

Forster Profile Systems



Forster System World

Innovations in Steel and Stainless Steel

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Cover

Forster **fuego light** and Forster **thermfix vario** – shown here at the new Media Center of the Swiss government building in CH-Berne. The systems Forster **fuego light** and Forster **thermfix vario** are used for the fire resistant curtain wall and many fire resistant doors EI30.

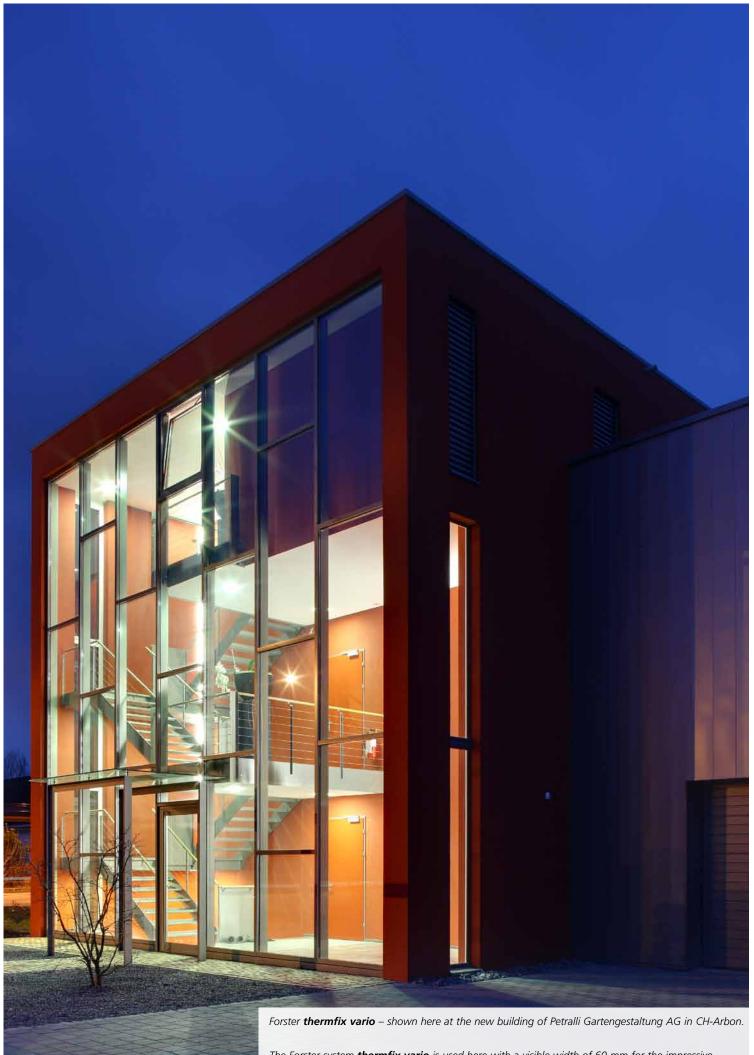
Forster Profile Systems

Innovations in Steel and Stainless Steel



Forster Profile Systems – the impressive solution in steel and stainless steel for doors, windows and curtain walls.

Steel and stainless steel are ideally suited for visually sophisticated glass structures. Forster develops and produces high quality profile systems for a whole range of applications.



The Forster system **thermfix vario** is used here with a visible width of 60 mm for the impressive mullion/transom curtain wall.

Forster Profile Systems Completed Projects



Pavillon de l'eau in FR-Paris using Forster **thermfix light** and Forster **unico**



BMW Welt in DE-Munich using Forster **fuego light**

using Forster thermfix vario



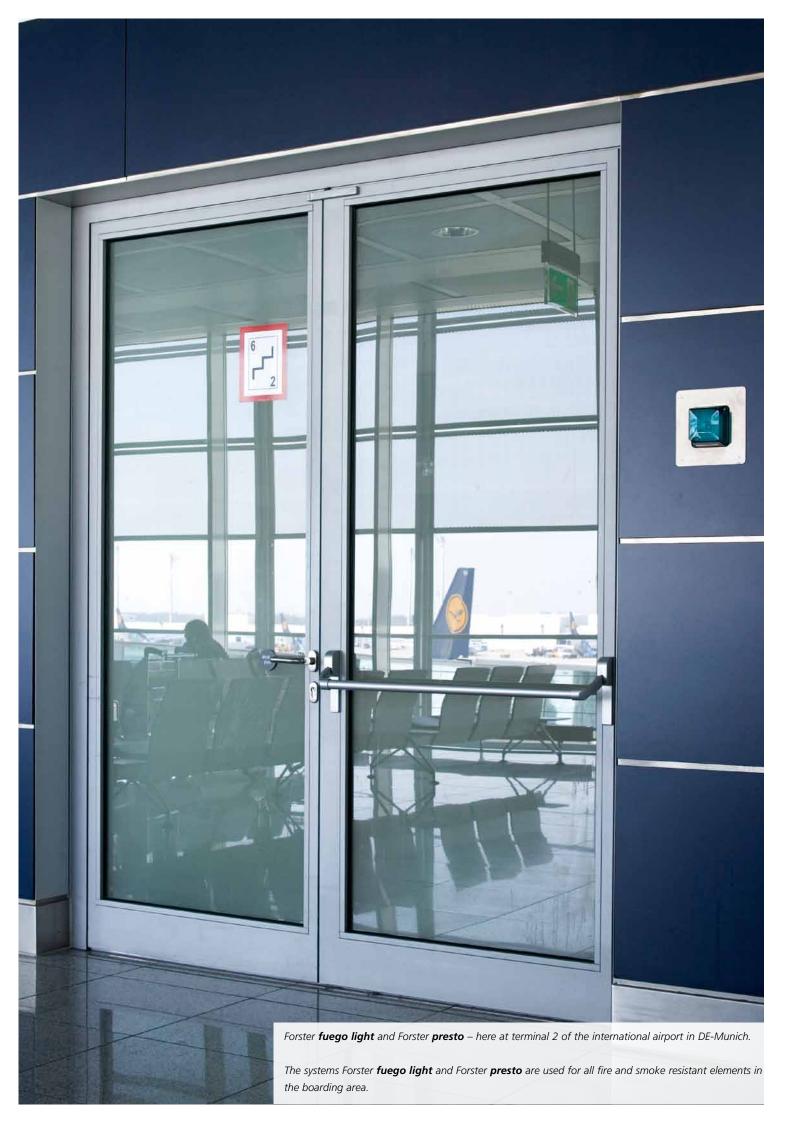
85 Great Eastern Street in GB-London using Forster **unico** and Forster **thermfix vario**



