



fire protection systems

Aluminium systems
for building industries

www.aliplast.pl



fire protection systems

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Fire protection systems

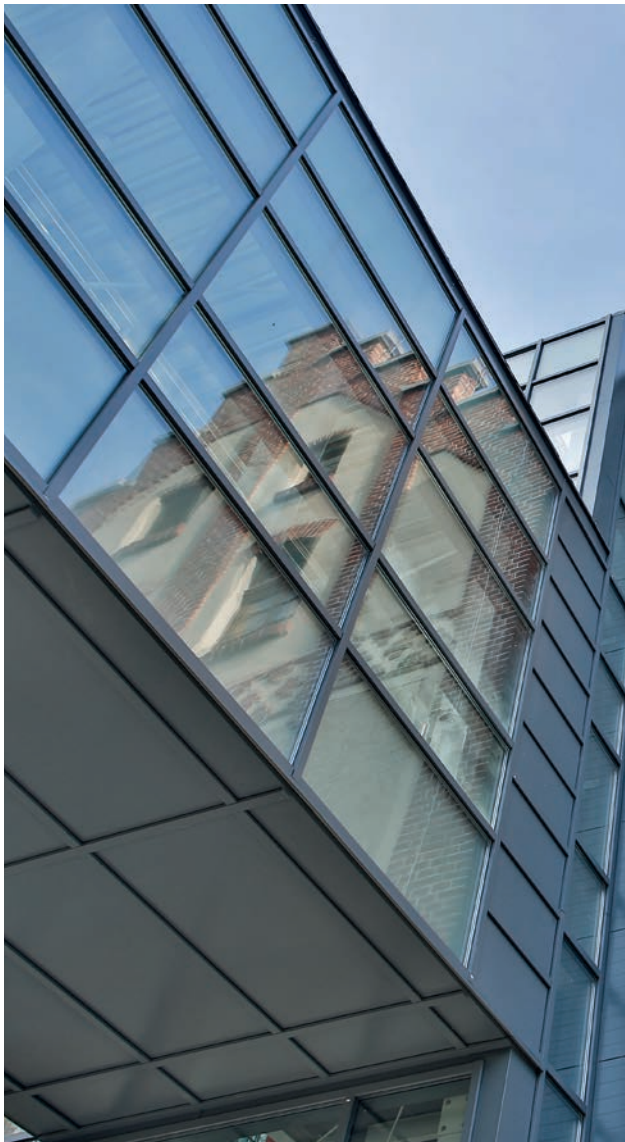
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Aluminium fire protection systems (including smoke control systems) offer the possibility of designing external structures, as well as internal units, which provide protection against the spread of fire, thus also ensuring efficient and quick evacuation.

The wide range of solutions that are offered by Aliplast includes thermally insulated fire protection systems: Genesis 75 windows in class EI30, FR65 - walls and interior doors in class EI30, EI60, FR90 - walls and external doors in classes: EI30, EI60, EI90, EI120, FR90 SLIDE (automatic doors) in class EI30 and facade systems: MC FIRE in classes EI30, EI60, MC GLASS FIRE in classes REI45.

The wide range of structural possibilities makes aluminium fire protection joinery suitable for public, commercial and also private buildings. Because of the properties of aluminium its low mass, strength and corrosion resistance, fire protection systems offer many possibilities for the design and construction of customised building projects.

Aliplast's offer of aluminium fire protection systems, by using advanced technologies and the best quality materials, is a guarantee of safety, accessibility and aesthetics.



Music School
Żagań, Poland
Architect: Panta Rhei Sp. z o.o.
Producer: Bauservive from Buk

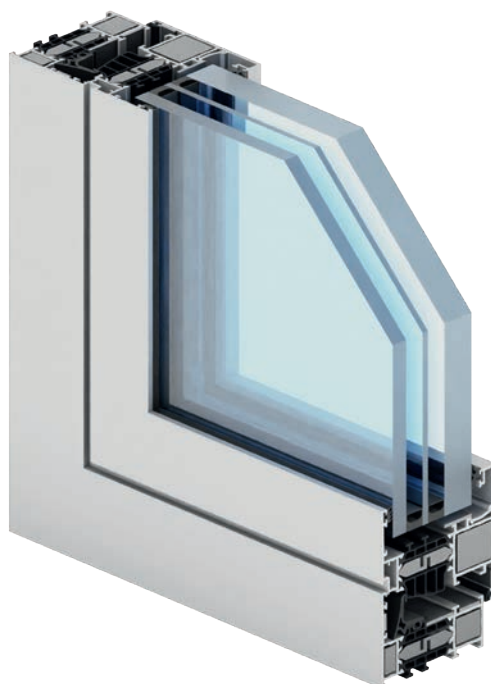


Music School
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fire protection systems

GENESIS 75 EI30



system characteristics

- window system with increased thermal insulation, characterised by fire resistance **class EI30, EW30, E30 according to EN 13501-2:2016-07** /the parameters have been attained for both directions of fire impact, from the outside inwards and from the inside outwards/
- system design based on the standard Genesis 75 system /installation depth 75 mm/
- window type: turn-type, tilt-type, turn-and-tilt
- possible use of automation: use of locking systems and AUMÜLLER AUMATIC and GEZE electric opening drives
- anti-burglary features: possible use of ROTO AL hardware with the option of anti-burglary features in the RC2 class and a load capacity of up to 160 kg
- glazing – ANTIFIRE 22 fire-resistant glass by RETRE; fire-resistant glass with single- or double-chamber glazing, also ESG, VSG
- maximum dimensions of the structure: 1200 x 2150 mm
- wide range of sections and profiles offered as part of the Genesis 75 system enabling the design of modern windows characterised by exceptional functionality
- system for the design of window structures in both public and private buildings
- wide range of colours available - RAL palette (Qualicoat 1518), structural colours, Aliplast Wood Colour Effect (wood-like colours), Aliplast Loft View - colours imitating stone surfaces (Qualideco PL-0001), bi-colour, anodized (Qualanod 1808)

