



**2023**  
Inspiring  
Profiles

**forster**

Project: WiSo, Cologne, Germany

Products: forster unico windows

Architecture: SSP AG Schürmann-Spannel, Bochum

Metal fabrication: MTZ Metalltechnik Zitzmann GmbH, Oerlenbach

Daylight technology: RETROSolar Gesellschaft für Tageslichtsysteme mbH, Kirn

Client: University of Cologne

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## Editorial

### **500 high-tech windows for a listed building**

*Horizontally pivoted windows, daylight control, service function, durability, very narrow face widths and no flammable materials – the list of requirements for the renovation of 500 windows at the high-rise building of the Faculty of Management, Economics and Social Sciences meant that a real technical all-rounder was needed. The building was constructed between 1956 and 1960 as an expansion of the University of Cologne according to the blueprints of architect Wilhelm Riphahn, and is part of a listed building ensemble.*

### **A narrow solution like no other**

*The horizontal window hinges running across the facade are a striking feature, and their renovation required horizontally pivoted windows with particularly narrow face widths that also met the requirements for use in listed buildings. While conventional aluminium window profiles are wider at around 143 millimetres in order to ensure the necessary stability, our steel system impresses with a width of just 70 millimetres. As a result, the forster unico profile system was given the nod following close consultation with the monument conservation authorities.*

### **Daylight control slats and maintenance leaf**

*In addition to aesthetic challenges, the new windows also meet all other requirements, including those related to ventilation and heat protection. As with their historic predecessors, the windows come with internal slats. These offer more than just protection against the sun – the electronically controlled system also directs daylight into the building without dazzling those inside. Furthermore, a maintenance leaf measuring 800 millimetres with wide opening for servicing and cleaning was also planned. The detailed solution was the result of a fruitful partnership between our engineers, the metal constructors MTZ and the RETROSolar light and building concept.*

It's not hard to see that we love the material we use, be it the static values, the long service life or its outstanding recyclability. Above all, it is the look of the thin steel profiles that is an absolute winner, particularly when we see it in the finished building projects. And we aren't the only ones who think so, which is why we deliver products that are anything but off the peg. In many cases, our engineers take the existing system and all of its components and rework it exactly according to modern requirements in architectural planning.

The ambitious renovation of the WiSo high-rise building at the University of Cologne is a perfect example of just how detailed this planning can be. The major renovation tasks were perfectly aligned here with the principles of modern sustainable buildings. Forster was the only company able to manufacture the elegant steel/glass constructions as customised solutions.

In our 30 branches and offices around the world, our staff in development, production and sales – among many other departments – do everything in their power to ensure that we can build things according to your demands. If you are looking to use steel exclusively in your project, we would be happy to assist you. When it comes to forward-looking building, the choice is clear for us – steel is our nature.

We are proud to present a selection of the projects realised with our systems, and we hope they will inspire you too. The following pages offer an overview of the design solutions possible using our products, not to mention information on how we ensure environmentally friendly production.

Best regards  
Willi Lüchinger  
and the Forster team

## In line with your design. In harmony with the surroundings.

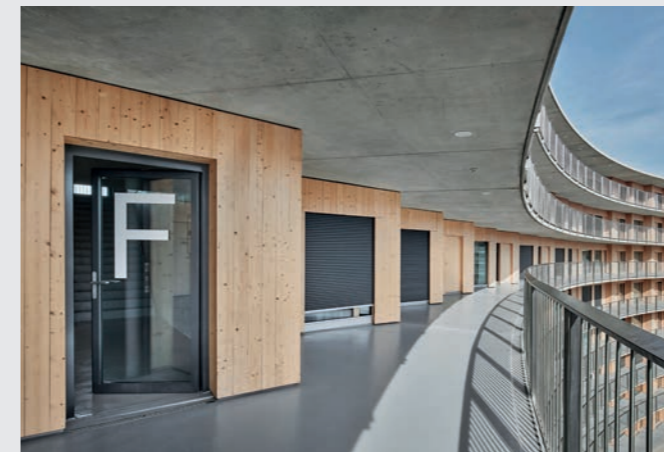
How can you find a building-specific solution?

Our systems offer numerous configurations and functions that we have developed closely in line with demands for contemporary, safe and sustainable architecture. If your project needs adjustments to existing products or a special construction, Forster can turn your dreams into reality with our tailored consultation and development.

All technical issues are solved by a stand-alone team in the development department, including all tests and statutory checks. Additionally, trained technicians are also on hand to advise you on the right profile solutions for facades, windows and doors according to your project plans – and to make sure that your project and its surroundings go together as you imagined.



Lokstadt, Winterthur, Switzerland  
Windows, doors and fixed glazing – forster unico Hi  
Image: Damian Poffet



Vortex, Lausanne, Switzerland  
EI30 fire-resistant doors – forster fuego light  
Images: Damian Poffet

Republic of Korea Pavilion, Dubai, UAE  
E160 mullion/transom facade with fire protection and 15 degree incline – forster thermfix vario



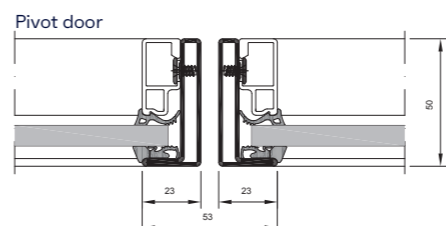
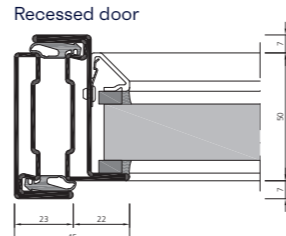
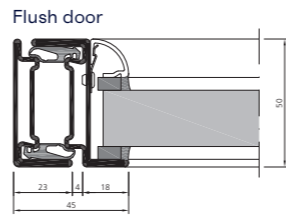
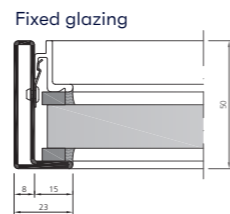
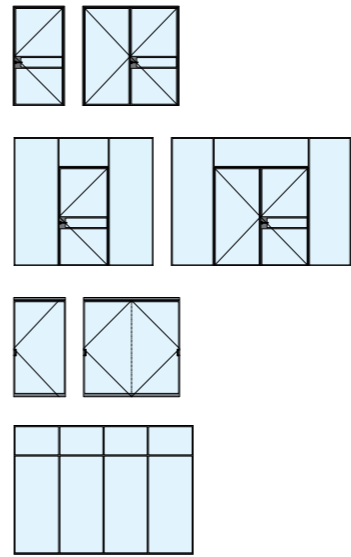
Fenix I, Rotterdam, the Netherlands  
Thermally insulated windows and fixed glazing – forster unico xs  
Image: Bart van Hoek Architectuurfotografie



ACI Jet Center, San Luis Obispo (CA), USA  
Fire-resistant doors – forster fuego light 120 min. (UL10C) – VDS  
Fire-resistant glazing – forster fuego light and thermfix vario 120 min. (UL263) – VDS  
Image: Eric Reed

Abu Dhabi Cranleigh School, Saadiyat Island, UAE  
E60 fire-resistant doors – forster fuego light  
E60 fire-resistant glazing – forster presto





## forster presto xs Door and fixed glazing

Combining elegance with purism, the non-insulated forster presto xs system is suitable for the interior design of architecturally sophisticated buildings. Door and glazing elements with profile face widths from 23 mm, a wide range of glazing beads and numerous other design options are available. Thanks to the new pivot door solution, extravagant room ideas are also a possibility.

