

# JJI-JOISTS SITE GUIDE FLOOR DETAILS

SECOND EDITION | JANUARY 2023



SAINT-GOBAIN

*Designed with precision, built with passion*



System	02
Site storage and restrictions	03
Installation guide	04
Floor details	05
Floor layout	12
Floor details	14
Service holes	17
Glulam and LVL fixing details	18



**James Jones  
& SONS LIMITED**  
TIMBER SYSTEMS DIVISION

[WWW.JAMESJONES.CO.UK](http://WWW.JAMESJONES.CO.UK)

[WWW.PASQUILL.CO.UK](http://WWW.PASQUILL.CO.UK)

# SYSTEM



## JJI-Joist Range

JJI-Joists are available in a comprehensive range of sizes, designed specifically for the UK market.

Joist Depth mm	Flange sizes in mm			
	A+ 47	B+ 63	C 72	D 97
195	✓			
220	✓	✓	✓	✓
245	✓	✓	✓	✓
300	✓	✓	✓	✓
350				✓
400				✓

## Glulam product range

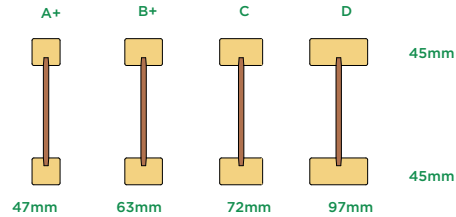
Glulam is supplied as part of the JJI-Joist system. It is available in depths that match the JJI-Joist product range and three standard widths. See table below for standard range.

Intermediate width can be achieved by fixing multiple settings together with suitably specified fixings.



Section Depth mm	Width in mm		
	38	45	90
195	✓		
220	✓	✓	✓
235	✓	✓	✓
245	✓	✓	✓
300	✓	✓	✓
350		✓	✓
400		✓	✓

## JJI-Joist flange sizes



## Metalwork

James Jones recommend using Cullen and Simpson Strong-Tie metalwork.



## LVL product range

LVL-Beam and Rim are available in depths to suit the JJI-Joist product range and four standard widths depending on the grade. See table below for our standard range.

Intermediate width can be achieved by fixing multiple settings together with suitably specified fixings.

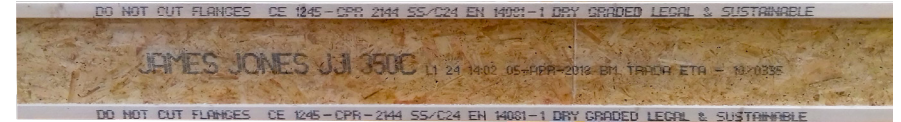


Section Depth mm	Flange sizes in mm		
	Rim 30	45	75
195	✓		
220	✓	✓	✓
235	✓	✓	✓
245	✓	✓	✓
300		✓	✓
350		✓	✓
400			✓

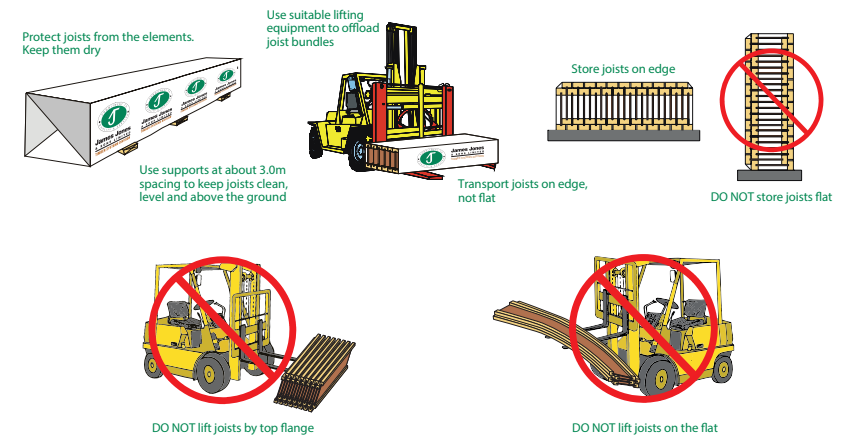
# SITE STORAGE AND RESTRICTIONS

## JJI-Joist identification and marking

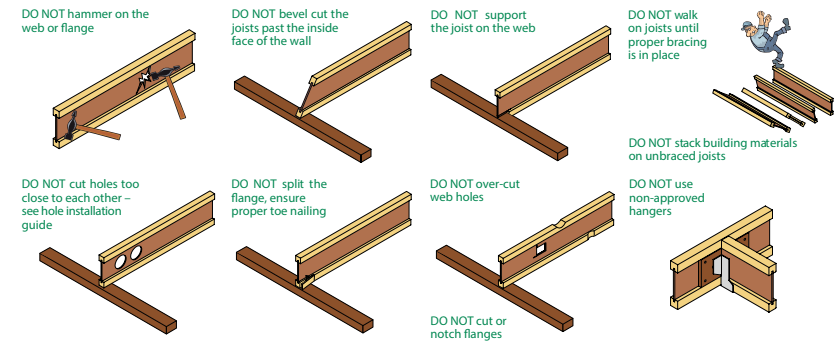
For onsite identification and traceability, all JJI-Joists are clearly marked with product and manufacturing information. The large markings on the OSB web detail the joist depth, flange size, manufacturing time/date and ETA product approval. Further information printed on the top and bottom timber flanges detail the timber strength class, chain of custody confirmation and a warning. 'DO NOT CUT FLANGES'.



## JJI-Joist site storage



## ATTENTION! The following conditions are not allowed



# INSTALLATION GUIDE

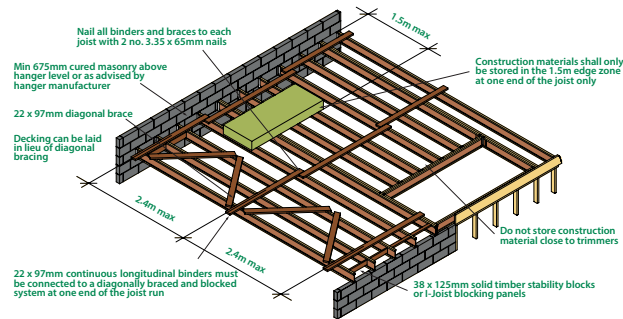
## Temporary erection bracing notes

The builder is responsible for identifying and minimising the risks involved in erecting JJI-Joists to ensure that the health and safety of all workers is maintained. Builders should be aware of the health and safety responsibilities imposed on them by the Construction (Design and Management) Regulations 2015. Proper erection procedures and bracing are vital to the safe construction of JJI-Joists floors. The following notes may assist builders in preparing a safety assessment.

1. Do not allow workers to walk on unbraced joists
2. Do not store building materials on unbraced joists
3. JJI-Joists should be erected straight and vertical. The maximum deviation from horizontal should not exceed 10mm and the maximum deviation from the vertical should not exceed 2mm
4. JJI-Joists are unstable until fully braced. Bracing includes: longitudinal binders, diagonal bracing, stability blocking, rim joist/rim boards
5. All longitudinal binders, diagonal braces, stability blocks, and hangers should be completely installed and fully nailed as detailed
6. Lateral strength should be provided by a diagonally braced and blocked system across at least 3 joists as shown in the Erection Bracing Details (diagram below). Additional braced and blocking systems should be provided at 12m spacing in long joist runs
7. Once a JJI-Joist floor has been fully braced, construction materials may be placed on the floor provided that the overall weight of material to be placed on a single joist does not exceed 250kg (200kg for 195mm deep joists). Please refer to Technical Bulletin 47, 'Loading out JJI-Joist Floors'
8. Flooring should be fully fixed to the JJI-Joists before additional loads are placed on the floor
9. The ends of cantilevers should be stabilised with longitudinal binders fixed to the top and bottom flanges

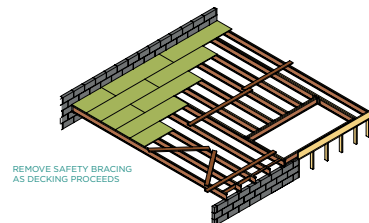
## Installation guidelines

This diagram indicates temporary erection bracing only. It is applicable to both timber frame and masonry construction.



