BUILDING PRODUCTS

Posi-Strut Short Wall Brace Kit

SMARTER WAY TO BRACE SHORT OR NARROW WALLS - DESIGNED FOR SPEED, SIMPLICITY AND STRUCTURAL CONFIDENCE

Engineered to deliver the same bracing performance as steel, the Posi-Strut Short Wall Brace comes pre-fabricated in the wall frame by your trusted MiTek fabricator. That means no steel contractors, no lead times and no slab rework—just a complete system, ready to install.

ADVANTAGES

- Fully engineered solution that meets structural performance requirements while reducing onsite complexity
- Comes in a convenient kit – contains 2 x boots, 2 square washers, 30 MiTek MSA screws and an installation sticker guide that can be adhered to concrete
- Independently tested at QUT and fully compliant with AS1720

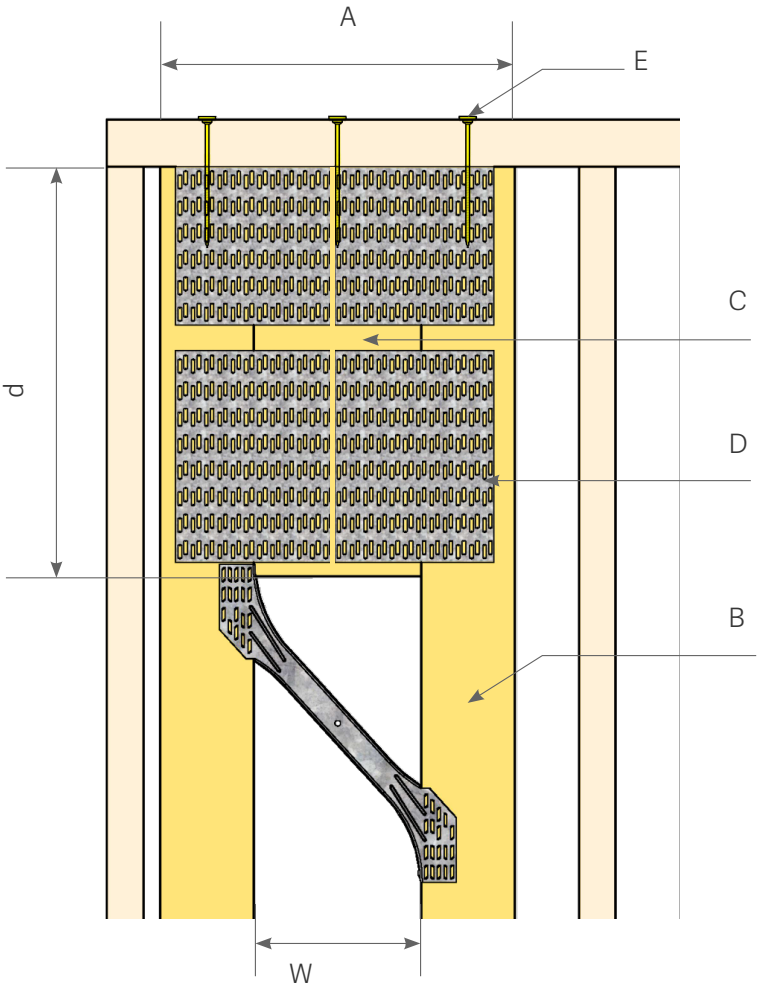
DESIGN NOTES FOR POSI-STRUT SHORT WALL BRACE MSWB

- Specified wall heights are nominal for brace walls. As such capacity of 2400mm wall height can be used for walls 2200mm – 2500mm height, 2700mm for 2500mm - 2800mm height; 3000mm for 2800mm – 3100mm height.
- MSWB elements require a hold-down capacity of up to 32kN to the floor below or to concrete foundations. The Brace Boot allows M16 bolts to be used as hold down. Refer to Appendix for more details on chemical anchors and hold downs.
  Please refer to the typical details for guidance on appropriate hold-down fixings. These hold down requirements must be considered in the design of floor bearers and/or foundations. It is the responsibility of the building designer or building contractor to ensure the structural components are designed to meet these performance requirements.
- Nominated design capacities include contribution from plasterboard cladding fixed to one face of the brace wall for external walls and both faces for internal walls.
- Laminate all timber plies with framing nails at 150mm c/c staggered.