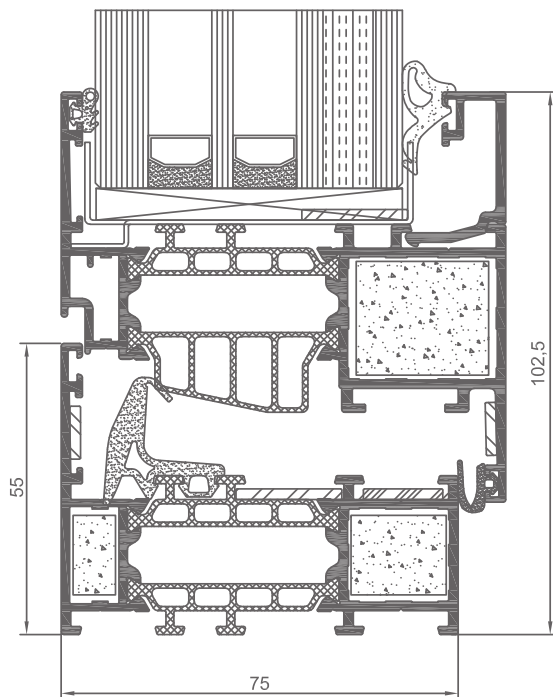
technical specification

system	material	depth of leaf	depth of leaf	glazing range	type of windows
Genesis 75 EI30	aluminium/polyamid	75 mm	84 mm	36-65 mm	RU, R, U

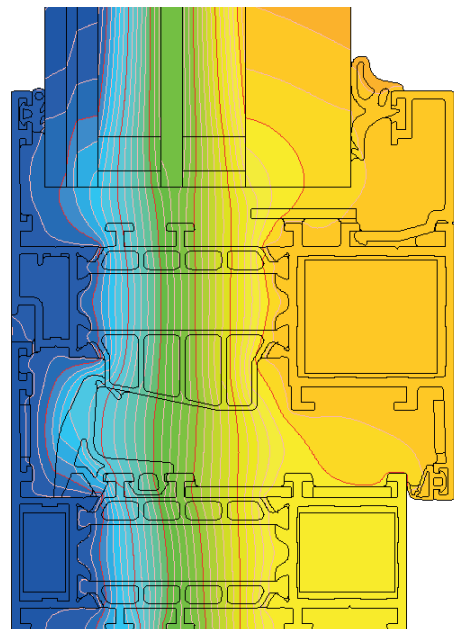
performance

system	thermal insulation Uf*	air permeability	windload resistance	watertightness
Genesis 75 EI30	Uf from 1,67 W/m²K	Class 600 Pa; EN 12207	Class 1600 Pa; EN 12210	Class 1650 Pa; EN 12208

* Thermal insulation is dependent on a combination of profiles and thickness of the filling



GN75 EI30 cross section (GN020 + GN010)



distribution of isotherms for frame with sash composition in the GN75 EI30 system (GN010 + GN020)



fire protection systems

FR 65



FR 65 EI60

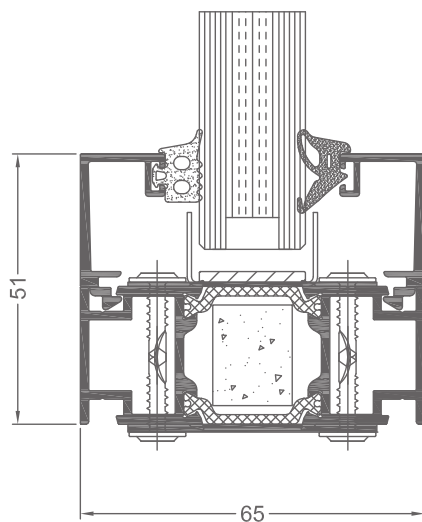
FR 65 EI30

system characteristics

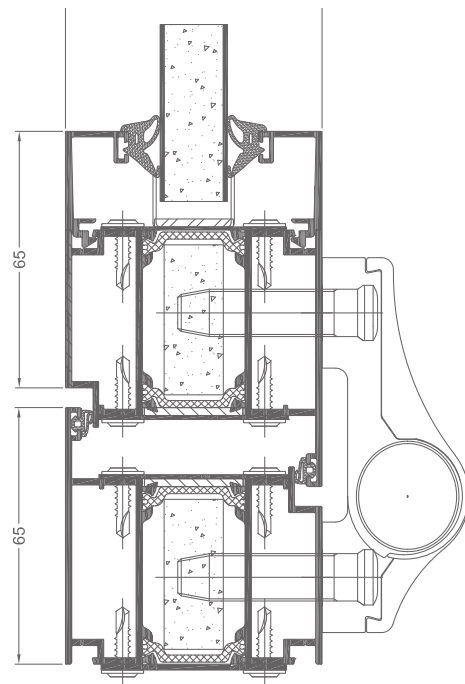
- thermally insulated fire protection system; application: indoor installations
- structures designed on the basis of the FR65 system feature fire rating for walls EI30, EI60 and feature fire rating for doors EI30, EI60**
- installation depth: 65 mm
- symmetrically designed profile, middle chamber filled with gypsum infill elements (between thermal separation sheets)
- compatible with systems with the installation depth of system 65 mm (Imperial, Ecofutural)
- possibility of using a double glazing unit (glazing: 17 mm to 25 mm)
- option of panel infill (panel thickness 17 mm): gypsum filled panels
- structures: single and double doors, fixed glazing
- single-point and multi-point door locks, electric door strikes, panic hardware
- cover plate hinges
- solutions with and without thresholds
- door kick plates (high plinth block)
- optimised profiles (one profile type for the door frame and leaf)
- quick and simple prefabrication (no processing of the glazing bar)
- acoustics – acoustic testing of double-leaf doors featuring fire rating EI30 and EI60 for indoor installations: from 37 dB, gypsum filled panels: 33 dB
- a wide range of colours – RAL palette (Qualicoat 1518), texture colours, Aliplast Wood Colour Effect (wood-like colours), Aliplast Loft View – colours imitating stone surfaces (Qualideco PL-0001), anodised colour (Qualanod 1808), bi-colour

