hyJOIST® Options Range Design Guide

Fully supported by design it for houses

CarterHoltHarvey
Woodproducts Australia

The natural solution for you.

OPTIONS RANGE

More options for more economical floor joist layouts

Select the economy section (HJ240 45, HJ300 45 & HJ360 63) of appropriate depth to accommodate the spans of the main area of the floor.

Cater for any larger spans in the floor area using the wider flange options of corresponding depth.

- **Technical support** – experienced engineering support, simply call **1800 808 131** – 'on-the-ground' specialist technical representatives, willing and able to help

- **Responsible conservative design** – 'maintaining the standard for consistency of performance'

- **'Off the shelf' convenience** – readily available, ex stock via a comprehensive distribution network, simply cut to length and install

- **Termite protected** – hyJOIST H2-S Terminator® is 'protected to the core' termite protection applicable for areas of Australia south of the Tropic of Capricorn

Design

Consider the **'hyJOIST SELECTION GUIDE'** below, summarising key parameters involved in selection of the appropriate joist sections. Information contained in this publication applies for floor joists used in houses. For more information refer either to this publication or **designIT** software as set out in the following table. Use of **designIT** will provide a wider range of options and allow more optimum design.
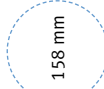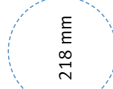
Design information	Literature	designIT
Spanning capabilities	✓	✓
Bearing requirements	✓	✓
Blocking for lateral support	✓	✓
Transfer of wind / earthquake forces through the floor depth	✓	✓
Web holes – permitted locations related to size, shape and span	✓	✓
Details for limited notching of flanges (at end supports only)	✓	✓
Hangers, brackets and fixing requirements for support of joists	✓	✓
Framing for stair voids		✓
Cantilevers for balconies		✓
Joists supporting parallel load bearing walls	✓	✓
Joists supporting perpendicular load bearing walls (including cantilevers)		✓
Continuous hyJOIST blocking for support of load bearing walls	✓	✓

Installation

Details for installation (referenced in this Design Guide) are contained in a separate publication 'Installation Guide'.

hyJOIST selection guide

DIMENSIONS FOR DETAILING

FLANGE WIDTH (mm)		
45	63	90
FLANGE OUTSTAND (mm)[1]		
18	27	39

Flange section illustrations (by section code): HJ200 45, HJ240 45, HJ240 63, HJ240 90, HJ300 45, HJ300 63, HJ300 90, HJ360 63, HJ360 90, HJ400 90

SPAN - FLOOR JOISTS FOR HOUSES (SUPPORTING FLOOR LOADS ONLY 40kg/m²)

OVERALL DEPTH (mm)	NOMINAL CLEAR DISTANCE BETWEEN FLANGES	hyJOIST SECTION CODE	WEIGHT OF 5 METRE LENGTH	MAXIMUM HOLE SIZE FOR SERVICES[2]	SINGLE SPAN 450	SINGLE SPAN 600	CONTINUOUS SPAN 450	CONTINUOUS SPAN 600	BALCONY CANTILEVER[3] 450 MAXIMUM (m)	BALCONY CANTILEVER[3] 600 MAXIMUM (m)
					RECOMMENDED MAXIMUM SPAN — JOIST SPACING (mm)					
200	130 mm	HJ200 45	13.8 kg	118 mm	3.7	3.4	4.6	4	1.0	0.9
240	170 mm	HJ240 45	15.0 kg	158 mm	4.5	4.0	5.1	4.7	1.2	1.0
		HJ240 63	18.8 kg		4.9	4.5	5.5	5.1	1.2	1.2
		HJ240 90	26.3 kg		5.4	5.0	6.1	5.6	1.5	1.4
300	230 mm	HJ300 45	16.9 kg	218 mm	5.1	4.7	5.8*	5.4*	1.4	1.3
		HJ300 63	20.7 kg		5.5	5.1	6.3	5.8	1.5	1.4
		HJ300 90	28.8 kg		6.1	5.7	7.0	6.4	1.7	1.6
360	290 mm	HJ360 63	22.6 kg	278 mm	6.1	5.7	7.0*	6.4*	1.7	1.6
		HJ360 90	31.3 kg		6.8	6.3	7.7	7.1	1.9	1.8
400	330 mm	HJ400 90	33.0 kg	318 mm	7.2	6.7	8.2*	7.6*	2.0	1.9

