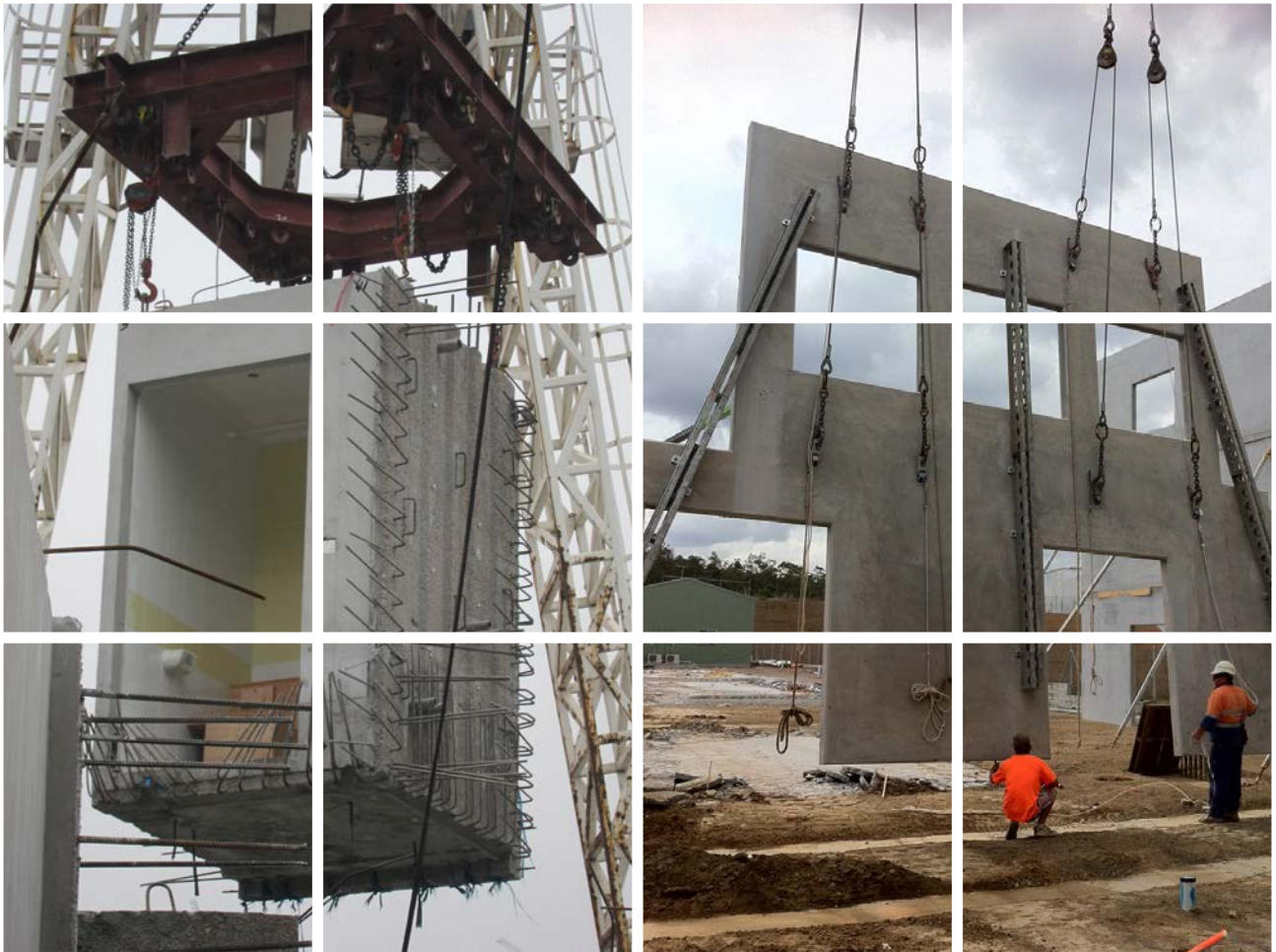


WET-CONCRETE



PRECAST SOLUTIONS

INTRODUCTION

FROM PRECAST YARD TO SITE

At Reid™, we aim to be much more than just a supplier of components to the precast industry. We work in partnership with our customers in all facets of planning, preparation, design, production, installation, rigging, lifting and bracing...all critical stages in the safe and efficient manufacture, transport and placement of precast concrete elements.

With our in-depth knowledge and extensive experience in precast concrete production and handling, we work with our customers to ensure the lowest total business cost and the safest solutions.

REID™...ENGINEERED SOLUTIONS:

- Reducing your risk
- Increasing precast construction safety
- Ensuring safe manufacturing, transport and installation
- Being your partner in precast concrete



Symbols



Black Surface Finish - Also called "Plain Surface"
Recommended for applications where there is no immediate or long term corrosive environment.



Steel Zinc Plated to AS1789-2003.
Recommended for internal applications only.



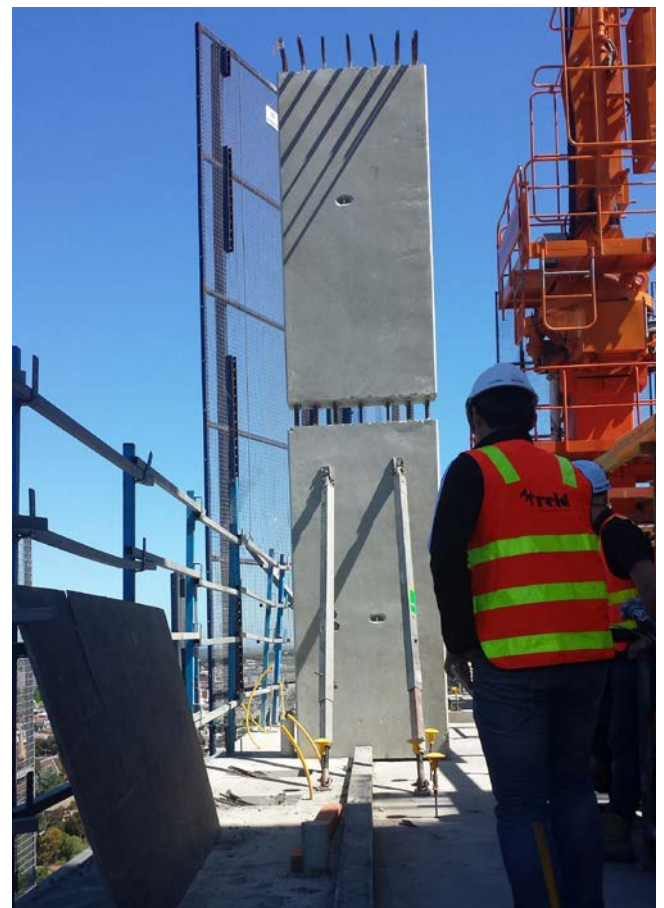
Hot Dipped Galvanised to AS4680-2006.
For external applications.



A2 AISI Grade 304 Stainless Steel - Resistant to corrosive agents and industrial pollutants.
Recommended for internal or external applications.



AISI Grade 316 Stainless Steel - Resistant to corrosive agents including chlorides and industrial pollutants. Recommended for internal or external applications in marine or corrosive environments.





