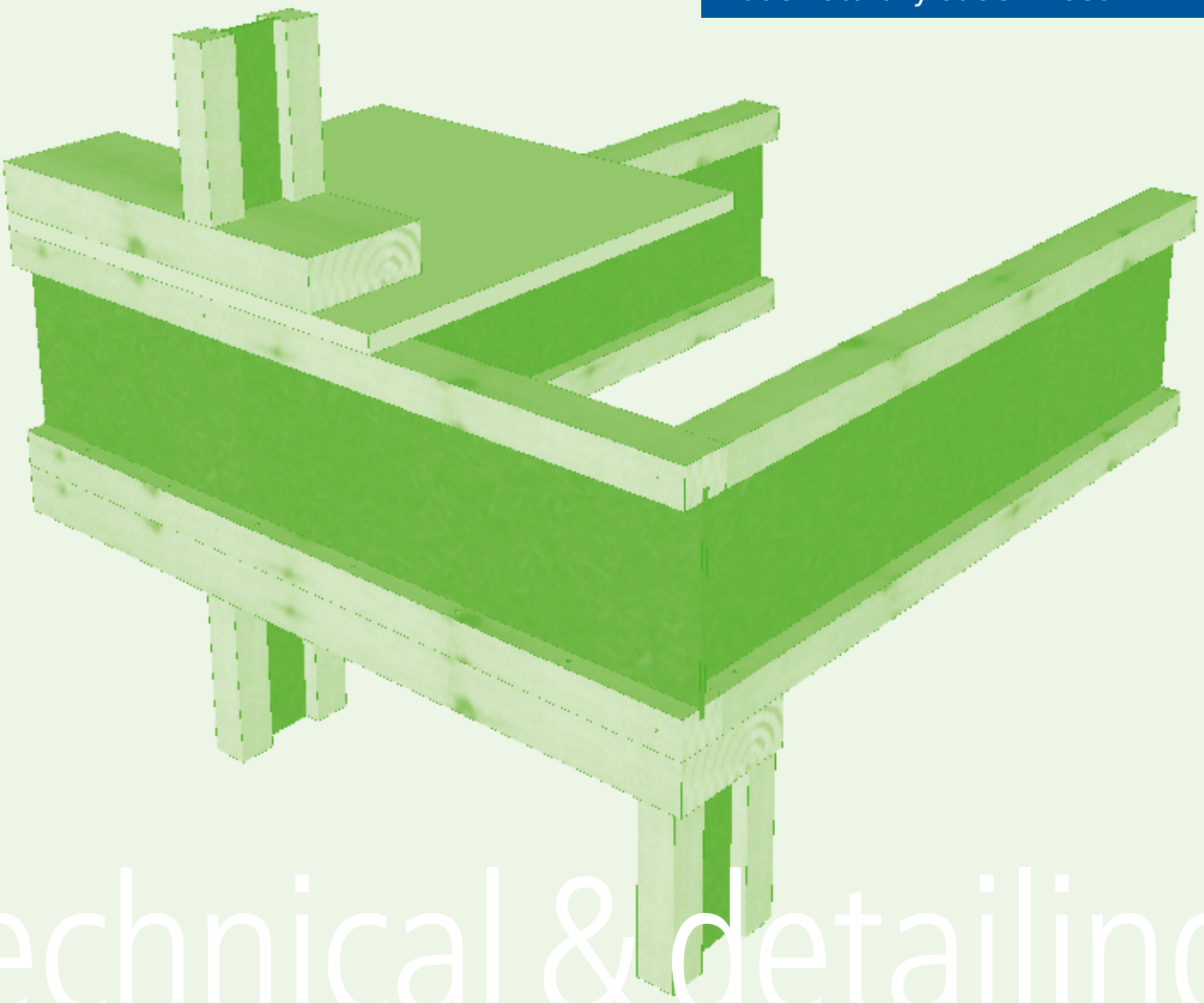
Technical Guide
STEICO*construction*

Construction elements –
made naturally **out of wood**



technical & detailing

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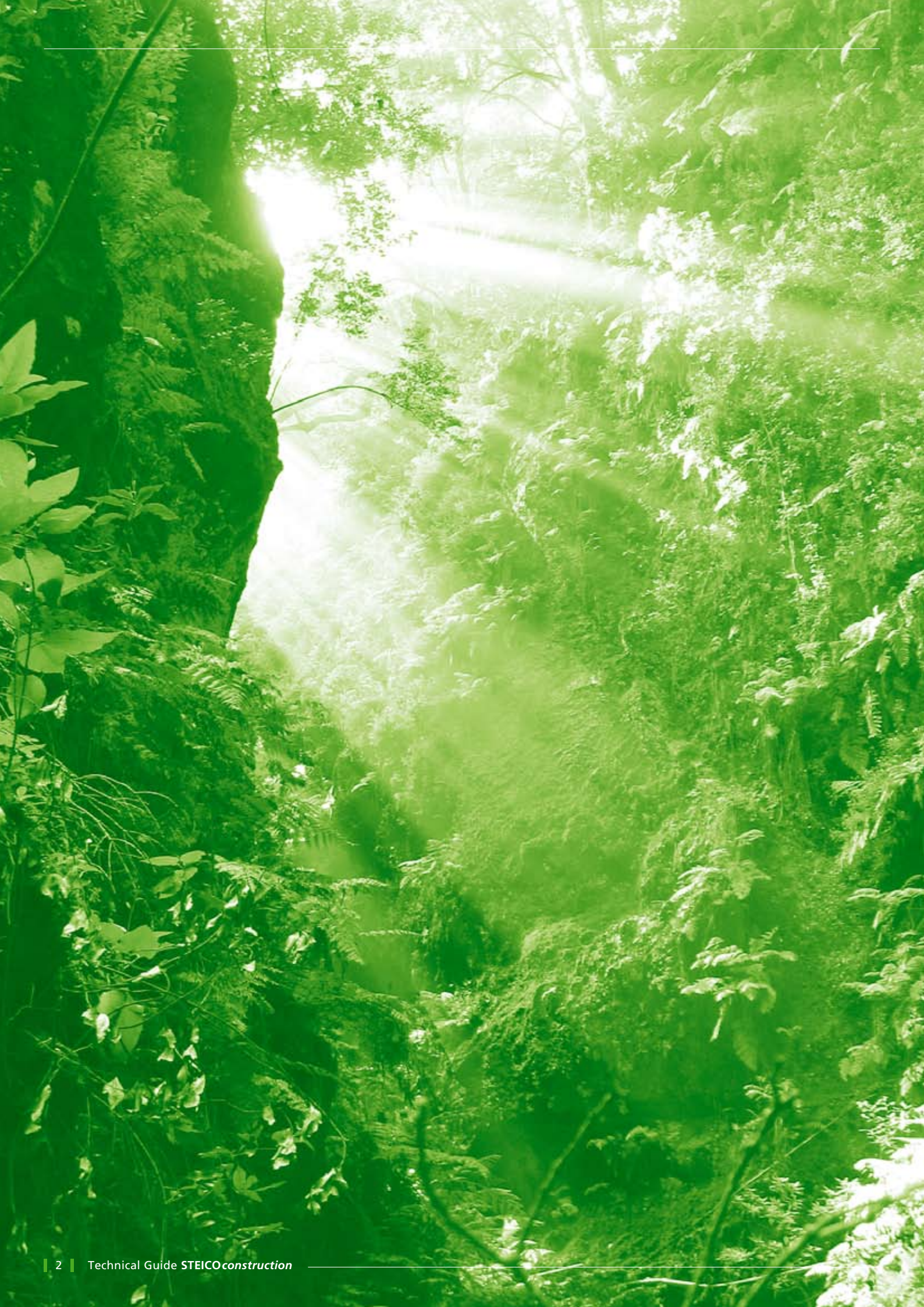
STEICO
building system products



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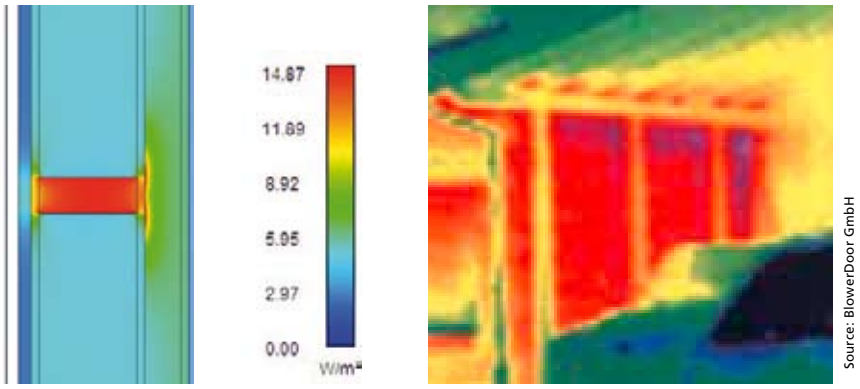
ENVIRONMENTALLY FRIENDLY BUILDING PRODUCTS MADE FROM SUSTAINABLE RESOURCES

How can we build in an energy efficient, environmentally responsible and sustainable way? This question has fascinated us since the start of our company in 1959, and in asking this we set ourselves a high quality standard for our products. Stringent tests and voluntary quality checks ensure that our products meet the highest requirements set for ecological building and modern methods of construction. Natureplus®, an independent quality certification organisation, certifies our insulation materials, and we only use raw materials certified by the FSC in our production.

As an insulation specialist we continually work to improve the energy efficiency of buildings and to increase their comfort to the occupier. The STEICO range of products includes products for both timber and masonry structures, for new buildings as well as refurbishments and renovations. Using STEICO products in a renovation project can increase the energy efficiency of the structure by up to twenty times.

Protecting our environment and the increasing costs of energy are two main drivers for the continued development of this system, and the production of I-Joists is a logical step forward. Lightweight and efficient engineered timber elements combined with high quality insulation materials form the basis for sustainable building and offer both security and comfort for future generations.



Source: BlowerDoor GmbH

Where high quality insulation materials are used, traditional solid wood often poses a technical challenge to designers due to its thermal inefficiency as it acts as a thermal bridge.

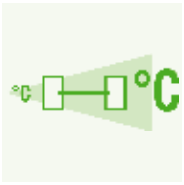
Solid wood wall joists or rafters are construction elements that can be inefficient where they act as a thermal bridge. With the STEICO*construction* building system such thermal bridges are reduced to a minimum due to the inherent efficiency of the I-Section profile.

FOLLOWING NATURE'S STEPS: I-JOISTS ARE IDEAL BUILDING ELEMENTS

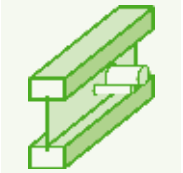
In nature we find numerous examples of highly efficient structures using a simple principle: where no materials are needed, none are used. The results speak for themselves: consistent performance values, lightweight, low embodied energy and improved energy efficiency in use.

STEICO I-Joists follow these principles and due to their characteristic profile offer the following advantages:

Natural engineering: Bamboo can reach a height of 38 meters with a stem circumference of just 80 centimeters, all enabled by innovative construction principles.



Reduction of thermal bridging

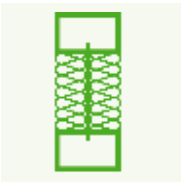


Easy installation of services

Lightweight. Easy to handle and install

Manufactured to standard depths and to match standard connectors

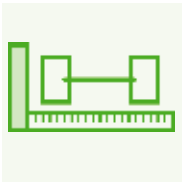
High dimensional stability through controlled moisture content



Available pre-insulated to form a solid cross section

High load bearing capacity

Easy to machine



Strict manufacturing tolerances

STEICO*joist* AND STEICO*wall* ARE NATURAL PRODUCTS

The production basis for all our joists is wood. Made from slow grown spruce, the flanges are kiln dried and machine stress graded thereby guaranteeing a sustainable quality and defined mechanical properties.