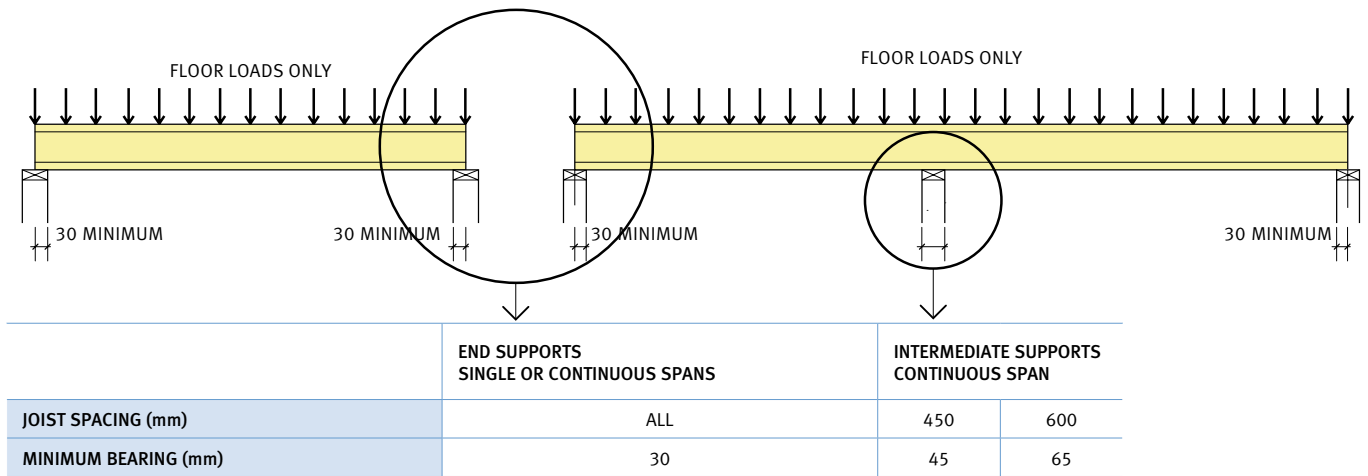1. Used to determine the thickness of packing to pack web flush with flanges
2. Refer to page 9 / designIT for permitted hole locations and limitations
3. Refer to page 10 / designIT for further design information
4. * Spans refer to ceiling attached to underside of hyJOIST, for ceiling not attached refer designIT
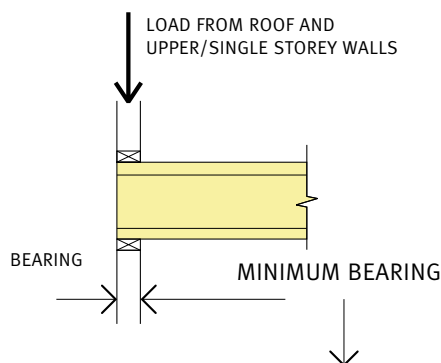
Bearing support

For joists not transferring load from upper walls

FLOOR LOADS ONLY

FLOOR LOADS ONLY

30 MINIMUM   30 MINIMUM   30 MINIMUM   30 MINIMUM

	END SUPPORTS SINGLE OR CONTINUOUS SPANS	INTERMEDIATE SUPPORTS CONTINUOUS SPAN	
JOIST SPACING (mm)	ALL	450	600
MINIMUM BEARING (mm)	30	45	65

designIT may give reduced bearing requirements for specific cases.

For joists transferring upper storey wall and roof loads at supports

End supports - single or continuous spans

LOAD FROM ROOF AND
UPPER/SINGLE STOREY WALLS
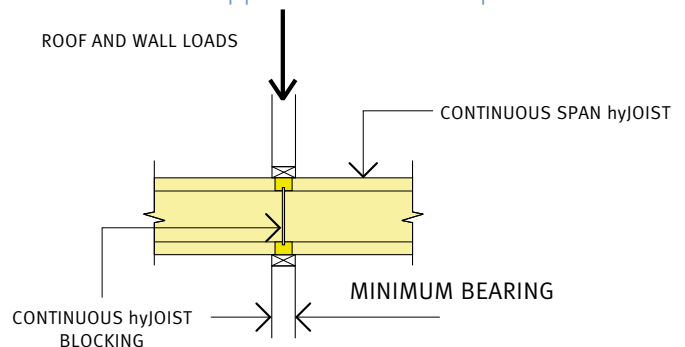
BEARING

MINIMUM BEARING

For joists supporting load bearing walls at end supports, provide bearing as specified in the table below or alternatively install continuous hyJOIST blocking/'rimboard'/boundary joist.

	JOIST SPACING (mm)	
LOAD TYPE	450	600
	MINIMUM BEARING (mm)	
SHEET ROOF	45	65[1]
TILE ROOF	65	90[2]

1. If web stiffeners installed bearing may be reduced to 45 mm
2. If web stiffeners installed bearing may be reduced to 65 mm
3. For all cases bearing may be reduced to 30 mm if continuous full depth blocking or compression blocks are installed
4. Web stiffener installation as per Detail F6 in the 'Installation Guide'
5. designIT may give a reduced bearing requirement

Intermediate supports - continuous spans

ROOF AND WALL LOADS

CONTINUOUS SPAN hyJOIST

MINIMUM BEARING

CONTINUOUS hyJOIST BLOCKING

Minimum bearing to be as for joists supporting floor loads only. Load bearing wall to be supported by continuous full depth hyJOIST blocking.

Concentrated loads from jamb studs/posts

Use compression blocks to transfer loads through to supports as shown. Refer to Detail F18 in the 'Installation Guide'.