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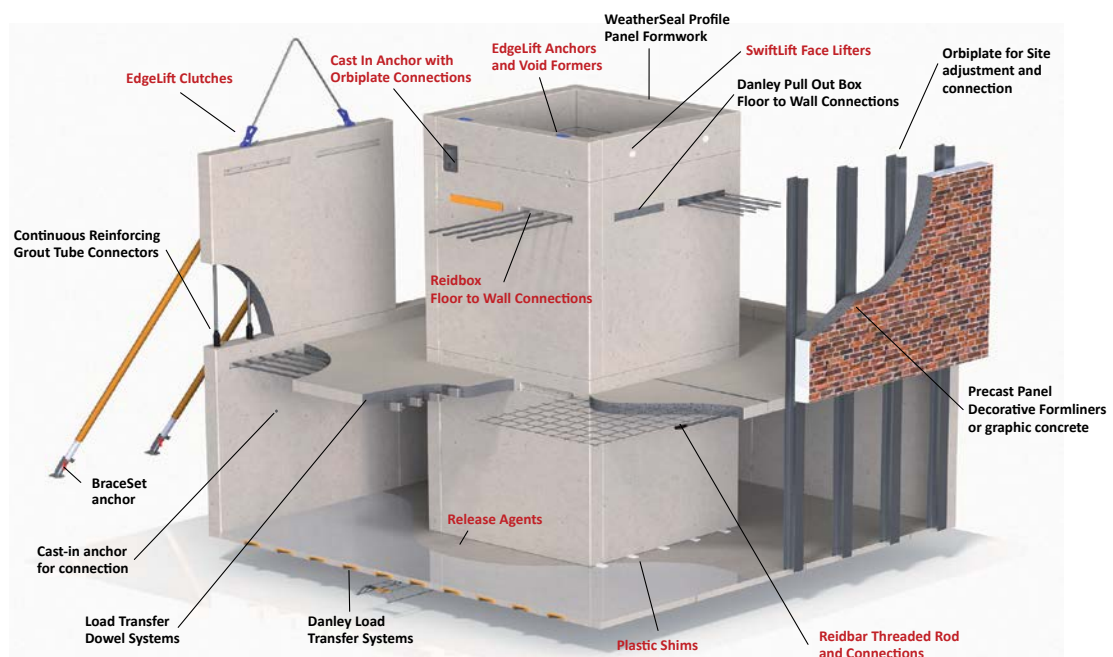
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4.2 Bracing

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1.1 IDAT Precast CAD software



For almost 50 years the name of **REID™** has been synonymous with the best in precast concrete lifting systems, and since the 1980's our Reidbar™ range has delivered unrivalled flexibility in concrete reinforcing.

Now you can experience the world's finest precast design and detailing package from **IDAT**, with the comfort of a familiar interface, and the convenience of local sales and support from the market leader in precast systems - **REID™**.

Gravity is the only universal factor affecting every part of a structure, and different building elements experience very different construction and in-service loads. The **IDAT** modular system recognises this, with each module optimised for a particular type of precast element. It also allows us to tailor an installation to the needs of your business.

1. Wall Modules

There are two different IDAT Wall Modules to choose from, optimised for the following applications:

- > **Standard precast or tilt up panels**
- > **Sandwich panels.**

Each module includes simple functions to add windows and doors, rebates and cast in components to the panels. Architectural features such as formliner patterns and false joints are also handled quickly and easily. Weather seal joints, panels with splayed edges and corbels can also be created.

The software allows an entire wall to be automatically split into panels, taking into account their final location relative to a crane position, ensuring that every panel falls within the safe lifting capacity of the available lifting equipment.

Edge or face lifters, prop points, reinforcement and panel to panel connections are automatically created by the system when the walls are split up into panels. Once panel designs are finalised, **IDAT**'s shop drawing functionality comes into play.

Shop drawing layouts are very flexible and can be set up to suit your factory. The title block, component symbols, position of views and parts list will all be set up to suit you, dramatically reducing the potential for confusion and errors in panel production. The views, dimensions, weight, volume and parts list are all generated automatically.

IDAT keeps on delivering even after the last panel is lifted from the casting bed, through the generation of transport plans that ensure panels are delivered to site in the correct order, and to the right crane location.

2. General Parts, (GCP) Module

The **General Concrete Parts (GCP)** module is able to design and detail anything that can be cast in concrete.

The module includes automatic functions for modelling columns and beams, facade panels and precast footings. More complex objects can be drawn using AutoCAD 3D functions followed by automatic conversion to an **IDAT** element. Once converted, elements can have reinforcement and cast-in components added in the same way as walls or slabs. Because the reinforcement is shown in the 3D model, clashes between bars, ligatures and cast-in components can be identified and remedied before any drawings are sent to the factory floor. You can also ensure that dowels line up correctly with grout tubes, and column feet align correctly with hold down bolts.

The GCP module includes all the customisation features described in the Wall and Slab sections.

3. Slab Modules

IDAT slab modules cover the design of the following flooring elements:

- > **Solid precast slabs**
- > **Hollowcore slabs**
- > **Composite slabs (transfloor)**
- > **Double T slabs.**

The **slab module** allows you to quickly and easily split an entire floor plate into precast segments designed to match site location and lifting capacities. As part of the support package, at installation **REID™** will ensure that the correct hollowcore, double T sections and reinforcing girders are included in your configuration as well as the cast-in component library.

Lifting points, reinforcement and connections are automatically created by the system, taking into account architectural and structural features and service penetrations.

As with all **IDAT** modules, production drawings for slabs are generated at the click of a button, with the views, dimensions, parts list, weight, volume etc. generated automatically. Drawing layouts and title blocks will be configured to suit your company.

4. Precast Stair Module

The **Stairs module** is able to produce both straight and winding precast staircases that integrate with other precast elements. Stairs can be created as free standing or linked to top and bottom slabs. If the stairs are linked to the floors, the system can calculate automatically the ideal physical parameters to suit the space - such as tread length, rise, and number of steps, before generating the structural design. Experimenting with different configurations is fast and easy.

Similar to the manner described with the Walls and Slabs modules, customised shop drawing generation is done with the click of a button, with all dimensions, weights, volumes, components etc. calculated and documented automatically.

Database & Reports

IDAT will **keep track** of concrete, reo and every other component in your project.

The following “standard” reports are contained in all IDAT modules:

- > **Bill of Materials (BOM)** – either by storey or complete building
- > **Quote** – extends the BOM report through the addition of pricing, giving subtotals by storey or building zone and a grand total.
- > **Take off** – provides an element-by-element materials take off that integrates with the production drawing output generated by the CAD system.
- > **Transport plan** – helps ensure elements are delivered to site in the order needed to efficiently construct the project.

Application specific modules also have reports appropriate to the module. **Call RAMSET-REID Technical Department** for more information.

All reports can be customised to suit your business, and unique reports can be developed from custom SQL queries. If the parameter you wish to track is contained in the basic database structure, we'll find a way to report it.

Customisation

Reid™ will ensure IDAT is set up to best suit your needs.

