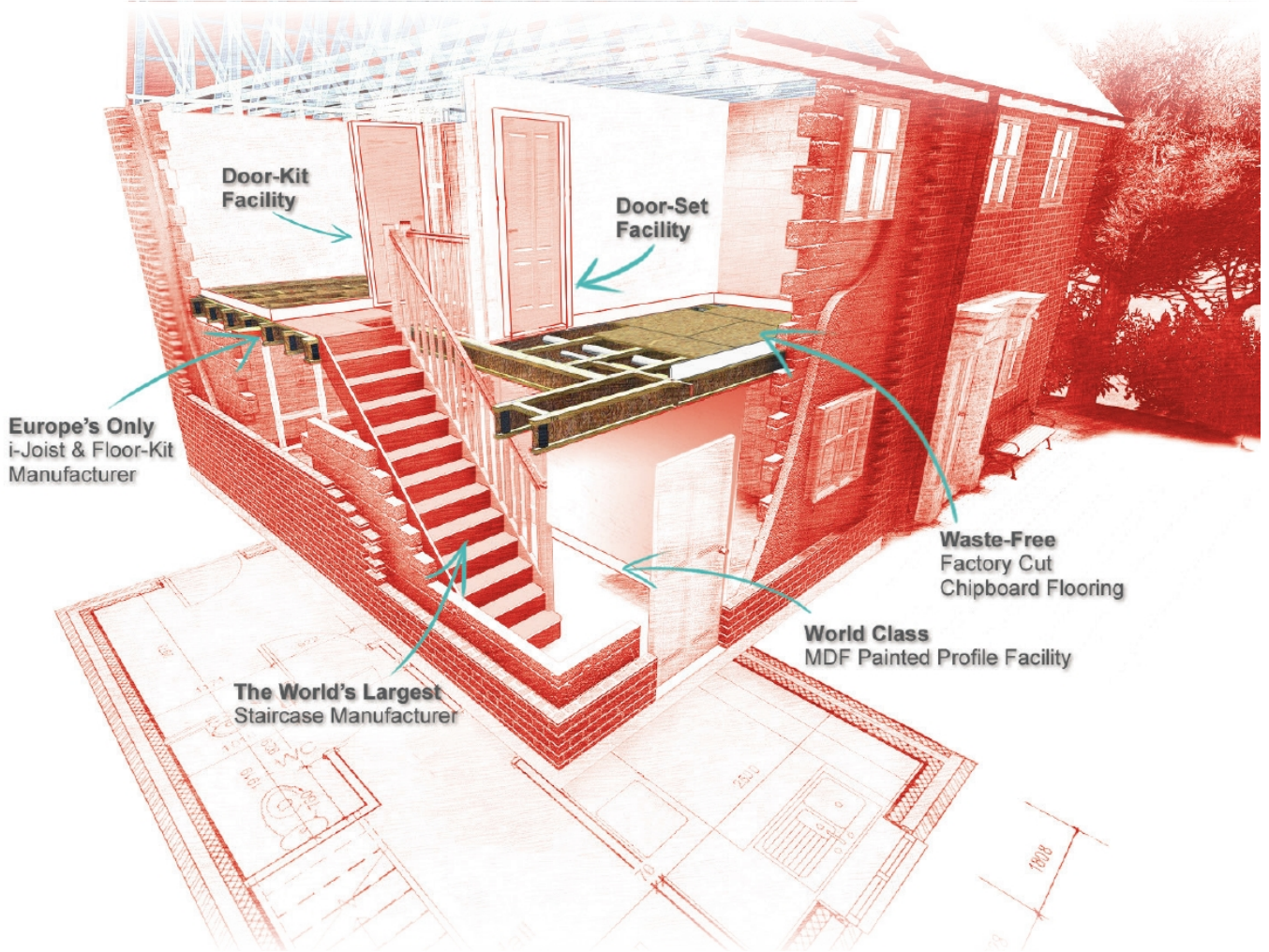




**STAIRCRAFT**  
Group



World Leading, Unique, Fully Integrated Stair,  
Floor & Door-Kit Solutions.

# Floor Installation Guide V2

 **TRUfloorsystems**<sup>®</sup>  
Part of the STAIRCRAFT Group



# Who We Are & What We Do

## Founded in 1984 Staircraft are now:

- The World's largest manufacturer of staircases with a capacity to supply 1600 new build homes every week
- Europe's only Stair, i-Joist, Floor-Kit & Door-Kit Manufacturer
- Proud to be one of few companies listed in consecutive years of the Sunday Times Virgin Atlantic Fast Track 100 League Tables (2017 and 2018)



## The Staircraft Group consists of three divisions:



(Independent Construction Technologies)

The Staircraft Integrated Solutions Division serve National House Builders and TRUbuildingsystems Division serve regional, timber frame and modular builders. Our ICT Division (Independent Construction Technologies) provides specialist design, performance and system testing services.

Our portfolio of products has expanded, resulting in Staircraft becoming the UK's first manufacturer of fully integrated staircases and i-Joist floor-kits.

We operate from multiple manufacturing facilities across 3 sites in the Midlands, covering over 200,000 sq. ft. Our team are passionate about manufacturing products that improve site safety and provide hassle-free installation.

Our investment in CNC technology is market leading, specifically designed to create innovative, time saving solutions for tradespeople. Improved site safety is also a key driver for our product development, resulting in products like our unique WellSafe™ stairwell fall protection system shown on page 18.

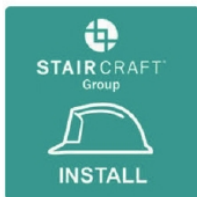


INTRODUCTION

### Introducing our brands



Our product categories continue to grow within our family of TRU brands. For more information visit [www.staircraftgroup.com](http://www.staircraftgroup.com)



**This Guide has been created to assist Installers. To view our Floor Technical Guide & other publications Download Our App (see page 13 for details) or visit [www.staircraftgroup.com](http://www.staircraftgroup.com) and click on Resource Centre**

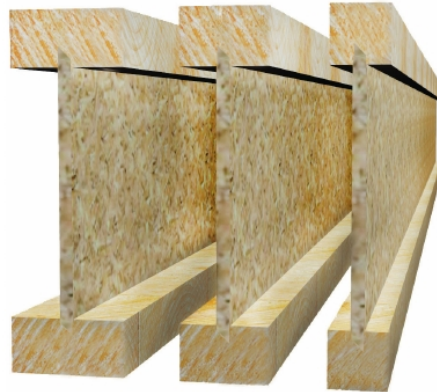


# TRUfloorsystems® TFSi-Joist

Part of the STAIRCRAFT Group

Over recent years i-Joists and floor decking/adhesives have been added to the product portfolio; often supplied with stairs for a fully integrated solution. Staircraft has, in a short period of time, become one of the largest engineered Floor Kit providers in the UK.

Our new technology i-Joist production plant is a natural progression for the business and is part of a massive investment programme, which will see the company enter new markets with innovative products. The high performance i-Joist is marketed in the UK under the TRUfloorsystems® TFSi brand which is part of a new family of TRU brands.



The TRUfloorsystems® i-Joists are produced in a new state of the art facility in Coventry, a few miles from the company's head office, door facility and principal stair factory. Additional factories are in West Bromwich, which service our TRUbuildingsystems® division.

Our precision made TFSi-Joists feature a high-quality timber flange combined with an enhanced OSB web. The joint between web and flange has been engineered to increase strength and there are no web joints, traditionally the weakest part of an i-Joist.



