forster fuego light (EI30 + EI60 + EI90 + EI120)

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**System Manufacturer/Provider:**

Forster Rohr & Profiltechnik AG Steel Profile Systems, Arbon Switzerland.

**Manufactured by:**

Manufactured by Forster approved Fabricators, list of fabricators available from above contact.

**Product reference:**

forster fuego light is a complete profile system with fittings and accessories for flush fitting doors and

screens. fuego light is a thermally insulated profile system and is suitable for fire integrity and insulation applications. forster fuego light has a product depth of 65mm, both in steel and stainless

steel.

**General Use (Fire Integrity & InsulationOnly):**

Doors

Can be used for single & double leaf single acting doors, inward or outward opening, along with

double acting doors. Fire integrity & insulation ranges from EI30, EI60 & EI90, dependant on

relevant test data, please contact for advice. All test data complies with BS476 or BS-EN 1634.

All fire doors must be self closing to comply with current fire regulations.

Windows

Windows have not specifically been fire tested. Unless windows are self closing, fire integrity rating

cannot be offered. Windows have not been fire tested with automatic smoke/fire control systems,

should this be a requirement please contact a Forster technical Advisor and the local Fire Officer to

discuss.

Fixed Screens

Can be used for fire integrity & insulation from EI30 to EI120 in a variety of solutions for fixed screen

applications, please contact for advice.

**Materials:**

The applicable steel system uses low carbon emission steel for profiles contains recycled materials with a proportion of at least 75%. The material used has a maximum CO₂ emission of 0.6 kg CO₂ per kg of steel.

The low carbon emission steel used has the same mechanical properties as conventional steel and does not impose any restrictions on painting or coating processes.

The profiles of the applicable system must be 100% recyclable at the end of the life cycle and consist exclusively of steel or stainless steel.

Steel

Profiles are supplied in Pre-Galvanized (GV-GC yellow chromated) finish.

Stainless Steel

Profiles are available in mill finish Stainless, to 304 standard. Profiles can be finish polished to

various requirements. Stainless steel has been fire assessed for EI30 & EI60 applications only.

**Construction method**

Doors and windows are to of fully welded construction, spigot joints can be used for multiple screens

or combinations frames.

**Fabrication Tolerances:**

Frames, doors and windows are to be manufactured within the following tolerances, these are to be

+/- 1.5mm in height and width, and +/- 4mm diagonally.

**Pre finish**

Internal/External applications

Doors, Frames & screens can either be Two-Pack primed or Zinc rich primed prior to powder coating.

**Finish:**

Standard finish to be Polyester powder coated to RAL/BS……. .

**Glazing details:**

Fire integrity & insulation

Single or double glazed units can be accommodated for fire integrity & insulation requirements.

Minimum glass thickness will generally be from approx 12mm and a maximum of 44mm for single and

double glazed units.

Examples of fire integrity/insulation glass used in Forster fire tests are 15mm Pilkington Pyrostop for

EI30, 25mm thick Vetrotech Swissflam for EI60 or 44mm Glaverbel Pyrobel for EI90.

EI120 has been tested with Pyrostop 120-10 56mm within the triple boxed 110mm fuego light profiles.

Double glazed units are available for external uses or for when a level of sound reduction is required.

Other combinations are also available incorporating low `E` glasses and tints. Only glasses that have

been fully tested for fire integrity & insulation may be used.

In certain instances maximum sizes to glass apply for both doorleaves and fixed elements. If in doubt

please consult.

Internal/External glazing applications

Please note that for external insulated glazing it is generally thicker than for internal applications. For

example, for EI30 Schott Pyranova is 15mm thick for internal applications and 19mm thick for external

applications, whilst for EI60 Pilkington Pyrostop is 21mm thick for internal use and 27mm thick for

external applications.

**Panel details:**

Fire integrity/insulation

Panels can be constructed to achieve integrity and insulation up to EI120. Generally these need to be as a minimum, each wall thickness of 2mm steel and with a rockwool infill (minimum 120kg/m3).

As a guide, the panels can be welded to the face of the profiles by slug welding or by crush folding top and bottom to produce a profile flange, welding to the profile in the glazing areas. Depending on the fire requirement (EI30/60 etc), the panel sizes/thickness/infill will differ throughout to suit the relevant requirement.

