



PLAN VIEW  
ASSEMBLY FOR 100mm x 100mm  
**FireCrunch : SHS COLUMN**  
**FRL 90/90/90 AND 120/120/120**

## FRL 90/90/90 to 120/120/120

NATA Labs Australia Fire Tested Systems **AS1530.4** and more

**NOTE:** FCA ref, is FireCrunch Australia



[firecrunch.com.au](http://firecrunch.com.au)



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ASSEMBLY FOR 100mm x 100mm  
**FireCrunch : SHS COLUMN**  
**FRL 90/90/90**

**NOTES :**

• 1.15 BMT STEEL frame and insert:  
CSR 350 Rockwool batt 90 MINS

• Column studs fixed into base track and anchored into slab and ceiling, upper slab tracks.

• Inner FireCrunch 10mm thick K-Clad sheets screwed into SHS.

column and outer K-clad sheet screwed into steel studs as per diagram but not more than 300mm vertically spaced centres.

• 4 x inner FireCrunch K-Clad sheets are cut to 110mm widths so the over lap fits on corners with fire sealant caulk gunned in as per diagram. 2/ 3mm

• 4 x outer FireCrunch 10mm (K-Clad) sheets are cut to 2 x 3000mm and 2 x 280mm widths and then over lap at corner joints which are then fire caulked and a 90 deg steel angle plate 0.75 BMT completes the joint stability, screw as shown.

Screw FireCrunch (K-clad) min 15mm from edges and corners. Internal cavity filled with Rockwool batt

CSR 350 OR SIMILAR SPEC NOT LESS THAN 350 for FRL 90/90/90 Fasteners, adhesives and sealers as per the manufacturer's recommended products list.

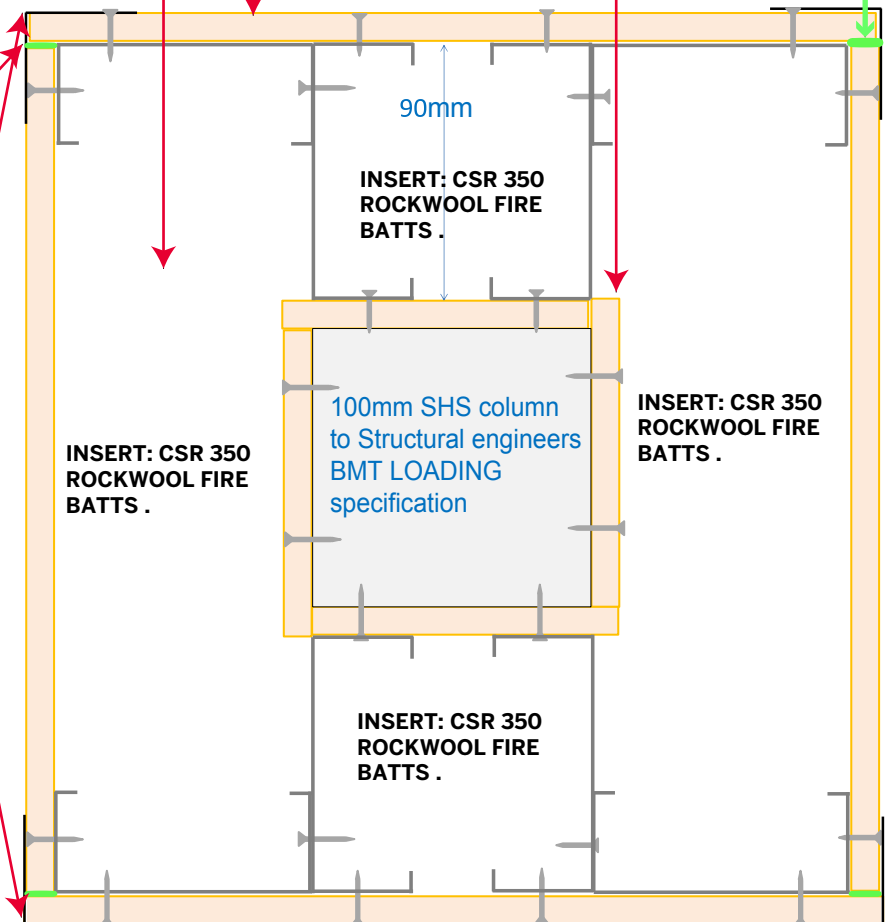
Screw, bolt or pot rivet steel framing <https://fire-crunch.com.au/recommended-products/>

Metal L-brackets to seal each corner min 0.75BMT.

Internal cavity filled with Rockwool batts  
CSR 350 or SIMILAR SPEC NOT  
LESS THAN 350 for FRL 90/90/90 and R  
2.5 FOR FRL 60/60/60

10mm FireCrunch K-CLAD 10mm

Fire Seal all joints with  
(AS/1530.4 fire sealant)