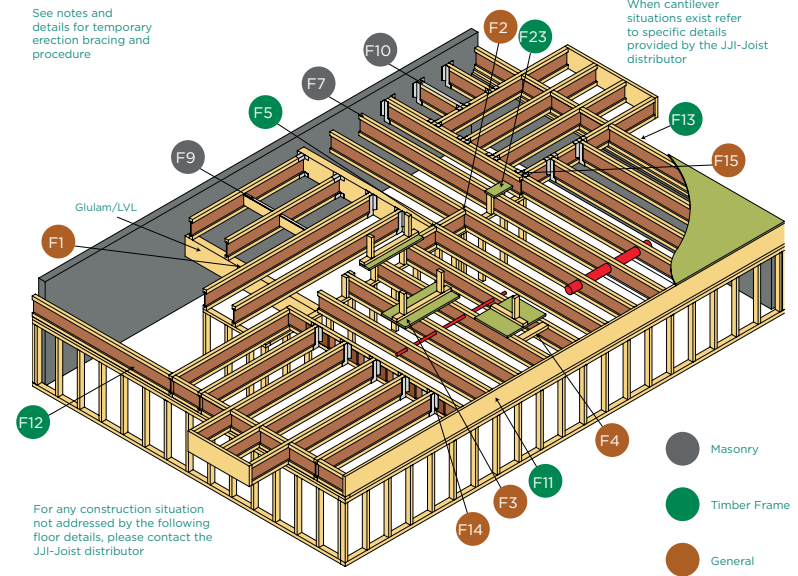
## Stability blocking notes

- Use timber blocks or JJI-Joist blocking pieces
- Timber blocks to be minimum 38 x 125mm cut squarely and accurately to maintain joist spacing. Fasten with minimum 2 no. 3.35 x 65mm nails
- Stability blocks need to be fixed to 3 joists and cover a minimum distance of 1200mm
- Timber blocks in the diagonally braced systems are required in each run of joists and at cantilever supports
- When joists butt on an interior support, block both sets of joists
- Additional braced and blocked systems should be provided at 12m spacing in long joist runs

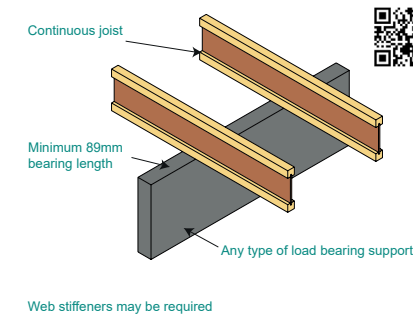


# FLOOR DETAILS

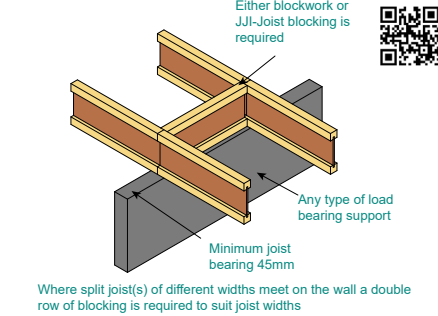
## Example of JJI-Joist floor system



### F1-Continuous JJI-Joist on wall

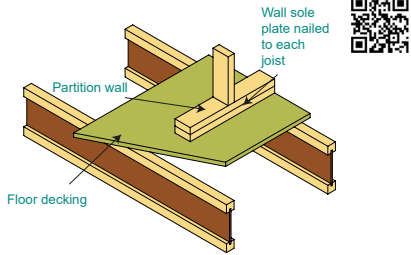


### F2-Split JJI-Joist on wall



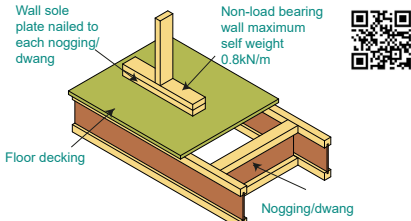
# FLOOR DETAILS

## F3-Wall at 90° to JJI-Joists



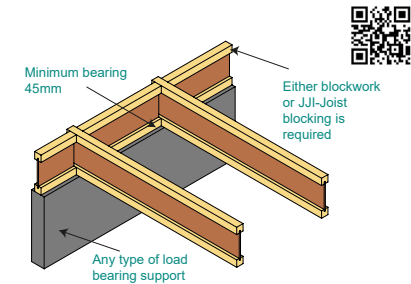
The floor designer is responsible for ensuring the joist design is adequate to support the wall

## F4a-Non-load bearing wall parallel to JJI-Joist



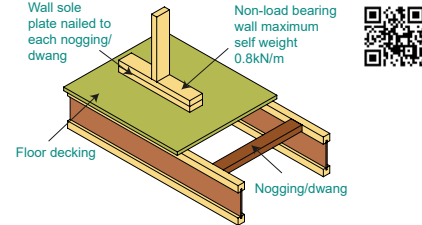
Minimum 38 x 75mm nogging/dwang or JJI-C flange at maximum 600 c/c attached with 2 no. 3.35 x 65mm nails skew nailed at each end, alternatively use approved clips  
The floor designer is responsible for ensuring the joist design is adequate to support the wall

## F6-Terminating JJI-Joist on wall



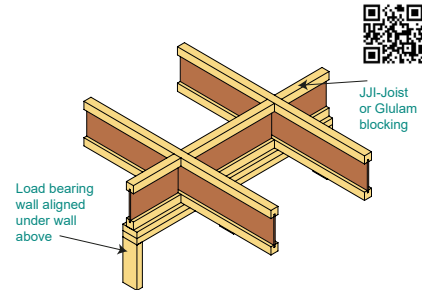
Suitable detailing required if used on an external wall

## F4-Non-load bearing wall parallel to JJI-Joist

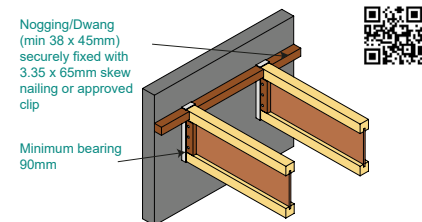


Minimum 38 x 75mm nogging/dwang or JJI-C flange at maximum 600 c/c attached with 2 no. 3.35 x 65mm nails skew nailed at each end, alternatively use approved clips  
The floor designer is responsible for ensuring the joist design is adequate to support the wall

## F5-Intermediate bearing with load bearing wall above



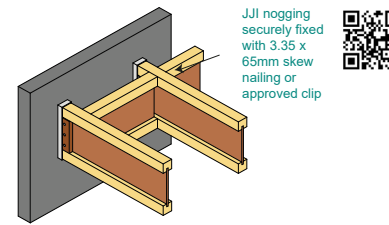
## F7-JJI-Joist bearing in block wall



Construct blockwork around joist and fill all voids with web fillers, mortar and point with mastic sealant  
Alternative proprietary systems may be used if approved by JJ&S  
Restraint straps will be required for greater than 2 storey\*  
\*Straps required on all floors

