

Reid™ Mistake Plate

Compliance Document

Reid™ Mistake
Plates comply with
AS 3850.1:2024

Reid™ Mistake Plate

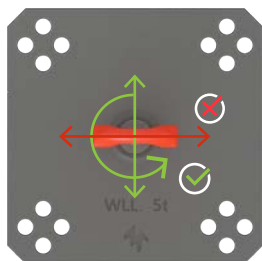


Reid MPLATE Mistake Plates are typically used in instances where there has been an error in anchor placement or an anchor that has been deemed unfit for use.

The design of the MPLATE mistake plate with its swiveling head, allows the plate to be loaded in any direction with no impact on capacity.



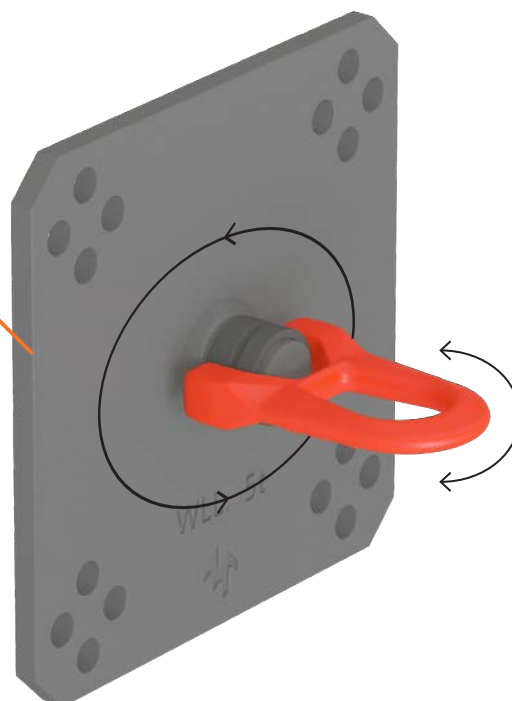
Figure 1:
Reid™ MPLATE Mistake Plate



Reid™ MPLATE Mistake Plate Key Features:

- Designed for use where a lifting anchor has been omitted or installed incorrectly in a concrete panel.
- 5 tonne WLL
- Suitable to for use with thicknesses of 150mm and above.
- Designed in accordance with AS 3850.1:2024
- Made in Australia
- NATA Proof Load Certificate
- Lifting Eye has multiple axes of movement which can swivel and rotate to safely manoeuvre during lifting of concrete elements.
- Multiple bolt holes allow greater range for BraceSet or SpaTex Xtrem Anchor location fixing.

MPLATE



When the shackle is side loaded (incorrect procedure) there is a risk that the shackle will bind resulting in a decline in capacity.

Compliance Details

Table I: AS 3850.1:2024 Compliance Details

Clause	Requirement	Compliant
2.2	The Working Load Limit has been determined by testing in accordance with Appendix A, using a FOS per Table 2.1.	
2.5.1	Manufactured from ductile steel.	
2.5.2.1	WLL determine per clause 2.2	
	Manufactured from ductile steel which exhibits plastic deformation prior to failure at all service temperatures for which the insert is designed to be used.	
	When loaded to tensile failure, a ductile failure and plastic deformation is observed and the failure surface is fully fibrous with no cleavage fracture.	
	Insert assembly including void former shall be marked to ensure compatibility with other system components.	 Refer Figure 2
A2	Concrete for testing complies with AS 1379, tested per AS 1012.	
A3	Testing and recording of results.	
A4	Statistical evaluation of test results, using formula A4, $X_k = x(1 - k_s \text{COV})$.	
A5	Production Validation through testing to confirm compliance of critical speciation requirements (dimensions, material properties and load bearing capacity where appropriate).	
A6	Tension testing of the manufactured lifting insert.	
A7	Characteristic capacity determined from a comprehensive test program including individual and combined effects per Table A3.	



Product Specification

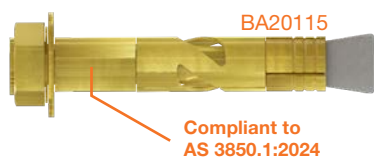
AS 3850.1:2024
Compliant



Reid MPLATE Mistake Plates are typically used in instances where there has been an error in anchor placement or an anchor that has been deemed unfit for use.

