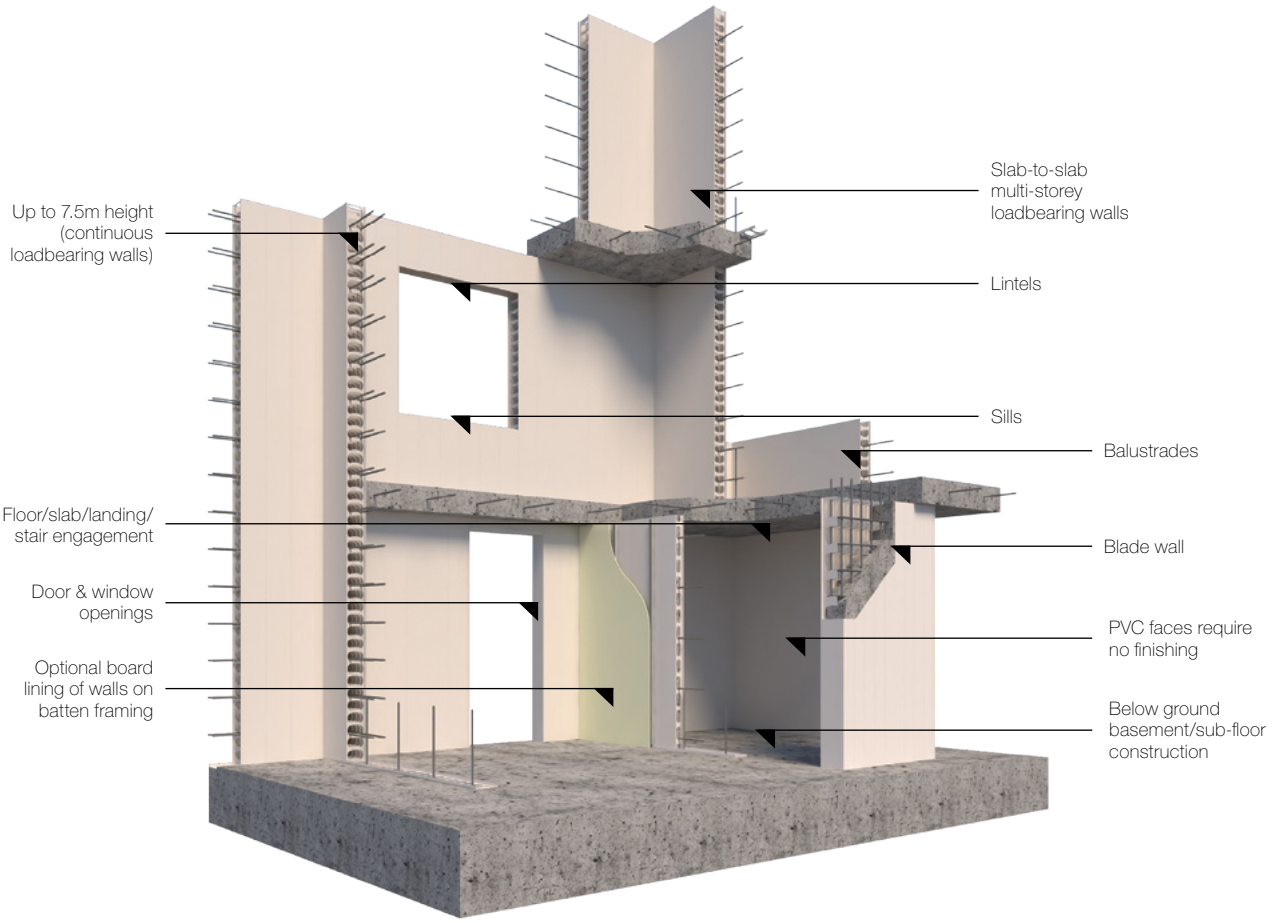
afs rediwall®

Fire Rated Junction Details for AFS Rediwall® Systems

As a division of CSR Limited, AFS products are backed by one of Australia's most trusted names in building products

CSR

System Overview



110mm

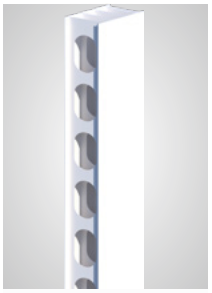
Wall thickness
Concrete
0.105m³/m²

Accoustic rating
Rw 50
Rw + Ctr 45

Fire resistance FRL
Upto 90/90/90
(Load bearing)

-/120/120
(Non load bearing)

Panel type
Speedy Snap-In™ Panels



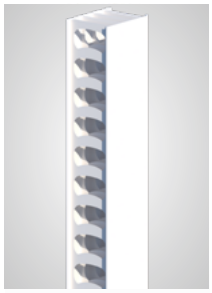
156mm

Wall thickness
Concrete
0.150m³/m²

Accoustic rating
Rw 54
Rw + Ctr 50

Fire resistance FRL
240/240/240

Panel type
Speedy Snap-In™ Panels



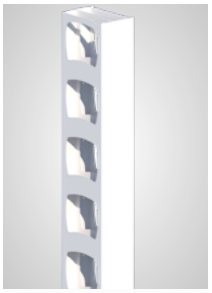
200mm

Wall thickness
Concrete
0.194m³/m²

Accoustic rating
Rw 58
Rw + Ctr 53

Fire resistance FRL
240/240/240

Panel type
Speedy Snap-In™ Panels



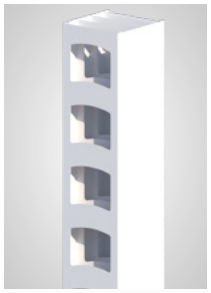
256mm

Wall thickness
Concrete
0.250m³/m²

Accoustic rating
Rw 60
Rw + Ctr 55

Fire resistance FRL
240/240/240

Panel type
Slide-In Panels



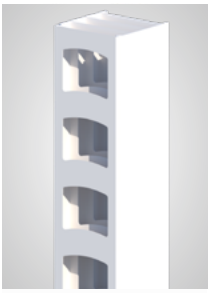
275mm

Wall thickness
Concrete
0.269m³/m²

Accoustic rating
Rw 61
Rw + Ctr >56

Fire resistance FRL
240/240/240

Panel type
Slide-In Panels



300mm

Wall thickness
Concrete
0.294m³/m²

Accoustic rating
Rw 61
Rw + Ctr >56

Fire resistance FRL
240/240/240

Panel type
Slide-In Panels

AFS, the systematic solution

Being the smarter permanent formwork system, we strive to not only offer great innovations to solve construction challenges but also provide compliant solutions to simplify our customers design process. AFS has teamed up with the experts from Warringtonfire Australia and created and assessed a range of junctions between AFS Rediwall® and other walls to the requirements of AS1530.4:2014 and AS 4072.1:2005.

