WEDGE ANCHOR

9.11 PRODUCT DATA

Head Type: Hexagon Bolt

Material Coating:

- Yellow Zinc Plated (Pictured)
- Galvanised
- 316 Stainless Steel

9.12 PRODUCT DESCRIPTION

The Macsim Wedge Anchor is a one piece, expansion anchor designed to fix a component to concrete and offers the advantage of needing the same clearance hole diameter as the drill hole, to eliminate hole potting or layout.

The design gives high tensile and shear performance, with simple installation and instantaneous load capability.

The Anchor is ideal for attaching steel components to concrete such as ledger angle, wall ties, support brackets, props and timber beams to concrete.

9.13 APPLICATIONS

- Used for Heavy Loads
- Attaching Steel to Concrete

9.15 INSTALLATION METHOD

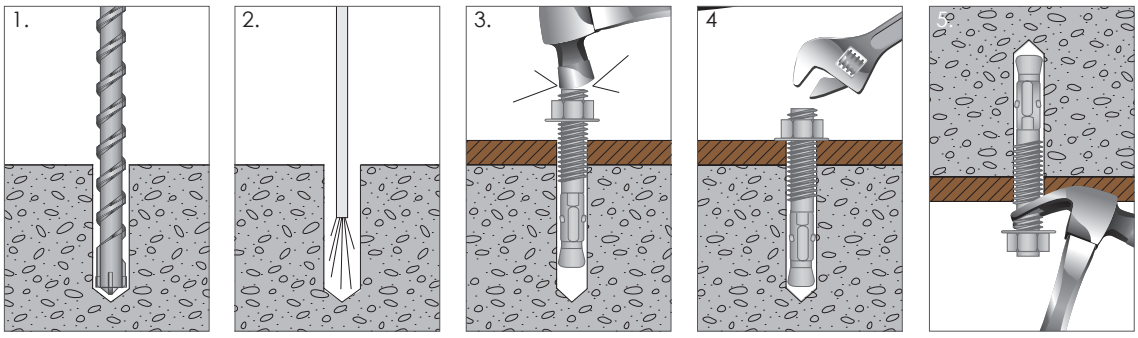
1. Drill Correct Diameter and depth of hole as specified.
2. Clean hole by brushing and blowing out dust carefully.
3. Push Anchor through fixture and hammer down until flush with surface.
4. Using a calibrated Torque Wrench apply correct torque setting as specified. The torque setting is critical, under torque may lead to slipping of the anchor before load capacity is reached, over torque may lead to permanent damage to the anchor and potential critical failure under loads.

OVERHEAD PROCEDURE

5. Following the installation procedure (steps 1-4 above) it is critical to ensure the Anchor is then locked into position. This is attained by pulling the Anchor down approximately 5mm away from the hole employing the use of a Claw Hammer or other applicable tool. This procedure ensures the Anchor is expanded fully and hence locked correctly into position.

9.14 ADVANTAGES

- High Tension Capacity
- Shear Load Capacity
- Simple Installation
- Instant Load Capacity
- Same Clearance Hole to Drill Hole



OVERHEAD PROCEDURE

9 WEDGE ANCHOR

9.15 INSTALLATION METHOD continued

CODE	Stud Diameter	Anchor Diameter (mm)	Drill Diameter (mm)	Minimum Hole Depth (mm)	Fixture Clearance Hole Diam. (mm)	Thickness Fastened Range (mm)	Minimum Structural Thickness (mm)	Rec. Tight Torque (Nm)
3806(SIZE)	M6	6	6	37	6.5	3-15	75	6
3808(SIZE)	M8	8	8	50	10	5-45	85	15
3810(SIZE)	M10	10	10	50	12	10-65	90	30
3812(SIZE)	M12	12	12	60	13	10-60	95	45
3816(SIZE)	M16	16	16	80	18	15-50	120	110
3820(SIZE)	M20	20	20	100	22	15-95	150	180

9.16 MATERIAL SPECIFICATIONS 5.8 Grade Carbon Steel

9.161 YELLOW ZINC PLATED & GALVANISED

CODE	Thread Size (mm)	Anchor Diameter (mm)	Bolt		Exp. Clip	
			Yield Strength (N/mm²)	Ultimate Strength (N/mm²)	Yield Strength (N/mm²)	Ultimate Strength (N/mm²)
3806(SIZE)	6	6	430	580	360	460
3808(SIZE)	8	8	430	580	360	460
3810(SIZE)	10	10	430	580	360	460
3812(SIZE)	12	12	430	580	360	460
3816(SIZE)	16	16	430	580	360	460
3820(SIZE)	20	20	430	580	360	460

NOTE: Wedge Anchors are Yellow Zinc Plated 5µm yellow Passivated zinc plate 25µm minimum Galvanised Coating.

9.162 316 STAINLESS STEEL

CODE	Thread Size (mm)	Anchor Diameter (mm)	Bolt		Exp. Clip	
			Yield Strength (N/mm²)	Ultimate Strength (N/mm²)	Yield Strength (N/mm²)	Ultimate Strength (N/mm²)
3808(SIZE)	8	8	480	600	500	700
3810(SIZE)	10	10	480	600	500	700
3812(SIZE)	12	12	480	600	500	700
3816(SIZE)	16	16	480	600	500	700
3820(SIZE)	20	20	480	600	500	700

NOTE: Wedge Anchors are Grade 316 Stainless Steel (AISI A4/70).

9.17 SIMPLE LOAD CHARACTERISTICS

Anchor Bolt Size (mm)	Hole Diameter (mm)	Min. Embed. Depth (mm)	Ultimate Tensile * (kN)	Nom. Steel Tensile Strength (kN)	Working Load		Anchor Spacing (mm)	Edge Distance (mm)
					Tensile (kN)	Shear (kN)		
M6	6	45	9.50	11.90	2.30	2.40	110	55
M8	8	55	15.50	19.40	3.90	5.30	150	75
M10	10	60	17.50	27.50	5.90	7.40	165	85
M12	12	80	30.0	31.90	7.50	9.90	195	100
M16	16	100	45.0	56.90	11.25	14.90	240	120
M20	20	120	75.0	87.50	18.75	24.0	300	150

NOTE: Loads are applicable to 30MPa Concrete and on the correct torque setting. Factors such as Close Edge or neighbouring anchor spacing may need to be applied. See following sections.
* From Actual Tested averages. Loads maybe increased by using greater embedment depth.