**NEW: Pivot door**

### Technical specifications

#### Material variants

- Bright steel
- Steel zinc magnesium

#### Face widths

- Door leaf with frame from 45 mm
- Fixed glazing from 23 mm

#### Dimensions

- Side hung door, inside width single-leaf (W×H): max. 1200 × 2400 mm
- Side hung door, inside width double-leaf (W×H): max. 2400 × 2400 mm
- Pivot door, inside width (W×H): max. 2500 × 3000 mm
- Fixed glazing (W×H): unlimited × max. 3000 mm

#### Fittings

- Attached and concealed flush fittings
- Max. leaf weight 200 kg

#### System features

- Design variants: single/double leaf, with optional sidelight and fanlight
- Fixed glazing
- Structural depth: 50 mm
- Max. filling element thickness 24 mm
- Design glazing beads in aluminium and steel
- Wet and dry glazing

#### Performance characteristics

- Barrier-free according to DIN 18040
- Durability of self-closing properties: Class 6 according to EN 12400 (200,000 cycles EN 1191)
- Operating forces: Class 3 according to EN 12217
- Sound insulation up to  $R_w = 35$  dB according to EN ISO 140-3



Haus Welper, Germany  
Image: Jens Kirchner



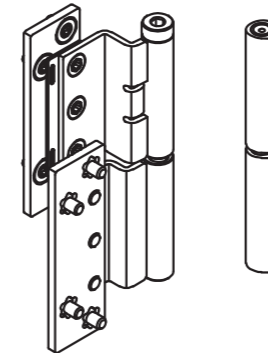
CE-  
marking



Durability

## forster presto xs Hinges

With performance combined with an uncompromising sense of form, forster presto xs has made a name for itself thanks to its extremely narrow face widths. This is also thanks to the hinges, which are installed inconspicuously on the profile and continue the slender look of the entire door design down to the finest detail. And this is all without any sacrifices being made in functionality or application – despite their low face heights and slender body, the hinges can support leaf weights of up to 100 kg. With CE marking according to EN 1935, they are ready for use in fire protection applications and in escape and emergency routes.



### Technical specifications

#### Design variants

- Steel weld-on hinge
- Stainless steel screw-on hinge

#### Face height

- Weld-on hinge: 90 mm
- Screw-on hinge: 96.5 mm

#### Hinge body diameter

- 10 mm

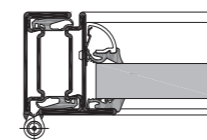
#### System features

- For flush and recessed doors
- Height-adjustable (-2/+4 mm)
- Lubrication nipple for simple maintenance

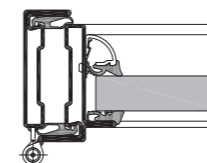
#### Performance characteristics

- CE marking according to EN 1935
- Durability according to EN 1191 up to 200,000 cycles
- Suitable for leaf weights of up to 100 kg

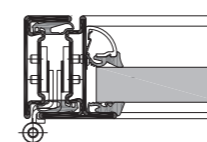
Flush weld-on hinge



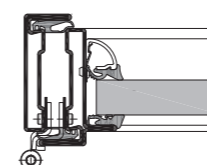
Recessed weld-on hinge

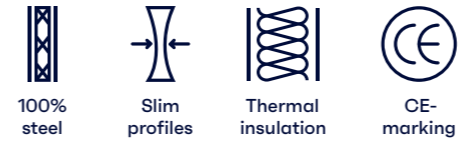


Flush screw-on hinge



Recessed screw-on hinge





100%  
steel

Slim  
profiles

Thermal  
insulation

CE-  
marking

## forster unico xs Thermally insulated door and fixed glazing

Flush on both sides and with particularly narrow face widths from 23 mm, forster unico xs doors not only offer the narrowest door design in our entire portfolio, they are also an important addition for architects and planners and allow building shells to now be constructed in a uniform design. The main principle of the design is to bring a lot of light into the building interior and to improve aesthetics and spatial well-being. As the system profiles are made from 100% steel, they can also be bent freely and installed according to architectural demands. As a result, even arches in historic buildings can be equipped with adaptable steel elements.

### Technical specifications

#### Availability

Door with narrow face width from Q4 2023

#### Material variants

Steel zinc magnesium

#### Face widths

Door leaf with frame from 65 mm

Fixed glazing from 23 mm

#### Dimensions

Side hung door inside width single-leaf (W×H): max. 1200 × 2400 mm

Side hung door, inside width double-leaf (W×H): max. 2400 × 2400 mm

Fixed glazing (W×H): unlimited × max. 3000 mm

#### Fittings

Attached fittings

Max. leaf weight 160 kg

#### System features

Design variants:

Side hung door with single/double leaf, with optional sidelight and fanlight Fixed glazing

Insulated door threshold

Structural depth 70 mm

Design glazing beads in aluminium and steel

Wet and dry glazing

#### Performance characteristics

CE marking according to EN 14351-1

Thermal insulation on door:  $U_D$  value up to 1.3 W/(m<sup>2</sup>K)

Thermal insulation on fixed glazing:  $U_W > 0.80$  W/(m<sup>2</sup>K)

Durability of self-closing properties:

Class 6 according to EN 12400 (200,000 cycles EN 1191)

Resistance to wind loads: Class C2/B2 according to EN 12210

Watertightness: Class 3A according to EN 12208

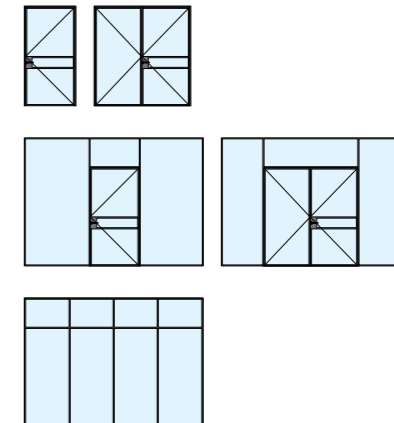
Air permeability: Class 3 according to EN 12207

Operating forces: Class 3 according to EN 12217

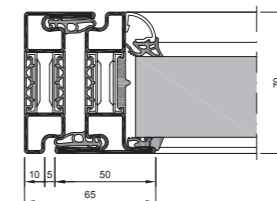
Barrier-free according to DIN 18040

Sound insulation up to  $R_w = 46$  dB according to EN ISO 140-3

### NEW: Door with narrow face width



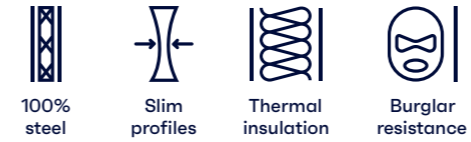
Door leaf frame







Haus Adeline Favre, Winterthur, Switzerland  
Image: Luca Zanier Photography



100% steel   Slim profiles   Thermal insulation   Burglar resistance

## forster unico xs Thermally insulated window and fixed glazing

A uniquely slim profile design made from 100% steel, the forster unico xs thermally insulated window and fixed glazing system is suitable for use in renovating old or historic buildings as well as for modern buildings where an industrial look is required. Various opening variants are available as well as a wide range of applications for holding fillings up to 60 mm. This creates designs with the lowest U-values and outstanding sound insulation properties, such as Minergie windows. Historic push rod fittings will also be available in future to ensure an end result that is as close to the original as possible.