Casolare in IT-San Donato using Forster **unico**



Residential building Wildbachgut in CH-Zurich using Forster **thermfix vario** / Forster **fuego light**



Forster Profile Systems At a Glance



Forster door systems

- In steel and stainless steel
- Unique narrow sightlines
- Proven security:
 - fire resistance and smoke proof (EI30 EI90 / E30 E120)
 - burglary resistance RC1-3
 - bullet resistance FB4 NS
- Invisible fittings: concealed door closers and hinges, solutions for door automatisation
- Various versions: beside 1 and 2 leaved elements also sliding and lift-up sliding doors
- Economical processing
- Thermal insulation with $U_{\rm D}\text{-values}$ up to 1.1 W/(m^{2.}K)
- CE-marking according to EN 14351-1



Forster window systems

- In steel and stainless steel
- Thermal insulation with U_w -values up to 1.0 W/(m² K)
- Very narrow facing widths
- Ideal for new buildings as well as for renovations
- Proven security:
 - burglary resistance RC1-3
- bullet resistance FB4 NS
- Invisible technique with concealed hinges
- Base profiles consists of 100% steel 100% recyclable
- Economical processing
- CE-marking according to EN 14351-1



Forster curtain wall systems

- In steel and stainless steel
- Narrow sightlines with facing widths from 45 mm
- Forster thermfix vario, the classic mullion/transom curtain wall
- Forster thermfix light, the curtain wall with attachment profiles and a free choice of substructure
- Proven security:
 - fire resistance and smoke proof (EI30 EI90 / E30 E90 / EW30 EW60) - burglary resistance RC1-3
- Applicable as vertical curtain wall as well as sloped or overhead glazing
- Economical processing
- Thermal insulation with Uf-values up to 1.0 W/(m²K)
- CE-marking according to EN 13830



The system Forster **fuego light** is used for fire protection doors T30 with access control in combination with Forster **presto** smoke proof doors RS and round glazings G30.

Forster Profile Systems Protection and Safety

Steel and stainless steel are the ideal building materials for safety requirements. The excellent structural qualities of these materials allow highly sophisticated constructions.

Internationally Certified

Forster Systems are leaders in the area of safety. We are successfully accredited and licensed in a multitude of countries. A wide range of variety and choices allow planners a high degree of creative freedom. Thus aspects of the aesthetic design are not overlooked, regardless of how high the demands.

Close collaboration with glass and hardware manufacturers guarantees optimal interaction with all the components. Forster works intensely on developing its systems and results in continuous testing and an increase in our range of products.

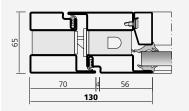
• Forster fuego light:

- Fire resistant doors and glazings EI30 / EI60 / EI90 / EI120
- Fire resistant sliding doors EI30
- Fire resistant metal sheet doors EI30
- Forster **presto:** Fire resistant doors and glazings E30-E120 / EW30-EW60 (DE: G30 / G60)
- Forster **thermfix vario**: Fire resistant glazings El30 / El60 / El90 / E30-E120 / EW30-EW60 (DE: G30)

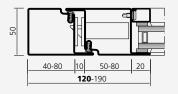
Smoke Proof Doors and Screens

- Forster presto:
- Smoke proof doors R30 / RS
- Forster thermfix vario: Smoke proof glazings R30

Forster **fuego light:** smallest facing widths for fire prevention classes EI30, EI60 and EI90

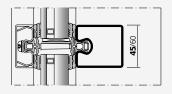


Forster **presto:** the reliable system for fire and smoke protection doors and screens E30-E120 (G30, G60, RS, R30)



Forster **thermfix vario:** multi-functional utilisation of thermal

insulating, fire and smoke protection, sound insulation



Forster thermfix vario – shown here at Sotheby's in CH-Zurich.

1'S

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The System Forster **thermfix vario** is used for burglar resistant mullion/transom shop window glazings RC3.

Sounedys

Forster Profile Systems Protection and Safety

An identical, uniform look for areas with different degrees of security requirements offers a maximum in design.

Security needs have grown tremendously in the past few years and this has also been reflected through greater demands in the area of doors, windows and screens of our systems.

Forster offers a wide spectrum of increased protection in steel or stainless steel security systems for inside or outside areas.