**NOTE ONLY USE R 2.5 BATTS FOR FRL 60/60/60**

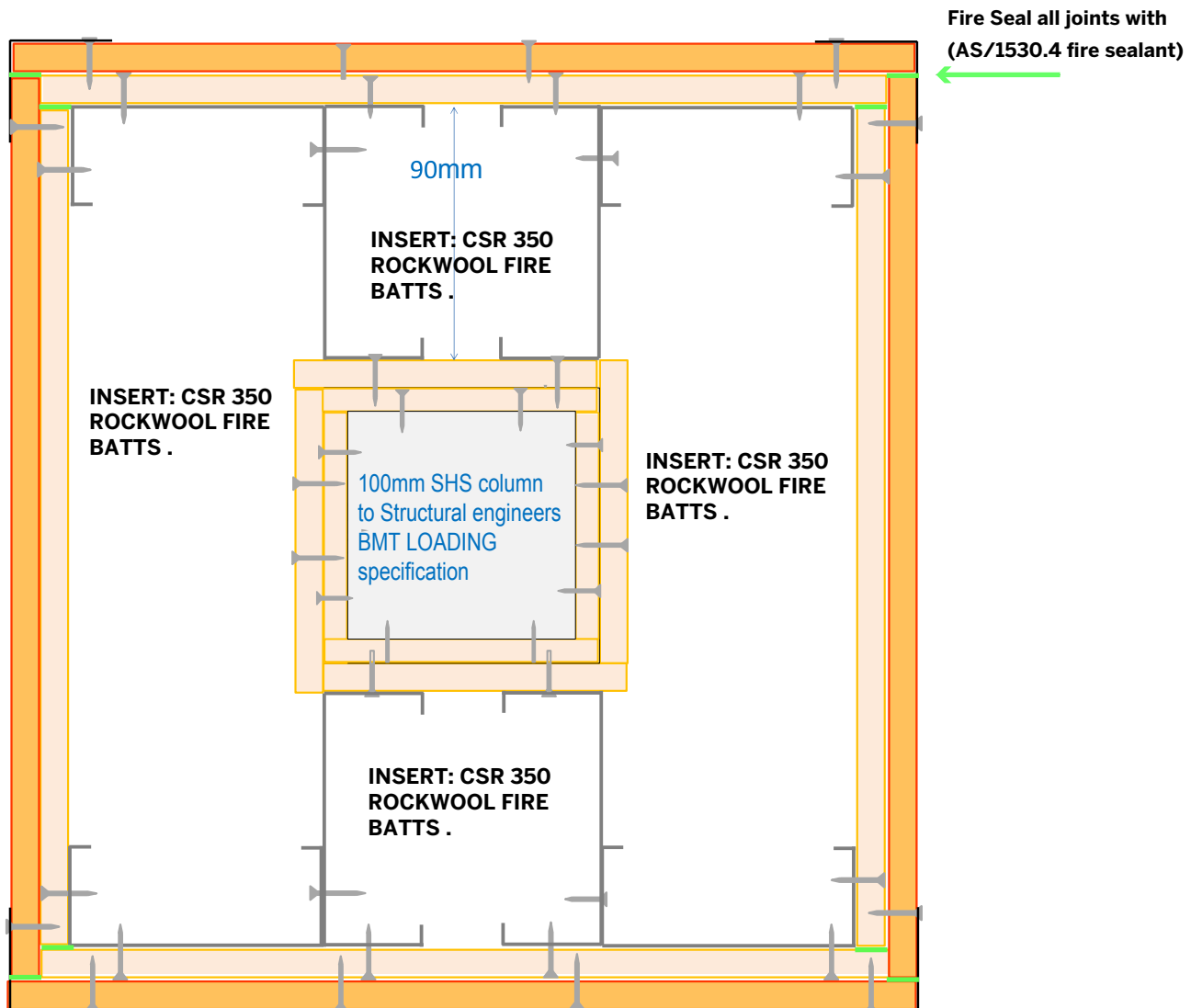
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PLAN VIEW  
ASSEMBLY FOR 100mm x 100mm  
**FireCrunch : SHS COLUMN**  
**FRL 120/120/120**

For 120 minutes use

2 x layers of FireCrunch 10mm (K-Clad) .

See website for FRL120/120 wall test under Certifications.



**NOTE :** FOR RHS COLUMNS THE SHEET SIZES REFERRED TO WILL BE LONGER ,SEE TEXT LEFT HAND SIDE PAGE 2 INFO

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PLAN VIEW  
ASSEMBLY FOR 100mm x 100mm  
**FireCrunch : SHS COLUMN**  
**FRL 90/90/90**

**NOTE:**

FireCrunch 10mm (K-clad )sheet maximum sheet size length 3000mm. Join in sheets as firecrunch instructions.

Seal gaps with specified fire proof gap Sealant.

Tested by NATA Labs CSIRO to FRL90/90/90 on Light gauge steel frame 1.15BMT C Section LOAD bearings 55kN (WALL)

This Column system emulates the exact performance of the wall fire test .  
This achieves an identical heat transfer PROTECTING the load bearing column by maintaining the unexposed inner face of Firecrunch 10mm (K-CLAD) in touch with the steel column to 140 deg C average to 90 minutes.

**For 120 minutes use**

2 x layers of FireCrunch 10mm (K-Clad) .  
See website for  
FRL 120/120 wall test under Certifications.

<https://firecrunch.com.au/wp-content/uploads/2016/10/CERTIFICATION-1D-FCA-ANDXF-2020-25-AS-1530.4-FRL-90-90-90-ASSESSMENT.pdf>

SHS,RHS OR CFS COLUMN or beam support systems are from 5mm to 10mm thick .Firecrunch NATA LABS CSIRO TESTS were load bearing FIRE TESTED UNDER AS1530.4 ACHIEVING 55kN on 3m x 3m BCA test frame , using 1.15mm light gauge C section. At 120 minutes the unexposed face which is in touch with the steel column reached the max allowed average temperature of 140 minutes , insufficient to degrade 1.15BMT steel  
<https://firecrunch.com.au/certifications/>

**SEALER & PAINTING**

- 1st step :** AquaCrunch / VAPOUR PERMEABLE sealer ( interior and exteriors) ,  
**2nd step :** you must then apply Dulux Precision MAX ADHESION undercoat, then apply  
**3rd step :** water based Dulux paints or texture top coats.

## side Elevation view – Column

Column fire sealed to under side of slab  
AS1530.4 fire Caulk