### Technical specifications

#### Availability

Historic fittings from Q4 2023

#### Material variants

Bright steel  
Steel zinc magnesium

#### Face widths

Window sash with frame from 55 mm  
Fixed glazing from 23 mm

#### Dimensions

Max. leaf height: 2440 mm  
Max. leaf width: 1440 mm  
Fixed glazing (W×H): unlimited × max. 3000 mm

#### Fittings

Attached and concealed flush fittings (max. opening angle 90°)  
Historic fittings  
Max. leaf weight 100 kg, 150 kg on request

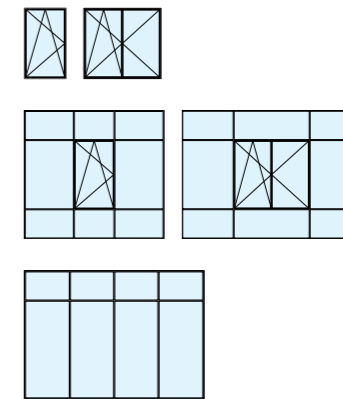
#### System features

Design variants:  
Opening inwards: turn/tilt and turn/tilt windows, single or double leaf  
Opening outwards: turn/top-hung windows, single leaf  
Fixed glazing  
Structural depth: leaf profile 88 mm, frame profile 70 mm  
Max. filling element thickness 62 mm  
Design glazing beads in aluminium and steel  
Wet and dry glazing

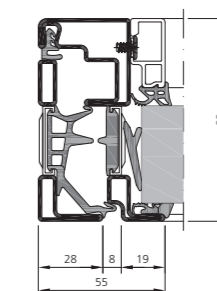
#### Performance characteristics\*

CE marking according to EN 14351-1  
Thermal insulation on window:  $U_w$  value up to 0.84 W/(m<sup>2</sup>K)  
Thermal insulation on fixed glazing:  $U_{fg}$  value up to 0.80 W/(m<sup>2</sup>K)  
Mechanical load:  
Class 2 according to EN 12400 (10,000 cycles EN 1191)  
Burglary resistance: RC2 according to EN 1627  
Resistance to wind loads: Class C5/B5 according to EN 12210  
Watertightness: Class E1050 according to EN 12208  
Air permeability: Class 4 according to EN 12207  
Operating forces: Class 2 according to EN 13115  
Sound insulation up to  $R_w = 48$  dB according to EN ISO 140-3

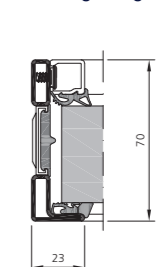
### NEW: Historic fittings



Window sash frame



Fixed glazing



\* Take note of the country-specific approvals and requirements





Cantonal Museum of Fine Arts (MCBA), Lausanne, Switzerland  
Images: Damian Poffet



100% steel Thermal insulation Fire resistance Smoke protection

## forster unico Thermally insulated fire-resistant door and fixed glazing

### Technical specifications

#### Material variants

Steel zinc magnesium  
Brushed stainless steel

#### Face widths

Door leaf with frame from 110 mm  
Fixed glazing from 50 mm

#### Dimensions

Side hung door inside width single-leaf (W×H): max. 1370 × 3010 mm  
Side hung door, inside width double-leaf (W×H): max. 2700 × 2850 mm  
Fixed glazing (W×H): unlimited × max. 5000 mm

#### Fittings

Attached and concealed flush fittings  
Max. leaf weight 410 kg

#### System features

Design variants:  
Side hung doors with single/double leaf, with optional sidelight and fanlight Fixed glazing  
Insulated door threshold  
Structural depth 70 mm  
Max. filling element thickness 56 mm  
Steel glazing beads  
Wet and dry glazing

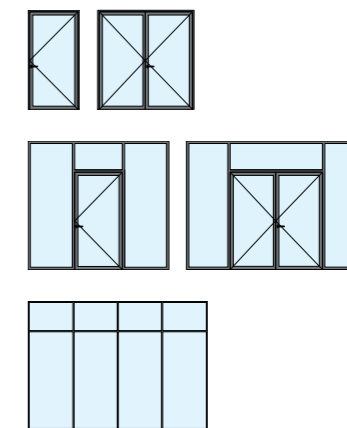
#### Performance characteristics\*

CE marking according to EN 16034 and 14351-1  
Thermal insulation on door:  $U_D$  value up to 1.15 W/(m<sup>2</sup>K)  
Thermal insulation on fixed glazing:  $U_D$  value up to 1.0 W/(m<sup>2</sup>K)  
Fire protection: EI30, EW30, E30 according to EN 1634-1  
Smoke protection:  $S_o$  or  $S_{200}$  according to EN 1634-3  
Durability of self-closing properties:  
Class 8 according to EN 12400  
(tested up to 1 million cycles according to EN 1191)  
Doors for escape and emergency routes (partial and full panic system) according to EN 179 and EN 1125  
Resistance to wind loads: Class C3/B3 according to EN 12210  
Watertightness: Class 3A according to EN 12208  
Air permeability: Class 4 according to EN 12207  
Impact resistance: Class 1 according to EN 13049  
Operating forces: Class 3 according to EN 12217  
Barrier-free according to DIN 18040  
Sound insulation up to  $R_w = 46$  dB according to EN ISO 140-3

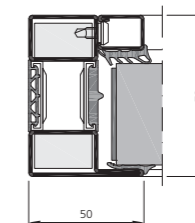
\* Take note of the country-specific approvals and requirements

The forster unico system for thermally insulated doors used in outdoor applications now has EI30 certification for fire protection and meets the requirements of EN 1634-1. Multi-point locks tailored to the system allow for efficient manufacturing. Moreover, an anti-panic emergency door is also possible.

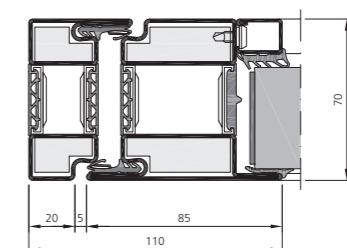
**NEW: Fire protection up to EI30**



#### Fixed glazing



#### Door leaf frame





Tumbelenstrasse, Pfäffikon, Switzerland



100% steel    Thermal insulation    Fire protection    CE-marking

### Technical specifications

#### Material variants

Steel zinc magnesium  
Brushed stainless steel\*\*

#### Face widths

Window sash with frame from 92 mm  
Fixed glazing from 50 mm

#### Dimensions

Max. leaf height: 2440 mm  
Max. leaf width: 1440 mm

#### Fittings

Concealed flush fittings (max. opening angle 90°)  
Max. leaf weight 150 kg

#### System features

Design variants:  
Opening inwards: turn/tilt and turn/tilt windows, single/double leaf, with optional sidelight and fanlight  
Fixed glazing  
Window can only be opened for cleaning and maintenance work, not approved as ventilation leaves  
Structural depth: leaf profile 88 mm, frame profile 70 mm  
Max. filling element thickness 60 mm  
Steel glazing beads  
Wet and dry glazing

#### Performance characteristics\*

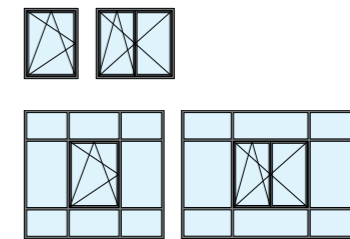
CE marking according to EN 16034 and 14351-1  
Thermal insulation on window:  $U_w$  value up to 1.0 W/(m<sup>2</sup>K)  
Thermal insulation on fixed glazing:  $U_g$  value up to 1.0 W/(m<sup>2</sup>K)  
Fire protection EI<sub>2</sub>30, EI<sub>1</sub>30, EW30, E30 according to EN 1634-1  
Mechanical load:  
Class 2 according to EN 12400 (10,000 cycles according to EN 1191)  
Resistance to wind loads: Class C5/B5 according to EN 12210  
Watertightness: Class E1050 according to EN 12208  
Air permeability: Class 4 according to EN 12207  
Impact resistance: Class 3 according to EN 13049  
Operating forces: Class 1 according to EN 13115  
Sound insulation up to  $R_w = 48$  dB according to EN ISO 140-3

\* Take note of the country-specific approvals and requirements

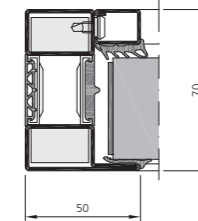
\*\* On request

## forster unico Thermally insulated fire-resistant window and fixed glazing

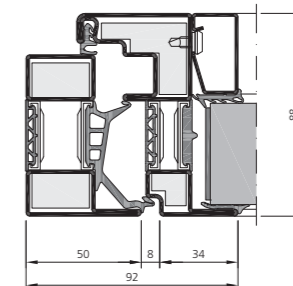
Providing adequate fire protection, the forster unico thermally insulated window system rounds off the existing door and fixed glazing solution with another efficient fire protection element for outdoor use. The fire protection classes EI<sub>2</sub>30, EI<sub>1</sub>30, EW30 and E30 are available. The windows are based on the profiles found in the standard version, but also come with added coolants and specially designed seals to comply with the EI fire resistance classes. Fittings and accessories are available for single-leaf and double-leaf turn/turn and tilt windows.