**Ironmongery:**

General

Fuego light doors are designed to utilize a full range of Forster hinges, which are available depending on choice or application. Hinges are either screw fixed to the door/frame or are welded to the door/frame.

Depending on test data, Forster Dog Bolts (947013) must be used to comply with fire test

requirements for ironmongery.

A full range of locking devices are available depending on application required, and include a range of

latch/deadlocks with and without two/three point locking along with a complimentary range of lever handles. A rage of panic latching devices as well as an emergency escape range is also available, along with a range of flush bolt locking mechanisms, including emergency panic bar solutions.

Note that forster fuego door profiles are pre machined to allow the two/three point lock shoot rods to pass though the insulation in the doors to reach the top/bottom latching points. Door Profiles are also available with pre machined lock cut-outs to ensure minimum cut away of insulation area.

For double acting requirements, fuego doors can also be mounted on suitable floorsprings, centre

located on profiles and used for 60 minutes integrity and 30 minutes insulation. Currently no internal

locking device can be fitted, should locking be required please consult the local fire officer to request

use of surface mounted shoot bolt type mechanisms.

Various overhead and internal door closers can be fitted to the fuego light range of doors including

automatic opening, smoke detection and selector controlled devices, available from companies such

as Dorma or Geze. These items must have been tested to the relevant BS or EN standard.

Tested to the EN standard, Dorma ITS96 internal mounted door closers may be used. Forster produce

special head profiles pre machined for the closers, this minimizes the cut away of insulating material.

Fire

When specifying and using fire integrity & insulated doors, certain ironmongery must be used to

comply with the fire test data. Those items must always be Forster hinges, Forster locking

mechanisms and (unless it is a double acting door) a tested door closer, usually from the Dorma/Geze

ranges or those tested to either the relevant BS or EN standards.

To ensure compliance please contact our Forster Technical Advisor or distributor.

**Accessories:**

Because forster fuego light can be used in a multitude of applications, such as fire or security, various

types of accessories can be used. For example, electric lockstrikes or magnetic locks can be easily

fitted for security applications or full door entry solutions with automatic detection and opening.

However, any additional hardware items not fire tested specifically must be checked with the local fire

officer to ensure his/her acceptance.

Automatic drop seals can also be fitted to forster fuego light doorsets to either enhance sound reduction

or to prevent wind/draft ingress in external applications.

Please note that fire/escape solutions or rights of exit will usually take precedence over security

requirements.

**Fixing of ironmongery/accessories:**

Fixing of ironmongery and accessories is to be by machine screws wherever possible, drilled and

tapped to size as per manufacturers stipulation wherever possible. This is critical for fire integrity &

insulated units in order to maintain correct performance in case of attack by fire.

Self tapping screws or nutserts may be used for retaining certain ironmongery accessories that are

non critical in fire situations, such as roses or escutcheons.

With pull handles utilize concealed back to back fixings, or if a handle is fitted to one side then ensure

it is secured by machine screws. All other fixings to be as recommended by the supplying

ironmonger or by the fabricator.

**Frame fixing to structure:-**

Fixing of frames can be achieved in several ways. The most common detail is by having the fixing

screws/bolts through one of the frame box profiles and into the structure, with the fixing either being

covered by a cap or by the glazing detail.

The second most common detail is by attaching (screwing or welding) a bracket or strap to the frame

and then fixing through the strap/bracket into the structure, which is then covered by plasterboard or

render etc. When fixing into concrete/stone/brick type material it is recommended that fixings should

be at least 50mm in from an edge to prevent breakout of the structure/fixing.

Typical fixings include woodscrews, plug & screw combinations, expanding anchors, machine

screws/bolts, and chemical fix.

**Services and Advice:-**

Fabrication/Technical

For fabrication or technical advice, a full processing binder is available in hardback or pdf forms, these

detail processing guidelines, techniques, detail drawings and the full range of profiles and fittings

available from Forster.

Architectural/Specification

A full specification service is available from Forster to architects and specifiers requiring assistance

with NBS specification writing. Please contact the Forster Technical Advisor in the UK or our UK

Distribution company.