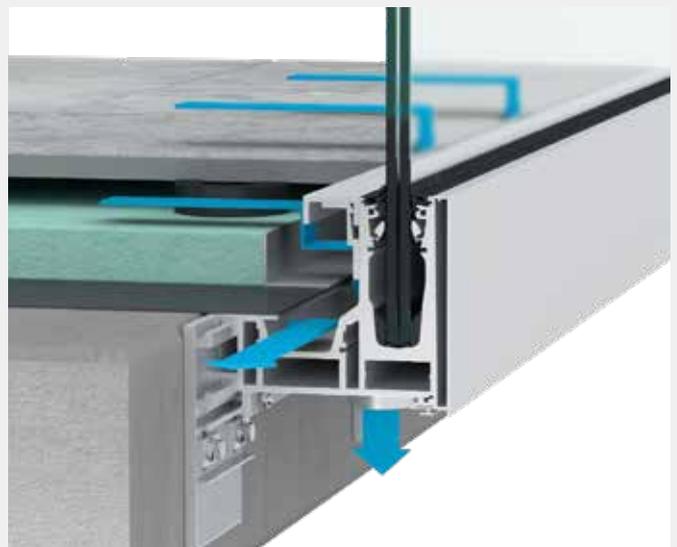


BALARDO *aqua control* is a system for drainage of balconies and roof terraces. It does exactly what its name says: Your customers control the drainage. Because in our systems, the water duct is accessible. This allows you to thoroughly clean the water duct and remove autumn leaves, for example. This makes a build-up of water on the balcony or roof terrace a thing of the past. The system uses the slope of the balcony or roof terrace and conducts the water into the freely accessible gutter. From there, it then continues to flow into the normal drain.

Another advantage: You can purchase this solution as an integrated system with our BALARDO *hybrid* all-glass railings. Or choose BALARDO *aqua control* on its own and combine it with another railing system.



Setup with standard flooring structure and panel supports.
View from the left.



Setup with standard flooring structure and panel supports.
View from the right.

BALARDO *light control*



A LED strip SMD5050-60-t 6000k

- Light colour: RGBW multi-colour RGB +
- cold white 6000 k
- Dimensions: 5000 x 12 x 2 mm
- IP rating: IP65
- Voltage: 24 VDC
- Beam angle: 120°
- Brightness: 627 lm/m
- Power consumption: 14.4 W/m
- Number of LEDs: 60/metre
- Can be split every 165 mm (every 10 LEDs)
- Energy efficiency class: A
- Packaging: 5 m/roll
- The item is CE and RoHS-certified



B PowerBox power supply units

▪ Light length:	Up to 5 metres	Up to 10 metres	Up to 20 metres
▪ Item no.:	L502408W	L502415W	L502424W
▪ Output voltage:	24 VDC	24 VDC	24 VDC
▪ Power:	80 watts	151 watts	240 watts
▪ Approved for contact with furniture:	Yes	Yes	Yes
▪ Voltage supply:	90-290 VAC + 130-400 VDC	90-290 VAC + 130-400 VDC	90-290 VAC + 130-400 VDC
▪ Frequency range:	47-63 Hz	47-63 Hz	47-63 Hz
▪ IP rating:	IP67	IP67	IP67
▪ Dimensions (LxBxH):	196 x 62 x 39 mm	222 x 68 x 39 mm	244 x 68 x 39 mm
▪ Weight:	0.84 kg	1.00 kg	1.20 kg
▪ Cable length:	1 metre	1 metre	1 metre



C GLASSLINE box with APP control

Connection:

- With GLASSLINE APP (Android/iOS)
- With Bluetooth (password-protected)

Control:

- Light on/off
- Continuous dimming
- Set light colour
- Save preferred colour
- Dimensions (L x W x H): 123 x 71 x 30 mm

Accessories for LED lighting



D 1-metre cable

- Five-pin for RGBW



E 5-metre cable

- Five-pin for RGBW



F Y-cable

- Five-pin for RGBW

G Dual connector

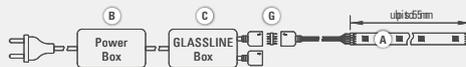
- Five-pin for RGBW

Structural principle/circuit diagrams

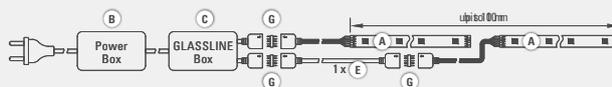


No need for soldering!

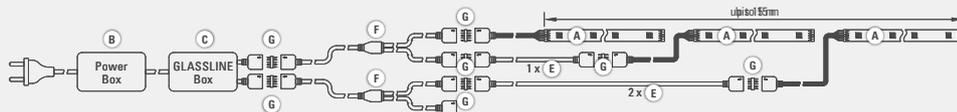
- 1 x **A** LED strip
- 1 x **B** Power Box
- 1 x **C** GLASSLINE Box



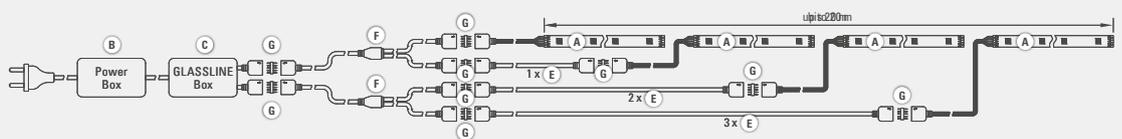
- 2 x **A** LED strip
- 1 x **B** Power Box
- 1 x **C** GLASSLINE Box
- 1 x **E** 5-metre cable



- 3 x **A** LED strip
- 1 x **B** Power Box
- 1 x **C** GLASSLINE Box
- 3 x **E** 5-metre cable
- 2 x **F** Y-cable



- 4 x **A** LED strip
- 1 x **B** Power Box
- 1 x **C** GLASSLINE Box
- 6 x **E** 5-metre cable
- 2 x **F** Y-cable



GLASSLINE

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SYSTEM SOLUTIONS FOR DEMANDING FRAMELESS GLASS ARCHITECTURE AND SECURE FASTENING OF ATTACHMENTS TO ETICS

GLASSLINE is a leading supplier which develops, manufactures and sells high-quality system solutions in the point support system, all-glass railing system and frameless canopy construction sectors, alongside systems with thermal separation for secure fastening of attachment elements to building envelopes.

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- All drawings show example applications. GLASSLINE assumes no warranty or liability for transferable use.
- Subject to technical and design modifications.
- All screw connections must be permanently secured so that they cannot come loose, e.g. using adhesive.
- The pressure-resistant insulating elements must be protected against UV radiation and the effects of weathering.
- The property-specific application and the certificates of load impact and load transfer must be reviewed and managed on-site.