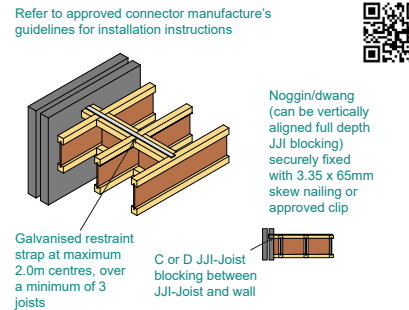
# FLOOR DETAILS

## F7a-JJI-Joist bearing in block wall

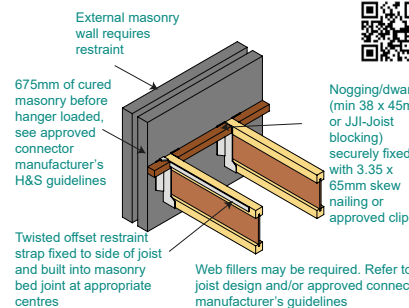


Construct blockwork around joist and fill all voids with web fillers, mortar and point with mastic sealant  
Alternative proprietary systems may be used if approved by JJ&S  
Restraint straps will be required for greater than 2 storeys\*  
\*Straps required on all floors

## F8a-Masonry wall restraint JJI-Joist parallel detail 1



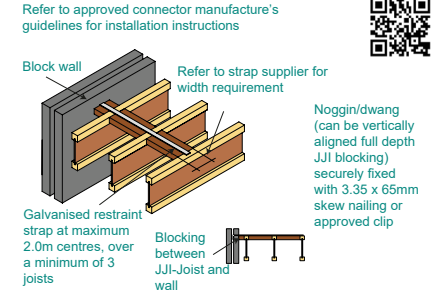
## F10-Wall restraint, block wall hanger support



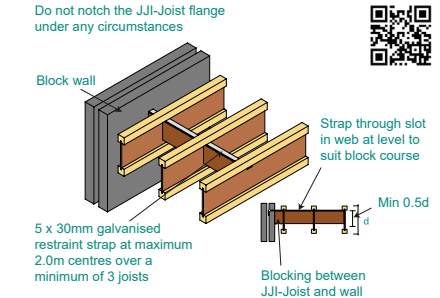
Twisted offset restraint strap fixed to side of joist and built into masonry bed joint at appropriate centres

Web fillers may be required. Refer to joist design and/or approved connector manufacturer's guidelines

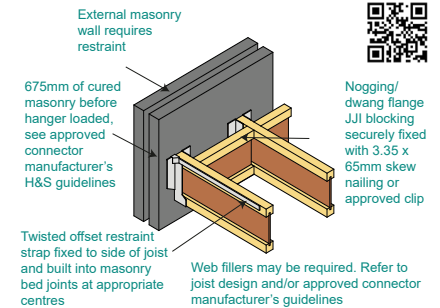
## F8-Masonry wall restraint JJI-Joist parallel detail 1



## F9-Masonry wall restraint JJI-Joist parallel detail 2



## F10a-Wall restraint, block wall hanger support

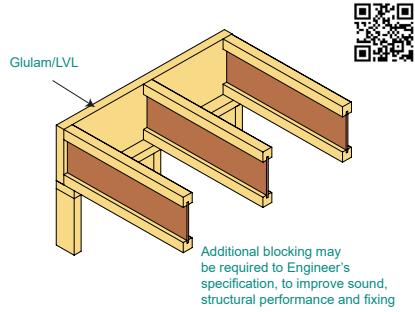


Twisted offset restraint strap fixed to side of joist and built into masonry bed joints at appropriate centres

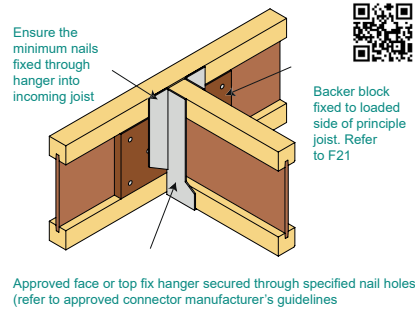
Web fillers may be required. Refer to joist design and/or approved connector manufacturer's guidelines

# FLOOR DETAILS

**F11-JJI-Joist bearing on external wall**



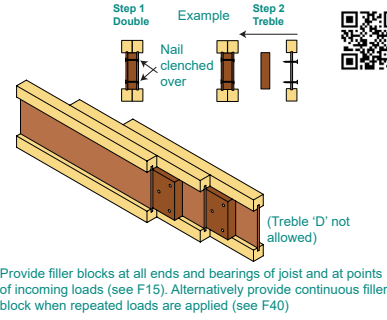
**F14-Single JJI-Joist to JJI-Joist**



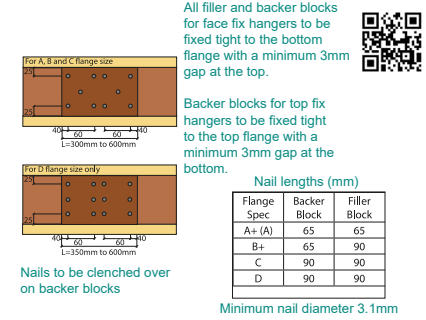
Approved face or top fix hanger secured through specified nail holes (refer to approved connector manufacturer's guidelines)

# FLOOR DETAILS

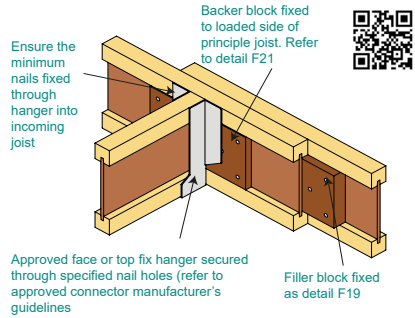
**F19-Filler block-double or treble JJI-Joist**



**F21-Filler and backer block nailing detail**

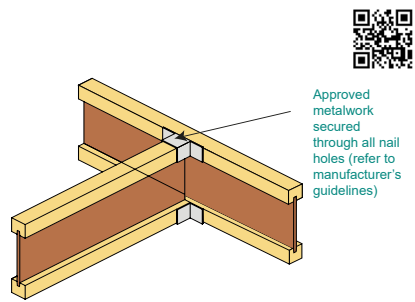


**F15-Single JJI-Joist to multiple JJI-Joist**

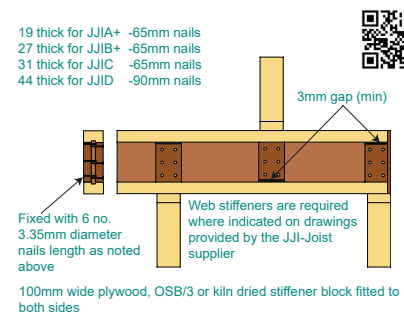


Approved face or top fix hanger secured through specified nail holes (refer to approved connector manufacturer's guidelines)

**F16-Single JJI-Joist to JJI-Joist (Light load)**

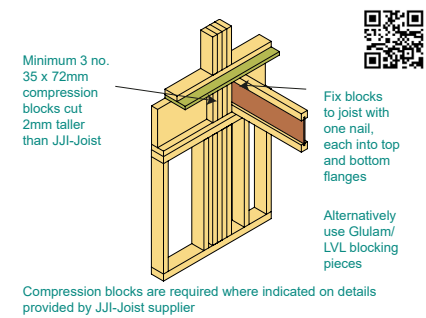


**F22-Web stiffener**



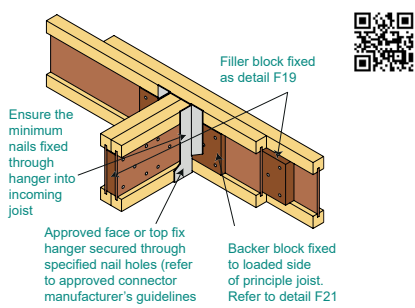
100mm wide plywood, OSB/3 or kiln dried stiffener block fitted to both sides

