

Fire rated protection of steel columns and beams — steel clip and channel

SCOPE OF USE

The options offered in this section provide quick reference solutions for the fire protection of structural steel columns and beams.

For engineered solutions, tailored to meet specific column and beam sizes and loading conditions, specific fire engineering design is required.

Specification number	FRR (structural adequacy rating*)	Lining requirement steel columns and beams
GBCBS 15	15/-/-	1 x 13mm GIB® Standard
GBCBS 30a	30/-/-	1 x 16mm GIB Fyreline®
GBCBS 30b	30/-/-	2 x 10mm GIB Fyreline®
GBCBS 60	60/-/-	2 x 13mm GIB Fyreline®
GBCBS 90	90/-/-	2 x 16mm GIB Fyreline®
GBCBS 120	120/-/-	2 x 19mm GIB Fyreline®
GBCBS 180	180/-/-	3 x 19mm GIB Fyreline®

*The FRR comprises values for structural adequacy/integrity/insulation. For loadbearing structural steel members (primary elements), the structural adequacy rating is usually the only requirement and prevents failure under vertical gravity loads during a fire.

CLIP AND CHANNEL

Attach Rondo® Clip (part no. BMCL) to column or beam at 600mm centres maximum. Insert Rondo® 140 Perimeter Channel (part no. 140) into clips. Ensure that the linings are supported by framing members at 600mm centres maximum.

For beams exposed on three sides, Rondo® Perimeter Angle (part no. NZ18) is to be secured to provide fixing for the linings.

The Rondo® angle must be fixed to the underside of the floor at 600mm centres maximum. The Rondo® angles are to be fixed at a maximum of 100mm centres in from each end.

LINING

Install the linings in accordance with the required FRR as specified above.

First and second layer joints must be formed over framing.

In double-layer systems, the joints between the first and second layer must be offset by 300mm minimum.

FASTENING THE LINING

Fasteners

Use GIB® Grabber® Self Tapping Drywall Screws.

The fastener length must ensure a 12mm minimum penetration into the steel framing.

Fastener centres

Single or outer layers must be fixed at 300mm centres maximum to framing spaced at 600mm centres maximum. Inner layers can be fixed at 600mm centres maximum to framing spaced at 600mm centres maximum.

JOINTING

Inner layer: Unstopped.

Outer layer: All fastener heads stopped and all sheet joints tape reinforced and stopped in accordance with the publication entitled "GIB® Site Guide".