The webs are made from structural fibreboard, jointed along the length with a V-groove profile, and offer a very high shear capacity. Both the preparation and manufacturing processes of the flanges and webs and the installation of durable adhesives are carried out using the latest automated assembly lines.

To guarantee a consistently high quality of our products, both internal and external parties control the production process. The I-Joist received a European technical certification from the British Board of Agrément (BBA), ETA-06/0238, and carries the CE-mark.

A unique product is the STEICO*wall* – a pre-insulated stud insulated with natural wood fibres. The spaces between the flanges and the web are pre-insulated thereby eliminating the need to profile the insulation on site, and the stud therefore can be used in the same way as a traditional, solid stud. The insulation materials are made with STEICO's standard quality of natural wood fibres, ensuring excellent thermal conductivity values.

A PRODUCT FOR EACH APPLICATION

STEICO joist

I-Joist Building System for roofs & floors

Joists for applications such as floors or roofs.

Special characteristics:

- 8 mm thick structural fibreboard web for high shear capacities
- High quality grade softwood flange material

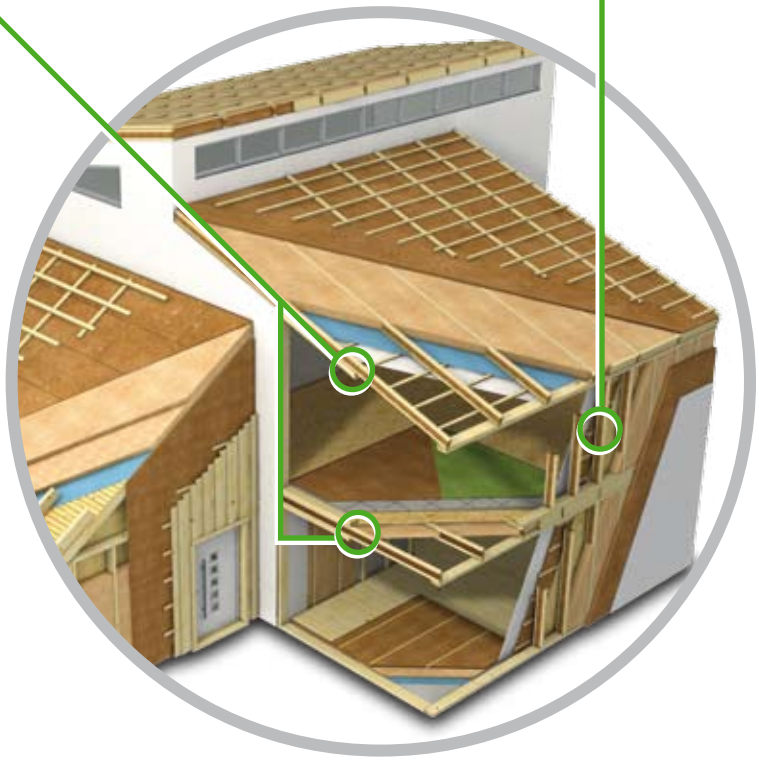
STEICO wall

I-Joist Building System for walls

Joists for wall stud applications.

Special characteristics:

- 6 mm thick structural fibreboard web to reduce thermal bridging
- Available as a pre-insulated stud

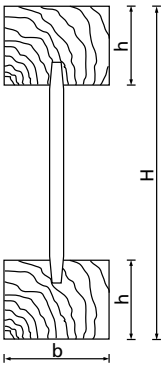


A perfect match with STEICO insulation materials

The STEICO I-Joists are suitable for combination with STEICO insulation materials. Whether wood, hemp or blown loose fibre insulation, fixed or flexible slabs, the complete range of STEICO's ecological insulation materials are available in conjunction with STEICO I-Joists.

For both new building and renovation projects STEICO offers a complimentary, optimised system enabling high-energy efficiency.

OVERVIEW OF ALL I-JOISTS



With lengths of up to 16 meters, depths from 160 – 400 mm, and the option for pre-insulation these combine to make the STEICO*construction* range a fully independent construction system.

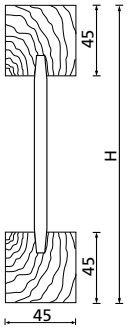
Type	Flange b*h [mm]	Depth H [mm]	Length [m]	Weight [kg / m]
STEICO*joist* SJ 45	45*45	200		2.9
	45*45	220		3.1
	45*45	240		3.2
	45*45	300		3.7
	45*45	350		4.2
STEICO*joist* SJ 60	60*45	200	Available in lengths of 7.0 m. 9.0 m. 13.5 m, and upon request up to 16 meters	3.5
	60*45	220		3.8
	60*45	240		3.9
	60*45	300		4.3
	60*45	350		4.8
	60*45	400		5.1
STEICO*joist* SJ 90	90*45	200		4.8
	90*45	220		5.1
	90*45	240		5.1
	90*45	300		5.6
	90*45	350		6.2
	90*45	400		6.4
STEICO*wall* * SW 45	45*45	160		2.4
	45*45	200		2.7
	45*45	240		2.9
	45*45	300		3.3
	45*45	350		3.6
STEICO*wall* * SW60	60*45	160	Available in lengths of 7.0 m. 9.0 m. 13.5 m, and upon request up to 16 meters	3.0
	60*45	200		3.3
	60*45	240		3.5
	60*45	300		3.9
	60*45	350		4.3
	60*45	400		4.5
STEICO*wall* * SW90	90*45	240		4.8
	90*45	300		5.2
	90*45	350		5.7
	90*45	400		5.8

* available in a pre-insulated option

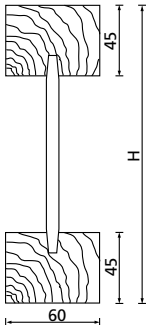
STEICO *joist*

With 8 mm thick structural fibreboard web for high shear applications

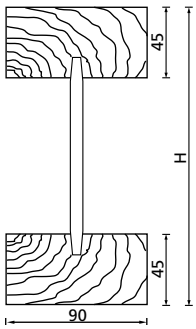
SJ 45



SJ 60



SJ 90



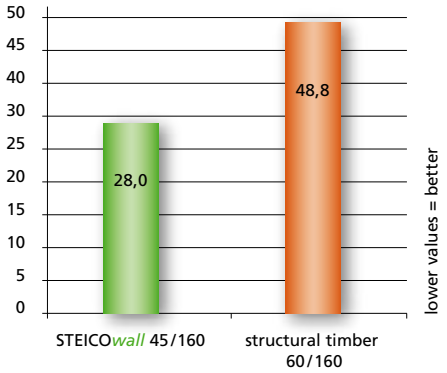
Properties

MATERIAL PROPERTIES

Material	Minimum density φ [kg / m³]	Declared thermal conductivity $\lambda_{\perp}$ [W/(m*K)] acc. to EN 12524	Specific heat capacity c [J/(kg*K)] acc. to EN 12524	Water vapour diffusion resistance μ acc. to EN 12524	
				Dry	Humid
Flange	500	0.13	1600	50	20
Web	900	0.18	1700	10	20

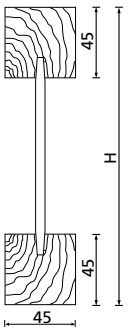
Please note: All STEICO fibreboards are made up of wood fibres aligned in the direction of the mattress. Wood is an anisotropic material with different physical properties along and across the fibres, and with differing properties between the fibreboards and flanges. For an accurate thermal conductivity calculation please use the above value for thermal conductivity, multiplied by 2.2.

Heat transfer per meter [mW]
By using these engineered wood products in combination with an effective vapour check and airtight barrier a significant reduction of heat loss can be achieved. With a temperature difference of one Kelvin per running meter of joist the following results can be achieved.

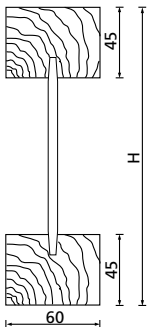


FIRE PERFORMANCE

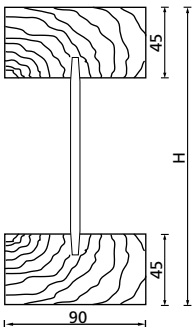
STEICO*joist* and STEICO*wall* have fire classifications according to EN 13501-1:2002: D-s2,d0



SW 45



SW 45



SW 45

STEICO wall

With 6 mm thick structural fibreboard web to reduce thermal bridging

Available in a pre-insulated option

CHARACTERISTIC DESIGN VALUES TO EC 5

Characteristic design values to EC 5

View page 12 for "Permissible design properties to BS 5268"

Type	Depth H [mm]	Moment capacity[a] My,k [kNm]	Flexural rigidity $EI_{y,\,mean}$ [$Nmm^2 * 10^9$]	Shear capacity V_k [KN]	Shear rigidity $GA_{y,\,mean}$ [MN]
STEICO*joist* SJ 45	200	7.09	327	10.92	2.09
	220	8.00	416	11.85	2.42
	240	8.92	516	12.75	2.76
	300	11.74	888	15.36	3.77
	350	13.46	1281	17.43	4.61
STEICO*joist* SJ 60	200	9.45	436	10.84	2.09
	220	10.66	554	11.75	2.42
	240	11.87	687	12.64	2.76
	300	15.57	1177	15.17	3.77
	350	18.03	1693	17.16	4.61
	400	20.45	2310	19.07	5.45
STEICO*joist* SJ 90	200	14.13	651	10.76	2.09
	220	15.96	827	11.65	2.42
	240	17.75	1025	12.51	2.76
	300	23.21	1752	14.97	3.77
	350	26.80	2513	16.88	4.61
	400	30.30	3419	18.71	5.45
STEICO*wall* SW 45	160	2.49	127	4.50	1.12
	200	3.56	227	5.47	1.63
	240	4.48	359	6.40	2.13
	300	5.90	618	7.72	2.89
	350	6.86	893	8.77	3.52
STEICO*wall* SW 60	160	3.32	169	4.48	1.12
	200	4.74	302	5.43	1.63
	240	5.95	477	6.34	2.13
	300	7.82	818	7.61	2.89
	350	9.06	1178	8.62	3.52
	400	10.28	1608	8.23	4.15
STEICO*wall* SW 90	240	8.89	711	6.27	2.13
	300	11.64	1216	7.50	2.89
	350	13.44	1746	8.47	3.52
	400	15.21	2376	8.23	4.15

Characteristic values prepared in accordance with the recommendations of ETAG 011 and BSEN 1995-1-1.

[a] The characteristic bending moments are based on the assumption that lateral bracing to compression flange (at a spacing not exceeding ten times the flange width) is in place.