I-JOIST SYSTEM

Customer Name		PLOT 608 First Floor	
	<b>J1</b> TFSi 47 - 300 Length = 5679mm Weight = 18.74kg		
◀ Joist Hanger	STAIRCRAFT Integrated Solutions	End Block ▶	
004	Dunm Close, Nuneaton, CV11 4NF enquiries@staircraftgroup.com Tel: 024 7632 4120	004	

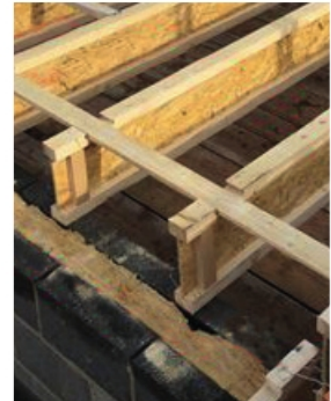
Printed labels are fixed to each joist to identify its location on the installation plan. The label carries bespoke information relating to each joist such as the customer and site details, joist length, weight and Staircraft contact details. Additionally the joist labels include a unique QR code, which when scanned by your phone will identify the installation detail relating to each end of the joist in question – this makes it easier to follow how the joist should be installed on site.

Use a QR Scanner to scan our TFS i-Joist labels and obtain an interactive 3D image on your phone of the construction details which apply to each i-Joist - see page 13 for more details.



# Leaders in Innovation

The Staircraft Group are renowned for leading the industry in bringing innovations to market which give our customers a fully integrated, problem free installation. A practical example which improves site safety, and simplifies floor construction is our unique factory applied notch detail. This will typically save 1 hour per plot of installation time along with 20kg of site waste, by eliminating the need for old fashioned perimeter noggings and z-clips and replacing these products with the safety bracing installed in the notch provided.



LEADERS IN INNOVATION

## Quality and Environmental Credentials

The Staircraft Group operates a comprehensive ISO 14001 registered environmental policy which covers both the manufacture of its products and the sourcing of raw materials.

TRUfloorsystems' i-Joists utilise wood fibre, certified under PEFC with a full chain of custody.

The TRUfloorsystems' i-Joists carry TRADA Q-Mark Approval and are ISO 9001 Quality Assured. All TRUfloorsystems' i-Joists are approved for use in structural applications by the NHBC.



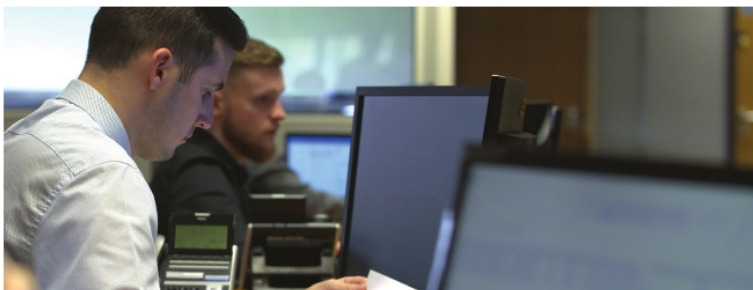
Engineered Wood Products



## Software and Technical Support

The Staircraft Group owns its own market leading iPro® design software package. Continuous development and upgrades keeps the software in line with all changes to Building Regulations and Codes of Practice. Exciting new in-house development allows for the design and supply of complete integrated Floor, Deck and Staircase systems.

We offer excellent technical support and can advise on all aspects of product use in Floors, Stairs, Roofs and Walls. Value engineering can save customers a great deal of cost without compromising performance. Full software and after sales service is also part of the extensive customer support package.



All Our Designs Are Revit Compatible

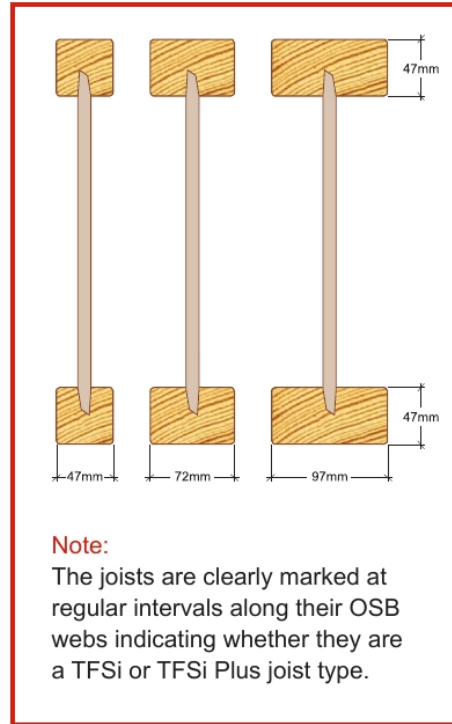


# Standard TFSi-Joist Specifications

Our range consists of a standard i-Joist (TFSi) and an enhanced i-Joist (TFSi PLUS) which has improved spanning capabilities.

	Type	47mm Wide	72mm Wide	97mm Wide
220mm Deep	TFSi (C24)	✓		
	TFSi Plus (C30+)	✓	✓	
240mm Deep	TFSi (C24)	✓		
	TFSi Plus (C30+)	✓	✓	✓
300mm Deep	TFSi (C24)	✓		
	TFSi Plus (C30+)	✓	✓	

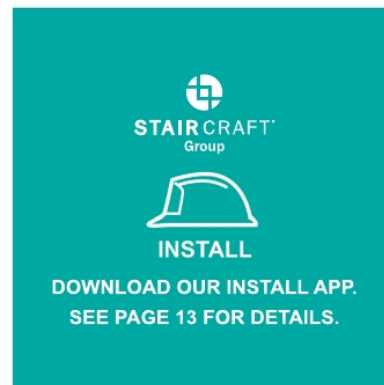
Depth	Type	Width	Max span @ 600c/c	Max span @ 400c/c
220mm	TFSi	47	3867	4320
	TFSi Plus	47	4123	4527
		72	4599	5004
240mm	TFSi	47	4166	4559
	TFSi Plus	47	4393	4777
		72	4850	5277
300mm	TFSi	47	4805	5224
		47	5024	5464
	TFSi Plus	72	5538	6027



SPECIFICATIONS

The spans shown above are based on the following assumptions:

