

WEDGE ANCHORS



Description

The Macsim Wedge Anchor is designed to fix a component to concrete and offers the advantage of needing the same clearance hole diameter as the drill hole. 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.

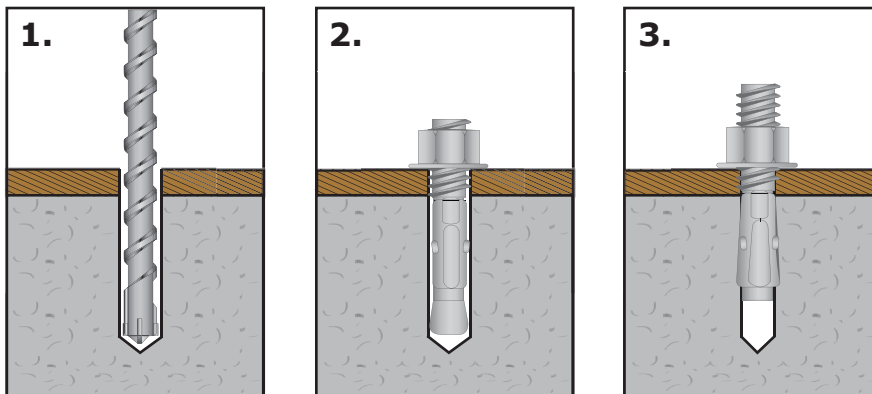
Features

- Heavy and medium duty anchor
- Drill bit diameter same as the wedge anchor diameter
- No need for hole spotting
- Length of holes can be bottomless
- Chamfered end prevents damage to threads

Typical Applications

- Marine Applications
- Structural Anchoring
- Attaching Steel Components
- Machinery Anchoring
- Suspended Ceiling Grids

Installation Procedure



1. Drill the correct diameter and depth of hole required. Clean out hole by brushing or blowing out dust carefully. Do not expand the anchor prior to installation
2. Push anchor through fixture and hammer down until flush with surface. Be sure the anchor is driven to the required embedment depth.
3. Using a calibrated torque wrench apply correct torque setting. The torque setting is critical. Under torque may lead to slipping of the anchor before load capacity is reached, and Over torque may lead to permanent damage to the anchor potential critical failure under load.

Installation Recommendations

Code	Stud Diameter	Anchor Diameter (mm)	Drill Diameter (mm)	Min. Hole Depth (mm)	Fixture Clearance Hole Diam. (mm)	Thickness Fastened Range (mm)	Min. Structure Thickness (mm)	Recommended Tight Torque (mm)
3806***	M6	6	6	45	6.5	30-150	75	6
3808***	M8	8	8	65	10	5-45	85	15
3810***	M10	10	10	70	12	10-65	90	30
3812***	M12	12	12	80	13	10-60	95	45
3816***	M16	16	16	100	18	15-50	120	110
3820***	M20	20	20	120	22	15-95	150	180

Material Specifications

ZINC PLATED/ GALVANISED			Bolt Strength		Exp. Clip Strength	
Code	Anchor Diameter (mm)	Hole Diameter (mm)	Yield (N/mm ²)	Ultimate (N/mm ²)	Yield (N/mm ²)	Ultimate (N/mm ²)
3806/ 38G06	6	6	240	300	360	460
3808/ 38G08	8	8	430	580	360	460
3810/ 38G10	10	10	430	580	360	460
3812/ 38G12	12	12	430	580	360	460
3816/ 38G16	16	16	430	580	360	460
3820/ 38G20	20	20	430	580	360	460

STAINLESS STEEL			Bolt Strength		Exp. Clip Strength	
Code	Anchor Diameter (mm)	Hole Diameter (mm)	Yield (N/mm ²)	Ultimate (N/mm ²)	Yield (N/mm ²)	Ultimate (N/mm ²)
38S08	8	8	480	600	500	700
38S10	10	10	480	600	500	700
38S12	12	12	480	600	500	700
38S16	16	16	480	600	500	700
38S20	20	20	480	600	500	700

Macsim Wedge Anchor is available in a 5µm yellow passivated zinc plate, a 25µm min. galvanised coating or in stainless steel grade 316 (AISI A4/70).

Tensile strengths refer to the threaded section. The reduced section produces a consistently higher tensile strength.

Simple Load Characteristics

Loads are applicable to 30 MPa concrete and on the correct torque setting. Factors such as close edge or neighbouring anchor spacing may need to be applied.

From actual tested averages. Loads maybe increased by using greater embedment depth.

PRODUCT SPECIFICATION MANUAL

Simple Load Characteristics - Continued

Thread Size (mm)	Hole Diameter (mm)	Min Embed. Depth (mm)	Ultimate Strength			Recommended		
			Tension (Kn)	Steel Tensile (Kn)	Tensile Working Load (kN)	Shear Working Load (kN)	Edge Distance (mm)	Anchor Spacing (mm)
M6	6	37	6.50	4.95	1.50	1.60	110	55
M8	8	55	15.50	19.40	3.20	3.00	150	75
M10	10	60	17.50	27.50	4.30	4.00	165	85
M12	12	60	30.00	31.90	5.60	5.00	195	100
M16	16	80	45.00	56.90	10.30	11.00	240	120
M20	20	100	75.00	87.50	13.80	15.00	300	150