InterHome
SEPARATING WALL SYSTEM FOR MULTI-RESIDENTIAL CONSTRUCTION
## DISCLAIMER
Products manufactured and systems designed by Knauf are produced in accordance with the Building Code of Australia and relevant Australian Standards. Information in this document is to be used as a guide only and is subject to project approval as many aspects of construction are not comprehensively covered. It is also the responsibility of the project to determine if Knauf’s products and systems are suitable for the intended application. Knauf Plasterboard will not be held responsible for any claims resulting from the installation of its products or other associated products not in accordance with the recommendations of the manufacturer’s technical literature or relevant Australian Standard.

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## WARRANTY
Knauf products are guaranteed by a 10 Year Warranty. Visit knaufplasterboard.com.au

## VERSION 9
April 2016

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InterHome is a separating wall system, suitable for adjoining residential dwellings as defined by the Building Code of Australia (BCA) as Class 1, Class 2 and Class 10, such as duplexes or townhouses*.

InterHome has been designed to satisfy the fire safety and sound insulation requirements of the BCA for separating walls.

**THE FEATURES OF INTERHOME INCLUDE:**

- Fire Resistance Level (FRL) 60/60/60 and 90/90/90
- Sound insulation performance for separating walls of:
  - $R_w + Ctr$ 50 + Discontinuous Construction
- Sound insulation performance for soil and waste pipes of:
  - $R_w + Ctr$ 25 and $R_w + Ctr$ 40
- Provisions for installation in wet areas.

* Note: For dwellings that are located above or below each other, contact Knauf Technical Services on 1300 724 505
Describing InterHome

There are 4 specific design elements that set InterHome apart from conventional separating wall systems.

1. A CENTRAL FIRE BARRIER SUPPORTED BY ALUMINIUM CLIPS

InterHome differs from a conventional double stud separating wall as it contains a central fire barrier built between timber or steel house frames.

The central fire barrier is:

- Composed of 1 layer of 25mm ShaftLiner or 1 layer of 25mm ShaftLiner plus 1 layer of 16mm FireShield.
- The Shaftliner is encased in InterHome H-Studs spaced at 600mm centres.
- Structurally supported by InterHome aluminium clips to the two stud frames.

The central fire barrier limits the spread of fire from one dwelling to adjoining dwellings. [Refer to Figure 1]

InterHome Aluminium Clips are used to structurally support the central fire barrier and are purposely made from aluminium. They are designed to melt in a fire, so the frame of the dwelling exposed to the fire can detach from the central fire barrier. The dwelling affected by the fire may therefore degrade, and even collapse, without spreading the fire to the adjoining dwelling.

2. LAMINATING METHOD FOR PROTECTING FLOOR JUNCTIONS AND ROOF CAVITIES

The laminating method is an important feature of InterHome fire protection of floor junctions and roof cavities. It prevents complicated conventional construction methods where fire rated plasterboard has to be fixed to timber trusses or secondary wall frames built above ceiling level.
3. INTEGRATED SERVICES AND PENETRATIONS

InterHome is an easier solution when it comes to installing penetrations for electrical and plumbing services. With masonry and conventionally framed separating walls, incorporation of services like electrical cables, power-points and plumbing pipes is always a difficulty. Maintaining the fire protection and sound insulation performance in these cases can be an issue. These conventional systems are time consuming to install and are difficult to inspect once completed.

InterHome uses the central fire barrier to maintain fire protection and sound insulation performance. Services may run through the wall cavity [Figure 2] and penetrations [Figure 3] may be made in the outer layers of plasterboard without the need for fire baffles in the cavity. There is no requirement for fire rated power-point boxes and fire collars around PVC pipes.*

In addition, installation of back-to-back services has been verified in the fire and acoustic testing conducted on InterHome, without degrading performance.

* Services must not be installed through or be in contact with the central fire barrier except in the roof cavity [Refer to Installation – Services and Penetrations]

4. NON-FIRE RATED INSTALLATION OF OUTER WALL LININGS

The outer layers of all InterHome systems are installed using non-fire rated installation techniques. The outer plasterboard lining also adds to the acoustic performance of the system to meet the BCA’s requirements for sound insulation between separated dwellings.

FIGURE 2 Services Installed in the Wall Cavity

FIGURE 3 Services With the Outer Layer of Plasterboard Installed
Choosing InterHome

InterHome has been designed as a superior solution over masonry, conventional double stud framed separating walls and other party wall systems.

**SAVES TIME THROUGH A MODULAR CONSTRUCTION METHOD**

- The central fire barrier is built during the construction of the timber wall frame in 3 or 3.6 metre high modular sections, and can be installed by the carpenter
- There is no requirement for the central fire barrier to be jointed with compounds
- The outer layers of plasterboard are installed to non-fire rated installation methods
- The co-ordination between trades is smoother.

**SIMPLE AND SAFE FOR BUILDERS AND CONTRACTORS**

- Hassle-free installation of penetrations and services
- A low risk solution for easier certification.
Inside InterHome

INTERHOME H-STUD

> Designed with an innovative flange that is used to encase 25mm ShaftLiner in the central fire barrier
> 0.55mm BMT Z275 galvanised steel.

INTERHOME ALUMINIUM CLIPS

> Used to support the central fire barrier
> Critical to InterHome system fire performance. Using any other material will detrimentally effect the fire performance of the system
> 1.6mm thick aluminium.

MASTIC

Use fire sealant to maintain fire and acoustic integrity.

INSTANT

EarthWool Batts
Polyester Batts
Mineral Wool
(fire resisting material)

J-TRACK

> Furring Channel Track used in the central fire barrier
> 0.55mm AM150 ZINCALUME® steel (AT 28-30).

FASTENERS

<table>
<thead>
<tr>
<th>Lining</th>
<th>Fastener type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixing outer layers to softwood timber frame</td>
<td></td>
</tr>
<tr>
<td>6mm fibre cement</td>
<td>30mm x 2.8 Galvanised Nail</td>
</tr>
<tr>
<td>10mm Knauf plasterboard</td>
<td>40mm x 2.8 Galvanised Nail or 30mm x 2.8 HDG Ring Shank Nail or 25mm – 6g Screw</td>
</tr>
<tr>
<td>13mm Knauf plasterboard</td>
<td>40mm x 2.8 Galvanised Nail or 30mm x 2.8 HDG Ring Shank Nail or 30mm – 6g Screw</td>
</tr>
</tbody>
</table>

Fixing InterHome Aluminium Clips

| Aluminium Clips to softwood timber frame | 30mm x 2.8 HDG Nail or 25mm – 6g Screw |
| Aluminium Clips to steel H-Stud         | 16mm – 6g Fine Thread, Drill-Point Screw recommended |
| Aluminium Clips to steel H-Stud through laminated FireShield | 30mm – 6g Fine Thread, Drill-Point Screw recommended |

Fixing J-Track together

| Back-to-back J-Track                   | 16mm – 6g Fine Thread, Drill-Point Screw recommended |

Laminating

| Laminating FireShield to central fire barrier | 40mm – 10g Laminating Screw |

Fastener type, lengths and gauges are minimums. Screws must comply with AS3566.1 and AS3566.2.
Performance

STRUCTURAL PERFORMANCE
For safety reasons the InterHome central fire barrier must be adequately propped until the dwelling is enclosed for wind loading purposes. Aluminium clips joining the timber/steel frame to the InterHome H-Stud must be installed at the same time as the central fire barrier for structural stability.

Timber framed InterHome systems must be designed to Australian Standard AS1684 ‘Residential timber-framed construction’ or AS1720 ‘Timber structures’. Timber studs must be 70mm minimum in depth.

Steel framed InterHome systems must be designed to Australian Standard AS4600 ‘Cold-formed steel structures’ or AS3623 ‘Domestic metal framing’. Steel studs must be 70mm minimum in depth.

Any axial load contribution of the plasterboard lining to either the timber or steel framed systems is not permitted.

The load bearing capacity of InterHome is maintained for the designated FRL of the timber or steel frame opposite to fire attack.

The central fire barrier has a maximum height of 12m.

WATER RESISTANCE
There are several InterHome systems available for wet areas (bathroom, toilet or laundry). Consult the latest Technical Manual on the website for installation, waterproofing and finishing of plasterboard in these areas.

FIRE RESISTANCE
InterHome systems meet the Fire Resistance requirements of the BCA as certified by independent fire engineers. The systems have been tested and/or assessed to AS1530.4 ‘Methods for fire tests on building materials, components and structures – Fire resistance test of elements of construction’.

The internal lining and insulation of any InterHome system can be used on one side of a different InterHome system without reducing its FRL.

FIRE HAZARD PROPERTIES
Plasterboard is classed as a non-combustible material according to the BCA Section C1.12.