technical specification

system	material	depth of frame	depth of leaf	glazing range	maximum door sizes
FR65	aluminium / polyamid	65 mm	65 mm	17-25 mm	single-leaf doors EI30: 1400 x 2500 mm double-leaf doors EI30: 2690 x 2500 mm single-leaf doors EI60: 1400 x 2500 mm double-leaf doors EI60: 2690 x 2500 mm fixed wall EI30: 4930 x 3104 mm fixed wall EI60: 4930 X 2904 mm



FR65 FIX cross section (FR030)

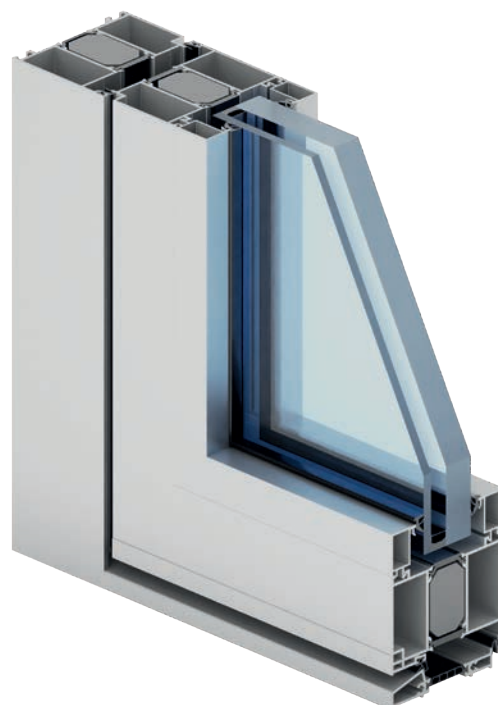


FR65 door cross section (FR024 + FR024)



fire protection systems

FR 90



system characteristics

- thermally insulated fire protection system; application: indoor and outdoor installations
- structures designed on the basis of the FR90 system feature fire rating for walls EI30, EI60, EI 90, EI120, and fire rating for doors EI30, EI60, EI90**
- installation depth: 90 mm
- compatible with systems with the installation depth of 90 mm (STAR)
- option of panel infill (panel thickness 60 mm): mineral wool filled panels ($U_p = 0.57 \text{ W/m}^2\text{K}$), gypsum filled panels
- structures: single and double doors, fixed glazing
- maximum dimensions of single-sash doors: 1650 x 2870 mm
- maximum dimensions of double-sash doors: 3170 x 2870 mm
- single-point and multi-point door locks, electric door strikes, panic hardware
- cover plate hinges, roller hinges, Inox hinges
- solutions with and without thresholds
- door kick plates (high plinth block)
- option of air vent installation
- optimised profiles (one profile type for the door frame and leaf)
- quick and simple prefabrication
- acoustics – acoustic testing of double doors featuring fire rating EI30 and EI60 for indoor and outdoor installations: 39 to 47 dB
- a wide range of colours – RAL palette (Qualicoat 1518), texture colours, Aliplast Wood Colour Effect (wood-like colours), Aliplast Loft View – colours imitating stone surfaces (Qualideco PL-0001), anodised colour (Qualanod 1808), bi-colour

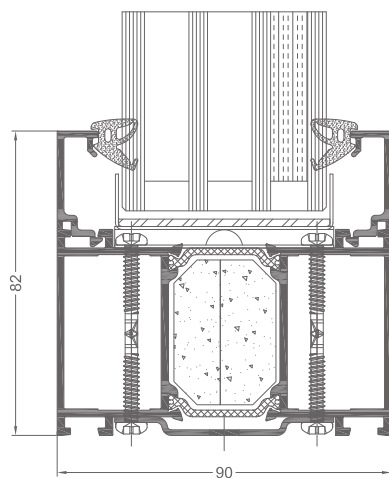
technical specification

system	material	depth of frame	depth of leaf	glazing range	type of doors
FR90 fix	aluminium / polyamid	90 mm	—	fix 20-69 mm	—
FR90 door	aluminium / polyamid	90 mm	90 mm	door 20-69 mm	single sash door, double sash door

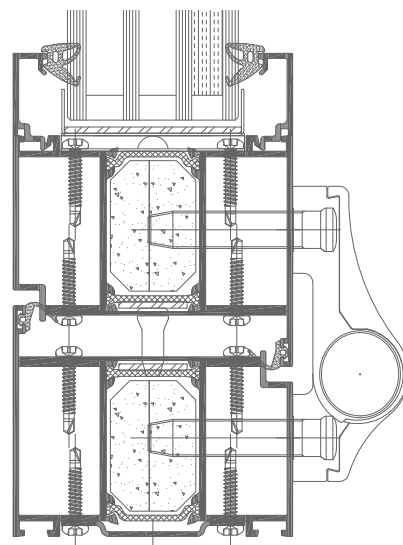
performance

system	thermal insulation U_f^*	air permeability	windload resistance	watertightness
FR90	U_f from 2,145 $\text{W/m}^2\text{K}$	Class 4; EN 12207	Class C1/B2; EN 12210	Class 4A; EN 12208