MANUFACTURING SPECIFICATIONS AND CONNECTIONS

MSWB Type Manufacturing Ht 3m	Width of Brace	Min. Chord Sizes and Grades	2 – 45mm Block Size and Joint Group*	Nail Plate Sizes One Face Install Only	StudLok Screws to Top Plate
	A	B	C (W X d)	D	E
MSWB P25	338mm	2- 90 x 45 [MGP12]	158 x 585 – JD4	GQ200150 + 2-GQ150150	6- SL125/SL170
MSWB P30	392mm		212 x 585 – JD4	GQ200150 + 2-GQ150150	8- SL125/SL170
MSWB P36	450mm		270 x 360 – JD4	GQ200150 + GQ150150	8- SL125/SL170
MSWB P40	502mm		322 x 360 – JD4	GQ200150 + GQ150150	10- SL125/SL170

*End block substitution list: Meyer LVL15, Wesbeam eBeam



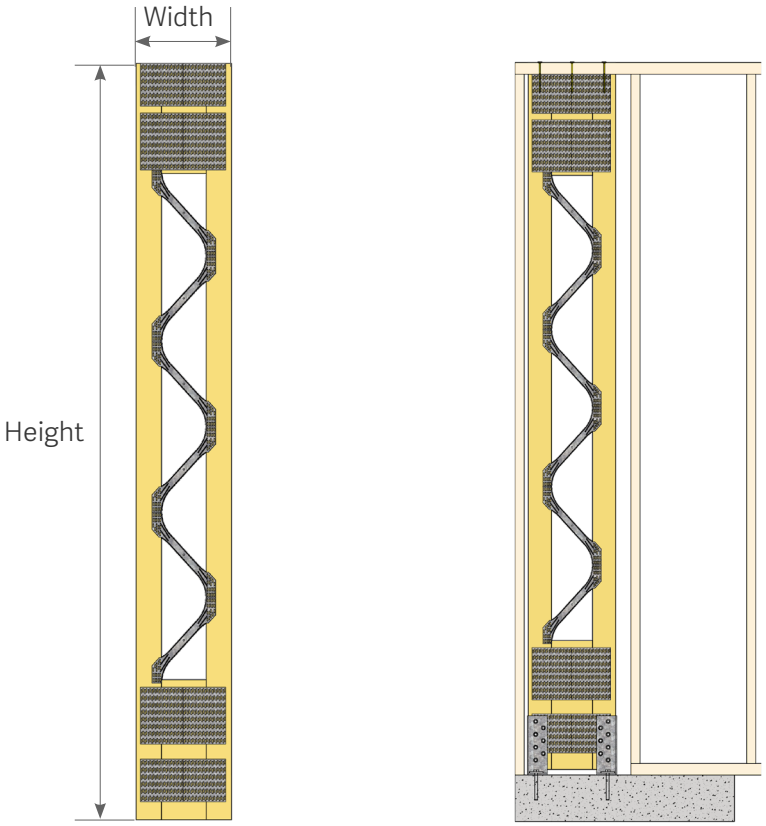


Table 1: Max. Capacity of braces in kN

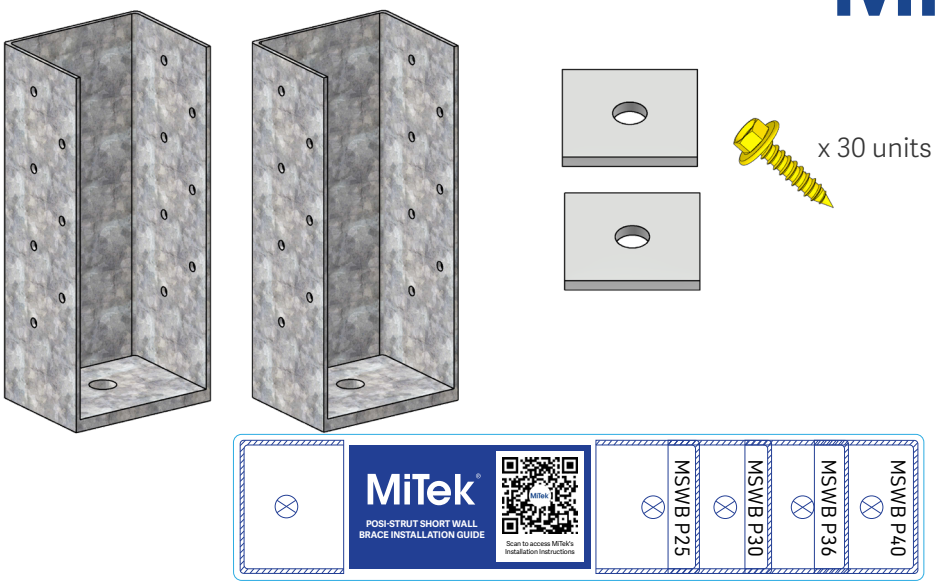
Capacity Table		Nominal Width of Brace (W)	2400mm (H)	2700mm (H)	3000mm (H)	Hold Down
	MSWB P25	340mm	3.26	2.93	2.57	30kN
	MSWB P30	400mm	4.34	3.92	3.45	30kN
	MSWB P36	450mm	5.42	5.00	4.53	32kN
	MSWB P40	510mm	6.27	5.67	5.01	32kN

Table 2: Capacity of wall braces in kN for max. 15kN hold-down

Capacity Table		Nominal Width of Brace (W)	2400mm (H)	2700mm (H)	3000mm (H)	Hold Down
	MSWB P25	340mm	1.93	1.72	1.55	15kN
	MSWB P30	400mm	2.27	2.02	1.82	15kN
	MSWB P36	450mm	2.63	2.34	2.11	15kN
	MSWB P40	510mm	2.96	2.63	2.37	15kN

Note: Capacity of MSWB if the hold down is capped to 15kN

MiTek Installation Kit	Products	Pcs.
	Hold Down Brace Boots	2
	50mm x 5mm Square Washers	2
	MiTek MSA1430 screws	30
	Posi-Strut Short Wall Brace Installation Template	1