As a result, AFS Rediwall® offers a series of tested fire rated junction solutions allowing connections to various wall types without the need to remove PVC facing. These solutions not only help to reduce costs and speed up installation, but also allow for greater versatility in design. You can find a range of junctions of Rediwall® to:

- CSR Gyprock Fyrchek Plasterboard
- CSR Gyprock Shaft Liner Panel
- CSR Hebel Panels
- Concrete and concrete masonry block wall systems

AFS Rediwall® also has been tested and assessed by CSIRO (test report FSV 2094 and assessment report FCO 3380) to AS1530.4 for fire resistance levels of various service penetrations to achieve up to FRL -/120/120 for service penetrations in the Rediwall® without the need to remove the PVC lining. Further details are provided in this document.

Why AFS Rediwall® permanent formwork is the smarter choice

AFS has been supplying the Australian market with innovative walling system since 1996 and now is a proud member of CSR brand family.

AFS ticks all the boxes on compliance

Assessed by peak Australian NATA-accredited testing laboratories, our AFS products exceed all critical building performance requirements. CodeMark certified, AFS systems can be designed and constructed to comply with the National Construction Code (NCC) requirements and are suitable for all NCC building classes (1-10).

Suitable for all climates and conditions

Bushfires and floods are an unfortunate part of Australian life. When building in a bushfire zone, it is critical to consider your choice of building materials. AFS Rediwall® has exceptional fire properties and meets the requirements for bushfire attack level BAL40. It is also CodeMark certified to be used in flood hazard zones. The robust reinforced concrete ensures reliable performance in the most difficult conditions.

Low environmental footprint

All AFS systems are fully Australian made, backed by CSR. AFS Rediwall® is recognised by the Green Building Council of Australia (GBCA) as meeting Best Practice Guidelines for PVC and it is a Green Star ready system.

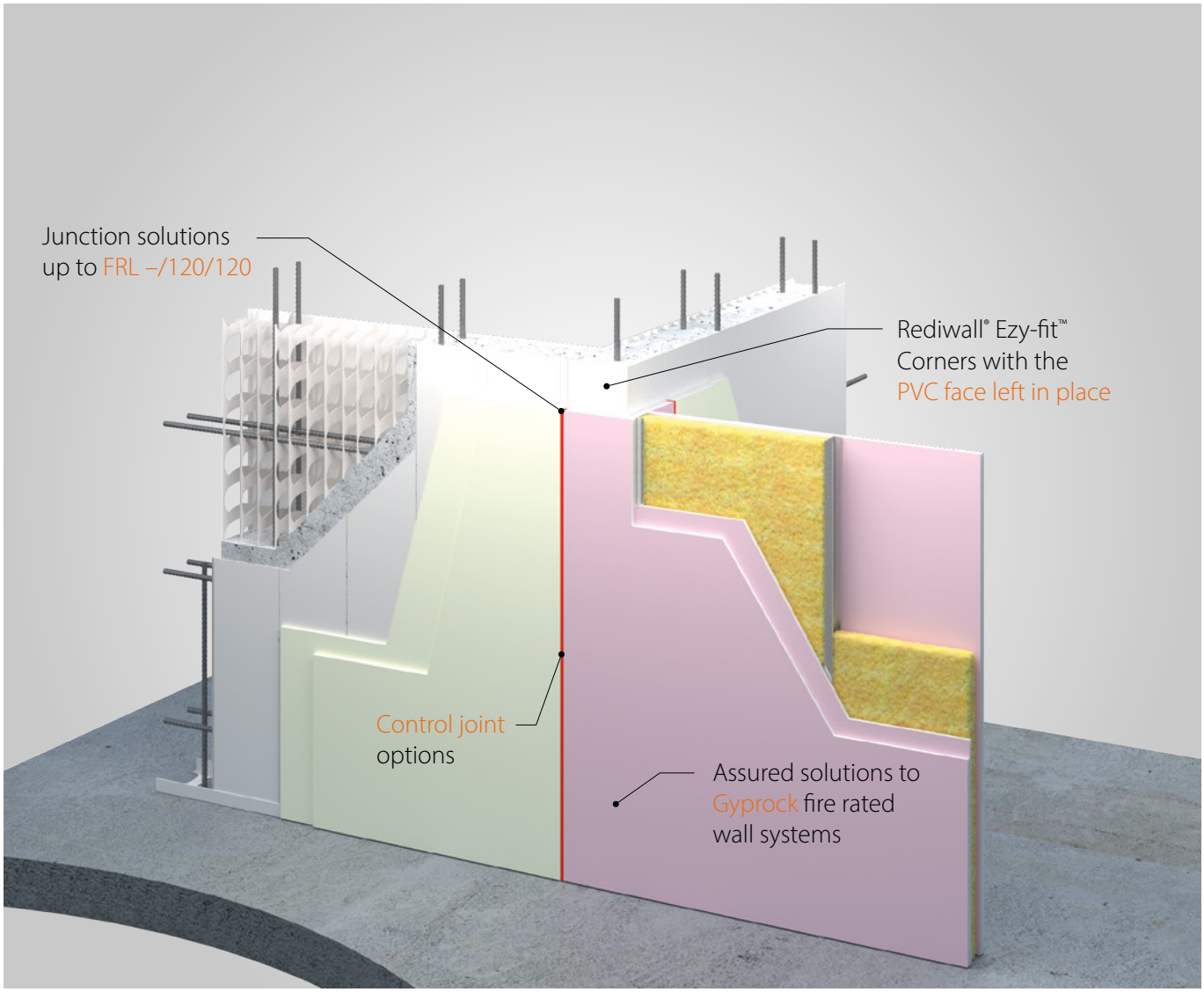
AFS has achieved Silver Status in the PVC Stewardship Program which is administered and independently audited by the Vinyl Council of Australia. To further reduce its environmental impact, AFS provides dedicated recycling services for its Rediwall® products.