Fixed glazing



Window sash frame





## forster omnia

### Thermally insulated door with fire protection and anti-burglary protection

#### Technical specifications

##### Material variants

Steel zinc magnesium  
Bright steel\*\*

##### Face widths

Door leaf with frame from 110 mm  
Fixed glazing from 50 mm

##### Dimensions

Inside width single-leaf (W×H): max. 1360 × 2691 mm  
Inside width double-leaf (W×H): max. 2670 × 2691 mm

##### Fittings

Attached and concealed flush fittings  
Max. leaf weight 420 kg

##### System features

Design variants:  
Side hung door with single/double leaf, with optional sidelight and fanlight Fixed glazing  
Insulated door threshold, simple lock installation via insertion strips  
Structural depth 85 mm  
Max. filling element thickness 59 mm  
Steel glazing beads  
Dry glazing

##### Performance characteristics\*

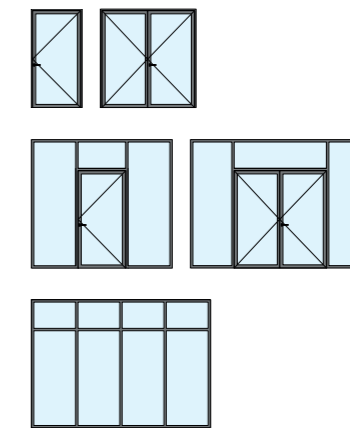
CE marking according to EN 16034 and 14351-1  
 $U_D$  value up to 1.0 W/(m<sup>2</sup>K)  
Fire protection: EI30 according to EN 1634-1  
Smoke protection:  $S_a$  or  $S_{200}$  according to EN 1634-3  
Durability of self-closing properties:  
Class 8 according to EN 12400 (tested up to 1 million cycles according to EN 1191 with automatic door opener)  
Doors for escape and emergency routes (partial and full panic system) according to EN 179 and EN 1125  
Burglary resistance: RC2 according to EN 1627  
Resistance to wind loads: Class C4/B4 according to EN 12210  
Watertightness: Class 3A according to EN 12208  
Air permeability: Class 4 according to EN 12207  
Impact resistance: Class 4 according to EN 13049  
Operating forces: Class 5 according to EN 12217  
Barrier-free according to DIN 18040  
Sound insulation up to  $R_w = 45$  dB according to EN ISO 140-3

\* Take note of the country-specific approvals and requirements

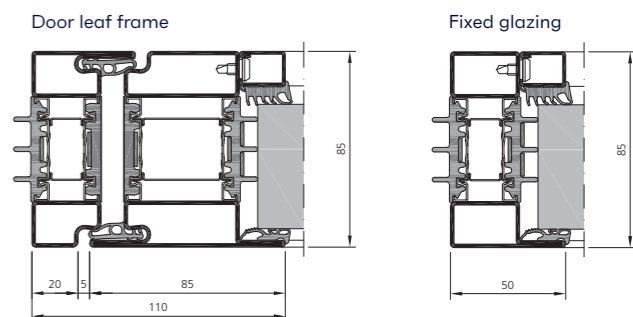
\*\* On request

Featuring a patented construction design, the forster omnia door profile system allows customised, modular solutions to be created for outdoor use. A single profile system is enough for numerous implementations. Where required, the thermally insulated door elements can be combined with safety functions such as EI30 fire protection and RC2 burglary resistance. The unique construction design for multiple applications reduces planning complexity. It also means that fewer stock materials are needed and allows for simple processing and a uniform appearance of the door elements throughout the entire building. The slim profiles are made from 100% steel and do not require any additional synthetic insulating materials or coolants for fire protection.

**NEW: Fire protection and burglary resistance**



**MINERGIE®**





## forster omnia Thermally insulated window and fixed glazing

In the same way as the proven door systems, the forster omnia insulated window system impresses thanks to maximum energy efficiency and durability. With  $U_f$  values of just  $1.2 \text{ W}/(\text{m}^2\text{K})$ , the solution contributes to a highly thermally insulated building shell and paves the way for building certification such as LEED or BREEAM. In contrast to comparable products on the market, the modular system consists entirely of the recyclable materials steel and stainless steel and dispenses with synthetic insulating materials. If cables are integrated in the profiles, their open insulator enables them to be easily removed in the event of a change of use and inserted elsewhere. In addition to sustainability qualities, forster omnia windows already have RC2 burglary resistance incorporated in their basic design, which makes it difficult to break them open with lever tools. The high structural depth of the windows (85 mm on frame side, 103 mm on sash side) allows for triple insulating glass to be combined with additional safety features.

### Technical specifications

#### Availability

Thermally insulated window from Q3 2023

#### Material variants

Steel zinc magnesium  
Bright steel\*\*  
Brushed stainless steel\*\*

#### Face widths

Window sash with frame from 92 mm  
Fixed glazing from 40 mm

#### Dimensions

Max. leaf height: 2840 mm  
Max. leaf width: 1640 mm

#### Fittings

Attached and concealed flush fittings  
Max. leaf weight 150 kg

#### System features

Design variants:  
Opening inwards: turn/tilt and turn/tilt windows, single or double leaf, with optional sidelight and fanlight  
Fixed glazing  
Structural depth: leaf profile 103 mm, frame profile 85 mm  
Max. filling element thickness 69.5 mm  
Glazing beads in aluminium and steel  
Wet and dry glazing

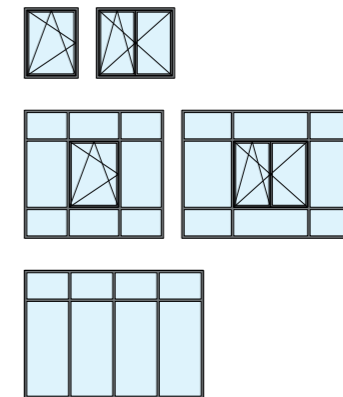
#### Performance characteristics\*

CE marking according to EN 14351-1  
Thermal insulation:  $U_f$  value up to  $1.2 \text{ W}/(\text{m}^2\text{K})$   
Mechanical load:  
Class 2 according to EN 12400 (10,000 cycles EN 1191)  
Burglary resistance: RC2 according to EN 1627  
Resistance to wind loads: Class C4/B4 according to EN 12210  
Watertightness: Class E750 according to EN 12208  
Air permeability: Class 4 according to EN 12207  
Impact resistance: Class 3 according to EN 13049  
Operating forces: Class 1 according to EN 13115  
Sound insulation up to  $R_w = 49 \text{ dB}$  according to EN ISO 140-3

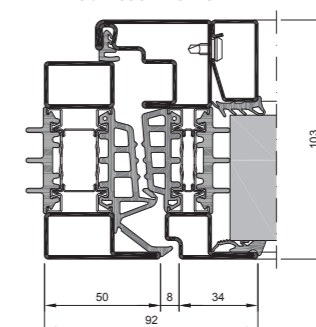
\* Take note of the country-specific approvals and requirements

\*\* On request

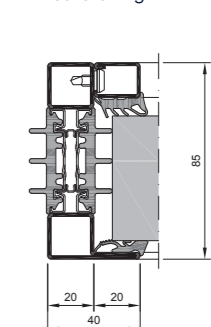
### NEW: Thermally insulated window



Window sash frame



Fixed Glazing



**For us, being sustainable is about giving buildings a long life in today's fast-paced world.**



# Architectural solutions with an eye on the future.

How are we making our branch more sustainable?

**Joint commitment**  
We are in constant discussions with our key suppliers on how we can continually improve sustainability in production while taking social and economic aspects into account.

**Setting a good example with rail and electric trucks**  
The profile components from one of our biggest suppliers are currently sent exclusively via rail to intermediate storage – and then on to us using an electric truck.