Characteristic bearing values to EC 5

View page 13 for "Permissible bearing resistance to BS 5268"

Type	Depth H	End bearing [kN]				Intermediate bearing [kN]	
		Bearing length 45 mm		Bearing length 90 mm		Bearing length 90 mm	
		Web stiffener		Web stiffener		Web stiffener	
		no	yes	no	yes	no	yes
STEICO*joist* SJ 45	200	8.1	9.7	8.7	10.7	16.0	16.1
	220		10.0		11.0		16.4
	240		10.3		11.3		16.7
	300		11.2		12.2		17.6
	350		11.9		13.0		18.3
STEICO*joist* SJ 60	200	12.0	12.7	12.6	14.2	21.6	23.0
	220		13.0		14.5		23.3
	240		13.3		14.8		23.6
	300		14.2		15.7		24.5
	350		15.0		16.4		25.2
	400		15.7		17.2		26.0
STEICO*joist* SJ 90	200	12.9	13.8	15.3	15.4	29.3	35.9
	220		14.1		15.7		36.2
	240		14.4		16.0		36.5
	300		15.3		16.9		37.4
	350		16.0		17.7		38.2
	400		16.8		18.4		38.9

Values of k_{mod} to be used with EC 5 when designing STEICO I-joist products

Duration of load	Bending and axial resistance		Shear resistance		Bearing resistance	
	Service class 1	Service class 2	Service class 1	Service class 2	Service class 1	Service class 2
Permanent	0.60	0.60	0.30	0.20	0.60	0.60
Long term	0.70	0.70	0.45	0.30	0.70	0.70
Medium term	0.80	0.80	0.65	0.45	0.80	0.80
Short term	0.90	0.90	0.85	0.60	0.90	0.90
Instantaneous	1.10	1.10	1.10	0.80	1.10	1.10

γ_m can be taken as 1.3 in general

PERMISSIBLE DESIGN PROPERTIES TO BS 5268

Design values to BS 5268

Type	Depth H [mm]	Moment[a)] [kNm]	Bending rigidity [Nmm² * 10⁹]	Shear [kN]	Shear rigidity [MN]
STEICO*joist* SJ 45	200	2.73	327	2.70	1.25
	220	3.08	416	2.93	1.45
	240	3.43	516	3.15	1.66
	300	4.52	888	3.79	2.26
	350	5.25	1281	4.31	2.76
STEICO*joist* SJ 60	200	3.64	436	2.68	1.25
	220	4.10	554	2.90	1.45
	240	4.57	687	3.12	1.66
	300	6.00	1177	3.75	2.26
	350	6.94	1693	4.24	2.76
	400	7.87	2310	4.71	3.27
STEICO*joist* SJ 90	200	5.44	651	2.66	1.25
	220	6.14	827	2.88	1.45
	240	6.83	1025	3.09	1.66
	300	8.94	1752	3.70	2.26
	350	10.32	2513	4.17	2.76
	400	11.67	3419	4.62	3.27
STEICO*wall* SW 45	160	0.96	127	1.11	0.67
	200	1.37	227	1.35	0.98
	240	1.72	359	1.58	1.28
	300	2.27	618	1.91	1.73
	350	2.64	893	2.17	2.11
STEICO*wall* SW 60	160	1.28	169	1.11	0.67
	200	1.82	302	1.34	0.98
	240	2.29	477	1.57	1.28
	300	3.01	818	1.88	1.79
	350	3.49	1178	2.13	2.11
	400	3.96	1608	2.03	2.49
STEICO*wall* SW 90	240	3.42	711	1.55	1.28
	300	4.48	1216	1.85	1.73
	350	5.18	1746	2.09	2.11
	400	5.86	2376	2.03	2.49

[a)] The bending moments are based on the assumption that lateral bracing to the compression flange (at a spacing not exceeding ten times the flange width) is in place.

Notes:

- Values shown are for non-loadsharing conditions – where the joist centres are < 610 mm a load-sharing factor K_3 of 1,10 should be applied to the permissible moment, shear and bearing values in accordance with BS 5268.
- A K_{dom} factor of 1.12 can be adopted when designing residential floors within self contained dwellings where the imposed load is no greater than 1,5kN/m². This is applicable to the permissible moment, shear and bearing values.
- Data shown is taken from characteristic values, page 10.

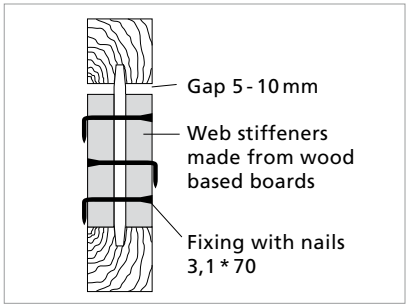
Permissible bearing resistance to BS 5268

Type	Depth H	End bearing [kN]				Intermediate bearing [kN]	
		Bearing length 45 mm		Bearing length 90 mm		Bearing length 90 mm	
		Web stiffener		Web stiffener		Web stiffener	
		no	yes	no	yes	no	yes
STEICO*joist* SJ 45	200	3.12	3.73	3.35	4.12	6.16	6.20
	220		3.85		4.24		6.31
	240		3.97		4.35		6.43
	300		4.31		4.70		6.78
	350		4.58		5.01		7.05
STEICO*joist* SJ 60	200	4.62	4.89	4.85	5.47	8.32	8.86
	220		5.01		5.58		8.97
	240		5.12		5.70		9.09
	300		5.47		6.04		9.43
	350		5.78		6.31		9.70
	400		6.04		6.62		10.01
STEICO*joist* SJ 90	200	4.97	5.31	5.89	5.93	11.28	13.82
	220		5.43		6.04		13.94
	240		5.54		6.16		14.05
	300		5.89		6.51		14.40
	350		6.16		6.81		14.71
	400		6.47		7.08		14.98

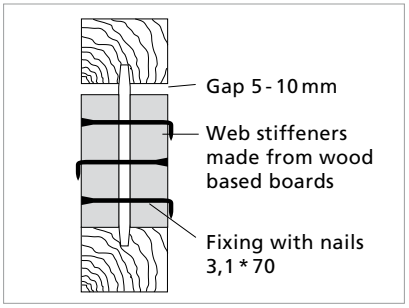
WEB STIFFENERS

In certain conditions or construction solutions web stiffeners are required. Web stiffeners are used specifically to increase the load capacity of middle and end bearings, to allow high point loads and to laterally support the top flange of the joist for some hanger applications.

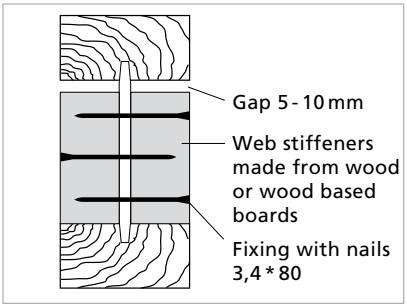
STEICO*joist* SJ 45



STEICO*joist* SJ 60



STEICO*joist* SJ 90



Installation of Web Stiffeners:

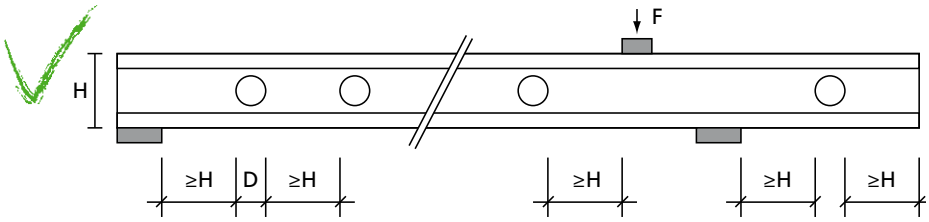
- For enhanced bearings, all pitched hanger and birdsmouth cut locations and where hangers do not restrain the top flange, web stiffeners must be fitted so that they are tight to the bottom flange and there is a 5-10 mm gap between the stiffeners and the top flange.
- Where concentrated point loads are applied onto the top flange, web stiffeners must be fitted so that they are tight to the top flange, leaving a 5-10 mm gap between the stiffeners and the bottom flange.

For web stiffener applications, please refer to Floor and Roof Construction Details

ACCESS AND SERVICE HOLES

Holes should be positioned in the middle of the web. The location and maximum sizes of the holes can be calculated in accordance with the drawing and table below.

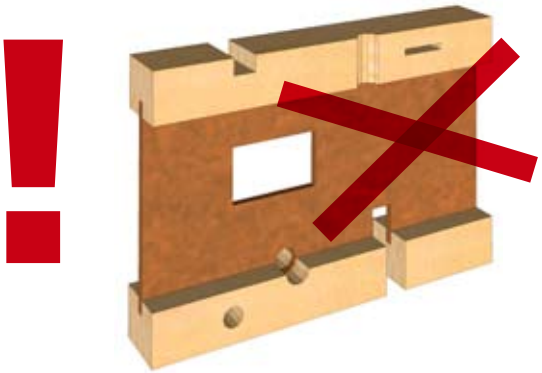
Holes up to a maximum 20 mm diameter can be made in any part of the web, as long as the distance between the edge of the holes is a minimum of 40 mm. A maximum row of 3 round holes with a diameter of up to 20 mm is allowed.



Joist depth	200 mm	240 mm	300 mm	360 mm	400 mm
Minimum distance to bearing or point load F	200 mm	240 mm	300 mm	360 mm	400 mm
Minimum distance between two holes	200 mm	240 mm	300 mm	360 mm	400 mm
Maximum diameter D	100 mm	140 mm	200 mm	200 mm	200 mm

INCORRECT HANDLING AND HOLES

- Notches and holes in the flanges are not allowed
- Holes have to be drilled
- Rectangular holes are not allowed



Floors

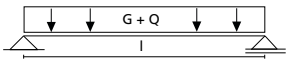
FLOOR APPLICATIONS

The STEICO*joist* is a geometrically optimised product using nature as its model. Suitable material is only used in those places where it meets the needs, resulting in a slender and economical building element for floors.

Modern structures require high performance and cost efficient constructions in which shrinkage and movement are a thing of the past. The carefully selected components used in the flange and web create a high quality engineered wood product, designed to reduce movement and other problems associated with solid timber floors.

Thanks to its engineered properties the STEICO*joist* is dimensionally stable, avoiding the need for mid span blocking to be installed and reducing the risk of nail popping in plasterboard by timber shrinkage. Due to its light-weight properties, new floors are easily incorporated into renovation projects where access is limited and handling issues are important.

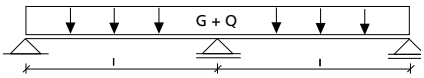
SPAN TABLES FOR STEICO*joist* TO BS 5268



Maximum single spans l in [m],
max. deflection = 12 mm or 0,003 * l

Live load Q=1,5 kN/m²

Type	Depth H [mm]	G=0,5 kN/m² Joist centers [mm]		G=0,75 kN/m² Joist centers [mm]		G=1,25 kN/m² Joist centers [mm]	
		400	600	400	600	400	600
STEICO*joist* SJ 45	200	4.27	3.77	4.13	3.60	3.89	3.34
	220	4.53	4.07	4.39	3.92	4.16	3.64
	240	4.79	4.30	4.64	4.16	4.40	3.92
	300	5.49	4.93	5.32	4.78	5.05	4.52
	350	6.02	5.41	5.84	5.24	5.53	4.66
STEICO*joist* SJ 60	200	4.56	4.09	4.42	3.94	4.18	3.65
	220	4.85	4.34	4.70	4.21	4.45	3.98
	240	5.12	4.59	4.96	4.44	4.70	4.21
	300	5.87	5.26	5.68	5.09	5.39	4.82
	350	6.43	5.77	6.23	5.58	5.90	5.29
	400	6.95	6.23	6.73	6.04	6.38	5.72
STEICO*joist* SJ 90	200	5.00	4.47	4.84	4.33	4.58	3.97
	220	5.32	4.76	5.15	4.60	4.87	4.30
	240	5.61	5.02	5.44	4.86	5.15	4.60
	300	6.43	5.76	6.23	5.57	5.90	5.27
	350	7.04	6.31	6.82	6.11	6.46	5.78
	400	7.61	6.82	7.37	6.60	6.98	6.24



Maximum double spans with mid span support l in [m],
max. deflection = 12 mm or 0,003 * l