Mistake Plate requires 4x BraceSet™

(Product Code: BA20115) for installation into concrete.



Go to www.reid.com.au for a copy of the BraceSet AS3850.1:2024 compliance document.

or 4x SpaTec™ Xtrem™

(Product Code: SP12120) for installation into concrete.



Go to www.ramset.com.au for a copy of the SpaTec Xtrem™ Safety Anchors product information document.

The Reid MPLATE Mistake Plate is marked with its rated Working Load Limit - 5T.

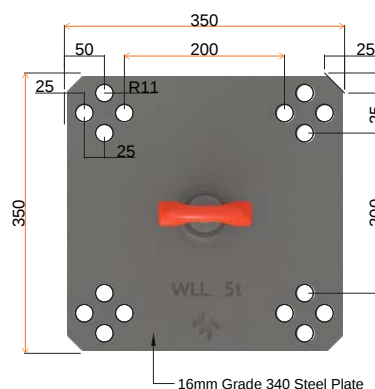
The Working Load Limit of 5t @20 MPa (when positioned away from an edge) and when the lift design is certified by the Reid™ Engineering department.

Please note:

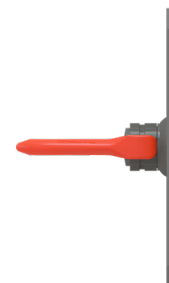
The MPLATE with swiveling head can be loaded in any direction whilst maintaining its full 5t WLL. Older version MPLATE without a swiveling head cannot.

Product Specification - MPLATE Dimensions (mm)

View 1



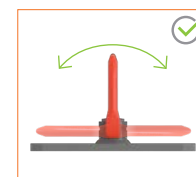
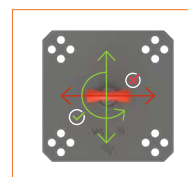
View 2



Please Note: All MPLATE contain a unique serial number etched onto the plate, located near branding.

Product Specification - MPLATE Cleat Position and Load Direction

Shackle must be positioned in the direction of the load.



Installation

(with post-installation QA check)

Reid MPLATE Mistake Plate Product Code

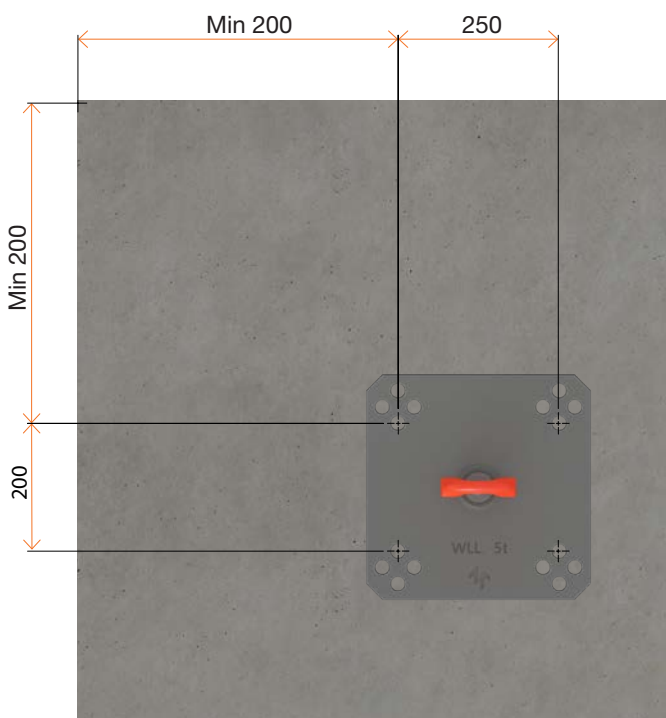
Product Code	Description	Capacity
MPLATE	5 tonne Reid Mistake Plate	5 Tonne

Please note:

Requires 4x BraceSet™ anchors (Product Code: BA20115) or 4x SpaTec™ Xtrem™ Safety Anchors (Product Code: SP12120) installed as per the installation procedure illustrated further in this Compliance Document.

Product Specification -

Minimum edge distances (mm)



Please note:

It is critical that there is 200mm minimum edge distances for the MPLATE.

