

Forster Profile Systems

Creative Solutions in Steel



forster

A leading brand of  AFG

*Photo right:
Prime Tower, Zurich, Switzerland
Fire protection doors EI30, smoke protection
doors E30 from Forster fuego light and
Forster presto systems*

*Front page picture:
Huawei Exhibition Center, Peking, China
Thermal insulated mullion/transom curtain
walls, glazings and entrance doors with the
systems Forster thermfix vario and Forster unico*



Contents

Forster Profile Systems Ltd	4
Overview of Forster systems	5
Freedom of design with profile systems made of steel Safer – slender – individual	6
Sustainability of steel profiles The recycling world champion	7
Beautiful down to the smallest detail Concealed solutions	8
Energy efficiency Ecological heat insulation	10
Universal design Barrier-free accessibility and finger protection	14
Safety Fire and smoke protection	18
Security Burglary and bullet resistance	22
Services	27

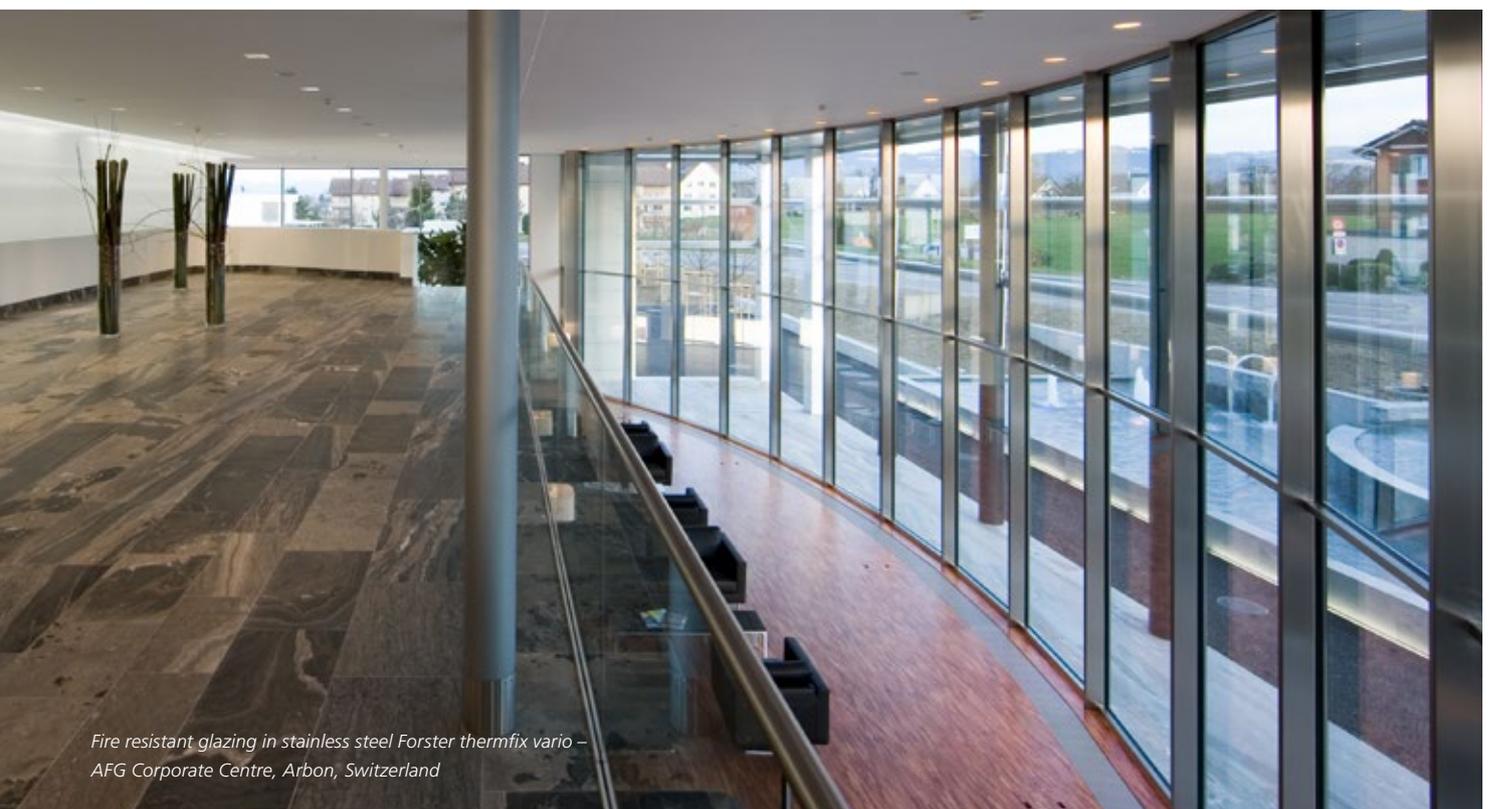
Forster Profile Systems Ltd

Impressive solutions in steel and stainless steel

At its location in Arbon in Switzerland, Forster develops and produces high-quality profile systems for a variety of applications:

- Thermally insulated doors and windows
- Curtain walls and glazed roofs
- Doors and windows without thermal break
- Fire and smoke protection closures
- Security doors and windows (burglary, bullet resistance)

Besides full support from our technical advisers, we provide architects, planners and metal-construction companies with detailed documentation and practical digital aids to help them complete their design and implement the systems.



*Fire resistant glazing in stainless steel Forster thermfix vario –
AFG Corporate Centre, Arbon, Switzerland*

The Forster systems

Windows, doors and curtain walls

Forster offers profile systems for a variety of different requirements and needs. Our systems are continuously updated and expanded by innovations to meet the latest demands of the market.

Forster fuego light

