



STEICO

SITE GUIDANCE FOR
FOLLOW ON TRADES

www.steico.com/en

NOTE: In order to assist with the process for locating holes for additional service runs this document details generic guidance for simply supported joists under the following residential loading conditions: Dead load: 0.75 kN/m^2 | Imposed load: 1.50 kN/m^2 or an imposed concentrated load of 2 kN | Service class 1 environment.

OVERVIEW

This document has been put together in order to assist Plumbers, Electricians and any other follow on trades, with the cutting and drilling of STEICO *joist* and STEICO *LVL*.

This simple pocket book provides guidance and rules which, if followed, ensure the long term structural stability of STEICO products.

If in doubt about the information contained in this document, then please contact your STEICO *joist* supplier before undertaking any work.

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Dealer details

Before undertaking any work the relevant trade should have access to the original joist layout.

This will enable them to assess if any specific drilling requirements have been incorporated at design stage.

REQUIRED INFORMATION

Where drilling for SVP runs, MVHR ducting etc. has been allowed for, it should be clearly marked on the layout.

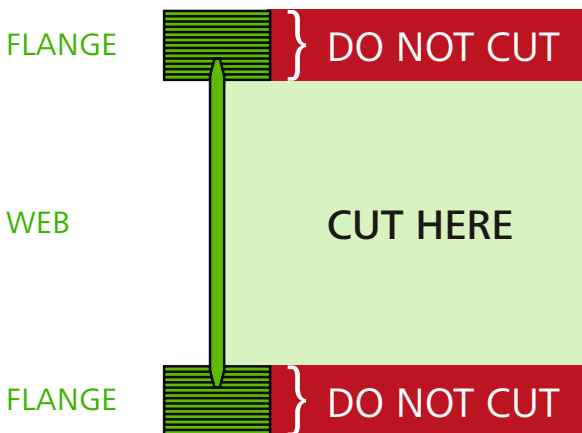
Where ducting is marked on the layout but not dimensioned, clarification should be sought from the floor designer before any holes are drilled.

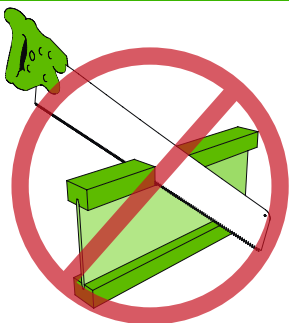
THE GOLDEN RULE

All cabling / pipework / ducting should be run through the web of the STEICO *joist*.

THE FLANGE SHOULD NOT BE CUT

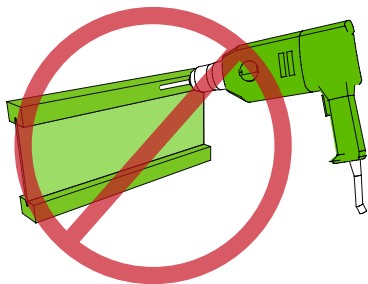
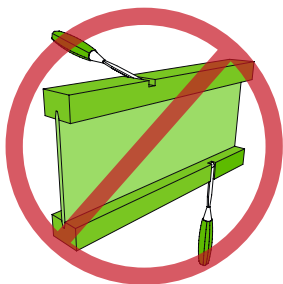
The majority of the structural forces run through the flange material. This should not be tampered with in any way.





**DO NOT CUT
THE FLANGES**

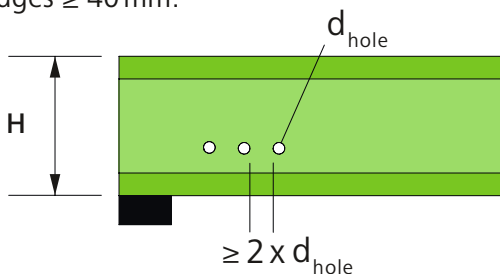
**DO NOT NOTCH
THE FLANGES**



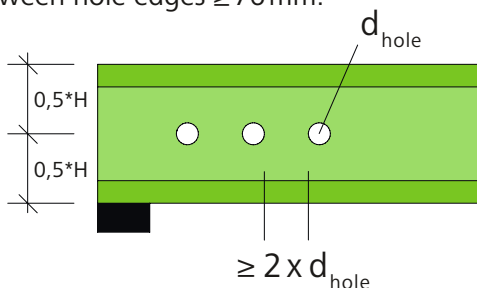
**DO NOT DRILL
THE FLANGES**

STEICO joist – THE BASICS

Holes ≤ 20 mm diameter (d_{hole}) can be placed anywhere in the web. Distance between hole edges ≥ 40 mm.