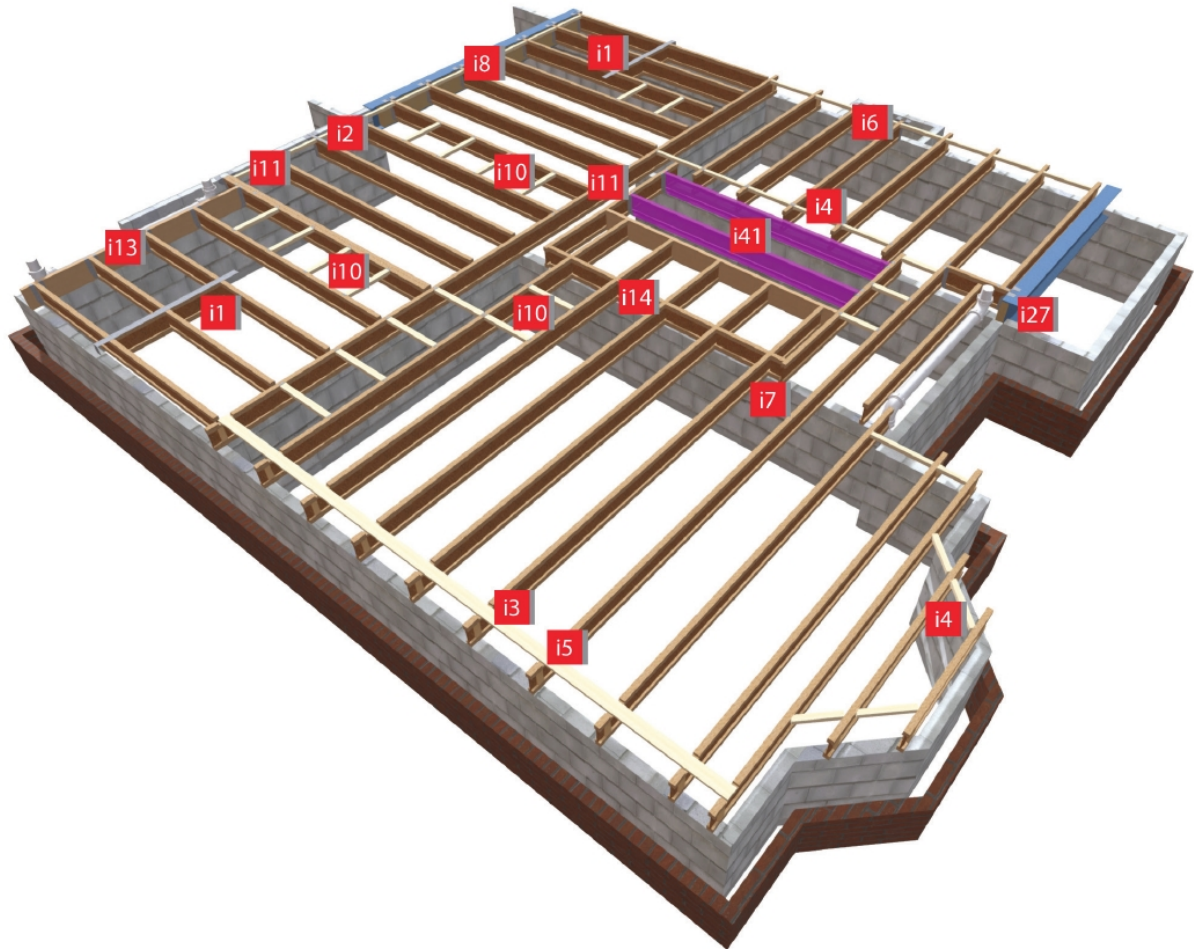
- Joists are simply supported on walls or joist hangers, with a minimum bearing of 45mm at each end
- The spans are maximum clear distances between inside face of walls
- Standard domestic (uniformly distributed) loading of 1.5kN/m<sup>2</sup> live load; 0.4kN/m<sup>2</sup> dead load; 0.35kN/m<sup>2</sup> partition allowance
- Calculations in accordance with EN1995-1-1 (Eurocode 5), its UK National Annex and PD6693-1





# Framing Details

Typical floor framing plan including construction detail “i” references



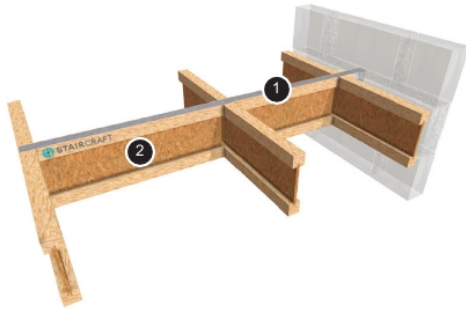
FRAMING DETAILS



Scan the QR codes on the following pages with your phone to bring the construction details to life!

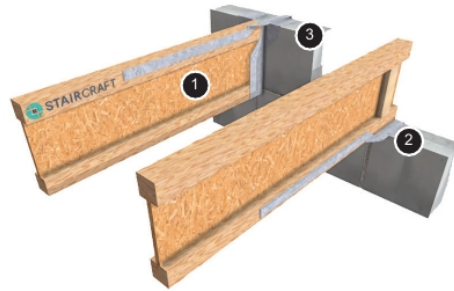
# Masonry Details

**i1** MASONRY WALL RESTRAINT  
– Perpendicular to Joist


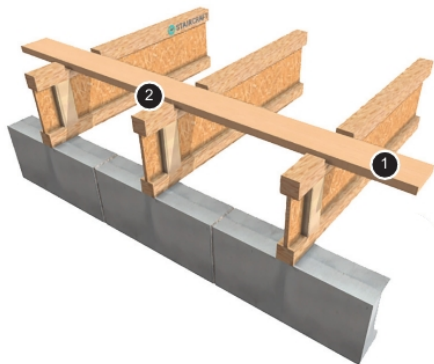
- 1 Thin metal restraint strap installed in accordance with the manufacturer's instructions
- 2 Full depth i-Joist or Min. 38x97mm noggings fixed to joists by skew nails

**i2** MASONRY WALL RESTRAINT  
– Parallel to Joist


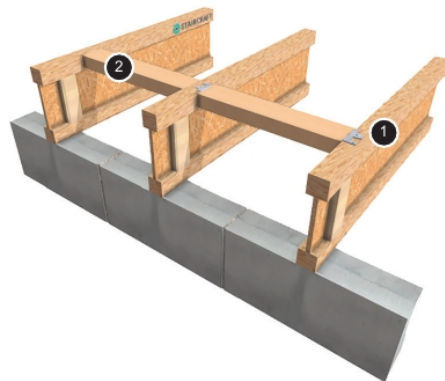
- 1 Restraint strap fitted to top flange for joists supported on hangers
- 2 Restraint strap fitted to bottom flange for built-in joists
- 3 Restraint straps may only be omitted if the joist has at least 90mm of direct bearing on the wall, provided that the height of the wall does not exceed 2 storeys

**i3** NOTCHED PERIMETER BRACING

- 1 Min 22 x 75mm perimeter bracing located in Staircraft factory-cut notched flanges. Fix using 1No 2.8 x 65mm nail to each joist
- 2 Where required butt joint bracing by skew nailing or fixing with screws
- i** **Information**  
Do NOT cut or notch flanges on site. Only factory notches allowed  
**Subject to Availability**

**i4** PERIMETER NOGGINGS





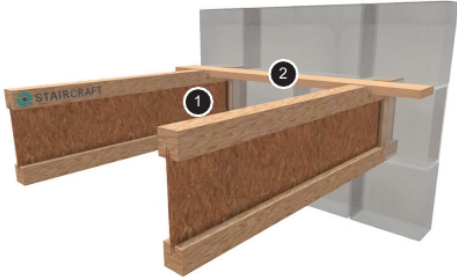
- 1 Noggings may be skew nailed to joists or supported on z-clips. Ensure all nail holes filled when using z-clips
- 2 Timber noggings require fitting between joists to support all free edges of decking. Please see floor design for locations.
- i** **Information**  
Do not cut or notch flanges on site

MASONRY DETAILS

# Masonry Details


MASONRY DETAILS

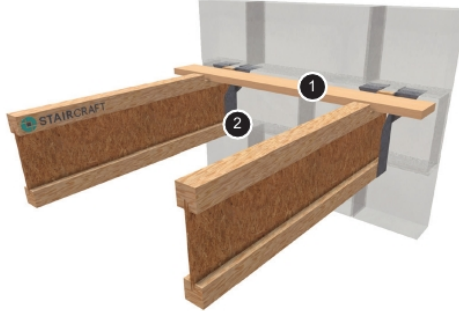
**i5** MASONRY WALL BEARING 



- 1 Note some capping devices may require less than a full bearing to prevent fouling the cavity
- 2 Perimeter nogging for decking support where required please refer to detail i3 & i4


