

**SPECIFICATION  
FIRE RATED VERTICAL PANELS  
FRL 90/90/60 OR FRL 90/90/90**

**SCOPE OF WORK**

The subcontractor shall be required to supply Glass Block Technologies International accredited labour, or similar approved persons, and Glass Block Technologies International proven materials for the successful erection of glass block panels to comply with all specifications and drawings related to this project. This will include the complete Ezylay Mortar System (for fire rated panels) or equal and glass blocks that reach the standard as set below and installed in accordance to CSIRO Opinion FCO-1835 for FRL 90/90/60 and FCO-1836 for FRL 90/90/90 and FCO-2444. Complete test reports, opinions and drawings are available on request.

Upon completion, a Glass Block Technologies International accredited inspector to verify compliance to the above tests will inspect the panels. A Conformity Certificate and identification plate will be issued upon approval.

**STANDARD**

Fire Resistant Level of 90/90/60 or 90/90/90, depending on type of glass block used, in accordance to AS 1530.4-1997, BS 476 Parts 20 and 22, and DIN 4102 Part 13.

**COMPLIANCE CERTIFICATE**

Upon completion, Glass Block Technologies International will issue a signed and dated compliance certificate stating the Fire Resistance Class, Standard and Test numbers, for submission to the relevant building inspectorate. All Fireproof glazing will be tagged to verify conformity.

***NB: If a Compliance Certificate is not issued – then the panel may be deemed as non-compliant.***

**MATERIALS**

**Glass Blocks** *(fill in details & delete other block sizes when specifying)*

Manufacturer: SEVES S.p.A  
Model: 1960 F (FRL 90/90/60)  
1990 F (FRL 90/90/90)  
Pattern: Clearview/ Clearview Sahara (Sandblasted)  
Colour: Neutral  
Dimension: 1960 F 190x190x160 (height x width x thickness) wall thickness of 20mm  
1990 F 190x190x160 (height x width x thickness) wall thickness of 20mm,  
with 4mm coated sheet glass glued in the middle of the glass  
block.

Seves S.p.A guarantees that the technical, dimensional and aesthetic features of its products meet relevant regulations for each characteristic (DIN 18175/77, EN 1051/1, EN 1051/2)

Seves production, in according to the European Regulations EN 1051-1, belong to Class 1, which is the highest possible quality level.

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**Glass Block Physical properties**

Type of Block	1919/160 60F	1919/160 90F
Weight/m <sup>2</sup> (KN) Load bearing properties own weight	~ 2.35	~ 2.5
Compressive Strength (Average value) (N/mm <sup>2</sup> )	> 7.5	> 7.5
Compressive Strength (minimum value) (N/mm <sup>2</sup> )	> 6.0	> 6.0
Light Transmittance (%)	58	43
U Value (W/m <sup>2</sup> x K) (EN 1051-2 - EN 673)	1.8	1.4
Thermal Shock ΔT	25°C	
Sound Insulation (dB) ISO 717-1 - DIN 52210	47	49
Bullet Proof (EN 1522)	FB6-S	FB7-S
Fire Resistance (DIN 4102)	F60	F90
Fire Resistance (AS1530.4-1997)	FRL 60/60/60	FRL 90/90/90

**Fire Rated System Accessories**

**Ezylay Aluminium Frames**

Extruded Aluminium designed specifically for the installation of glass blocks. Frame comprised of sections GBT-024 and GBT-023

**Ezylay Premix Mortar - Standard**

Ezylay Glass Block Premix Mortar – Standard is designed specifically for use with the Ezylay Glass Block Installation Systems.

**Dynabolt® Plus Round Head Anchors**

10mm dia x 75mm length, M10, Zinc coated anchors.

Ezylay Frame drilled and fixed into non-cracked masonry and/or concrete at 400mm centres for concrete constructions, 12mm dia x 75mm length, M10, Zinc coated anchors.

**Bent Expansion Ties**

Expansion Ties - C.G.T.1.B. are used to tie the Glass Block panels to surrounding construction allowing the panel to expand and contract.

**Promaseal® IBS™ Foam or Equal – Fire Resistant Foam**

Flexible strip fire protection for joints and gaps, successfully tested to Australian Standard AS 1530 part 4 for periods of up to 4 hours depending on application. Cut to 10mm x 100mm x 2000mm (thickness x width x length).

**Promaseal® Acrylic Sealant or Equal**

Flexible water based gunnable sealant for fire resistant sealing of joint and service penetrations for up to 2 hours FRL when tested to AS1530 part 4 and AS 4072 part 1.

**7.6mm dia galvanised steel ribbed reinforcing rods**

7.6mm hard drawn steel, hot dipped galvanised rods as per AS 1303 with a nominal yield stress of 550 MPa. Three straight rods to be installed around the perimeter joint of the glass block panel.

**6mm dia galvanised steel reinforcing rods**

6.3mm mild steel, hot dipped galvanised rods.

Three rods to be installed every course horizontally running up to the surround reinforcing.

Two rods to be installed every second course vertically, alternating inside/outside, the reinforcing rods running up to the surround reinforcement.