**F23-Compression block**



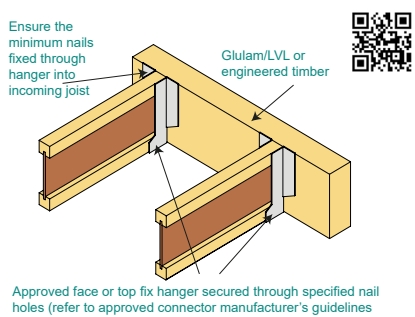
Compression blocks are required where indicated on details provided by JJI-Joist supplier

**F17-Multiple JJI-Joist to multiple JJI-Joist**



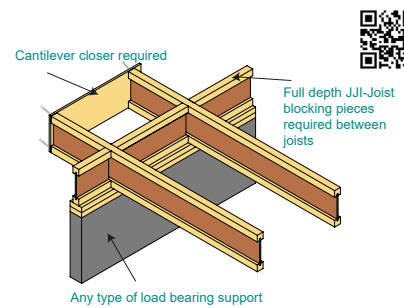
Approved face or top fix hanger secured through specified nail holes (refer to approved connector manufacturer's guidelines)

**F18-JJI-Joist to engineered timber**

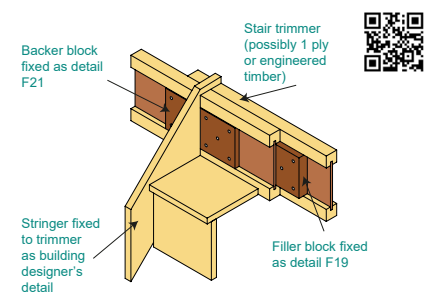


Approved face or top fix hanger secured through specified nail holes (refer to approved connector manufacturer's guidelines)

**F24-Cantilever**

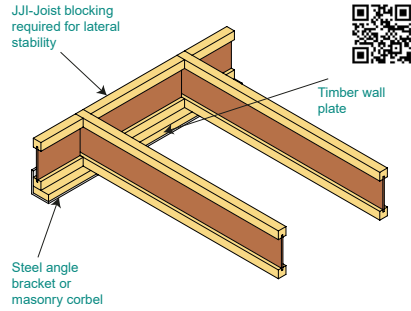


**F25-Stair stringer connection**

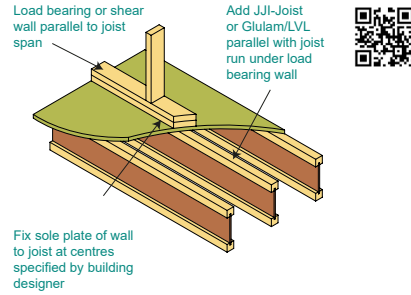


# FLOOR DETAILS

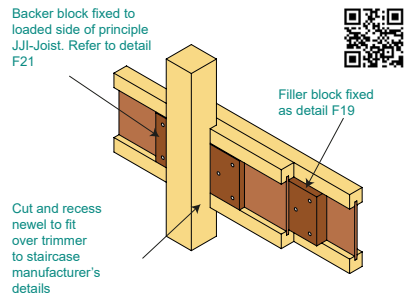
**F26-JJI-Joist supported on steel/corbel wall**



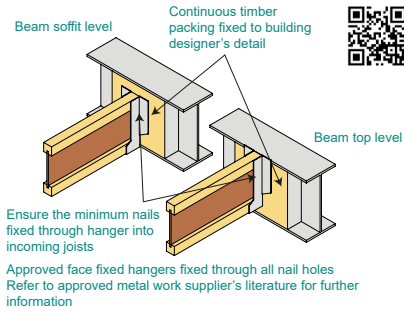
**F27-Load bearing wall parallel to JJI-Joist run**



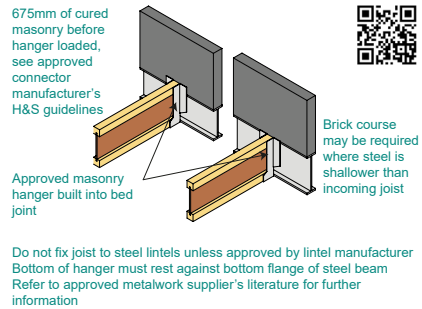
**F28-Newel post to JJI-Joist trimmer**



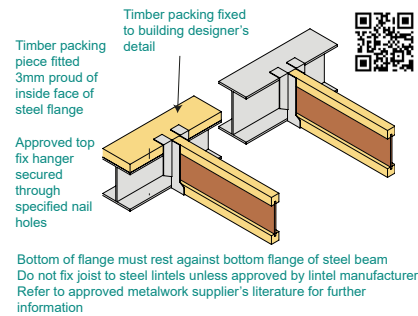
**F29-JJI-Joist to steel beam face fixing**



**F30-JJI-Joist to steel beam/masonry**

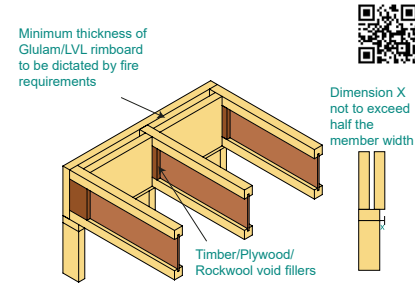


**F31-JJI-Joist to steel beam to fixing**

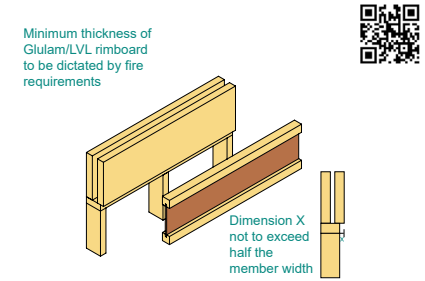


# FLOOR DETAILS

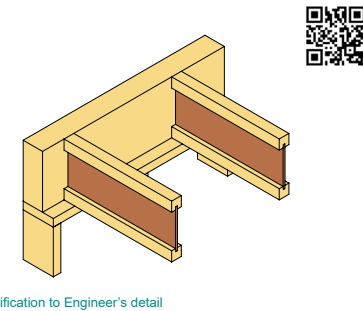
**F32-JJI-Joist bearing on external wall**



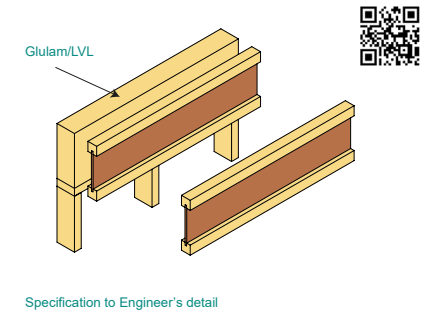
**F33-JJI-Joist parallel to party wall**



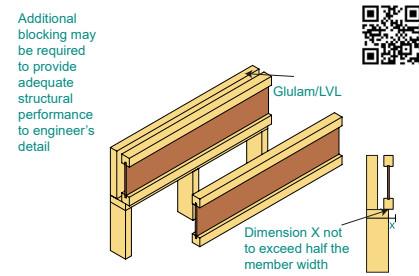
**F34-Indicative disproportionate collapse JJI-Joist at 90° to wall**



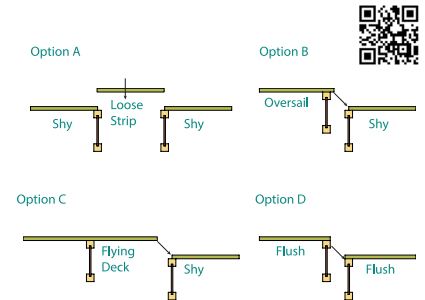
**F35-Indicative disproportionate collapse JJI-Joist parallel to wall**