Burglary Resistance

- Forster unico: Thermal insulated windows and doors in steel and stainless steel RC1-3 for EN 1627-1630
- Forster **unico Hi:** Enhanced thermal insulated windows and doors in steel and stainless steel RC1-3 for EN 1627-1630
- Forster **thermfix vario:** Transom/ mullion curtain walls RC1-3 for DIN ENV 1627-1630
- Forster fuego light: Doors RC1-3 for DIN ENV 1627-1630
- Forster **presto:** Doors RC1-3 for DIN ENV 1627-1630

Bullet Resistance

- Forster unico:
- Thermal insulated windows and doors in steel and stainless steel FB4 NS for EN 1522
- Forster unico Hi:

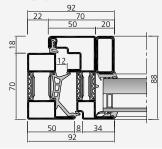
Enhanced thermal insulated windows and doors in steel and stainless steel FB4 NS for EN 1522

- Forster presto:
 Doors M3-SA
- Forster thermfix vario:

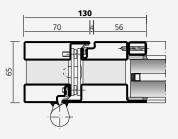
Transom/mullion curtain walls M1-3-SF

Forster unico: narrow facing widths also

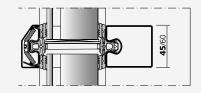
for burglary resistant windows RC1-3



Forster **fuego light:** burglary resistant RC3 in combination with fire protection demands (EI30)



Forster **thermfix vario:** multi functional usage also for bullet resistant curtain walls M3-SF





The system Forster thermfix vario in stainless steel, is used for the thermal insulated curtain wall.



The system Forster **unico** in stainless steel, is used for the thermal insulated entrance doors.

Forster Profile Systems Stainless Steel Systems

Building with stainless steel: an ideal combination of security, maintenance free durability and design.



Rustproof Stainless Steel the Most Important Qualities:

- Resistance to corrosion From air, water and aggressive mediums
- Wear resistant Also to high temperatures, high mechanical stress and abrasive influences as well as to aggressive agents.
- Hygienic Through to sterility
- Convenient Maintenance-free surfaces
- Environmentally friendly Through a long life cycle and 100% recycling capability

Forster leads the market with the widest selection of stainless steel systems and is therefore able to offer a stainless steel solution for practically any application or need – whether for outdoors areas with thermal insulated windows, doors or curtain walls, or for indoor areas with fire and smoke protection screens. Elegant stainless steel systems can also be provided on elements with additional security requirements such as burglary or bullet resistance. Profiles are available in the qualities 1.4301 and on demand in 1.4401 as well, grinded with 220-240 grain and covered with a protective tape.

Curtain Walls in stainless steel • Forster thermfix vario:

Transom/mullion system with dry glazing

• Forster thermfix vario SV: Transom/mullion system for sloped glazings

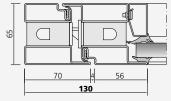
Windows in stainless steel

- Forster unico:
 - Thermal insulated windows and fanlights
- Forster **unico Hi**: Enhanced thermal insulated windows and fanlights

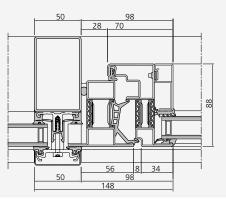
Doors/Glazings in stainless steel

- Forster **unico**: Thermal insulated doors and glazings
- Forster unico Hi: Enhanced thermal insulated doors and glazings
- Forster presto: Uninsulated doors and glazings, smoke proof doors and fire resistant glazings E30
- Forster fuego light: Fire resistant doors and glazings EI30 / EI60

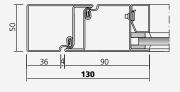
Forster fuego light in stainless steel: extremely slim section widths and the purest aesthetic design for fire protection classes EI30, EI60 and EI90

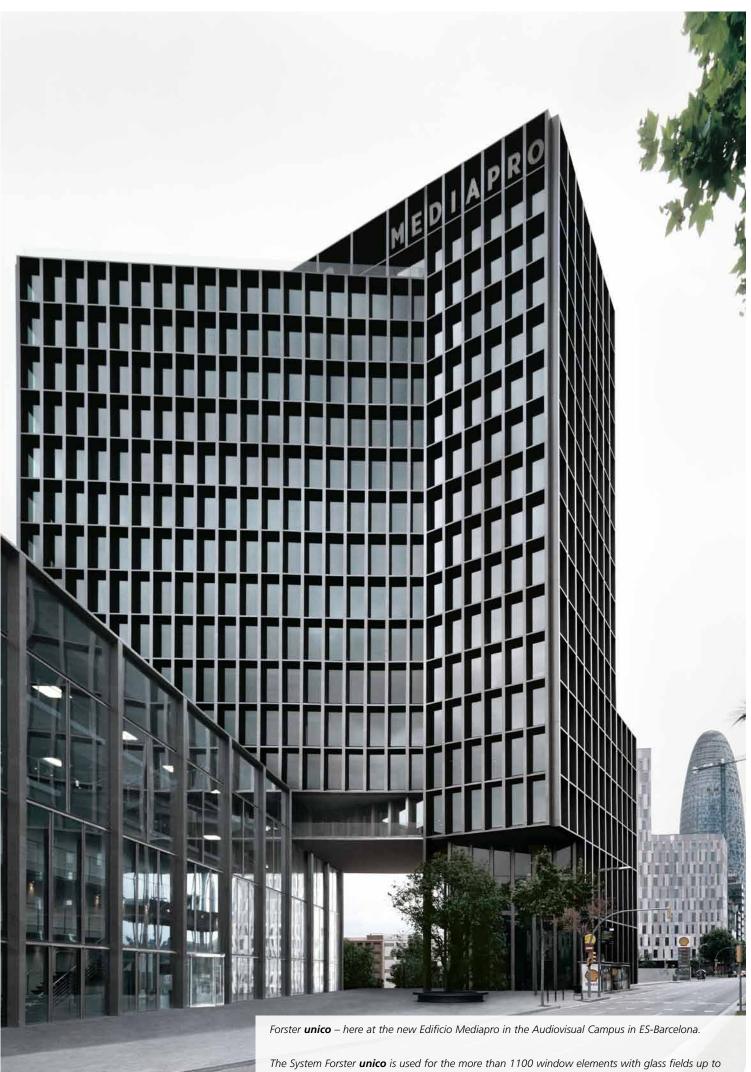


combination of thermal insulated facades with integrated windows



Forster unico and Forster thermfix light in stainless steel: an elegant – Forster presto in stainless steel: with hidden fittings for doors in simple elegance, for smoke and fire protection as well E30





3.1 m height.