For fire protection doors and glazing at the highest quality level. Many different solutions are tested and approved in numerous countries. Design variants range from single and double-leaf doors through to large-surface sliding doors. The system is convincing due to its very narrow sightline, slender looks and extreme transparency.



SAFE • SLENDER

EI30/EI60/EI90/EI120



Forster unico / Forster unico Hi

Thermally insulated windows, doors and glazings – elements, produced with profiles in this unique framework style, can be fitted indoors or outdoors. The ecological basic profiles are made of 100% recyclable steel and contain no synthetic insulating materials. The clever fastening techniques achieve extremely narrow profile cross-sections previously unattainable with thermally insulated series. This system is therefore ideal for renovating old buildings and listed industrial buildings.



DURABLE • ENERGY-EFFICIENT

WK1/RC2-3/FB4 NS/E30-E60/EW30-EW60



Forster thermfix vario

System for thermally insulated curtain walls based on a mullion/transom construction has a multifunctional use that is combinable with noise reduction, fire protection and burglary resistance. Very narrow facing widths from 45 mm permit a wide range of applications.



MULTIFUNCTIONAL • FLEXIBLE

E30-E90/EW30-EW60/EI30-EI90/RC2-3/FB4 NS



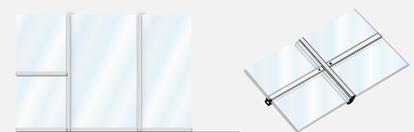
Forster thermfix light

Curtain walls and fixed glazing are simple, quick and economic to install with free choice of substructure. This makes fitting a weatherstripping system simple on commercially available steel and aluminium profiles or wooden substructures. Also ideal for sloped or glazed roofs.



ECONOMICAL • SIMPLE

EI30/E60/EW60



Forster presto

For flush mounted single or double-leaf doors, windows and glazed closures. Forster presto stands for security and safety and meets maximum demands for technical functionality and extreme long-term exposure to stress. The system is suitable for use wherever there are no special thermal insulation requirements. Forster presto is also available in stainless steel for elegant and ambitious solutions.