* Thermal insulation is dependent on a combination of profiles and thickness of the filling



FR90 FIX cross section (FR120)

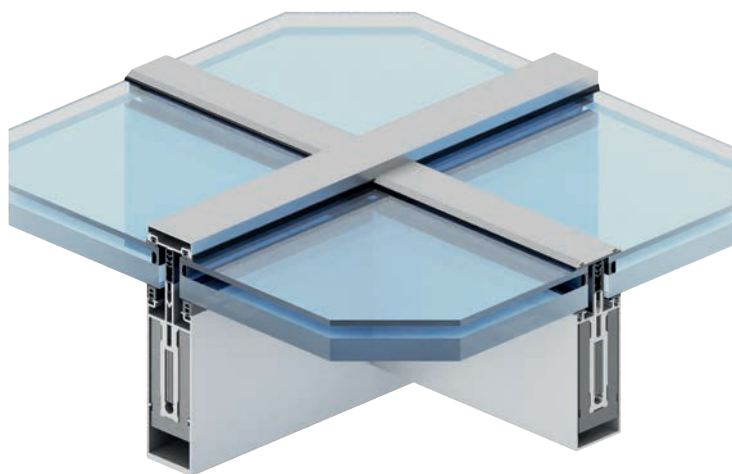


FR90 door cross section (FR101 + FR101)



fire protection systems

MC FIRE ROOF



system characteristics

- the MC FIRE ROOF solution using appropriate glass (different variants available) achieves the REI45 rating (according to EN 13501-2:2016-07)
- the MC FIRE ROOF system consists of posts (rafters) and beams (purlins) available in a wide range of MC WALL system profiles
- there is a wide range of masking profiles and roof-plane strips available in the system, giving the structure an aesthetic appearance
- the structure of the MC FIRE ROOF skylight can be inclined from 0° to 80° (applies to fire rating)
- the maximum glass dimensions are 1300 x 2400 (EI30)
- non-rectangular glass is also possible
- the maximum depth of poles/rafters depends on strength calculations and ranges from 104 to 326 mm
- the maximum depth of beams/purlins depends on strength calculations and ranges from 88 to 294 mm
- a wide range of colours – RAL palette (Qualicoat 1518), texture colours, Aliplast Wood Colour Effect (wood-like colours), Aliplast Loft View – colours imitating stone surfaces (Qualideco PL-0001), anodised colour (Qualanod 1808), bi-colour

technical specification

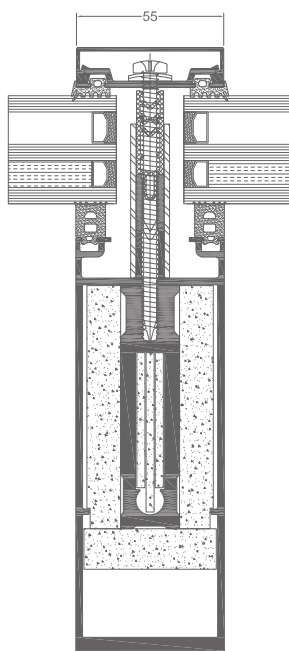
system	material	depth mullion	depth transom	glazing range	mullions rigidity	transom rigidity
MC FIRE ROOF	aluminium	104-326 mm	88 -294 mm	40-66 mm	178,9 - 5177,1 cm ⁴ *	124,9 - 2429,8 cm ⁴ *

* There is a possibility to use additional reinforcements

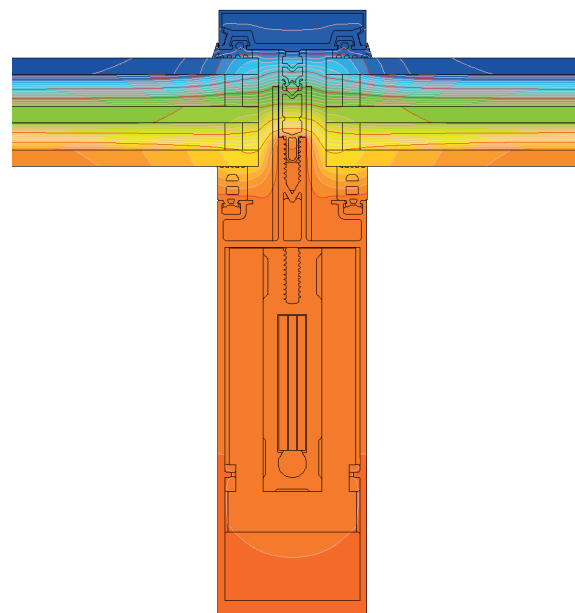
performance

system	thermal insulation Uf*	air permeability	windload resistance	watertightness
MC FIRE ROOF	Uf from 1,16 W/m ² K	Class AE1200 Pa; EN 12152	Class 2600 Pa ± 3900 Pa; EN 13116	Class RE1350 Pa; EN 12154

* Thermal insulation is dependent on a combination of profiles and thickness of the filling



MC FIRE ROOF cross section (MC017)

