

RACKING CAPACITY OF FIBRE-CEMENT CLADDING (ON 1.2MM & 1.6MM GAUGE WELDED STEEL FRAMES)

Bracing System & Material	Stud Spacing (mm)	Screw Spacing (mm)	Permissible Stress Design Resistance (kN/m)
External Wall Single-Sided Systems			
	On 1.6mm gauge studs and plates		
6mm Hardiflex	450	200	3.9
6mm Hardiflex	300	200	4.8
7.5mm Harditex	450	200	3.3
7.5mm Hardiplank or Weatherboard	450	see Note 4	1.6
7.5mm Hardiplank or Weatherboard	300	see Note 4	2.4
5.5mm Hardibrace	450	see Note 5	5.4
5.5mm Hardibrace	300	see Note 5	5.6
External Wall Two-Sided Systems			
	On 1.6mm gauge studs and plates		
6mm Hardiflex / 6mm Villaboard	450	200	5.1
6mm Hardiflex / 6mm Villaboard	300	200	7.1
7.5mm Hardiflex / 6mm Villaboard	450	200	5.0
7.5mm Hardiplank / 6mm Villaboard	450	see Note 4	4.4
Internal Wall Systems			
	On 1.6mm gauge studs and plates		
single-sided 6mm Villaboard or Versilux	450	200	3.7
two-sided 6mm Villaboard or Versilux	450	200	3.9

WALL FRAMING & FINISHING

Studs shall be rolled steel sections of maximum thickness 1.6mm. For external wind-load-bearing walls, the maximum stud and plate spacing shall be as given in the Design Tables M/203/6 to M/203/11 for the various 6mm and 7.5mm thick James Hardie products. For internal walls (with 1.2mm thick studs), stud spacing shall be 450mm. Refer to James Hardie's Fixing Manuals for recommended coating and/or finishing of sheets.

FASTENER TYPE & SPACING

Refer to Hardie's "External Fixing Manual" and "Internal Fixing Manual" for details of recommended fastener type. Spacing shall be at 200mm centres along all edges and intermediate framing, unless indicated otherwise in the Design Tables. Do not fix fasteners closer than 12mm from panel edges nor closer than 50mm from corners.

NOTES

- [1] Design bracing capacity was determined in accordance with Technical Record TR 440 of 1978. Maximum height to which tabulated bracing capacities apply is 2.7m.
- [2] The minimum length of a bracing wall shall be 900mm for which the racking capacity is 0.9 times the tabulated values. Maximum wall length to which the capacities apply is 3.6m.
- [3] Provide M12 minimum hold-down bolts with 75x70x6mm distribution washers at 900mm centres and within 70mm of face of studs.
- [4] Bracing capacity can only be claimed for HARDIPLANK™ or WEATHERBOARD™ cladding if screws pass through both planks.
- [5] HARDIBRACE™ sheets are purpose-made for structural bracing and shall not be used as exposed, finished, external cladding. Fasteners shall be at 100mm centres along the top/bottom plates and 150mm centres elsewhere.
- [6] For rivetted frames of equivalent gauge, racking capacities given above must be multiplied by a factor 0.8.



**James Hardie
Building Products**

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FIXING TO STEEL FRAMES IN THE DARWIN AREA

**BRACING CAPACITY OF FIBRE-CEMENT SHEET
EXTERNAL & INTERNAL CLADDING**

DESIGN DATA SHEET

CYCLONE STRUCTURAL TESTING STATION

Dept of Civil & Systems Engineering,
James Cook University, Townsville, QLD 4811, Australia

Certified:
Date:

M.I.E. AUST, C.P.Eng
22nd January 1996

NORTHERN TERRITORY
DEPT OF LANDS & HOUSING
BUILDING AUTHORITY BRANCH

Approved:

Date:

DWG NO.

M203/5

Approved for inclusion in DEEMED TO COMPLY by BUILDING ADVISORY COMMITTEE

Date

12/1/96