

WALL PLATE TO STUD TIE-DOWNS

(and high capacity lateral fixing of timber members)

UPDATED MAY 2020

END GRAIN DESIGN UPLIFT CAPACITIES WALL PLATE TO STUD CONNECTION (UPLIFT)

(a) Simpson Strong-Tie® Screws

Joint Group (Stud)	SDWS Length (mm)	Design Uplift Capacity, N_{dj} (kN)				
		WALL PLATE THICKNESS (mm)				
		35	45	70	80	90
JD4	102	5.1	4.8	2.7	1.9	N/S
	127	6.5		5.3	4.4	3.5
	152	6.5		6.5	6.5	5.8
JD5	102	3.8	3.6	2.0	1.4	N/S
	127	4.6		3.8	3.1	2.5
	152	4.6		4.6	4.6	4.1
JD6	102	2.6	2.4	1.4	0.9	N/S
	127	3.6		2.9	2.4	1.9
	152	3.6		3.6	3.6	3.2

Screw Codes: SDWS224(102mm), SDWS225(127mm), SDWS226(152mm).

END GRAIN UPLIFT NOTES:

1. Values per screw. Double screws require minimum 90mm stud width.
2. Plates to be designed for required tie-down spacing.
3. Single screw per stud on stud clusters.

(b) Hobson Engineering Screws

Joint Group (Stud)	TYKT Length (mm)	Design Uplift Capacity, N_{dj} (kN)				
		WALL PLATE THICKNESS (mm)				
		35	45	70	80	90
JD4	100	5.5	4.7	2.6	1.7	N/S
	125	6.5		5.1	4.2	3.3
	150	7.5		7.5	6.5	5.6
JD5	100	4.1	3.5	1.9	1.3	N/S
	125	4.6		3.6	3.0	2.3
	150	5.3		5.3	4.6	4.0
JD6	100	2.8	2.3	1.3	0.9	N/S
	125	3.6		2.8	2.3	1.8
	150	4.1		4.1	3.6	3.1

Screw Codes: TYKT100(100mm), TYKT125(125mm), TYKT150(150mm).

SIDE GRAIN DESIGN UPLIFT CAPACITIES WALL PLATE TO TIMBER FLOOR (UPLIFT)

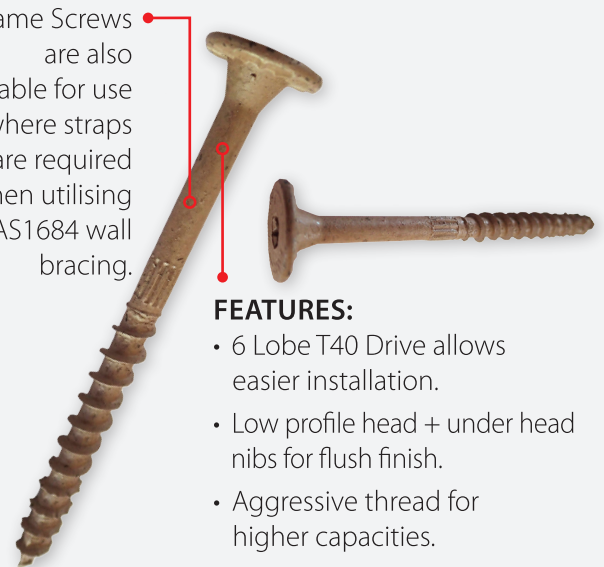
Joint Group	Design Uplift Capacity N_{dj} (kN)	
	SDWS226	TYKT150
JD4	7.7	8.8
JD5	5.4	6.2
JD6	4.2	4.8

NOTE:

A minimum 80mm screw penetration into the floor member is assumed.



Frame Screws are also suitable for use where straps are required when utilising AS1684 wall bracing.



FEATURES:

- 6 Lobe T40 Drive allows easier installation.
- Low profile head + under head nibs for flush finish.
- Aggressive thread for higher capacities.

Meyer TIMBER MT WALL PLATE TO STUD TIE-DOWN SELECTION TABLES

TABLE 1- SHEET ROOFS (40 kg/m²) *** N3 WIND *** 2/35 top plate & 1/35 bottom plate *** HIP Type ***

TOP PLATE TO STUD JD5

RLW	TIE-DOWN SPACING					
	450	600	900	1200	1350	1800
1000	SDWS224	SDWS224	SDWS224	SDWS224	SDWS224	SDWS224
2000	SDWS224	SDWS224	SDWS224	SDWS224	SDWS224	SDWS224
3000	SDWS224	SDWS224	SDWS224	SDWS225	SDWS225	SDWS225
4000	SDWS224	SDWS224	SDWS225	SDWS225	SDWS225	SDWS225
5000	SDWS224	SDWS224	SDWS225	SDWS225	SDWS225	SDWS225
6000	SDWS224	SDWS225	SDWS225	SDWS225	SDWS225	SDWS225
7000	SDWS224	SDWS225	SDWS225	SDWS225	SDWS225	SDWS225
8000	SDWS225	SDWS225	SDWS225	SDWS225	SDWS225	SDWS225

STUD TO BOTTOM PLATE JD6

CUSTOMISED SPECIFICATION AVAILABLE CONTACT MEYER TIMBER®

Nominal fixing capacity is based on 2

***The Joint Group typically reflects the joint group of the stud. Use JD5 for MCP10 (unless the timber is heat excluded) and JD6 for some imported pine.

DESIGN LATERAL CAPACITIES (Shear)

Joint Group	Design Shear Capacity, N_{dj} (kN)		
	Dead Load	Dead + Floor Live Load	Wind Uplift
	$k_1 = 0.57$	$k_1 = 0.69$	$k_1 = 1.14$
JD4	2.8	3.3	5.5
JD5	1.9	2.3	3.8

NOTES:

1. Minimum timber thickness to be 35mm.
2. Minimum screw embedment to be 35mm.
3. For screw embedment >60mm the above values can be increased by 30%.
4. Screw to be driven flush and tip not to protrude more than 10mm.
5. Values above calculated for single shear into side grain.
6. For screws into end grain multiply values by 0.6.