

SmartFrame *Red Alert* wall framing



- Strong and light SmartLVL 12
- Straight, no twists and warps
- Coloured Red for easy identification
- Glue-line H2S treated to AS/NZS 1604.4 (H2 treatment available for North of the Tropic of Capricorn)
- Sizes 90 x 35 & 45 mm
- Lengths 2.4—12.0 m (please check availability on lengths greater than 9.0 m)
- Precision docking of studs available on request

www.tilling.com.au

1300 668 690

Design Tables

Characteristic Properties		Design Loads		Design Criteria/Assumptions:	
Bending	f'_b 46 MPa	Roof dead load	40 kg/m ² (sheet)	1) Double studs are nail laminated	
Compression Parallel	f'_c 30 MPa	Roof dead load	90 kg/m ² (tile)	2) Reduced f'_b by 40% for notched stud	
Edge shear	f'_s 4.5 MPa	Roof live load	0.25 kPa	3) Reduced f'_c & f'_t by 22% for notched stud	
Modulus of Elasticity	E 12,000 MPa	Floor dead load:	40 kg/m ² (sheet)	4) Studs are assumed laterally restrained by noggings	
		Floor live load	1.5 kPa	5) Maximum 450 mm stud spacing	
		Wall dead load	30 kg/m ²	6) Rafter/truss spacing - up to 600 mm for tile & 900 mm for sheet roof	
		Wind speed:	N3	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)

Size	Stud Height (m)	Maximum Allowable RLW (m)	
		Sheet Roof (40 kg/m ²) 900 mm max truss spacing	Tile Roof (90 kg/m ²) 600 mm max truss spacing
		Floor Load Width up to 4.5 m	
90x35	Up to 2.7 m	10	10
	2.7 - 3.0 m	10	10
90x45	Up to 2.7 m	10	10
	2.7 - 3.0 m	10	10

Common Wall Studs - (Notched 20mm max)

Size	Stud Height (m)	Maximum Allowable RLW (m)	
		Sheet Roof (40 kg/m ²) 900 mm max truss spacing	Tile Roof (90 kg/m ²) 600 mm max truss spacing
		Floor Load Width up to 4.5 m	
90x35	Up to 2.7m	10	10
	2.7m - 3.0m	5.5	5.5
90x45	Up to 2.7m	10	10
	2.7m - 3.0m	10	10

Jamb Studs - (Not notched)

Size	Jamb Stud Height (m)	Roof Load Width (m)	Maximum Opening Width (m)					
			Sheet Roof (40 kg/m ²) 900 mm max truss spacing			Tile Roof (90 kg/m ²) 600 mm max truss spacing		
			No Floor	2.0 m FLW	4.5 m FLW	No Floor	2.0 m FLW	4.5 m FLW
2/90x35	Up to 2.7 m	1.5	4.1	3.8	3.4	4.0	3.7	3.3
		4.5	3.5	3.2	2.9	3.2	3.0	2.8
		7.5	3.0	2.8	2.6	2.7	2.5	2.3
	2.7 - 3.0 m	1.5	3.2	3.0	2.7	3.1	2.9	2.7
		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
2/90x45	Up to 2.7 m	1.5	5.5	5.1	4.6	5.4	5.0	4.5
		4.5	4.8	4.4	4.0	4.4	4.1	3.8
		7.5	4.1	3.8	3.6	3.7	3.5	3.2
	2.7 - 3.0 m	1.5	4.4	4.1	3.8	4.3	4.0	3.7
		4.5	3.9	3.6	3.3	3.6	3.4	3.2
		7.5	3.4	3.2	3.0	3.1	3.0	2.8

Studs Supporting Concentrated Loads - (Not notched)

Size	Jamb Stud Height (m)	Maximum Roof Area Support (m ²)					
		Sheet Roof (40 kg/m ²)			Tile Roof (90 kg/m ²)		
		No Floor	4 m ² Floor	8 m ² Floor	No Floor	4 m ² Floor	8 m ² Floor
2/90x35	Up to 2.7m	36	33	30	24	22	18
	2.7m - 3.0m	26	23	17	17	15	8
2/90x45	Up to 2.7m	46	43	41	31	29	27
	2.7m - 3.0m	34	31	28	23	21	16

Tilling Timber Pty Ltd

Victoria

31-45 Orchard Street,
Kilsyth Vic 3137
email: sales@tilling.com.au
Phone +61 3 9725 0222
Fax +61 3 9725 3045

New South Wales

109 Kurrajong Avenue,
Mt Druitt, NSW 2770
email: nswsales@tilling.com.au
Phone +61 2 9677 2600
Fax +61 2 9677 2500

Queensland

84 Magnesium Drive,
Crestmead QLD 4132
email: qldsales@tilling.com.au
Phone +61 7 3440 5400
Fax +61 7 3440 5444

Western Australia

10 Cartwright Drive
Forrestdale WA 6112
email: wasales@tilling.com.au
Phone +61 8 9399 1609
Fax +61 8 9399 1065

South Australia

5-9 Woomera Ave
Edinburgh SA 5111
email: sasales@tilling.com.au
Phone +61 8 8345 1966
Fax +61 8 8345 1977