Forster Profile Systems Thermal Insulated Doors and Windows

Forster **unico** and Forster **unico Hi:** the revolutionary profile system for thermally insulated doors, windows and for external area glazings as well.

100% Steel, 100% Recyclable



Door and Window System

- Forster **unico**:
 - U_r-values up to 1.9 W/(m²K) according to EN 10077-2
- Forster unico Hi:
- $U_w\mbox{-}values$ up to 1.0 W/(m²-K) and $U_{\mbox{\tiny o}}\mbox{-}values$ up to 1.1 W/(m²-K)
- Facing widths: frame profiles 30, 50, 70 and 90 mm, door profiles 85 mm
- Lift-up sliding doors, 1 or 2 leaved
- System testings according to prEN 14351-1, and complying with the requirements for the CE-marking
- Tested for burglary resistant windows and doors RC1-3 according to EN 1627-1630
- Bullet resistance FB4 NS tested according to EN 1522

The base profile consists of 100% recycled steel and does not contain any synthetic insulators – unlike conventional insulating systems.

This unique innovation of framework structure fulfils the most stringent demands of technical and physical building functions.

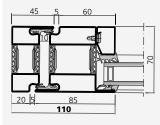
The profiles easily achieve today's standard insulating values from these profile series.

Thanks to a specialised supporting geometry, the profiles guarantee the highest static values.

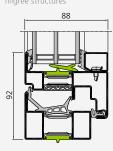
A clever joining method allows extraordinarily narrow profile cross sections that until now, were not possible in thermal insulating series. Forster unico is therefore also an appropriately exceptional choice when renovating old buildings or landmark industrial facilities. Good flexibility also allows adaptation to outer shells of existing buildings.

Forster **unico:** for doors with an elevation width

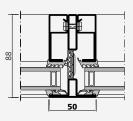
of just 110 mm in wall connections

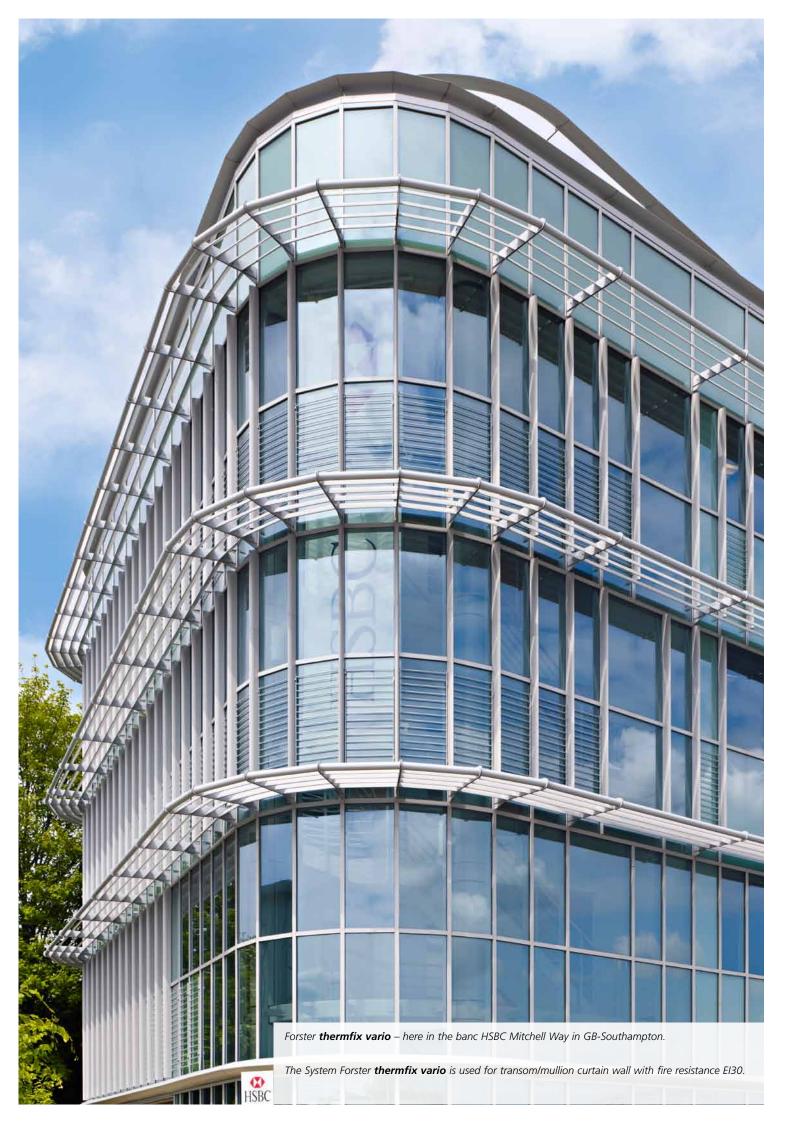


Forster **unico Hi:** high thermally insulated and extremely filigree structures



Forster **unico:** narrow transoms are especially suited for renovating old buildings





Forster Profile Systems Curtain Wall Systems

Forster offers a wide selection of structural possibilities for curtain walls.