Installation Specification

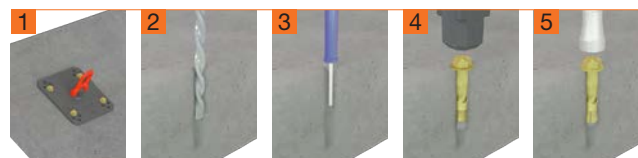
Anchor	Part No.	Drill Hole Diameter (mm)	Hole Depth (mm)	Setup Torque (Nm)	Min. Edge Distance (mm)	Min. Ctr Distance to another plate (mm)	Min. Concrete Strength (MPa)
BraceSet	BA20115	20	130**	150	200	750*	>20**
SpaTec Xtrem	SP12120	18	116**	80	200	750*	>20**

Note: Minimum concrete panel thickness to be 150mm

*750mm or as specified by Reid™ engineer.

**Ensure that the minimum concrete strength achieved is more than 20MPa

***Hole to be thoroughly cleaned - dust blown out/vacuumed



1. Centralise the MPLATE at proposed lifting point, with specified minimum distances from concrete edge and another plate.

2. Drill one hole for each corner with nominated diameter and depth.

3. Blow/Vacuum dust from the hole.

4. Position and drive the anchor with mash hammer into hole until it makes contact with the lifting plate.

5. Tighten the anchor bolts with a calibrated torque wrench to the nominated assembly torque*.

*Use calibrated torque wrench to verify the required installation torque, in accordance with AS 3850.2:2024 clause 5.1.2.

Note: If reinforcing is struck and the required depth cannot be achieved, please follow the Aborted Hole Process on page 6.

Prior to each use, ensure red tab & swivel rotates freely and does not catch or snag.

Maintenance: swivel should be regularly greased with marine-grade grease to ensure swivel does not bind.

Aborted Hole Process:

If reinforcing is struck and the required depth cannot be achieved, the following process shall be followed:

Case 1 – for Mistake Plate subject to rotation experiencing multi-directional shear (e.g. rotation of precast panels)

1. Aborted hole must be filled with high strength grout/mortar. Grout/mortar strength should be equivalent or greater than concrete strength at time of lift.
2. Mistake Plate shall be relocated 100mm in any direction from original position (maintaining the minimum edge distances) and redrill the holes.

Case 2 – for Mistake Plate subject to one direction shear (e.g. tilt-up panels being lifted with spreader beams)

1. Aborted hole may be discarded provided it is not in direct line of the lifting load. If unsure, always fill aborted hole with high strength grout/mortar.
2. Mistake Plate shall be relocated 100mm to the left or right side from original position (maintaining the minimum edge distances) and redrill the holes.

Alternatively for Case 2 only, if the aborted hole is less than 46 mm deep, you can use another hole in the plate provided the aborted hole is filled with high strength grout/mortar and you maintain the required minimum edge distance and plate spacings.

Note 1: Where required all aborted holes must be filled with high strength grout/mortar.

Note 2: Where aborted holes are filled, the aged strength of grout/mortar shall be at least the strength of the concrete at time of lift.

Installation QA Check:

1. Anchor bolts should be verified at least weekly and after major weather events to ensure they are secure, in accordance with AS 3850.2:2024
2. Check if a bolt head can be turned by hand and if it turns, report it immediately to the responsible authority on site.
3. After installation of anchors with nominated assembly torque, put an alignment reference marks on the bolt head and the surrounding surface.
4. For BraceSet™, using a calibrated torque wrench, apply 100Nm torque in a clockwise direction. For SpaTec™ Xtrem™, using a calibrated torque wrench, apply 54Nm torque in a clockwise direction.
5. If any anchor bolt turns more than 90° from the reference mark, then report this immediately to the responsible authority on site.



A - No Movement



B - Up to 45°



C - Up to 90°



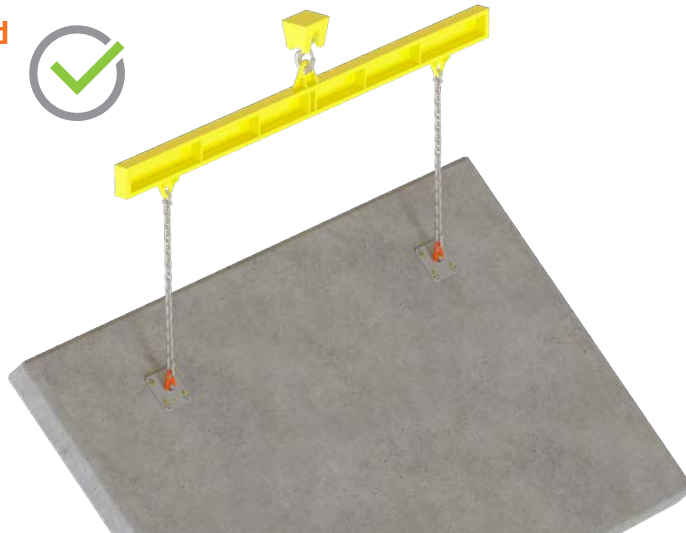
D - Greater than 90°
Report to authority on site.