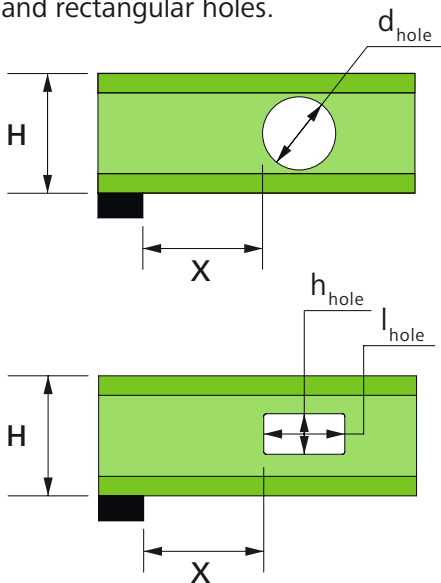


Holes with a max. diameter (d_{hole}) of 38 mm can be placed in the center of the web depth. Distance between hole edges ≥ 76 mm.



STEICO joist – ALLOWED HOLES

Where holes are required with a diameter (d_{hole}) of $>38\text{mm}$ then the minimum distance from a bearing point should be the distance X detailed in the following 2 tables. This applies for both circular and rectangular holes.



Note: Corners of rectangular holes should have a radius of 10mm or more.

Minimum distance (X) from hole edge to nearest edge of end support (m).

Joist height H [mm]	Joist span [m]	Hole diameter d_{hole} [mm]					
		75	100	125	150	175	200
220	3.50	0.22	0.29	0.88	-	-	-
	4.00	0.22	0.43	1.07	-	-	-
	4.50	0.22	0.58	1.26	-	-	-
	5.00	0.22	0.74	1.46	-	-	-
240	4.00	0.24	0.24	0.56	1.18	-	-
	4.50	0.24	0.24	0.72	1.38	-	-
	5.00	0.24	0.29	0.89	1.59	-	-
	5.50	0.24	0.54	1.07	1.80	-	-
300	4.50	0.30	0.30	0.30	0.30	0.60	1.18
	5.00	0.30	0.30	0.30	0.30	0.76	1.38
	5.50	0.30	0.30	0.30	0.50	0.94	1.58
	6.00	0.30	0.30	0.38	0.75	1.13	1.79

Size and location of RECTANGULAR holes in STEICO joists in residential intermediate floors.

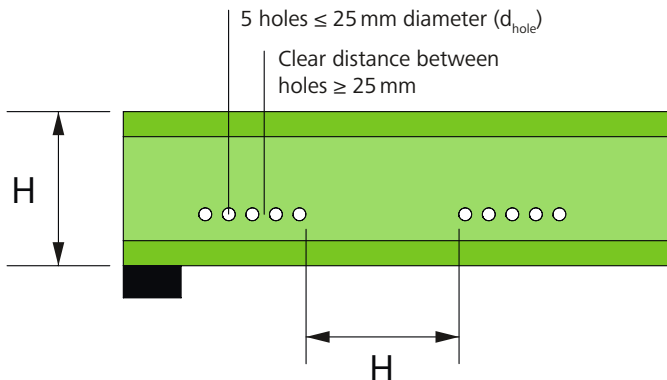
Minimum distance (X) from hole edge to nearest edge of end support (m).

Joist height H [mm]	Joist span [m]	Hole size $h_{\text{hole}} * l_{\text{hole}}$ [mm]							
		100*100	100*200	125*125	125*250	150*150	150*300	200*200	
220	3.50	0.58	1.09	0.71	1.19	-	-	-	
	4.00	0.74	1.29	0.88	1.40	-	-	-	
	4.50	0.91	1.49	1.06	1.61	-	-	-	
240	5.00	1.08	1.70	1.24	1.82	-	-	-	
	4.00	0.66	1.23	0.81	1.34	0.93	1.43	-	
	4.50	0.83	1.43	0.98	1.55	1.11	1.64	-	
300	5.00	1.00	1.63	1.16	1.76	1.29	1.86	-	
	5.50	1.18	1.84	1.35	1.98	1.49	2.08	-	
	4.50	0.76	1.38	0.92	1.50	1.05	1.60	1.23	
300	5.00	0.93	1.58	1.10	1.71	1.23	1.81	1.42	
	5.50	1.10	1.78	1.28	1.92	1.42	2.03	1.62	
	6.00	1.28	2.00	1.47	2.14	1.61	2.25	1.83	

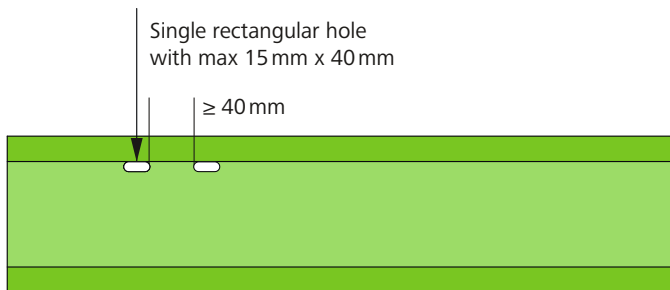
TIPS & TRICKS

The following rules can be followed in addition to the basic rules already shown.