JAMB STUD OR POST

ONE OR MORE COMPRESSION BLOCKS OF SIMILAR COMBINED CROSS SECTIONAL AREA TO THAT OF THE SUPPORTED JAMB STUD OR POST

SINGLE NAIL TO FLANGE AS SHOWN

LOAD BEARING WALL ALIGNED UNDER
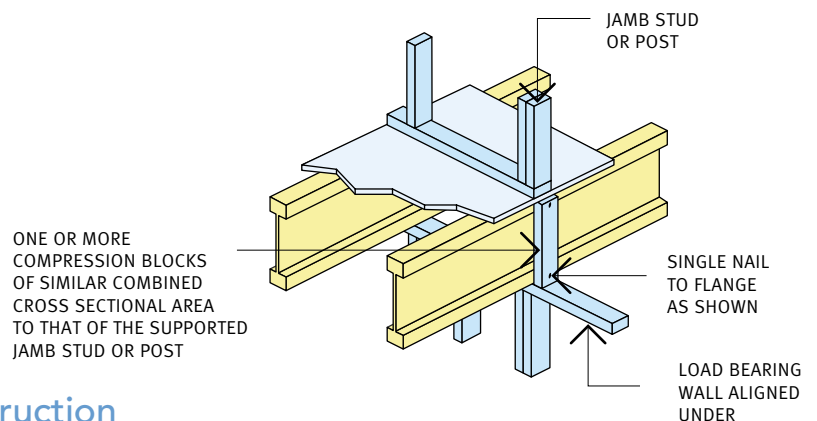
For lower storey of 2 storey construction

Continuous full depth hyJOIST blocking should be installed to transfer compression loads from load bearing walls to the supports.

In most cases continuous hyJOIST blocking will be adequate to support the roof, wall and floor loads. Refer to designIT for confirmation.

design it *for houses* Optimised sizing from the full hyJOIST range can be obtained using the free designIT software. www.chhwoodproducts.com.au/designIT

Support

Joist hangers

| hyJOIST SECTION CODE | MANUFACTURER OR DISTRIBUTOR | FACE MOUNT HANGERS | | | | TOP MOUNT HANGERS |
| | | FULL DEPTH | | PARTIAL DEPTH[3] | | |
		HANGER CODE	MINIMUM Nº OF NAILS TO BEARER	HANGER CODE	MINIMUM Nº OF NAILS TO BEARER	HANGER CODE
HJ200 45	Pryda	LF190/50	6	FB50180	8	LT200/50
	Mitek	IBHF20050	6			IBHT20050
HJ240 45	Pryda	LF235/50	6	FB50220	8	LT240/50
	Mitek	IBHF24050	6			IBHT24050
HJ240 63	Pryda	LF235/65	8	FB65170	10	LT240/65
	Mitek	IBHF24065	8			IBHT24065
HJ240 90	Pryda	LF235/90	8	FB90200	10	LT240/90
	Mitek	IBHF24090	8			IBHT24090
HJ300 45	Pryda	LF297/50	8	FB50220	10	LT300/47
	Mitek	IBHF30050	8			IBHT30050
HJ300 63	Pryda	LF290/65	8	FB65170	10	LT302/65
	Mitek	IBHF30065	8			IBHT30065
HJ300 90	Pryda	LF290/90	8	FB90200	12	LT300/90
	Mitek	IBHF30090	8			IBHT30090
HJ360 63	Pryda	LF340/65	8	FB65170	12	LT360/65
	Mitek	IBHF36065	8			IBHT36065
HJ360 90	Pryda	LF350/90	10	FB90200	12	LT356/90
	Mitek	IBHF36090	10			IBHT36090
HJ400 90	Pryda			LF350/90	14	LT400/90
	Mitek	IBHF40090	10			IBHT40090
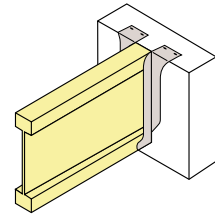
TOP MOUNT HANGER
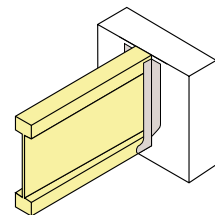
FULL DEPTH FACE MOUNT HANGER
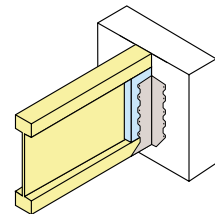
PARTIAL DEPTH FACE MOUNT HANGERS WITH PACKING TO WEB

1. Nailing specified is for brackets face fixed to hySPAN or JD4 (or better) timber bearer or wale plate.
2. Brackets to be installed strictly in accordance with bracket manufacturers' recommendations. Note, nails for FB hangers are 35 x 3.15 flat head type; for all other hangers 35 x 3.75 flat head nails are specified.
3. Partial depth face mount hangers to be installed with web packing - install as for web stiffeners refer Detail F6.

Skew angle bracket for oblique joists
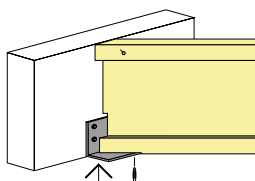
SKEW ANGLE BRACKET AVAILABLE FROM PRYDA – PRYDA CODE: LVSIA

Limited notching at end supports is allowed

Flange Notches – Bottom and/or top flanges may be notched to maximum depth 12 mm – refer Detail F7 in the 'Installation Guide'.

