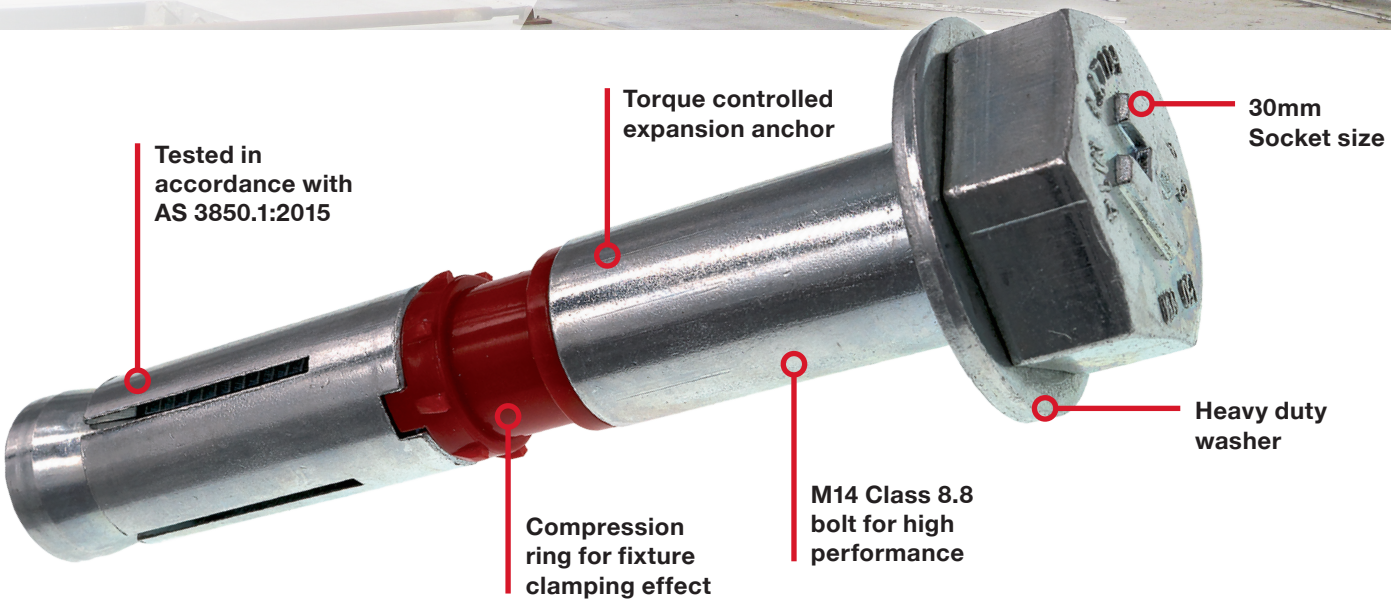
RELIABLE AND CONSISTENT

Hilti HBI Panel Brace Anchor



Hilti HBI Panel Brace Anchor is a heavy duty, load controlled expansion anchor and is designed especially for bracing prefabricated concrete elements during construction.

This anchor has been tested in accordance with appendix A9 AS 3850.1:2015, which provides a superior level of safety and quality control for the prefabricated concrete construction industry.

The testing measures the performance of the anchor on the basis of the following criteria:

1. Static tension
2. Static shear
3. Cyclic tension
4. Installation torque testing and integrity assessment

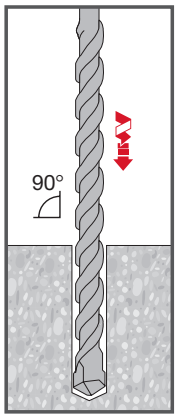
Part no.	Description	Drill Ø (mm)	Embedment Depth (mm)	Fixture thickness (mm)	Clearance hole in fixture (mm)	Installation torque (Nm)	Socket size (mm)
3556279	Hilti Panel Brace Anchor M14 x 115	20	95	20	22	150	30

Hilti Panel Brace Anchor M14 x 115	Anchor size	Drill size	Embedment depth	Working load Limit for Non-cracked concrete (20MPa Concrete)
Tension	M14	20	95	17.3
Shear				35.8

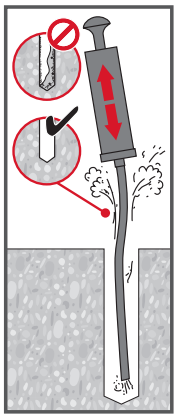
TESTED TO MEET AS 3850.1:2015

Hilti HBI Panel Brace Anchor

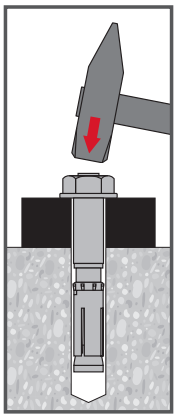
Installation Process



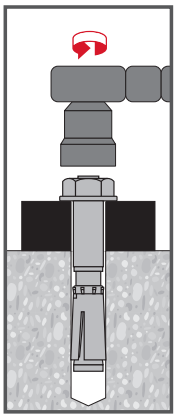
Using the proper drill bit, drill a 20mm hole to the required embedment depth into the base material. The maximum depth of the hole should not be more that 80% of the base material thickness.



Clean the borehole with a blow pump to ensure the drilled hole is free of dust and debris.



Position the fixture and drive the anchor to the required embedment depth. Make sure the head and washer of the anchor is fully supported on the fixture.



Tighten the anchor by using a calibrated torque wrench to 150 Nm.

Tested in accordance with Australian Standard Code AS 3850.1:2015 for prefabricated concrete elements.

Installation Specification

Hilti Panel Brace Anchor M14 x 115	
Part No.	3556279
Drill bit diameter	20mm
Embedment depth	95mm
Minimum base material thickness	150mm
Minimum spacing	250mm
Minimum edge distance	300mm
Fixture thickness	20mm
Fixture Clearance hole	22mm
Tightening torque	150Nm
Depth of drill hole	110mm

Material Specification

Hilti Panel Brace Anchor M14 x 115	
Bolt	Steel strength 8.8, galvanised 5µm minimum
Washer	E235 (Cold pressed)
Compression Ring	ABS
Head style	Hex 30mm
Socket size	30mm
Expansion sleeve	C1008 (forged)
Plating	Zinc plating to 5 µm minimum

Combined Tension and Shear

Where the Hilti HBI Panel Brace Anchor is subjected to combined tension and shear the anchor shall conform to the interaction relationship included in the following equation:

$$[N_s / (R_{u,N} / F)]^{1.5} + [V_s / (R_{u,V} / F)]^{1.5} \leq 1.0$$

where:

$R_{u,N}$ = characteristic ultimate tensile strength of brace insert
$R_{u,V}$ = characteristic ultimate shear strength of brace insert
N_s = tensile component of the unfactored applied load
V_s = shear component of the unfactored applied load
F = factor of safety = 2.25 (Table 2.1 of 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/NZS 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)