



PRODUCT DATA

X Bolt® Wall Frame Tie Down

A hardened steel masonry screw anchor. Suitable to restrain bottom plate in accordance with AS 1684, AS 1720 and NZS 3604.

Applications	
<ul style="list-style-type: none"> • Connecting bottom plates to slab • External and internal wall frame anchor 	

Material	Carbon Steel
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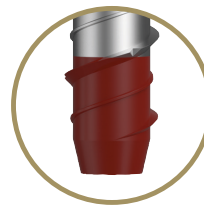
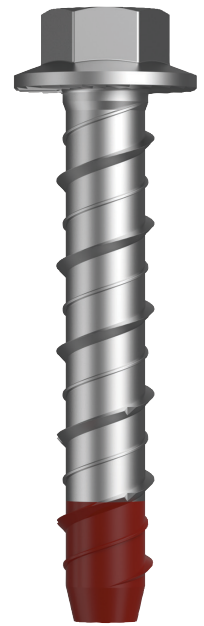
Finish	Mechanical Galvanised
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Part	QFind	Diameter	Length	Wrench Size
		(mm)	L (mm)	AF (mm)
MXHMSGM100100	MXH110	10	100	15
MXHMSGM100120	MXH111		120	
MXHMSGM100150	MXH112		150	
MXHMSGM120100	MXH114	12	100	16
MXHMSGM120150	MXH115		150	

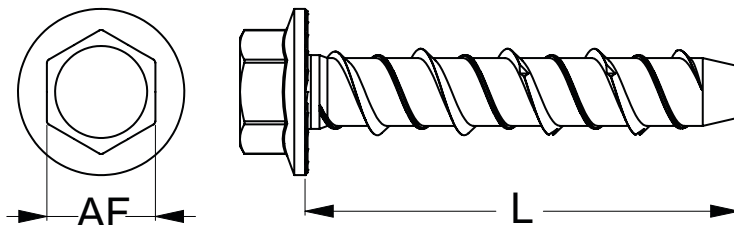


Features

- Suitable for medium to heavy loads
- Suitable for small anchor spacing and edge distance applications
- Quick and easy to install
- Fully removable



Tapered End



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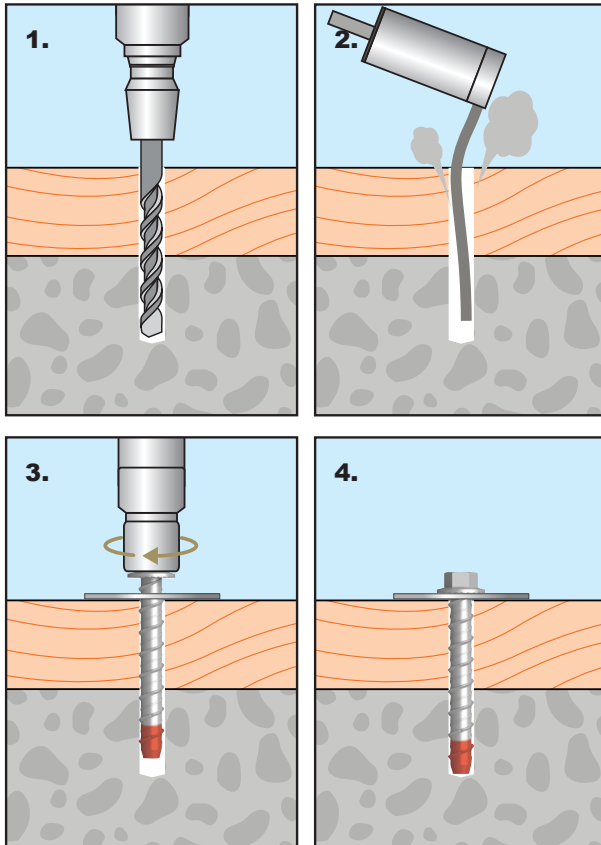
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X Bolt® Wall Frame Tie Down

Installation



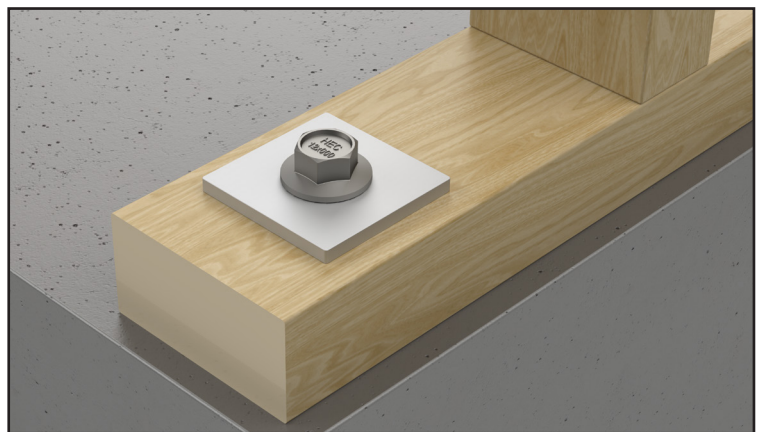
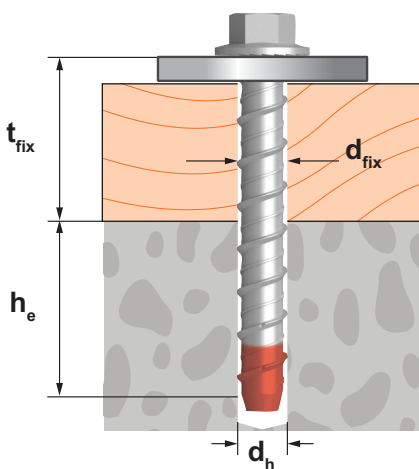
Installation Guide

1. Drill hole into concrete 15mm deeper than required embedment depth
2. Clean hole by blowing 3 times or until dust is removed
3. Insert anchor through washer and bottom plate
4. Use a ratchet or impact driver to install anchor
5. Check minimum embedment depth has been reached

Note: To avoid damaging the timber through over tightening of the anchor, final rotation should be performed using hand tools.