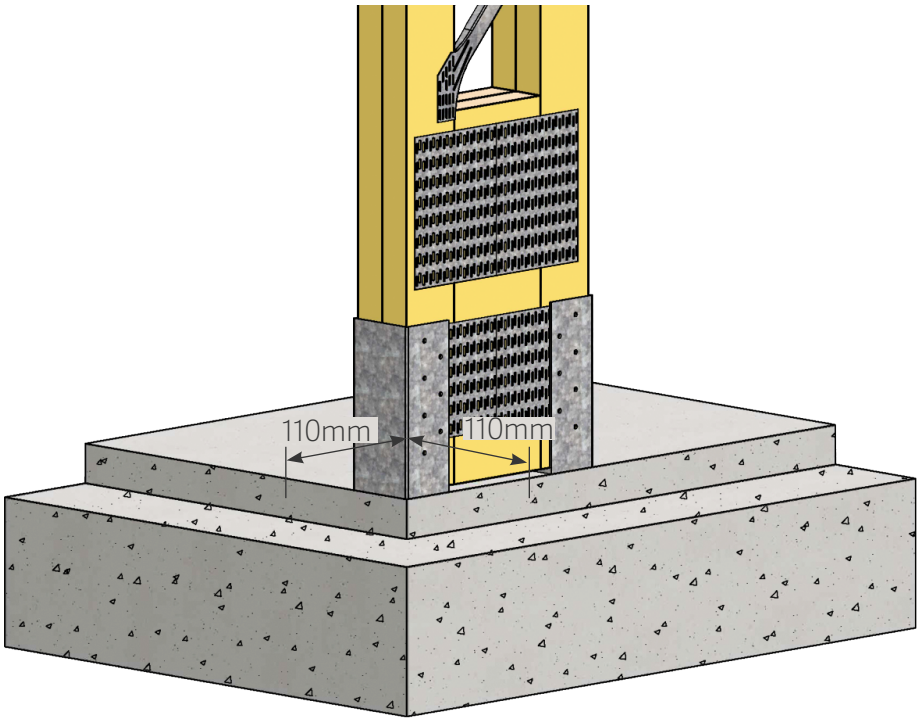


x 1 template per kit

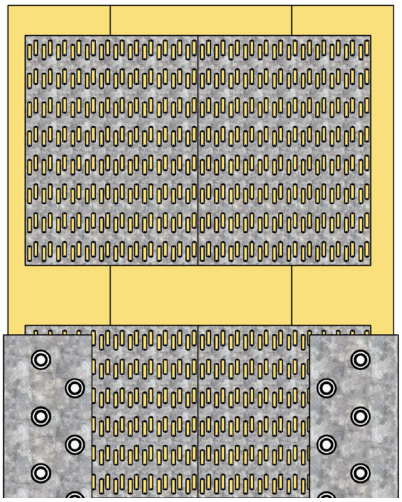
INSTALLATION INSTRUCTIONS

Pre-Install of Braces

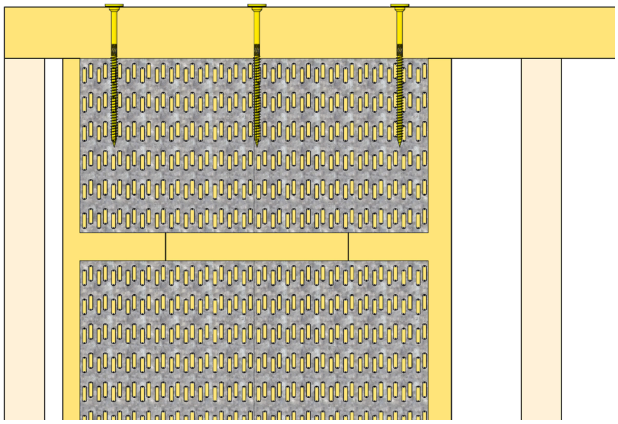
1. **Caution: DO NOT trim Posi Short Wall Brace prior to complete installation of Hold Down Brace Boots.**
2. Use provided **Posi-Strut Short Wall Brace Installation Guide** to position the hold down bolts as per Project Design Engineer's recommendations. Allow hold down to season if using Chemical Anchor.



3. Use provided 50mm x 5mm Square washers to install hold down brace boots. Ensure the bolt head/ nut heads/ hold down rods are trimmed to approximately same level to seat Posi Braces



4. Trim Posi-Strut Short Wall Brace **equally from top and bottom** to fit the wall frame (under the top plate). Insert the trimmed Posi-Strut Short Wall Brace in the brace boots. Check plumb, line and level of Posi-Strut Short Wall Brace secure in place using provided MSA screws to all holes. It is acceptable to trim through the nail plate for height adjustment of Posi Wall Brace.
5. Secure the Posi-Strut Short Wall Brace to Top Plate of wall frame using StudLok screws as recommended in connection specification in Table 'Specification and Connections'