Live load Q=1,5 kN/m²

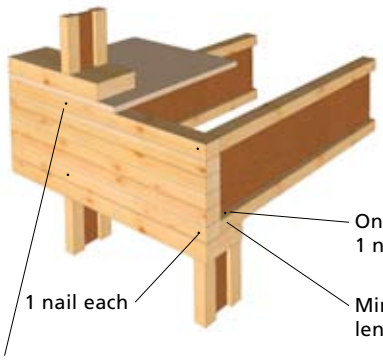
Type	Depth H [mm]	G=0,5 kN/m² Joist centers [mm]		G=0,75 kN/m² Joist centers [mm]		G=1,25 kN/m² Joist centers [mm]	
		400	600	400	600	400	600
STEICO*joist* SJ 45	200	4.80	4.31	4.70	4.21	4.52	3.61
	220	5.10	4.58	4.99	4.48	4.80	3.68
	240	5.38	4.84	5.27	4.50	5.08	3.68
	300	6.17	5.06	6.04	4.50	5.52	3.68
	350	6.77	5.06	6.63	4.50	5.52	3.68
STEICO*joist* SJ 60	200	5.13	4.60	5.02	4.30	4.83	3.59
	220	5.45	4.89	5.34	4.66	5.13	3.89
	240	5.76	5.17	5.64	5.01	5.42	4.19
	300	6.60	5.92	6.46	5.79	6.21	4.97
	350	7.23	6.49	7.08	6.07	6.81	4.97
	400	7.82	6.83	7.65	6.07	7.36	4.97
STEICO*joist* SJ 90	200	5.63	4.76	5.51	4.27	5.15	3.57
	220	5.98	5.15	5.86	4.63	5.58	3.86
	240	6.32	5.53	6.18	4.97	5.95	4.15
	300	7.24	6.49	7.08	5.95	6.81	4.97
	350	7.93	7.11	7.76	6.72	7.46	5.61
	400	8.57	7.68	8.38	7.46	8.06	6.23

General comments:

- These tables serve as a guide only and do not replace independent structural calculations prepared by a qualified structural engineer.
- Please pay special attention to the bearing conditions.
- Do not use these tables to calculate point or irregular loads.
- Spans indicated are between centres of supports.
- Q = design imposed loads. G= design dead loads. The UKTFA Engineered Wood Products Committee recommends a minimum dead load for single occupancy domestic floors of 0.41 kN/m² plus an allowance of 0.22 kN/2 for non-load-bearing partitions (up to 27 kg/m²), irrespective of whether they are present on the floor. Where partition positions are known, the final design should reflect the worst case of either the blanket UDL (incl partitions) or the dead load plus a minimum line load of 0.64 kN/m at partition locations. Where the calculated dead loads exceed the recommended minimum (ie: compartment floors and multi-boarded partitions), these must be adopted.
- Span tables are for floor joists under service class 1 conditions only.

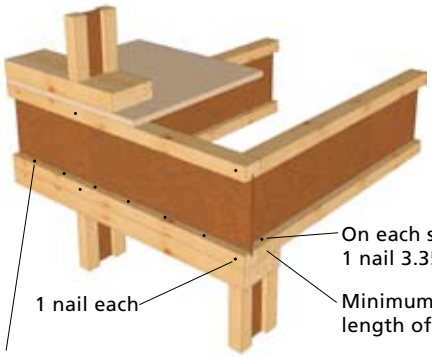
FLOOR CONSTRUCTION DETAILS

F1 Glulam (e.g. Panelam) Rim Board



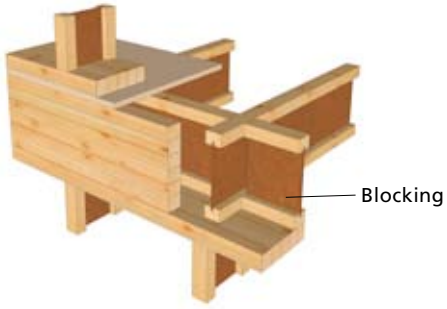
Minimum nailing for class 1 structures to be 3.00*75 nails at 300 mm centres which should be applied at each interface where lateral loads are to be transferred. Refer to UKTFA "Design Guidance on Disproportionate Collapse" for further information

F2 Rim Joist STEICO*joist*



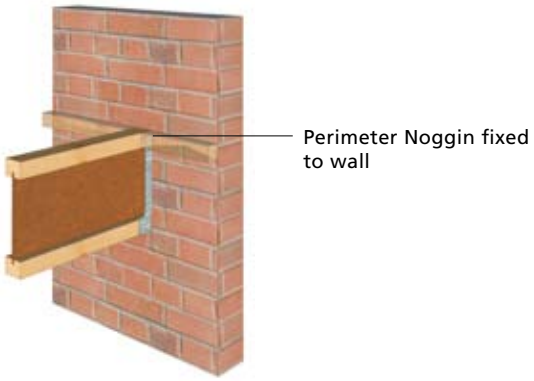
Minimum nailing for class 1 structures to be 3.00*75 nails at 300 mm centres which should be applied at each interface where lateral loads are to be transferred. Refer to UKTFA "Design Guidance on Disproportionate Collapse" for further information

F3 Glulam (e.g. Panelam) rim board with STEICO*joist* blocking



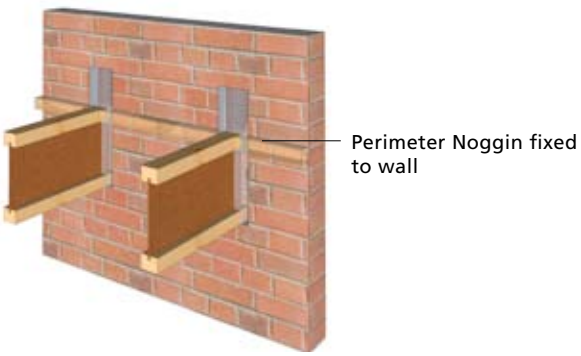
Minimum nailing for class 1 structures to be 3.00*75 nails at 300 mm centres which should be applied at each interface where lateral loads are to be transferred. Refer to UKTFA "Design Guidance on Disproportionate Collapse" for further information

F4 Bearing onto block or brick wall



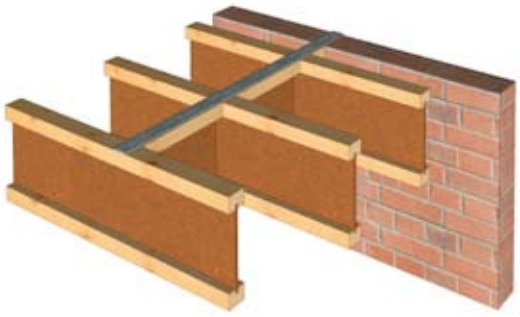
Top flange masonry hanger suitable for STEICO*joist*

F5 Bearing onto block or brick wall



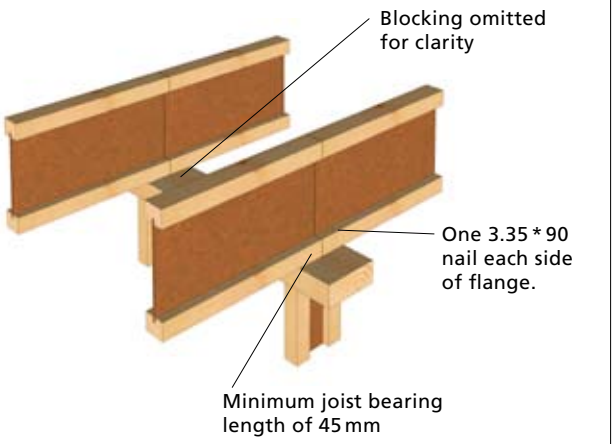
STEICO*joist* built into wall – ensure minimum 45 mm bearing and provide end caps or suitable alternative to prevent moisture ingress to the joist, thermal bridging and air leakage.

F6 Masonry wall restraint

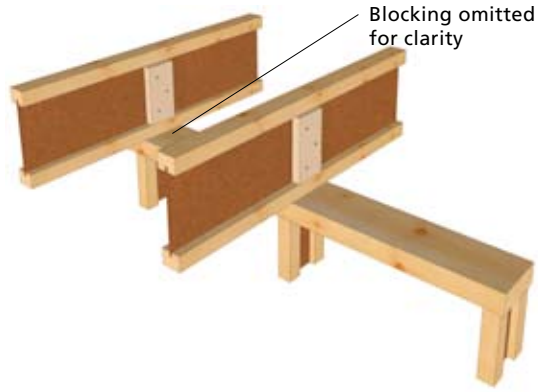


Galv masonry strap restraint fixed to minimum 3 joists in accordance with manufacturers recommendations.
38 x (0.5H) noggin under strap.

F7 Intermediate bearing with joists discontinuous

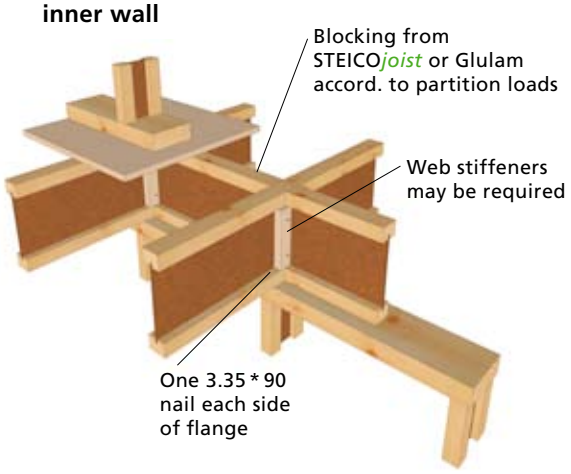


F8 Intermediate bearing with continuous joists

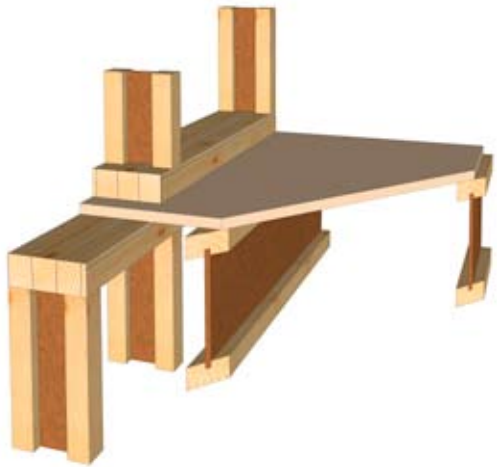


Web stiffeners may be required

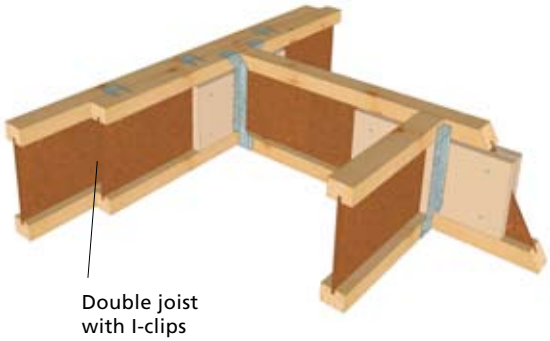
F9 Intermediate bearing with load bearing inner wall



F10 Connection Floor / Wall

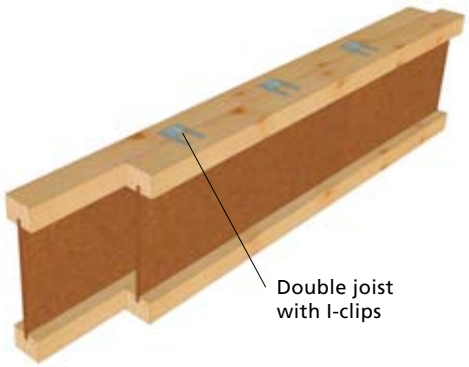


F11 Joist to Joist



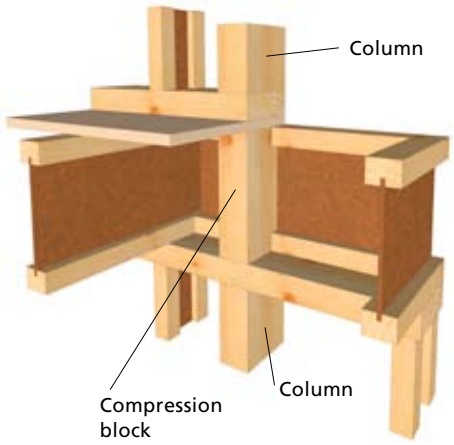
Backer blocks may not be required when using special hangers