**Innovations in steel with less CO<sub>2</sub>**  
From mid-2024, the profiles we manufacture in house will be gradually switched to steel sheet, with at least 75 percent coming from recycled material. Only 532 kg of CO<sub>2</sub> equivalents are created during their production – compared to 2230 kg per tonne when using conventional steel.

**A campus for tomorrow**  
Forster is currently constructing its new company campus – the first hybrid-use building ensemble in Switzerland to be fully LEED GOLD certified. It is equipped with the latest sustainable technologies and is ready for completely energy-neutral production.

**Energy from renewable sources**  
From 2024, a photovoltaic system measuring 6000 square metres installed on the roofs of our new site in Romanshorn will provide our production facilities with over 100% green energy – any excess energy is fed into the regional power grid. We use district heating for heating and cooling, which is also generated from completely sustainable sources.



**Timeless – in every way**  
Six of our nine product lines are made from 100% steel, meaning they are completely recyclable and can be reused without any loss in quality. You can find out more about steel and its world-class recyclability on our website:



**Certified for the future**  
We are constantly expanding our offering of products that have been designed and manufactured according to the cradle-to-cradle principle. From the end of 2024, Forster will be providing product-specific environmental product declarations (EPD).

**Less material**  
Thanks to their outstanding static values, our steel products require only little material.

**High insulation**  
With our products – many of which are Minergie certified – buildings can achieve excellent thermal insulation values without using plastic strips or insulating cores.

**A long-lasting solution**  
Forster systems have an above-average service life, even under heavy load.

**We are  
committed  
to being  
carbon neutral  
by 2035.**







## forster fuego light Telescopic fire-resistant sliding door

A space-saving sensation, the forster fuego light telescopic sliding door system is made from flexible sliding elements, making it a winner wherever space-saving passageways are required in both new and existing buildings. It can be installed in lightweight or solid walls as well as fixed glazing. The particularly narrow steel profiles also ensure maximum transparency. High opening speeds of up to 50 cm per second and generous passage widths of up to 2.6 metres help ensure a smooth flow of people in busy building areas. Last but not least, the automatic door system with EI30 meets stringent fire protection requirements.

**NEW: Telescopic fire-resistant sliding door**

### Technical specifications

#### Availability

Object solutions on request

#### Material variants

Steel zinc magnesium  
Brushed stainless steel\*\*

#### Face widths

Door leaf from 70 mm  
Central section from 152 mm

#### Dimensions

Inside width single-leaf (W×H): max. 2200 × 3000 mm  
Inside width double-leaf (W×H): max. 2600 × 3000 mm

#### Fittings

Max. leaf weight according to drive manufacturer

#### System features

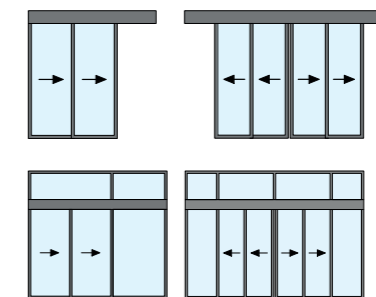
Design variants:  
sliding door with single/double leaf, with optional sidelight and fanlight  
Structural depth 65 mm  
Max. filling element thickness 53.5 mm  
Steel glazing beads  
Wet and dry glazing

#### Performance characteristics\*

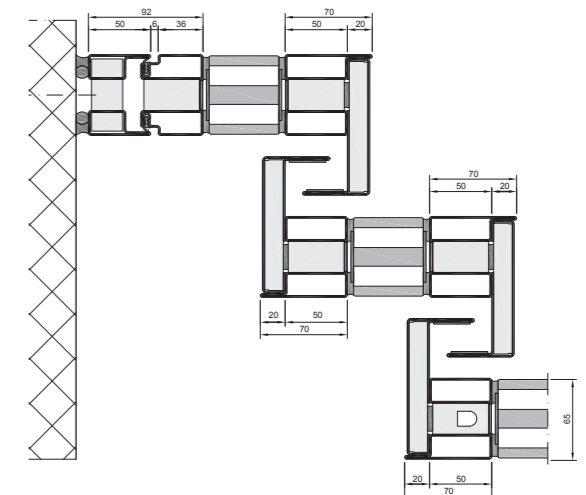
Fire protection: EI30 according to EN 1634-1  
Barrier-free according to DIN 18040  
Finger trapping protection according to DIN 18650/EN 16005

\* Take note of the country-specific approvals and requirements

\*\* On request

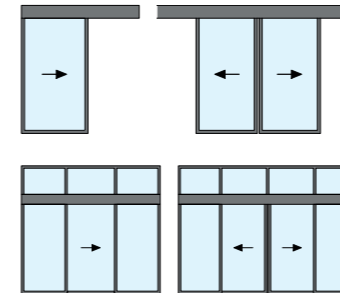


Standard glass insert (sealed on one side)

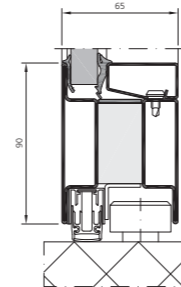




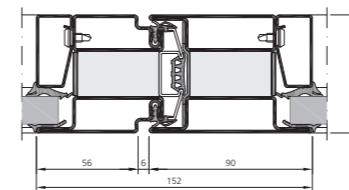
Münsterlingen Cantonal Hospital, Switzerland



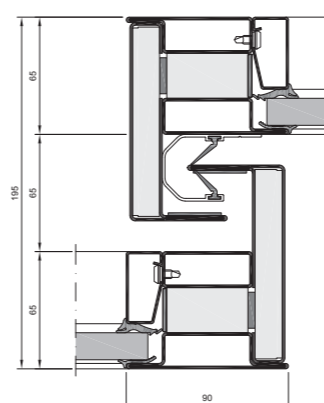
Drop seal



Central section of sliding leaf



Labyrinth seal



## forster fuego light Fire- and smoke-resistant sliding door

Ideal for projects with special requirements, the forster fuego light fire-resistant sliding door can also be expanded with the addition of a smoke protection closure in line with EI<sub>2</sub>30 / C5 / S<sub>200</sub>. It is equipped with sealing levels on four sides, making it the ideal solution when transparency, fire protection, increased tightness and special requirements for air pressure conditions are required. The space-saving design of the automatic door improves the flow of people and goods in passageways.

### Technical specifications

#### Material variants

Steel zinc magnesium  
Brushed stainless steel\*\*

#### Face widths

Door leaf from 90 mm  
Central section from 152 mm

#### Dimensions

Inside width single-leaf (W×H): max. 1380 × 2500 mm  
Inside width double-leaf (W×H): max. 2600 × 2500 mm

#### Fittings

Drive systems from different manufacturers tested and approved  
Max. leaf weight according to drive manufacturer  
No current, self-closing (without battery buffer)

#### System features

Design variants:  
sliding door with single/double leaf, with optional sidelight and fanlight  
Increased tightness due to four-sided sealing level around the edges  
Structural depth 65 mm  
Max. filling element thickness 53.5 mm  
Steel glazing beads  
Wet and dry glazing

#### Performance characteristics\*

Fire protection: EI30 according to EN 1634-1  
Smoke protection: S<sub>0</sub> or S<sub>200</sub> according to EN 1634-3  
Durability of self-closing properties:  
Class 8 according to EN 12400 (tested up to 1 million cycles according to EN 1191)  
Barrier-free according to DIN 18040  
Finger trapping protection according to DIN 18650/EN 16005

\* Take note of the country-specific approvals and requirements

\*\* On request



## forster fuego light Bulletproof fire-resistant door

The epitome of understatement, the forster fuego light fire-resistant door and glazing is now also available as a bulletproof version in the FB4 NS class. Both transparent and flush sheet metal solutions are possible, thus opening up new planning freedom. The safety barrier is achieved thanks to special reinforcements in the profiles and is integrated into the slender appearance while being indistinguishable to onlookers.