**i** **Information**  
The joist bearing must be sealed to prevent air leakage. This may be achieved by the use of proprietary capping devices such as Staircraft factory fitted end blocks which DO NOT require sealant

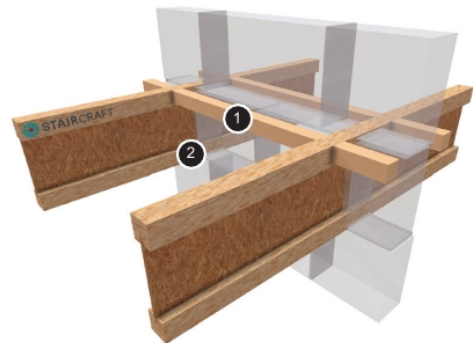
**i6** MASONRY HANGER 




- 1 Perimeter nogging for decking support where required please refer to detail i3 & i4
- 2 Proprietary approved masonry joist hangers (web stiffeners may be required)

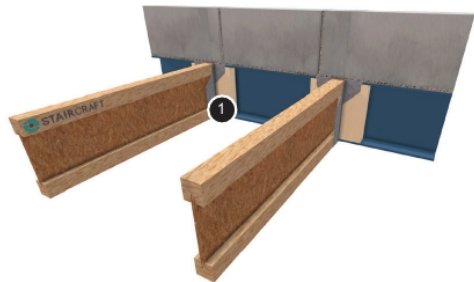
**i** **Information**  
Parallel restraint straps will be required with non-restraining hangers — see detail i2  
All round holes in hangers to be filled with 3.75mm diameter square twist nails x 30mm long or equivalent

**i7** INTERMEDIATE BEARING – Masonry Wall 



- 1 Perimeter nogging for decking support where required please refer to detail i4
- 2 Minimum 45mm bearing

**i8** STEEL BEAM CONNECTION – Masonry Wall 

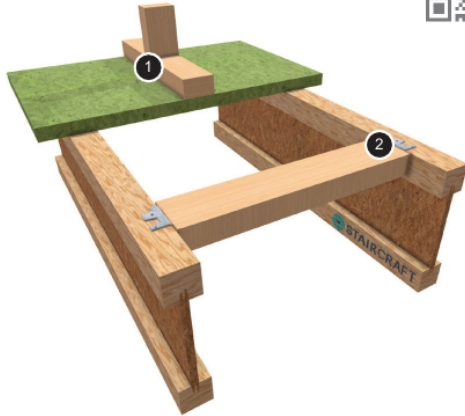


- 1 Timber packer installed between steel flanges to prevent rotation on hanger.



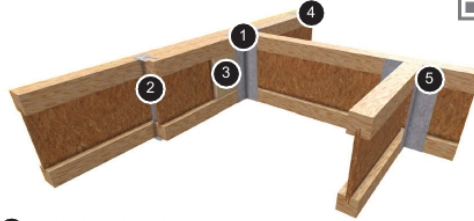
# Masonry / Timber Frame Details

## i10 NON LOAD BEARING PARTITION – Parallel to Joists



- 1 Non-load bearing stud partition fixed to noggings (max. self-weight of partition 0.8kN/m run)
- 2 Min 38 x 63mm partition noggings supported by metal z-clips, nailed in accordance with the manufacturer's instructions
- i Information**  
All round holes in z-clips to be filled with 3.75mm diameter square twist nails x 30mm long or equivalent

## i11 JOIST TO JOIST CONNECTION – I Clip



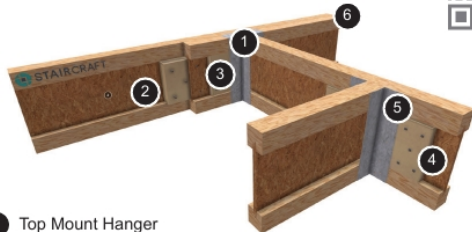
- 1 Top Mount Hanger
- 2 I Clips fitted max 200mm distance from hanger unless specified on design
- 3 Backer block on hanger face only for double joists if backer block is required by design
- 4 TRUfloorsystems i-Joist
- 5 Approved hanger designed for use without backer blocks

- i Information**  
All round holes in hangers to be filled with 3.75mm diameter square twist nails x 30mm long or equivalent. Note that approved hangers which require the use of backer blocks are available. See detail i12

### Backer Block Nailing

For top mount hangers, backer block tight to top flange of joist  
For face mount hanger, backer block tight to bottom flange  
Use 10n. 2.8mm nails x 75mm long for joists up to 75mm wide  
Use 10n. 2.8mm nails x 90mm long for joists over 75mm wide

## i12 JOIST TO JOIST CONNECTION – Filler Block



- 1 Top Mount Hanger
- 2 Filler block or proprietary metal clips must be installed with multiple joists
- 3 Backer block on hanger face only for double joists if backer block is required by design
- 4 Backer block both sides of single joist
- 5 Where backerless hangers are used backer block is not required. See design for correct detail
- 6 Double i-Joist

- i Information**  
All round holes in hangers to be filled with 3.75mm diameter square twist nails x 30mm long or equivalent. Note that approved hangers which eliminate the need for backer blocks are available. See detail i11

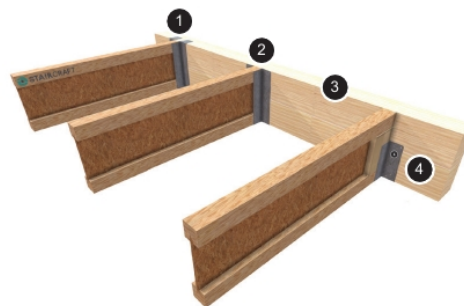
### Filler block nailing:

Filler blocks nailed with 10n. 3.75mm diameter nails x 75mm long, with ends clenched if possible

### Backer block nailing:

For top mount hangers, backer block tight to top flange of joist  
For face mount hanger, backer block tight to bottom flange  
Use 10n. 2.8mm nails x 75mm long for joist widths up to 75mm wide  
Use 10n. 2.8mm nails x 90mm long for joists over 75mm wide

## i13 JOIST TO SOLID BEAM CONNECTION




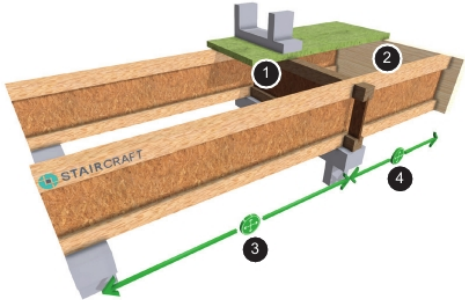
- 1 Top Mounted Hanger
- 2 Face Mounted Hanger
- 3 Rectangular Solid Section
- 4 Face mount hangers which do not laterally support the joist top flange require web stiffeners

- i Information**  
All round holes in hangers to be filled with 3.75mm diameter square twist nails x 30mm long or equivalent