CE-marking

	ift Product Passport Curtain Walling as per EN 13830 : 2003	ift
	No. 100 29778/1-0.4e	ROSENHEIM
	Valid until December 2011 This is a transition of Test Report 102 297701 - 0.2 dated 13 November 2008.	
The client is the system sup- plan	Forster Rohr-/Profiltechnik AG	Baels EN 13830 : 2003-09 Curtain walling - Product standard Meximum requirements for per-
	9320 Arbon Switzerland	formance characteristics as per IR Certification Scheme Curtain walling (CM329)
Product family		Instructions for use
Variants	Face width 45	The IR product passport dem-
Etame material	Steel, stainless steel	onabaties the peneral perform- ance of the designated product family - determined on the ba-
	Performance characteristics (mperDN 13830 Arrest	sis of testing, calculation or as- sessment. The values / classes indicated
Characteristics	2A.1) Number Differ Free wear. Free promption to American D. Wind and in: Street wear	The values relatives indicated refer both to the specific ob- jects described in the individual
C-MARADON STOCK		evidence and the scope of ap- plication defined by the IR product persport.
Class/ Value	npd npd ') RE ₁₀₀ ') '') 15/E5	Implementation of the per-
Characteristics	Perpendicipal Residence & Ari Permitte Representative Second Process Antonio Second Research Second Research Second Process Se	Romance characteristics is subject to national technical regulations.
Classi Value	further characteristics / Evidence	This Product Passport forms the basis for obtaining the lift Certificate of Conformity, which provides evidence of the con-
Characteristics		formity of the finished products and the company's quality con- trol through regular third party audits of the menufacturer by the lift Rosenheim.
Class/Value	no water penetra- fon ****)	Notes on publishing
npd - no perform	ance determined	The IR Guidance Sheet "Con- ditions and Guidance for the Use of IR Test Documents"
") Design load	ded evidence of performance – as necessary (in kNIm*) positive pressure +3.0, negative pressure –2.0; safety load (in kNIm*)	applies.
	since 4.5, frequency pressure -3.5 in terror (SE 1533)5, Arrive (B netrostions as $p_{\rm min}$ 375 Par $_{\rm Par}$ 1125 Pa	Contents This Product Passport consists of a total of 14 pages: 1 Classification matrix as per EN 13830 2
10 Posenheim 10 Petruary 2000	1	2 Classification matrix as per other standerbinegulations3 3 Phodust description / abridged version 4 4 Performance characteristics
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Attachment Profiles

- Forster thermfix light:
- Substructure with standard commercial profiles in steel, aluminium or wood
- Forster attachment profiles in steel, galvanized steel or aluminium
- Facing width 50 mm
- Great configuration flexibility
- CE-marking in accordance to EN 13830
 Heat transfer coefficiency U_f from 1.1 to
- 2.2 W/(m²·K)
- Simple and economical finishing

Forster system **thermfix light** allows for trouble free mounting of sealing systems on standard commercial steel and aluminium profiles as well as on wooden substructures.

This system stands out for its simple and quick processing and thus by its cost efficiency.

Transom/Mullion Dry Glazing

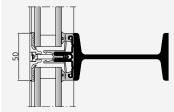
- Forster thermfix vario:
 - Heat transfer coefficiency Uf from 1.5 to 2.4 W/(m²·K)
 - Filling thickness between 3 and 60 mm
 - CE-marking according to EN 13830

Forster system **thermfix vario** is a thermal insulated, mullion/transom construction based on the dry glazing system. The load bearing function is taken over by the steel and stainless steel profiles on the inside of the structure.

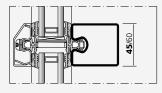
The system is remarkable for its slim facing widths (from 45 mm) and is well suited for multi-functional purposes such as:

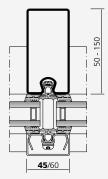
- Thermal insulation
- Fire and smoke protection EI30-EI90, E30-E120, EW30-EW60
- Burglary resistance RC1-3.

Forster **thermfix light:** simple, quick, economical, with a choice of substructures



Forster **thermfix vario:** multi-functional application, thermal insulation combined with fire and burglary protection

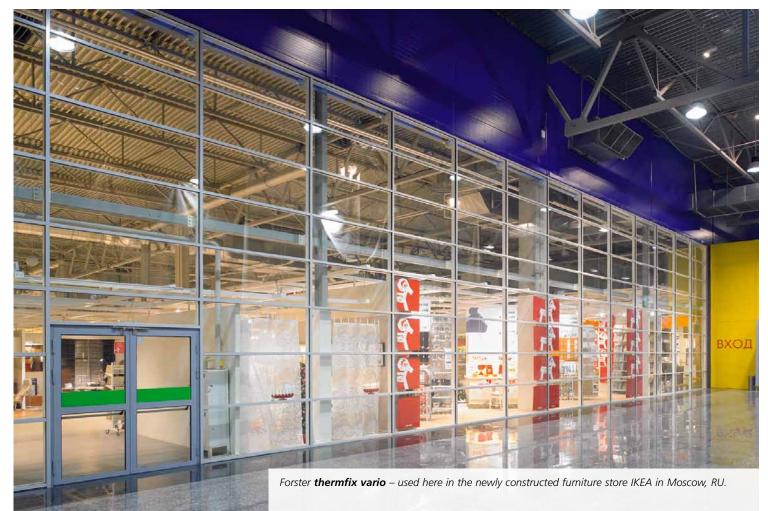






Forster thermfix vario – here at the Museum Stibbert in IT-Florence.

The System Forster **thermfix vario** is used for curtain wall and roof glazing in the completely restored 'Limonaia'.



The Forster system **thermfix vario** is used for mullion/transom façades. Forster **fuego light** provides security for customers with fire protection doors El60 inside.

Forster Profile Systems Curtain Wall Systems

Steel tube profiles are the optimal construction elements to use with curtain walls for static reasons. Large open and transparent curtain walls made from steel and stainless steel can be assembled with the slimmest visible widths of 45 or 60 mm.