**F36-JJI-Joist parallel external wall**



**F37-Floor cassette joining detail**



# FLOOR LAYOUT

# FLOOR LAYOUT

BOQ Complete breakdown of floor layout materials showing quantities, weights, ID marks, material descriptions

**Joist Requirements**

Mark	Product	Len	Ply	Weight (kg)	Qty
J1	JJ245A+	1150	1	2.0	1
J2	JJ245A+	1150	1	3.3	2
J3	JJ245A+	3474	1	10.0	4
J4	JJ245A+	4212	1	12.1	1
J5	JJ245A+	4700	1	12.4	1
J6	JJ245B+	4700	1	16.5	2
J7	JJ245B+	4700	2	33.0	2
J8	JJ245C+	4700	1	38.2	4
J9	JJ-beam 38x245	2074	2	26.3	1

**Metalwork Requirements**

Mark	Product	Qty
A	H48-78-220-235 (i)	2
B	HM-50-235 (i)	8
	HFS-150-100-B	4
	HW-GR-240-1	10
	HW-GR-240-2	20
	1-245-46	8

**Extra Timber Requirements**

Product	Length (mm)	Material	Qty
Perimeter Nogging	10966	C16 35x50	1
Partition Nogging	6908	C16 38x72	1
Strap Nogging	4164	TR26 35x122	1

**Ockwells**

Description & Code	Dimensions
Stairwell Hatch System	1053x456
3 x Stairwell Hatches	1200 x 900mm 32.5kg
1 x Stairwell Joist	2500 - 3500mm 33kg
1 x Stairwell Ladder Plate	1200 x 450mm 5kg

**Connection Detail A - 2 ply JJI-Beam/JJI/L-Beam - 2 rows of 3.1mm nails @300mm centres**

**Notes:**

- Capacities for nail details are based on 3.1mm diameter power driven nails (7.9mm ring for 38.2mm thick steel and 6mm ring for 10mm plate). Hammer driven nails up to 4.5mm diameter may be used.

**Notes:**

- Nails in two ply members to be fixed in two rows 45mm from the top and bottom edge, driven from alternate sides. The maximum end distance should be 30mm.

**Notes:**

- Joists are designed in accordance with EN 1990, EN 1991 and EN 1995 and their National Annexes, with information from TRAKA EN-10-0335.
- 310 Joists at 600mm centres unless noted otherwise.
- Loading: 0.500kN/m<sup>2</sup> Permanent Self Weight, 0.250kN/m<sup>2</sup> Permanent Partition, 1.500kN/m<sup>2</sup> Medium Term Live unless otherwise noted.
- Multiple solid rectangular members fixed in accordance with James Jones & Sons Ltd technical guidelines.
- Masonry Restraint: Strap numbers and positions are the responsibility of the Building Designer. Straps shown are indicative.

**Notes:**

- Joists are designed in accordance with EN 1990, EN 1991 and EN 1995 and their National Annexes, with information from TRAKA EN-10-0335.
- 310 Joists at 600mm centres unless noted otherwise.
- Loading: 0.500kN/m<sup>2</sup> Permanent Self Weight, 0.250kN/m<sup>2</sup> Permanent Partition, 1.500kN/m<sup>2</sup> Medium Term Live unless otherwise noted.
- Multiple solid rectangular members fixed in accordance with James Jones & Sons Ltd technical guidelines.
- Masonry Restraint: Strap numbers and positions are the responsibility of the Building Designer. Straps shown are indicative.

**Notes:**

- Joists are designed in accordance with EN 1990, EN 1991 and EN 1995 and their National Annexes, with information from TRAKA EN-10-0335.
- 310 Joists at 600mm centres unless noted otherwise.
- Loading: 0.500kN/m<sup>2</sup> Permanent Self Weight, 0.250kN/m<sup>2</sup> Permanent Partition, 1.500kN/m<sup>2</sup> Medium Term Live unless otherwise noted.
- Multiple solid rectangular members fixed in accordance with James Jones & Sons Ltd technical guidelines.
- Masonry Restraint: Strap numbers and positions are the responsibility of the Building Designer. Straps shown are indicative.

Fixing details Examples of how to connect JJI-Joists, Glulam, LVL, blocking pieces, restraint straps etc

Floor layout Joist scheme showing JJI/ Glulam/LVL joist layout; Joist ID marks, hanger marks, masonry restraint strap locations, noggin requirements, building dimensions

Safety hatch system System component description, codes and dimensions (optional)

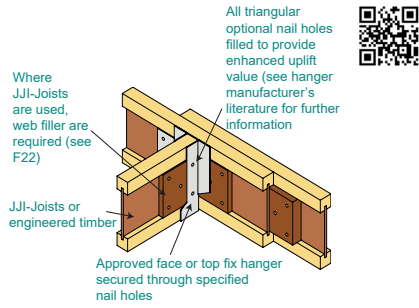
Notes Floor layout design notes including; joist spacing, design code and loadings, restraint strap responsibilities

Metalwork Specific metalwork images of the hangers and associated ironmongery used within the floor layout

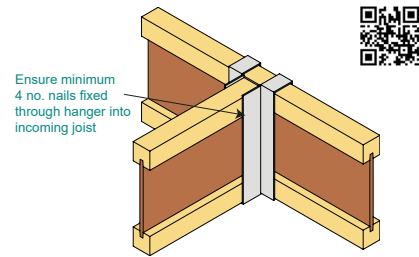
Job/Layout details Floor layout details including; house type, design revision, design date, site address, layout scale

# FLOOR DETAILS

## F39-Enhanced hanger uplift

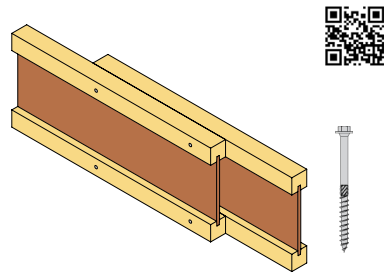


## F41-Backer free JJI-Joist to JJI-Joist



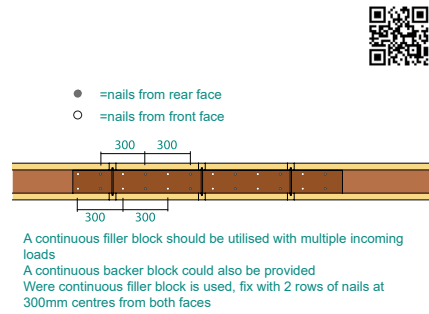
Approved backer free hanger secured through specified nail holes  
Refer to approved connector manufacturer's guidelines

## F43-Fixing double JJI-Joists

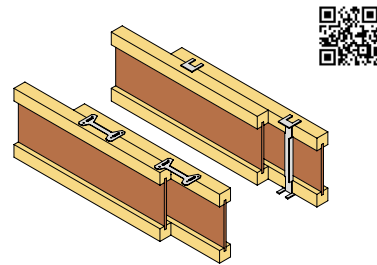


Refer to approved metalwork supplier's technical literature for specification and installation guidelines

## F40-Continuous filler blocks

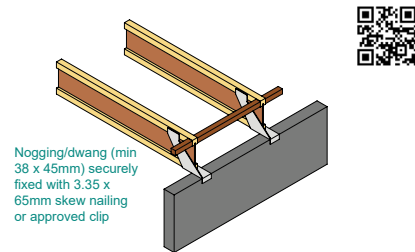


## F42-Fixing double or treble JJI-Joists



Refer to approved metalwork supplier's technical literature for specification and installation guidelines

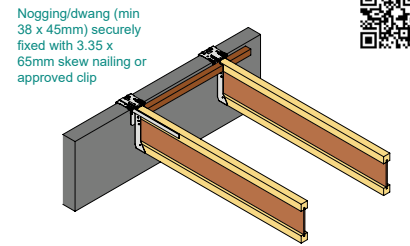
## F45-Masonry restraint hanger detail 1