F12 Double Joist



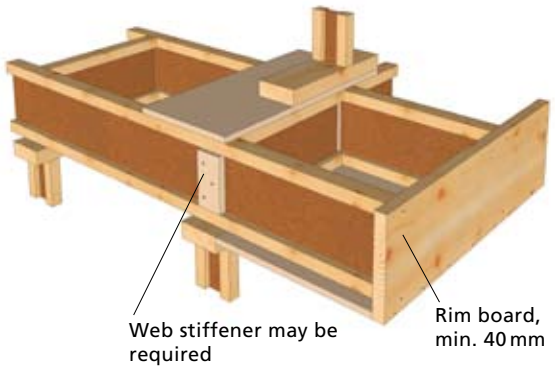
FLOOR CONSTRUCTION DETAILS

F13 Transfer of high point loads



F14 Different hanger applications

F15 Cantilever



Please make sure that external parts are protected against weather

NOTES TO THE DETAILS

Bearing lengths

- End bearing minimum 45 mm
- Intermediate bearing minimum 90 mm

Fastening

- Where bearing onto an external timber frame wall, STEICO*joists* must be secured to a Glulam (e.g. Panelam) rim board, a rim joist or other suitable EWP using nails or suitable hangers.
- STEICO*joists* to be nailed to head plates using minimum 2 No. 3.35 * 90 ring shank nails, located a minimum of 38 mm from the end of the joist. Nails may need to be skewed slightly to avoid splitting the bearing plate.
- Compression blocks to be fixed to each flange using a minimum of one 3.35 dia nail, ensure the block is cut from a suitable EWP to the same depth as the joist.
- Typical details shown are for guidance only and should be used in conjunction with the recommendations and requirements of the UKTFA, British Standards, NHBC, Zurich, Robust Details Ltd, Building regulations and all other statutory bodies.

CONNECTORS

Face fix hangers

Type	Depth H [mm]	Simpson-HWS® connector	Type of nail [mm][a] Prim. / sec. joist	Cullen® connector	Type of nail [mm][b] Prim. / sec. joist	
STEICO*joist* SJ 45	200	–	–	FFI 46 / 195	3.75 * 30	For allowable loads please check the current Simpson Strong-Tie® or Cullen® Building Products technical brochures.
	220	–	–	FFI 46 / 220	3.75 * 30	
	240	IUT 9	4.0 * 40	FFI 46 / 235	3.75 * 30	
	300	IUT 11	4.0 * 40	FFI 46 / 300	3.75 * 30	
	350	IUT 14	4.0 * 40	FFI 46 / 350	3.75 * 30	
STEICO*joist* SJ 60	200	–	–	FFI 61 / 195	3.75 * 30	
	220	–	–	FFI 61 / 220	3.75 * 30	
	240	IUT 3510	4.0 * 40	FFI 61 / 235	3.75 * 30	
	300	IUT 3512	4.0 * 40	FFI 61 / 300	3.75 * 30	
	350	IUT 3514	4.0 * 40	FFI 61 / 350	3.75 * 30	
	400	IUT 380/60	4.0 * 40	FFI 61 / 400	3.75 * 30	
STEICO*joist* SJ 90	200	–	–	FFI 92 / 195	3.75 * 30	
	220	–	–	FFI 92 / 220	3.75 * 30	
	240	IUT 410	4.0 * 40	FFI 92 / 235	3.75 * 30	
	300	IUT 412	4.0 * 40	FFI 92 / 300	3.75 * 30	
	350	IUT 414	4.0 * 40	FFI 92 / 350	3.75 * 30	
	400	IUT 380/91	4.0 * 40	FFI 92 / 400	3.75 * 30	

[a] Fixing nails to be installed strictly in accordance with Simpson Strong-Tie® recommendations
[b] sheradised square twist nails

General comments:

- The distance between the main and secondary joist must not exceed 3 mm
- Please pay special attention to bearing conditions
- All hangers to be installed strictly in accordance with the manufacturers recommendations
- Web stiffeners for lateral restraint to the top flange of the joist may be required

CONNECTORS

Top fix hangers

Type	Depth H [mm]	Simpson-HWS® connector	Type of nail [mm] [a]		Cullen® connector	Type of nail [mm] [b]	
			Primary joist	Second. joist		Prim. / sec. joist	
STEICO*joist* SJ 45	200	ITB 200/45	4.0*50	4.0*40	TFI 46/200	3.75*30	For allowable loads please check the current Simpson Strong-Tie® or Cullen® Building Products technical brochures.
					UI 46/200	3.75*30	
	220	ITT 219/47	4.0*50	4.0*40	TFI 46/220	3.75*30	
		ITB 220/45	4.0*50	4.0*40	UI 46/220	3.75*30	
	240	ITT 9.5	4.0*50	4.0*40	TFI 46/241	3.75*30	
		ITB 240/45	4.0*50	4.0*40	UI 46/240	3.75*30	
	300	ITT 11.88	4.0*50	4.0*40	TFI 46/300	3.75*30	
		ITB 302/45	4.0*50	4.0*40	UI 46/300	3.75*30	
	350	ITT 349/47	4.0*50	4.0*40	TFI 46/350	3.75*30	
					UI 46/350	3.75*30	
STEICO*joist* SJ 60	200	ITB 200/60	4.0*50	4.0*40	TFI 61/200	3.75*30	
					UI 61/200	3.75*30	
	220	ITT 219/60	4.0*50	4.0*40	TFI 61/220	3.75*30	
		ITB 220/60	4.0*50	4.0*40	UI 61/220	3.75*30	
	240	ITT 359.5	4.0*50	4.0*40	TFI 61/241	3.75*30	
		ITB 240/60	4.0*50	4.0*40	UI 61/240	3.75*30	
	300	ITT 3511.88	4.0*50	4.0*40	TFI 61/300	3.75*30	
		ITB 302/60	4.0*50	4.0*40	UI 61/300	3.75*30	
	350	ITT 349/60	4.0*50	4.0*40	TFI 61/350	3.75*30	
					UI 61/350	3.75*30	
	400	ITT 399/60	4.0*50	4.0*40	TFI 61/400	3.75*30	
					UI 61/400	3.75*30	
STEICO*joist* SJ 90	200	ITB 200/90	4.0*50	4.0*40	TFI 92/200	3.75*30	
					UI 92/200	3.75*30	
	220	ITT 219/91	4.0*50	4.0*40	TFI 92/220	3.75*30	
		ITB 220/90	4.0*50	4.0*40	UI 92/220	3.75*30	
	240	ITT 49.5	4.0*50	4.0*40	TFI 92/241	3.75*30	
		ITB 240/90	4.0*50	4.0*40	UI 92/240	3.75*30	
	300	ITT 411.88	4.0*50	4.0*40	TFI 92/300	3.75*30	
		ITB 302/90	4.0*50	4.0*40	UI 92/300	3.75*30	
	350	ITT 349/91	4.0*50	4.0*40	TFI 92/350	3.75*30	
					HI 92/350	3.75*30	
	400	ITT 399/91	4.0*50	4.0*40	TFI 92/400	3.75*30	
					HI 92/400	3.75*30	

[a] Fixing nails to be installed strictly in accordance with Simpson Strong-Tie® recommendations
[b] sheradised square twist nails

General comments:

- The distance between the main and secondary joist must not exceed 3 mm
- Please pay special attention to bearing conditions
- All hangers to be installed strictly in accordance with the manufacturers recommendations
- Web stiffeners for lateral restraint to the top flange of the joist may be required

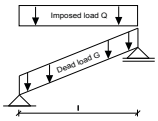
Roofs

ROOF APPLICATIONS

Highly insulated roof constructions are easily achieved with the STEICO*joist*. The light-weight joist provides the user a fast and efficient installation for which your carpenter will thank you.

SPAN TABLES FOR STEICO*joist* TO BS 5268

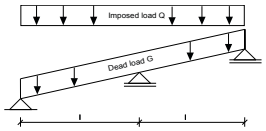
Single span max. deflection = 0,003 * l



Maximum single spans l in [m] Imposed load Q = 0,75 kN / m²

Type	Depth H [mm]	0,5 kN / m² < G ≤ 0,75 kN / ²						0,75 kN / m² < G ≤ 1,0 kN / ²					
		α < 5°		5° ≤ α < 30°		30° ≤ α < 45°		α < 5°		5° ≤ α < 30°		30° ≤ α < 45°	
		Joist centers [mm]		Joist centers [mm]		Joist centers [mm]		Joist centers [mm]		Joist centers [mm]		Joist centers [mm]	
		400	600	400	600	400	600	400	600	400	600	400	600
STEICO*joist* SJ 45	200	4.83	4.18	4.52	3.92	4.09	3.55	4.57	3.95	4.27	3.69	3.84	3.33
	220	5.25	4.54	4.91	4.25	4.44	3.85	4.97	4.29	4.63	4.01	4.17	3.62
	240	5.65	4.89	5.29	4.58	4.78	4.15	5.35	4.63	4.99	4.32	4.49	3.89
	300	6.80	5.89	6.35	5.51	5.74	4.99	6.44	5.57	6.00	5.20	5.40	4.68
	350	7.70	6.67	7.19	6.24	6.50	5.64	7.29	6.32	6.79	5.89	6.11	5.30
STEICO*joist* SJ 60	200	5.30	4.58	4.96	4.29	4.49	3.89	5.01	4.32	4.68	4.04	4.22	3.65
	220	5.76	4.97	5.39	4.66	4.87	4.22	5.45	4.70	5.08	4.39	4.58	3.96
	240	6.20	5.36	5.80	5.02	5.24	4.55	5.86	5.06	5.47	4.73	4.93	4.27
	300	7.45	6.45	6.96	6.04	6.29	5.46	7.05	6.10	6.57	5.69	5.91	5.13
	350	8.42	7.30	7.88	6.83	7.12	6.18	7.98	6.91	7.44	6.44	6.69	5.80
	400	9.36	8.11	8.75	7.59	7.90	6.86	8.87	7.68	8.26	7.16	7.43	6.45
STEICO*joist* SJ 90	200	6.03	5.20	5.65	4.88	5.12	4.43	5.70	4.90	5.32	4.59	4.80	4.15
	220	6.55	5.65	6.13	5.30	5.55	4.81	6.19	5.33	5.78	4.99	5.21	4.51
	240	7.05	6.08	6.60	5.71	5.97	5.17	6.67	5.75	6.22	5.37	5.61	4.85
	300	8.47	7.32	7.92	6.86	7.16	6.21	8.01	6.92	7.47	6.46	6.73	5.83
	350	9.57	8.28	8.95	7.76	8.10	7.02	9.06	7.83	8.45	7.31	7.61	6.60
	400	10.63	9.20	9.94	8.62	8.98	7.80	10.06	8.71	9.38	8.12	8.44	7.32