Overhead Glazing

- Forster thermfix vario SV:
- Tested overhead glazing for angles between 15 and 60 degrees

Forster system **thermfix vario SV** is a thermal insulated, transom/mullion construction based on the dry glazing system for glazed roofs and inclined areas. The load bearing function is taken over by the steel and stainless steel profiles erected on the inside of the structure.

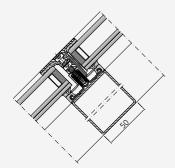
- Forster thermfix light:
 - Tested overhead glazing for angles 10-75 degrees (Institute CSTB, Paris)

Fire Protection Curtain Walls

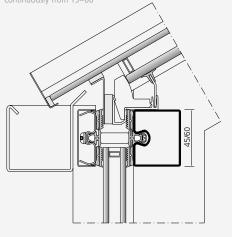
- Forster thermfix vario:
 - EI30 / EI60 / EI90 / E30-E120 / EW30-EW60 accredited in many countries
 - Can be used in floor levels up to 5 m in height

The fire resistant curtain wall Forster **thermfix vario** is a thermal insulated, mullion/transom construction that is based on the dry glazing system and is optically identical with standard curtain walls.

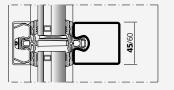
Forster **thermfix light:** glazed roofs and overhead glazings continuously from 10-75°



Forster **thermfix vario SV:** glazed roofs and overhead glazings continuously from 15–60°



Forster **thermfix vario:** fire resistant glazings EI30-EI90, E30-EI20 and EW30-60 with the slimmest visibility





The System Forster **norm** is used in this very beautyfully restored building for over 800 window elements, for the most part with arches.

Forster Profile Systems Systems Without Thermal Break

Uninsulated Forster systems are perfect for low budget structures.

Flush Mounted Windows and Door Systems • Forster presto:

- Doors and window glazings in steel and stainless steel
- Steel windows with EURO groove
- Easy finishing
- System testings according to EN 14351-1, and complying with the requirements for the CE-marking

Forster **presto** is a complete profile system with fittings and accessories for flush mounted single and double leafed doors and windows as well as for glazed screens.

The elements stand for safety and protection and meet the highest requirements of technical functionality and extreme stress endurance. The system is suited for areas where special thermal insulating requirements are not necessary.

Forster **presto** is also available in stainless steel for elegant and sophisticated structures.

Overlapping Profiles for Windows and Doors

• Forster **norm:**

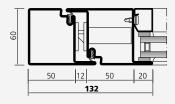
- Universal structures
- Wide profile selection
- Easy finishing
- System testings according to EN 14351-1, and complying with the requirements for the CE-marking

The uninsulated profile system Forster **norm** is suitable for building vertical doors and window structures. The appropriate profile choice permits overlapping casement windows, window bands, and window walls as well as doors and partition walls to be possible in various combinations.

Forster **norm** is distinguished through its wide profile selection in various sectional depths which leads to a wide combination of choices.

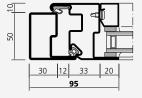
Forster presto 60: easy solution for large

door elements and window glazings

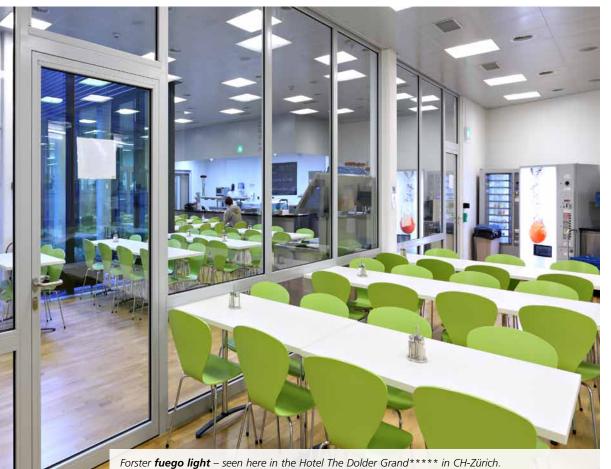


Forster **presto:** a system rich in variations,

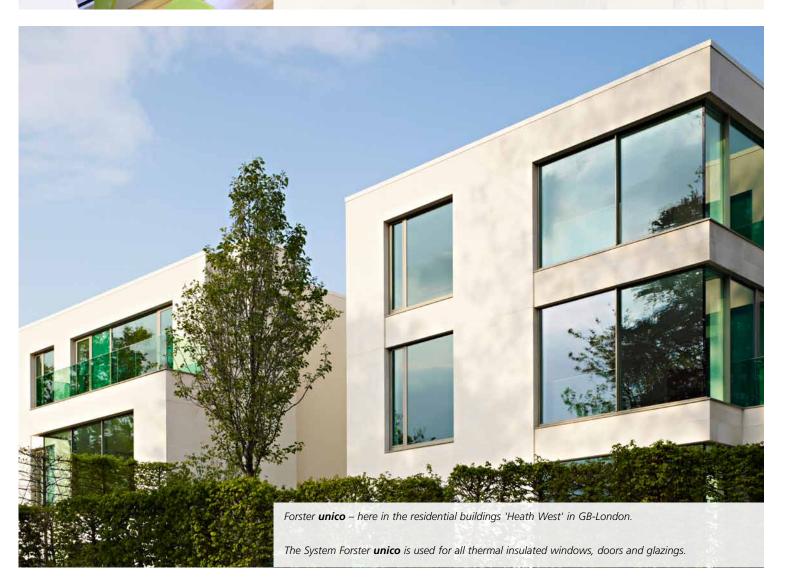




Forster **norm:** universal system for uninsulated doors and windows in various sectional depths



The System Forster **fuego light** is used for fire resistant doors and glazings EI30 / EI60 in the areas of the kitchens, the back-office, main offices and the employee canteen.