STEEL BEAM

12 mm (MAX)

MINIMUM BEARING
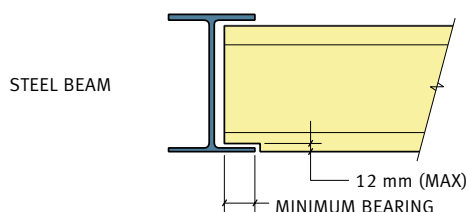
Webs may be cut to accommodate the top flange of steel beams in accordance with Detail F8 in the 'Installation Guide'. Web notches may be combined with flange notching.

hyJOIST

D/2 (MAX)

STEEL BEAM

D

MINIMUM BEARING

WEB STIFFENERS
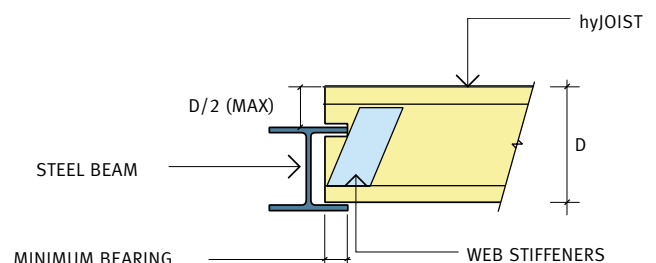
ALLOWED	NOT ALLOWED

Typical floor layout

WEB HOLES FOR SERVICES
SEE PAGE 9 / designIT

FACE FIXING TO TIMBER BEARER
OR WALE PLATE SEE PAGE 5

LATERAL RESTRAINT AND FIXING
SEE PAGE 8

STAIR

FLOOR JOISTS SUPPORTING PARALLEL
LOAD BEARING WALLS OVER OPENINGS
– REFER PAGE 11 / designIT

TEMPORARY RESTRAINT
SEE INSTALLATION GUIDE

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Optimised sizing from the full hyJOIST range can be obtained using the free designIT software.
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OPENINGS IN FLOORS
FOR DESIGN OF TRIMMING JOISTS AND TRIMMERS
REFER designIT

CANTILEVERS FOR BALCONIES
SEE PAGE 10 / designIT

VOID

BEARING SUPPORT SEE PAGE 4 / designIT

CANTILEVERS TO SUPPORT LOAD
BEARING WALLS – REFER designIT

Installation

Details for installation are provided in a separate publication 'Installation Guide'. Detail numbers referred to in this publication correspond to those given in the installation guide.

Storage

Prior to installation hyJOIST should be stacked on level bearers, at least 150 mm clear of the ground and kept dry.

Lateral restraint requirements

Joists need to be installed and held plumb and straight if they are to perform to expectations.

At supports

1. Joists are to be fixed accurately in position at supports using nails or screws as per Detail F5 in the 'Installation Guide'.
2. Specify hyJOIST blocking or equivalent to be installed in accordance with requirements given in the 'Installation Guide'.
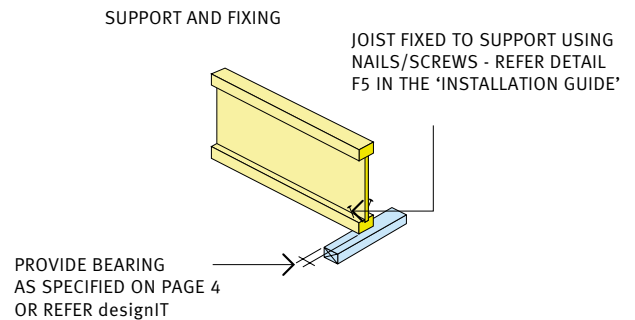   The installation requirements for blocking, bracing, 'rimboard' or boundary joists are specified in Details F1, F2, F3 and F17.

SUPPORT AND FIXING

JOIST FIXED TO SUPPORT USING NAILS/SCREWS - REFER DETAIL F5 IN THE 'INSTALLATION GUIDE'

PROVIDE BEARING AS SPECIFIED ON PAGE 4 OR REFER designIT

Requirements for intermediate support

Provided care is taken to ensure that joists are installed plumb and straight between supports there is no requirement for installation of intermediate blocking. During construction, prior to walking on bare joists, the top flange of hyJOIST should be restrained at not more than 2.5 m intervals using battens or equivalent fixed back to points of rigidity as shown in the 'Installation Guide'.

Transfer of wind and earthquake forces between floors

The design of houses includes quantification of lateral loads due to wind and earthquake. Racking forces determined for design of upper level bracing must be able to be transferred through the floor depth to the lower level. Racking forces in the direction of the joists are catered for by the considerable longitudinal shear capacity of the joists. For forces perpendicular to the joists, blocking and/or perimeter 'rimboard' and their associated fixings (installed to provide lateral restraint) may or may not be adequate. In particular, the fixing of the floor diaphragm to 'rimboard'/blocking and in turn, fixing of 'rimboard'/blocking to the supports must be adequate to resist the horizontal racking force used for design of the upper floor wall bracing system.

Blocking using hyJOIST with the required fixing is a practical and easy to install solution.

Using plywood closures – at external walls

NAIL SPACING AS REQUIRED FOR THE UPPER STOREY WALL BRACING

RACKING LOADS NEED TO BE TRANSFERRED THROUGH FLOORS TO THE LOWER STOREY WALL BRACING SYSTEM
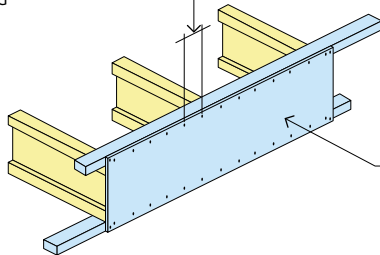
STRUCTURAL PLYWOOD BRACING PANELS AS REQUIRED FOR THE UPPER STOREY WALLS
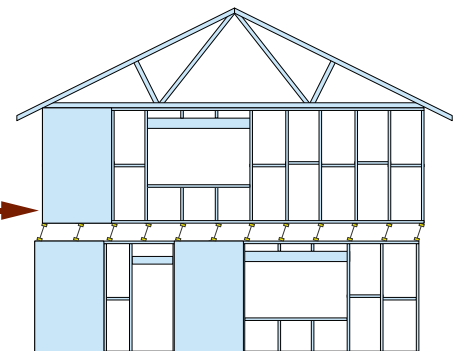
Using hyJOIST blocking – external and internal walls

At external walls, 'rimboard' may be used in conjunction with hyJOIST blocking.