6. 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.
7. Reid™ does not recommend retorquing to the initial installation torque of 150Nm for BraceSet™, or 80Nm for SpaTec Xtrem™ anchors.

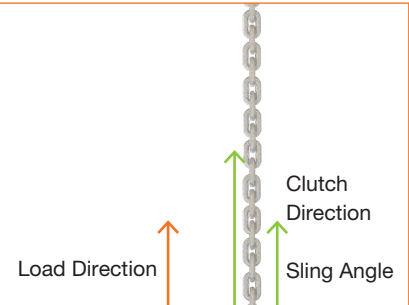
Safe Lifting Procedures:

All uses of MPLATE should follow an engineered Lifting Certification

Preferred Lifting Practice

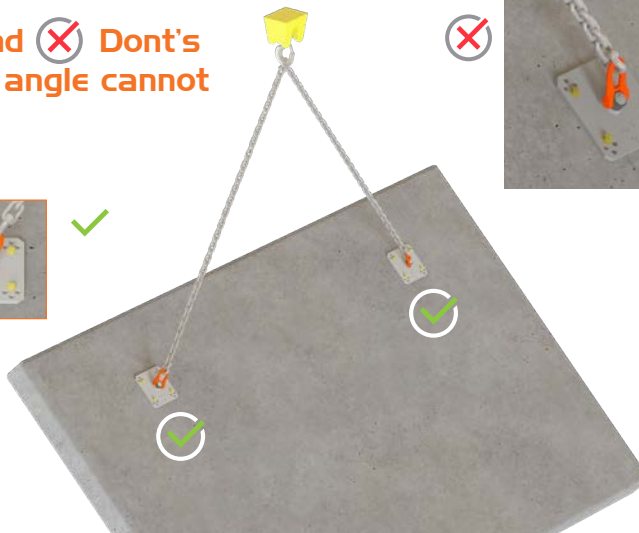


Using a spreader beam is best practice for optimal weight distribution when lifting points are at the top of the panel.



MPLATE shackle (red tab) must be positioned in the direction of the load. If rotation is to take place, the swivel will allow the shackle to rotate through the lift.

Do's and Don't's when sling angle cannot be avoided



If a shear load is applied to a MPLATE where the lifting swivel cannot rotate, the applied load is increased on the lifting point; increasing the risk of injury or panel damage.

Incorrect Lifting Practice



It is incorrect if swivel arm is not aligned with sling angle.



When the shackle is side loaded (incorrect procedure) there is a risk that the shackle will bind resulting in a decline in capacity.

Please note:

The MPLATE with a swiveling head can be loaded in any direction whilst maintaining its full 5t WLL as long as the articulating clutch/head is pointed in the correct direction by aligning with the load direction.

Quality and Compliance

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 continued progress of the industry and the new innovative uses of precast and tilt-up construction, Australian Standard AS 3850 Part 1 and Part 2 has recently been updated in 2024. AS 3850 Part 1, Part 2 and Part 3 are detailed below.

- Part 1, called 'General requirements' details the updated performance and testing requirements for suppliers of componentry into the industry. These requirements are significantly different to AS 3850:2015 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. It was updated to align with the changes in Part 1 and the content in Part 3.
- Part 3, called 'Civil construction' provides requirements impacting prefabricated concrete elements in civil, infrastructure and non-building construction. Similar to Part 2, it focuses on various stages of safety, planning, manufacturing, construction design, casting, transportation, erection and incorporation into the final structure.

The new AS 3850.1:2024 is central for the safe, efficient and cost-effective manufacture, construction, transport and erection of prefabricated concrete elements.

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AS 3850.1:2024
Compliant



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