# Masonry / Timber Frame Details

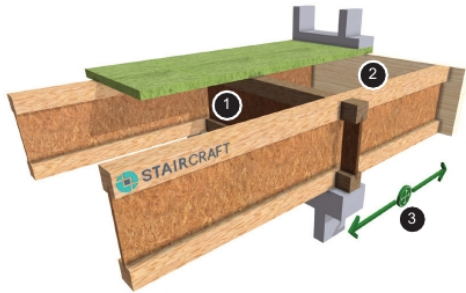
MASONRY / TIMBER FRAME DETAILS

**i14** NON LOAD BEARING CANTILEVER 




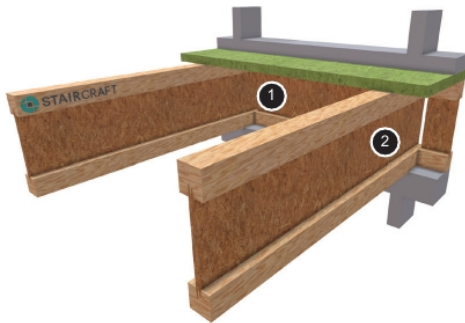
- 1 i-Joist Blocking
- 2 Rectangular Solid Section
- 3 Span
- 4 1/3 Span
- i** **Information**  
Max. cantilever length is 1200mm. No load applied on cantilever

**i15** CANTILEVER SUPPORTING WALL 




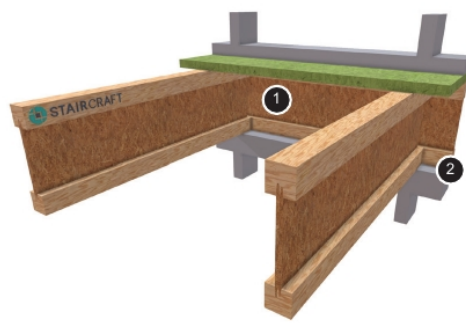
- 1 i-Joist Blocking
- 2 Rectangular Solid Section
- 3 600mm max.
- i** **Information**  
Structural cantilever must not exceed 600mm

**i20** I-JOIST BLOCKING PANEL 



- 1 i-Joist blocking panel. Fix blocking in place by skew nailing.
- 2 Joist has full bearing on timber plate


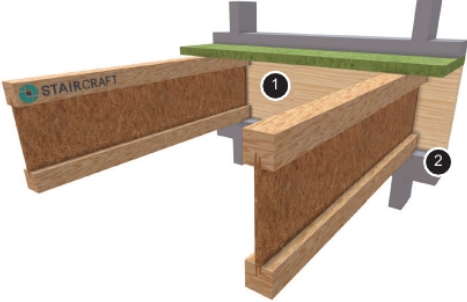
**i21** RIMBOARD (I-JOIST) 



- 1 i-Joist rim board. Fix rimboard to joists by nailing through the top and bottom flanges of the rimboard into the joists top and bottom flanges. 1 nail top and bottom
- 2 Joist requires 45mm minimum bearing


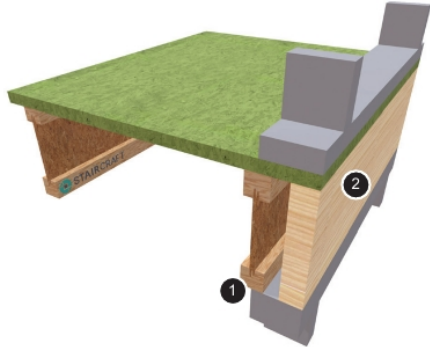
# Masonry / Timber Frame Details

**i22 RIM BOARD (SOLID)**


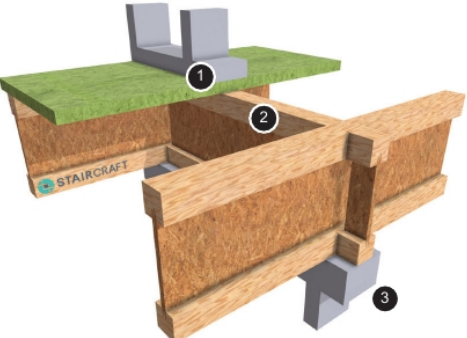
- 1 Ensure joists are fixed to rimboard by nailing through the rimboard into the top and bottom of the joist flanges. Min 1 nail top and bottom
- 2 Joist requires 45mm minimum bearing

**i23 PARALLEL TIMBER FRAME WALL**


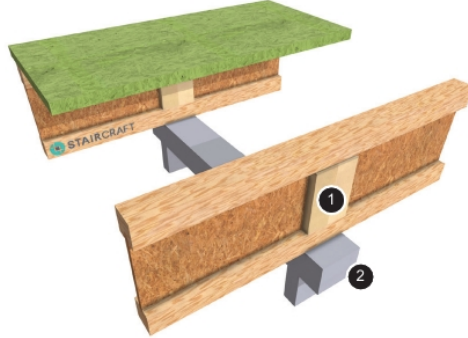
- 1 i-Joist with half bearing on wall
- 2 Rimboard to suit wall load

**i24 INTERMEDIATE BEARING – Load Bearing Wall Above**

- 1 Load bearing wall directly above wall below
- 2 i-Joist blocking panels between joists
- 3 Minimum 45mm bearing

**i25 INTERMEDIATE BEARING – No Load Bearing Wall Above**


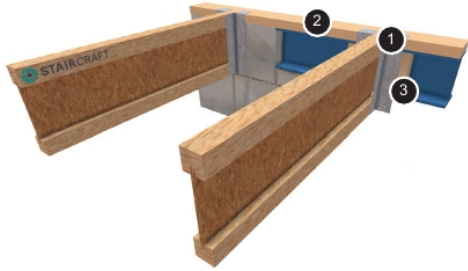
- 1 Web stiffeners where required
- 2 Minimum 45mm bearing

MASONRY / TIMBER FRAME DETAILS

# Masonry / Timber Frame Details

MASONRY / TIMBER FRAME DETAILS



**i26** STEEL BEAM CONNECTION – Wallplate

- 1 Top mount hangers
- 2 Timber bearing plate securely fixed to flange of steel beam/masonry wall (design of fixings by Building Designer)
- 3 If bottom flange of steel beam is not touching the back of the hanger timber blocking MUST be securely installed to the web of the steel.


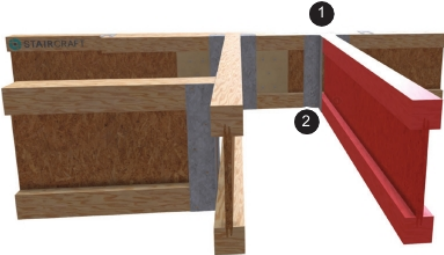
**i** **Information**  
All round holes in hangers to be filled with 3.75mm diameter square twist nails x 30mm long or equivalent

**i27** STEEL BEAM CONNECTION – Shot-fired

- 1 Hangers fixed directly to top flange of steel beam using SPIT P370 Cartridge tool using SC9 nails or equivalent, into the hanger flanges. Hanger must be deeper than the steel beam or timber packer must be installed to prevent hanger rotation.