The fire hazard properties have been evaluated under the requirements of AS/NZS 3837:1988 ‘Method of test for heat and smoke release rates for materials and products using an oxygen consumption calorimeter’.

Group 1 Materials are those that do not reach flashover when exposed to 100kW for 600 seconds followed by exposure to 300kW for 600 seconds.

FireShield, WaterShield, SoundShield, MastaShield, TruRock and fibre cement are all classed as Group 1 Materials.

Sarking-type materials used in the roof must not have a Flammability Index greater than 5.
ACOUSTIC PERFORMANCE

Acoustic performance has been determined by either laboratory testing at the CSIRO in Highett, Melbourne, or tested/calculated by Day Design Pty Ltd Acoustical Engineers. Calculated acoustic numbers stated in Knauf systems are based on laboratory performance.

In most cases, site acoustic performance of installed systems is lower than those measured in the laboratory, due to the transmission of sound via flanking paths. Knauf cannot guarantee on-site acoustic performance and recommends consulting acoustical engineers.

When the internal lining and insulation of one InterHome system is used on one side of a different InterHome system the acoustic rating is the lower of the two, provided that the central fire barrier and stud cavity sizes are the same.

WEATHER PROTECTION

During construction, InterHome may be exposed to the weather. Protect plasterboard in the central fire barrier from water and excessive moisture until the dwelling is enclosed. This is to prevent mould growth and degradation of the plasterboard.

A suitable impervious covering like plastic sheeting must be used to protect the central fire barrier in adverse weather conditions. Plastic sheeting can be stapled to the central fire barrier or attached to the dwellings frame.

Pay particular attention to protecting the base of the central fire barrier where water may pool between timber bottom plates or steel tracks. The plastic sheeting must deflect any water from pooling at the base.

Only install internal linings after the dwelling is completely enclosed and weather protected.

To minimise sound flanking paths, seal the perimeter with fire sealant to maintain acoustic integrity. Services in the wall cavities must not come into contact with the central fire barrier.

Other site conditions like sound transmitting through ceilings, floors, windows and other walls may also be detrimental to the final acoustic rating.

Installing the aluminium clips in zones other than those shown in the Construction Details may breach the impact sound and discontinuous construction sound insulation requirements of the BCA.

If the plasterboard in the central fire barrier is likely to be wet before covering, then a spray applied application of a non-flammable waterproof/repellent sealer can be used. The plasterboard must be completely dry before enclosing the wall cavity.

For exposure to wind loading conditions. [Refer to Structural Performance]
**Timber Systems**

**KIH1**

**WALL LINING:** [Both sides] 1 layer of 10mm OPAL or SoundShield

**FRAME:**
Double timber studs at maximum 600mm centres
Minimum 20mm air gap to central fire barrier

**INSULATION:**
Insulation required in both cavities

**CENTRAL FIRE BARRIER:**
1 layer of 25mm ShaftLiner encased in InterHome H-Stud at 600mm max centres
[16mm FireShield laminated to one side of central fire barrier at sub-floor area, floor junctions and roof cavity]

<table>
<thead>
<tr>
<th>FRL 60/60/60 rated from both sides</th>
<th>Stud Size (mm)</th>
<th>Cavity Size (mm)</th>
<th>Wall Width (mm)</th>
<th>Acoustics Rw (Rw + Ctr)</th>
<th>Acoustic Report Day Design FAR 3131</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>70</td>
<td>90</td>
<td>225</td>
<td>2 x R2.0 EarthWool</td>
<td>61 (47)*</td>
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<td></td>
<td>70* or 90</td>
<td>110</td>
<td>265</td>
<td>2 x R1.5 Polyester</td>
<td>58 (47)*</td>
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</tbody>
</table>

**KIH2**

**WALL LINING:** [Both sides] 1 layer of 13mm SoundShield

**FRAME:**
Double timber studs at maximum 600mm centres
Minimum 20mm air gap to central fire barrier

**INSULATION:**
Insulation required in both cavities

**CENTRAL FIRE BARRIER:**
1 layer of 25mm ShaftLiner encased in InterHome H-Stud at 600mm max centres
[16mm FireShield laminated to one side of central fire barrier at sub-floor area, floor junctions and roof cavity]

<table>
<thead>
<tr>
<th>FRL 60/60/60 rated from both sides</th>
<th>Stud Size (mm)</th>
<th>Cavity Size (mm)</th>
<th>Wall Width (mm)</th>
<th>Acoustics Rw (Rw + Ctr)</th>
<th>Acoustic Report Day Design FAR 3131</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>70</td>
<td>90</td>
<td>231</td>
<td>2 x R2.0 EarthWool</td>
<td>67 (52)</td>
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<tr>
<td></td>
<td>70* or 90</td>
<td>110</td>
<td>271</td>
<td>2 x R1.5 Polyester</td>
<td>63 (52)</td>
</tr>
</tbody>
</table>

**KIH4**

**WALL LINING:** [Both sides] 1 layer of 13mm WaterShield

**FRAME:**
Double timber studs at maximum 600mm centres with
Minimum 20mm air gap to central fire barrier

**INSULATION:**
Insulation required in both cavities

**CENTRAL FIRE BARRIER:**
1 layer of 25mm ShaftLiner encased in InterHome H-Stud at 600mm max centres
[16mm FireShield laminated to one side of central fire barrier at sub-floor area, floor junctions and roof cavity]

<table>
<thead>
<tr>
<th>FRL 60/60/60 rated from both sides</th>
<th>Stud Size (mm)</th>
<th>Cavity Size (mm)</th>
<th>Wall Width (mm)</th>
<th>Acoustics Rw (Rw + Ctr)</th>
<th>Acoustic Report Day Design FAR 3131</th>
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<tr>
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<td>90</td>
<td>231</td>
<td>2 x R2.0 EarthWool</td>
<td>64 (49)*</td>
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<tr>
<td></td>
<td>70* or 90</td>
<td>110</td>
<td>271</td>
<td>2 x R2.0 Insulco Polyacoustic Polyester</td>
<td>64 (50)</td>
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</table>

* Leave minimum 40mm air gap between timber frames and central fire barrier

Does not meet BCA acoustic requirements in NSW, VIC, QLD, TAS, WA, SA and ACT
**KIH5**

**WALL LINING:** [Both sides] 1 layer of 6mm Fibre Cement  
**FRAME:** Double timber studs at maximum 600mm centres  
Minimum 20mm air gap to central fire barrier  
**INSULATION:** EarthWool insulation required in both cavities  
**CENTRAL FIRE BARRIER:** 1 layer of 25mm ShaftLiner encased in InterHome H-Stud at 600mm max centres  
[16mm FireShield laminated to one side of central fire barrier at sub-floor area, floor junctions and roof cavity]  
[Polyester insulation is not permitted when using 6mm Fibre Cement as the wall lining]

<table>
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<tr>
<th>FRL 60/60/60 rated from both sides</th>
<th>Stud Size (mm)</th>
<th>Cavity Size (mm)</th>
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<th>Acoustics Rw (Rw + Ctr)</th>
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<td>217</td>
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<tr>
<td></td>
<td>70* or 90</td>
<td>110</td>
<td>257</td>
<td>65 (50)</td>
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**KIH6**

**WALL LINING:** [Both sides] 1 layer of 13mm FireShield or TruRock  
**FRAME:** Double timber studs at maximum 600mm centres  
Minimum 20mm air gap to central fire barrier  
**INSULATION:** Insulation required in both cavities  
**CENTRAL FIRE BARRIER:** 1 layer of 25mm ShaftLiner encased in InterHome H-Stud at 600mm max centres  
[16mm FireShield laminated to one side of central fire barrier at sub-floor area, floor junctions and roof cavity]

<table>
<thead>
<tr>
<th>FRL 60/60/60 rated from both sides</th>
<th>Stud Size (mm)</th>
<th>Cavity Size (mm)</th>
<th>Wall Width (mm)</th>
<th>Acoustics Rw (Rw + Ctr)</th>
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<tbody>
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<td>110</td>
<td>271</td>
<td>64 (50) 66 (51) 66 (51) 63 (50) 65 (52)</td>
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</tbody>
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**KIH8**

**WALL LINING:** [Both sides] 2 layers of 10mm MastaShield or WaterShield  
**FRAME:** Double timber studs at maximum 600mm centres  
Minimum 20mm air gap to central fire barrier  
**INSULATION:** Insulation required in both cavities  
**CENTRAL FIRE BARRIER:** 1 layer of 25mm ShaftLiner encased in InterHome H-Stud at 600mm max centres  
[16mm FireShield laminated to one side of central fire barrier at sub-floor area, floor junctions and roof cavity]

<table>
<thead>
<tr>
<th>FRL 60/60/60 rated from both sides</th>
<th>Stud Size (mm)</th>
<th>Cavity Size (mm)</th>
<th>Wall Width (mm)</th>
<th>Acoustics Rw (Rw + Ctr)</th>
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<td>110</td>
<td>285</td>
<td>68 (53) 69 (54) 63 (50) 65 (51)</td>
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</table>