STURDY • UNCOMPLICATED

E30-E120/EW30-EW60/RC2-3



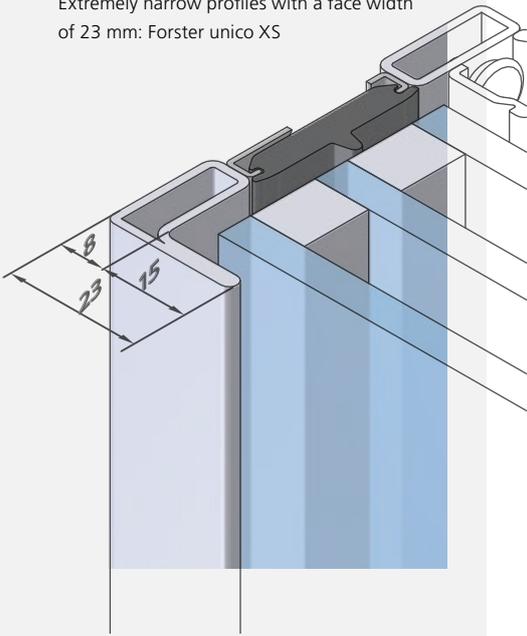
* Refer to country-specific approvals

Safer – slender – individual

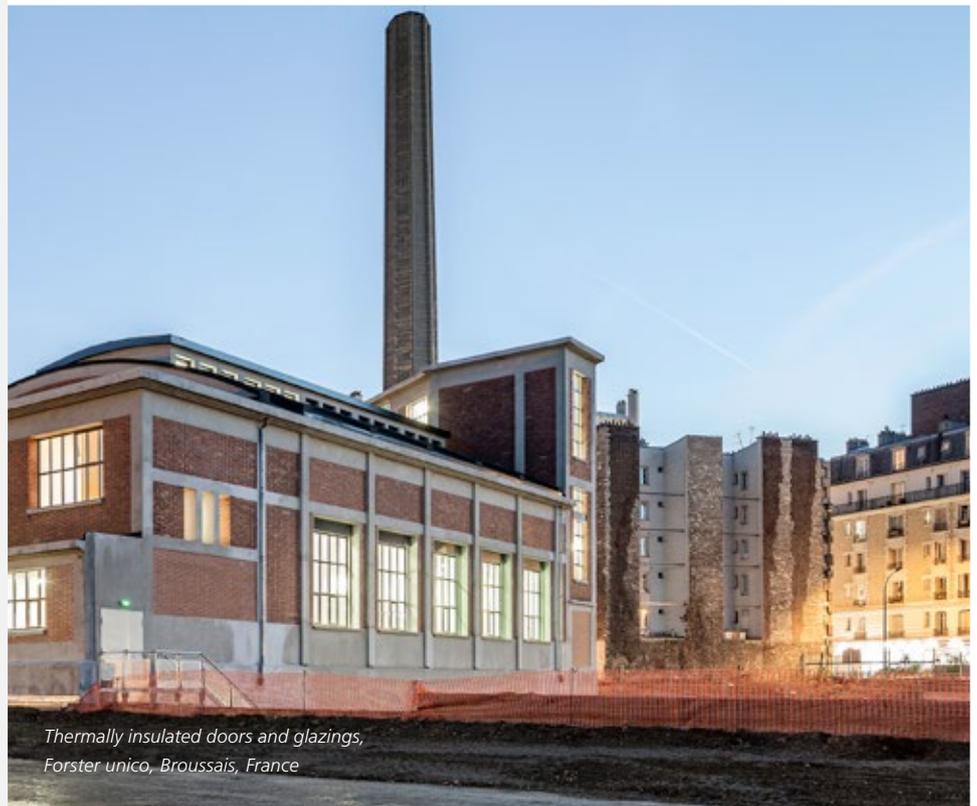
Freedom of design with profile systems made of steel

Profile steel tubes are an optimal construction element for doors, windows and curtain walls for structural reasons. Large-surface elements with extremely narrow face widths can be produced from steel and stainless steel, which is otherwise not possible with other materials. In many respects, steel as a basic material is a reliable partner, in particular for our Forster profile systems:

Extremely narrow profiles with a face width of 23 mm: Forster unico XS



- Elegant, transparent, lightweight and slim constructions
- Impressive element dimensions – the structural properties of steel make this possible
- Many varied forms, curved in elevation or in plan
- Easy to combine with materials such as concrete, glass, membranes and wood
- Offers many fitting options
- Durable and economic
- Ecological and sustainable, 100% recyclable
- Ideal for renovations



*Thermally insulated doors and glazings,
Forster unico, Broussais, France*

Sustainable

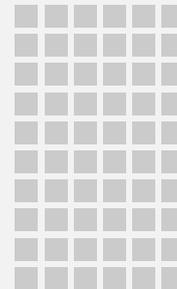
Steel, the recycling champion

Steel is the material with the highest recycling rate in the whole world. Even when adding up all other materials together, such as aluminium, glass and paper i.e. materials that are recycled in larger quantities, the quantity of recycled steel is far greater. 570 million tonnes of steel scrap per year – that is 60 times the quantity of recycled aluminium, for example. Steel is the world’s recycling champion by a long margin!