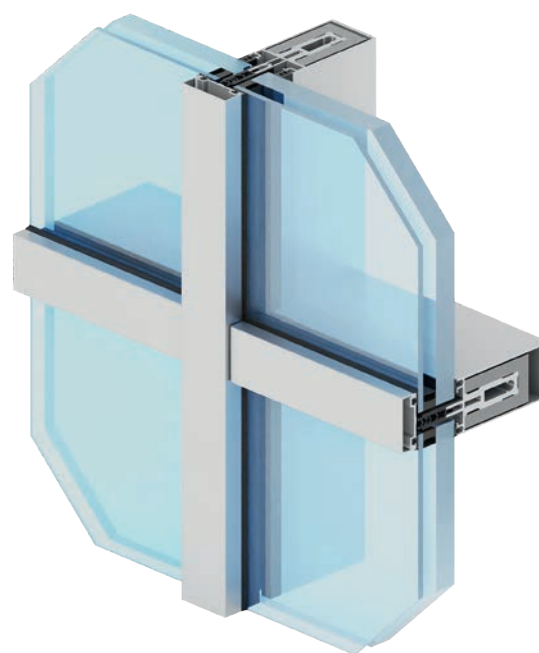


distribution of isotherms in the MC FIRE ROOF system (MC017)



fire protection systems

MC **FIRE**



system characteristics

- a mullion-transom wall system used to design and construct lightweight fire-rated curtain walls conforming to the EI30 and EI60 fire resistance class
- the system is based on a framed load-bearing structure consisting of vertical (mullion) and horizontal (transom) aluminium shaped sections with a width of 55 mm
- in order to obtain fire resistance of aluminium shaped sections, the mullions and transoms are fitted with special flame-retardant inserts (aluminium shaped sections filled with a flame-retardant compound)
- the appearance of the fire-rated facade is the same as the appearance of the mullion-transom facade; therefore, the joint of the fire-rated facade and the standard facade can be optically invisible
- a wide range of decorative cover caps makes is used to obtain a modern and individual design of the facade
- a wide range of colours – RAL palette (Qualicoat 1518), texture colours, Aliplast Wood Colour Effect (wood-like colours), Aliplast Loft View – colours imitating stone surfaces (Qualideco PL-0001), anodised colour (Qualanod 1808), bi-colour

technical specification

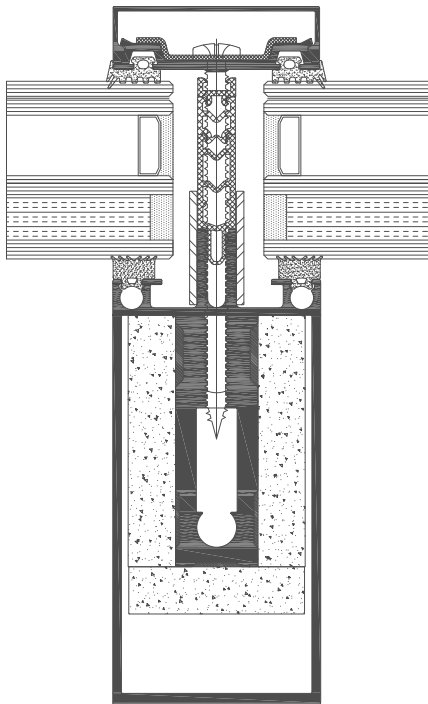
system	material	depth mullion	depth transom	glazing range	mullions rigidity	transom rigidity
MCF	aluminium	10-326 mm	10-294 mm	4-59 mm	111,7-4092 cm ⁴ *	131,7-2293 cm ⁴ *

* There is a possibility to use additional reinforcements

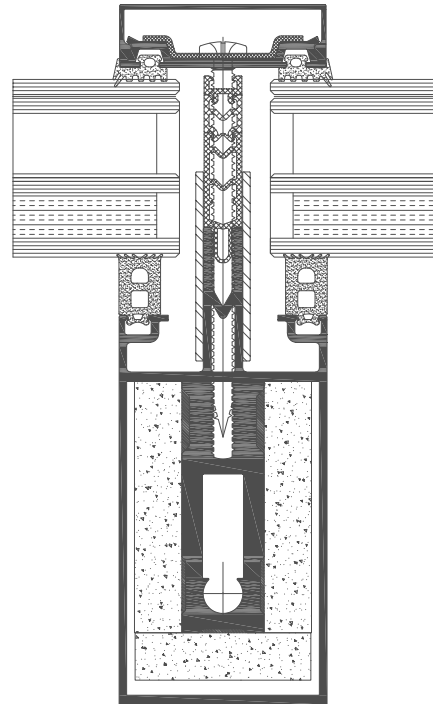
performance

system	thermal insulation Uf*	air permeability	windload resistance	watertightness
MCF	Uf from 1,03 W/m ² K	Class AE1300; EN 12152	Class 1500 - 2600 Pa; EN 13116	Class RE1500; EN 12154

* Thermal insulation is dependent on a combination of profiles and thickness of the filling



MC FIRE transom cross section (MC534)

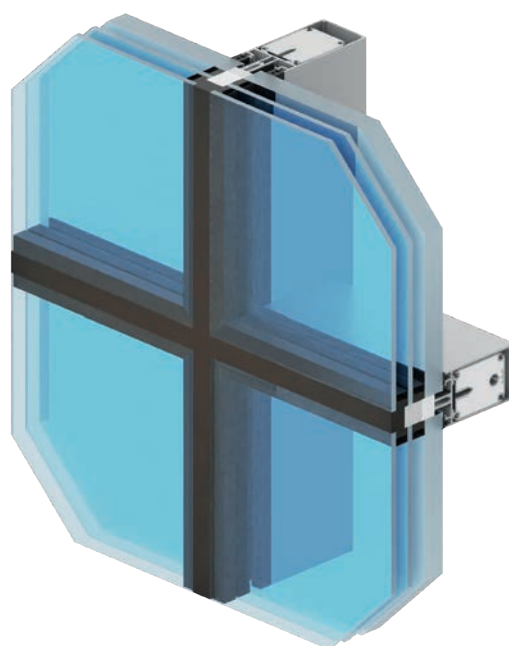


MC FIRE mullion cross section (MC014)