### Technical specifications

#### Material variants

Steel zinc magnesium  
Brushed stainless steel

#### Face widths

Door leaf with frame from 130 mm  
Fixed glazing from 70 mm

#### Dimensions

Inside width single-leaf (W×H): max. 1400 × 3000 mm  
Inside width double-leaf (W×H): max. 2830 × 3000 mm  
Fixed glazing (W×H): unlimited × max. 5000 mm

#### Fittings

Attached fittings  
Max. leaf weight 410 kg

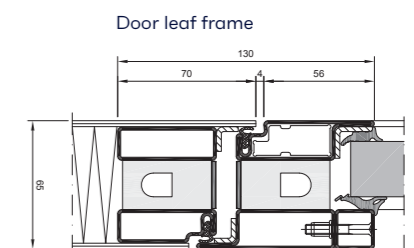
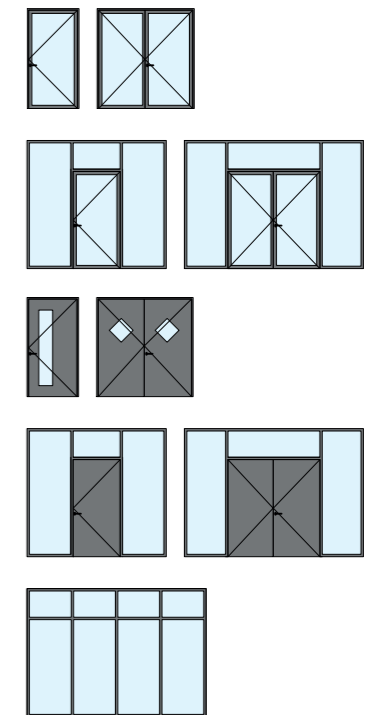
#### System features

Design variants:  
Side hung door with single/double leaf, opening outwards, with optional sidelight and fanlight  
Flush sheet metal door  
Fixed glazing  
Filling elements: glass and panels  
Structural depth 65 mm  
Steel glazing beads  
Wet and dry glazing

#### Performance characteristics\*

Fire protection: EI30 according to EN 1634-1  
Bullet resistance: Class FB4 NS according to EN 1523  
Durability of self-closing properties:  
Class 8 according to EN 12400  
(tested up to 1 million cycles according to EN 1191 with automatic door opener)  
Doors for escape and emergency routes (partial and full panic system) according to EN 179 and EN 1125  
Operating forces: Class 1 according to EN 12217

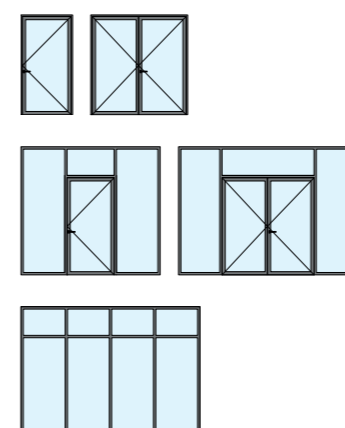
\* Take note of the country-specific approvals and requirements



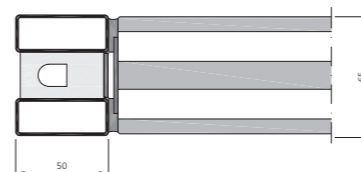


## forster fuego light Flush glass panels

Aesthetic and fireproof, the flush glass panels in the forster fuego light system feature proven EI30 or EI60 fire protection and are also an outstanding design element in large-surface glazing. The elegant, slim steel profiles allow for transparent, open room design as part of contemporary architecture. They can also be combined well with Flachglas or Vetrotech for customised solutions.



Profile with flush glass panels



### Technical specifications

#### Availability

Object solutions on request

#### Material variants

Steel zinc magnesium  
Brushed stainless steel

#### Face widths

Fixed glazing from 50 mm

#### Dimensions

Inside width single-leaf (W×H): max. 1400 × 2390 mm  
Inside width double-leaf (W×H): max. 2320 × 2390 mm  
Fixed glazing (W×H):  
EI30: unlimited × max. 5000 mm  
EI60: unlimited × max. 4000 mm

#### System features

Design variants:  
Side hung doors EI30 with single/double leaf, with optional sidelight and fanlight  
Fixed glazing EI30/EI60  
Patented clip system for efficient use of the glass panels  
Structural depth 65 mm  
Filling element thickness 63 mm  
Wet glazing

#### Performance characteristics\*

Fire protection: EI30, EI60 according to EN 1634-1

\* Take note of the country-specific approvals and requirements

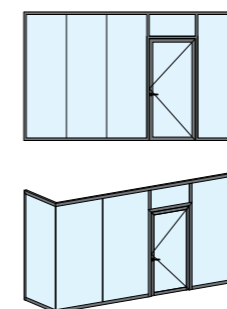


Maison de la Paix, Geneva, Switzerland  
Image: Damian Poffet

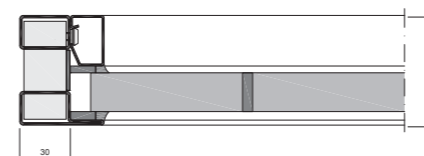


## forster fuego light Butt-joint glazing for fire protection

Featuring an ornate design and secure glazing, the forster fuego light butt-joint glazing gives excellent transparency through glass surfaces that allow light to flow while also providing safety in case of fire with EI30 or EI60 fire protection. The glass elements can be joined together with a joint of just 4 mm, resulting in a stylish, transparent glass front that is virtually uniform. The fixed glazing is installed in the floor and ceiling area using horizontal forster fuego light retaining profiles. Transoms in the vertical glass joint are not necessary thanks to this concept. The glass-on-glass connection is made at the construction site with the help of special fire-resistant sealing. The glass-on-glass joint design can also be combined with forster fuego light fire-resistant doors to ensure holistic planning.



Composite butt-joint glazing



### Technical specifications

#### Material variants

Steel zinc magnesium  
Brushed stainless steel

#### Face widths

Fixed glazing from 50 mm

#### Dimensions

Fixed glazing (WxH): unlimited x max. 4000 mm

#### System features

Design variants:  
fixed glazing  
Installation of fire-resistant doors possible  
90° to 270° corner glazing EI30 and EI60  
Mono or insulating glass up to max. 3000 mm  
Structural depth 65 mm  
Max. filling element thickness 53.5 mm  
Steel glazing beads  
Wet and dry glazing