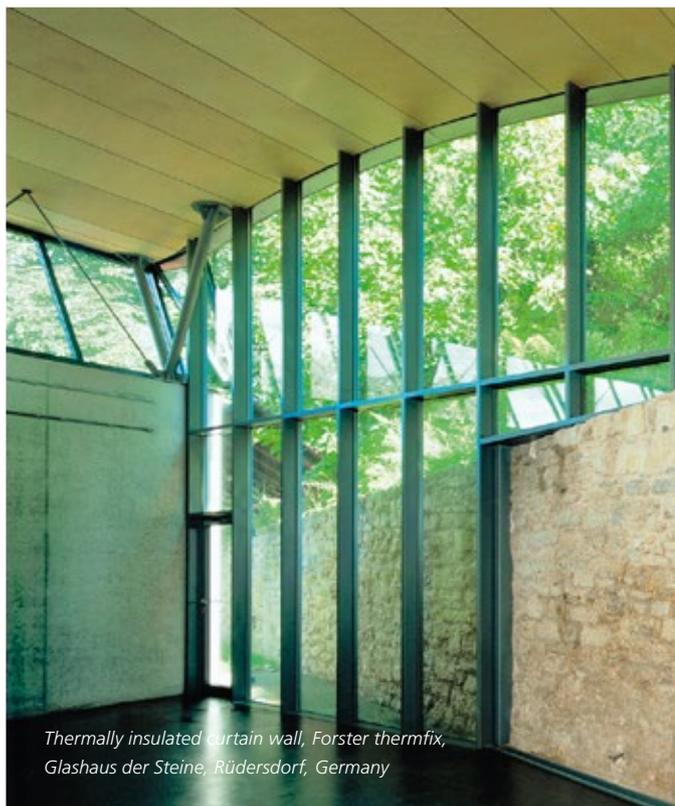
The ecological footprint of steel is smaller than previously estimated due to its multi-recycling properties. At the same time, material quality is retained in every new product cycle. These are the findings of a study performed by the Technical University of Berlin under the direction of Prof. Dr. Matthias Finkbeiner. For the first time, it presents a holistic and comprehensive life cycle assessment methodology for steel. (Source: Steel Information Centre, www.stahl-online.de)

Together with members of the VFF (Association of Window and Façade Manufacturers, Frankfurt), we commissioned ift Rosenheim to produce EPDs (Environmental Product Declarations) in compliance with DIN ISO 14025 and EN 15804 for windows, doors and curtain walls made of steel and stainless steel. You may use these EPDs as the basis to obtain your own manufacturer EPDs which can then be used for building identification.

Steel recycling



Aluminium recycling



Thermally insulated curtain wall, Forster thermfix, Glashaus der Steine, Rüdersdorf, Germany



Beautiful down to the smallest detail

Nothing to see

Safety need not be ugly or bulky. Slender profiles made of steel, concealed hinges and integrated door closers (ITS) reduce the number of visible elements to a minimum and give doors, glazing and curtain walls a clear, elegant look.

