

# Plankwall<sup>®</sup> Grooved Panels



TECHNICAL  
SPECIFICATION

Plankwall® Grooved Panels are medium density fibre-board (MDF) panels. The panels comprise engineered wood fibre bonded under heat and pressure synthetic resin adhesive. The panels are manufactured in accordance with ASNZS 1859.2 reconstituted wood-based panels.

The MDF panels are manufactured into Grooved Panels using the Plankwall profile machine to create shiplap-look V or W grooves on one side, running the length of the panels. The panels are also available as 'Plain Faced' (un-grooved).

9mm and 12mm thick panels have a tongue and groove edge on the long edge. The 16mm and 18mm thick have a half V groove edge (long edge). All panels are 1200 mm wide and are available in lengths of 2400 mm, 2745 mm, and 3660 mm.

**TABLE 1: PANEL RANGE**

GROOVE TYPE	GROOVE DEPTH (mm)	PANEL WIDTH (mm)	PANEL THICKNESS (mm)		
			9	12	16, 18
			PANEL LENGTH (mm)		
100 mm V Groove	3	1200	2400, 2745 & 3660	2400, 2745 & 3660	2400 - indent only
150 mm V Groove	3	1200	2400, 2745 & 3660	2400, 2745 & 3660	2400 - indent only
80 mm W Groove	2	1200	2400 2745 - indent only	2400 2745 - indent only	2400 - indent only
Plain Faced (un-grooved)	N/A	1200	2400, 2745 & 3660	2400, 2745 & 3660	2400 - indent only

## APPLICATIONS

Plankwall Grooved Panels are designed for internal applications, including feature walls, general wall panelling, ceilings, general cabinetry and joinery units.

## ADVANTAGES

- High impact resistance
- High mechanical resistance
- Equivalent weight to plasterboard
- Good dimensional stability against temperature variations and dampness
- Consistent density: easy to cut (no warping or splintering) and shape
- Smooth surface for high-quality painted and custom finishes
- Ease of finishing compared to plasterboard – no need for stopping
- Ease of installation
- Available in varying thicknesses
- Manufactured from sustainably sourced timber
- Made from sawdust which is timber processing waste

## PANEL SPECIFICATION

**TABLE 2: PANEL SPECIFICATION**

FEATURE	DESCRIPTION
Thickness	9 mm, 12 mm, 16 mm, 18 mm
Panel Size	Width: 1200 mm Height: 2400 mm, 2745 mm, 3660 mm
Material	Medium density fibre-board (MDF)
Edge	9 mm, 12 mm: Tongue and groove (length only) 16 mm, 18 mm: Half V groove (length only)
Surface Finish	Shiplap appearance (down the panel length) with 3 mm deep V grooves at 100 mm or 150 mm centres or with 2 mm deep W grooves at 80 mm or plain faced.
Coating	Raw MDF or Almost Finished Almost Finished: Hard-wearing, scratch resistant UV-cured base surface coating. Two coats of white prime coating on the front face giving a premium smooth surface and providing a moisture barrier. One clear coat on the rear face, providing protection from temporary exposure to moisture e.g. during transportation, as well as a sealed surface for good application of adhesives.
Density	725 kg/m <sup>3</sup>
Weight	6.6 kg/m <sup>2</sup> (9 mm)
Internal Bond	920 kPa (9 mm)
MoE	3300 MPa (9 mm)
MoR	40 MPa (9 mm)
Surface Finish	Material Group 3 (MDF only)
VOC/formaldehyde	Super E0 rating
Accessories	Mill finish aluminium rounded 90° corner joins for 9mm panels: Product Code C09 Mill finish or anodised aluminium corner, edging and capping profiles. Lengths: 5.0 m (with some profiles available in 2.45 m)

## CERTIFICATIONS

Certifications held for the manufacture of the MDF:

- ISO 9001: 2015 Quality management systems (Certificate No. 324)
- ISO 14001:2015 Environmental management systems (Certificate No. 55)
- CARB 93120 Phase 2 and EPA TSCA TI part 770 (Certificate CSi-17111)
- FSC Forestry Stewardship Council Chain of Custody (Certificate 0178950)

## PERFORMANCE

The panels are manufactured in accordance with AS/NZS 1859.2.

Where installed in accordance with the Plankwall Grooved Panels Design and Installation Guide, the panels will meet the requirements of:

- Clause B1 Structure: B1.3.1, B1.3.2, B1.3.4, and B1.3.3 (j) where used for lining and B1.3.3 (f, h, j) where used for bracing
- Clause B2 Durability: B2.3.1 (a) (bracing) and B2.3.1 (b) (lining)
- Clause F2 Hazardous building materials: F3.2.1.