NAIL FIX PLATE TO BLOCKING AND BLOCKING TO SUPPORT TO MATCH CAPACITY OF NAILING REQUIRED FOR THE UPPER STOREY BRACING
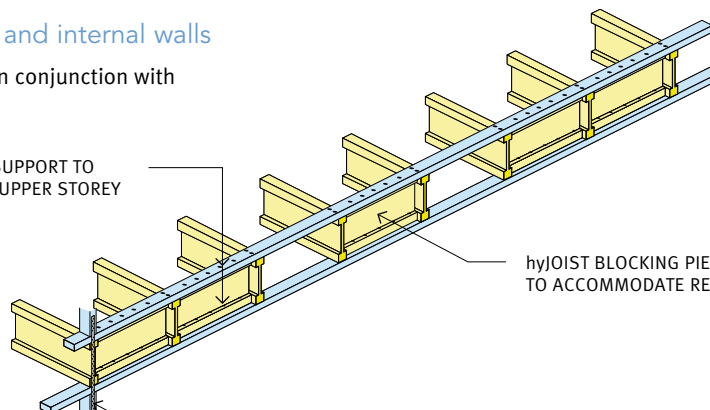
hyJOIST BLOCKING PIECES – SUFFICIENT NUMBER TO ACCOMMODATE REQUIRED NAILING

TIE-DOWN STRAP OR BOLTS AS FOR THE UPPER STOREY WALL BRACING AND TIE-DOWN REQUIREMENTS

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Web holes for hyJOIST

Holes may be cut through the web of hyJOIST provided they are located within the central part of the span as specified below.

For hole sizes other than those included below refer to the web hole calculator in designIT. For cases involving non-uniform loading or where the possibility of locating the hole closer to supports needs to be assessed, use the web hole option in the floor joist calculator in designIT.

CIRCULAR HOLES

40 MM DIA. HOLE ALLOWED ANYWHERE IN WEB. CLOSEST SPACING 300 mm C/C

HOLE SPACING NOT LESS THAN 300 mm OR 2D (OR 2W)

HOLE DIAMETER

MINIMUM DISTANCE (X) FROM EITHER SUPPORT

JOIST SPAN (L)

RECTANGULAR HOLES

HOLE LENGTH W

MAXIMUM 40 mm DIAMETER HOLE IN CANTILEVER SPAN

H

MINIMUM DISTANCE (X) FROM EITHER SUPPORT

CANTILEVER SPAN

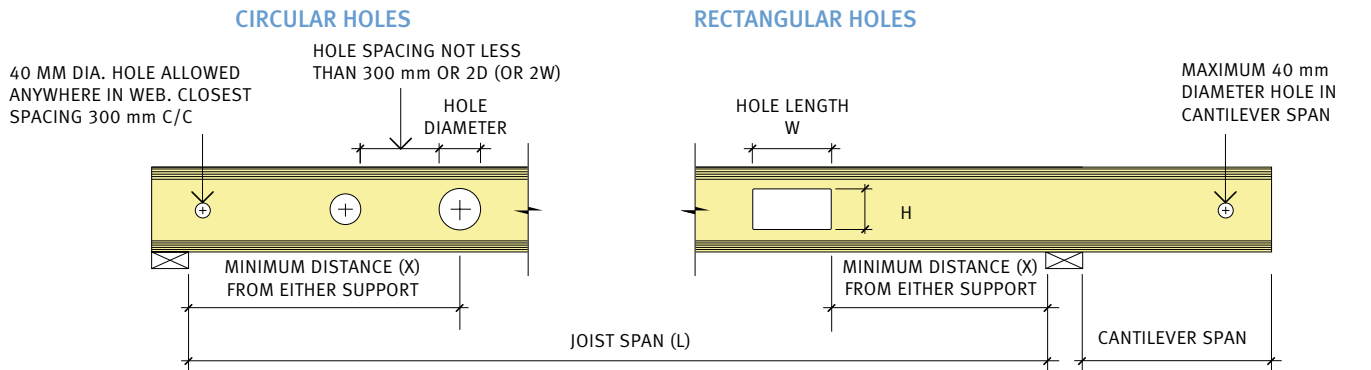| hyJOIST SECTION CODE	MAXIMUM HOLE DIAMETER (mm)	MINIMUM DISTANCE FROM SUPPORT 'X'	HOLE DIAMETER (mm)			
			ø80	ø110	ø125	ø150
			CIRCULAR HOLES – MINIMUM DISTANCE 'X' FROM SUPPORT – (m)			
HJ200 45	ø118	0.34L	0.16L	0.28L	N/A	N/A
HJ240 45	ø158	0.38L	0.12L	0.21L	0.26L	0.33L
HJ240 63						
HJ240 90						
HJ300 45	ø218	0.41L	0.10L*	0.15L	0.18L	0.24L
HJ300 63						
HJ300 90			0.10L*	0.14L	0.20L	
HJ360 63	ø278	0.42L	0.3 m*	0.08L*	0.11L	0.16L
HJ360 90		0.40L	0.3 m*	0.3 m*	0.3 m*	0.05L*
HJ400 90	ø318	0.40L	0.3 m*	0.3 m*	0.3 m*	0.08L*