Double span max. deflection = 0,003 * l



Maximum double spans l in [m] Imposed load Q = 0,75 kN / m²

Type	Depth H [mm]	0,5 kN / m² < G ≤ 0,75 kN / ²						0,75 kN / m² < G ≤ 1,0 kN / ²					
		α < 5°		5° ≤ α < 30°		30° ≤ α < 45°		α < 5°		5° ≤ α < 30°		30° ≤ α < 45°	
		Joist centers [mm]		Joist centers [mm]		Joist centers [mm]		Joist centers [mm]		Joist centers [mm]		Joist centers [mm]	
		400	600	400	600	400	600	400	600	400	600	400	600
STEICO*joist* SJ 45	200	6.03	5.26	5.66	4.93	5.14	4.49	5.80	5.06	5.42	4.73	4.91	4.28
	220	6.53	5.70	6.13	5.35	5.57	4.86	6.29	5.48	5.88	5.13	5.32	4.64
	240	7.02	6.13	6.59	5.75	5.99	5.23	6.76	5.89	6.32	5.51	5.72	4.99
	300	8.42	7.35	7.90	6.89	7.18	6.27	8.10	6.46	7.58	6.33	6.85	5.82
	350	9.52	7.54	8.93	7.40	8.11	6.84	9.02	6.46	8.39	6.79	7.72	6.22
STEICO*joist* SJ 60	200	6.63	5.78	6.22	5.42	5.66	4.93	6.38	5.56	5.97	5.20	5.40	4.71
	220	7.18	6.26	6.74	5.88	6.13	5.35	6.91	6.03	6.46	5.64	5.85	5.10
	240	7.72	6.73	7.24	6.32	6.58	5.75	7.43	6.48	6.95	6.06	6.28	5.48
	300	9.25	8.06	8.67	7.57	7.88	6.88	8.89	7.76	8.32	7.26	7.52	6.57
	350	10.44	9.11	9.79	8.55	8.90	7.77	10.04	8.46	9.39	7.86	8.49	7.23
	400	11.58	9.73	10.87	9.08	9.88	8.41	11.04	8.73	10.29	8.34	9.42	7.65
STEICO*joist* SJ 90	200	7.57	6.60	7.11	6.20	6.46	5.64	7.29	5.97	6.82	5.94	6.17	5.38
	220	8.20	7.15	7.70	6.71	7.00	6.11	7.89	6.46	7.38	6.44	6.68	5.83
	240	8.81	7.68	8.27	7.21	7.52	6.56	8.48	6.94	7.93	6.92	7.18	6.26
	300	10.55	9.20	9.90	8.63	9.00	7.85	10.15	8.31	9.49	8.28	8.59	7.49
	350	11.90	10.38	11.17	9.74	10.15	8.86	11.45	9.38	10.71	9.34	9.69	8.45
	400	13.19	11.51	12.38	10.80	11.25	9.82	12.69	10.41	11.87	10.23	10.73	9.37

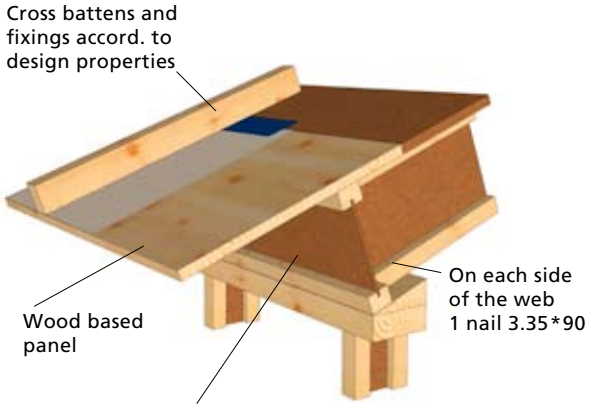
SPAN TABLES FOR STEICO*joist*

Different roof constructions require varying dead loads and pitches from 5 degrees upwards. In the tables these dead loads are summarised, with a difference made for light roofs (e.g. sheeting roofs) and heavier roofs (e.g. tiled roofs) and guidance on pitches between 5 degrees up to 45 degrees.

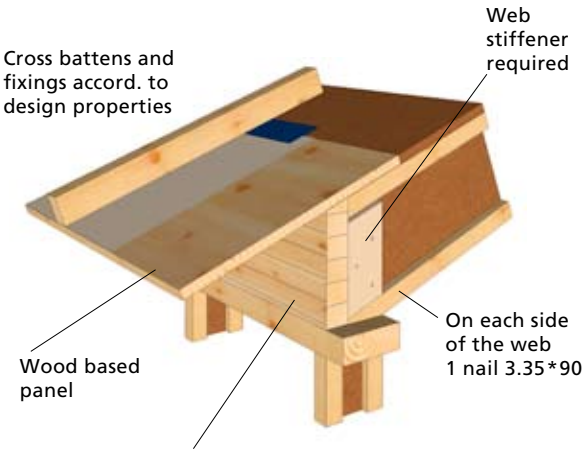
General comments:

- These tables serve as a guide only and do not replace independent structural calculations prepared by a qualified structural engineer.
- Please pay special attention to the bearing conditions.
- Do not use these tables to calculate point or irregular loads.
- Spans indicated are between centres of supports.
- Calculations are based on BS 5268.
- Lateral bracing to compression flange at a spacing not exceeding ten times the flange width is required.
- Q = design imposed loads on plan. G = design dead loads acting perpendicular with the roof slope. Imposed loads are from BS6399-3 clause 4.3.2 for small buildings. Dead loads will vary for differing roof finishes and manufacturers technical literature should be consulted to ensure adequate allowance is made when assessing the design dead load.
- Span tables are for roof joists under service class 1 conditions only and assume continuous lateral restraint is provided to the top flange from either tiling battens combined with suitable diagonal bracing or from a sheathing board. Where load reversal due to wind uplift is probable, suitable restraint from sheathing of plasterboard must be provided to the bottom flange.

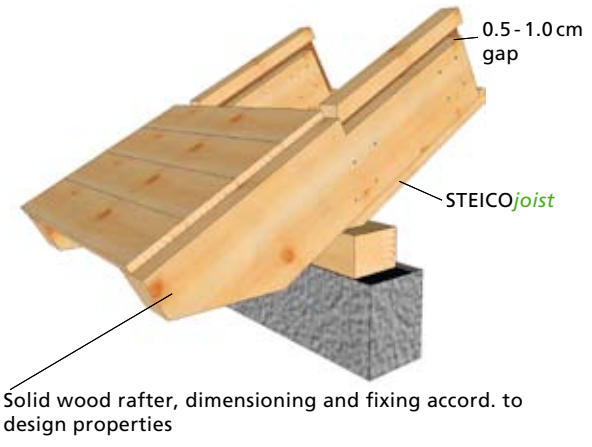
R1 Eaves with wood based panel



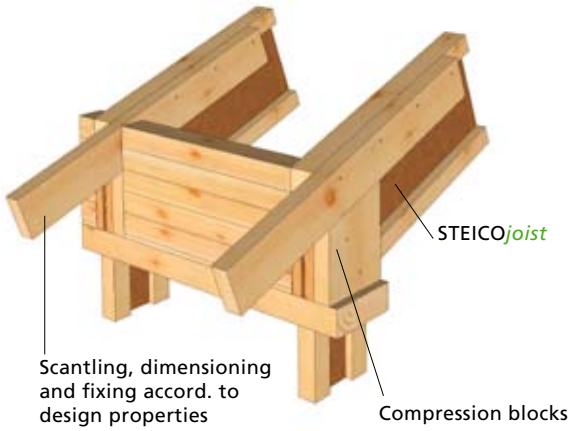
R2 Eaves with wood based panel



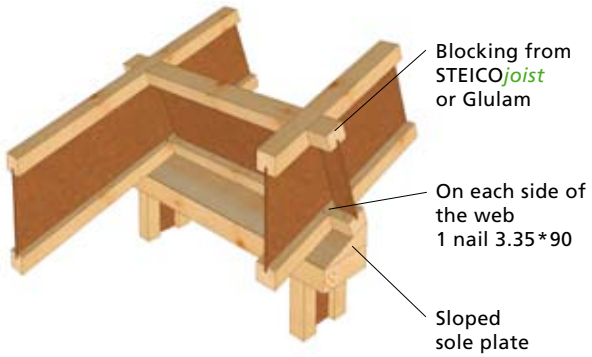
R3 Traditional eaves construction



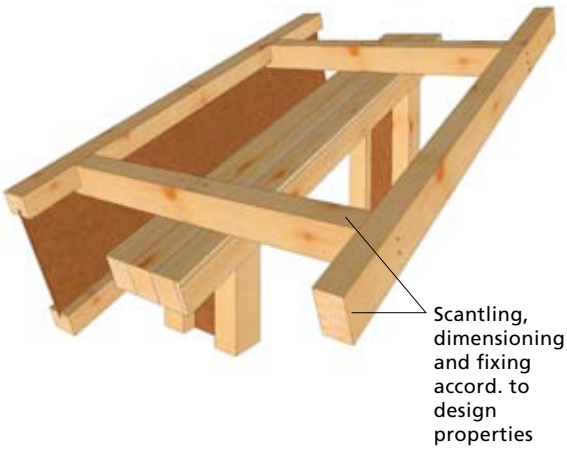
R4 Eaves construction with scantling



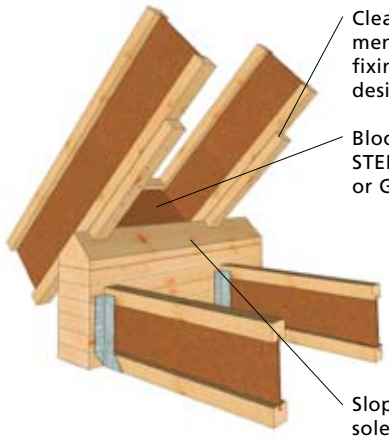
R5 Eaves construction with I-joists



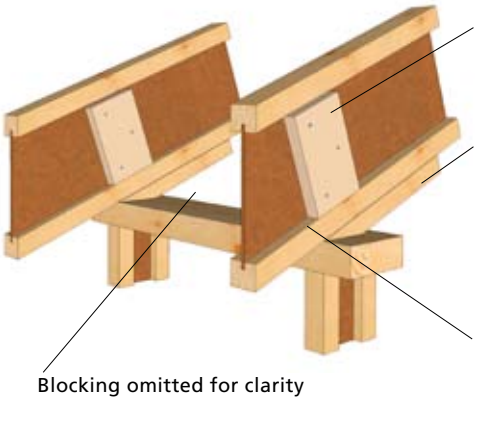
R6 Verge construction



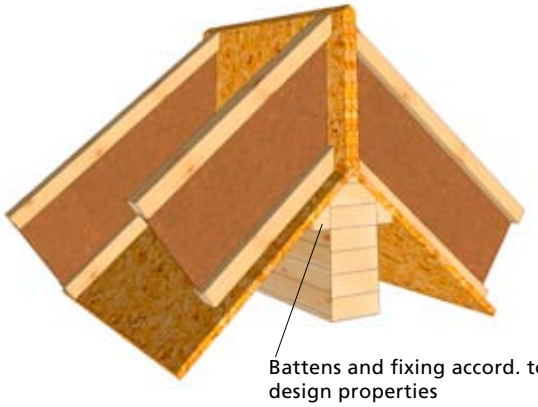
R7 Intermediate bearing with cleat



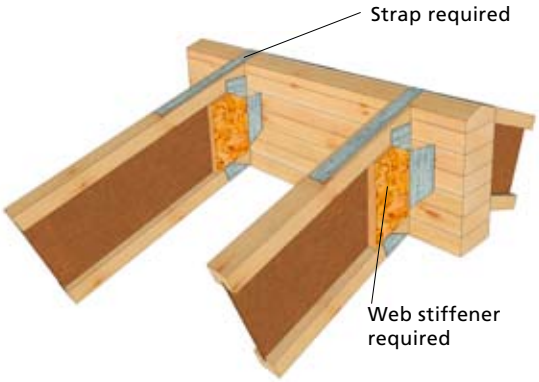
R8 Intermediate bearing with cleat



R9 Ridge construction for pre-fabrication



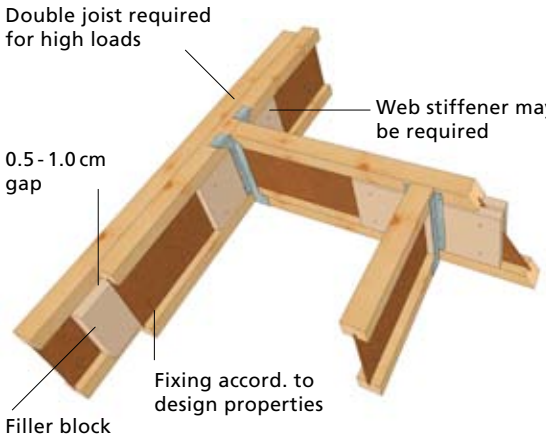
R10 Ridge construction with adjustable hangers



