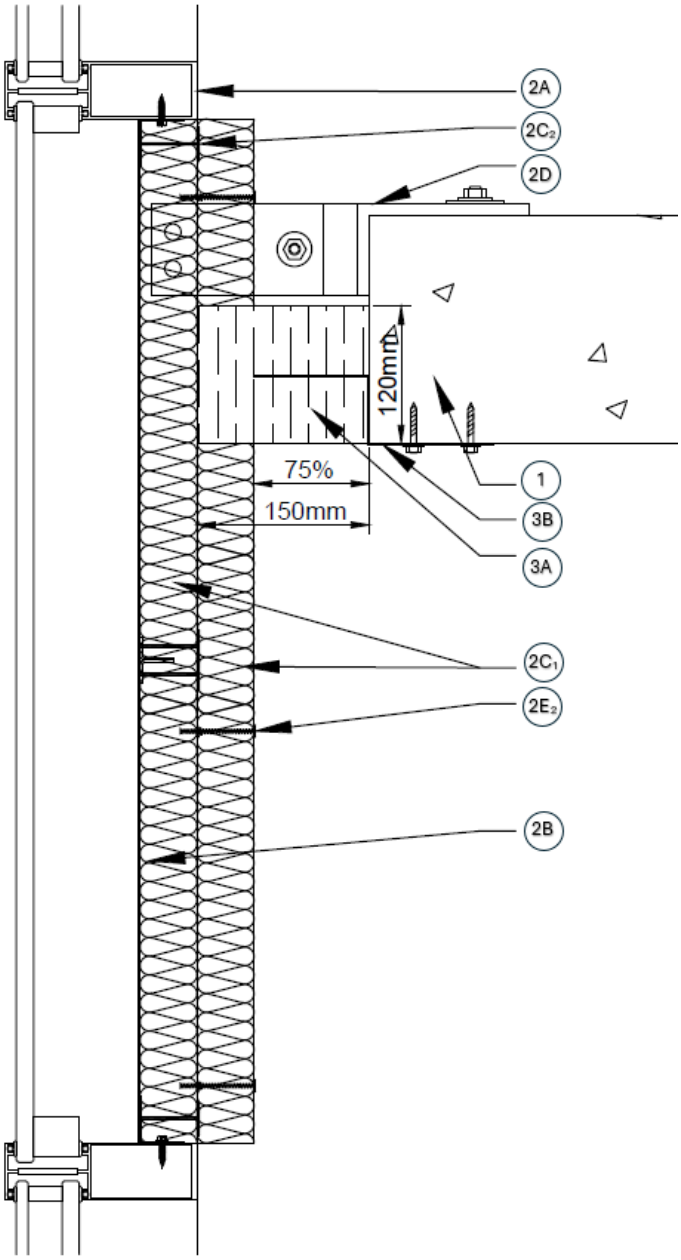
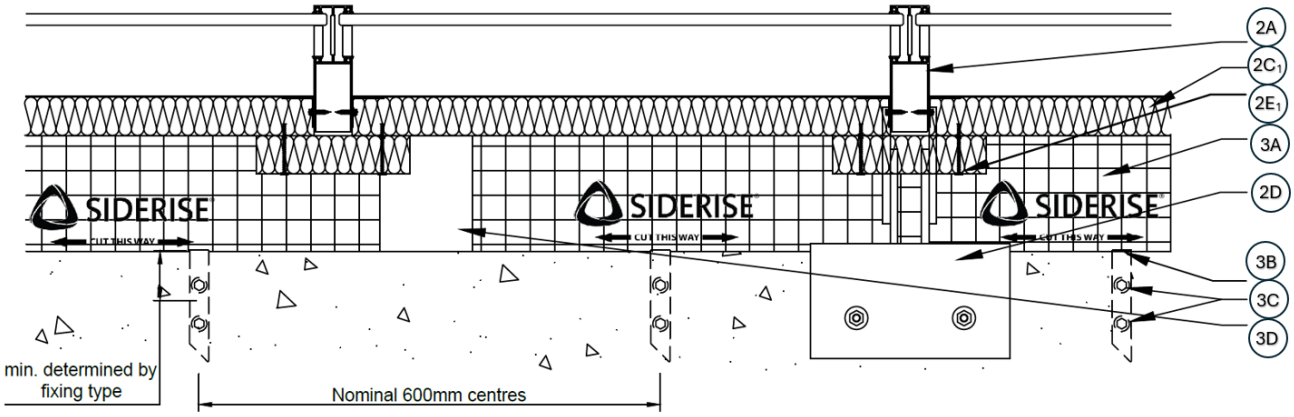
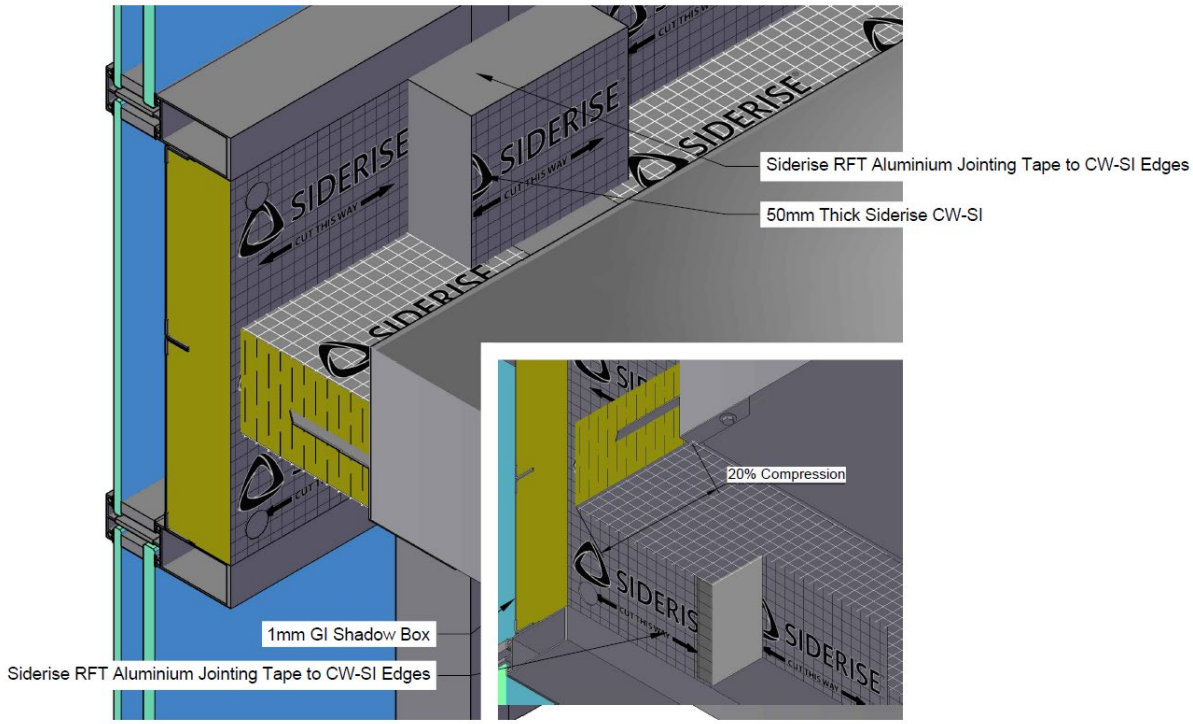
Siderise Insulation Limited
Design No. SIR/BPF 120-03
Perimeter Fire Barrier
Siderise CW-FS
ASTM E2307
"F" Rating: 2 Hour
"T" Rating: 3/4 Hour