* Minimum distance from any support is 0.3 metres

| hyJOIST SECTION CODE	HOLE SIZE		PERMITTED LOCATIONS FOR RECTANGULAR HOLES							
	HEIGHT (mm)	LENGTH (mm)	L	Actual Span 'L' in metres						
			X	Minimum distance from the side of the hole to any support – (m)						
HJ200 45	118	230	L	≤ 3.8	4.0	4.2	4.4	4.5		
			X	0.34L	1.38	1.59	1.80	1.90		
HJ240 45	158	310	L	≤ 3.5	3.6	3.8	4.0	4.2	4.4	4.6	4.7
			X	0.38L	1.36	1.50	1.65	1.80	1.95	2.10	2.18
HJ240 63	158	310	L	≤ 3.5	5.5					
			X	0.38L	2.13					
HJ240 90	158	310	L	≤ 5.8	6.0	6.1				
			X	0.38L	2.36	2.45				
HJ300 45	218	400	L	≤ 3.6	3.8	4.0	4.2	4.4	4.6	> 4.6
			X	0.41L	1.58	1.71	1.84	1.97	2.10	†
HJ300 63	218	400	L	≤ 5.2	5.4	5.6	5.8	6.0	6.2	6.3
			X	0.41L	2.25	2.39	2.54	2.69	2.83	2.91
HJ300 90	218	400	L	≤ 6.4	6.6	6.8	7.0			
			X	0.40L	2.73	2.88	3.04			
HJ360 63	278	500	L	≤ 5.4	5.6	5.8	6.0	6.2	6.4	6.6	6.8
			X	0.42L	2.37	2.49	2.62	2.75	2.88	3.02	3.15
HJ360 90	278	500	L	≤ 7.2	7.4	7.6	7.7			
			X	0.40L	2.97	3.10	3.17			
HJ400 90	318	600	L	≤ 8.0						
			X	0.40L						

† Use the web hole option in the floor joist calculator in designIT
Interpolate to obtain values of 'X' for spans intermediate between the values given

Notes:
1. Data applies for floor joists supporting uniform loads (and concentrated live load not exceeding 1.8 kN).
2. Hole locations closer to supports may be possible for some load and support conditions; refer to the 'floor joist calculator' in designIT software or contact our free call market support service on 1800 808 131.
3. Spacing between holes to be not less than 300 mm or twice the width (or twice the diameter) of the larger hole.
4. Not more than three holes with width or diameter greater than 80 mm in any span.
5. For cantilever spans holes greater than 40 mm diameter are not permitted.
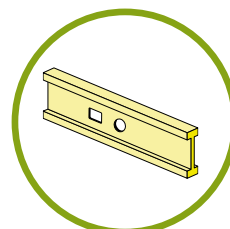
DO CUT IN WEB AREA AS SPECIFIED
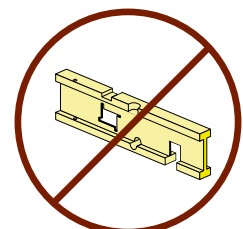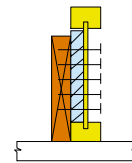
DO NOT CUT, NOTCH OR BORE THROUGH FLANGE

Cantilevers for balconies

Balcony cantilevers, subject to external weather exposure can be provided using preservative treated and protected outriggers as per Details F11 and F12 in the 'Installation Guide'. For weather proofed applications hyJOIST can be cantilevered to provide balcony support as per Detail F13 also in the 'Installation Guide'.
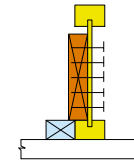
Outriggers can be seasoned stress-graded timber or hySPAN, either nested against the hyJOIST web and bearing on the top of the bottom flange or placed adjacent to the hyJOIST bearing directly on the support. Diagrams illustrating these configurations are shown below.