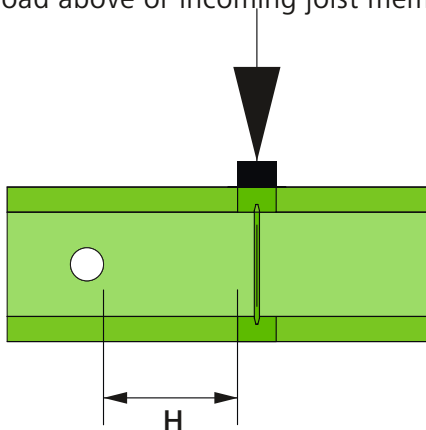
A group of 5 holes ≤ 25 mm diameter (d_{hole}) can be positioned anywhere within the span of the joist and depth of the web. Distance between individual holes should be ≥ 25 mm and the distance to the next group of holes should be a minimum of the joist depth (H).



Single holes with a size of 15 mm x 40 mm can be drilled tight to the top/bottom flanges. Clear distance between holes should be ≥ 40 mm.



Holes < 38 mm diameter (d_{hole}) should be a minimum distance of the joist depth (H) from a point load above or incoming joist member.



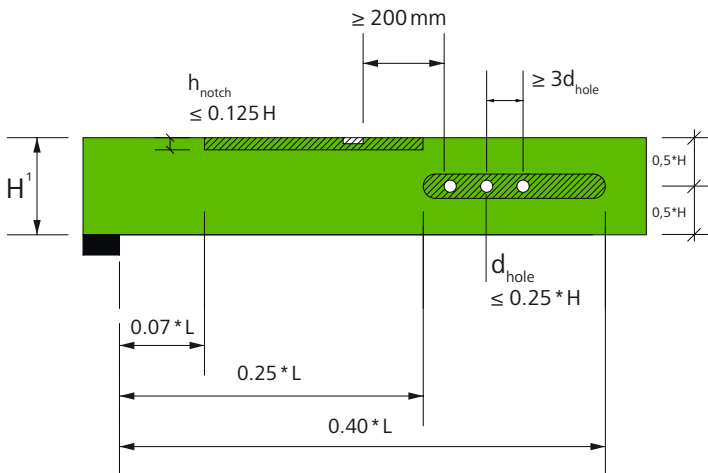


STEICO *LVL* – THE BASICS

STEICO *LVL* are solid section members which are generally used in areas with much higher load and hence the rules for holes are more restrictive.

Notching is allowed based on a depth equivalent to the height (H) * 0.125 and position within the clear span (L) of the beam.

Holes are allowed based on a diameter of $H * 0.25$ and position within the clear span (L) of the beam. These requirements are detailed on the following page.



L = clear span of the beam

¹ only valid for members $\leq 250 \text{ mm}$



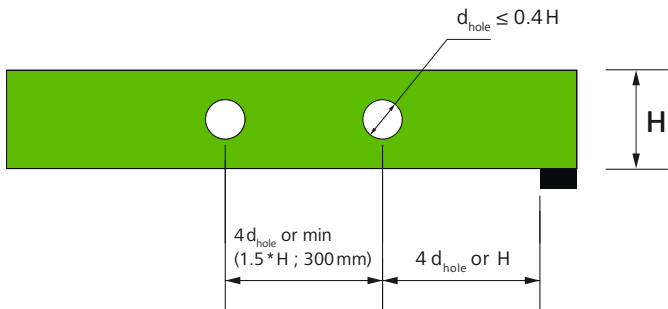
STEICO *LVL* – ALLOWED HOLES

The maximum hole size within a STEICO *LVL* member is limited to the height * 0.4 or 200 mm max. and specific locations within the span.

For all holes of this size a specific design check is required by the joist designer.

Where large holes aren't already allowed for within the joist design the relevant trade should always contact their STEICO *joist* supplier for further guidance.

Maximum hole size requires specific design check. Contact your STEICO distributor.



Note: Holes are only allowed in the center of the depth

DEALER DETAILS

Please find below contact details of your STEICO *joist* supplier. They should be the primary initial contact with any queries.

WHO WE ARE

Established in 1986, STEICO has become the largest i-joist manufacturer in Europe and the Worlds largest producer of natural insulation and timber construction systems.

3 European production facilities covering approx. 150 hectares provide constructional and insulation products all over the World. With a focus on systems that incorporate I-joists and LVL with timber based insulations, STEICO's mission is to ensure fully sustainable and healthy building solutions.



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