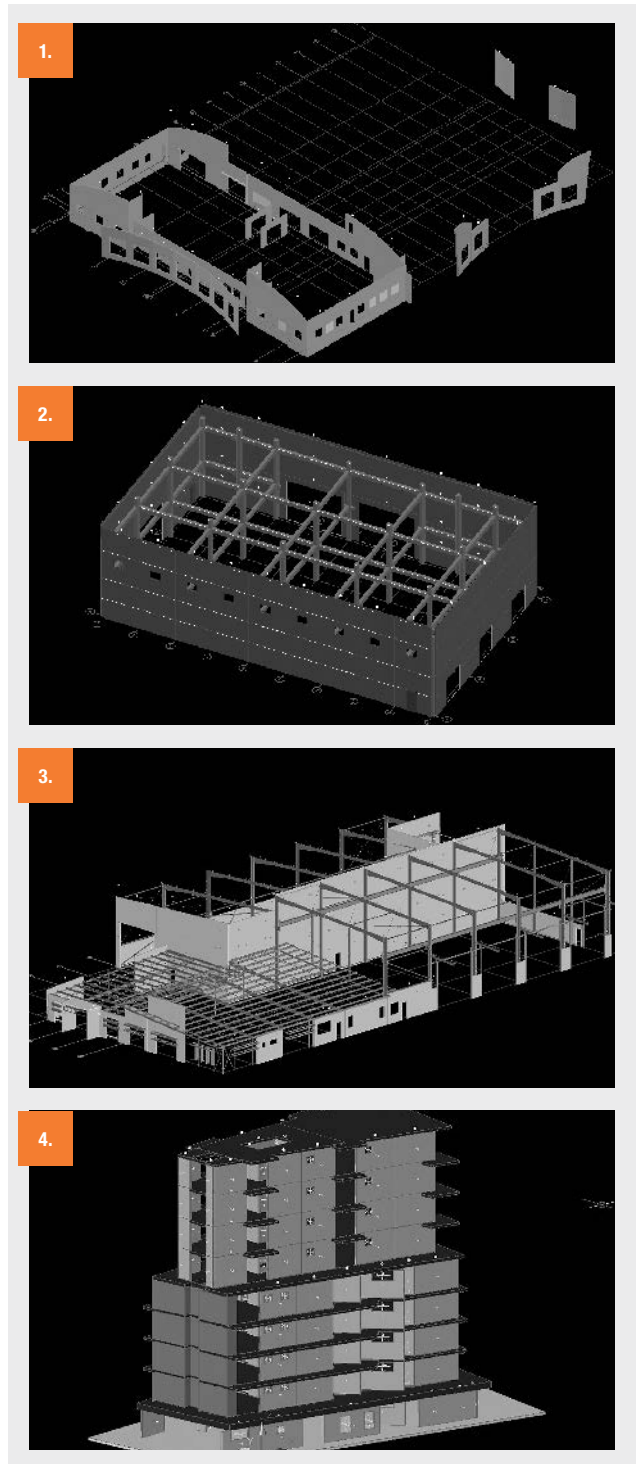
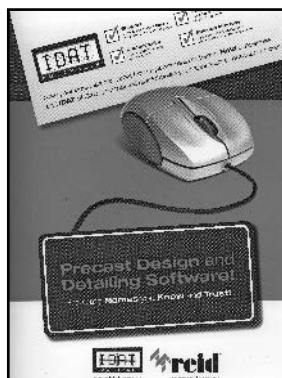
Whilst the programming that powers the IDAT CAD system is advanced and powerful, it is the linked SQL database sitting at the heart of its' reporting functionality which makes the combined system readily adaptable to the needs of individual users and businesses. By using an open database format, IDAT has removed much of the risk associated with investing in “closed” systems.

As part of the installation process we will assess those aspects of your business that are unique and modify the database accordingly.

This ensures that the system will:

- > Meet the specific needs of your business
- > Remain adaptable to changing requirements
- > Help build your brand through easy inclusion of logos and identification marks on drawings and reports, and change as they do.

IDAT – the CAD system for precast concrete that delivers what you want, not what a software engineer thinks you should have.



1.2 Engineered Solutions

At Reid™, our focus is to deliver cost effective, engineered solutions that reduce the risk and worry to your business through utilisation of our expertise, extensive experience and proven performance.

Innovative

We are constantly developing and sourcing the most innovative solutions locally and from around the world.

We have dedicated Product Engineering Laboratory focused on testing, developing and validating product solutions.



Innovative

Safe

We have complete quality control system in place and have ISO9001 accreditation so that you can be sure that when you use Reid™ products and services, your safety is guaranteed.



Safe

Efficient

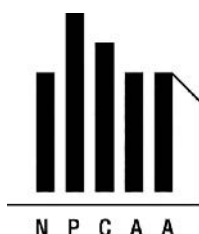
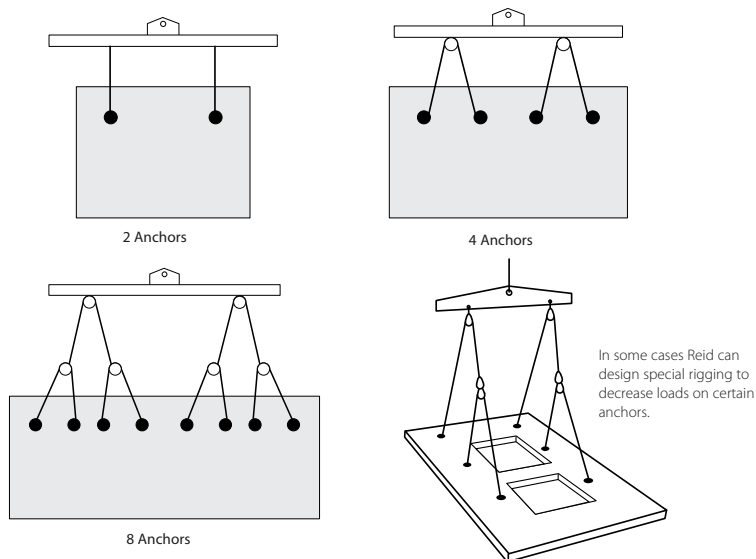
Our team of dedicated Technical Representatives and Engineers have the expertise to help find efficiencies in your business, whether engineering design or product solutions. Our aim is to make your business more efficient, through better engineering, better product solutions and by addressing challenges faced in the concrete construction industry.



Efficient

Call example

Reid™... standing behind the precast industry.



CONCRETE
INSTITUTE of
AUSTRALIA



The Spartan™ Formwork System brings innovative, smart technology to the precast yard and allows imagination the freedom of full expression in the physical structure.

Central to the Spartan™ Formwork System is the Titan™ Magnet Clamp and Spartan™ Sideform. Together, these products provide unparalleled levels of accuracy, flexibility, efficiency and safety to precast yards.

Titan™ III Magnet Clamp

The Titan™ III patented Precast Magnet is Australia's strongest magnet for its size and is significantly smaller than other commercially available magnets:

Smaller and lighter: Weighs just 4.1kgs

Stronger: Up to 1,800kgs of pull-down force!

Rubber Base Skirt: Fully seals the underside of the housing to protect against dirt, metal particles and other contaminants. The Rubber Skirt also minimises the possibility of fingers or limbs being caught under the magnet.


De-magnetising Plate: Safely secures the magnet to prevent it from unexpectedly engaging against the steel bed.

Easy to Clean: Concrete does not stick to the magnet's plastic housing, making it quick and easy to clean.

Durable: The 8mm reinforced plastic housing is job site tough!

Reid™ recommends the use of water based release agents.

Caution: Some solvent based release agents may adversely affect the magnet's components and functionality.

	Item Code:	MAG3
	Colour:	Orange/Red
	Dimensions:	140mm L x 155mm W x 85mm H
	Specifications:	Weight: 4.1kgs Up to 1,800kgs pull-down force

Spartan™ Sideform

The patented Spartan™ Sideform is manufactured from a unique combination of composite materials and offers a multitude of benefits over traditional steel or wood formwork.