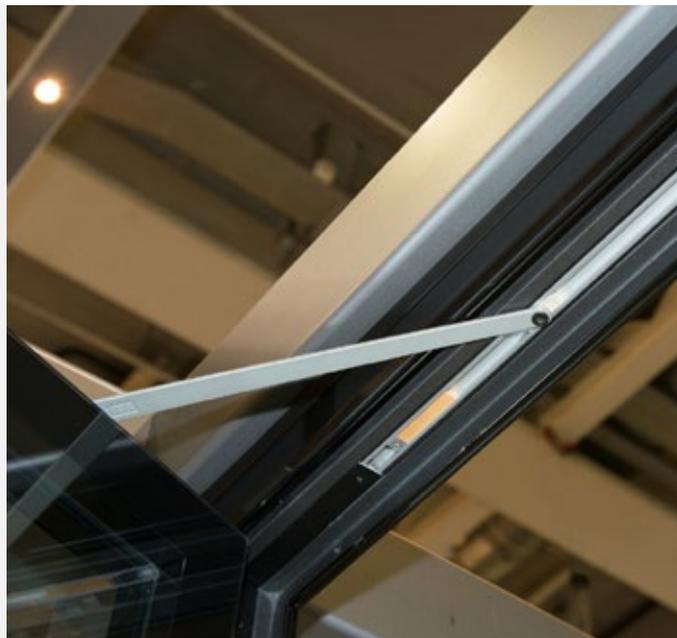
The latest development in fire protection hides its capabilities behind glass. Elements in an all-glass look, whether clad with glass on one or both sides, offer proven Forster safety and a modern, elegant design. Only a completely smooth glass surface remains next to the handle.

Generous glass elements for fixed glazing up to 3.5 m high can be aligned in a row with a minimum gap. Fire resistant butt joint glazing which is definitely eye-catching with no transoms.

With our profile systems you receive door elements with a uniform appearance within the entire building. For both fire resistant, smoke controlling and heat insulating, the identical face widths of the various systems guarantee a uniform appearance.



Element in all-glass look



Concealed integrated door closers



Concealed hinges



Butt joint glazing EI30 with Forster fuego light – Cycle d'orientation de Drize, Carouge, Switzerland



U_w 0.9

U_D 1.1

Our systems for thermally insulated elements

Forster unico / Forster unico Hi

Thermally insulated windows and doors in steel and stainless steel

Forster thermfix vario Forster thermfix light

Thermally insulated curtain walls in steel and stainless steel

Energy efficiency

Ecological heat insulation

Our Forster unico system needs no additional synthetic insulating materials. The profile system made completely of steel meets the highest demands for technical and structural functions due to its unique framework style of construction. An ideal combination of the latest technology, energy efficiency and ecological use of materials for responsible and sustainable building.

Forster unico lets you construct doors, windows and glazing for outdoors, no matter whether you are planning a modern new building or renovating an historic building. Of course it is not only combinable with thermal insulation but also with fire protection, and/or burglary/bullet resistance.

Thermally insulated curtain walls with an impressive element size can be achieved using Forster thermfix systems. They are variable and multifunctional and on request meet additional requirements regarding fire protection, burglary or bullet resistance.



Thermally insulated windows, doors Forster unico – Health West, London, United Kingdom



Thermally insulated door elements with round arches from Forster unico profiles – Renovation of a mansion in Küsnacht, Switzerland



MEDIAPRO

Over 1,100 Forster unico window elements with glass panels up to 3.1 m high – in the new Edificio Mediapro at the Audiovisual Campus, Barcelona, Spain



Curtain wall and glazed roof on the fully restored 'Limonaia' using Forster thermfix vario – Museum Stibbert, Florence, Italy



Thermally insulated windows, doors and glazing using Forster unico – Hotel Crowne Plaza, Liège, Belgium

Universal design

Our universal design systems

Forster unico / Forster unico Hi

Anti-finger trap door with escape route function, insulated barrier-free threshold

Forster fuego light

Barrier-free sliding door EI30 with no threshold with/without escape route function, anti-finger trap door EI30, side-hung door with free-running function

Barrier-free accessibility and finger protection

Current requirements for insulated access without thresholds, automatic or easy to open doors also play a major role for us and so are included in our standard portfolio. The construction variants range from single-leaf doors through to large-surface sliding doors and escape doors with anti-panic function (full panic or partial panic) or swing-out function.

Our anti-finger trap doors, designed in single or double-leaf versions, offer a reduced risk of injury and come with numerous other protection features.

