

FR90

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Thermally insulated fire protection system. Structures designed on the basis of the FR90 system feature fire rating EI30 (E.), EI60 (E.).

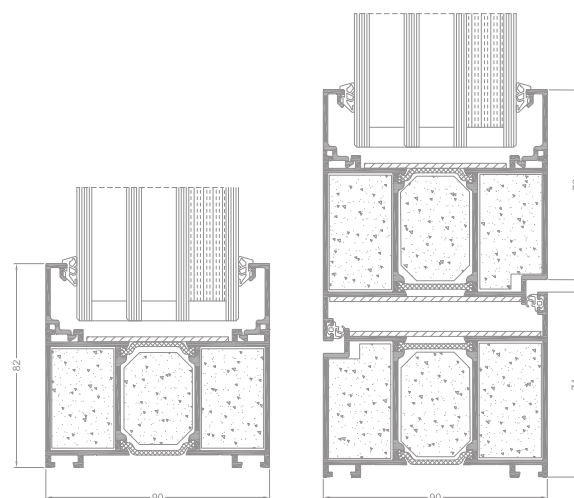
FR90

Thermally insulated fire protection system. Structures designed on the basis of the FR90 system feature fire rating for walls EI30, EI60, EI90, EI120; and fire rating for doors EI30, EI60, EI90.

System description:

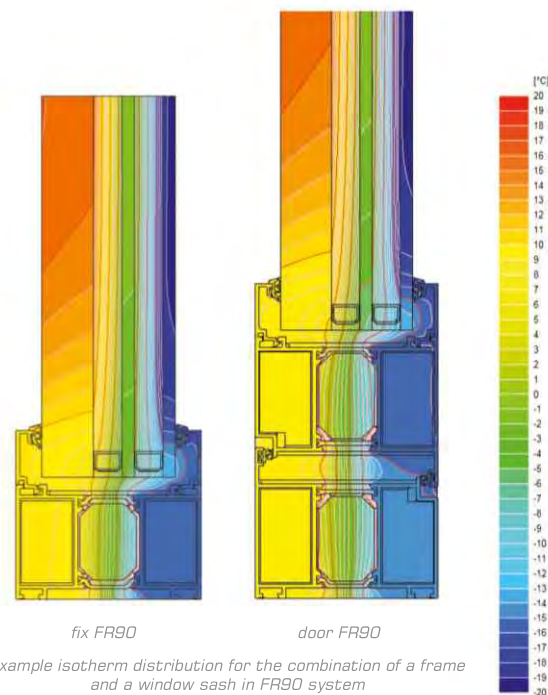
- Installation depth: 90 mm
- Symmetrically designed profile, inner chamber filled with gypsum infill elements (between thermal separation sheets) – for EI30; all chambers filled with gypsum – for EI60
- Compatible with systems with the installation depth of 90 mm (STAR)
- Possibility of using a triple glazing unit (glazing: 20 mm to 68 mm)
- 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
- Application: indoor and outdoor installations
- Structures: single and double doors, fixed glazing
- Maximum dimensions of the tested structure: 6000 x 3000 mm (fixed wall, single glass pane)
- Maximum dimensions of single-leaf doors: 1650 x 2870 mm
- Maximum dimensions of double-leaf doors: 3170 x 2870 mm
- Single-point and multi-point door locks, electric door strikes
- Cover plate hinges, roller 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 (no processing of the glazing bar)
- Acoustics – acoustic testing of double doors featuring fire rating EI30 and EI60 for indoor and outdoor installations: 39 to 47 dB.

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), anodized colour (Qualanod 1808), bi-colour.



FR90 fix section

FR90 door section



fix FR90

door FR90

example isotherm distribution for the combination of a frame and a window sash in FR90 system

TECHNICAL SPECIFICATION

SYSTEM	MATERIAL	DEPTH OF FRAME	DEPTH OF LEAF	GLAZING RANGE	MAX. SIZE OF FIX GLAZING	MAXIMUM DOOR SIZES
FR90 fix	aluminium / polyamid	90 mm	—	fix 20 - 60 mm	EI30: 2200 x 4316 mm EI60: 2046 x 3966 mm EI90: 1500 x 3000 mm EI120: 1500 x 3000 mm	—
FR90 door	aluminium / polyamid	90 mm	90 mm	door 20 - 60 mm	—	single sash door EI30: 1541 x 2806 mm double sash door EI30: 2532 x 2928 mm single sash door EI60: 1340 x 2440 mm double sash door EI60: 2680 x 2440 mm single sash door EI90: 1450 x 2600 mm double sash door EI90: 2770 x 2600 mm

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.