Installation Specification

Size	Drill Diameter	Minimum Embedment Depth	Min. hole diameter in fixture	Min. Washer Dimensions
	d_h (mm)	h_e (mm)	d_{fix} (mm)	(mm)
M10	10	50	13	38 x 38 x 3.0
M12	12	55	15	50 x 50 x 5.0



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Limit State Design Loads - Tension

Bottom Plate Height – 35mm in 20MPa Concrete

Anchor Size	Concrete Embedment h_{ef} (mm)	Concrete Edge Distance (mm)	Uplift Capacity (kN)					
			J2	J3	J4	JD4	JD5	JD6
M10 x 100	62	35	7.5	7.5	7.5	7.5	7.5	7.5
		45	7.8	7.8	7.8	7.8	7.8	7.8
M10 x 120	82	35	12.0	12.0	12.0	12.0	12.0	9.0
		45	12.5	12.5	12.5	12.5	12.0	9.0
M10 x 150	112	35	18.0	18.0	18.0	15.0	12.0	9.0
		45	18.0	18.0	18.0	15.0	12.0	9.0
M12 x 100	60	35	8.6	8.6	8.6	8.6	8.6	8.6
		45	9.0	9.0	9.0	9.0	9.0	9.0
M12 x 150	110	35	19.6	19.6	19.6	19.6	16.0	12.0
		45	20.5	20.5	20.5	20.0	16.0	12.0

Bottom Plate Height – 45mm in 20MPa Concrete

Anchor Size	Concrete Embedment h_{ef} (mm)	Concrete Edge Distance (mm)	Uplift Capacity (kN)					
			J2	J3	J4	JD4	JD5	JD6
M10 x 100	52	35	5.4	5.4	5.4	5.4	5.4	5.4
		45	5.6	5.6	5.6	5.6	5.6	5.6
M10 x 120	72	35	10.3	10.3	10.3	10.3	10.3	9.0
		45	10.7	10.7	10.7	10.7	10.7	9.0
M10 x 150	102	35	16.9	16.9	16.9	15.0	12.0	9.0
		45	17.6	17.6	17.6	15.0	12.0	9.0
M12 x 100	50	35	7.3	7.3	7.3	7.3	7.3	7.3
		45	7.6	7.6	7.6	7.6	7.6	7.6
M12 x 150	100	35	18.9	18.9	18.9	18.9	16.0	12.0
		45	19.7	19.7	19.7	19.7	16.0	12.0

Shear Strength

Size	Edge Distance (mm)	In Plane Shear (kN)	Out of Plane Shear (kN)
M10	35	12.4	2.2
	45	12.4	3.3
M12	35	16.7	2.9
	45	16.7	4.5

Note: Minimum edge distance of 45mm should be used to comply with NZS 3604

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Limit State Design Loads - Tension

Bottom Plate Height – 35mm in 32 MPa Concrete

Anchor Size	Concrete Embedment h_{ef} (mm)	Concrete Edge Distance (mm)	Uplift Capacity (kN)					
			J2	J3	J4	JD4	JD5	JD6
M10 x 100	62	35	9.5	9.5	9.5	9.5	9.5	9.0
		45	9.9	9.9	9.9	9.9	9.9	9.0
M10 x 120	82	35	15.2	15.2	15.2	15.0	12.0	9.0
		45	15.8	15.8	15.8	15.0	12.0	9.0
M10 x 150	112	35	18.0	18.0	18.0	15.0	12.0	9.0
		45	18.0	18.0	18.0	15.0	12.0	9.0
M12 x 100	60	35	8.1	8.1	8.1	8.1	8.1	8.1
		45	8.5	8.5	8.5	8.5	8.5	8.5
M12 x 150	110	35	24.5	24.5	24.5	20.0	16.0	12.0
		45	25.6	25.6	25.6	20.0	16.0	12.0

Bottom Plate Height – 45mm in 32 MPa Concrete

Anchor Size	Concrete Embedment h_{ef} (mm)	Concrete Edge Distance (mm)	Uplift Capacity (kN)					
			J2	J3	J4	JD4	JD5	JD6
M10 x 100	52	35	6.8	6.8	6.8	6.8	6.8	6.8
		45	7.1	7.1	7.1	7.1	7.1	7.1
M10 x 120	72	35	13.0	13.0	13.0	13.0	12.0	9.0
		45	13.5	13.5	13.5	13.5	12.0	9.0
M10 x 150	102	35	18.0	18.0	18.0	15.0	12.0	9.0
		45	18.0	18.0	18.0	15.0	12.0	9.0
M12 x 100	50	35	9.2	9.2	9.2	9.2	9.2	9.2
		45	9.6	9.6	9.6	9.6	9.6	9.6
M12 x 150	100	35	21.1	21.1	21.1	20.0	16.0	12.0
		45	22.0	22.0	22.0	20.0	16.0	12.0

Shear Strength

Size	Edge Distance (mm)	In Plane Shear (kN)	Out of Plane Shear (kN)
M10	35	12.4	2.7
	45	12.4	4.2
M12	35	16.7	3.7
	45	16.7	5.7

Note: Minimum edge distance of 45mm should be used to comply with NZS 3604

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