

- Strong and light Smart LVL 12.
- JD4 joint group.
- Straight, no twists and warps.
- Coloured Red for easy identification.
- H2S treated to AS/NZS 1604.1.
- H2 treatment also available for North of the Tropic of Capricorn.
- Sizes: 70, 90, 140, 190 x 35 mm.
- Lengths: 2.4 12.0m.
- Precision docking of studs available on request.







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# **Design tables**

## 1. Wall studs

Characteristic properties							
Bending	ťь	46	MPa				
Compression parallel	ť،	30	MPa				
Edge shear	ť,	4.5	MPa				
Modulus of Elasticity	Е	12,000	MPa				

Design loads		
Roof dead load	40	kg/m <sup>2</sup> (sheet)
Roof dead load	90	kg/m² (tile)
Roof live load	0.25	kPa
Floor dead load:	40	kg/m <sup>2</sup> (sheet)
Floor live load	1.5	kPa
Wall dead load	30	kg/m <sup>2</sup>
Wind speed:	Ν3	

### Design criteria/assumptions:

Rafter/truss s

1) Double studs are nail laminated
2) Reduced f' <sub>b</sub> by 40% for notched stud
3) Reduced $f'_{c}$ & $f'_{t}$ by 22% for notched stud
4) Studs are assumed laterally restrained by noggings
5) Maximum 450 mm stud spacing
6) Rafter/truss spacing -up to 600 mm for tile & 900 mm for sheet roof
7) Maximum 600 mm floor joist spacing
8) Upper wall height is assumed to be the same as the lower wall height

### Common wall studs - (not notched)

		Maximum recommended RLW (m)			
Size	Stud height (m)	Sheet roof (40 kg/m <sup>2</sup> ) Max 900 mm truss spacing	Tile roof (90 kg/m <sup>2</sup> ) Max 600 mm truss spacing		
0025		Floor load wid	or load width up to 4.5 m		
90x35	up to 3.0 m	10.0	10.0		

### <u>Common wall studs - (maximum 20 mm notch into</u> the depth for bracing element)

		Maximum recommended RLW (m)			
Size	Stud height (m)	Sheet roof (40 kg/m <sup>2</sup> ) Max 900 mm truss spacing	Tile roof (90kg/m <sup>2</sup> ) Max 600mm truss spacing		
	up to 2.7 m	Floor load width up to 4.5 m			
00-25		10	10		
90x35	2.7 - 3.0 m	Floor load wid	th up to <mark>4.5 m</mark>		
		6.7	5.4		

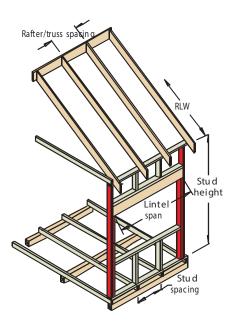
# Stud height

### Jamb studs - (not notched)

		Roof Ioad width	Maximum recommended opening width (m)					
Size	Jamb stud height (m)		Sheet roof (Max 900 mm truss spacing)			Tile roof (Max 600 mm truss spacing)		
		(m)	No floor	2.0 m FLW	4.5 m FLW	No floor	2.0 m FLW	4.5 m FLW
		1.5	4.1	3.8	3.4	4.0	3.7	3.3
	up to 2.7 m	4.5	3.5	3.2	2.9	3.2	3.0	2.8
2/90x35		7.5	3.0	2.8	2.6	2.7	2.5	2.3
		1.5	3.2	3.0	2.7	3.1	2.9	2.7
	2.7 - 3.0 m	4.5	2.8	2.6	2.4	2.6	2.5	2.3
		7.5	2.4	2.3	2.1	2.2	2.1	2.0

### Studs supporting concentrated loads - (not notched)

		Maximum recommended roof area supported (m <sup>2</sup> )					
Size	Jamb stud height (m)	Sheet roof (40 kg/m²)			Tile roof (90 kg/m²)		
		No floor	5 m² floor	10 m <sup>2</sup> floor	No floor	5 m <sup>2</sup> floor	10 m <sup>2</sup> floor
2/00.25	up to 2.7 m	44	40	37	31	28	25
2/90x35	27-30m	38	34	30	27	24	21





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