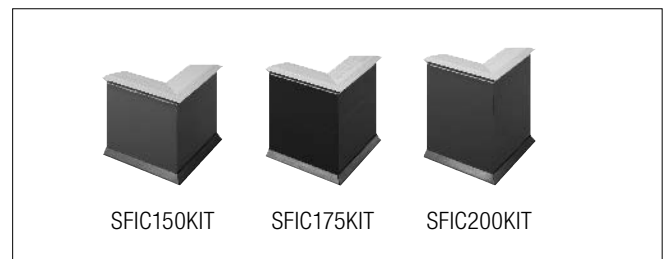
1. **Lightweight:** Spartan™ Sideform is significantly lighter than steel formwork reducing any potential OH&S issues.
2. **Thick wall sections:** Sideform will not bend or buckle. Thick wall sections provide for proper screw bite when fixing fittings to the sideform.
3. **Centre line marking:** Spartan™ Sideform provides a horizontal line-of-centre to assist with the alignment or positioning of fittings.

4. **Easy to Clean:** Epoxy powder coated Spartan™ Sideform can be easily cleaned and is protected against the elements.
5. **Magnet Securing Rail** on the rear of Spartan™ Sideform does not allow concrete to become wedged and is easily removed.
6. Sideform is colour-coded to reflect the 4 variations in height.
7. Spartan™ Sideform accommodates interchangeable top capping for height and profile flexibility.
8. The Spartan™ Sideform also houses the unique Rubber Base Seal which prevents concrete bleed without the need for use of silicone.



Item Code	Colour	Dimensions (LxH)	Weight (kg)
SF125	Green	5.8m x 125mm	17.69
SF150	Grey	5.8m x 150mm	19.95
SF175	Blue	5.8m x 175mm	22.38
SF200	Burgundy	5.8m x 200mm	24.65

Spartan™ Internal Corner Sideform Kits



Item Code	Colour	For use with:
SFIC150KIT	Grey	SF150
SFIC175KIT	Blue	SF175
SFIC200KIT	Burgundy	SF200

Specifications: 4 corners per kit.
Sideform corners sold with end caps.
Capping and base inserts are included.



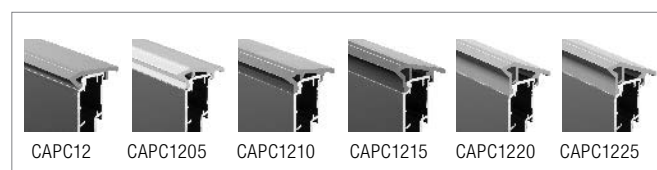
Spartan™

Spartan™ Sideform Capping

The Spartan™ Sideform Capping provides precasters with the flexibility to change sideform height and profile without the need to invest in entirely new sideform.


Available in 6 sizes ranging from +0mm to +25mm in 5mm increments, the Spartan™ Top Cap simply snaps on to the sideform, and snaps off as required.

Chamfer – 12 x 12 Profile




Item Code	Colour	Dimensions (LxH)
CAPC12	Grey	3m x 0mm
CAPC1205	White	3m x 5mm
CAPC1210	Green	3m x 10mm
CAPC1215	Burgundy	3m x 15mm
CAPC1220	Orange	3m x 20mm
CAPC1225	Navy	3m x 25mm


Square

	Item Code CAPSQ00	Colour Light Grey	Dimensions (LxH) 3m x 0mm
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Spartan™ Rubber Base Inserts

Not all steel beds are perfectly flat and small gaps do appear between the underside of the sideform and the bed. These can cause concrete bleed or seepage. Traditionally, a bead of silicone is used between the sideform and the steel bed - a labour intensive and cost prohibitive exercise.

Chamfer			
	Item Code BIC12	Colour Black	Dimensions 6m lengths

Square			
	Item Code BICSQ	Colour Black	Dimensions 6m lengths

Titan™ Magnet Adapter Plates


The Titan™ range of Magnet Adapter Plates are the crucial link in the Spartan™ Formwork System, enabling quick and easy interchangeability of the magnet between sideform of varying size.





Item Code	Suits	Dimensions (LxWxH)
MAP125	SF125	145 x 20 x 85mm
MAP150175	SF150 & SF175	145 x 20 x 110mm
MAP200	SF200	145 x 20 x 160mm

Spartan™ Sideform Joiner Plates

Spartan™ Joiner Plates are used for temporary or semi-permanent joining of sideform and used for joining the Spartan™ Internal Corner system.

	Item Code: SFJP150200 Colour: Silver Specifications: Suits Spartan™ Sideform SF150, SF175 and SF200
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	Item Code: SFJP100125 Colour: Silver Specifications: Suits Spartan™ Sideform SF100 and SF125
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	Item Code: MAG1HK Specifications: Magnet Handle Kit suits Titan™/Genisys™
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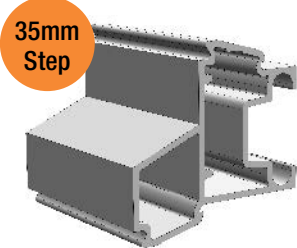
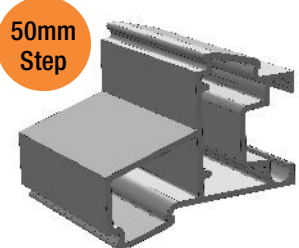
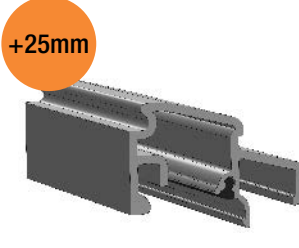
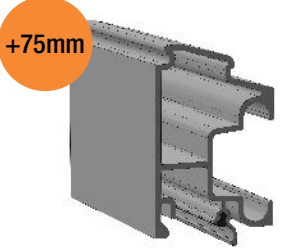


Designed for casting panels with a “ship-lap” edge detail, The Spartan™ WeatherSeal Formwork System from Reid™ is the industry's first modular system available in two standard ship-lap profiles that can be easily adapted for panels of various thicknesses.

Comprising of just four aluminium extrusions, The WeatherSeal Formwork System is compatible with components of Reid's existing formwork systems including Spartan™ and Panelware™. Utilising a combination of WeatherSeal extrusions and Spartan™ Top Capping profiles, the Spartan™ WeatherSeal Formwork System provides precasters with the ultimate in panel set up flexibility and versatility. Easily set up for panels that are 100mm up to 300mm in thickness. Choose between two variations in “step” detail: 35mm and 50mm base sideform options are available.

The WeatherSeal Formwork System from Reid™... Setting the industry standard in ship-lap edge detail.



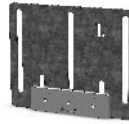
Spartan™ Weatherseal Sideform Extrusions:

WeatherSeal Base Sideform Extrusions		Aluminium Sideform Profile Extensions	
			
CCS100WS WeatherSeal Base Sideform 100mm x 35mm White Powder Coat 100mm H x 5.8m Long Weight: 19.3kgs per length 4pcs per pack 16 pcs per pallet	CCS10050WS WeatherSeal Base Sideform 100mm x 50mm White Powder Coat 100mm H x 5.8m Long Weight: 20.6kgs per length 4pcs per pack 16 pcs per pallet	SFPEXT 25 Sideform Profile Extension +25mm White Powder Coat 25mm High x 5.8m Long Weight: 7kgs per length 4pcs per pack 16 pcs per pallet	SFPEXT 75 Sideform Profile Extension +75mm White Powder Coat 75mm High x 5.8m Long Weight: 13.6kgs per length 4pcs per pack 16 pcs per pallet

Spartan™ Weatherseal Formwork System Accessories:

Slotted Magnet Adapter Plates

The Spartan™ WeatherSeal Slotted Magnet Adapter plates are available in three sizes to provide a magnetised connection between the WeatherSeal sideform and the steel bed. The slotted adapters are compatible with the Titan™ III magnets and adapter plates.