Refer to ITW's technical literature for specification and installation guidelines

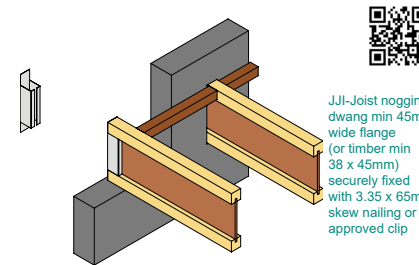
# FLOOR DETAILS

## F46-Masonry restraint hanger detail 2



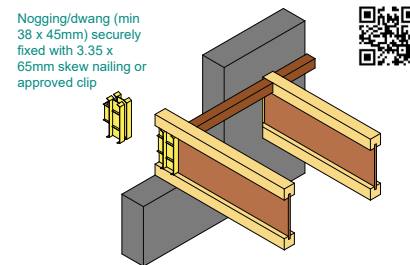
Refer to Simpson Strongtie's technical literature for specification and installation guidelines

## F47-SST End Cap airtightness detail



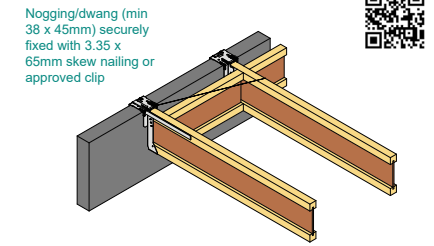
Refer to Simpson Strongtie's technical literature for specification and installation guidelines

## F48-ITW Gripper airtightness detail



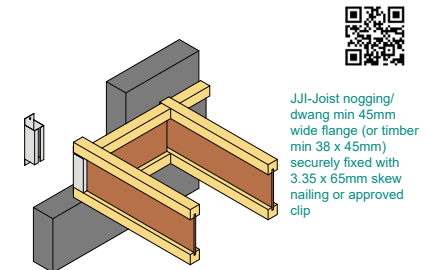
Refer to ITW's technical literature for specification and installation guidelines

## F46a-Masonry restraint hanger detail 2



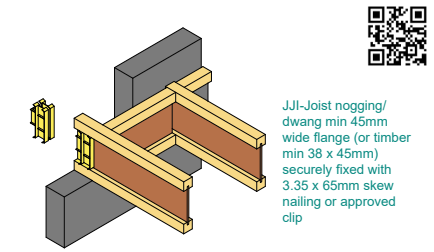
Refer to Simpson Strongtie's technical literature for specification and installation guidelines

## F47a-SST End Cap airtightness detail



Refer to Simpson Strongtie's technical literature for specification and installation guidelines

## F48a-ITW Gripper airtightness detail

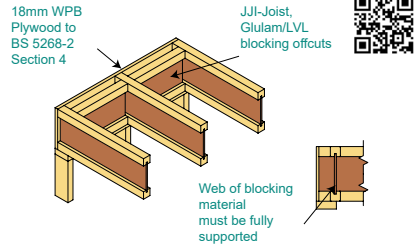


Refer to ITW's technical literature for specification and installation guidelines



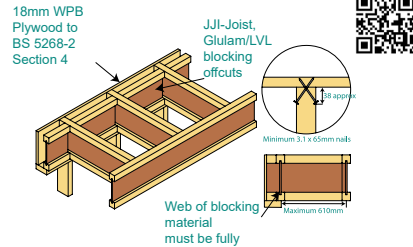
# FLOOR DETAILS

## F49-JJI-Joist bearing on external wall (low load)



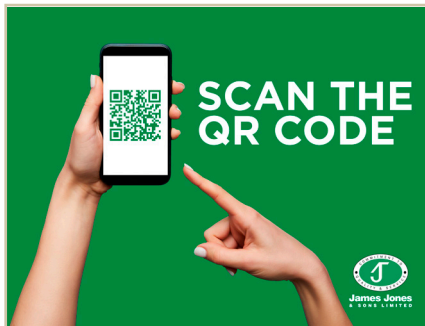
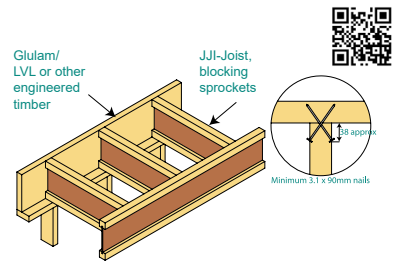
Alternatively use Glulam/LVL blocking in lieu of JJI-Joists  
 JJI-Joist blocking offcuts can be of any joist width

## F50-JJI-Joist bearing on external wall (low load)



Alternatively use Glulam/LVL blocking in lieu of JJI-Joists  
 JJI-Joist blocking offcuts can be of any joist width

## F51-JJI-Joist parallel detail sprockets

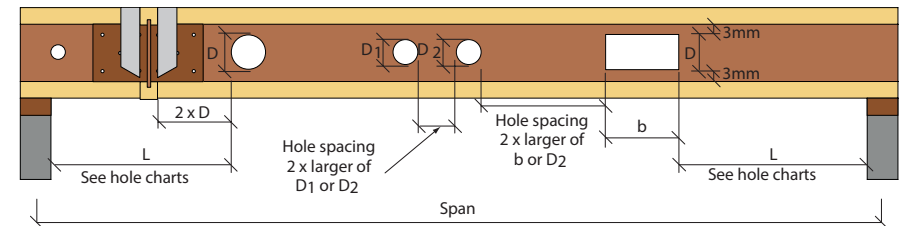


# SERVICE HOLES

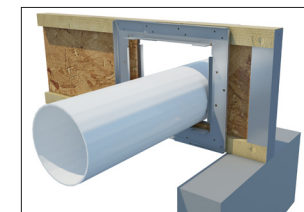
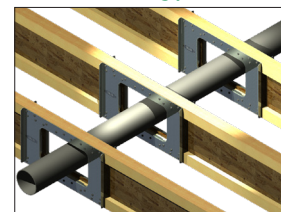
The table below gives the minimum required distance, L (mm), from inside face of support to nearest edge of hole for uniformly loaded, simply supported joists. See table notes.

Joist Depth (mm)	Joist Span (mm)	Hole Size (mm)															
		50		75		100		125		150		175		200			
220	3000	300	300	361	656	721	838	838	1159								
	3500	300	300	500	824	895	1024	1024	1375								
	4000	300	300	651	1001	1078	1216	1216	1596								
	4500	300	449	813	1186	1268	1415	1415	1819								
	4890	300	566	945	1334	1420	1574	1574	1996								
235	3000	300	300	300	566	656	873	873	1217								
	3500	300	300	325	725	824	1062	1062	1440								
	4000	300	300	463	894	1000	1258	1258	1665								
	4500	300	300	612	1072	1185	1460	1460	1893								
	5066	300	382	794	1282	1402	1693	1693	2154								
245	3000	300	300	300	482	586	865	865	1252	955	1252						
	3500	300	300	300	632	747	1053	1053	1478	1152	1478						
	4000	300	300	300	794	918	1248	1248	1706	1355	1706						
	4500	300	300	457	965	1097	1449	1449	1937	1563	1937						
	5184	300	300	666	1212	1353	1731	1731	2256	1854	2256						
300	4000	300	300	300	300	300	803	803	1308	1230	1542	1477	1883	1572	1883		
	4500	300	300	300	300	300	975	975	1513	1430	1762	1693	2126	1795	2126		
	5000	300	300	300	300	449	1154	1154	1722	1635	1985	1912	2369	2019	2369		
	5500	300	300	300	535	670	1341	1341	1935	1844	2210	2135	2613	2247	2613		
	5803	300	300	300	687	822	1456	1456	2066	1972	2348	2271	2761	2385	2761		