fire protection systems

MC **GLASS** **FIRE**



system characteristics

- a semi-structural facade system used to design fire-rated facade structures
- **structures based on the MC GLASS FIRE system provide the EI30, EI60, EI90, EI120 fire resistance class according to EN 13501-2:2016-07**
- fire-rated inserts in mullions and transoms: aluminium shaped sections filled with the Aestuver fire resistant cement compound supplied by Xella
- the space between glasses is filled with an insulating material with thermal and fire-resistant features
- in order to obtain a smooth external surface, the gap is filled with UV resistant silicone
- a wide range of colours – RAL palette (Qualicoat 1518), texture colours, Aliplast Wood Colour Effect (wood-like colours), Aliplast Loft View – colours imitating stone surfaces (Qualideco PL-0001), anodised colour (Qualanod 1808), bi-colour

technical specification

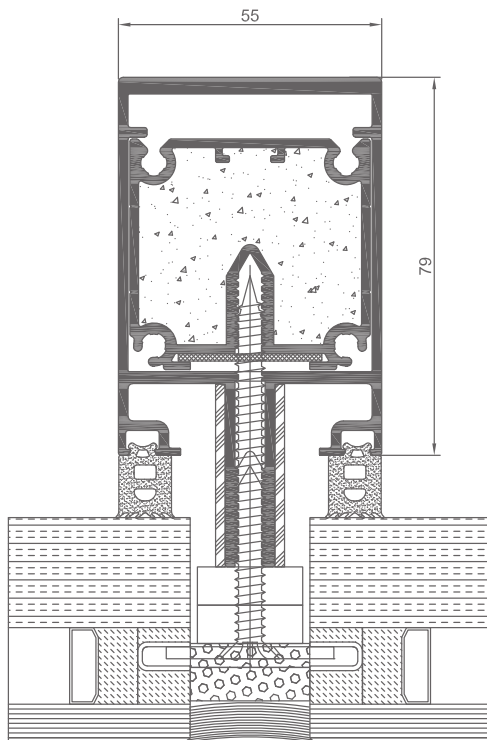
system	material	depth mullion	depth transom	glazing range	mullions rigidity	transom rigidity
MCGF	aluminium	10-326 mm	10-294 mm	4-59 mm	176,7 - 4092 cm ⁴ *	215,90 - 2293 cm ⁴ *

* There is a possibility to use additional reinforcements

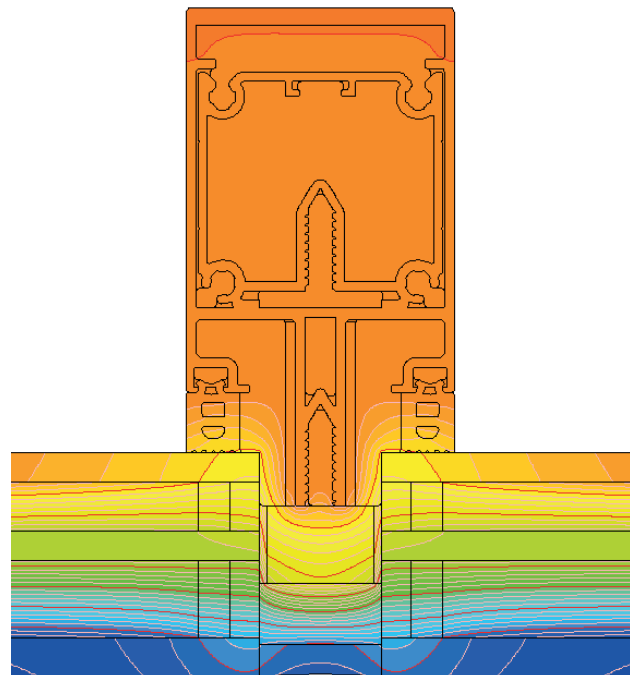
performance

system	thermal insulation Uf*	air permeability	windload resistance	watertightness
MCGF	Uf from 0,88 W/m ² K	Class AE1300; EN 12152	Class 2000Pa - 3000Pa; EN 13116	Class RE1800; EN 12154

* Thermal insulation is dependent on a combination of profiles and thickness of the filling



MC GLASS FIRE mullion cross section (MC413)

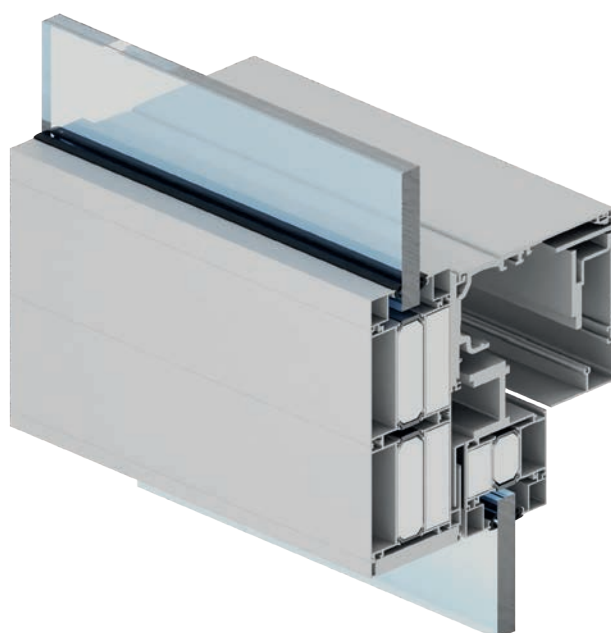


distribution of isotherms in the MC GLASS FIRE system (MC537)