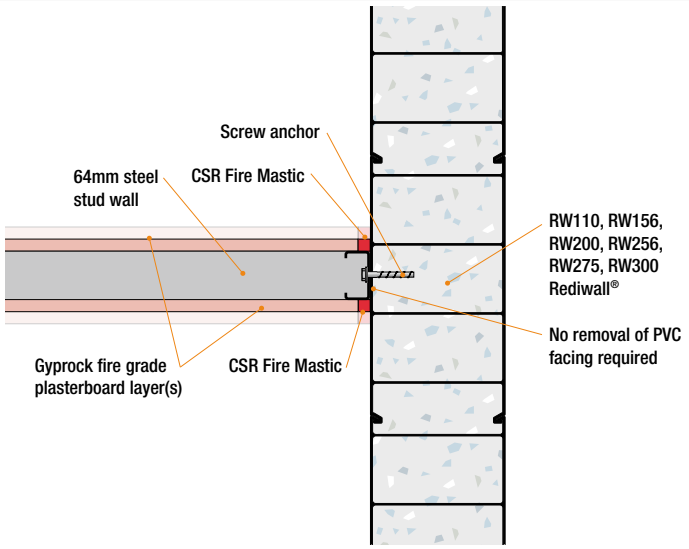
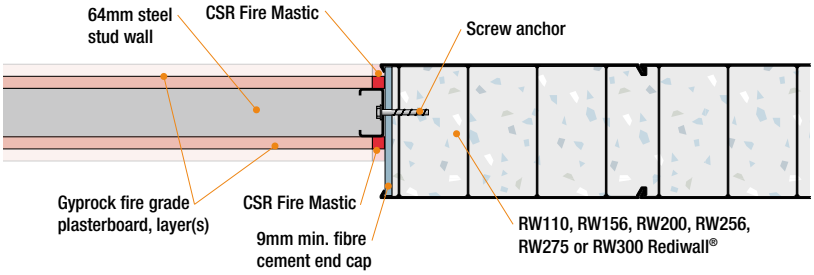
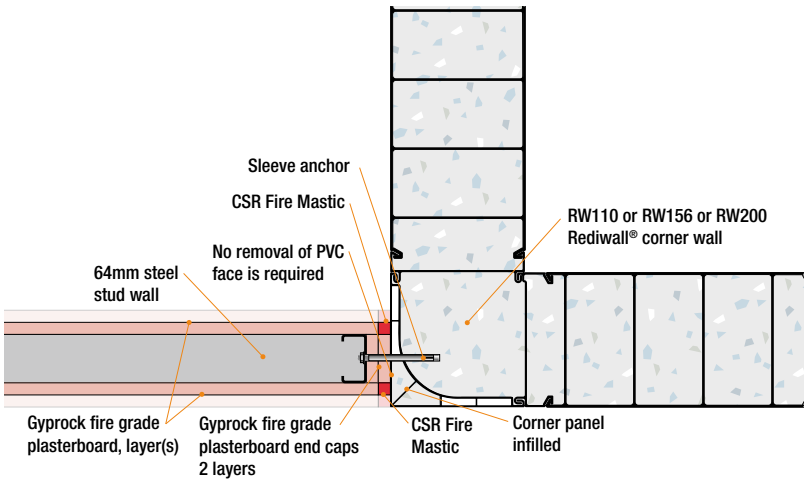
Disclaimer

Figures are to be used as a diagrammatic representation of the junction construction. Please ensure that the details are strictly adhered to. Variations from the specification details may void the stated FRL performance of the junction.

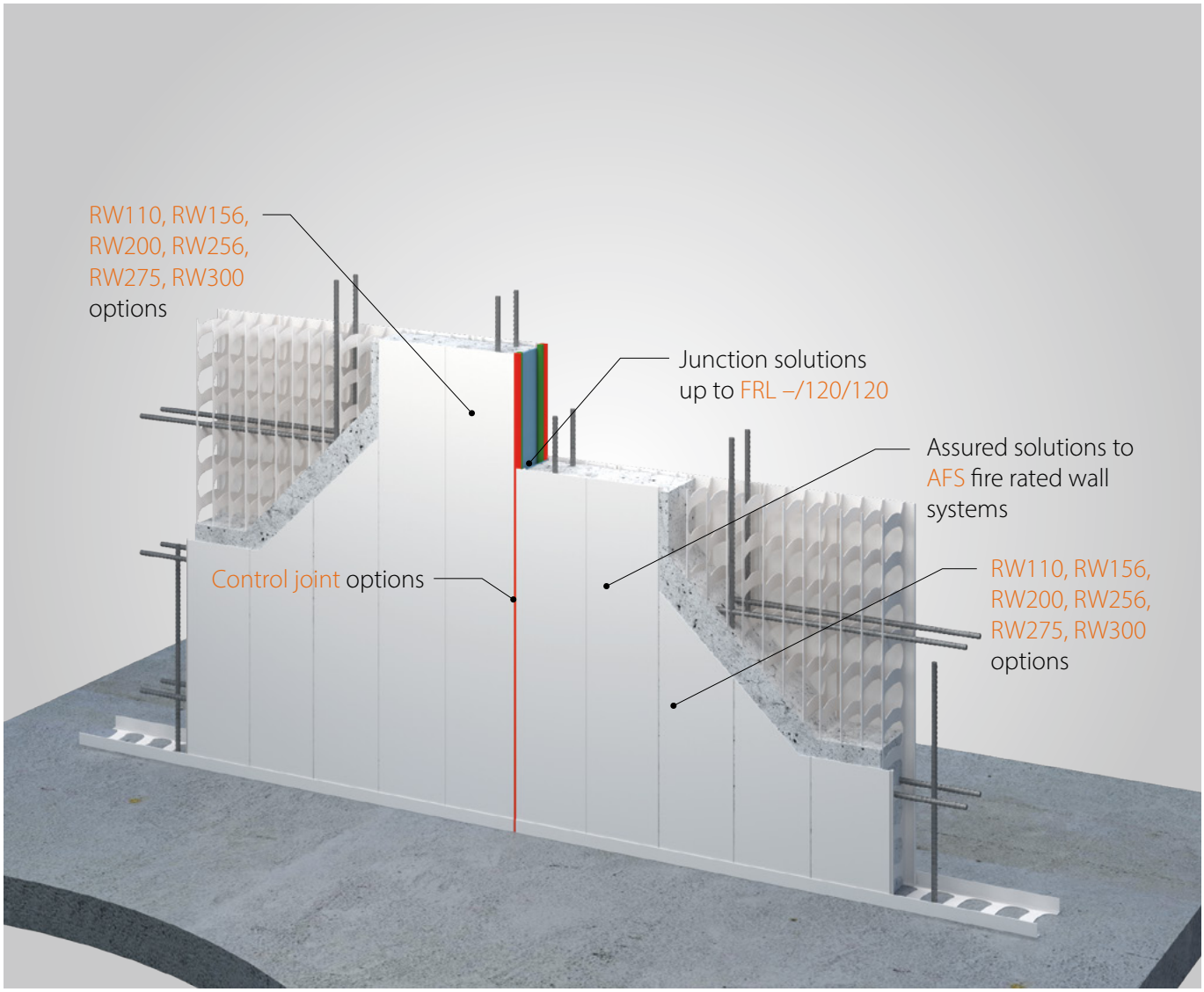
This guide should be read in conjunction with the latest version of AFS Rediwall® Design Performance & Compliance Guide.