			
Item Code:	SMAP125140	SMAP150180	SMAP200225
Suits:	125mm to 140mm (S)	150mm to 180mm (M)	200mm to 225mm (L)

2

BED PREPARATION


Support Brace

Recommended for use on sideform over 200mm in thickness, the Spartan™ WeatherSeal Slotted Support Brace is used in conjunction with a conventional magnetised connection of formwork. The Support Brace provides added brace support, and ensures formwork remains plumb. Slotted Brace provides for quick and easy attachment to the sideform using WeatherSeal Bolt-Style clickers.

Item Code:	SSB200300	
Suits:	200mm to 300mm	

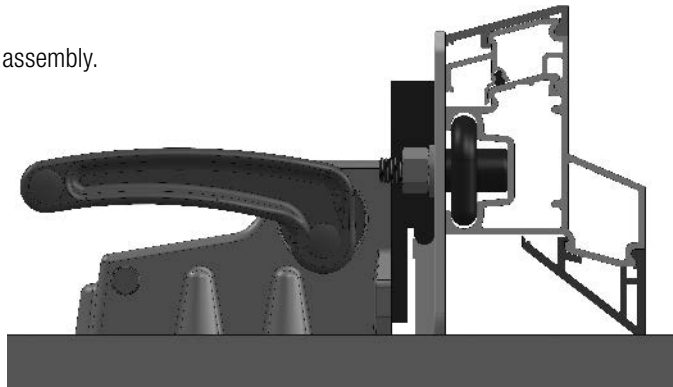
Sideform Bolt-Style Clicker

The WeatherSeal Bolt-style clickers engages into the rear top and bottom race of the Base Sideform and +75mm Profile Extension and provides an M12 threaded anchor point for securing brackets and related accessories.

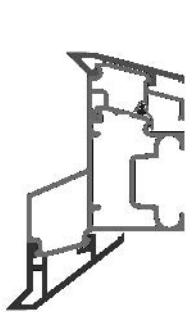
Item Code:	CLICKER100B	
Suits:	WeatherSeal Bolt Style Clicker and Nut Set	
Thread:	M12	

Titan™ Assembly

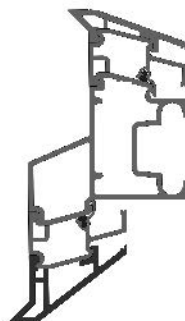
The Spartan™ WeatherSeal 150mm Profile and Titan™ III assembly.



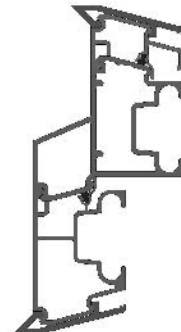
WeatherSeal Profile Configuration Examples:



150mm configuration



180mm configuration



200mm configuration

2.2 Concrete Form Release Agents and Curing

- Water Based and Biodegradable
- Architectural Finishes
- Concrete to Concrete release agents also available
- Stainless Steel Spray Units

Product	Part No (20L)	Part No (200L)	Application
Release Agent #10 (solvent based)	RA1005	RA1055 (RA10275 for 1000L totes)	Rusty formwork, steam cure, white cement mixes
Bionox	BN05	BN55	General panel precast
Noxcrete PCE	PCE05	PCE55	High flyash levels, vertical formwork & abrasive mixes
Reid™ Spray Applicator	RPPS01	(10 Litre)	Coated steel tank
Total Spray Applicator Deluxe	RPPS02	(10 Litre)	Stainless steel tank
Primer Sprayer	RPPS03	(5 Litre)	Polyethylene tank
Cure8 Acrylic Curing Compound (20L)	CURE8A2LT		Maximizes moisture retention

Note a full range of Spares and various tip sizes are available for spray applicators.

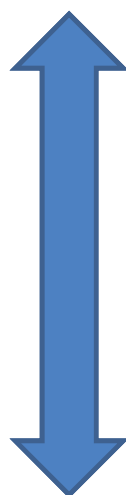
nox-crete
chemical solutions to concrete problems



Noxcrete Form Release Selection Guide

High Reactivity / Low Barrier

Rusty pitted formwork,
white cement mixes,
medium steam curing
Porous forms – raw plywood
General concrete mix,
light steam cure
Moderate flyash levels,
minimal rust on
formwork
High Flyash (>25%) mix,
vertical forms, abrasive mix



Release Agent #10

Form Coat E

Bio-nox

Precast release 80

Nox-crete PCE

Low Reactivity / High Barrier



chemical solutions to concrete problems

3.1 Reinforcing

Reidbar™ Systems

Reidbar™ is a 500N Grade continuous threaded reinforcing system, enabling fast, easy and efficient reinforcement connections in any concrete structure.

- No need for complex calculations
- Components achieve ultimate bar capacity and full bar strength
- More effective engineered connections
- Simple, easy to use. No special tools required. Fast, no-fuss connections
- Simplified detailing
- Complete system for all applications
- No protruding bars in precast elements
- Reduced formwork damage
- Reduced OH&S risk
- Increased productivity
- Meets the requirements of 'Steel Reinforcing Materials, AS/NZS4671:2001'
- Improved structural integrity
- Ultimate strength development with short embedment
- Suitable for thin concrete sections



Reidbar™ Starters™, a screw-in method of connecting concrete structural elements including floors and walls.



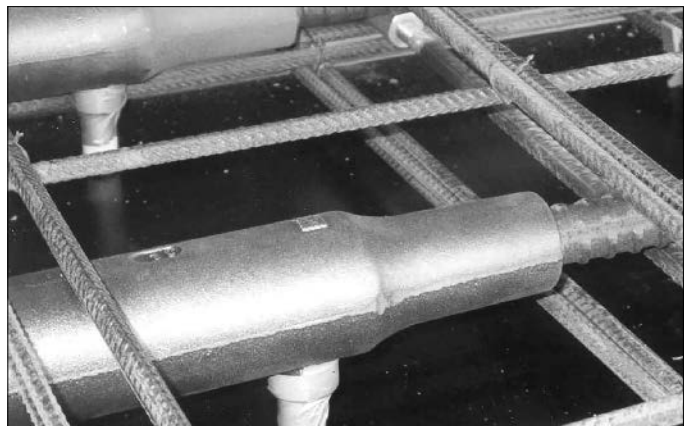
Reidbar™ continuous threaded reinforcing can be used to lift any size concrete element.



Reidbar™ was used as a designed lifting system to lift 200 Tonne Bridge Beams on the Kwinana Freeway Perth WA project utilising reusable lifting plates fastened with Reidbar™ nuts.



Reidbar™ Inserts™ used with ReidBox™ to simplify installation of floor to wall connections.



Reid Grouters™ offer a splicing solution for reinforcing bars ensuring full strength continuity.

3.1 Reinforcing

REIDBAR™

Continuously threaded, hot rolled, Grade 500N reinforcing bar to AS4671. Achieves efficient continuous reinforcing throughout the whole job. It is recommended that all *Reidbar™* is saw cut when used with *Reidbar™* fittings.