**i41** SACRIFICIAL JOIST DETAIL

- 1 Snap top plate of the hanger and secure screws to all round holes that meet the top and bottom flanges (12no. screws in total)
- 2 Use 3.5 x 40mm multi-purpose wood screws for ease of removal

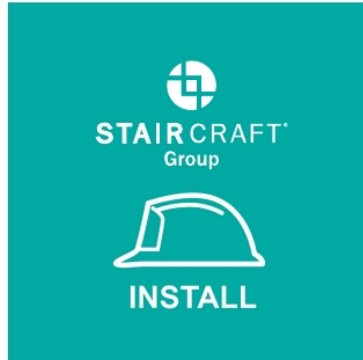
**i** **Information**  
i-Joist does not require backer blocks when UH hangers are used as detailed

**Sacrificial joists not required where WellSafe™ is used (see page 18 for details)**

**i42** NEWEL POST DETAIL




- 1 Notched Newel Post
- 2 Backer Block
- 3 Cullen MHIC hanger fitted to joist & backer block - notched into newel
- 4 Incoming joist fitted into installed MHIC hanger




# Download Our INSTALL APP to View Our Interactive Construction Details in 3D

INSTALL APP

**Features:**


- QR Scanner – scan our TFS i Joist labels on site for an interactive image.
- **TRUstair** – Stair Pre-Start Installation Guide.
- **TRUfloorsystems** – Floor Installation Guide with interactive construction details.
- **TRUfloorsystems** – Floor Technical Guide.
- Latest news.

**TO DOWNLOAD TO AN APPLE DEVICE:**



- 1 Click on App Store icon.
- 2 Search for Staircraft INSTALL and install the App for free.
- 3 Once installed tap the Staircraft icon to begin.

**TO DOWNLOAD TO AN ANDROID DEVICE:**



- 1 Open the Google Play store.
- 2 Search for Staircraft INSTALL and install the App for free.
- 3 Once installed tap the Staircraft icon to begin.



# Ancillary Block Sizes / Details

## Filler and Backer Block sizes

The length of backer and filler blocks should allow nail installation without splitting and are typically 300-600mm long.

JOIST DEPTH mm	220		240			300	
JOIST WIDTH mm	47	72	47	72	97	47	72
Block Height	120	120	140	140	140	200	200
Backer Thickness	18	30	18	30	44	18	30
Filler Thickness	36	60	36	60	88	36	60

### Backer block nailing:

For top mount hangers, backer block tight to top flange of joist.

For face mount hanger, backer block tight to bottom flange.

Use 10n. 2.8mm nails x 75mm long for joist widths up to 75mm wide.

Use 10n. 2.8mm nails x 90mm long for joists over 75mm wide.

### Filler block nailing:

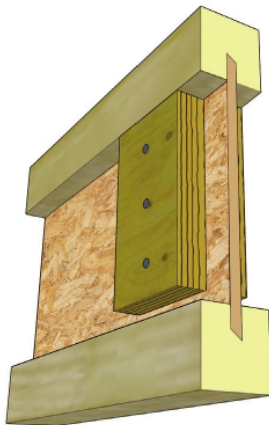
Filler blocks nailed with 10n. 3.75mm diameter nails x 75mm long, with ends clenched if possible.

## Web Stiffener Sizes

100mm wide web stiffeners

JOIST DEPTH mm	220		240			300	
JOIST WIDTH mm	47	72	47	72	97	47	72
Web Stiffener Height	120	120	140	140	140	200	200
Web Stiffener Thickness	18	30	18	30	44	18	30
Web Stiffener Nails (min 2.8mm diameter)	3no 65mm	3no 65mm	3no 65mm	3no 65mm	3no 90mm	3no 65mm	3no 65mm

ANCILLARY BLOCK SIZES

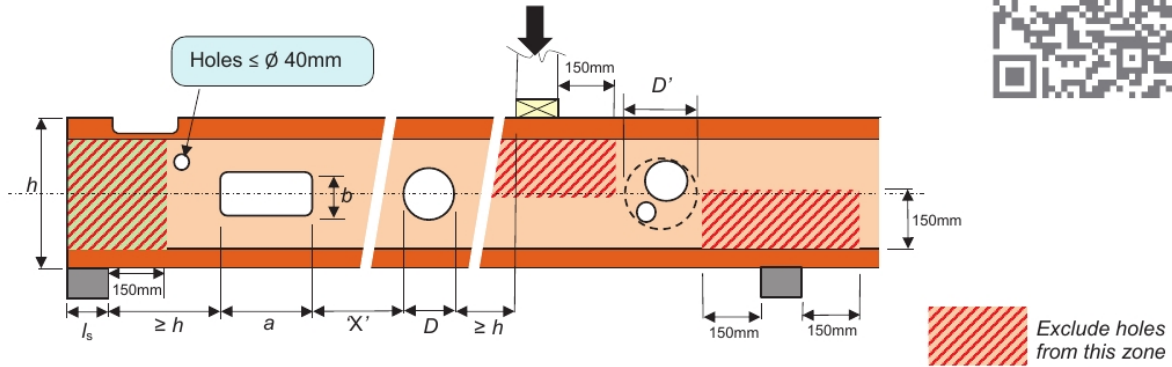


### Web stiffeners are required in the following instances:

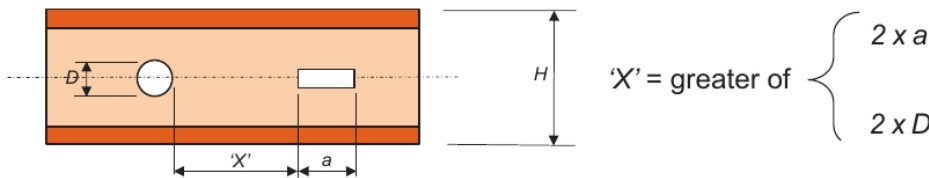
- When a higher load capacity is needed at an internal support.
- When the sides of the hanger do not support the i-Joist top flange.
- When a point load is applied, the web stiffeners should be tight to the top flange with a gap at the bottom flange.



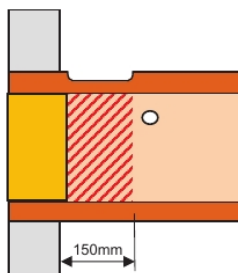
# i30 Permissible Web Hole Sizes & Locations



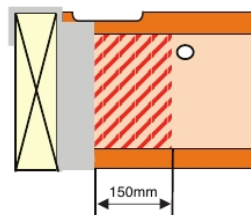
- Service holes must be cut out carefully (no overcutting) and must not be cut into the TFSi-Joist flange.
- Irrespective of the following size limits for circular and rectangular service holes, a minimum of 3mm clearance to each flange must be maintained.
- Holes should be cut on the centre line of the web where possible.
- Circular holes of 40mm diameter or less are allowed anywhere in the web, whilst maintaining 120mm horizontal spacing centre to centre.



- Multiple holes that do not comply with the above spacing rules must be considered as a larger circular or rectangular hole which encloses the group
- Circular hole diameter is limited to TFSi i-Joist depth minus 100mm
- Rectangular hole width (length, a) is limited to 300mm
- Rectangular hole depth (height, b) is limited to 200mm
- No service holes within 150mm of the edge of a bearing or load location, unless factory cut



Masonry support



Joist hanger support

PERMISSIBLE WEB HOLE SIZES & LOCATIONS



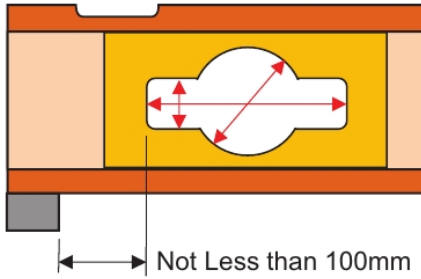
# i31 Hole Reinforcement Details

## Factory-fitted hole reinforcement options

Note: These hole reinforcements are **FACTORY FITTED ONLY** to approved Staircraft specifications.