Rediwall® to fire grade gyprock lined steel frame junction solutions



Specification	Typical Detail
Steel framed plasterboard walls to transverse AFS Rediwall® – Tee junctions	
FRL –/120/90 **Wall and Junction** • 64mm steel stud wall with 1 x 16mm Gyprock fire grade plasterboard – both sides. • 16 x 16mm deep bead of CSR Fire Mastic at junction. • Rated from both sides. **AFS Rediwall®** RW110*, RW156, RW200, RW256, RW275 or RW300 *Reduce junction FRL to -/90/90 for a load bearing RW110	
FRL –/120/120 **Wall and Junction** • 64mm steel stud wall with 2 x 13mm Gyprock fire grade plasterboard – both sides. • 16 x 26mm deep bead of CSR Fire Mastic at junction. • Rated from both sides. **AFS Rediwall®** RW110*, RW156, RW200, RW256, RW275 or RW300 *Reduce junction FRL to -/90/90 for a load bearing RW110	
Steel framed plasterboard walls to AFS Rediwall® fibre cement end cap – Butt joint junction	
FRL –/90/90 **Wall and Junction** • 64mm steel stud wall with 1 x 16mm Gyprock fire grade plasterboard – both sides. • 16 x 16mm deep bead of CSR Fire Mastic at junction. • Rated from both sides. **AFS Rediwall®** RW110, RW156, RW200, RW256, RW275, RW300 with min. 9mm fibre cement end cap.	
FRL –/120/120 **Wall and Junction** • 64mm steel stud wall with 2 x 13mm Gyprock fire grade plasterboard – both sides. • 16 wide x 26mm deep bead of CSR Fire Mastic at junction. • Rated from both sides. **AFS Rediwall®** RW110*, RW156, RW200, RW256, RW275, RW300 with min. 9mm fibre cement end cap. *Reduce junction FRL to -/90/90 for a load bearing RW110	
Steel framed plasterboard walls to AFS Rediwall® junctions – Filled corner	
FRL –/90/90 **Wall and Junction** • 64mm steel stud wall with 1x16mm Gyprock fire grade plasterboard – both sides. • 2 x 16mm Gyprock fire grade plasterboard as end cap for the stud wall. • 16 x 16mm deep bead of CSR Fire Mastic at junction. • Rated from both sides. **AFS Rediwall®** RW110 or RW156 or RW200	
FRL –/120/120 **Wall and Junction** • 64mm steel stud wall with 2x13mm Gyprock fire grade plasterboard – both sides. • 2 x 13mm Gyprock fire grade plasterboard as end cap for the stud wall. • 13 wide x 26mm deep bead of CSR Fire Mastic at junction. • Rated from both sides. **AFS Rediwall®** RW110* or RW156 or RW200 *Reduce junction FRL to -/90/90 for a load bearing RW110	

Rediwall® to Rediwall® junction solutions



Specification	Typical Detail

AFS Rediwall® RW110 to AFS Rediwall® RW110 – Butt joints

FRL –/120/90

Rediwall® side 1	Rediwall® side 2
RW110*	RW110*

Junction

- 9mm min. fibre cement end cap on both walls.
- 10mm max. gap between walls.
- 20mm deep bead (from behind panel clips) of CSR FireSeal to both sides of junction.
- Rated from both sides.

*Reduce junction FRL to -/90/90 for a load bearing RW110

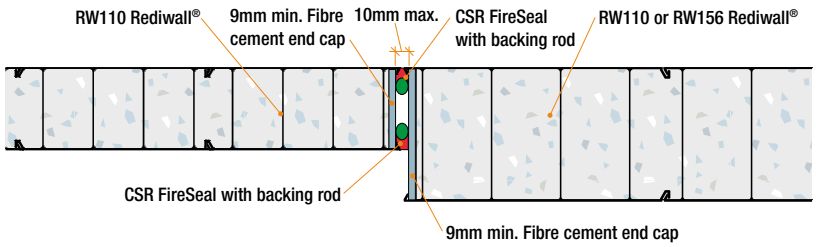
FRL –/120/120

Rediwall® side 1	Rediwall® side 2
RW110*	RW156

Junction

- 9mm min. fibre cement end cap on both walls.
- 10mm max. gap between walls.
- 16mm deep bead (from behind the panel clips) of CSR FireSeal to both sides of junction.
- Rated from both sides.

