

# BraceSet<sup>TM</sup> Bracing Anchor

**AS 3850.1:2015 (+A1:2019) Compliance**

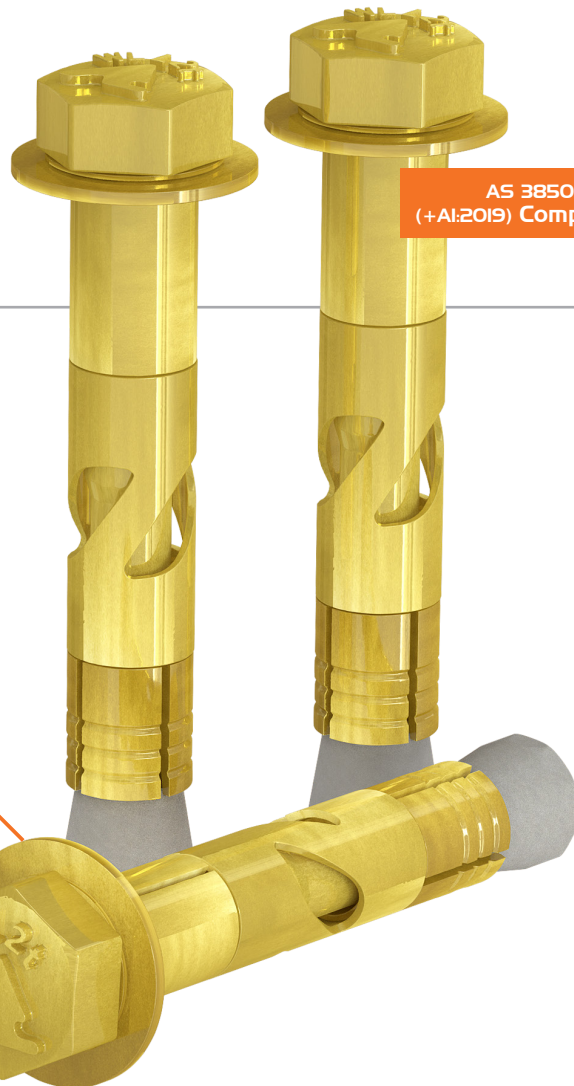


**Reid<sup>TM</sup> BraceSet<sup>TM</sup>  
Bracing Anchors  
comply with  
AS 3850.1:2015  
(+A1:2019)**

# BraceSet™ Bracing Anchor



Reid™ BraceSet™ Bracing Anchor is the ideal solution for anchoring the slotted feet of concrete wall panel braces, at either end of the brace.



AS 3850.1:2015  
(+A1:2019) Compliant



Figure 1:  
BraceSet™ Bracing Anchor

## BraceSet Bracing Anchor Key Features:

- Heavy Duty load controlled torque setting expansion anchor
- High tensile and shear capacities
- Uses a common 30mm AF hex head socket
- 20mm diameter drilled hole
- Ideal for use at either end of the precast panel brace
- Simple removal leaving no messy protrusions

# Compliance Details

**Table I: AS 3850.1:2015 (+A1:2019) Compliance Details**

Clause	Requirement	Compliant
2.2	WLL derived from testing in accordance with Appendix A	✓
2.5	Ductile materials. Washer sized to transfer load across brace foot slot.	✓
2.10	Statement of intended use 'BraceSet bracing anchor is intended to secure either end of a precast concrete panel brace (as defined in AS 3850.1:2015 (+A1:2019) when installed in accordance with this information'.	✓
Appendix A	Product Validation through testing to confirm compliance of critical specification requirements (dimensions, material properties and load bearing capacity where appropriate).	✓
A3	Comprehensive test report produced according to A9.7	✓
A4	Statistical evaluation of test results	✓
A9.4.1	Torque tests assessed according to A9.5.2	✓
A9.4.2	Basic tension tests assessed according to A9.5.3	✓
A9.4.3	Cyclic slip tension tests assessed according to A9.5.4	✓
A9.4.4	Shear tests assessed according to A9.5.5	✓



Reid™ BraceSet™ Bracing Anchors comply with **AS 3850.1:2015 (+A1:2019)**

# Reid™ BraceSet™ Bracing Anchor

Reid™ BraceSet™ Bracing Anchor is the ideal solution for anchoring the slotted feet of concrete wall panel braces, at either end of the brace.

BraceSet is a Heavy Duty load controlled torque setting expansion anchor, using a common 30mm AF hex head socket. BraceSet provides high tensile and shear capacities. Ideal for use at either end of the precast panel brace, it is simple to remove leaving no messy protrusions.