Finger protection DIN 18650
Barrier-free accessibility DIN 18040
Escape routes EN 179/EN 1125
1 mn cycles EN 12400
CE-marking EN 14351-1



Fire and smoke resistant doors Forster presto and Forster fuego light – Medical Clinic, Heidelberg, Germany



Fire resistant glazing EI30 and EI60 / automatic fire resistant sliding doors EI30, IKEA St.Gallen, Switzerland



Barrier-free fire resistant sliding door EI30 using the Forster fuego light system – City West, Chur, Switzerland

*Fire resistant door EI30 made of Forster fuego light profiles with bar knob –
Federal Ministry of Labour, Social Affairs and Consumer Protection, Vienna, Austria*



Anti-finger trap door using E130 fire resistant Forster fuego light – Stocks, Mülenen, Switzerland



Safety

Our systems for fire protection and smoke control

Forster fuego light

Fire resistant doors and fire resistant glazing
EI30/EI60/EI90/EI120

Fire resistant sliding doors EI30 with/without
escape route function

Sheet metal clad tubular frame doors
EI30/EI60

Forster presto

Doors and fire resistant glazing
E30-E120/EW30-EW60 (DE: RS/G30)

Forster thermfix vario

Fire resistant glazing EI30/EI60/EI90/
E30-E120/EW30-EW60 (DE: G30)

Forster thermfix light

Sloping fire resistant glazing EI30/E60/ EW60

* Refer to country-specific approvals

Fire and smoke protection

Forster Profile Systems lead in the sector of safety. Our systems have been tested and approved with success in a large number of countries. The wide range of versions allows planners a high degree of freedom of design and functionality. Despite the highest requirements, the aesthetic design aspects are not overlooked.

Close co-operation with glazing and fittings manufacturers ensure that all components are optimally compatible with each other. Forster works intensively on further developing its systems. This results in constant new tests and product line supplements.



Stainless steel fire resistant door EI30 –
Prime Tower, Zurich, Switzerland



Fire resistant glazing EI30 –
Mercury Tower, Moscow, Russia



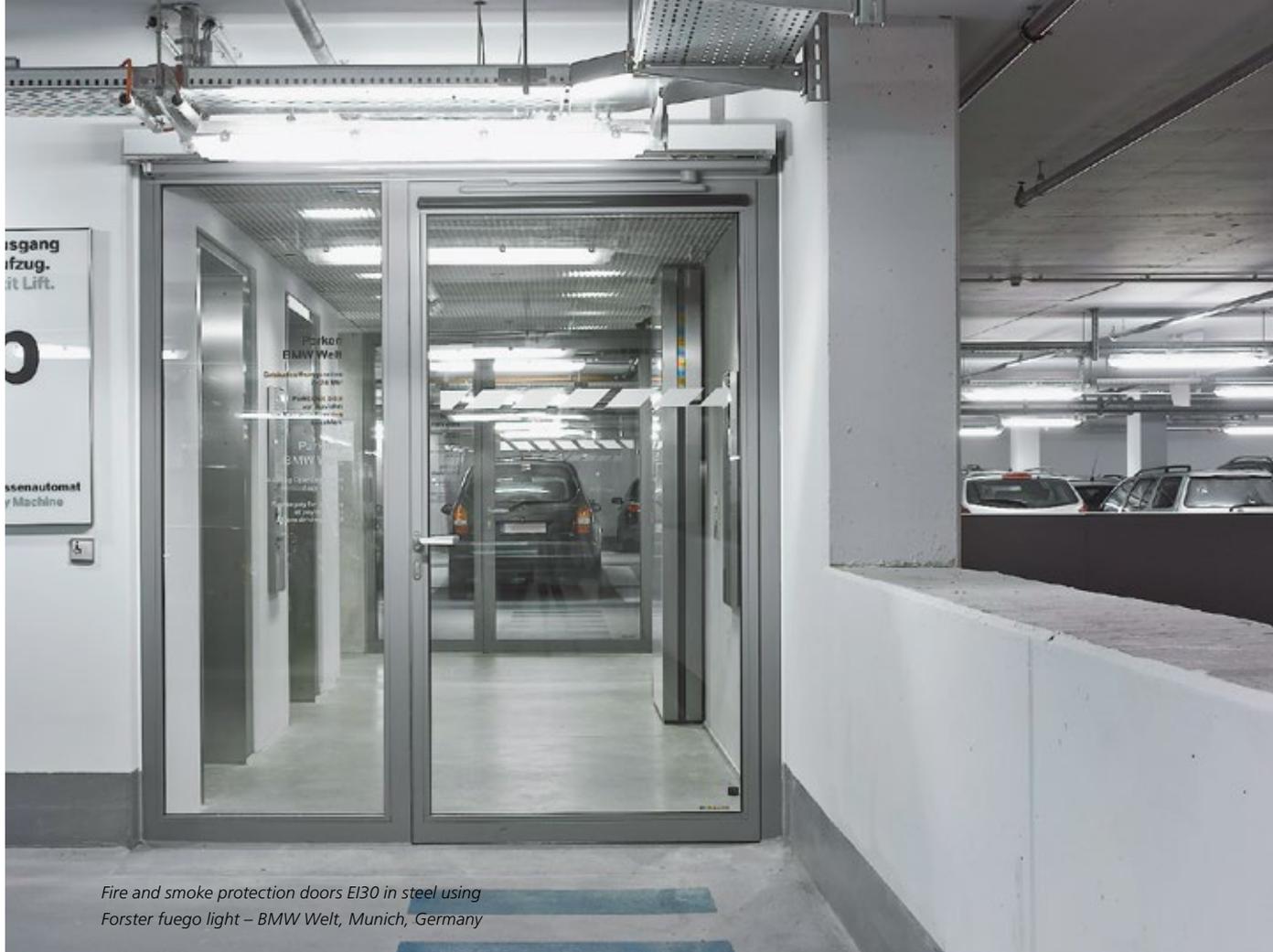
Fire resistant glazing EI30/EI60 –
Karlsplatzpassage, Vienna, Austria