Note: Please refer to the information of the connector manufacturer (e.g. Simpson Strong-Tie®)

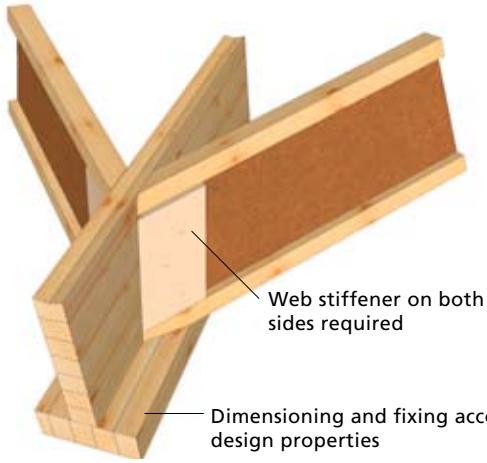
R11 Top roof insulation

R12 Joist to Joist

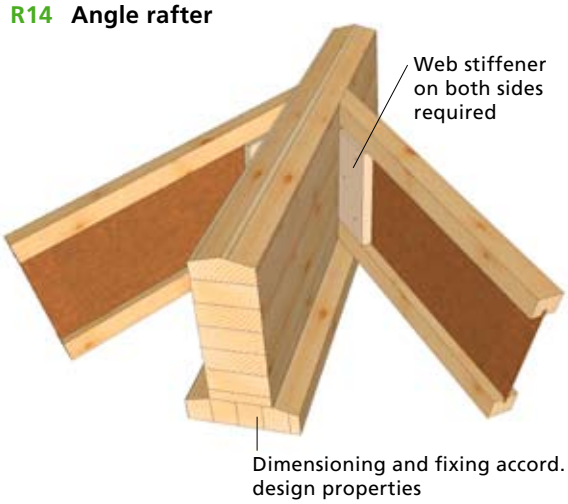


ROOF CONSTRUCTION DETAILS

R13 Valley rafter



R14 Angle rafter



NOTES TO THE DETAILS

Bearing lengths

- End bearing minimum 45 mm
- Intermediate bearing minimum 90 mm

Fastening

- STEICO*joist* to be nailed to head plates using minimum 2 No. 3.35 * 90 ring shank nails, located a minimum of 38 mm from the end of the joist. Nails may need to be skewed slightly to avoid splitting the bearing plate. For roofs pitched > 25 degrees, lateral forces may be significant and additional fixings to prevent roof spread may be required.
- Typical details shown are for guidance only and should be used in conjunction with the recommendations and requirements of the UKTFA, British Standards, NHBC, Zurich, Robust Details Ltd, Building regulations and all other statutory bodies.

Web stiffeners

- Web stiffeners are required for birdsmouth cuts and should be independently verified by a suitably qualified structural engineer.
- Web stiffeners should be applied where the sides of the hanger do not laterally support the top flange of the joist.

Blocking

- Blocking to provide lateral restraint must be installed at bearings. Blocking can be from EWP such as glulam or STEICO*joist*.

Cantilevers

- Cantilevers should be restricted to a maximum of 750 mm past the centre of the bearing to the end of the joist. Ensure that blocking is installed at the bearing and that the top and bottom flanges are restrained by sheathing.

CONNECTORS

Adjustable ridge hanger

Type	Depth H [mm]	Simpson-HSW® connector	Type of nail [mm] a)		Cullen® connector	Type of nail [mm]b) Prim./sec. joist	
			Prim. joist	Second. joist			
STEICO*joist* SJ 45	200-360	LSSUI 25	3.7*50	3.8*38	ARC-46	3.75*30	For allowable loads please check the current manufacturer documentation
STEICO*joist* SJ 60	200-400	LSSUI 35	3.7*50	3.8*38	ARC-61	3.75*30	
STEICO*joist* SJ 90	200-400	LSSU 410	3.7*50	3.8*38	ARC-92	3.75*30	

a) fixing nails to be installed strictly in accordance with Simpson Strong-Tie® recommendations

b) sheradised square twist nails

In certain applications allowable loads can be increased by 14°- 45° with the use of an LSTA strap. In the case of sliding bearings the use of the LSTA strap is compulsory.

Type	Dimensions b*l [mm]	Use for	Type of nail b)	
LSTA 21	32*533	LSSUI 25+ LSSUI 35	3.7*50	For allowable loads please check the current Simpson Strong-Tie® documentation
LSTA 24	32*610	LSSUI 25+ LSSUI 35	3.7*50	
LSTA 30	32*762	LSSU 410	3.7*50	
LSTA 36	32*914	LSSU 410	3.7*50	

b) Galvanised Simpson Strong-Tie® nail

LSTA strap

General comments:

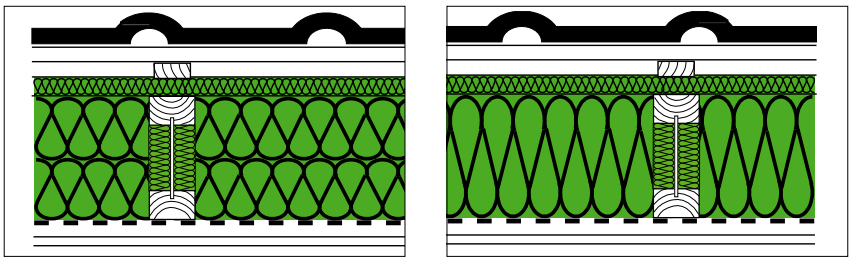
- The distance between the main and secondary joist must not exceed 3 mm
- Please pay special attention to bearing conditions
- All hangers to be installed strictly in accordance with the manufacturers recommendations
- Web stiffeners for lateral restraint to the top flange of the joist may be required

THERMAL INSULATION

With its I-section profile the STEICO*joist* is ideal for roof construction applications where there is a high demand for thermal protection. The STEICO*joist* is an ideal building element for low energy buildings.

Roof constructions with STEICO*joist*

Tiles 8
Tile battens 7
Cross battens 6
STEICO*universal* 5
STEICO*flex* / STEICO*joist* 4
Vapour check 3
Battens 2
Plasterboard 1



Material Values

Insulation thickness from inside to outside [mm]	U-Value, insulation only W/(m²*K)	U-Value, I-joist only W/(m²*K)	Overall U-Value W/(m²*K)	Amplitude damping (1/TAV)	Phase shift in hours
200+21	0.174	0.537	0.19	14	11.5
200+35	0.166	0.469	0.18	17	12.7
240+21	0.148	0.480	0.16	21	13.1
240+35	0.142	0.425	0.16	25	14.3
300+21	0.120	0.414	0.13	39	15.5
300+35	0.117	0.372	0.13	47	16.7
360+21	0.102	0.364	0.11	73	17.9
360+35	0.099	0.331	0.11	87	19.0
400+21	0.092	0.336	0.10	110	19.5
400+35	0.090	0.309	0.10	132	20.6

Calculations according to DIN 4108

Walls

WALL APPLICATIONS

STEICO*wall* is a slender, efficient building element for wall constructions that demand a high level of both energy efficiency and strength. Using pre-insulated STEICO*wall* studs facilitates insulation and thereby contributes to overall cost savings.

CHARACTERISTIC AXIAL COMPRESSION LOADS FOR STEICO*wall* TO EC 5

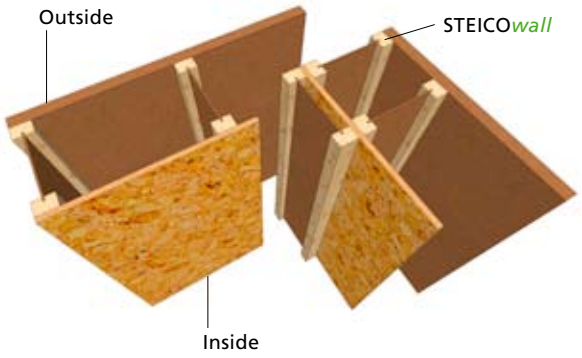
Type	Flange b*h [mm]	With one side only sheathed N_k [kN]	With both sides sheathed N_k [kN]
STEICO*wall* SW 45	45*45	6.1	55.5
STEICO*wall* SW 60	60*45	14.2	74.9
STEICO*wall* SW 90	90*45	45.0	124.9

Note: The above tables are based on a wall panel height of 2,5 m.

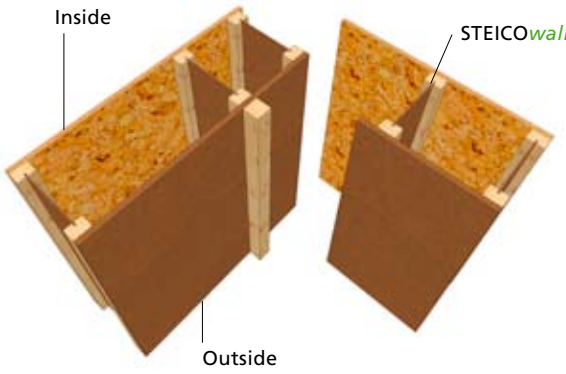
Sheathing to provide lateral restraint to the flanges should be in accordance with the requirements of BS 5268 and it is recommended that in all construction this is provided to both sides of the stud. Where the studs are part of a system offering lateral restraint to a structure, a minimum of 1 layer of category 1 or 2 sheathing must be provided. Where wind reversal occurs, both faces must be sheathed to prevent buckling.

