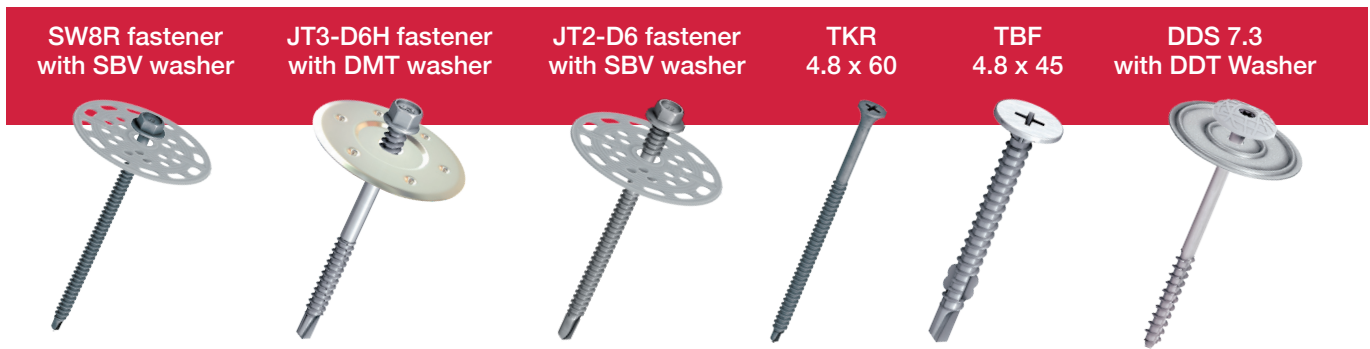




Fastener Application Guide

Best practice fastener / washer combinations for KEMWELL FIRE specialist passive fire protection building products and systems.



Perimeter and Centre Fixing Definition



Perimeter Fixing

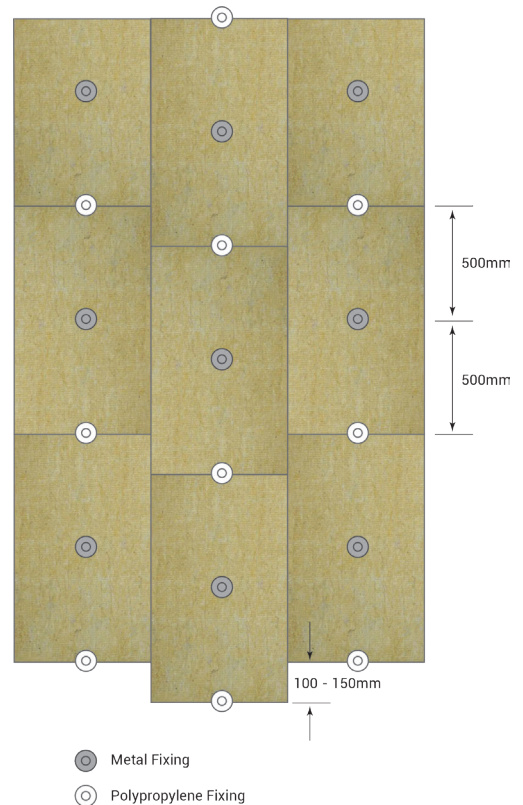
Refers to the perimeter fixing of the main WeatherKem board. When perimeter fixing use the recommended combination of EJOT plastic washer with the correct fastener shown in the following tables.



Centre Fixing

Refers to the centre fixing of the WeatherKem board, for fire protection purposes.

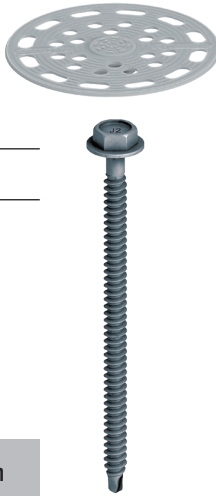

For centre fixing use the recommended combination of EJOT stainless steel washer with the correct stainless steel fastener shown in the following tables.



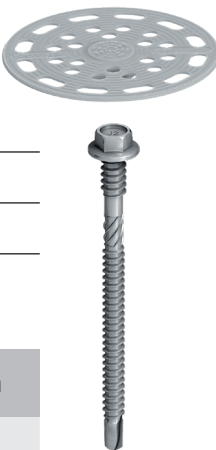

The diagram shows a typical fixing pattern with 3 fixings per m². The fixing pattern depends on location, building height, orientation etc and the fixing requirements for specific applications must be determined by a suitably qualified and experienced person. Where additional wind loads are transferred to the insulation, or where prolonged exposure is expected, then additional fixings may be required.

Kemwell recommend WeatherKem calcium silicate fibre cement board as the sheathing board behind our insulation. In these cases the fasteners can be applied into the board and into the steel framing behind. In cases where WeatherKem is not the sheathing board, it may be necessary for all fasteners to go directly into the steel framing stud members. In these cases, please consult with the board manufacturer for fixing instructions.