Forster Profile Systems Services

Aside from the comprehensive amount of technical information available in brochures and catalogues, Forster also offers a wide selection of services.

assemblies, there are also complete system plans integrated.

CAD-Profile Catalogue

U-Value-Calculator









Planning and Fabrication Information

calculated - an easy and helpful tool for planning.

CD ROMs with the latest Forster system documentation are available in PDF format for the planner as well as fabricator.

The easy to understand program obtains U-values in accordance with EN ISO 10077-1:11.2000 that is based on the large data bank of U-values (heat transfer coefficient) from complete structural elements such as doors, windows and screens. Complex building modules can also be achieved and separately

The CD-ROM with CAD drawings is a helpful and dependable work instrument for the planning of Forster systems. Aside from the drawing data of singular system components and various profile

Calculation Program MAP

We can offer the best proven calculation program with some very distinct advantages. The varied use of this calculation program extends over the entire order process: from business bids to AVOR papers, to material samples and optimised cutting lists, delivery/invoicing.

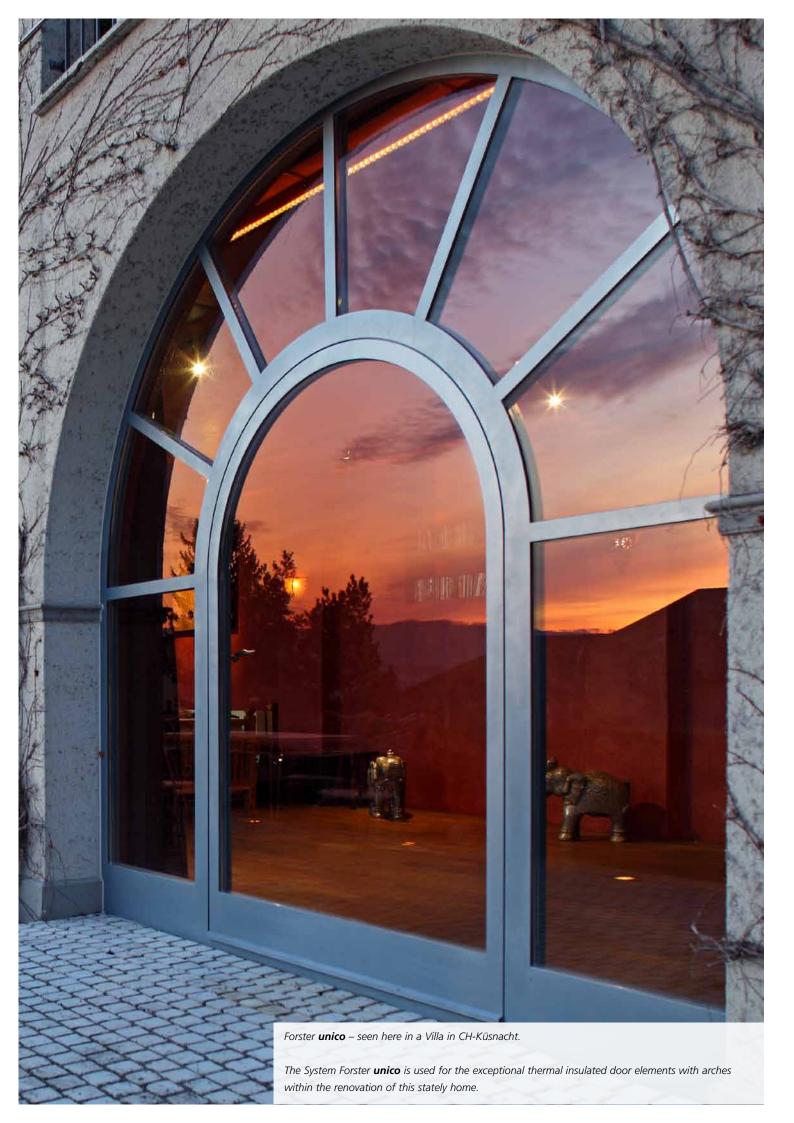


Technical Consultations

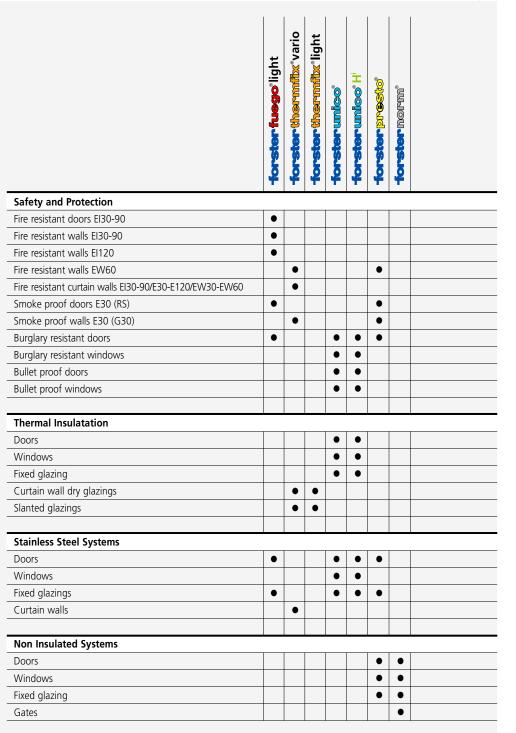
A team of highly qualified technicians are here to help you with your projects and assist for specifications, for the implementation planning and also for object specific solutions.

www.forster-profile.ch

On the Forster website you will not only find all product information but also an extensive reference data bank. You will find under Downloads, specification texts, documents in PDF format and much more useful information. In a separate downloadportal you will find information and documents for the CE-Marking.