* Leave minimum 40mm air gap between timber frames and central fire barrier  
* Does not meet BCA acoustic requirements in NSW, VIC, QLD, TAS, WA, SA and ACT
KIH16

WALL LINING:  
[Side 1] 1 layer of 10mm MastaShield or WaterShield  
[Side 2] 2 layers of 10mm MastaShield or WaterShield

FRAME:  
Double timber studs at maximum 600mm centres  
Minimum 20mm air gap to central fire barrier

INSULATION:  
EarthWool insulation required in both cavities

CENTRAL FIRE BARRIER:  
1 layer of 25mm ShaftLiner encased in InterHome H-Stud at 600mm max centres  
[16mm FireShield laminated to one side of central fire barrier at sub-floor area, floor junctions and roof cavity]

<table>
<thead>
<tr>
<th>FRL 60/60/60</th>
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KIH17

WALL LINING:  
[Side 1] 1 layer of 13mm MastaShield  
[Side 2] 2 layers of 13mm MastaShield

FRAME:  
Double timber studs at maximum 600mm centres  
Minimum 20mm air gap to central fire barrier

INSULATION:  
Insulation required in both cavities

CENTRAL FIRE BARRIER:  
1 layer of 25mm ShaftLiner encased in InterHome H-Stud at 600mm max centres  
[16mm FireShield laminated to one side of central fire barrier at sub-floor area, floor junctions and roof cavity]

<table>
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<td>284</td>
<td>66 (53)</td>
</tr>
</tbody>
</table>

KIH18

WALL LINING:  
[Side 1] 1 layer of 10mm OPAL or SoundShield  
[Side 2] 2 layers of 10mm MastaShield

FRAME:  
Double timber studs at maximum 600mm centres  
Minimum 20mm air gap to central fire barrier

INSULATION:  
Insulation required in both cavities

CENTRAL FIRE BARRIER:  
1 layer of 25mm ShaftLiner encased in InterHome H-Stud at 600mm max centres  
[16mm FireShield laminated to one side of central fire barrier at sub-floor area, floor junctions and roof cavity]

<table>
<thead>
<tr>
<th>FRL 60/60/60</th>
<th>Stud Size (mm)</th>
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<td>70* or 90</td>
<td>110</td>
<td>275</td>
<td>66 (51)</td>
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</tbody>
</table>
**KIH20**

**WALL LINING:** [Both sides] 1 layer of 10mm MastaShield or WaterShield

**FRAME:** Double timber studs at maximum 600mm centres
Minimum 20mm air gap to central fire barrier

**INSULATION:** Insulation required in both cavities

**CENTRAL FIRE BARRIER:** 1 layer of 25mm ShaftLiner encased in InterHome H-Stud at 600mm max centres
plus 1 layer of 16mm FireShield laminated to 25mm ShaftLiner

[16mm FireShield also laminated to central fire barrier at sub-floor area, floor junctions and roof cavity]

[10mm MastaShield can be substituted with 10mm WaterShield or 10mm SoundShield]

<table>
<thead>
<tr>
<th>FRL 90/90/90</th>
<th>Stud Size (mm)</th>
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<th>Acoustics Rw (Rw + Ctr)</th>
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<td>63 (49)*</td>
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</tbody>
</table>

**KIH21**

**WALL LINING:** [Both sides] 2 layers of 10mm MastaShield

**FRAME:** Double timber studs at maximum 600mm centres
Minimum 20mm air gap to central fire barrier

**INSULATION:** Insulation required in one cavity only

**CENTRAL FIRE BARRIER:** 1 layer of 25mm ShaftLiner encased in InterHome H-Stud at 600mm max centres
plus 1 layer of 16mm FireShield laminated to 25mm ShaftLiner.

[16mm FireShield also laminated to central fire barrier at sub-floor area, floor junctions and roof cavity]

[10mm MastaShield can be substituted with 10mm WaterShield or 10mm SoundShield]

<table>
<thead>
<tr>
<th>FRL 90/90/90</th>
<th>Stud Size (mm)</th>
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<th>Stud Size (mm)</th>
<th>Cavity Size (mm)</th>
<th>Wall Width (mm)</th>
<th>Acoustics Rw (Rw + Ctr)</th>
<th>Acoustic Report Day Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>rated from both sides Fire Report FAR 3131</td>
<td></td>
<td></td>
<td></td>
<td>1 x R1.5 EarthWool</td>
<td></td>
<td>70</td>
<td>90</td>
<td>261</td>
<td>66 (52)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>70</td>
<td>90</td>
<td>261</td>
<td>63 (50)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>70* or 90</td>
<td>110</td>
<td>301</td>
<td>67 (52)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>70* or 90</td>
<td>110</td>
<td>301</td>
<td>64 (51)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**KIH22**

**WALL LINING:** [Both sides] 1 layer of 10mm OPAL or SoundShield

**FRAME:** Double timber studs at maximum 600mm centres
Minimum 20mm air gap to central fire barrier

**INSULATION:** Insulation required in both cavities

**CENTRAL FIRE BARRIER:** 1 layer of 25mm ShaftLiner encased in InterHome H-Stud at 600mm max centres
plus 1 layer of 16mm FireShield laminated to 25mm ShaftLiner.

[16mm FireShield also laminated to central fire barrier at sub-floor area, floor junctions and roof cavity]

* Leave minimum 40mm air gap between timber frames and central fire barrier
^ Does not meet BCA acoustic requirements in NSW, VIC, QLD, TAS, WA, SA and ACT

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### KIH23

**WALL LINING:** [Both sides] 1 layer of 13mm **SoundShield**  
**FRAME:** Double timber studs at maximum 600mm centres  
Minimum 20mm air gap to central fire barrier  
**INSULATION:** Insulation required in both cavities  
**CENTRAL FIRE BARRIER:** 1 layer of 25mm **ShaftLiner** encased in InterHome H-Stud at 600mm max centres  
plus 1 layer of 16mm **FireShield** laminated to 25mm **ShaftLiner**.  
[16mm **FireShield** also laminated to central fire barrier at sub-floor area, floor junctions and roof cavity]

<table>
<thead>
<tr>
<th>FRL</th>
<th>Stud Size (mm)</th>
<th>Cavity Size (mm)</th>
<th>Wall Width (mm)</th>
<th>Acoustics Rw (Rw + Ctr)</th>
<th>Acoustic Report Day Design</th>
<th>Note: Impact Sound Resistant – Discontinuous Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>90/90/90</td>
<td>70</td>
<td>90</td>
<td>247</td>
<td>2 x R1.5 EarthWool</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>70* or 90</td>
<td>110</td>
<td>287</td>
<td>2 x R1.5 Polyester</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### KIH24

**WALL LINING:** [Both sides] 1 layer of 6mm **FibreCement**  
**FRAME:** Double timber studs at maximum 600mm centres  
Minimum 20mm air gap to central fire barrier  
**INSULATION:** EarthWool insulation required in both cavities  
**CENTRAL FIRE BARRIER:** 1 layer of 25mm **ShaftLiner** encased in InterHome H-Stud at 600mm max centres  
plus 1 layer of 16mm **FireShield** laminated to 25mm **ShaftLiner**.  
[16mm **FireShield** also laminated to central fire barrier at sub-floor area, floor junctions and roof cavity]

<table>
<thead>
<tr>
<th>FRL</th>
<th>Stud Size (mm)</th>
<th>Cavity Size (mm)</th>
<th>Wall Width (mm)</th>
<th>Acoustics Rw (Rw + Ctr)</th>
<th>Acoustic Report Day Design</th>
<th>Note: Impact Sound Resistant – Discontinuous Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>90/90/90</td>
<td>70</td>
<td>90</td>
<td>233</td>
<td>2 x R1.5 EarthWool</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>70* or 90</td>
<td>110</td>
<td>273</td>
<td>2 x R1.5 Polyester</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Leave minimum 40mm air gap between timber frames and central fire barrier
# Steel Systems

## KIH9

**WALL LINING:** [Both sides] 1 layer of 10mm OPAL or SoundShield

**FRAME:** Double steel studs at maximum 600mm centres
Minimum 20mm air gap to central fire barrier

**INSULATION:** Insulation required in both cavities

**CENTRAL FIRE BARRIER:** 1 layer of 25mm ShaftLiner encased in InterHome H-Stud at 600mm max centres
[16mm FireShield laminated to one side of central fire barrier at sub-floor area, floor junctions and roof cavity]