fire protection systems

FR 90 SLIDE

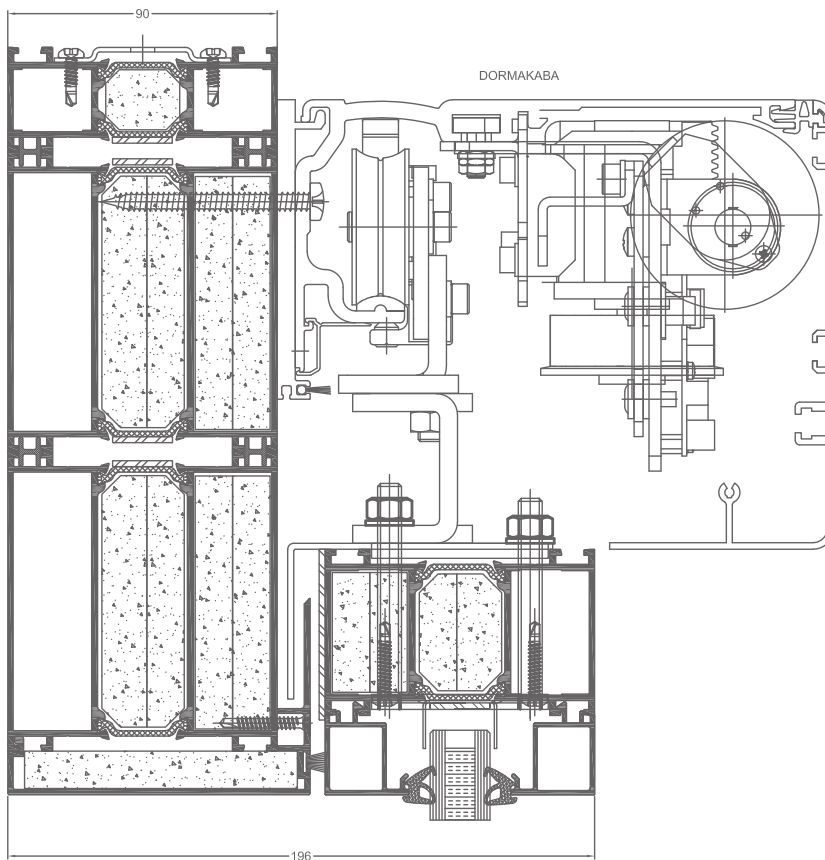


system characteristics

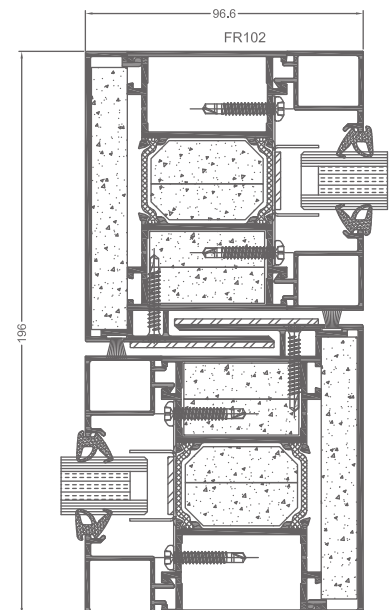
- thermally insulated automatic fire-rated door system
- structures based on the FR 90 system provide the EI30 fire resistance class according to EN 1634-1+A1:2018-03 and EN 13501-2:2016-7**
- chambers of the profiles are filled with fireproof inserts
- universality and unification of profiles with the FR90 system
- esthetic labyrinth connection of the sashes
- symmetrically glazing
- maximum dimensions of the structure 4900 mm x 3500 mm
- maximum dimensions of the leaf glass pane: 1193,5 x 2339 mm
- maximum dimensions of sash: 1369 x 2472 mm (joggle connection)
- structures: single door, double door, sliding externally, side and top lites
- a wide range of colours – RAL palette (Qualicoat 1518), texture colours, Aliplast Wood Colour Effect (wood-like colours), Aliplast Loft View – colours imitating stone surfaces (Qualideco PL-0001), anodised colour (Qualanod 1808), bi-colour

performance

system	material	maximum dimensions of the door leaf (l x h mm)	max dimensions of the leaf glass pane	structure type	fire resistance class
FR90 SLIDE	aluminium	1369 x 2472 mm	1193,5 x 2339 mm	single and double door, sliding externally, side and top lites	EI 30 /EN 1634-1+A1:2018-03 EN 13501-2:2016-7



connection through the sliding leaf with automatic drive (FR104 + FR104 + FR102)



FR 90 SLIDE cross section (FR102)

Aliplast is a manufacturer and supplier of aluminium systems that are known and widely used during construction projects worldwide.

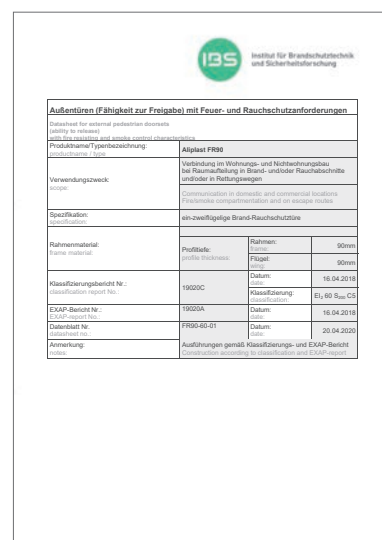
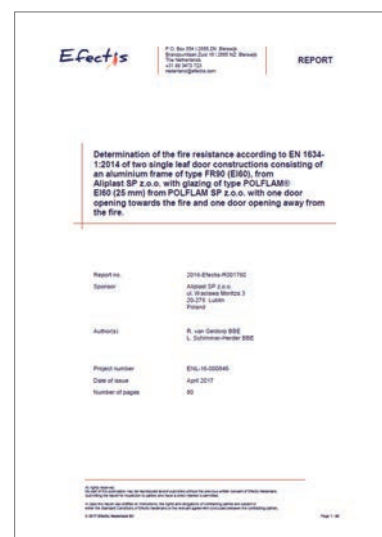
With many years of experience and qualified staff, the company guarantees the high quality of the offered products, which is confirmed by the implemented quality management system compliant with the requirements of the EN ISO 9001:2015, EN ISO-14001:2015, ISO-45001:2018 standards and the certificate obtained from TÜV NORD Polska.