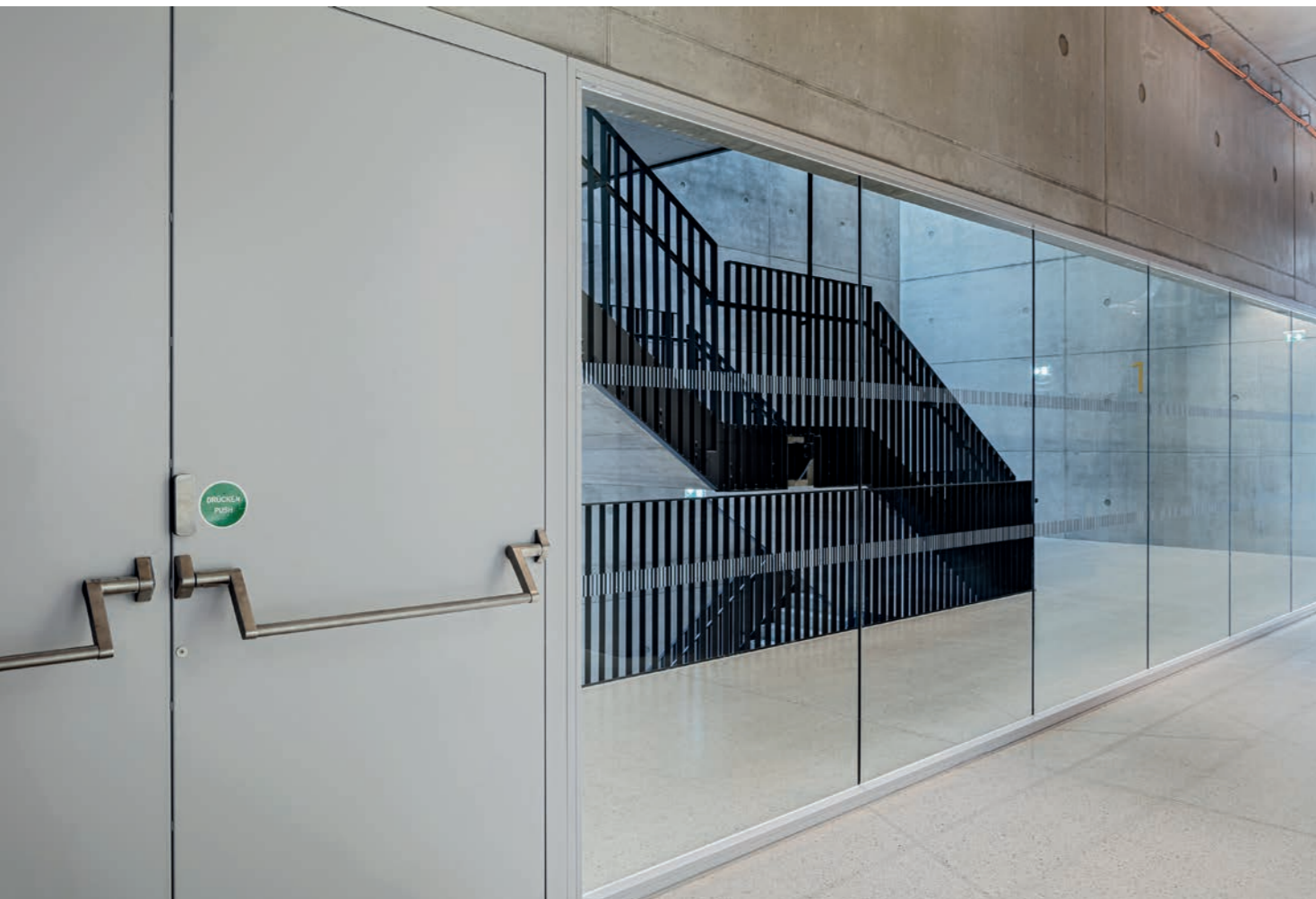
#### Performance characteristics\*

Fire protection: EI30, EI60 according to EN 1634-1

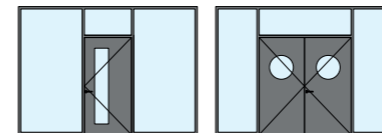
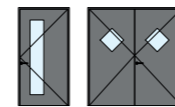
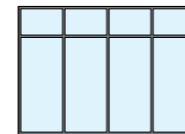
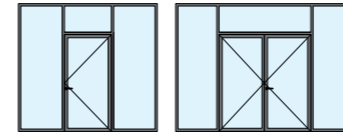
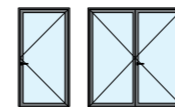
\* Take note of the country-specific approvals and requirements



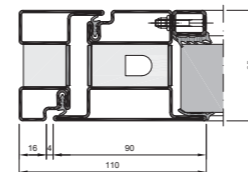
MedCampus, Linz, Austria  
Images: Martin Steinkellner



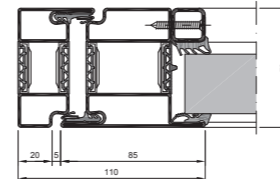
Burglar  
resistance



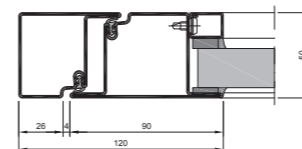
forster fuego light door leaf frame



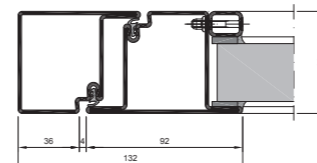
forster unico door leaf frame



forster presto 50 door leaf frame



forster presto 60S door leaf frame



## forster presto, unico und fuego light System-independent, burglar- resistant solution up to RC3 with anti-panic function

Offering multi-functional uniformity, burglar-resistant door elements are now required in a wide range of building types and applications, both outdoors and indoors. Additionally, the solutions often also have to meet additional safety requirements, such as fire protection, smoke protection or emergency exit and panic door closures. The new burglar-resistant overall solution from Forster offers this outstanding flexibility, with the right profile for every situation in combination with the compatible systems forster presto, unico and fuego light. Multifunctionality doesn't mean sacrifices have to be made in terms of appearance or service life. Typically of Forster solutions, the tested steel/glass constructions are robust, thin and aesthetically pleasing – and remain so for many years.

### Technical specifications

#### Availability

forster fuego light RC2 & RC3, presto 50 RC2 available now  
forster presto 60S RC3: Q2/2023 (object solutions on request)  
forster unico RC2 & RC3: Q1/2024 (object solutions on request)

#### Dimensions

Inside width single-leaf (W×H): max. 1400 × 3000 mm  
Inside width double-leaf (W×H): max. 2830 × 3000 mm  
Fixed glazing (W×H): unlimited × max. 5000 mm

#### Fittings and accessories

RC2:  
Mortise lock without additional lock up to leaf height of 2500 mm  
With supplementary top shootbolt on leaf heights above 2500 mm  
Clipped glazing beads  
Glass types from P4A/P6B can be used according to EN 356  
Attached and concealed flush door fittings

RC3:  
Safety multi-point lock  
Screwed glazing beads  
Different glass types from P5A/P8B can be used according to EN 356  
Attached and concealed flush door fittings

#### System features

Design variants:  
Side hung door with single/double leaf, with optional sidelight and fanlight  
Flush sheet metal door  
Fixed glazing  
Suitable profile systems:  
RC2: forster fuego light EI30/60, unico, presto 50, presto 60S  
RC3: forster fuego light EI30/60, unico, presto 60S

#### Performance characteristics\*

Burglary resistance: RC2/RC3 according to EN 1627  
Fire and smoke protection according to EN 1634-1 and EN 1634-3  
Doors for escape and emergency routes (partial and full panic system) according to EN 179 and EN 1125  
Barrier-free according to DIN 18040

\* Take note of the country-specific approvals and requirements



Théâtre de Carouge, Switzerland  
Image: Damian Poffet



## forster fuego light and forster presto Lock series 200

As a multi-functional addition, the lock series 200 for forster fuego light and forster presto meets virtually all wishes and requirements in terms of modern, secure door technology, whether constant use, fire and smoke protection or all necessary functions for escape and emergency routes. This is in addition to self-locking and electronic handle control. Installation is simple and quick thanks to uniform dimensions, including in combination with prepared forster fuego light profiles.

### Technical specifications

#### Basic versions

Locks without anti-panic function (incl. roller latch and latch protection)  
Panic function B, D, E for single/double-leaf anti-panic doors

#### Extended versions

Basic versions can be expanded with the following options:  
Supplementary top shootbolt  
Self-locking (possible for panic functions E and B)  
Monitoring  
Electronic handle control (EDS)  
Latch and dead bolt retraction

#### Properties

All locks available in profile and round cylinders  
Uniform face plate dimensions (320 × 29.5 × 3 mm)  
Rotatable latch for switching between DIN left and DIN right  
Adjustable escape direction  
Standard version with backset 35 mm  
System-compatible, matching accessories  
Rod guide with adjustable spring force (three stages)  
Design-oriented triggering fitting according to EN 179 and EN 1125

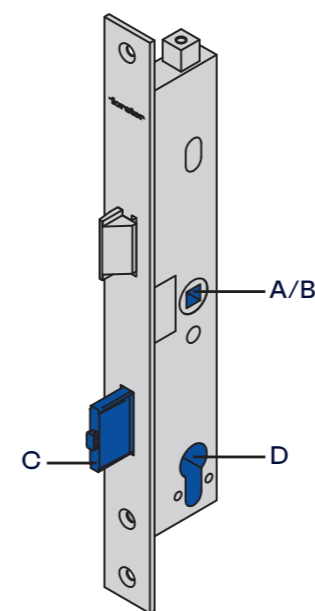
#### System features

CE marking according to DIN EN 12209

#### Performance characteristics

Fire resistance: EN 1634-1 up to class EI90  
Smoke protection according to EN 1634-3  
Durability according to EN 1191 up to 1 million cycles  
Escape route: anti-panic locks suitable for single/double-leaf escape and emergency routes (partial and full panic) according to EN 179 and EN 1125