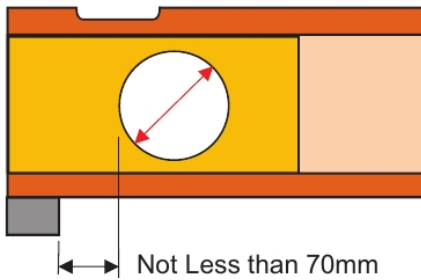
HOLE REINFORCEMENT



### HRV / MVHR (Circle and/or Slot)

Factory fitted 25mm x 400mm long MDF reinforcement blocks glued and nailed on both sides to approved Staircraft specifications

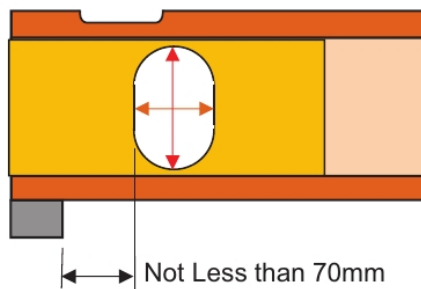
Maximum Hole Dimensions	
Diameter	135mm (Circle)
Height	70mm (Slot)
Width	230mm



### Circular SVP

Factory fitted 18mm x 400mm long MDF reinforcement blocks glued and nailed on both sides to approved Staircraft specifications

Maximum Hole Dimensions	
Diameter	120mm



### Obround SVP

Factory fitted 18mm x 400mm long softwood plywood reinforcement blocks glued and nailed on both sides to approved Staircraft specifications

Maximum Hole Dimensions	
Height	136mm
Width	118mm

**Note - The hole is slotted to enable SVP pipe falls**



# i40 Safety Bracing

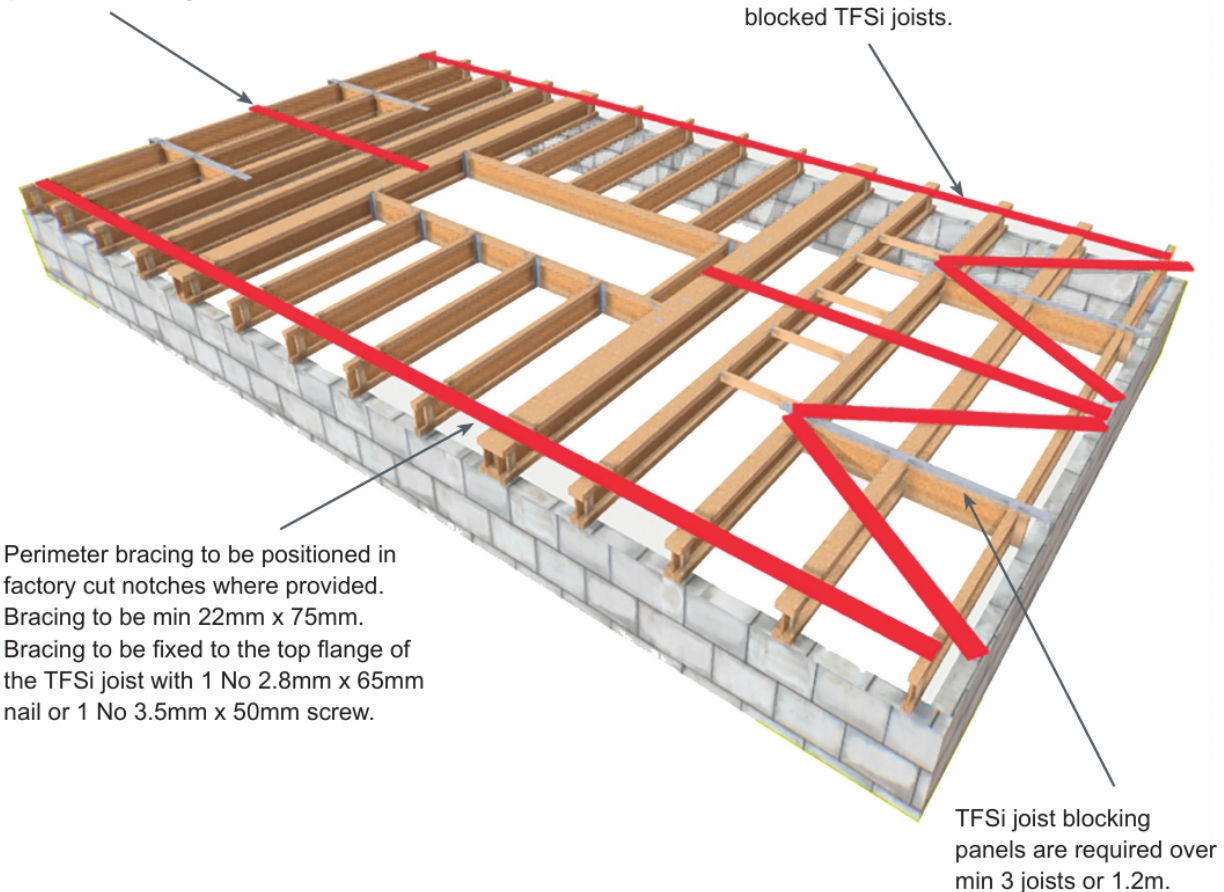
## Unbraced I-joists are unstable

- Do not walk on or apply any materials to TFSi-Joists until the floor system is properly braced.
- Perimeter bracing located in factory cut notches should be left in position to act as a permanent perimeter noggling for floor decking. All other temporary bracing should be removed in sequence as the decking is installed.
- Where masonry hangers are used, refer to manufacturer's literature for safe loading guidance during construction.



Additional bracing to be fixed to each joist as per perimeter bracing.

All longitudinal safety bracing must be attached to a section of diagonally braced and blocked TFSi joists.



SAFETY BRACING

### Notes:

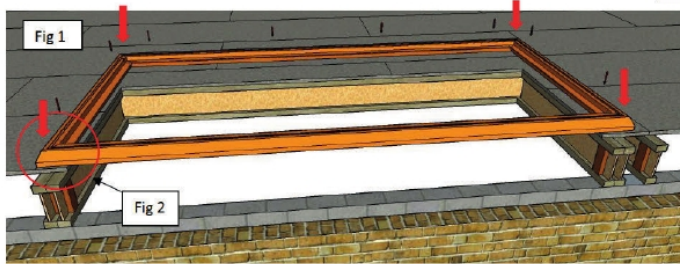
- All TFSi blocking panels to be cut accurately and squarely to maintain joist spacings.
- Additional blocking and bracing is needed for any area where TFSi joists run in the opposite direction.
- Cantilevered TFSi joists will also need bracing unless permanent closure pieces are fitted with the joist installation.

Staircraft 'WellSafe™' is a re-useable fall protection system that avoids the need to install temporary (sacrificial) joists, hangers and decking, and prevents operatives from falling through stairwell openings during floor installation. It can also be used as a working platform for loads up to 2kN/m<sup>2</sup> or 1.5kN concentrated.

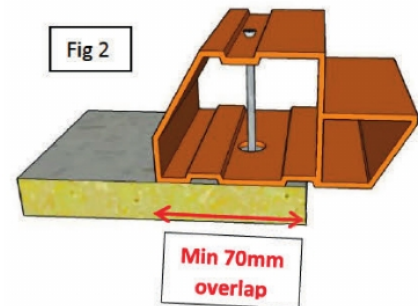
#### KEY BENEFITS:

- Removes the need for sacrificial joists
- Reusable and saves time
- Reduces waste by up to 100kg per plot

- **Frame:** Extruded aluminium section - 130mm (wide) x 70mm (deep)
- **Overall Dimensions:** 3015mm (long) x 1400mm (wide)
- **Grilles:** 30mm (deep) GRP mesh with gritted non-slip finish.