WALL CONSTRUCTION DETAILS

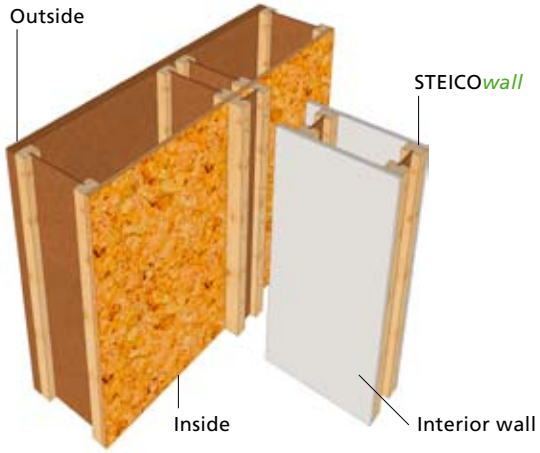
W1 External wall corner detail



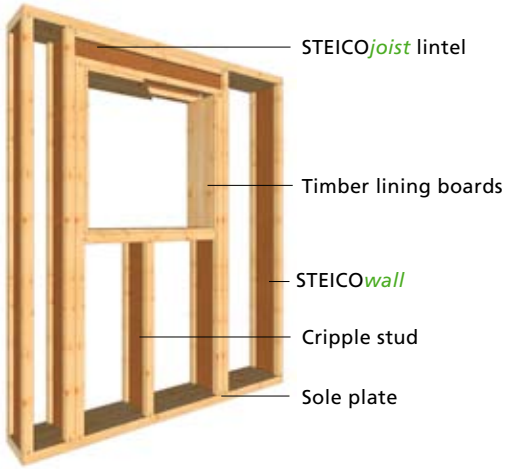
W2 Interior corner, exterior wall



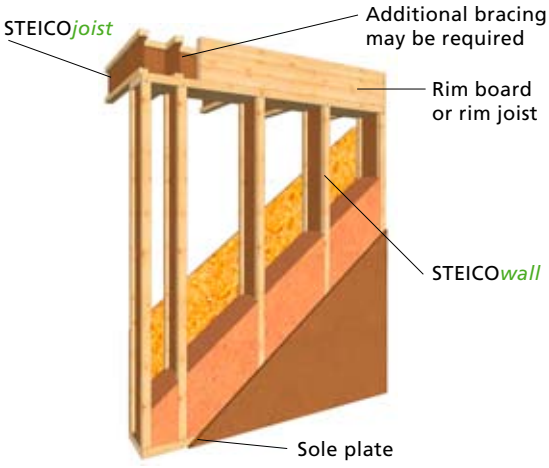
W3 External wall to partition



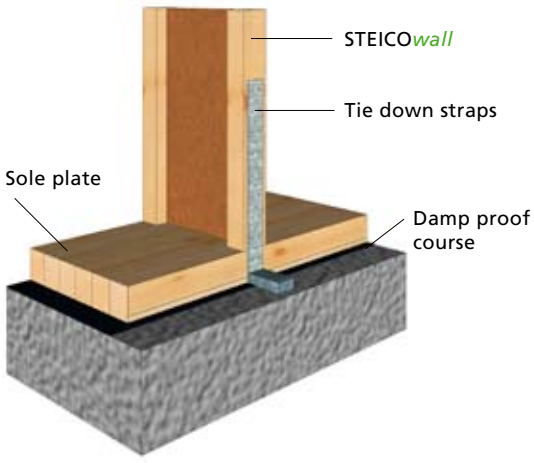
W4 Window opening



W5 Exterior wall and floor connection



W6 Connection to concrete floor

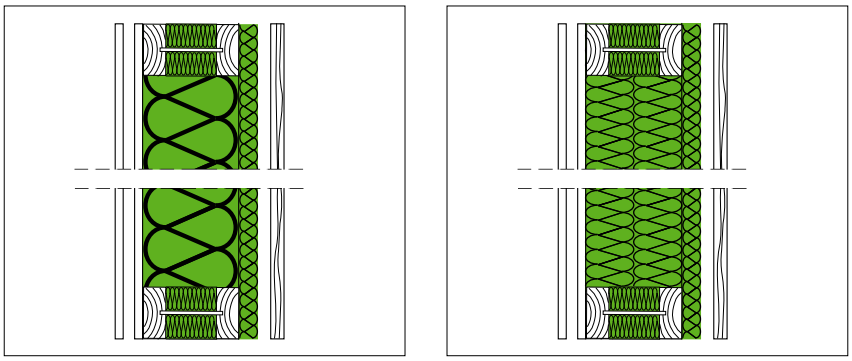


THERMAL INSULATION

With its I-section profile, the STEICO*wall* is ideally suited for wall constructions with high thermal requirements. Low energy buildings may be efficiently constructed.

The factory-made flange filler insulation and bespoke insulation widths of the STEICO*wall* allow energy efficient design and the easy installation of the STEICO flexible insulation products.

Wall construction with STEICO*wall*



8 Timber frame panel
7 Boarding battens
6 Cross battens
5 STEICO*universal*
4 STEICO*flex* / STEICO*joist*
3 OSB / vapour check
2 Battens for a service void
1 Plasterboard

STEICO*flex* wall insulation in combination with STEICO*universal* and STEICO*wall*

Insulation thickness from inside to outside [mm]	U-Value insulation only W/(m²*K)	U-Value I-joist only W/(m²*K)	Overall U-Value W/(m²*K)	Amplitude damping (1/TAV)	Phase shift in hours
160+35	0.190	0.453	0.21	21	12.2
160+52	0.179	0.394	0.19	28	13.7
200+35	0.159	0.409	0.17	31	13.7
200+52	0.151	0.361	0.16	42	15.2
240+35	0.137	0.373	0.15	45	15.2
240+52	0.131	0.333	0.14	62	16.7
300+35	0.113	0.330	0.13	82	17.5
300+35	0.109	0.298	0.12	112	19.0
360+35	0.096	0.295	0.11	149	19.8
360+52	0.093	0.269	0.10	204	21.2
400+35	0.088	0.276	0.10	221	21.3
400+52	0.085	0.253	0.10	303	22.8

Calculations according to DIN 4108

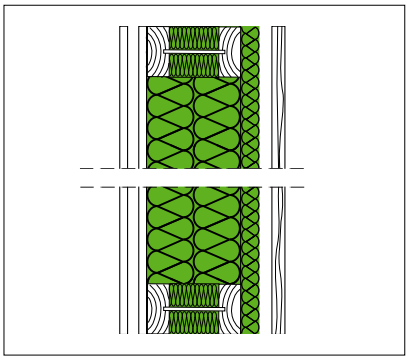
FIRE PROTECTION

STEICO products are suitable for use in wall constructions requiring fire protection. Wood and wood based products in conjunction with fire resistant materials provide positive fire protection properties with a measurable char rating.

Wall construction F 30-B
According to the general building code test certificate "AbP P-SAC 02/ III–201" from STEICO AG.

A) Wall construction with timber cladding

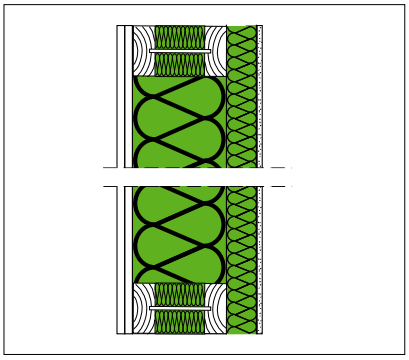
Timber cladding d ≥ 20 mm	1
Battens and cross battens ≥ 50 mm	2
STEICO*universal* 35 or 52 mm	3
STEICO*wall* SW 60/160-360 or STEICO*wall* SW 90/160-360	
Stud centers 400 - 600 mm	4
STEICO*flex* ≥ 160 mm	5
Wood based panel ≥ 15 mm	6
Plasterboard 12.5 mm	7



Please note: As an alternative the inner sheeting of construction B) can be used.

B) Wall construction with rendered finish

Render system d ≥ 4 mm	1
INTHERMO render board d ≥ 40 mm	2
STEICO*wall* SW 60/160-360 or STEICO*wall* SW 90/160-360	3
Stud centers 400 - 600 mm	
STEICO*flex* ≥ 160 mm	4
Wood based panel ≥ 15 mm	5
Fermacell gypsumboard d ≥ 15 mm	6



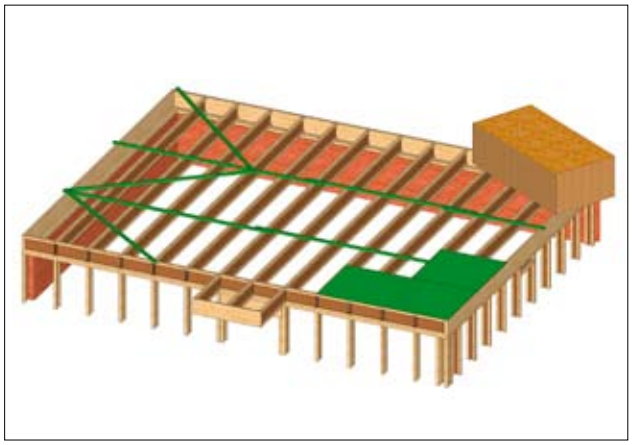
Please note: As an alternative the inner sheeting of construction A) can be used.

Additional construction alternatives are possible. Please contact your STEICO partner for more information.

General information

Proper erection procedures and the installation of bracing are essential to safe construction when using I-joists. The following notes may assist builders when preparing safety assessments under the CDM regulations 1994.

INSTALLATION NOTES

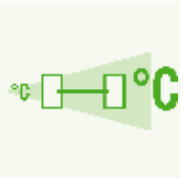


- Under no circumstances walk on joists until they are fully braced.
- Do not store building materials on unbraced joists.
- I-joists are unstable until fully braced. This includes temporary and permanent longtitudinal and diagonal bracing, rim boards/joists, stability blocking.
- Temporary longtitudinal bracing must be provided at maximum 2.4 m centres across the span. Temporary diagonal bracing should be provided perpendicular to the longtitudinal braces fixed to at least the first 1.2 m of joists. Provide temporary bracing at maximum 12 m centres. All bracing to be 22 * 97 softwood, nailed to each joist with two 3.35 * 65 nails.

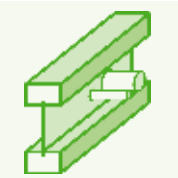
- Temporary bracing may be progressively removed as decking proceeds, leaving bracing in place on un-decked areas.
- Construction materials may only be placed on joists when all bracing is in place. Materials should be positioned so they are spread over at least 4 joists and no more than 1.5 m from a support. Floor/ceiling boards may only be stacked up to a height of 250 mm (150 kg per joist at 600 centres, 100 kg per joist at 400 centres).
- Flooring should be fully fixed to the joists in accordance with manufacturers recommendations before additional loads are placed on the system.
- STEICO AG do not currently recommend any use of "no-nails" decking solutions to be used in conjunction with their products.
- Under no circumstances use damaged joists or attempt to repair them.

STORAGE NOTES

- STEICO Joists must be stored straight and vertical.
- STEICO joists should be stored vertically, on level bearers, at least 150mm high and spaced at approx 3.0 m centres.
- Leave banding in place until the joists are ready for use.
- When stored, protect joists at all times from direct weather exposure with an appropriate covering.
- Always lift the joists using the bottom flange.

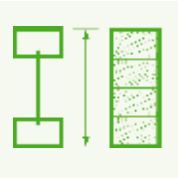


Reduction of thermal bridging

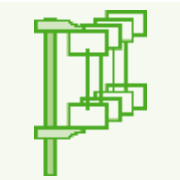


Easy installation of services

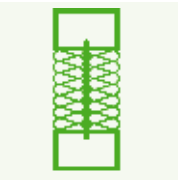
Lightweight. Easy to handle and install



Manufactured to standard depths and to match standard connectors



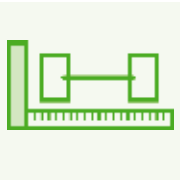
High dimensional stability through controlled moisture content



Available pre insulated to form a solid cross section

High load bearing capacity

Easy to machine



Strict manufacturing tolerances

ABOUT STEICO

STEICO AG operates worldwide with approx. 750 employees. The headquarters is in Feldkirchen close to Munich (Germany).

A huge product range of insulation materials made from wood fibres and hemp is being manufactured at two modern production facilities next to the I-Joist line. Ongoing Quality control in our own laboratories as well as independent Quality Control by recognised European institutions, guarantees a high quality level for the products.

The STEICO production is certified according to ISO 9001:2000.

CE

BBA BRITISH BOARD OF AGRÉMENT
European Technical Approval ETA-06/0238

Europäische Technische Zulassung ETA-06/0238

Operating site certified accor. ISO 9001:2000

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