*Reduce junction FRL to -/90/90 for a load bearing RW110



Joints between other AFS Rediwall® panels

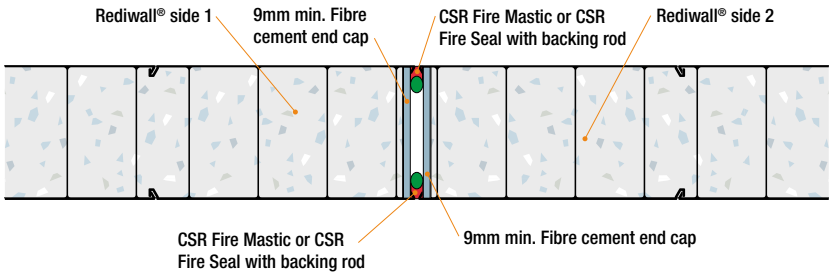
FRL –/120/120

Rediwall® side 1	Rediwall® side 2
RW110*	RW200, RW256, RW275 or RW300
RW156	RW156, RW200, RW256, RW275 or RW300
RW200, RW256, RW275 or RW300	RW200, RW256, RW275 or RW300

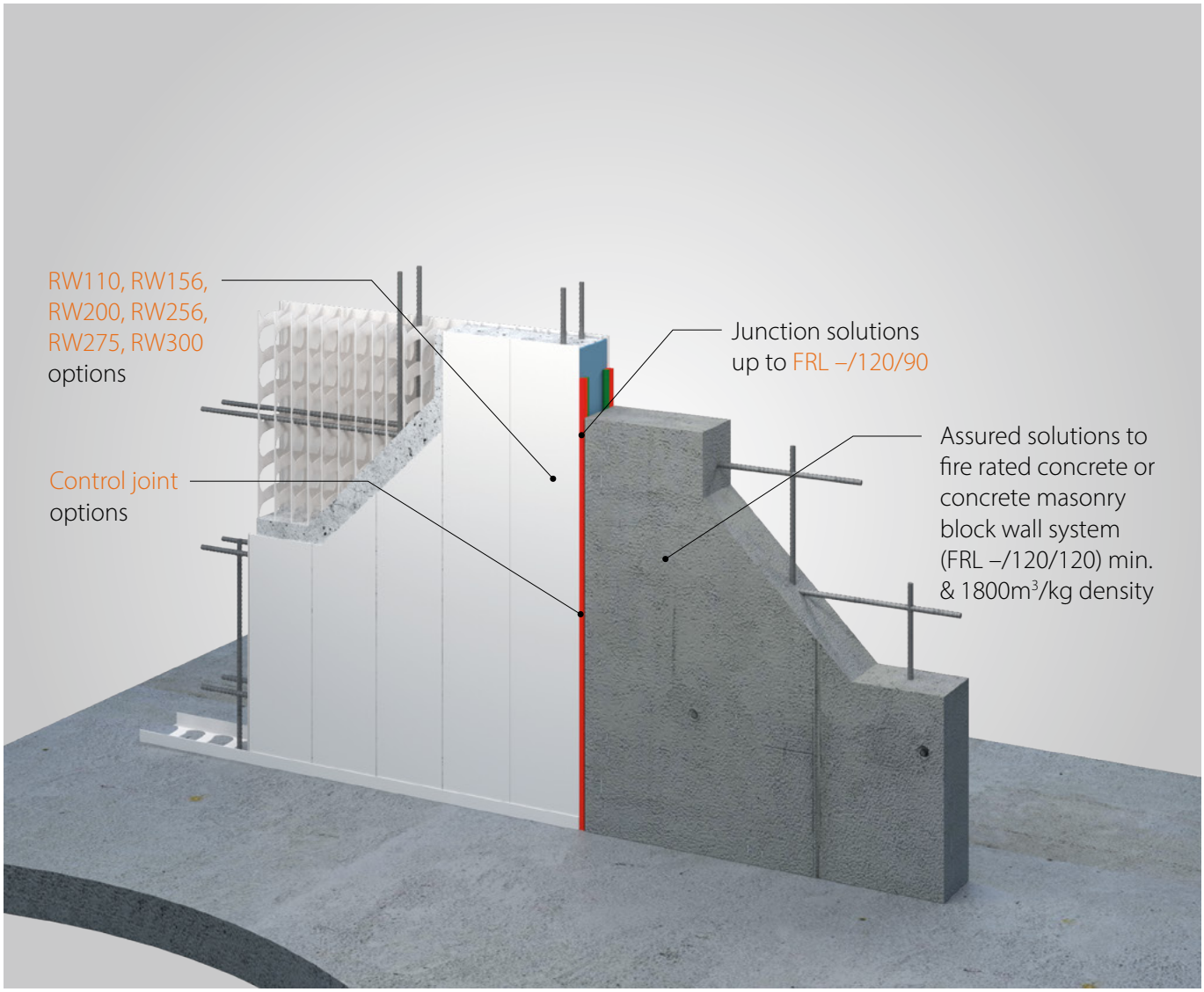
Junction

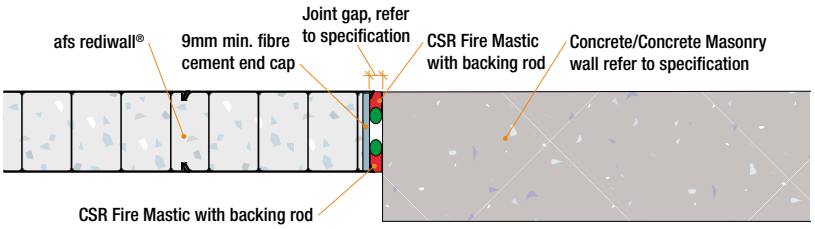
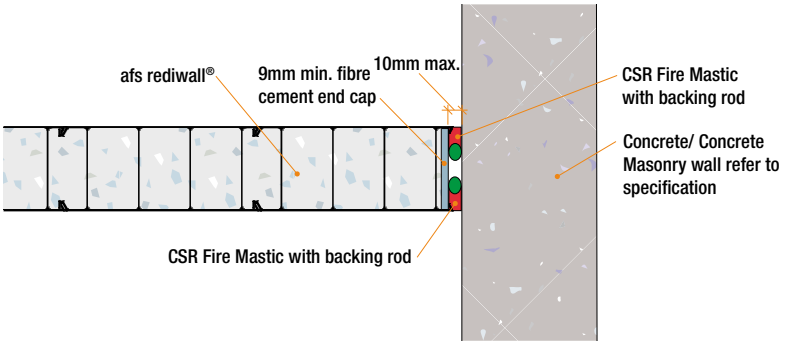
- 9mm min. fibre cement end cap on both walls.
- 10-20mm wide x 20mm deep bead of CSR Fire Mastic or CSR FireSeal to both sides of junction.
- Rated from both sides.