Fixing specifications - Insulation via WeatherKem board: Back to Steel Stud 1.2mm - 1.5mm

Perimeter Fix		Hex Head 8mm AF	Centre Fix		Hex Head 8mm AF																
Fastener / Plastic Washer fixing combination Carbon steel fastener with organic corrosion resistant finish <hr/> Fastener: SW8-R 4.8mm x Length <hr/> Washer: SBV-6.5/90			Fastener / Washer Stainless Steel fixing combination A2 Austenitic Stainless Steel fastener with Carbon steel drill point <hr/> Fastener: JT3-D6-H 5.5/6.3 x Length <hr/> Washer: DMT 85-7 (E) <hr/> (E) = Stainless Steel <hr/> Note: This centre fix combination is suitable for steel stud 1.2mm - 6.0mm as shown in the table below.																		
<table border="1"> <thead> <tr> <th>Insulation Thickness</th> <th>Fastener Length</th> </tr> </thead> <tbody> <tr> <td>80mm</td> <td>110mm</td> </tr> <tr> <td>100mm</td> <td>130mm</td> </tr> <tr> <td>120mm</td> <td>150mm</td> </tr> <tr> <td>150mm</td> <td>180mm</td> </tr> </tbody> </table>	Insulation Thickness		Fastener Length	80mm		110mm	100mm	130mm	120mm	150mm	150mm	180mm	<table border="1"> <thead> <tr> <th>Insulation Thickness</th> <th>Fastener Length</th> </tr> </thead> <tbody> <tr> <td>80mm</td> <td>127mm</td> </tr> <tr> <td>100mm</td> <td>147mm</td> </tr> <tr> <td>120mm</td> <td>167mm</td> </tr> <tr> <td>150mm</td> <td>197mm</td> </tr> </tbody> </table>	Insulation Thickness	Fastener Length	80mm	127mm	100mm	147mm	120mm	167mm
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Fixing specifications - Insulation via WeatherKem board: Back to Steel Stud 1.6mm - 6.0mm

Perimeter Fix		Hex Head 8mm AF	Centre Fix		Hex Head 8mm AF																
Fastener / Plastic Washer fixing combination Carbon steel fastener with organic corrosion resistant finish <hr/> Fastener: JT2-D6 5.5/6.3mm x Length <hr/> Washer: SBV-6.5/90			Fastener / Washer Stainless Steel fixing combination A2 Austenitic Stainless Steel fastener with Carbon steel drill point <hr/> Fastener: JT3-D6-H 5.5/6.3 x Length <hr/> Washer: DMT 85-7 (E) <hr/> (E) = Stainless Steel																		
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Fixing specifications - WeatherKem board: Back to Timber



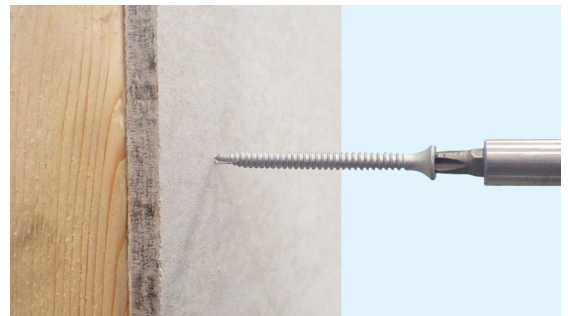
One Fastener fixed length TKR 4.8 x 60

Case-hardened carbon steel with Climadur organic coating

Fastener: TKR 4.8 x 60

Meets minimum embedment into timber <40mm

P2 Drive 



Fixing specifications - WeatherKem board: Back to Steel Frame System (SFS)



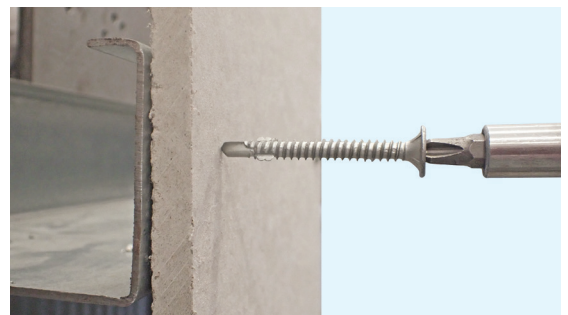
One Fastener fixed length TBF 4.8 x 45

Carbon steel wing tipped self-drilling fastener

Fastener: TBF 4.8 x 45

Drilling capacity: 0.7mm - 3.0mm

P2 Drive 



Fixing specifications - Insulation: Back to Concrete



Fastener / Washer Stainless Steel fixing combination

Zinc plated, hardened carbon steel anchor with integral 25mm plastic washer face

Fastener: DDS 7.3

Washer: DDT 70

T30 Drive 



(KSL) Plain White or Black Tissue foil face	EJOT DDS + DDT 70 washer	(KSL +) Plain with calcium silicate 6mm board	EJOT DDS + DDT 70 washer
130	DDS 7.3 x 150 (25mm EMB)	136	DDS 7.3 x 175 (39mm EMB)
160	DDS 7.3 x 175 (25mm EMB)	166	DDS 7.3 x 200 (34mm EMB)

EMB = Embedment depth into substrate

NOTE: As there may be significant embedment depths required, a test should be conducted to avoid the fastener thread being compromised on any rebar within the concrete.