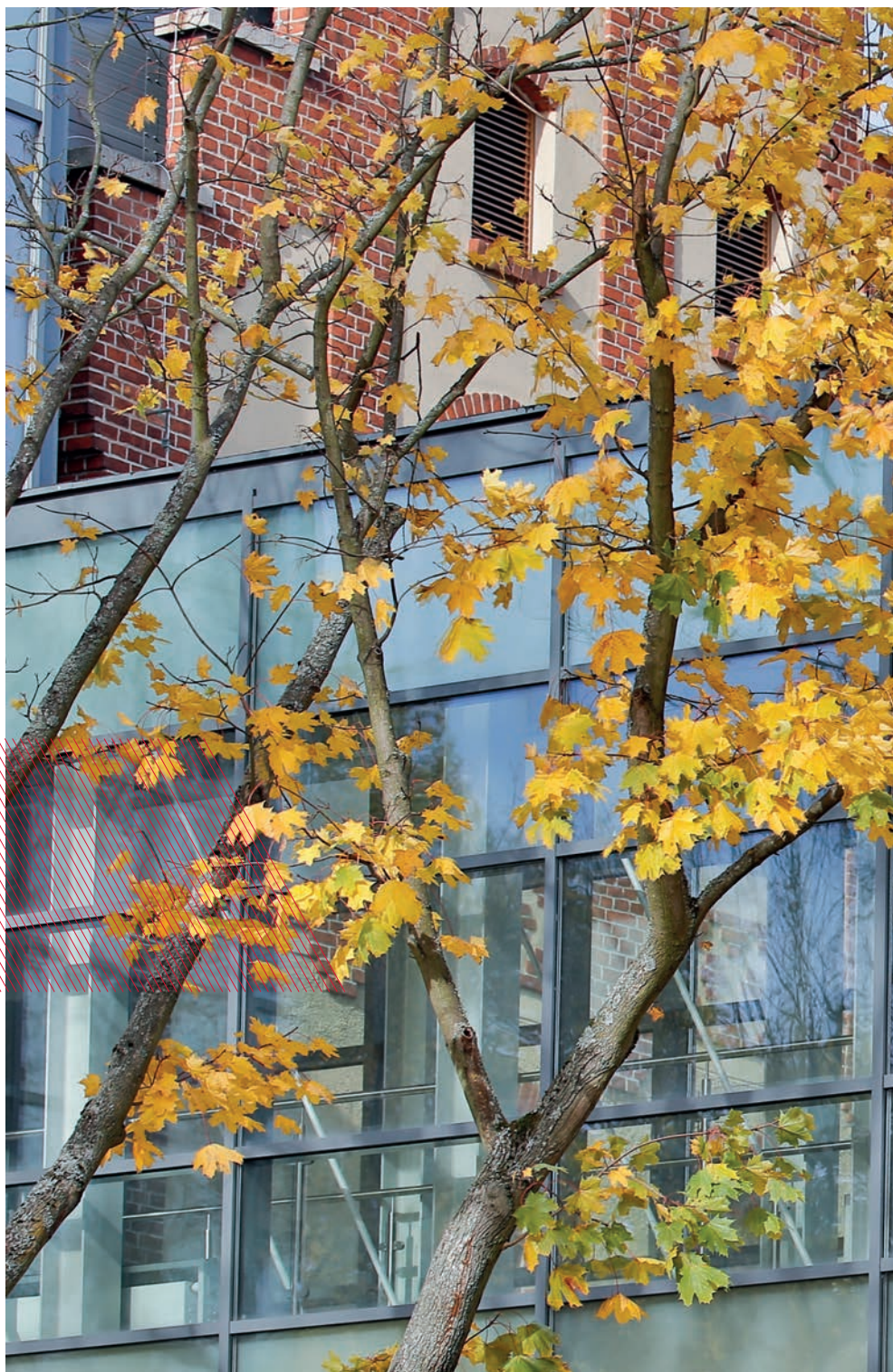
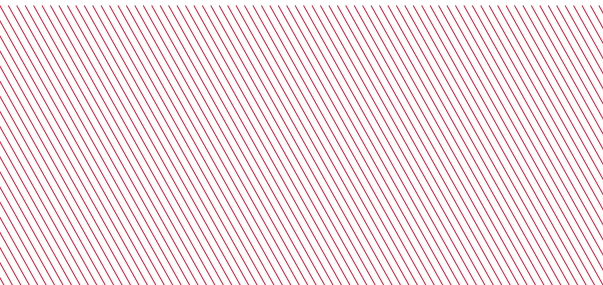
The products offered by Aliplast (aluminium window and door systems, facade systems, sliding systems, pergolas, conservatories, fire protection structures) meet the requirements of the relevant European standards.

As far as the offered systems dedicated to fire protection structures are concerned, Aliplast maintains extensive cooperation with research institutes in Poland and Europe: Instytut Techniki Budowlanej (Warsaw), Certbud, IFT Reosenheim (Germany) IBS (Austria), Fires (Slovakia), Warrington Certificate Exova (United Kingdom), UBAtc (Belgium), Efectis (France).

These measures make it possible to launch and use Aliplast fire protection structures in markets not only in Europe.







aliplast
aluminium systems

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