Some options for outriggers are included in the following table. These have all been determined for 2 kPa balcony floor load. For other floor loads and to consider other options refer to designIT.
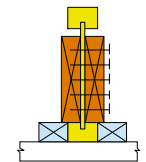
hyJOIST SECTION CODE	JOIST SPACING (mm)	MAXIMUM BALCONY CANTILEVER (m)	OUTRIGGER OPTIONS	
			NESTED OUTRIGGER	ADJACENT OUTRIGGER
HJ200 45	450	1.0	No suitable size	150 x 35 hySPAN
	600	0.9	No suitable size	130 x 45 hySPAN
HJ240 45	450	1.2	2/150 x 35 hySPAN	170 x 45 hySPAN
		1.1	2/140 x 35 MGP10	190 x 45 F5
	600	1.0	150 x 45 hySPAN	150 x 45 hySPAN
			2/140 x 35 MGP10	190 x 45 F5
HJ240 63	450	1.2	2/150 x 35 hySPAN	170 x 45 hySPAN
				190 x 45 F5
	600	1.2	2/150 x 45 hySPAN	200 x 45 hySPAN
				240 x 45 F5
HJ240 90	450	1.4	2/150 x 35 hySPAN	Not Recommended
	600	1.4	No suitable size	
HJ300 45	450	1.4	200 x 45 hySPAN	200 x 45 hySPAN
			190 x 45 MGP12	240 x 45 F5
	600	1.3	200 x 45 hySPAN	200 x 45 hySPAN
				290 x 45 F5
HJ300 63	450	1.5	200 x 45 hySPAN	200 x 45 hySPAN
				240 x 45 F5
	600	1.4	2/200 x 35 hySPAN	240 x 45 hySPAN
				290 x 45 F5
HJ300 90	450	1.7	2/200 x 35 hySPAN	Not Recommended
	600	1.6	2/200 x 45 hySPAN	
HJ360 63	450	1.7	240 x 45 hySPAN	240 x 45 hySPAN
				290 x 45 F5
	600	1.6	240 x 45 hySPAN	240 x 45 hySPAN
				290 x 45 MGP 10
HJ360 90	450	1.9	2/240 x 35 hySPAN	Not Recommended
	600	1.8	2/240 x 45 hySPAN	
HJ400 90	450	2.0	300 x 45 hySPAN	Not Recommended
	600	1.9	2/300 x 45 hySPAN	

ADJACENT OUTRIGGER

SINGLE SECTION   DOUBLE SECTION

NESTED OUTRIGGER

BLOCKING

TRIMMING JOIST

OUTRIGGER

PACKING REQUIRED FOR ADJACENT OUTRIGGER ONLY

OUTRIGGER FIXED TO JOIST AS PER DETAIL F11 OR F12 IN THE 'INSTALLATION GUIDE'

CANTILEVER SPAN

OUTRIGGER BACKSPAN NOT LESS THAN 1.5 X CANTILEVER SPAN

JOIST BACKSPAN NOT LESS THAN 2 TIMES THE CANTILEVER

Joists supporting parallel load bearing walls

hyJOIST SECTION CODE	SHEET ROOF & CEILING											
	ROOF LOAD WIDTH (m)						ROOF LOAD WIDTH (m)					
	1.8	2.4	3.6	4.8	6.0	7.2	1.8	2.4	3.6	4.8	6.0	7.2
	MAXIMUM SINGLE SPAN (m)						MAXIMUM CONTINUOUS SPAN (m)					
HJ200 45	2.7	2.5	2.1	1.8	1.5	1.3	2.6	2.2	1.7	1.3	NS	NS
2/HJ200 45	3.5	3.3	3.0	2.8	2.6	2.4	4.5	4.3	3.2	2.6	2.2	1.9
HJ240 45	3.1	3.0	2.6	2.3	1.9	1.7	3.4	2.9	2.1	1.7	1.5	1.3
2/HJ240 45	4.1	3.9	3.5	3.2	3.0	2.9	5.1	4.8	4.2	3.4	2.9	2.5
HJ240 63	3.5	3.2	2.8	2.3	1.9	1.7	3.4	2.9	2.1	1.7	1.5	1.3
2/HJ240 63	4.5	4.3	3.9	3.6	3.3	3.1	5.4	5.2	4.2	3.4	2.9	2.5
HJ240 90	4.0	3.8	3.4_{45}	3.0_{45}	2.6_{45}	2.2_{70}	4.4	3.6	2.8_{90}	2.3_{90}	1.9_{90}	$1.7_{\#\#}$
HJ300 45	3.8	3.5	3.2_{45}	2.9_{70}	2.6_{70}	2.2_{70}	4.5_{90}	3.9_{90}	2.8_{90}	$2.3_{\#\#}$	$2.0_{\#\#}$	$1.7_{\#\#}$
2/HJ300 45	4.8	4.6	4.2	3.9	3.6	3.4_{45}	5.1	4.7	4.4	4.1_{90}	$3.9_{\#\#}$	$3.4_{\#\#}$
HJ300 63	4.2	3.9	3.5_{45}	3.0_{70}	2.6_{70}	2.2_{70}	4.5_{90}	3.6_{90}	2.8_{90}	$2.3_{\#\#}$	$2.0_{\#\#}$	$1.7_{\#\#}$
2/HJ300 63	5.1	4.9	4.6	4.3	4.0_{45}	3.8_{45}	6.1	5.9	5.4_{90}	$4.5_{\#\#}$	$3.9_{\#\#}$	$3.3_{\#\#}$
HJ300 90	4.7	4.5_{45}	4.1_{70}	3.5_{70}	3.0_{70}	2.6_{70}	5.2_{90}	$4.2_{\#\#}$	$3.3_{\#\#}$	-	-	-
HJ360 63	4.7	4.5_{45}	4.1_{70}	3.5_{70}	3.0_{90}	2.6_{90}	$5.2_{\#\#}$	$4.2_{\#\#}$	$3.3_{\#\#}$	-	-	-
2/HJ360 63	5.7	5.5	5.1	4.8_{45}	4.6_{70}	4.4_{70}	6.2	5.9	$5.5_{\#\#}$	$5.3_{\#\#}$	-	-
HJ360 90	5.2_{45}	5.0_{45}	4.3_{70}	3.5_{70}	2.8_{70}	2.5_{70}	$4.9_{\#\#}$	$4.2_{\#\#}$	$3.3_{\#\#}$	-	-	-
HJ400 90	5.6_{45}	5.3_{70}	4.3_{70}	3.5_{70}	2.8_{70}	2.5_{70}	$4.9_{\#\#}$	$4.2_{\#\#}$	$3.3_{\#\#}$	-	-	-