- This table has been calculated for joists in intermediate domestic floors ( $G_k=0.75\text{kN/m}^2, q_k=1.5\text{kN/m}^2, Q_k=2\text{kN}$ ) at 600mm centres
- Where more than one hole is to be cut, the minimum spacing between holes must be 2 times the width of the largest hole
- The rectangular hole width  $b$  should not exceed  $1.5 \times D$
- Cut all holes carefully, do not overcut and do not cut flanges
- Where holes are required in rim and header joists of timber frame construction refer to the building designer
- Plastic plumbing is ideal with JJI-Joists. Where copper plumbing is to be used, careful consideration of the sequence of pipe installation is required
- The bearing support length used for this table is 45mm
- A 35mm hole may be drilled anywhere on the centre line of the web material provided there is a minimum of 35mm from the edge of the hole to the end of the joist and it is not directly over a support



### Alternative solutions - reinforcing plates



For Glulam and LVL holes contact your distributor

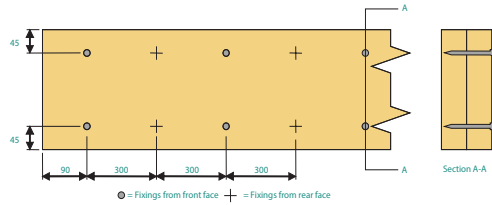
# GLULAM/LVL BEAM FIXINGS

## Connection Detail A - 2 ply Glulam/LVL-Beam - 2 rows of 3.1mm nails @300mm centres

**CD-A-2ply**

**Notes**

- Capacities for nail details are based on 3.1mm diameter power driven nails (75mm long for 38/39mm thick plies and 90mm long for 45mm plies), hammer driven nails up to 4.5mm diameter may be used



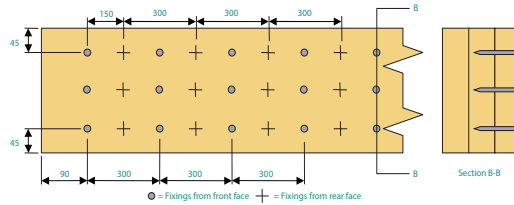
Nails in two ply members to be fixed in two rows 45mm in from the top and bottom edge, driven from alternate sides. The minimum end distance should be 90mm.

## Connection Detail B - 3ply Glulam/LVL - Beam - 3 rows of 3.1mm nails @300mm centres

**CD-B-3ply**

**Notes**

- Capacities for nail details are based on 3.1mm diameter power driven nails (75mm long for 38/39mm thick plies and 90mm long for 45mm plies), hammer driven nails up to 4.5mm diameter may be used



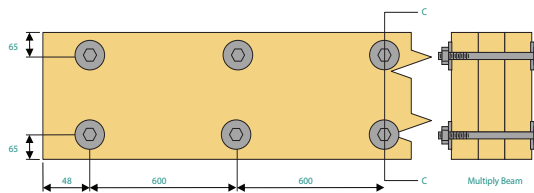
Nails in three ply members to be fixed with the outer rows 45mm in from the top and bottom edge, all nails driven through each outer ply into the central ply. Nails from any one face to be at 300mm centres with nails from the opposite face offset by 150mm. The minimum end distance should be 90mm.

## Connection Detail C - Multiply Glulam/LVL - Beam - 2 rows of M12 bolts @600 centres

**CD-C**

**Notes**

- 38mm diameter x 3mm thick washers are required under each head and nut on M12 bolts. Bolts to be minimum 4.6 grade
- Bolt length to be no less than the overall width of beam + 18mm, e.g. a 90mm beam and rim would require a 108mm bolt



Bolts should be fixed in two rows 65mm in from the top and bottom edge, Bolts should be drilled at Ø12mm and bolts tapped into place. The minimum end distance should be 48mm.

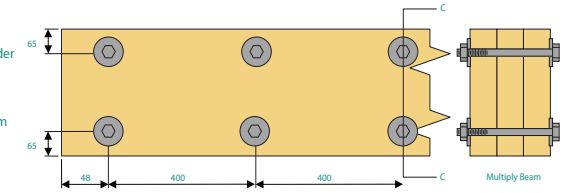
# GLULAM/LVL BEAM FIXINGS

## Connection Detail D - Multiply Glulam/LVL - Beam - 2 rows of M12 bolts @400 centres

**CD-D**

**Notes**

- 38mm diameter x 3mm thick washers are required under each head and nut on M12 bolts. Bolts to be minimum 4.6 grade
- Bolt length to be no less than the overall width of beam + 18mm, e.g. a 90mm beam and rim would require a 108mm bolt



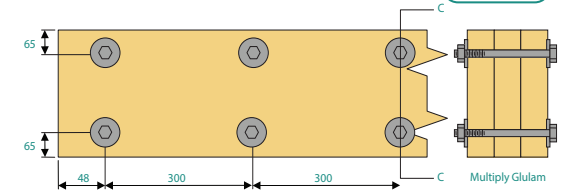
Bolts should be fixed in two rows 65mm in from the top and bottom edge, Bolts should be drilled at Ø12mm and bolts tapped into place. The minimum end distance should be 48mm.

## Connection Detail E - Multiply Glulam/LVL - Beam - 2 rows of M12 bolts @300mm centres

**CD-E**

**Notes**

- 38mm diameter x 3mm thick washers are required under each head and nut on M12 bolts. Bolts to be minimum 4.6 grade
- Bolt length to be no less than the overall width of beam + 18mm, e.g. a 90mm beam would require a 108mm bolt



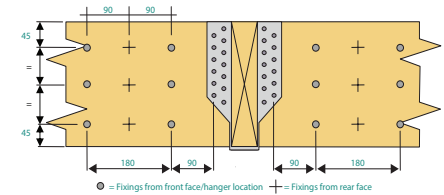
Bolts should be fixed in two rows 65mm in from the top and bottom edge, bolts should be drilled at Ø12mm and bolts tapped into place. The minimum end distance should be 48mm.

## Connection Detail F - 3ply Glulam/LVL - Beam - 3 rows of 3.1mm nails @90mm spacing

**CD-F-3ply**

**Notes**

- Capacities for nail details are based on 3.1mm diameter power driven nails (75mm long for 38/39mm thick plies and 90mm long for 45mm plies), hammer driven nails up to 4.5mm diameter may be used



Nails in three ply members to be fixed with the outer rows 45mm in from the top and bottom edge, all nails driven through each outer ply into the central ply. Nails from any one face to be at 180mm centres with nails from the opposite face offset by 90mm.