<table>
<thead>
<tr>
<th>FRL 60/60/60 rated from both sides Fire Report FAR 3131</th>
<th>Stud Size (mm)</th>
<th>Cavity Size (mm)</th>
<th>Wall Width (mm)</th>
<th>Acoustics Rw (Rw + Ctr)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>70</td>
<td>90</td>
<td>225</td>
<td>2 x R2.0 EarthWool</td>
</tr>
<tr>
<td></td>
<td>70* or 90</td>
<td>110</td>
<td>265</td>
<td>2 x R2.5 EarthWool</td>
</tr>
<tr>
<td></td>
<td>2 x R1.5 Polyester</td>
<td>59 (47)*</td>
<td>60 (48)*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2 x R2.0 Polyester</td>
<td>55 (45)*</td>
<td>57 (46)*</td>
<td></td>
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<tr>
<td></td>
<td>Note: Impact Sound Resistant – Discontinuous Construction</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## KIH10

**WALL LINING:** [Both sides] 1 layer of 13mm SoundShield

**FRAME:** Double steel studs at maximum 600mm centres
Minimum 20mm air gap to central fire barrier

**INSULATION:** Insulation required in both cavities

**CENTRAL FIRE BARRIER:** 1 layer of 25mm ShaftLiner encased in InterHome H-Stud at 600mm max centres
[16mm FireShield laminated to one side of central fire barrier at sub-floor area, floor junctions and roof cavity]

<table>
<thead>
<tr>
<th>FRL 60/60/60 rated from both sides Fire Report FAR 3131</th>
<th>Stud Size (mm)</th>
<th>Cavity Size (mm)</th>
<th>Wall Width (mm)</th>
<th>Acoustics Rw (Rw + Ctr)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>70</td>
<td>90</td>
<td>231</td>
<td>2 x R2.0 EarthWool</td>
</tr>
<tr>
<td></td>
<td>70* or 90</td>
<td>110</td>
<td>271</td>
<td>2 x R2.5 EarthWool</td>
</tr>
<tr>
<td></td>
<td>2 x R1.5 Polyester</td>
<td>65 (52)</td>
<td>66 (53)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2 x R2.0 Polyester</td>
<td>60 (50)</td>
<td>62 (51)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Note: Impact Sound Resistant – Discontinuous Construction</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## KIH12

**WALL LINING:** [Both sides] 1 layer of 13mm WaterShield

**FRAME:** Double steel studs at maximum 600mm centres
Minimum 20mm air gap to central fire barrier

**INSULATION:** Insulation required in both cavities

**CENTRAL FIRE BARRIER:** 1 layer of 25mm ShaftLiner encased in InterHome H-Stud at 600mm max centres
[16mm FireShield laminated to one side of central fire barrier at sub-floor area, floor junctions and roof cavity]

<table>
<thead>
<tr>
<th>FRL 60/60/60 rated from both sides Fire Report FAR 3131</th>
<th>Stud Size (mm)</th>
<th>Cavity Size (mm)</th>
<th>Wall Width (mm)</th>
<th>Acoustics Rw (Rw + Ctr)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>70</td>
<td>90</td>
<td>231</td>
<td>2 x R2.0 EarthWool</td>
</tr>
<tr>
<td></td>
<td>70* or 90</td>
<td>110</td>
<td>271</td>
<td>2 x R2.5 EarthWool</td>
</tr>
<tr>
<td></td>
<td>2 x R1.5 Polyester</td>
<td>62 (49)*</td>
<td>63 (50)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2 x R2.0 Polyester</td>
<td>58 (47)*</td>
<td>60 (48)*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Note: Impact Sound Resistant – Discontinuous Construction</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Leave minimum 40mm air gap between timber frames and central fire barrier

* Does not meet BCA acoustic requirements in NSW, VIC, Qld, TAS, WA, SA and ACT

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**KIH13**

**WALL LINING:** [Both sides] 1 layer of 13mm FireShield or TruRock

**FRAME:**
- Double steel studs at maximum 600mm centres
- Minimum 20mm air gap to central fire barrier

**INSULATION:** Insulation required in both cavities

**CENTRAL FIRE BARRIER:** 1 layer of 25mm ShaftLiner encased in InterHome H-Stud at 600mm max centres
- [16mm FireShield laminated to one side of central fire barrier at sub-floor area, floor junctions and roof cavity]

<table>
<thead>
<tr>
<th>FRL 60/60/60 rated from both sides Fire Report FAR 3131</th>
<th>Stud Size (mm)</th>
<th>Cavity Size (mm)</th>
<th>Wall Width (mm)</th>
<th>Acoustics Rw (Rw + Ctr)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>70</td>
<td>90</td>
<td>231</td>
<td>2 x R2.0 EarthWool</td>
</tr>
<tr>
<td></td>
<td>70* or 90</td>
<td>110</td>
<td>271</td>
<td>2 x R2.5 EarthWool</td>
</tr>
</tbody>
</table>

Note:
- Impact Sound Resistant — Discontinuous Construction

**KIH15**

**WALL LINING:** [Both sides] 2 layers of 10mm MastaShield or WaterShield

**FRAME:**
- Double steel studs at maximum 600mm centres
- Minimum 20mm air gap to central fire barrier

**INSULATION:** Insulation required in both cavities

**CENTRAL FIRE BARRIER:** 1 layer of 25mm ShaftLiner encased in InterHome H-Stud at 600mm max centres
- [16mm FireShield laminated to one side of central fire barrier at sub-floor area, floor junctions and roof cavity]
- [10mm MastaShield can be substituted with 10mm WaterShield or 10mm SoundShield]

<table>
<thead>
<tr>
<th>FRL 60/60/60 rated from both sides Fire Report FAR 3131</th>
<th>Stud Size (mm)</th>
<th>Cavity Size (mm)</th>
<th>Wall Width (mm)</th>
<th>Acoustics Rw (Rw + Ctr)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>70</td>
<td>90</td>
<td>245</td>
<td>2 x R2.0 EarthWool</td>
</tr>
<tr>
<td></td>
<td>70* or 90</td>
<td>110</td>
<td>285</td>
<td>2 x R2.5 EarthWool</td>
</tr>
</tbody>
</table>

Note:
- Impact Sound Resistant — Discontinuous Construction

* Leave minimum 40mm air gap between timber frames and central fire barrier

* Does not meet BCA acoustic requirements in NSW, VIC, QLD, TAS, WA, SA and ACT
**KIH36**

**WALL LINING:**
- [Side 1] 1 layer of 13mm MastaShield
- [Side 2] 2 layers of 13mm MastaShield

**FRAME:**
Double steel studs at maximum 600mm centres
Minimum 20mm air gap to central fire barrier

**INSULATION:**
Insulation required in both cavities

**CENTRAL FIRE BARRIER:**
1 layer of 25mm ShaftLiner encased in InterHome H-Stud at 600mm max centres
[16mm FireShield laminated to one side of central fire barrier at sub-floor area, floor junctions and roof cavity]

<table>
<thead>
<tr>
<th>Stud Size (mm)</th>
<th>Cavity Size (mm)</th>
<th>Wall Width (mm)</th>
<th>Acoustics Rw (Rw + Ctr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>70</td>
<td>90</td>
<td>244</td>
<td>64 (50) 64 (51)</td>
</tr>
<tr>
<td>70* or 90</td>
<td>110</td>
<td>284</td>
<td>64 (50) 65 (51)</td>
</tr>
</tbody>
</table>

**FRL 60/60/60**
rated from both sides
Fire Report FAR 3131

**KIH30**

**WALL LINING:**
[Both sides] 1 layer of 10mm MastaShield or WaterShield

**FRAME:**
Double steel studs at maximum 600mm centres
Minimum 20mm air gap to central fire barrier

**INSULATION:**
Insulation required in both cavities

**CENTRAL FIRE BARRIER:**
1 layer of 25mm ShaftLiner encased in InterHome H-Stud at 600mm max centres
plus 1 layer of 16mm FireShield laminated to 25mm ShaftLiner
[16mm FireShield also laminated to central fire barrier at sub-floor area, floor junctions and roof cavity]

<table>
<thead>
<tr>
<th>Stud Size (mm)</th>
<th>Cavity Size (mm)</th>
<th>Wall Width (mm)</th>
<th>Acoustics Rw (Rw + Ctr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>70</td>
<td>90</td>
<td>241</td>
<td>63 (49) 60 (47)*</td>
</tr>
<tr>
<td>70 or 90</td>
<td>110</td>
<td>281</td>
<td>64 (50) 61 (49)*</td>
</tr>
</tbody>
</table>

**FRL 90/90/90**
rated from both sides
Fire Report FAR 3131

**KIH31**

**WALL LINING:**
[Both sides] 2 layers of 10mm MastaShield or WaterShield

**FRAME:**
Double steel studs at maximum 600mm centres
Minimum 20mm air gap to central fire barrier

**INSULATION:**
Insulation required in one cavity only

**CENTRAL FIRE BARRIER:**
1 layer of 25mm ShaftLiner encased in InterHome H-Stud at 600mm max centres
plus 1 layer of 16mm FireShield laminated to 25mm ShaftLiner
[16mm FireShield also laminated to central fire barrier at sub-floor area, floor junctions and roof cavity]