Fire resistant doors and closures E130 using Forster fuego light – The Dolder Grand ****, Zurich, Switzerland



Fire resistant doors and curtain wall E130 using Forster thermfix vario and Forster fuego light – Wildbachgut residential building, Zurich, Switzerland



Fire and smoke protection doors EI30 in steel using Forster fuego light – BMW Welt, Munich, Germany



Fire resistant curtain wall EI60 using Forster thermfix vario in stainless steel – Helsana / 2SIDES, Dübendorf, Switzerland

Security

Our systems for burglary resistance

Forster unico / Forster unico Hi

Thermally insulated windows and doors in steel, stainless steel WK1/RC 2-3 according to EN 1627-1630

Forster thermfix vario

Mullion/transom curtain wall WK1/RC 2-3 according to EN 1627-1630

Forster fuego light

Doors WK1/RC 2-3 according to EN 1627

Forster presto

Doors WK1/RC 2-3 according to EN 1627-1630

Our systems for burglary resistance

Forster unico / Forster unico Hi

Thermally insulated window and door systems FB4 NS according to EN 1522

Forster thermfix vario

Thermally insulated mullion/transom curtain wall FB4 NS according to EN 1522

* Refer to country-specific approvals

Burglary and bullet resistance

The need for security in the past few years has risen immensely and this is reflected by more stringent system requirements for doors, windows and curtain walls.

Our profile systems in steel or stainless steel cover a wide range for increased security indoors and outdoors. Our doors, windows and glazing have proved to be one of the best world-wide, in particular when it comes to burglary and/or bullet resistance. The same visual appearance for different security areas offers a maximum in aesthetic design and inconspicuous integration in the overall architecture.



Fire resistant door and fire resistant glazing T30/F30 – Puls 5, Zurich, Switzerland



Burglar resistant door and glazing in stainless steel – Belgian Embassy, Athens, Greece



Burglar resistant thermally insulated glazing – KBA NotaSys, Lausanne, Switzerland



Burglar resistant display window glazing WK3 using Forster thermfix vario – Sotheby's, Zurich, Switzerland



Fire resistant doors and closures and burglar resistant doors WK3 Forster presto and Forster fuego light – Finance Centre in Aachen, Germany



Burglary and bullet resistant doors and glazing RC3/FB4 using Forster unico and Forster thermfix vario – Belgian Embassy, Athens, Greece



*Thermally insulated windows and glazing, burglar resistant using Forster thermfix vario and Forster unico –
KBA NotaSys SA, Lausanne, Switzerland*

Your partner

On the safe side

Tested and approved

Forster systems have been tested and approved in many countries for fire and smoke protection as well as burglary and bullet resistance.