KEY	
1	Concrete Floor Slab
2A	Curtain Wall Transom / Mullion
2B	GI Steel Pan
$2C_1$	CW-SI50 Spandrel Insulation
$2C_2$	Weld Pins for CW-SI50
2D	Curtain Wall Bracket System
$2E_1$	Mullion Cover
$2E_2$	Spiral Screws for CW-SI50 Mullion Cover
3A	Siderise CW-FS120 Perimeter Barrier
3B	Siderise B-Series Bracket for CW-FS
3C	Siderise B-Series Bracket fixing Screw
3D	Siderise RFT120 Aluminium Tape





1. **FLOOR ASSEMBLY:** Min. 2 hour fire-rated concrete floor assembly made from reinforced concrete with a min. density of 2000 kg/m^3 and a min. thickness of 203mm at the joint face.

2. **CURTAIN WALL ASSEMBLY:** The curtain wall assembly shall incorporate the following construction features:

A. TRANSOMS/MULLIONS – Rectangular aluminum tubing mullions and transoms, sized and installed according to the curtain wall system manufacturer's guidelines. Min. overall dimensions of framing required are 2.5mm thick aluminum with 100mm x 52mm (depth x width) mullion section, and 100mm x 52mm (depth x width) transom sections.

Max. spacing between mullions is limited to 1483mm and the min. spacing between transoms is limited to 850mm. Min. 750mm distance shall be maintained between the top edge of the concrete floor assembly and lower transom member. Min. 37mm distance shall be maintained between the top edge of the concrete floor assembly and the upper transom member.

B. GALVANIZED STEEL PAN AND REINFORCING ANGLE – The galvanized steel back panel is a 1mm thick prefabricated bended tray profile and is fixed on to the mullion and transom profiles using Ø4.2 x 16mm stainless steel pan-head screws at nominally 300mm on center (oc). Weld the perimeter L-angle and intermediate L-angles together to form a back pan frame, which is fixed onto the mullion and transom profiles using Ø4.2 x 16mm stainless steel pan-head screws at nominally 300mm oc.

C. **CERTIFIED MANUFACTURER:** Siderise Insulation Ltd.

CERTIFIED PRODUCT: CW-SI Spandrel Insulation

Mineral wool with aluminum foil facing, with an overall thickness of 50mm and a density of 128 kg/m^3, is cut to the required dimensions and installed within the GI bended back panel using cupped-head insulation weld pin [2C$_2$] of Ø2.7 x 75mm (thickness x length).

D. CURTAIN WALL BRACKET SYSTEM **–** The mullions are linked to the supporting floor with a bracket-system according to curtain wall system manufacturer's guidelines. Connect the brackets to the top of the concrete floor assembly in accordance with the manufacturer's instruction.

E. **CERTIFIED MANUFACTURER:** Siderise Insulation Ltd.

CERTIFIED PRODUCT: CW-SI Spandrel Insulation

MULLION COVERS **–** The 50mm thick CW-SI mineral wool insulation slabs [2C] are cut to the required size and provided behind the mullion at the spandrel area, and fixed to the spandrel insulations at the interior face of the exterior wall using 90mm spiral screws [2E$_2$] spaced nominally 250mm oc vertically, both above and below the perimeter barrier.

F. SPANDREL PANELS – Use of tempered or heat-strengthened glass panes, or alternative non-combustible decorative panels made of suitable materials like metals, stone, marble, etc., and meeting requirements of ASTM E136 or Class A1 class in accordance with EN 13501-1 are acceptable to be used as the exterior pane.

3. PERIMETER JOINT PROTECTION: The perimeter joint protection system shall incorporate the following construction features:

A. **CERTIFIED MANUFACTURER:** Siderise Insulation Limited

CERTIFIED PRODUCT: Siderise CW-FS

PERIMETER SEAL – The max. gap between the floor assembly and interior face of the exterior wall assembly is 150mm. Cut the perimeter fire barriers of thickness 120mm and a nominal density of 75 kg/m^3 to 180mm (an oversize of 20% greater than the joint width) and install horizontally with compression in a joint width of 150mm between the floor assembly and interior face of the exterior wall assembly.

Install the perimeter fire barrier such that the underside of the perimeter fire barrier is 6mm above the underside of the floor assembly. Apply Siderise RFT120 aluminum joint tape [3D] at the butt joints of the perimeter fire barrier on the top side.

B. STEEL BRACKET – Fix the perimeter fire barriers to the bottom side of the floor assembly with 2 nos. of Siderise B-series fixing brackets per fire barrier, spaced nominally 600mm oc, using Ø6.3 x 45mm concrete fixing steel screws.

C. FIXING SCREWS – The steel brackets are fixed on the bottom side of the concrete slab using Ø6.3 x 45mm concrete fixing steel screws.

D. ALUMINUM JOINT TAPE – Siderise RFT120 self-adhesive aluminum joint tape is to be applied over all splices/abutment joints between the Siderise CW-FS pieces, the exposed stonewool edges, and the interface between the mullion cover and spandrel insulation.

Consult the listing report on the Directory of Building Products (https://bpdirectory.intertek.com) for the edition of the standard(s) evaluated.

Compliance of the assembly described in this Design Listing with the referenced standard relies on verification that the assembly constructed in the field is consistent with that described herein. Intertek certified products may be verified by the approved Intertek label; other products must be verified by the Authority Having Jurisdiction as meeting the specifications stated herein.