<table>
<thead>
<tr>
<th>Stud Size (mm)</th>
<th>Cavity Size (mm)</th>
<th>Wall Width (mm)</th>
<th>Acoustics Rw (Rw + Ctr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>70</td>
<td>90</td>
<td>261</td>
<td>64 (52) 61 (50)</td>
</tr>
<tr>
<td>70 or 90</td>
<td>110</td>
<td>301</td>
<td>65 (52) 62 (51)</td>
</tr>
</tbody>
</table>

* Leave minimum 40mm air gap between timber frames and central fire barrier
^ Does not meet BCA acoustic requirements in NSW, VIC, QLD, TAS, WA, SA and ACT
### KIH32

**WALL LINING:** [Both sides] 1 layer of 10mm OPAL or SoundShield

**FRAME:**
- Double steel studs at maximum 600mm centres
- Minimum 20mm air gap to central fire barrier

**INSULATION:**
- Insulation required in both cavities

**CENTRAL FIRE BARRIER:**
- 1 layer of 25mm ShaftLiner encased in InterHome H-Stud at 600mm max centres
- plus 1 layer of 16mm FireShield laminated to 25mm ShaftLiner.

[16mm FireShield also laminated to central fire barrier at sub-floor area, floor junctions and roof cavity]

<table>
<thead>
<tr>
<th>FRL 90/90/90 rated from both sides Fire Report FAR 3131</th>
<th>Stud Size (mm)</th>
<th>Cavity Size (mm)</th>
<th>Wall Width (mm)</th>
<th>Acoustics Rw (Rw + Ctr)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>70</td>
<td>90</td>
<td>241</td>
<td>67 (55) 64 (53)</td>
</tr>
<tr>
<td></td>
<td>70 or 90</td>
<td>110</td>
<td>281</td>
<td>68 (55) 65 (53)</td>
</tr>
</tbody>
</table>

### KIH33

**WALL LINING:** [Both sides] 1 layer of 13mm SoundShield

**FRAME:**
- Double steel studs at maximum 600mm centres
- Minimum 20mm air gap to central fire barrier

**INSULATION:**
- Insulation required in both cavities

**CENTRAL FIRE BARRIER:**
- 1 layer of 25mm ShaftLiner encased in InterHome H-Stud at 600mm max centres
- plus 1 layer of 16mm FireShield laminated to 25mm ShaftLiner.

[16mm FireShield also laminated to central fire barrier at sub-floor area, floor junctions and roof cavity]

<table>
<thead>
<tr>
<th>FRL 90/90/90 rated from both sides Fire Report FAR 3131</th>
<th>Stud Size (mm)</th>
<th>Cavity Size (mm)</th>
<th>Wall Width (mm)</th>
<th>Acoustics Rw (Rw + Ctr)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>70</td>
<td>90</td>
<td>247</td>
<td>70 (55) 68 (55)</td>
</tr>
<tr>
<td></td>
<td>70* or 90</td>
<td>110</td>
<td>287</td>
<td>70 (55) 69 (55)</td>
</tr>
</tbody>
</table>

### KIH34

**WALL LINING:** [Both sides] 1 layer of 6mm FibreCement

**FRAME:**
- Double steel studs at maximum 600mm centres
- Minimum 20mm air gap to central fire barrier

**INSULATION:**
- EarthWool insulation required in both cavities

**CENTRAL FIRE BARRIER:**
- 1 layer of 25mm ShaftLiner encased in InterHome H-Stud at 600mm max centres
- plus 1 layer of 16mm FireShield laminated to 25mm ShaftLiner.

[16mm FireShield also laminated to central fire barrier at sub-floor area, floor junctions and roof cavity]

<table>
<thead>
<tr>
<th>FRL 90/90/90 rated from both sides Fire Report FAR 3131</th>
<th>Stud Size (mm)</th>
<th>Cavity Size (mm)</th>
<th>Wall Width (mm)</th>
<th>Acoustics Rw (Rw + Ctr)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>70</td>
<td>90</td>
<td>233</td>
<td>68 (55)</td>
</tr>
<tr>
<td></td>
<td>70* or 90</td>
<td>110</td>
<td>273</td>
<td>69 (55)</td>
</tr>
</tbody>
</table>

* Leave minimum 40mm air gap between steel frames and central fire barrier
Ceiling Attenuation Class

**KCAC130**

**CEILING:** 10mm minimum plasterboard

**ABOVE CEILING:** Minimum EarthWool R1.5

(This system is suitable for timber roof framing or steel roof framing)

(Acoustic numbers based on minimum 300mm cavity)

(Wall to ceiling junction must be square set or finished with cornice to achieve acoustic rating)

(Non-acoustic penetrations in ceiling lining may degrade acoustic performance)

<table>
<thead>
<tr>
<th>Plasterboard ceiling lining</th>
<th>Acoustics – airborne Rw (Rw + Ctr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 layer of 10mm MastaShield or SpanShield</td>
<td>60 (50)</td>
</tr>
</tbody>
</table>
**KCAC131**

**CEILING:** 10mm minimum plasterboard  
**ABOVE CEILING:** Without insulation or with minimum EarthWool R1.5 over the ceiling 1200mm from ShaftLiner  
[This system is suitable for timber framing or steel framing]  
[Acoustic numbers based on minimum 200mm cavity]  
[Wall to ceiling junction must be square set or finished with cornice to achieve acoustic rating]  
[Non-acoustic penetrations in ceiling lining may degrade acoustic performance]

| Plasterboard ceiling lining | Acoustics – airborne  
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rw (Rw + Ctr)</td>
<td>No Insulation</td>
<td>Minimum EarthWool R1.5 over the ceiling 1200mm from ShaftLiner</td>
<td>Acoustic Report Day Design 4738-16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 layer of 10mm MastaShield or SpanShield</td>
<td>54 (46)</td>
<td>60 (50)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**KCAC132**

**CEILING:** 10mm minimum plasterboard  
**ABOVE CEILING:** Without insulation or with minimum EarthWool R1.5 over the ceiling in adjacent cavities.  
[This system is suitable for timber framing or steel framing]  
[Acoustic numbers based on minimum 200mm cavity]  
[Wall to ceiling junction must be square set or finished with cornice to achieve acoustic rating]  
[Non-acoustic penetrations in ceiling lining may degrade acoustic performance]

| Plasterboard ceiling lining | Acoustics – airborne  
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rw (Rw + Ctr)</td>
<td>No Insulation</td>
<td>Minimum EarthWool R1.5 over the ceiling in adjacent cavities</td>
<td>Acoustic Report Day Design 4738-16</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>1 layer of 10mm MastaShield or SpanShield</td>
<td>60 (50)</td>
<td>64 (54)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>
# Installation

## GENERAL REQUIREMENTS

<table>
<thead>
<tr>
<th>Use a central fire barrier of InterHome H-Studs and either:</th>
</tr>
</thead>
<tbody>
<tr>
<td>➤ 1 layer of 25mm ShaftLiner for FRL 60/60/60 [Figure 7]</td>
</tr>
<tr>
<td>➤ 1 layer of 25mm ShaftLiner plus 1 layer of 16mm FireShield for FRL 90/90/90 [Figure 8]</td>
</tr>
</tbody>
</table>

- Use only InterHome Aluminium Clips to connect the H-Studs to the double stud frames. Aluminium will melt in a fire so the frame of the dwelling on fire side can detach from the central fire barrier. 

- Prevent contact between services in the wall cavities and the central fire barrier.

- Leave a gap between the central fire barrier and both frames of at least 20mm.