*Reduce junction FRL to -/90/90 for a load bearing RW110

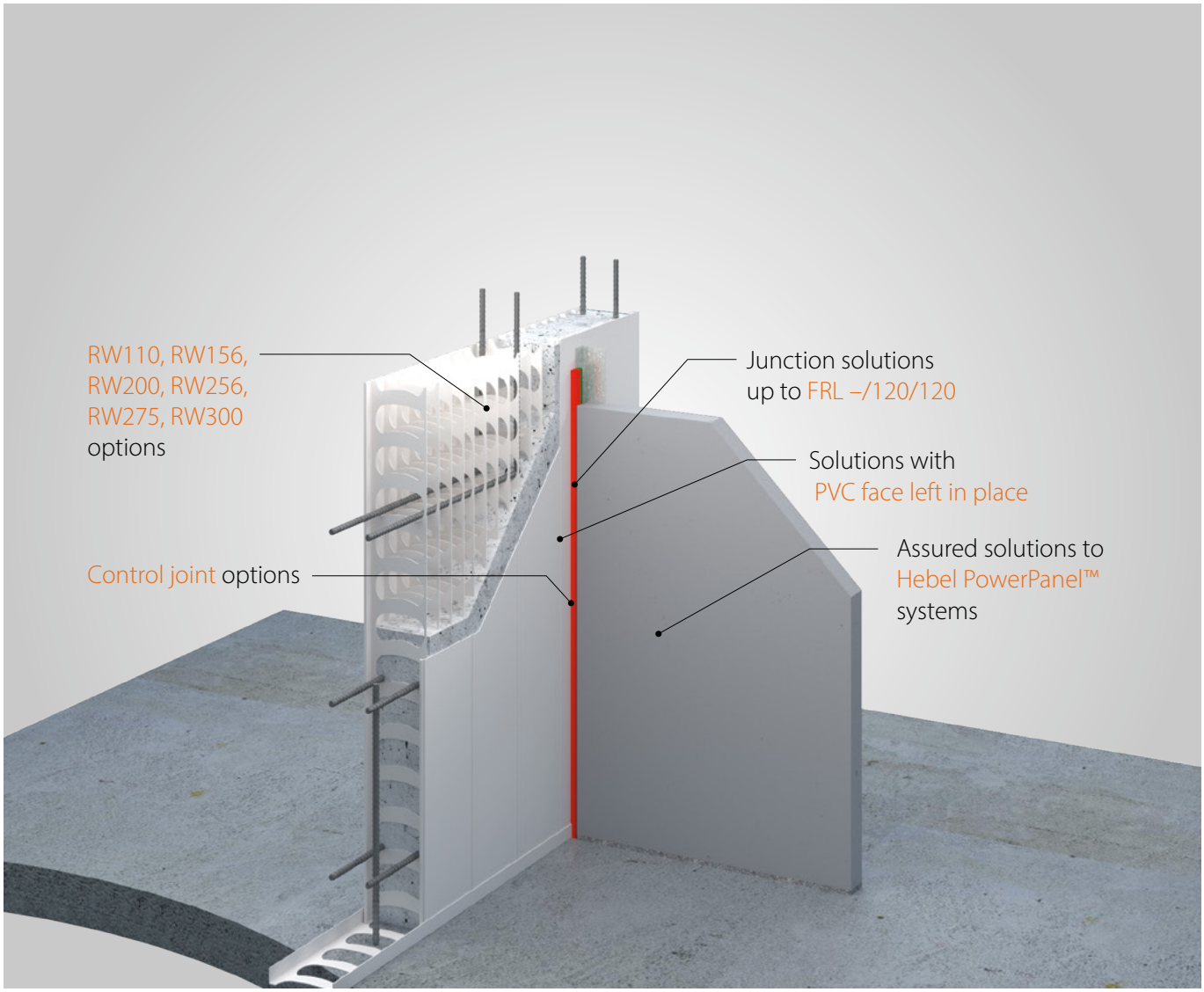


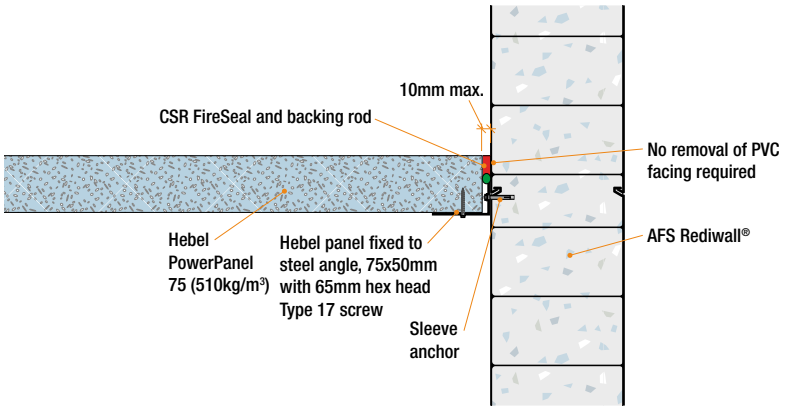
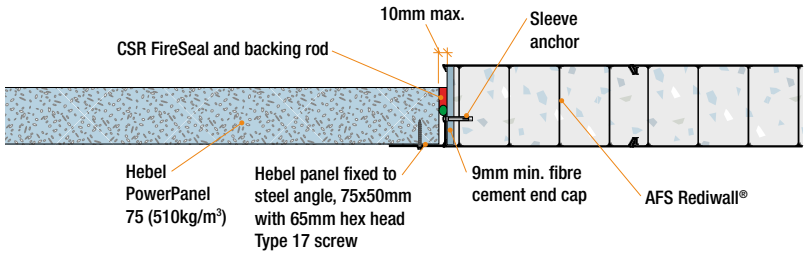
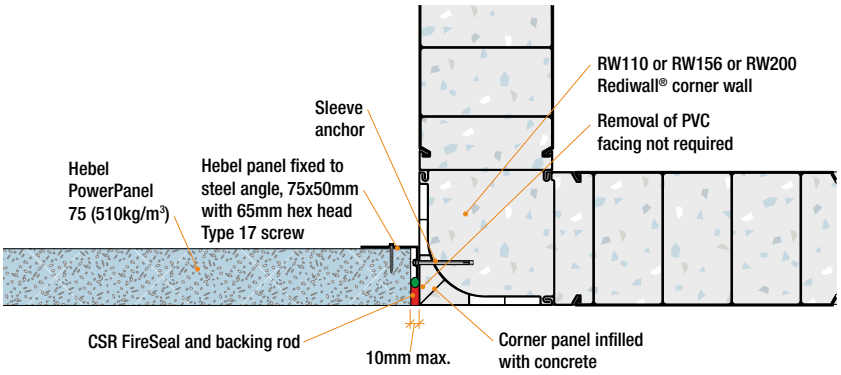
Rediwall® to Concrete or Concrete Masonry Junction Solutions