## BRACING SPECIFICATION

The performance and construction of Plankwall Grooved Panels for bracing is detailed in Table 3. Refer to BRANZ Appraisal No.779 for additional bracing options. Bracing demand must be calculated in accordance with NZS 3604:2011. Refer to the Plankwall Grooved Panels Design and Installation Guide for detailed instructions.

**TABLE 3: BRACING SYSTEM** <sup>1</sup>

LINING	FIXING	OTHER REQUIREMENTS	MINIMUM LENGTH*	WIND BU/m	EQ BU/m
9 or 12 mm thick panels, 2400 x 1200 lined on one side***	Screws, clouts, staples	N/A	0.6	80	70
	Screws, clouts, staples	Hold down	0.4 1.2	95 140**	105 130**
	Finish Nails	Hold down	0.4 1.2	65 120	80 100

**Notes:**

\*The minimum length refers to the smallest length of panel for which bracing units can be claimed. In the case of NP-N, only one length has been tested for these purposes.

\*\*Bracing limits of 120 BU/m for timber floors and 150 BU/m for concrete floors in accordance with NZS 3604:2011.

\*\*\*For walls greater than 2.4 m high, multiply the tested bracing value by a factor of  $f = 2.4 / H$ , where H is the wall height in metres. Walls shorter than 2.4 m should be rated as 2.4 m.

<sup>1</sup> Based on GoldenEdge® MDF Panelbrace™ Wall Bracing Systems Bracing Ratings

## BRACING SPECIFICATION CONT.

**TABLE 4: SHEET FASTENERS**

FASTENER	DESCRIPTION
Flat head nails	40 x 2.8 mm hot dip galvanised
Wood screws	8g x 40 mm countersunk coarse thread
Staples	1.6 mm (16 g) 10.5 mm crown galvanised 35 mm or longer
Finishing nails	1.6 mm (16 g) 32 mm or longer
Steel framing	25 mm self-drilling hot dip galvanised or countersunk screws (6 g) or longer

**TABLE 5: HOLD DOWN AND FASTENER CONNECTORS**

FASTENER	DESCRIPTION
Gib® HandiBrac®	One-piece, 2 mm thick, galvanised steel angle bracket. Bracket supplied with type 17 screws, 14 g x 35 mm
BOWMAC®	M10 x 140 mm screw anchor
Coach screw	12 mm x 150 mm and 50 x 50 x 3 mm washer
Galvanised or stainless-steel strap	25 x 0.9 mm top and bottom plate connectors
Cast-in bolt	M12 x 150 mm and 50 x 50 x 3 mm washer
Strap fixing	30 x 2.5 mm hot dip galvanised or stainless-steel flat head nails.

Plankwall Grooved Panels may also be specified as a ceiling diaphragm.  
Refer to the Plankwall Grooved Panels Design and Installation Guide for detailed instructions.

## DESIGN AND INSTALLATION

### DESIGN AND LIMITATIONS OF USE

Plankwall Grooved Panels are for use in internal areas that are dry and protected. The panels must not be subjected to sustained wetting or used in high moisture or high humidity environments, such as bathrooms, kitchen cabinets that are exposed to steam, commercial kitchen, internal pool enclosures, etc. The building must be closed in and weathertight prior to the installation of the panels.

Plankwall Grooved Panels must not be installed where the maximum moisture content of the timber framing exceeds 18% moisture content.

Plankwall Grooved Panels may be used vertically or horizontally, except where the panels are used to provide bracing capacity, the panels must be installed vertically.

Where Plankwall Grooved Panels are to be used as bracing, bracing must be designed in accordance with Section 5 of NZS 3604:2011 and the tested bracing assemblies.

Refer to the Plankwall Grooved Panels Design and Installation Guide for a detailed scope and limitations of use and design instructions.

### HANDLING AND STORAGE

Plankwall Grooved Panels must be stored in a dry and ventilated area. The panels should be stored flat on bearers at maximum 800 mm centres to support the panels or supported on a pallet.

Allow 48 hours for the panels to acclimatise to the on-site relative humidity prior to installation.

Refer to the Plankwall Grooved Panels Design and Installation Guide for detailed handling and storage instructions.

### INSTALLATION

Plankwall Grooved Panels can be installed with general carpentry tools.

Detailed installation instructions for installing Plankwall Grooved Panels as feature walls, general wall panelling of internal walls, ceilings, and cabinetry are provided in the Plankwall Grooved Panels Design and Installation Guide.





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FOR MORE INFORMATION  
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