

TECHNICAL DATA SHEET:

Metal Pin Anchor - Mushroom Head

The Metal Pin Anchor is a nail drive anchor which has a body formed from Zamac alloy and a carbon steel nail. This anchor is ideal for use in concrete, block, brick, or stone.

The diameter of the Metal Pin Anchor body is the same as that for the hole reducing labour times eliminating the need for layout or hole spotting. The anchor body features a mushroom head and made from a corrosion resistant alloy, Zamac 7. On the working end of anchor, The pin anchor features two slots on each half of the body allowing it to expand. The anchor is pre-assembled with a carbon steel nail. That is driven in at the time of installation, forcing each half of the expansion mechanism to compress against the wall of the drilled hole. The Metal Pin Anchor is non-removable anchor once set. This anchor is not recommended for fire rated and overhead applications

TOP FEATURES

- Simple easy to use, fast hammer-in installation.
- Non-removable.
- Corrosion protection for outdoor use.

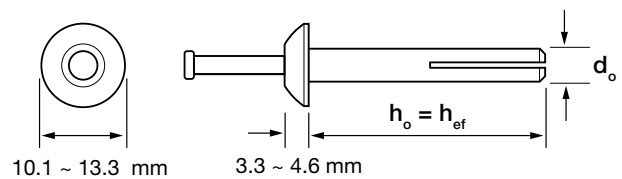




MATERIAL SPECIFICATION

Drive nail	AISI 1018
Anchor body	Zamac 7 alloy
Nail plating	Electroplated zinc in accordance with AS 1789 - 2003 Coating thickness 5 microns minimum

PRODUCT SELECTION

The anchor length is measured from below the head to the end of the anchor. To select the proper length, determine the embedment depth required to obtain the desired load capacity (N_{rec}). Then add the thickness of the fixture, including any spacers or shims, to the embedment depth (h_{ef}). This will be the minimum anchor length required to secure the fixture to the base materials.



SKU	Dia. x Length	Pre-Drill	Fixture, max	Hole Depth, min	Embedment Depth	Rec Tensile Load (kN)*	Rec Shear Load (kN)*		
1MPA05022	5 x 22 mm	6.5 mm	6.5 mm	5-6 mm greater than the calculated embedment	19 mm	0.6 kN	1.3 kN	100	500
1MPA06.5025	6.5 x 25 mm		10 mm						
1MPA06.5032	6.5 x 32 mm		13 mm						
1MPA06.5038	6.5 x 38 mm		22 mm		22 mm / 35 mm	1.0 / 1.5 kN	1.9 kN	100	500
1MPA06.5050	6.5 x 50 mm		28 mm						
1MPA06.5075	6.5 x 75 mm		45 mm						

*32MPa Concrete

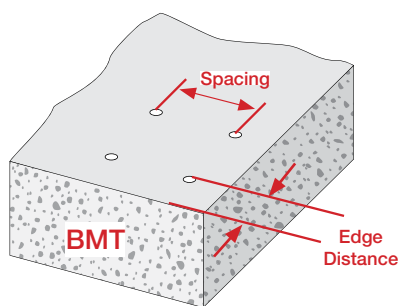
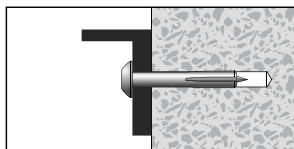
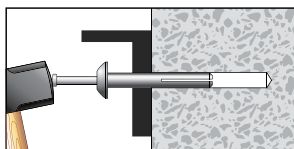
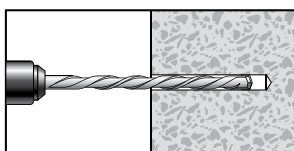
SETTING PARAMETERS

INSTALLATION

Using the proper diameter bit drill a hole into the base material to a depth of at least 6.5mm deeper than the required embedment. Blow the hole clean of dust and other material.

Insert the anchor through the fixture. Hammer the nail into the anchor body to expand it.

Be sure the head is seated firmly against the fixture and that the anchor is at the proper embedment



BASE MATERIAL THICKNESS

The minimum recommended thickness of base material, BMT, when using the Metal Pin Anchor is 125% of the embedment to be used for solid materials. For example, when installing an anchor to a depth of 20mm, the base material thickness should be 25mm. This does not apply to the face shell or block wall.

SPACING BETWEEN ANCHORS

To obtain the maximum load in tension or shear, a spacing, S, of 10 anchor diameters (10d) should be used. The minimum recommended anchor spacing, S, is 5 anchor diameters (5d) at which point the load should be reduced by 50%. The following table lists the load reduction factor, R_s, for each anchor diameter, d, based on the center to center anchor spacing.

ANCHOR SIZE	Spacing Distance, S (mm) Tension and Shear					
	10 x d	9 x d	8 x d	7 x d	6 x d	5 x d
5 mm	50	45	40	35	30	25
6.5 mm	65	58.5	52	45.5	39	32.5
R _s	1.00	0.90	0.80	0.70	0.60	0.50

EDGE DISTANCE – TENSION

An edge distance, E, of 12 anchor diameters (12d) should be used to obtain the maximum tension load. The minimum recommended edge distance, E, is 5 anchor diameters (5d) at which point the tension load should be reduced by 20%. The following table lists the load reduction factor, R_e, for each anchor diameter, d, based on the anchor center to edge distance.

ANCHOR SIZE	Edge distance, E (mm) Tension Only							
	12 x d	11 x d	10 x d	9 x d	8 x d	7 x d	6 x d	5 x d
5 mm	60	55	50	45	40	35	30	25
6.5 mm	78	71.5	65	58.5	52	45.5	39	32.5
R _e (t)	1.00	0.97	0.94	0.91	0.89	0.86	0.83	0.80

EDGE DISTANCE – SHEAR

For shear loads, an edge distance, E, of 12 anchor diameters (12d) should be used to obtain the maximum load. The minimum recommended edge distance, E, is 5 anchor diameters (5d) at which point the shear load should be reduced by 50%. The following table lists the load reduction factor, R_e, for each anchor diameter, d, based on the anchor center to edge distance.

ANCHOR SIZE	Edge distance, E (mm) Shear Only							
	12 x d	11 x d	10 x d	9 x d	8 x d	7 x d	6 x d	5 x d
5 mm	60	55	50	45	40	35	30	25
6.5 mm	78	71.5	65	58.5	52	45.5	39	32.5
R _e (s)	1.00	0.93	0.86	0.79	0.71	0.64	0.57	0.50

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