Specification	Typical Detail
AFS Rediwall® to a concrete or concrete masonry block wall – Butt joint junction	
FRL –/120/90 **AFS Rediwall®** RW110*, RW156, RW200, RW256, RW275 or RW300 **Junction** • 9mm min. fibre cement end cap on the AFS Rediwall®. • Joint gap 10-20mm x 20mm min. deep bead of CSR Fire Mastic with backing rod to both sides of the junction. • Rated from both sides. **Concrete wall** • Concrete wall 120mm min. thickness, OR Concrete Masonry block wall with FRL –/120/120 min. & 1800kg/m^3 density min. *Reduce junction FRL to -/90/90 for a load bearing RW110	
FRL –/120/120 **AFS Rediwall®** RW110*, RW156, RW200, RW256, RW275 or RW300 **Junction** • 9mm min. Fibre Cement end cap on the AFS Rediwall®. • Joint gap <10mm x 20mm min. deep bead of CSR Fire Mastic with backing rod to both sides of the junction. • Rated from both sides. **Concrete wall** • Concrete wall 120mm min. thickness, OR Concrete Masonry block wall with FRL –/120/120 min. & 1800kg/m^3 density min. *Reduce junction FRL to -/90/90 for a load bearing RW110	
AFS Rediwall® to a transverse concrete or concrete masonry block wall – Tee junction	
FRL –/120/120 **AFS Rediwall®** RW110*, RW156, RW200,RW256, RW275 or RW300 **Junction** • 9mm min. fibre cement end cap on the AFS Rediwall®. • 10mm max width x 20mm min. deep bead of CSR Fire Mastic with backing rod to both sides of the junction. • Rated from both sides. **Concrete wall** • Concrete wall 120mm min. thickness, OR Concrete Masonry block wall with FRL –/120/120 min. & 1800kg/m^3 density min. *Reduce junction FRL to -/90/90 for a load bearing RW110	

Rediwall® to Hebel PowerPanel™ Junction Solutions



Specification	Typical Detail
AFS Rediwall® to transverse CSR Hebel panel wall –Tee junction	
FRL –/90/90 **AFS Rediwall®** RW110, RW156, RW200, RW256, RW275 or RW300 **Junction** • For gap width ≤10mm. • 75x50mm angle to Rediwall® & Hebel Panel. • 10mm wide max. x 20mm deep bead of CSR FireSeal with backing rod. • Rated from both sides. **Hebel** • Requires a Hebel Wall System with a minimum FRL –/90/90 (example Hebel PowerPanel 75 (510kg/m^3)	
AFS Rediwall® to CSR Hebel panel wall – Butt joint junction	
FRL –/90/90 **AFS Rediwall®** RW110, RW156, RW200, RW256, RW275 or RW300 **Junction** • For gap width ≤10mm. • 75x50mm angle to rediwall® & Hebel Panel. • 10mm wide x 20mm deep bead of CSR FireSeal with backing rod. **Hebel** • Requires a Hebel Wall System with a minimum FRL –/90/90 (example Hebel PowerPanel 75 (510kg/m^3)	
AFS Rediwall® corner (concrete filled) to CSR Hebel panel wall junction	
FRL –/90/90 **AFS Rediwall®** RW110, RW156, RW200 corner (concrete filled) **Junction** • For gap width ≤10mm. • 75x50mm angle to rediwall® & Hebel Panel. • 10mm wide x 20mm deep bead of CSR FireSeal with backing rod. **Hebel** • Requires a Hebel Wall System with a minimum FRL –/90/90 (example Hebel PowerPanel 75 (510kg/m^3)	

Rediwall® Fire Rated Penetrations

AFS Rediwall® has been tested and assessed by CSIRO (test report FSV 2094 and assessment report FCO 3380) to AS1530.4 for fire resistance levels of various service penetrations to achieve up to FRL -/120/120 for service penetrations in the Rediwall® without the need to remove the PVC lining.

Service penetration types tested and assessed include:

- Clay Brick Infill
- Cable trays
- PVC Pipe work
- Electrical Cable (Single or bundled)
- Copper and metal pipe work
- Fire Dampers FRL -/120/ - (Integrity)

These service penetrations types are allowed to be used through Rediwall® RW110C, RW156C, RW200C, RW256S, RW275S and RW300S with penetration apertures as close as 40mm spacing.