WellSafe™ is designed to cover an opening adjacent to walls up to 2875mm (long) x 1380mm (wide). Central openings can be longer or wider.



Position the frame over the opening **ensuring all 4 corners are fully supported** as shown in Fig 1. Ensure the frame overlaps the decking by min 70mm (Fig 2).

Fix the frame in position using 5mm x 100mm long screws fixed through the holes provided into the decking - min 2 screws per side.



Insert the grilles in the frame with the non-slip surface facing up.

One of the grilles contains a ladder flap which can be flipped back to allow a ladder to extend through the hatch. Fix the ladder using (min) 6mm cable ties through holes provided in the frame.

To access the floor, climb the ladder, lift and push the access grille back and climb through onto the floor. Immediately re-close the grille to avoid falls through the opening.

To pass large items up to the floor from below, remove whole grilles for access - always remembering to replace them straight away to prevent falls through the opening.



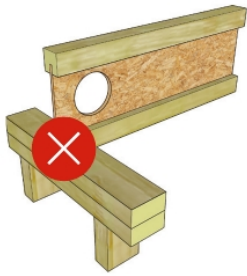


# Product Handling & Storage

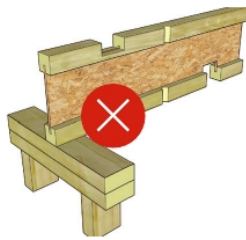
## THESE CONDITIONS ARE NOT PERMITTED UNDER ANY CIRCUMSTANCES

If in doubt, please ask before you cut.

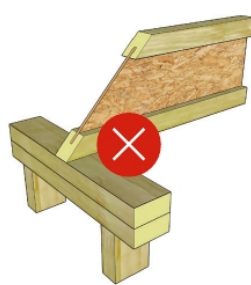
**NO holes close to TFSi-Joist ends** – use rules on page 15.



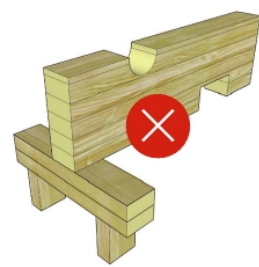
**NO site notching of TFSi-Joists flanges**



**NO bevel cuts beyond the inside face of wall**



**NO notches or holes in Glulam** – except as advised in manufacturers guidelines.



### STORAGE

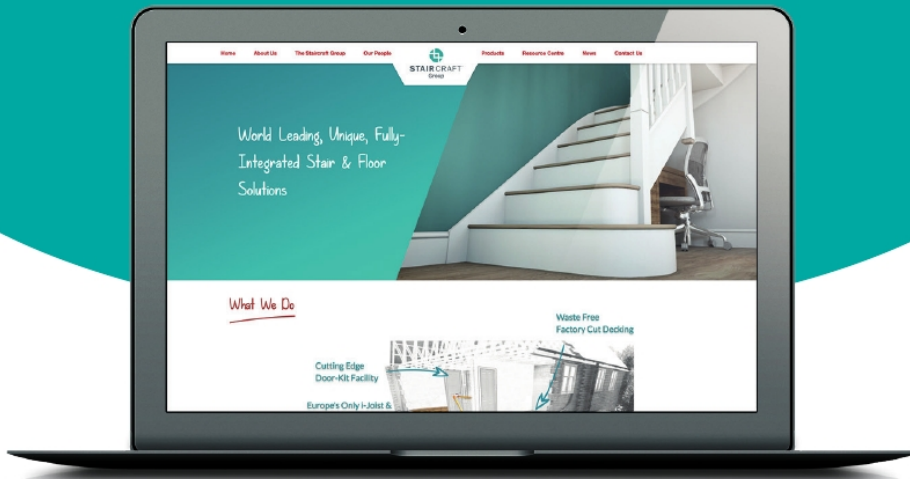
- Always store joist packs flat.
- Never lift or move the joist packs by the flanges.
- Ensure joist packs are properly covered and stored clear of the ground.

### HANDLING

- Always follow the HSE guidance on manual handling.

PRODUCT HANDLING & STORAGE

To Find Out More About Staircraft  
Visit [www.staircraftgroup.com](http://www.staircraftgroup.com)



Click on our Resource Centre - Our One-Stop Shop  
For Useful Technical Information, Guides,  
Accreditations, Apps and Websites



# The Staircraft Difference - Floors

## Our Unique Floors

### Features & Benefits

	Cost benefit	Installation benefit	Performance benefit	Site H&S benefit	Site waste benefit
<b>Stiffest i-Joist on the market</b> Longer spans; less deflection or bounce issues	✓	✓	✓✓✓		
<b>Superior fire resistance</b> The only i-Joist to permit 12.5mm plasterboard ceilings with no noggings	✓✓✓	✓✓✓	✓✓	✓✓✓	
<b>Pre-fitted end blocks</b> End blocks are factory fixed where i-Joists are built-in to masonry (at no added cost)	✓	✓✓	✓		✓
<b>Pre-drilled service holes</b> Any size/shape holes for pipes and services can be pre-drilled in our factory (at no added cost)	✓	✓✓✓		✓	✓
<b>Factory fixed hole reinforcement</b> Where holes exceed design limits we factory-fit reinforcements to make them permissible	✓✓✓	✓✓✓	✓✓✓		
<b>No perimeter noggings needed</b> By factory end notching our i-Joists, perimeter bracing can act as a permanent floor nogging	✓	✓✓✓	✓	✓✓	✓✓
<b>Pre-cut floor decking</b> Avoiding the need to cut floor decking on site and dispose of decking waste		✓	✓	✓✓	✓✓✓
<b>No sacrificial i-Joists needed</b> Our reusable 'WellSafe' system avoids the need for sacrificial i-Joist, hangers and decking	✓	✓✓✓		✓✓✓	✓✓✓
<b>Integrated floor and stair design</b> Ensuring the stairwell opening size is coordinated between the floor design and the stair design	✓	✓	✓	✓	✓
<b>'Working platform' design option</b> Allows the floor to be used as a working platform without the need for propping beneath	✓✓	✓✓	✓✓✓	✓✓	
<b>Unique i-Joist labelling</b> i-Joist labels indicate the relevant construction detail at each joist end, via QR code		✓✓			
<b>Waterproof framing plans</b> Site friendly framing plans which are weatherproof, tear proof and wipe clean		✓✓			
<b>3D construction details via APP</b> Access 3D details for each floor from QR codes on our framing plans and i-Joist labels		✓✓			
<b>Downlight fire approved</b> The only i-Joist with EN certified fire performance with downlights	✓		✓✓		
<b>60min fire resistance for flats</b> EN certificated 60min fire resistance using 2x15mm plasterboard in flats			✓		
<b>Superior acoustic performance</b> 43dB Scottish Regs can be satisfied without insulation or resilient bars	✓✓	✓✓	✓		✓
<b>Technical and Installation Guides</b> Including unique digital 3D construction details, downloadable via our APP	✓	✓✓✓	✓✓	✓✓✓	✓
<b>Automatic padstone design check</b> Possible padstone requirements flagged for engineers approval	✓		✓		
<b>REVIT BIM model output</b> Floor output as a 3D REVIT model as standard, enabling efficient resolution of design queries	✓	✓	✓		
<b>i-Joists can be pre-cambered</b> Large loads can be accommodated with small resulting deflections	✓		✓✓✓		