Bar Type	Length (m)	Bundle Qty (approx 2 tonnes)	Part No.	
			BL Black	GAL Hot-dip Galv.
RB12	6	364	RB126	RB126G
RBA16	6	206	RBA166	RBA166G
RBA20	6	132	RBA206	RBA206G
RB25	6	85	RB256	RB256G
RB32	6	52	RB326	RB326G

Product Code	Nom Thread Pitch (mm)	Characteristic Value					Mass (kg/m)
		Min Yield Stress (Mpa)	Min Yield Strength (kN)	Min Ultimate Strength (kN)	Max Ultimate Strength (kN)	Min Shear (.62 min Ult) (kN)	
RB12	8	500	56.5	65.0	79.0	40.3	0.88
RBA16	9	500	100.6	115.6	140.8	71.7	1.58
RBA20	10	500	157.0	180.6	219.9	112.0	2.47
RB25	12.9	500	245.5	282.3	343.7	175.0	3.85
RB32	16.4	500	402.0	462.3	562.9	286.6	6.31

Also available cut to length (straight) or processed (bent) to your requirements. Lead time applies.

REIDBAR™ STARTERS

Pre-cut bar connections for fast full strength reinforcing. Grade 500N bar to AS4671

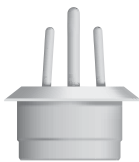


Bar Type	Length (mm)	Bundle Qty	Part No.	
			BL Black	GAL Hot-dip Galv.
RB12	540	25	RB12SB	RB12SBG
RBA16	660	20	RBA16SB	RBA16SBG
RBA20	850	10	RBA20SB	RBA20SBG
RB25	1150	10	RB25SB	RB25SBG
RB32	1450	10	RB32SB	RB32SBG

REIDBAR™ ANTENNA CAPS

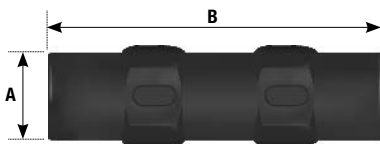
Used to locate inserts or couplers after concrete pour and prevent entry of slurry into the thread.

To Suit	Pack Qty	Part No
RB12TI, RB12C	100	ANTCAPRB12
RBA16TI, RBA16C	100	ANTCAPRB16



REIDBAR™ COUPLERS™

Internally threaded couplers for joining *Reidbar™*.



Bar Type	(A) Diameter (mm)		(B) Length (mm)		Hex A/F (mm)	Pack Qty	Part No.	
							BL Black	GAL Hot-dip Galv.
RB12	22	90	25	100			RB12C	RB12CG
RBA16	30	102	30	25			RBA16C	RBA16CG
RBA20	35	129	37	20			RBA20C	RBA20CG
RB25	43	180	45	10			RB25C	RB25CG
RB32	55	210	57	10			RB32C	RB32CG

REIDBAR™ TO METRIC COUPLERS™

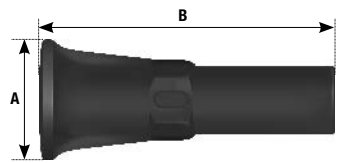
The *Reidbar™* to Metric Coupler is ideal when a fully engineered, full capacity fixing is required close to an edge, along an edge of a panel or at close spacings. The premium alternative to ferrule anchor bars. A full bar break system is achieved when using *Reidbar™* Starter Bars and 8.8 grade metric bolts.



Description	Length (mm)	Hex A/F (mm)	Metric Thread Length (mm)	Pack Qty	Part No.	
					BL Black	GAL Hot-dip Galv.
RB12 to M16	90	25	40	70	RB12M16C	RB12M16CG
RBA16 to M20	102	30	45	50	RBA16M20C	RBA16M20CG
RBA20 to M24	122	35	50	20	-	RBA20M20CG

REIDBAR™ INSERTS

Inserts for casting into concrete, designed to accept *Reidbar™* bar or starters at a later stage with sufficient embedment for a full strength bar break connection.

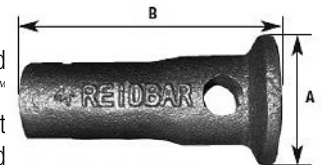


Suits	(A) Foot Diam (mm)		(B) Length (mm)		Pack Qty	Part No.	
						BL Black	GAL Hot-dip Galv.
RB12	38	100	75			RB12TI	RB12TIG
RBA16	50	118	30			RBA16TI	RBA16TIG
RBA20	64	148	20			RBA20TI	RBA20TIG
RB25	80	191	10			RB25TI	RB25TIG
RB32	101	210	5			RB32TI	RB32TIG

Refer to technical data sheets for edge and spacing distance information.

REIDBAR™ REBATE INSERTS™

Designed to be used in thin walled panels and panels with rebates, where standard *Reidbar™* Inserts will not fit. Includes a cross hole to suit N12 bar. Minimum rebate of 25mm required to achieve bar break connection.



Suits	(A) Foot Diam (mm)		(B) Length (mm)		Cross Hole Diam (mm)	Pack Qty	Part No
RB12	39	78	14.5	60			RB12RI
RBA16	51	96	14.5	30			RBA16RI

REIDBAR™ NUTS



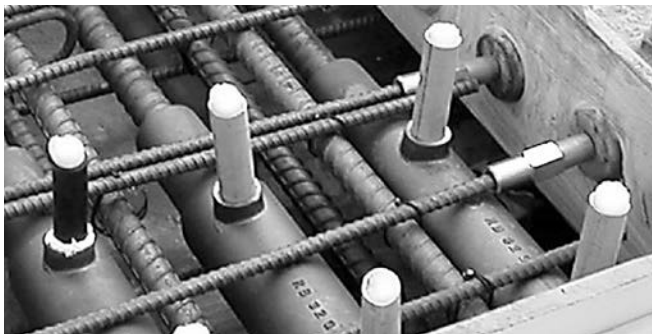
Suits	Length (mm)		Nominal Hex Size (mm) +/- 0.5mm	Pack Qty	Part No.	
					BL Black	GAL Hot-dip Galv.
RB12	40	25	50		RB12N	RB12NG
RBA16	45	30	50		RBA16N	RBA16NG
RBA20	45	36	25		RBA20N	RBA20NG
RB25	65	46	30		RB25N	RB25NG
RB32	82	55	15		RB32N	RB32NG

REIDBAR™ WING NUTS



Suits	Hex AF		Height (mm)	Overall Dia. (mm)	Pack Qty	Part No
RB12	22	40	58	100		RB12WN
RBA16	30	51	98	30		RBA16WN

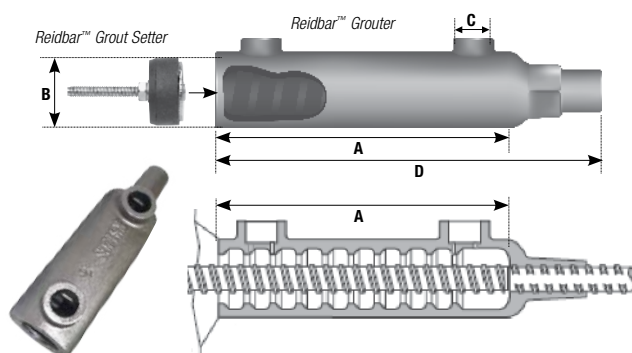
3.1 Reinforcing



REIDBAR™ GROUTERS™

Grouters are used for connecting *Reidbar™* lengths where one side of the connection must be female or when converting to standard reinforcing bar. The internal surfaces are ribbed to ensure full bar break after sleeve has been filled with high performance cementitious grout (65MPa, 28 day compressive strength).

Grouter Setting Kits for *Reidbar™* Grouters enables fixing to formwork prior to pouring and to prevent concrete slurry ingress.