AS 3850.1:2015 (+A1:2019) Compliant



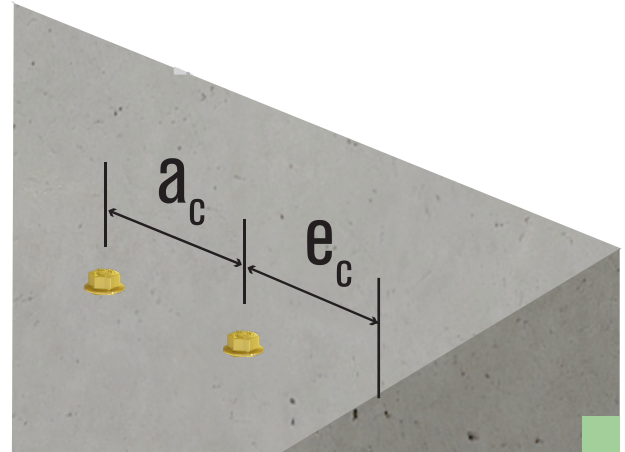
## Performance details

Part No.	Description	Pack Qty	Anchor Size (mm)	Tensile Capacity (kN)	Shear Capacity (kN)
BA20115	Reid BraceSet Bracing Anchor	40	M14	16.2	43.4



- Large 30mm AF head and 38mm washer.**  
Bolt head spans the brace foot slot structurally, does not rely on the fitting of a separate washer.
- High shear capacity for a 20mm diameter anchor.** 16mm diameter shear zone gives upto 5% higher shear capacity than M12 based bolts.
- Pull down sleeve ensures fixture clamping.**  
If required, the pull down sleeve reduces in height, drawing the fixture down tight against the substrate.
- Heavy duty, thick expansion sleeve.**  
Reliable, high performance.
- Locking cone nut engages the concrete.**  
Reliable clamp load creation means consistently higher capacity.

Figure 2: Installation details



## Installation details

Concrete Strength (min.)	Tightening Torque	Bracing Foot Slot Width	Nominal Fixture Thickness	Drilled Hole Dimensions		Installation Dimensions (Refer Figure 2.)		
				Drilled Hole Diameter	Drilled Hole Depth (min)	Substrate Thickness (min.)	Min. Edge Distance $e_c$	Min. Spacing $a_c$
20 MPa*	150 Nm	21-26 mm	20 mm	20 mm	120 mm	150 mm **	300 mm	500 mm

\* Ensure min. concrete strength achieved is equal to or greater than 20MPa

\*\* Slab on ground thickness may be 125mm provided drilling breakthrough is permitted

# BraceSet™ Installation

1. Position BraceSet Anchor at proposed bracing location ensuring specified min. edge distance & anchor spacing (see figure 2 – Page 4.)

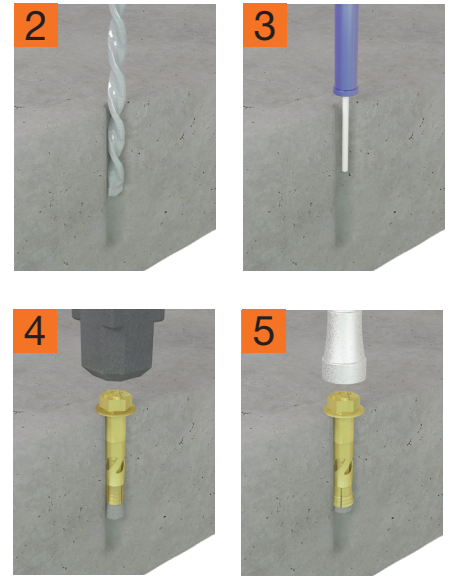
2. Drill hole for BraceSet anchor ensuring correct Diameter & hole depth are achieved.

3. Blow/Vacuum dust from hole.

4. Position & drive the anchor with mash hammer into hole until it makes contact with Brace Foot.

5. Tighten anchor bolt with calibrated torque wrench to nominated assembly torque\*\*\*

\*\*\* Use calibrated torque wrench only, In accordance with AS3850.2:2015 (+A1:2019), Clause 5.1.2



## Post-Installation QA Check:

- BraceSet™ Anchors should be verified at least weekly and after major weather events to ensure they are secure, in accordance with AS3850.2:2015 (+A1:2018)
- Check if a bolt head can be turned by hand and if it turns, report it immediately to the responsible authority on site.
- After installation of brace inserts with nominated assembly torque, put an alignment reference marks on the bolt head and the surrounding surface.
- Using a calibrated torque wrench, apply 100Nm torque in a clockwise direction.
- If any anchor bolt turns more than 90° from the reference mark, then report this immediately to the responsible authority on site.
- Total accumulated rotation of any bolt head should not exceed 180° from the first reference mark and if it does, report immediately to the responsible authority on site.
- Reid™ does not recommend retorquing to the initial installation torque of 150Nm.