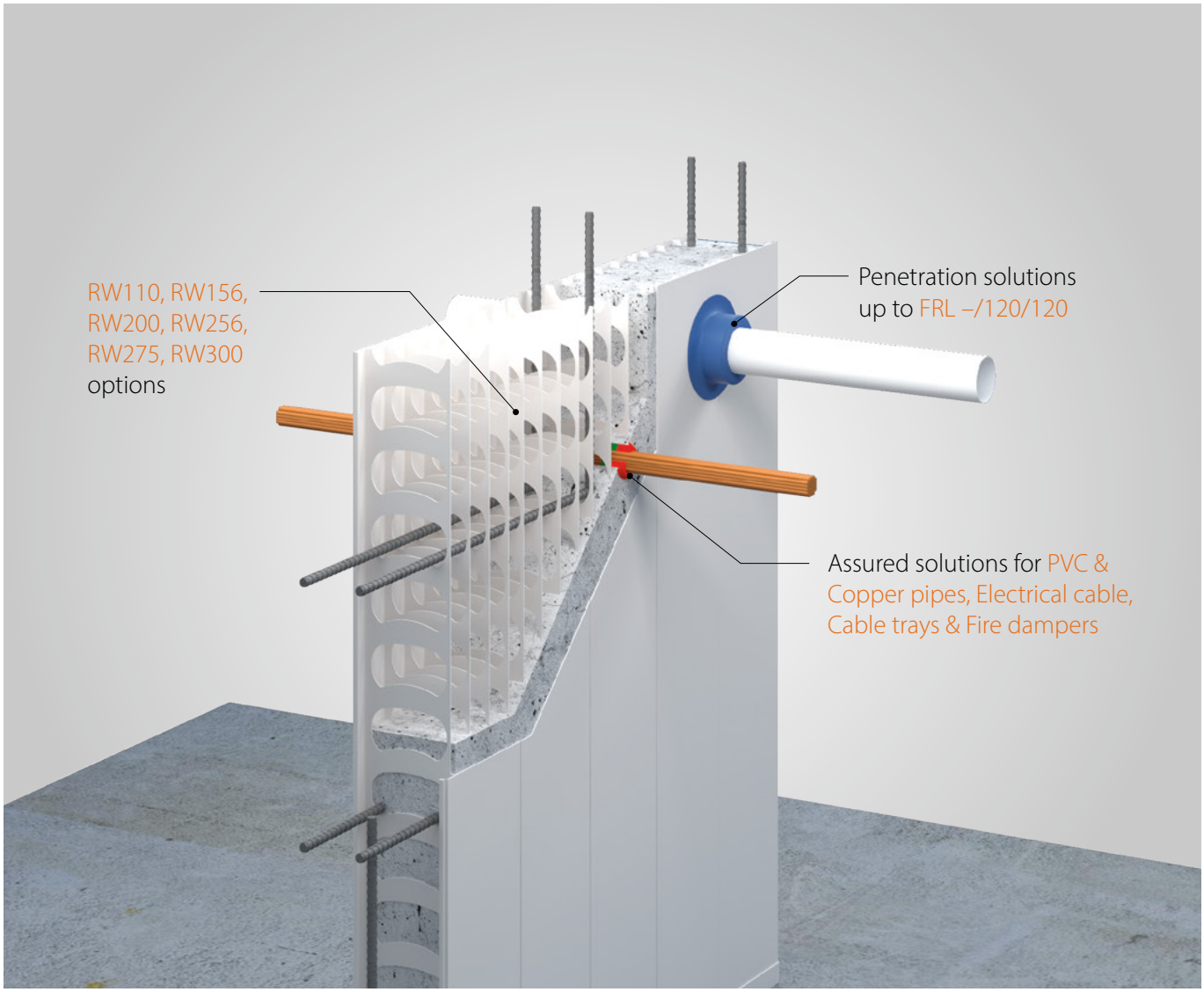


TABLE 1: AS1530.4 –Rediwall® Service Penetration FRL Rating and Protection Measures

Service Penetration Type	RW110C	RW156C, RW200C, RW256S RW275S, RW300S
Cable Trays or Bundled Cables	FRL –/120/120 **Promat Supawrap** **PLUS** **Promat Promaseal A Sealant** **OR** **ANY** sealant tested or assessed for FRL –/120/120 when protecting AS1530.4 appendix D1 Group A cable configurations in concrete walls **105mm** thick or less.	FRL –/120/120 **Promat Supawrap** **PLUS** **Promat Promaseal A Sealant** **OR** **ANY** sealant tested assessed for FRL –/120/120 when protecting AS1530.4 appendix D1 Group A cable configurations in concrete walls **150mm** thick or less.
Cables or PVC pipes	FRL –/120/120 **Promat Promaseal FC100 Fire Collar** **OR** **ANY** fire collar tested or assessed for FRL –/120/120 protecting plastic pipes in concrete walls **105mm** thick or less	FRL –/120/120 **Promat Promaseal FC100 Fire Collar** **OR** **ANY** fire collar tested or assessed for FRL –/120/120 protecting plastic pipes in concrete walls **150mm** thick or less
Copper Pipes or Metal Pipes	FRL –/120/120 **Promat Supawrap & metal pipe clamps** **PLUS** **Promat Promaseal A Sealant** (with sealant depth to 20mm in wall) **OR** **ANY** sealant tested in or assessed for FRL –/120/120 protecting AS1530.4 appendix E metal pipe configurations in concrete **105mm** thick or less, (with increase sealant depth to 20mm into wall)	FRL –/120/120 Promat Supawrap & metal pipe clamps **PLUS** **Promat Promaseal A Sealant** (with sealant depth to 20mm in wall) **OR** **ANY** sealant tested or assessed for FRL –/120/120 protecting AS1530.4 appendix E metal pipe configurations in concrete **150mm** thick or less, (with increase sealant depth to 20mm into wall)
Brickwork Infill	FRL –/120/120 **Clay Bricks + Render infill** in accordance to AS3700 with **CSR Fireseal Sealant** sealed perimeter of infill **OR** use of FRL –/120/120 rated Blocks/Bricks	
Fire Dampers	FRL –/120/– (Integrity) **Bullock Model 4900 Curtain Fire Damper** (6mm FC sheet around damper frame to PVC facing both sides **OR** **ANY** conventional curtain/blade fire damper tested or assessed for –/120/– to AS1530.4 in concrete walls **150mm** thick	
Note: Installation must be in accordance with manufacture's requirements, with variations as detailed in CSIRO assessment report FC3380		

Design and Technical Engineering Services

CSR is committed to providing our customers with the highest level of service at various stages during their design and build process. These include:

Design & Engineering

- CSR DesignLink is a dedicated team of engineers, available to assist customers meet their design and compliance requirements
- Fast take-off and estimation services
- CPD presentations and training

Order & Delivery

- Made-to-order custom length service available, minimising site wastage and improving efficiencies
- Fast turnaround times and product availability - order by 2pm and product will arrive within 5 working days
- Onsite waste recycling

Onsite Support

- Installer/contractor training
- Onsite support
- Inspection post-installation with thermal imaging camera technology

afs

afsformwork.com.au | 1300 727 237

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10 Airds Rd, Minto NSW 2566

AUSTRALIAN MADE

CODEMARK Australia 30107 30062

BEST PRACTICE PVC
In accordance with the GBCA PVC guideline
GECA CLAIM AUTHENTICATED

BMS1842 0724

CSR