Suits	(A) Max Internal Embedment Depth (mm)	(B) Body ID (mm)	(C) Internal Grout Hole Diam (mm)	(D) Tube Length (mm)	Grouter Part No	Grout Setter Part No
RB12	150	28-40	21	200	RB12GS	RB12GSSET
RBA16	190	32	21	240	RBA16GS	RBA16GSSET
RBA20	224	40	21	290	RBA20GS	RBA20GSSET
RB25	274	48	21	360	RB25GS	RB25GSSET
RB32	320	55	26	445	RB32GS	RB32GSSET

Refer to technical data sheets for recommended grouts.

REIDBAR™ PLASTIC NAIL PLATES

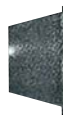
Supports for fixing to boxing and formwork for positioning all *Reidbar™* internally threaded components, such as insert and coupler.



Suits	Pack Qty	Part No
RB12TI, RB12C	100	NP12RB
RBA16TI, RBA16C	100	NP16RB
RBA20TI, RBA20C	100	NP20RB
RB25TI, RB25C	100	NP25RB
RB32TI, RB32C	100	NP32RB

REIDBAR™ SEALING CAPS

Used to protect the internal thread of inserts and couplers

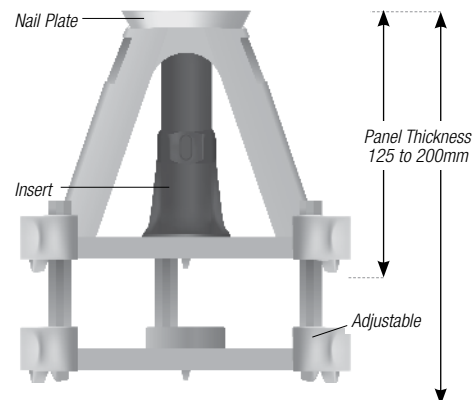


Suits	Pack Qty	Part No
RBA16TI, RBA16C	100	RBA16CAP
RBA20TI, RB20C	100	RBA20CAP
RB25TI, RB25C	100	RB25CAP
RB32TI, RB32C	100	RB32CAP

REIDBAR™ TI CHAIR

Designed to enable *Reidbar™* inserts to be easily used for near face applications in precast elements.

Used in conjunction with the appropriate nail plate, the TI Chair is fully adjustable to suit 125, 150, 175, and 200mm panel thicknesses and can be trimmed for intermediate thicknesses.



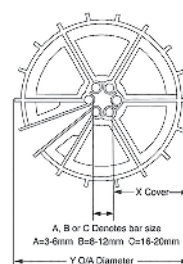
Chair	Adaptor	Legs	Panel Thickness (mm)	Pack Qty	Part No
1	1	3	125-200	90	TICHAIR

- NOTE:
1. The chair will take all inserts from RB12 to RBA20.
 2. Use appropriate size nail plate to attach insert into chair.
 3. Can be used for all metric and coil thread inserts with appropriate nailing plate.

CIRCULAR SPACER

The unique design offers accurate cover for 360 degrees. It will not twist when in position due to the in-built sleeves which adjusts to hold the bar firmly. As the size of the bar increases the cover remains the same. Ideal for:

- Civil precast and commercial construction
- Columns and piers
- Bar spacers in conduit



Bar Size	X Cover	Y O/A Diameter	Part NO
8-12	15	40	CB15CR12
8-12	20	50	CB20CR12
8-12	25	60	CB25CR12
8-12	30	70	CB30CR12
8-12	40	90	CB40CR12
8-12	50	110	CB50CR12
8-12	65	145	CB65CR12
8-12	75	160	CB75CR12

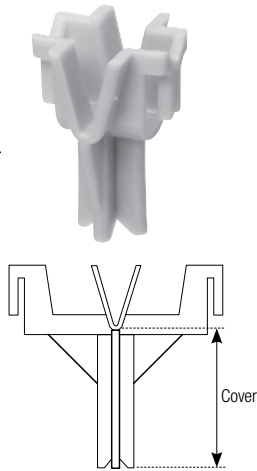
SET-UP, STRIPPING, HANDLING, STORAGE & TRANSPORT

3.1 Reinforcing

Reinforcing Support Chairs

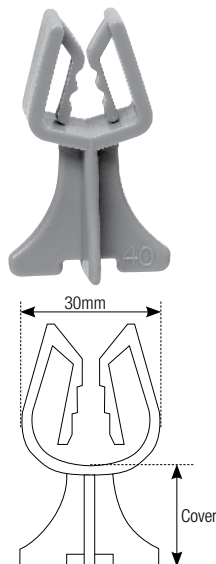
MESH CHAIR - The mesh chair is designed to clip easily to the intersection of the mesh, providing greater strength and stability. Mesh chairs can be used with extensions for added height if required.

Cover (mm)	Pack Qty	Part No
20	100	MESH20
25	100	MESH25
30	100	MESH30
40	100	MESH40
50	100	MESH50
65	100	MESH65
75	100	MESH75

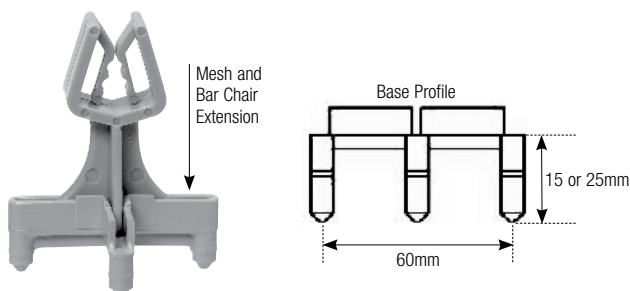


BAR CHAIR - Fast Clip Bar Chairs accommodate bar sizes from 4mm to 20mm. Each chair is identified by cover and can be used with extensions for added height and stability if required.

Cover (mm)	Pack Qty	Part No
20	100	BAR20
25	100	BAR25
30	100	BAR30
35	100	BAR35
40	100	BAR40
45	100	BAR45
50	100	BAR50
60	100	BAR60
65	100	BAR65
75	100	BAR75



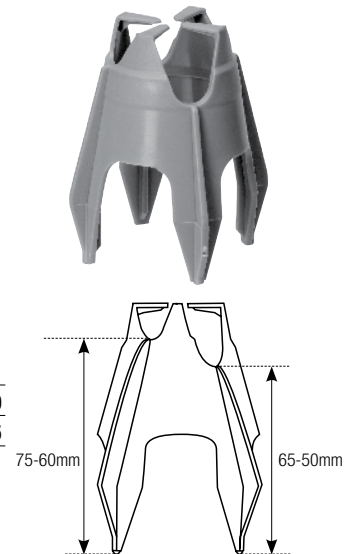
MESH AND BAR CHAIR EXTENSIONS



Height (mm)	Pack Qty	Part No
15	100	FWBASE015
25	100	FWBASE025

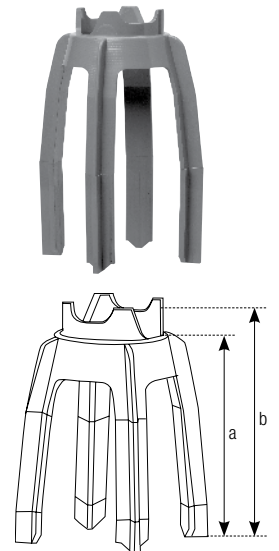
PANEL CHAIRS - Designed to support single layered mesh in tilt-up and precast panels. The easy push on clip mechanism allows the chair to swing into a vertical position when lowering the mesh into the form and suits all mesh sizes including N12 bars. Dimples located at the base of the legs ensures minimum exposure.