hyJOIST SECTION CODE	TILE ROOF & CEILING											
	ROOF LOAD WIDTH (m)						ROOF LOAD WIDTH (m)					
	1.8	2.4	3.6	4.8	6.0	7.2	1.8	2.4	3.6	4.8	6.0	7.2
	MAXIMUM SINGLE SPAN (m)						MAXIMUM CONTINUOUS SPAN (m)					
HJ200 45	2.0	1.6	1.2	NS	NS	NS	1.6	1.3	NS	NS	NS	NS
2/HJ200 45	2.9	2.7	2.3	1.8	1.5	1.3	3.1	2.5	1.8	1.4	NS	NS
HJ240 45	2.6	2.1	1.5	1.2	NS	NS	2.1	1.7	1.2	NS	NS	NS
2/HJ240 45	3.4	3.1	2.7	2.4	2.0	1.7	4.1	3.3	2.3	1.8	1.5	1.3
HJ240 63	2.6	2.1	1.5	1.2	NS	NS	2.1	1.7	1.2	NS	NS	NS
2/HJ240 63	3.7	3.4	3.0	2.4	2.0	1.7	4.1	3.3	2.3	1.8	1.5	1.3
HJ240 90	3.3	2.8_{45}	2.0_{45}	1.6_{45}	1.3_{45}	NS	2.7	2.2	1.6	1.2	NS	NS
HJ300 45	3.1	2.8_{45}	2.0_{45}	1.6_{45}	1.3_{45}	NS	2.8_{90}	2.2_{90}	1.6_{90}	1.2_{90}	NS	NS
2/HJ300 45	4.1	3.7	3.3	3.0_{45}	2.6_{45}	2.2_{45}	4.3	4.0_{90}	3.1_{90}	2.4_{90}	2.0_{90}	1.7_{90}
HJ300 63	3.4_{45}	2.8_{45}	2.0_{45}	1.6_{45}	1.3_{45}	NS	2.7_{90}	2.2_{90}	1.6_{90}	1.2_{90}	NS	NS
2/HJ300 63	4.5	4.1	3.6	3.2_{45}	2.6_{45}	2.2_{45}	5.3_{90}	4.2_{90}	3.0_{90}	2.4_{90}	2.0_{90}	1.7_{90}
HJ300 90	4.0_{45}	3.2_{70}	2.4_{70}	1.9_{70}	1.5_{70}	1.3_{70}	3.2_{90}	2.6_{90}	1.8_{90}	1.4_{90}	1.2_{90}	NS
HJ360 63	3.9_{70}	3.3_{70}	2.4_{70}	1.9_{70}	1.5_{70}	1.3_{70}	$3.2_{\#\#}$	$2.6_{\#\#}$	$1.8_{\#\#}$	$1.4_{\#\#}$	$1.2_{\#\#}$	NS
2/HJ360 63	5.0	4.7	4.2_{45}	3.7_{70}	3.0_{70}	2.6_{70}	5.5_{90}	$4.9_{\#\#}$	$3.5_{\#\#}$	$2.8_{\#\#}$	$2.3_{\#\#}$	$2.0_{\#\#}$
HJ360 90	4.0_{70}	3.2_{70}	2.4_{70}	1.9_{70}	1.5_{70}	1.3_{70}	$3.2_{\#\#}$	$2.5_{\#\#}$	$1.8_{\#\#}$	$1.4_{\#\#}$	$1.2_{\#\#}$	NS
HJ400 90	4.0_{70}	3.2_{70}	2.4_{70}	1.9_{70}	1.5_{70}	1.3_{70}	$3.2_{\#\#}$	$2.4_{\#\#}$	$1.8_{\#\#}$	$1.4_{\#\#}$	$1.2_{\#\#}$	NS

Notes:

1. NS signifies the calculated span is less than 1.2 m.
2. Bearing for single span joists or the end supports of continuous joists, provide at least 30 mm bearing unless signified otherwise by a subscript value adjacent to the quoted maximum span. For the intermediate supports of continuous span joists, provide at least 65 mm bearing unless signified otherwise by a subscript value adjacent to the quoted span - ##, signifies that web stiffeners are required together with a bearing of 90 mm.
3. See designIT for spans and bearings.

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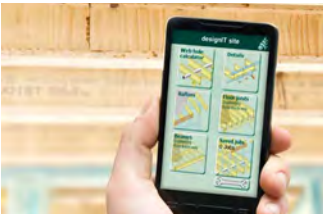• Increased design options for a range of building materials

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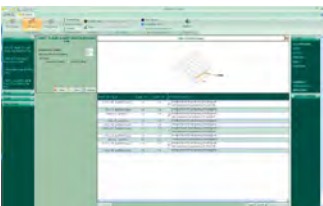
Floor beam layout and take-off service

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