A - No Movement



B - Up to 45°



C - Up to 90°



D - Greater than 90°  
Report to authority on site.

# FAQ's

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**Q: Can I use BraceSet™ for fixing the top of the brace to the panel as well as at the base of the brace?**

A: Yes - BraceSet™ will provide the same WLL when used at either end of the brace.

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**Q: How many sizes is BraceSet™ available in?**

A: BraceSet™ is available in a single, optimal size.

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**Q: What floor slab thickness can I install BraceSet into?**

A: A floor slab of 125mm thick will accept BraceSet, and will perform in accordance with this information even if the drill breaks through the bottom of the slab.

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**Q: What wall panel thickness can I install the BraceSet into?**

A: A wall panel 150mm thick will accept BraceSet, the hole should be drilled to a maximum of 120mm deep to prevent the back of the panel blowing out when drilling. If the drill bit accidentally breaks out the back of the panel, BraceSet™ will still perform in accordance with this information.

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**Q: Is it easy to remove?**

A: Yes - BraceSet™ is designed to be easily removed. The cone nut has points on it that engage the concrete when installed, ensuring that the cone nut does not spin when undoing the bolt. The kick out spacer can be removed without tools leaving the hole ready to grout up. No need to hammer in or grind off the anchor before grouting up the hole.

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**Q: How long is the anchor?**

A: The total anchor length is 135mm with 117mm below the underside of the washer.

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**Q: What hole depth do I need?**

A: The drill hole depth will depend on the brace foot fixture thickness. Please refer to the installation details above for the recommended minimum drill hole depth based on the nominal fixture thickness.

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**Q: Can I use the BraceSet™ for other jobs on my site ?**

A: BraceSet™ has been designed specifically for panel bracing and lifting plate (5LP) applications and hence is supported for use in those applications. Ramset has a number of other excellent anchoring products suited to your other structural requirements on site.

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**Q: Is BraceSet™ re – usable?**

A: No - BraceSet™ is designed for single use, ensuring that you receive the outstanding benefits of BraceSet™ with each panel you brace.

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# Terms and Conditions

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**All Reid™ branded products and all products manufactured at our Melbourne manufacturing facility are designed, manufactured, tested and supplied in compliance with our Quality Management System which has been independently audited and certified by SAI Global to ISO 9001:2015. Reid™ undertake strict quality control processes to ensure performance specifications and metallurgical properties are maintained.**

To reflect the progress of the industry and the new innovative uses of precast and tilt-up construction, Australian Standard AS 3850 was updated in 2015 and amended in 2019. This update included a change in title to AS 3850:2015 Prefabricated Concrete Elements, a widened scope to include all prefabricated elements in Building Construction and splitting of the document into two parts:

- Part 1, called 'General requirements' details the new performance and testing requirements for suppliers of componentry into the industry. These new requirements are significantly different to AS 3850:2003 and should enable the industry to have greater confidence in the products that they are specifying and using;
- Part 2, called 'Building construction', aligns with the 2008 National Code of Practice for Precast, Tilt-Up and Concrete Elements in Building Construction and focuses on the interrelation of the various stages of manufacture, construction, transport and erection. It is specifically for the construction design and documentation of prefabricated concrete elements in building construction and provides guidance for the Erection Designer and highlights the importance of the Erection Design and Documentation.

Further to this, a third part to AS3850 was developed and released in 2021 as follows,

- Part 3, called 'Civil Construction', which focuses on the interrelation of the various stages of manufacture, construction, transport and erection of concrete elements in civil, infrastructure and non-building constructions. It aligns with the industry requirements of civil prefabricated concrete elements such as pipes, culverts, bridge elements, tunnel elements, poles, piles and numerous other elements related to water quality products for drainage and sewerage access.

The new AS 3850.1:2015 (Incorporating Amendment 1 - 2019) is central for the safe, efficient and cost-effective manufacture, construction, transport and erection of prefabricated concrete elements.

## customer service

### Reid™ Australia

Customer Service Centre

Tel: 1300 780 250

Email: [sales@reidanz.com](mailto:sales@reidanz.com)

Web: [reid.com.au](http://reid.com.au)

#### Reid™ Construction Systems (RCS) 1 Ramset Drive, Chirnside Park 3116

Information in this document is correct at the time of printing. Readers should contact RCS or consult RCS detailed technical information to ensure product is suitable for intended use prior to purchase.

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