- Pack any gaps between the top of the central fire barrier and the underside of the roof covering with mineral fibre or other suitable fire resisting material. This maintains the fire rating of the system. [Refer to mineral fibre manufactures specifications for minimum widths required]

---

**FIGURE 7 Central Fire Barrier Using 25mm ShaftLiner FRL 60/60/60**

**FIGURE 8 Central Fire Barrier Using 25mm ShaftLiner plus 16mm FireShield FRL 90/90/90**

---

FRAMING

<table>
<thead>
<tr>
<th>Installation</th>
<th>Fire Rated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Position the J-Track on the slab or footing 20mm min from the existing frame of the dwelling.</td>
<td>✓</td>
</tr>
<tr>
<td>Fix the J-Track to the concrete at 600mm intervals and 150mm from each end.</td>
<td>✓</td>
</tr>
<tr>
<td>Fit J-Track to both vertical ends of the central fire barrier. Screw fix vertical J-Track to horizontal J-Tracks [Figure 9].</td>
<td>✓</td>
</tr>
<tr>
<td>Friction fit InterHome H-Studs into bottom J-Track. Push H-Studs down completely, they are not required to be fastened to the top or bottom J-Tracks [Figure 9].</td>
<td>✓</td>
</tr>
<tr>
<td>Space InterHome H-Studs at 600mm centres. Alternate between ShaftLiner and H-Studs until the row is complete [Figure 9].</td>
<td>✓</td>
</tr>
<tr>
<td>Use J-Track at the top of each 3m or 3.6m high section to form the top track and bottom track for the next level. Screw fix the J-Tracks back-to-back at 600mm intervals and 150mm from each end [Figure 11].</td>
<td>✓</td>
</tr>
<tr>
<td>Leave a gap of 20mm min between the central fire barrier and both of the dwellings frames.</td>
<td>✓</td>
</tr>
<tr>
<td>Fix InterHome Aluminium Clips to both sides of each H-Stud and vertical J-Track [Figures 10 and 12]:</td>
<td>✓</td>
</tr>
<tr>
<td>At the top plates</td>
<td>✓</td>
</tr>
<tr>
<td>At the top chord of the trusses</td>
<td>✓</td>
</tr>
<tr>
<td>At maximum 3m intervals for 3m ShaftLiner sheets</td>
<td>✓</td>
</tr>
<tr>
<td>At maximum 3.6m intervals for 3.6m ShaftLiner sheets</td>
<td>✓</td>
</tr>
<tr>
<td>Within 600mm from the top of an H-Stud [Refer to Construction Details].</td>
<td>✓</td>
</tr>
</tbody>
</table>

It is critical to correctly fix the InterHome Aluminium Clips only in the locations listed above to comply with the discontinuous construction requirements of the BCA. Using any other component apart from the InterHome Aluminium Clips may be detrimental to the performance of the system.

Plumbing and electrical services must not protrude beyond the face of the stud.

![FIGURE 9 J-Track and H-Studs in Central Fire Barrier](image9)

![FIGURE 10 Location of Aluminium Clips](image10)
FIGURE 11 J-Track Back-to-Back in Central Fire Barrier

FIGURE 12 Aluminium Clips to H-Stud and Frame

FIGURE 13 Aluminium Clips Attached to Inverted Steel Track

FIGURE 14 InterHome Aluminium Clip

FIGURE 15 InterHome Steel H-Stud

FIGURE 16 InterHome J-Track (Furring Channel Track)
FIGURE 17 Install the Frame of the First Dwelling

FIGURE 18 Install the First Row of the Central Fire Barrier

FIGURE 19 Continue Central Fire Barrier to the Roof Lining (for Non-Combustible Roof Lining Only)

FIGURE 20 Laminate 16mm FireShield to Central Fire Barrier

FIGURE 21 Install Frame of the Next Dwelling

FIGURE 22 Location of Aluminium Clips

INSTALLATION OVERVIEW FOR 60/60/60 SYSTEMS

Fix Aluminium Clips to both sides of each H-Stud:
- At the top plates
- At the top chord of the trusses
- At maximum 3m intervals for 3m ShaftLiner sheets
- At maximum 3.6m intervals for 3.6m ShaftLiner sheets

Install clips at bottom plate if J-Track is not fixed to concrete within 600mm from the top of an H-Stud.
PLASTERBOARD LAYOUT

### Central Fire Barrier

- Laminate 1 layer of 16mm FireShield to ShaftLiner for 90/90/90 systems.
- Build the central fire barrier up to the underside of a non-combustible roof lining or 450mm above a combustible roof.
- Maximum height is 12m for the central fire barrier

<table>
<thead>
<tr>
<th>Laminated 16mm FireShield</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laminated 16mm FireShield to the central fire barrier in the following locations:</td>
</tr>
<tr>
<td>- At floor joists to 150mm above floor level [Figures 27, 30, 52 and 53]</td>
</tr>
<tr>
<td>- 150mm below ceilings [Figures 30, 32, 34, 35, 36, 53, 54, 55 and 56]</td>
</tr>
<tr>
<td>- Roof space [Figures 32, 37 and 54]</td>
</tr>
<tr>
<td>- Parapets [Figure 34]</td>
</tr>
<tr>
<td>If solid timber blocking is used at the floor levels to maintain the fire rating, the additional 16mm FireShield does not need to be laminated to the central fire barrier. [Figure 31]</td>
</tr>
</tbody>
</table>

PLASTERBOARD FIXING

<table>
<thead>
<tr>
<th>Fire Rated</th>
</tr>
</thead>
<tbody>
<tr>
<td>The ShaftLiner of the central fire barrier is friction fit into the InterHome H-Stud and J-Track, no screws are required.</td>
</tr>
<tr>
<td>Install internal linings with either the Fastener and Adhesive method or the Fastener Only method. Both methods may be used to achieve the fire rating for the InterHome system.</td>
</tr>
</tbody>
</table>

FASTENER TYPE AND MINIMUM SIZE FOR THE INSTALLATION OF THE INTERHOME WALL SYSTEM

| Fastener Type and Minimum Size for the Installation of the InterHome Wall System |
| Fixing Outer Layers to Softwood Timber Frame |
| 6mm fibre cement | 30mm x 2.8 Galvanised Nail |
| 10mm Knauf plasterboard | 40mm x 2.8 Galvanised Nail or, 30mm x 2.8 Ring Shank Nail or 25mm – 6g Screw |
| 13mm Knauf plasterboard | 40mm x 2.8 Galvanised Nail or, 30mm x 2.8 Ring Shank Nail or 30mm – 6g Screw |
| Fixing Aluminium Clips |
| Aluminium clips to softwood timber frame | 30mm x 2.8 HDG Nail or 25mm – 6g Screw |
| Aluminium clips to steel H-Stud | 16mm – 6g Fine Thread, Drill-Point Screw recommended |
| Aluminium clips to steel H-Stud through laminated 16mm FireShield | 30mm – 6g Fine Thread, Drill-Point Screw recommended |
| Fixing J-Track Together |
| Back-to-back J-Track | 16mm – 6g Fine Thread, Drill-Point Screw recommended |
| Laminating |
| Laminating 16mm FireShield to central fire barrier | 40mm – 10g Laminating Screw |

Fastener type, lengths and gauges are minimums.
Screws must comply with AS3566.1 and AS3566.2.
WEATHER PROTECTION OF CENTRAL FIRE BARRIER

Protect from water.

Cover during adverse weather conditions by stapling plastic sheeting to the central fire barrier and the dwellings frame.

Avoid water pooling at the base between bottom plates/tracks.

Limit weather exposure of the central fire barrier to a maximum of 30 days.

Allow to dry out before installing internal linings.

- If the central fire barrier is likely to be wet before covering, a spray application of a non-flammable waterproof repellent sealer can be used.
- Plasterboard must be completely dry before enclosing the wall cavity.

SERVICES AND PENETRATIONS

Avoid contact of services with the central fire barrier.

Penetration of the central fire barrier is only permitted in the roof space or below floor level and must follow fire rated installation details.

Seal all penetrations made through the internal linings to maintain the acoustic integrity.

- Electrical and plumbing services can be installed back-to-back in InterHome systems without degrading the fire and acoustic performance.
- Services installed in one cavity have an acoustic rating to the other side of the InterHome wall of at least Rw + Ctr 40

PROTECTION OF PENETRATIONS IN INTERNAL LININGS OF INTERHOME SYSTEMS

<table>
<thead>
<tr>
<th>Penetration Type</th>
<th>To Maintain Fire Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>PVC pipe up to 65mm</td>
<td>No fire collar needed and wet area sealant is permitted.</td>
</tr>
<tr>
<td>Copper Plumbing</td>
<td>Wet area sealant is permitted.</td>
</tr>
<tr>
<td>Electrical Outlet (GPO)</td>
<td>Can be attached via stud bracket or wall mount. No GPO fire rated wall-boxes are required.</td>
</tr>
<tr>
<td>Penetrations in roof cavity through central fire barrier</td>
<td>Any penetration must be to a fire rated detail.</td>
</tr>
<tr>
<td>Any other gaps</td>
<td>Must be sealed with fire sealant.*</td>
</tr>
</tbody>
</table>

* (Refer to Construction Details for more information)
**Fixing** | Laminating screw method  
**Sheet Layout** | Horizontal or Vertical  
**Perimeter** | Screws must be within 50mm of sheet edges, recess joints and butt joints.  
**Field** | Laminate to central fire barrier at 400x400mm max centres.  
**Recessed Edges** | Laminate to central fire barrier at 400mm max centres.  
**Butt Joints** | Laminate to central fire barrier at 400mm max centres.  
**Fire Sealant** | Use fire sealant on any gaps to maintain fire and acoustic integrity.  
[Refer to Construction Details]  
**Jointing** | No plaster jointing required, only use fire sealant on any gaps.
Construction Details

FIRE RATED
INTERHOME WALL BASE – ELEVATION

Fix aluminium clips to H-Studs on both sides of central fire barrier.