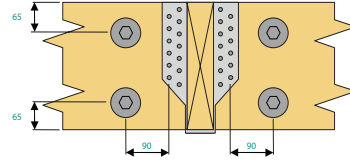
# GLULAM/LVL BEAM FIXINGS

## Connection Detail G - Multiply Glulam/LVL - Beam - 2 rows of M12 bolts @90mm spacing

CD-G

Notes

- 38mm diameter x 3mm thick washers are required under each head and nut on M12 bolts. Bolts to be minimum 4.6 grade
- Bolt length to be no less than the overall width of beam + 18mm, e.g. a 90mm beam would require a 108mm bolt



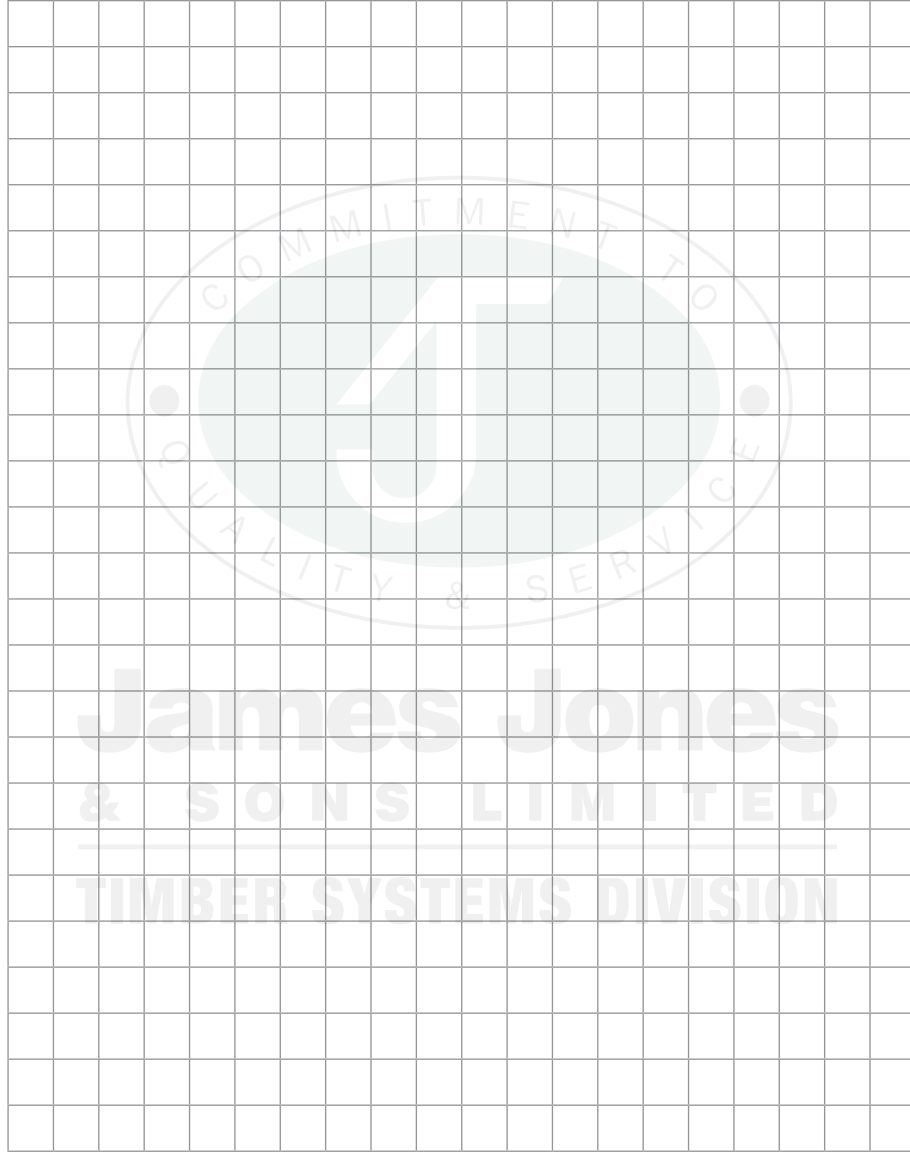
Bolts should be fixed in two rows 65mm in from the top and bottom edge, bolts should be drilled at Ø12mm and bolts tapped into place.

# NOTES

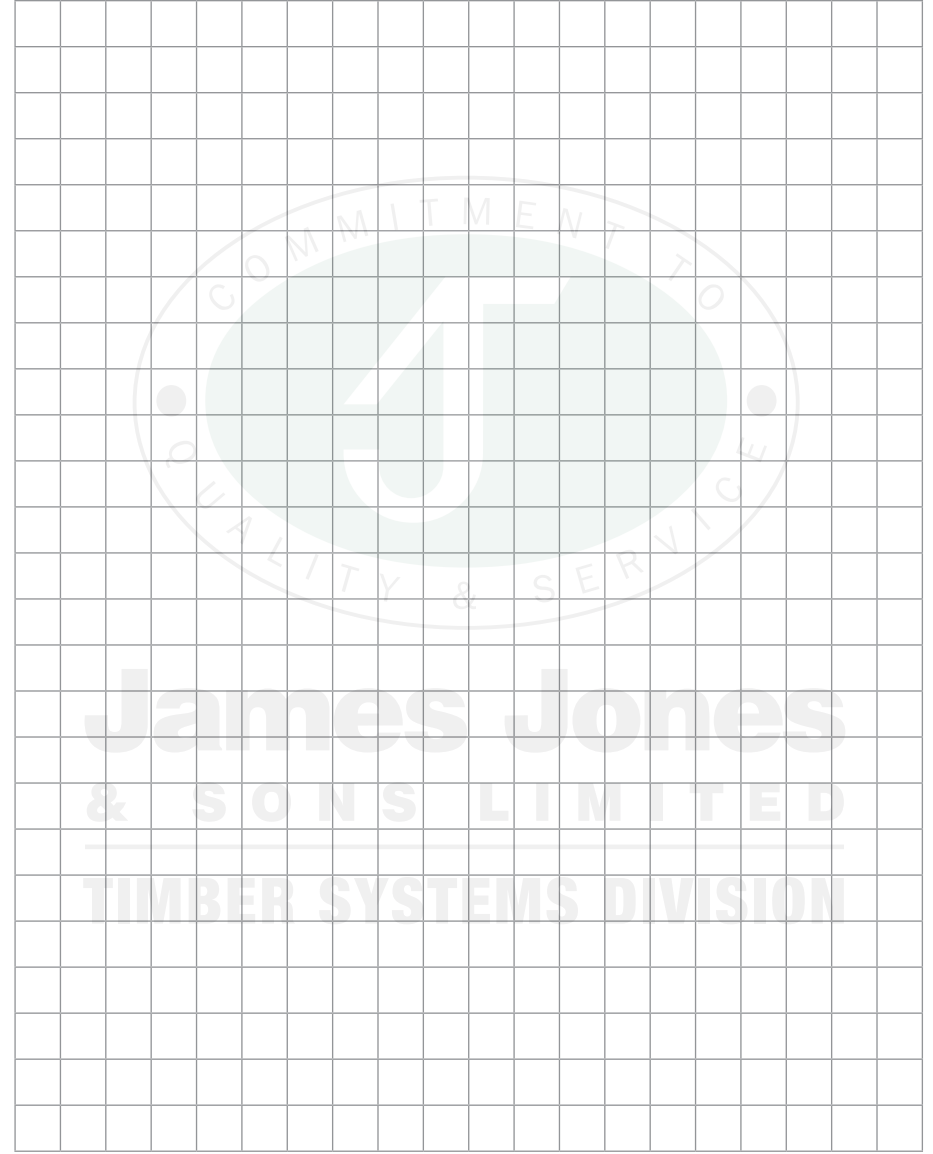
Grid area for notes with a large watermark logo for James Jones & Sons Limited. The logo features a stylized 'JJ' inside a circle with the text 'COMMITMENT TO QUALITY & SERVICE' around the perimeter. Below the logo, the text 'James Jones & Sons Limited' and 'TIMBER SYSTEMS DIVISION' is displayed.



# NOTES



# NOTES



# PRODUCT SUPPORT



**James Jones  
& Sons Limited**  
TIMBER SYSTEMS DIVISION

[WWW.JAMESJONES.CO.UK](http://WWW.JAMESJONES.CO.UK)

[WWW.PASQUILL.CO.UK](http://WWW.PASQUILL.CO.UK)



**Cullen ITW (Metalwork)**

01592 777570



**Simpson Strong-Tie (Metalwork)**

01827 255600



**West Fraser (Chipboard deck)**

01463 792424



**Egger (Chipboard deck)**

01434 602191



## DISTRIBUTOR DETAILS