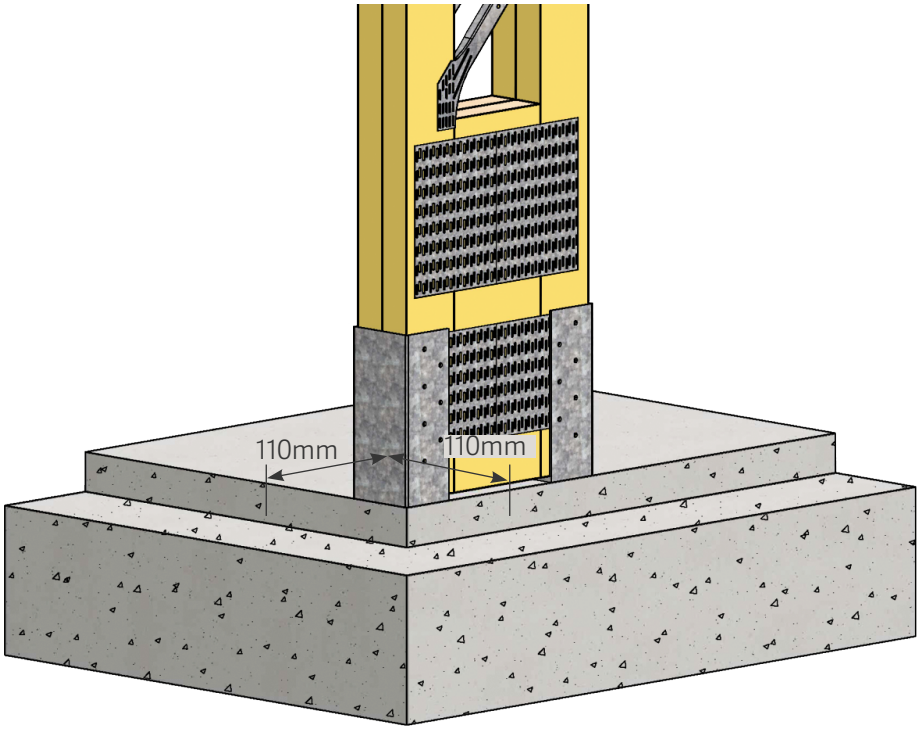


RETRO-FITTING BRACES

1. **Caution: DO NOT trim Posi Short Wall Brace prior to complete installation of Hold Down Brace Boots.**
2. Trim the bottom plate of wall frame (if needed) as per the provided **Posi-Strut Short Wall Brace Installation Guide**. Reinforce the bottom plate each end of cut using 6 concrete nails spaced at 50mm c/c staggered.
3. Use provided template to position the hold down bolts as per Project Design Engineer's recommendations. Allow hold down to season if using Chemical Anchors.
4. Use provided 50mm x 5mm square washers to install hold down brace boots.
5. Trim Posi-Strut Short Wall Brace **equally from top and bottom** to fit the wall frame (under the top plate). Insert the trimmed Posi-Strut Short Wall Brace in the brace boots. Check plumb, line and level of Posi-Strut Short Wall Brace secure in place using provided MSA screws to all holes. It is acceptable to trim through the nail plate for height adjustment of Posi Wall Brace.
6. Secure the Posi-Strut Short Wall Brace to Top Plate of wall frame using StudLok screws as recommended in connection specification in Table 'Specification and Connections'.

APPENDIX

Installation of Brace Boots using Chemical Anchors for 32kN Hold Down Capacity.



Design Parameters	Concrete Grade	Depth of Concrete
	20MPa	250mm minimum
	25MPa	200mm minimum

1. Edge distance from side and face: 110mm minimum
2. Bolt Size: M16 8.8S minimum (Designed for cracked concrete in accordance with AS 5216)
3. Embedded depth of anchor: 165mm minimum

HILTI – RE 500 V4 or equivalent may be used. Alternatively, consult with an anchor design engineer to achieve better outcomes for your project specific needs.

DESIGN NOTES

1. MSWB is a high-performance element. As such, concrete foundation, steel beam or timber beam supporting MSWB to be designed by the project engineer to withstand required hold down and compression forces.
2. Installation of Chemical Anchors to be done by licensed professionals only.