25mm ShaftLiner encased in H-Studs at 600mm max centres

Refer to Systems for wall lining and insulation

Fix central fire barrier track at 600mm max centres and 150mm max from ends

Extend 16mm FireShield 150mm above flooring

Install additional timber bottom plate to elevate the central fire barrier off the floor preventing water pooling.

16mm FireShield laminated to 25mm ShaftLiner at sub-floor framing. Laminate at 400x400mm max centres and 50mm from sheets ends.

FIGURE 24 InterHome Base to Slab FRL 60/60/60

FIGURE 25 InterHome Base to Slab – Alternate Detail FRL 60/60/60

FIGURE 26 InterHome base to slab for improved water resistance FRL 60/60/60

FIGURE 27 InterHome to Suspended Ground Floor FRL 60/60/60
Central fire barrier. 25mm ShaftLiner encased in H-Studs at 600mm max centres

Fix central fire barrier track at 600mm max centres and 150mm max from ends

Fill any gaps with fire sealant

FIGURE 28 InterHome Base to Slab with Step in Slab
FRL 60/60/60

Aluminium clips required if vertical support of central fire barrier exceeds length of H-Stud / ShaftLiner.

Central fire barrier. 25mm ShaftLiner encased in H-Studs at 600mm max centres

Fix central fire barrier track at 600mm max centres and 150mm max from ends

Fill any gaps with fire sealant

FIGURE 29 InterHome Base to Slab with Step in Slab
FRL 60/60/60
**INTERHOME WALL UPPER STOREY FLOOR – ELEVATION**

- Place J-Tracks back-to-back and fix together at 600mm max centres and 150mm from ends. Fill any gaps with fire sealant.
- Extend 16mm FireShield 150mm above flooring.
- Extend 16mm FireShield 150mm below joist.
- Aluminium clips fixed to H-Studs on both sides of central fire barrier. Extend 16mm FireShield 150mm below joist.
- 16mm FireShield laminated to central fire barrier at suspended floor framing. Laminate at 400x400mm max centres and 50mm from sheets ends.
- Aluminium clips fixed to H-Studs on both sides of central fire barrier.
- Floor joists perpendicular to separating wall.
- Engineered timber joist.
- Sacrificial solid timber blocking to maintain fire rating. Additional to structural timber. Use 1x45mm or 2x35mm thick for FRL 60.
- Floor joists parallel to InterHome wall.

**FIGURE 30 InterHome to Upper Storey Floor**

FRL 60/60/60

**FIGURE 31 InterHome to Upper Storey Floor – Alternate Detail**

FRL 60/60/60
Fill with fire resistant mineral wool to maintain FRL of wall system to non-combustible roof lining.

Roof battens can be continuous over InterHome wall

Use 30mm screws when fixing aluminium clip through 16mm FireShield to H-Stud

16mm FireShield laminated to central fire barrier in roof cavity. Laminate at 400x400mm max centres and 50mm from sheets ends.

Central fire barrier continued through roof cavity

Truss parallel to InterHome wall

Aluminium clips on both sides of H-Studs

Knauf plasterboard

Install trimmer for ceiling plasterboard perimeter support

Extend 16mm FireShield 150mm below ceiling

FIGURE 32 InterHome Wall with Parallel Roof Trusses
FRL 60/60/60
Fill with fire resistant mineral wool to maintain FRL of wall system to non-combustible roof lining.

Sacrificial solid timber blocking to maintain fire rating. Additional to structural timber. Use 1x45mm or 2x35mm thick for FRL 60.

External cladding

Extend 15mm FireShield 150mm below ceiling.

Truss perpendicular to InterHome wall. Not permitted to pass through central fire barrier.

J-Track over central fire barrier.

Fill with fire resistant mineral wool to maintain FRL of wall system to non-combustible roof lining.
INTERHOME WALL TO EXTERNAL WALL ABOVE – ELEVATION

1 layer of 16mm TruRock to maintain FRL 60/60/60 of the external wall above the InterHome separating wall.

Any external cladding

Batten or channel

Fill with fire resistant mineral wool to maintain FRL of InterHome wall to non-combustible roof lining

Use 30mm screws when fixing aluminium clip through 16mm FireShield to H-Stud

16mm FireShield or 16mm TruRock laminated to central fire barrier in roof cavity. Laminate at 400x400mm max centres and 50mm from sheets ends.

Extend 16mm FireShield 150mm below ceiling lining

Any external cladding

Batten or channel

Fill with fire resistant mineral wool to maintain FRL of InterHome wall to non-combustible roof lining

Use 30mm drill point wafer head screws when fixing aluminium clip through 16mm FireShield to H-Stud

2 layers of 16mm TruRock to maintain FRL 60/60/60 external wall above InterHome wall

External wall

Separating wall

Insert nogging to support aluminium clip

Aluminium clips fixed to H-Studs on both sides of central fire barrier

FIGURE 35 InterHome Wall to External Wall Above
FRL 60/60/60

FIGURE 36 InterHome Wall to External Wall Above
FRL 60/60/60

Internal penetrations in the external wall section must use fire rated penetration details, otherwise 2 layers of 16mm TruRock must be used externally underneath the external cladding. (Refer to Figure 34)
INTERHOME WALL OVER EAVES – ELEVATION

FIGURE 37 InterHome Horizontal ShaftLiner
FRL 60/60/60

- Fill gap with fire resistant mineral wool to maintain FRL of InterHome wall to non-combustible roof lining.
- J-Track continuous over 25mm ShaftLiner.
- Fill with fire resistant mineral wool to maintain FRL of InterHome wall to non-combustible roof lining.
- ShaftLiner may be installed horizontally.
- 16mm FireShield laminated to ShaftLiner.
- Aluminium clips at 600mm max on both sides.
- Fill with fire resistant mineral wool to maintain FRL of InterHome wall to non-combustible roof lining.
- Aluminium clips to top plate.
- Back to back J-Track.
- Max 600mm.
- J-Track continuous over 25mm ShaftLiner.
- Fix Aluminium clips to top plate.
- Back to back J-Track.

FIGURE 38 InterHome Wall Eave End Detail for Class 1 Building

- Install non-combustible vertical lining such as 16mm FireShield in common eaves or verandah space fixed to one side of framing to form a continuous barrier with the ShaftLiner.
- Refer to BCA 3.7.1.B[e].
INTERHOME JUNCTIONS AND PENETRATIONS – PLAN VIEW

FIGURE 39 InterHome Wall with Non-Fire Rated Intersecting Wall
Timber Frame – FRL 60/60/60

Aluminium clip. Fix to top or bottom plates

FIGURE 40 InterHome Wall with Non-Fire Rated Intersecting Wall
Steel Frame – FRL 60/60/60

Aluminium clip fixed to H-Studs and inverted track at top or bottom plates

FIGURE 41 InterHome Wall Intersection
FRL 60/60/60

Aluminium clip. Fix to top or bottom plates

Fill any gaps with fire sealant

FIGURE 42 InterHome Wall Corner
FRL 60/60/60

Aluminium clip. Fix to top or bottom plates

Fill any gaps with fire sealant

FIGURE 43 InterHome Wall with Penetrations
FRL 60/60/60

Penetrations in wall lining can be back-to-back. No penetrations permitted through central fire barrier.
**Construction Details**

**INTERHOME WALL TO EXTERNAL WALL – PLAN VIEW**

- **Aluminium clip. Fix to top or bottom plates**
- **Central fire barrier**
- **H-Stud**
- **J-Track on central fire barrier ends**
- **Fill with fire resistant mineral wool in cavity to maintain FRL**
- **Control joint in masonry opposite central fire barrier**
- **Aluminium clips (may be flattened)**
- **Vertical damp proof course**
- **EarthWool insulation required in at least one stud cavity of intersecting wall**
- **Aluminium clip. Fix to H-Studs and inverted track at top or bottom plates**
- **Inverted track**
- **Moisture barrier**

**FIGURE 44 InterHome Wall to External Brick Wall**

**Timber Frame – FRL 60/60/60**

**FIGURE 45 InterHome Wall to External Brick Wall**

**Steel Frame – FRL 60/60/60**
**INTERHOME WALL TO EXTERNAL WALL – PLAN VIEW**

- **Knauf plasterboard**
- **Fill with fire resistant mineral wool in cavity to maintain FRL**
- **Vertical damp proof course**
- **Aluminium clips (may be flattened)**
- **Control joint opposite central fire barrier in external cladding. Use external grade sealant over bond breaker tape**
- **External cladding**
- **Moisture barrier**
- **Aluminium clip. Fix to top or bottom plates only**
- **Central fire barrier**
- **J-Track on central fire barrier ends. Any gaps between J-Track and external cladding fill with fire resistant mineral wool to maintain FRL**

**FIGURE 46 InterHome Wall to External Brick Wall with Return FRL 60/60/60**

**FIGURE 47 InterHome Wall to External Clad Wall FRL 60/60/60**
INTERHOME WALL TO EXTERNAL WALL – PLAN VIEW

For external wall section only:
A minimum of any 10mm plasterboard must be used to maintain FRL.