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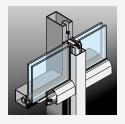


Please be aware of country specific standards and approvals!



Forster fuego light

Forster thermfix vario



Forster **unico**

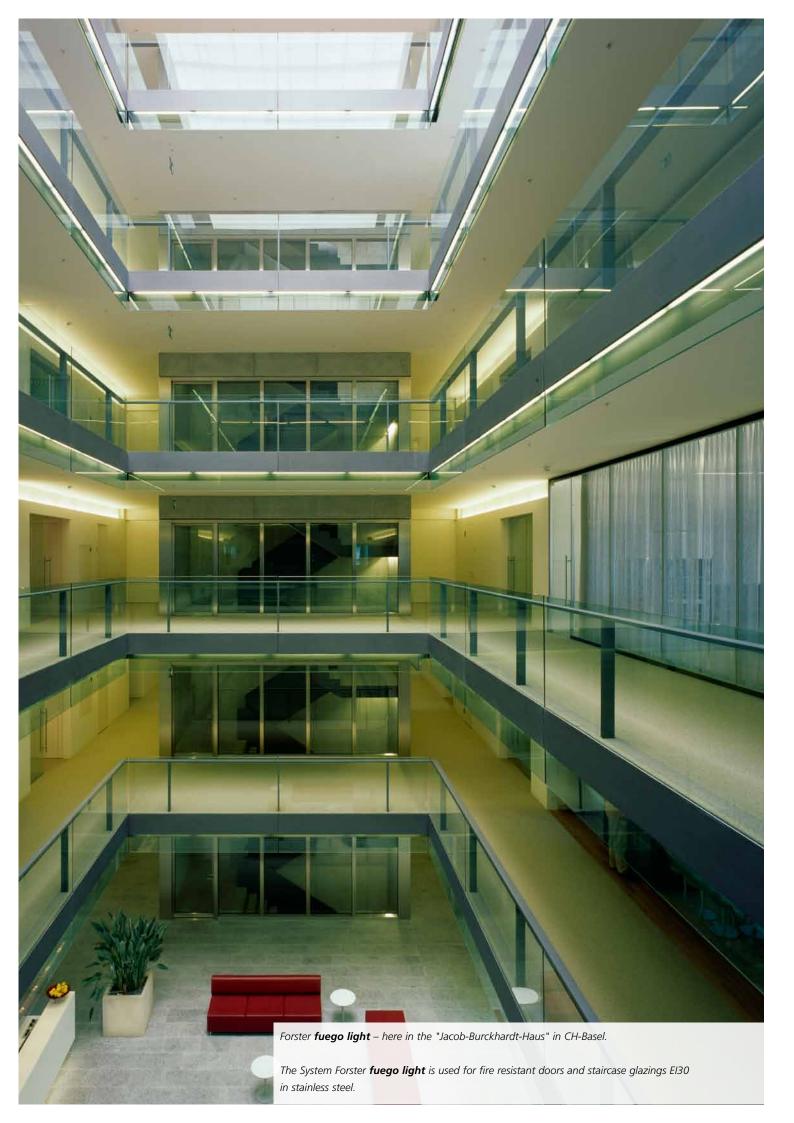


Forster **presto**



Forster **norm**





Forster Profile Systems Your partner

Forster Profile Systems are internationally certified, proven through many years of continual use and are efficiently processed.

On the Safe Side

Forster Systems are certified in many countries and authorised for fire and smoke protection as well as for burglary and bullet resistance

Timeless Elegance

Forster stainless steel systems fulfill all aesthetic requirements, are maintenance-free and very durable.

Time Saving

Forster-systems stand out through their quick processing and their full range of support services for highly efficient production.

Environmentally Friendly

Steel and stainless steel are recyclable materials. Forster Profile Systems is certified according to the environmental management system ISO 14001:2004.

Facilitated Work Planning

Numerous technical support material available from Forster Systems is at your disposal. Our technicians will advise you with the planning of your projects.

Further information on our systems can be found at **www.forster-profile.ch** or directly through one of our service consultants found in your area. Please contact us.

AFG Arbonia-Forster-Holding AG, based in Arbon, Switzerland, is a leading integrated construction industry supplier and technology group. The company is listed on the SIX Swiss Exchange and operates through five Divisions: Heating Technology and Sanitary Equipment, Kitchens and Refrigeration, Windows and Doors, Steel Technology and Surface Technology.

Its production sites are in Switzerland, Germany, France, the USA, the Czech Republic, the UK and Slovakia. AFG has about 50 production and distribution companies around the world, as well as several representative offices and partners. It is active in more than 70 countries in total. Its brands - Kermi, Arbonia, Prolux, ASCO Swiss, Aqualux, Forster Küchen, Forster Kühlen, Warendorf, Piatti, EgoKiefer, RWD Schlatter, Slovaktual, Forster Präzisionsstahlrohre, Forster Profilsysteme, STI | Hartchrom and Asta – are at the heart of its business. With these brands, AFG Arbonia-Forster-Holding AG has built up leading positions in its home markets of Switzerland and Germany.

It is also engaged in intensive efforts to develop new markets in Eastern Europe, Russia, and the Middle and Far East, though always with a close eye on the general economic situation. A separate Asia Pacific regional branch was set up in 2008. AFG's focus is on segments that reward outstanding innovation and responsiveness with robust margins and exceptional long-term growth potential.

www.afg.ch



A company in the AFG Arbonia-Forster-Holding AG

Forster Rohr- & Profiltechnik AG Forster Profile Systems Amriswilerstrasse 50 P.O. Box 400 CH-9320 Arbon T +41 71 447 43 43 F +41 71 447 44 78 forster.profile@afg.ch www.forster-profile.ch