*Functions also available in combination*



Lock monitoring functions

- A: Operation of outside lever handle
- B: Operation of inside lever handle
- C: Dead bolt locked or unlocked
- D: Cylinder actuated



ECAvénir, Lausanne, Switzerland  
Images: Damian Poffet



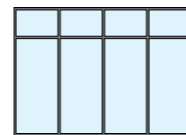
Thermal insulation



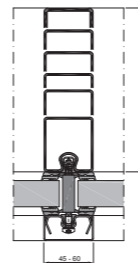
Fire protection



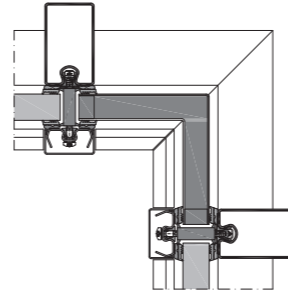
Burglar resistance



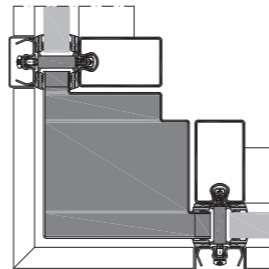
Transom



Inner corner



Outer corner



## forster thermfix vario Curtain wall for fire protection

With impressive dimensions and maximum safety, forster thermfix vario curtain walls meet all requirements in terms of high thermal insulation, burglary and bullet resistance, and fire protection. The corner constructions and glass-bonded panels with a size of up to 1500 x 3000 mm have been tested for fire protection and facilitate wide-ranging design and application possibilities with a consistently high level of safety. Profiles in steel or stainless steel positioned in the room are used for load bearing. Thanks to the outstanding static properties, impressive field sizes are possible despite the discreet profile face widths of just 45 mm. Seals printed with position markings guarantee safe, precise processing on site. In addition, sophisticated processing tools save time during production and assembly. Where openings are required in the curtain wall, side-hung or sliding doors from the forster fuego light system offer ideal combination possibilities.

### Technical specifications

#### Material variants

Bright steel  
Steel zinc magnesium  
Steel GV/BC  
Brushed stainless steel

#### Face widths

Mullion/transom profile in 45 and 60 mm

#### Dimensions

Fixed glazing (WxH): unlimited x max. 5000 mm across floors

#### System features

Design variants:  
curtain wall or inner partition  
Corner designs in classes EI30 and EI60 up to 5000 mm floor height  
Panels up to max. 1500 x 3000 mm with glass bonding possible  
Easy installation thanks to mechanical T-joints  
Cover strips in aluminium and stainless steel  
Structural depth 50 to 150 mm  
Max. filling element thickness 70 mm  
Max. filling weight 500 kg  
Dry glazing

#### Performance characteristics\*

CE marking according to EN 13830  
Thermal insulation:  $U_f$  value up to 1.2 W/(m<sup>2</sup>K)  
Fire protection: EI30/EI60/EI90/E30/E60/E90/EW30/EW60 according to EN 1634-1  
Burglary resistance: WK2/WK3 according to EN 1627  
Bullet resistance: FB4 NS according to EN 1522 as customised solution  
Explosion resistance: EPR1 (S) according to EN 13123-1 as customised solution  
Resistance to wind load: 3 kN/m<sup>2</sup> according to EN 12179, safety load 4.5 kN/m<sup>2</sup>  
Watertightness: Class RE1200 according to EN 12155  
Air permeability: Class AE (>600) according to EN 12153  
Impact resistance: Class I5/E5 according to EN 14019  
Sound insulation up to  $R_w = 45$  dB according to EN ISO 140-3

\* Take note of the country-specific approvals and requirements





Hilo module, Dübendorf, Switzerland  
Images: Roman Keller



## forster thermfix vario Hi Highly thermally insulated curtain wall

An aesthetic masterpiece designed to meet the Passive House standard, the forster thermfix vario Hi curtain wall meets the highest Passive House efficiency class phA and therefore offers excellent thermal insulation. The steel profile system can also be used to create impressive field sizes – even for very slim profiles with a width of 45 or 60 mm. Since the Passive House-certified system is based on the forster thermfix vario standard mullion/transom construction, many components can be used across systems. Burglary resistance and fire protection can be taken into account while retaining the same appearance across the entire curtain wall. To ensure similarly high insulation properties on the window and door components, the curtain wall system can be ideally combined with the forster unico, unico xs and omnia profile systems.

### Technical specifications

#### Material variants

- Bright steel
- Steel zinc magnesium
- Steel GV/BC
- Brushed stainless steel

#### Face widths

Mullion/transom profile in 45 and 60 mm

#### Dimensions

Fixed glazing (W×H): unlimited × max. 5000 mm across floors

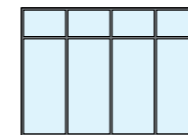
#### System features

- Design variants:  
curtain wall or inner partition
- Easy installation thanks to mechanical T-joints
- Cover strips in aluminium and stainless steel
- Structural depth 50 to 250 mm
- Max. filling element thickness 70 mm
- Max. filling weight 500 kg
- Dry glazing

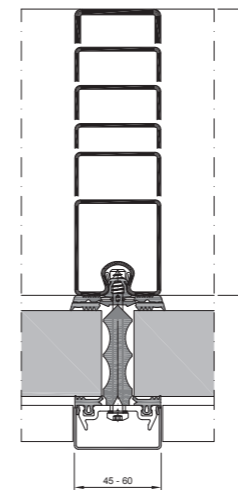
#### Performance characteristics\*

- CE marking according to EN 13830
- Thermal insulation on mullion/transom:  
 $U_f$  value up to  $0,49 \text{ W}/(\text{m}^2\text{K})$ ,  $U_{ow}$  value up to  $0,6 \text{ W}/(\text{m}^2\text{K})$
- Resistance to wind loads:  
 $3 \text{ kN}/\text{m}^2$  according to EN 12179, safety load  $4,5 \text{ kN}/\text{m}^2$
- Watertightness: Class RE1350 according to EN 12155
- Air permeability: Class AE (>600) according to EN 12153
- Impact resistance: Class I5/E5 according to EN 14019
- Sound insulation up to  $R_w = 45 \text{ dB}$  according to EN ISO 140-3

\* Take note of the country-specific approvals and requirements



Transom



$U_f 0,49 \text{ W}/(\text{m}^2\text{K})$

## List of references

<b>Abu Dhabi Cranleigh School</b> , Saadiyat Island, UAE	<b>9</b>
<b>ACI Jet Center</b> , San Luis Obispo CA, USA	<b>8</b>
<b>ECAvenir</b> , Lausanne, Switzerland	<b>36, 46</b>
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<b>Vortex</b> , Lausanne, Switzerland	<b>7</b>
<b>WiSo</b> , Cologne, Germany	<b>Titel, 4</b>

# Steel is our nature.

9912016/10068877/03-23

**For us, steel is a matter of the heart. We develop long-lasting systems for attractive and energy-efficient architecture.**

Forster Profile Systems develops and manufactures safe, energy-efficient solutions in steel and stainless steel for doors, windows and facades across Switzerland. Forster works with its own branches in over 20 countries – and exclusive sales partners in around 10 more. In-house consultants are on hand to assist our customers at sites ranging from Europe and the Middle East to Asia and North America. Forster systems are used for building shells and

interiors. This includes market-leading solutions that meet the strictest requirements and standards in terms of thermal insulation, plus safety applications such as fire protection, burglar resistance and bullet resistance. The product range is rounded off by matching accessories. Our customers and business partners in architecture, planning and construction can also count on comprehensive services for their respective branch.

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Forster Profile Systems Ltd | CH-9320 Arbon  
info@forster.ch | www.forster.ch