Aluminium clips at top or bottom plates
Corrosion resistant flashing
16mm TruRock
Fire resistant mineral wool
Breathable wall wrap
Separating wall
External wall

FIGURE 48 InterHome Wall to External Cladded Wall with Return FRL 60/60/60

Internal penetrations in the external wall section must use fire rated penetration details, otherwise 2 layers of 16mm TruRock must be used externally underneath the external cladding.

FIGURE 49 InterHome Wall with External Wall Extension FRL 60/60/60
Central fire barrier. 25mm ShaftLiner encased in H-studs at 600mm max centres.

Fix central fire barrier track at 600mm max centres and 150mm max from ends.

Fill any gaps with fire sealant.

FIGURE 51 InterHome base to slab
FRL 90/90/90
Construction Details

INTERHOME WALL BASE – ELEVATION

Extend 16mm FireShield 150mm above flooring

16mm FireShield or 16mm TruRock laminated to central fire barrier at sub-floor framing. Laminate at 400x400mm max centres and 50mm max from sheets ends.

Fill any gaps with fire sealant

20mm min 20mm min

Refer to Systems for wall lining and insulation

16mm FireShield or 16mm TruRock laminated to 25mm ShaftLiner from ground to roof lining. Laminate at 400x400mm max centres and 50mm from sheets ends.

FIGURE 52 InterHome to suspended ground floor
FRL 90/90/90
Place J-tracks back-to-back and fix together at 600mm max centres and 150mm from ends. Fill any gaps with fire sealant.

Extend 16mm FireShield 150mm above flooring

Extend 16mm FireShield 150mm below joist

Floor joists perpendicular to separating wall

20mm min 20mm min

16mm FireShield or 16mm TruRock laminated to 25mm ShaftLiner from ground to roof lining. Laminate at 400x400mm max centres and 50mm from sheets ends.

600mm max between Aluminium clips and back-to-back J-tracks

Engineered timber joist

Aluminium clips fixed to H-studs on both sides of central fire barrier.

16mm FireShield laminated to 25mm ShaftLiner at suspended floor framing. Laminate at 400x400mm max centres and 50mm max from sheets ends.

Use 30mm screws when fixing Aluminium clip through 16mm FireShield to H-stud

Central fire barrier continued through roof cavity

Knauf plasterboard

Extend 16mm FireShield 150mm below ceiling

16mm FireShield laminated to 25mm ShaftLiner at suspended floor framing. Laminate at 400x400mm max centres and 50mm max from sheets ends.

Install trimmer for ceiling plasterboard perimeter support

Fill with fire resistant mineral wool to maintain FRL of wall system to non-combustible roof lining.
INTERHOME WALL TO EXTERNAL WALL ABOVE – ELEVATION

2 layer of 13mm TruRock to maintain FRL 90/90/90 of the external wall above the InterHome separating wall

Use 30mm screws when fixing Aluminium clip through 16mm FireShield to H-stud

16mm FireShield or 16mm TruRock laminated to 25mm ShaftLiner in roof cavity. Laminate at 400x400mm max centres and 50mm from sheets ends.

Any external cladding

Fill with fire resistant mineral wool to maintain FRL of InterHome wall to non-combustible roof lining

Extend 16mm FireShield 150mm below ceiling lining

For external wall section only: A minimum of any 10mm plasterboard must be used to maintain FRL

External wall

Separating wall

Insert nogging to support Aluminium clip

Aluminium clips fixed to H-studs on both sides of central fire barrier

Batten or channel

20mm min

16mm FireShield or 16mm TruRock laminated to 25mm ShaftLiner from ground to roof lining. Laminate at 400x400mm max centres and 50mm from sheets ends.

Use 30mm screws when fixing Aluminium clip through 16mm FireShield to H-stud

Any external cladding

Fill with fire resistant mineral wool to maintain FRL of InterHome wall to non-combustible roof lining

Extend 16mm FireShield 150mm below ceiling lining

3 layers of 13mm TruRock to maintain FRL 90/90/90 external wall above InterHome wall

For external wall section only: A minimum of any 10mm plasterboard must be used to maintain FRL

External wall

Separating wall

Insert nogging to support Aluminium clip

Aluminium clips fixed to H-studs on both sides of central fire barrier

Batten or channel

20mm min

16mm FireShield or 16mm TruRock laminated to 25mm ShaftLiner from ground to roof lining. Laminate at 400x400mm max centres and 50mm from sheets ends.

Use 30mm screws when fixing Aluminium clip through 16mm FireShield to H-stud

Any external cladding

Fill with fire resistant mineral wool to maintain FRL of InterHome wall to non-combustible roof lining

Extend 16mm FireShield 150mm below ceiling lining

For external wall section only: A minimum of any 10mm plasterboard must be used to maintain FRL

External wall

Separating wall

Insert nogging to support Aluminium clip

Aluminium clips fixed to H-studs on both sides of central fire barrier

Batten or channel

20mm min
**INTERHOME JUNCTIONS – PLAN VIEW**

- Aluminium clip fixed to H-studs and top or bottom plates.
- 16mm FireShield or 16mm TruRock laminated to 25mm ShaftLiner from ground to roof lining. Laminate at 400x400mm max centres and 50mm from sheets ends.
- Inverted track
  - Aluminium clip. Fix to H-studs and inverted track.
- EarthWool insulation required in at least one stud cavity of intersecting wall.

**FIGURE 57** InterHome wall with non-fire rated intersecting wall Timber frame  
FRL 90/90/90

**FIGURE 58** InterHome wall with non-fire rated intersecting wall Steel frame  
FRL 90/90/90

- Aluminium clip. Fix to top or bottom plates.
- Fill any gaps with fire sealant.
- Fix J-tracks together at 600mm max centres and 150mm from ends.
- 16mm FireShield or 16mm TruRock laminated to 25mm ShaftLiner from ground to roof lining. Laminate at 400x400mm max centres and 50mm from sheets ends.
- Fix J-tracks at 600mm max centres and 150mm from ends.
- Fill any gaps with fire sealant.

**FIGURE 59** InterHome wall intersection  
FRL 90/90/90

**FIGURE 60** InterHome wall corner  
FRL 90/90/90
Knauf plasterboard

For external wall section only:
A minimum of any 10mm plasterboard must be used to maintain FRL

Separating wall
External wall

Corner moulding

25mm Shaft Liner

Corrosion resistant flashing

Aluminium clips at top or bottom plates

For external wall section only:
A minimum of any 10mm plasterboard must be used to maintain FRL

Breathable wall wrap

16mm FireShield or 16mm TruRock laminated to 25mm ShaftLiner from ground to roof lining. Laminate at 400x400mm max centres and 50mm from sheets ends.

Internal penetrations in the external wall section must use fire rated penetration details, otherwise 3 layers of 16mm TruRock must be used externally underneath the external cladding.

FIGURE 61 InterHome wall to external cladded wall with return FRL 90/90/90

FIGURE 62 InterHome wall with external wall extension FRL 90/90/90
INTERHOME WALL TO EXTERNAL WALL – PLAN VIEW

FIGURE 63 InterHome wall with external wall extension
FRL 90/90/90
INTERHOME CHECKLIST

☐ There is a minimum 20mm gap between both frames and the ShaftLiner.

☐ The stud frames or services attached to these frames do not touch the Central Fire Barrier (ShaftLiner, H-Studs, J-Track and 16mm FireShield).

☐ The J-Track is fixed, using suitable fasteners, to the concrete slab every 600mm and 150mm from each end or alternatively, Aluminium clips are used at the bottom plate.

☐ Any gaps between the J-Track and concrete slab are filled with fire sealant.

☐ ShaftLiner sheets are not damaged.

☐ Horizontal framing between ShaftLiner sheets consists of two J-Tracks screw fixed back to back.

☐ J-Track caps the ends and the top of the ShaftLiner wall.

☐ Aluminium clips are within 600mm of the end of each H-Stud and vertically separated by a maximum of 3000mm (for 3000mm long H-Studs).

☐ Aluminium clips are on both sides of each H-Stud at all top plates and the top chord of the roof truss.

☐ 16mm FireShield is laminated at 400mm centres to the ShaftLiner in the roof space and at the floor levels.

☐ Mineral wool is installed over the top of the InterHome wall and between the brick or external cladding.

☐ No penetrations in the ShaftLiner except in the roof space and beneath the floor. These penetrations must be installed to a fire rated detail.

☐ Central Fire Barrier is protected from adverse weather.