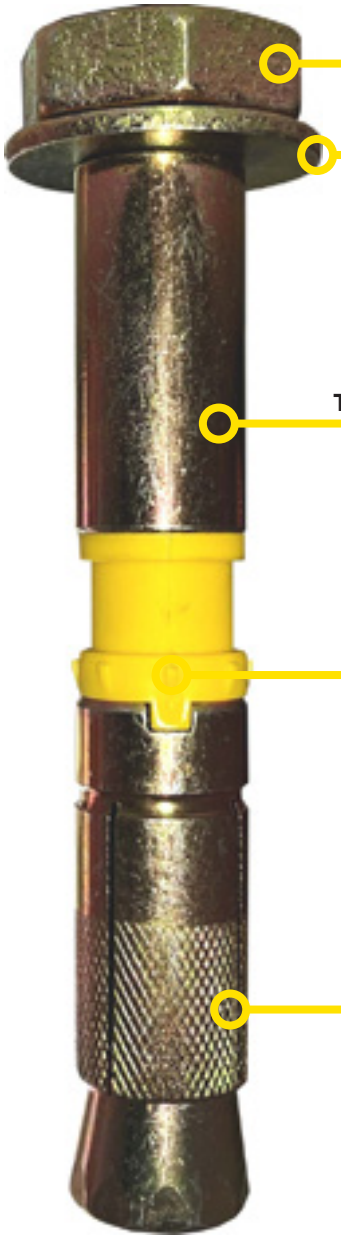
MACSIM®

HIGHLOAD
Brace Anchor

Macsim Highload Brace Anchor is a torque controlled heavy duty expansion anchor. The anchor is ideal for bracing prefabricated concrete elements during construction. This anchor has been tested in accordance with AS3850.1:2015 (Section A9).

The testing measures the performance of the anchor for the following criteria:

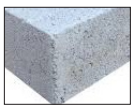
1. Basic tension
2. Shear
3. Cyclic tension
4. Torque



Features

- 30mm Socket size
- Heavy duty washer
- Compression ring
- Torque controlled expansion anchor
- M14 Class 8.8 bolt
- Tested to AS3850.1:2015

Base Material



Concrete

Material Finish

- Yellow Zinc Plated

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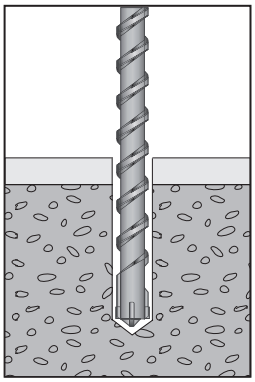
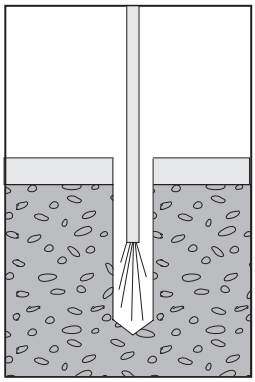
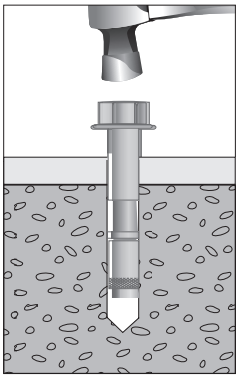
Installation Method



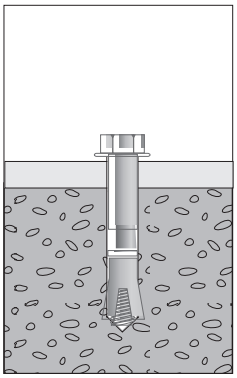
1. Drill
Drill Correct Diameter and depth of hole as specified.



2. Clean
Clean hole by brushing & blowing out dust carefully.



3. Drive
Push Anchor through fixture & hammer down until flush with surface.



4. Torque
Use a calibrated torque wrench & apply tightening torque as specified.

Part no.	Description	Anchor Size	Socket size (mm)	Drill diameter (mm)	Embedment depth (mm)	Fixture thickness (mm)	Fixture hole clearance (mm)
HLS1420BA	**Highload Brace Anchor M14 x 120**	**M14**	**30**	**20**	**100**	20	22-25

	Concrete Compressive Strength 20 MPa
HLS1420BA	Working Load Limit – WLL (kN)
Tension	17.1
Shear	34.1

Part No.	HLS1420BA
Drill bit diameter	20mm
Embedment depth	100mm
Minimum base material thickness	150mm
Anchor spacing	300mm (nominal)
Anchor Edge distance	300mm (nominal)
Tightening torque	150Nm
Drill Hole depth	110mm

Combined Tension and Shear

Macsim HLS Brace Anchor subjected to combined tension and shear shall conform to the following equation:

$[Ns /(Ru,N /F)]^{1.5} \leq [Vs /(Ru,V /F)]^{1.5} \leq 1.0$

Where: Ru,N = Characteristic ultimate tensile stength of brace insert
Ru,V = Characterisitic ultimate shear strength of brace insert
Ns = Tensile component of the unfactored applied load
Vs = Shear componenet of the unfactored applied load
F= factor of safety = 2.25 (Table 2.1of AS 3850.1:2015)
Note: If the applied load, or a component of it, is a wind load calculated from AS/NZS 1170.2 or AS/NSZ 1170.0, it should be divided by 1.5 before being placed in this formula (see clause 2.5.6 of AS 3850.2:2015)