Support and assistance

A number of technical aids are available to you for our Forster profile systems. Our technical advisers support you in planning your projects. They are delighted to help you with questions and doubts to facilitate your work.

Time-saving

Forster systems feature short processing times and offer a large number of aids for cost-effective production. This not only saves money but also gives you peace of mind.

Ecological

Steel and stainless steel are durable and are made of 100% recyclable materials. Forster Profile Systems is certified to the Environment Management System ISO 14001:2004.

Safe – slender – innovative

Our development team works constantly on new innovative solutions for you to meet both functional and visual requirements.

You will find more information about us and our profile systems on our website at www.forster-profile.ch or simply contact one of our advisers in your vicinity. We always have an open ear for you.

Services

Besides comprehensive technical information in brochures and application catalogues, Forster offers a wide range of services:

Project consulting

- Highly trained technicians are available to advise you on projects, designs and detailing
- Assistance in drafting specifications
- Project-specific solutions

Tender specifications

Our website also contains numerous tender specifications on our profiles and end products.

CAD profile catalogue

The latest version of the CD-ROM contains the individual system components as well as entire system drawings in DWG format.

U-value calculator

The easy to understand program calculates the U-values (heat transfer coefficient) of complete components, such as doors, windows and façades, to EN ISO 10077-1:11.2000 using a database as a source. Likewise it is possible to selectively describe and calculate complex building units – a simple and helpful design tool.

Design and processing information

CD-ROMs with all the latest documentation on Forster systems in PDF format are available for designers and manufacturers.

www.forster-profile.ch

The Forster website download section includes all product information as well as an extensive reference database, all specification texts and PDF documents and much more useful information.

CE marking

Our website, www.forster-profile.ch also contains extensive information on CE marking:

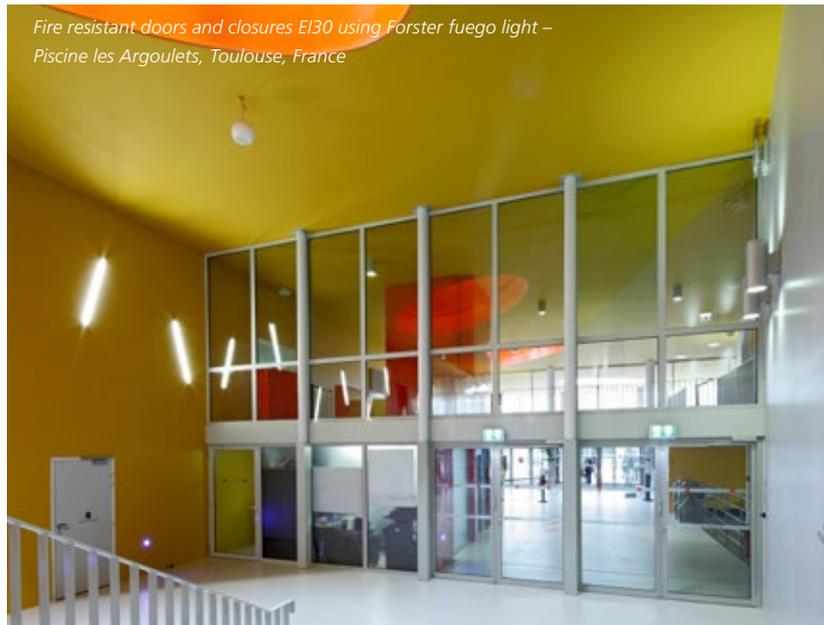
- Curtain walls to EN 13830
- Windows and external doors to EN 14351-1

Forster profile systems in steel and stainless steel

*Thermally insulated windows and glazing using Forster unico –
Rustoord Ancrosite, Wilsel, Belgium*



*Fire resistant doors and closures EI30 using Forster fuego light –
Piscine les Argoulets, Toulouse, France*



*Thermally insulated doors Forster unico and Forster
thermfix light façades – Autohaus Kamper, Neusiedl am See, Austria*

Forster Profile Systems Ltd.
P.O. Box 400
CH-9320 Arbon
T+41 71 447 43 43
forster.profile@afg.ch
www.forster-profile.ch

forster
A leading brand of  **AFG**