Cover (mm)	Pack Qty	Pallet Qty	Part No
50/60	100	5000	BCPANEL5060
65/75	100	5000	BCPANEL6575



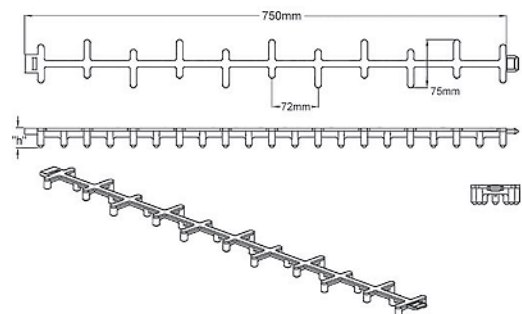
TOP DECK CHAIR - The dual height top deck chair has been designed to support both top mesh and top reinforcing bars in suspended decks, thick precast and tilt-up panels and any tall spacer applications, where strength and stability is critical.

Height (mm)		Pack Qty	Part No
a	b		
90	100	50	BPDST090100
110	120	50	BPDST110120
130	140	50	BPDST130140
150	160	50	BPDST150160
170	180	50	BPDST170180
190	200	50	BPDST190200



BAR DECK RAIL

The 750mm long plastic deck rail is a continuous spacer for formwork applications, with sets of vertical legs at approximately 75mm centres and another vertical leg in between the



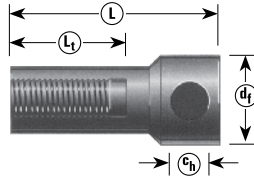
Height "h" mm	Mass kg Per 100	Pallet Quantity	Product No
25	16.3	2000	BDR025
30	17.5	1700	BDR030
35	19	1700	BDR035
40	20	1500	BDR040
45	21.5	1500	BDR045
50	22.6	1300	BDR050

3.2 Connections

Metric Threaded Systems

TCM

The TCM is a medium to heavy duty, cast-in ferrule. All steel threaded socket for casting into pre-cast concrete and institute concrete elements, giving a prefixed fastening point.



Thread Size	Ferrule Length (mm) (L)	Thread Length (mm) (L1)	Nom Foot Dia. (d1)	Cross Hole to suit (c1h)	Pack Qty	Zn	Part No GAL	A4 316
M8	35	16	16	--	600	TCM8R	TCM8GH	TCM8RSS
M10	44	20	19	R8 x 300	400	TCM10R	TCM10GH	TCM10RSS
M12	54	25	22	R8 x 300	250	TCM12R	TCM12GH	TCM12RSS
M16	75	32	29	Y12 x 300	125	TCM16R	TCM16GH	TCM16RSS
M20	80	38	32	Y12 x 300	80	TCM20R	TCM20GH	TCM20RSS
M24	125	50	44	Y12 x 300	30	TCM24R	TCM24GH	TCM24RSS

TCM™ Cast-in Anchors (Stainless Steel) - Recommended Working Loads in 40N/mm² non-cracked Concrete

Thread Ø	Embedment Depth (mm)	Torque (Nm)	Unreinforced ferrule		Reinforced ferrule	
			Shear Load (kN)	Tensile Load (kN)	Shear Load (kN)	Tensile Load (kN)
M8	28	10	5.2	4.9	-	-
M10	29	17	8.3	5.3	8.3	6.3
M12	37	30	12.2	7.8	12.2	9.3
M16	52	75	23.4	14.4	23.4	17.2
M20	57	144	31.7	16.1	31.7	19.3
M24	101	250	42.7	35.5	42.7	43.1

* Safety factor for all loads = 3

* This table does not consider edge distance and anchor spacing effects. Please refer to Ramset Design Guide for more information.

* Pull out test for single anchor = working load x 1.5

* Reinforcing TCM is TCM connected to reinforcing bar of specified length.

TCM™ Cast-in Anchors (Zn Plated / Hot Dipped Galv) - Recommended Working Loads in 40N/mm² non-cracked Concrete

Thread Ø	Embedment Depth (mm)	Torque (Nm)	Unreinforced ferrule		Reinforced ferrule	
			Shear Load (kN)	Tensile Load (kN)	Shear Load (kN)	Tensile Load (kN)
M8	28	10	5.2	4.9	-	-
M10	29	17	8.3	5.3	8.3	6.3
M12	37	30	12.2	7.8	12.2	9.3
M16	52	75	23.4	14.4	23.4	17.2
M20	57	144	29.3	16.1	29.3	19.3
M24	101	250	36.7	35.5	36.7	43.1

* Safety factor for all loads = 3

* This table does not consider edge distance and anchor spacing effects. Please refer to Ramset Design Guide for more information.

* Pull out test for single anchor = working load x 1.5

* Reinforcing TCM is TCM connected to reinforcing bar of specified length.



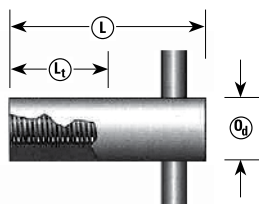
SET-UP, STRIPPING, HANDLING, STORAGE & TRANSPORT

3.2 Connections

Metric Threaded Systems

CIM

The CIM is a medium to heavy duty, cast-in ferrule.



Thread Size	Ferrule Length (mm) \textcircled{L}	Thread Length (mm) $\textcircled{L_1}$	Outside Diameter $\textcircled{\text{Ø}_d}$	Pack Qty	Zn	Part No $\textcircled{\text{A2 304}}$	$\textcircled{\text{A4 316}}$
M6	35	14	10	1000	CIM6	CIM6SS	CIM6SS316
M8	35	16	12	600	CIM8	CIM8SS	CIM8SS316
M10	44	22	16	400	CIM10	CIM10SS	CIM10SS316
M12	55	25	18	250	CIM12	CIM12SS	CIM12SS316
M16	70	32	22	100	CIM16	CIM16SS	CIM16SS316
M20	80	38	25	75	CIM20	CIM20SS	CIM20SS316
M24	125	50	30	30	CIM24	CIM24SS	CIM24SS316

CIM Cast-in Anchors (Stainless Steel A2/A4) - Recommended Working Loads in 40N/mm² non-cracked Concrete

Thread Ø	Embedment Depth (mm)	Torque (Nm)	Unreinforced ferrule		Reinforced ferrule	
			Shear Load (kN)	Tensile Load (kN)	Shear Load (kN)	Tensile Load (kN)
M6	26	5	2.8	3.2	2.8	3.9
M8	26	10	5.2	4.9	5.2	5.9
M10	35	17	8.3	5.0	8.3	6.3
M12	46	30	12.0	7.3	12.0	9.1
M16	57	75	22.1	12.3	22.1	15.3
M20	67	144	26.0	13.9	26.0	17.4
M24	112	250	33.7	32.5	33.7	40.7

* Safety factor for all loads = 3

* Shear load is calculated using Grade 8.8 steel or A4-80 stainless steel bolt

* This table does not consider edge distance and anchor spacing effects. Please refer to Ramset Design Guide for more information.

* Pull out test for single anchor = working load x 1.5

* Reinforcing CIM is CIM connected to reinforcing bar of specified length.

CIM Cast-in Anchors (Zn Plated / Hot Dipped Galv) - Recommended Working Loads in 40N/mm² non-cracked Concrete

Thread Ø	Embedment Depth (mm)	Torque (Nm)	Unreinforced ferrule		Reinforced ferrule	
			Shear Load (kN)	Tensile Load (kN)	Shear Load (kN)	Tensile Load (kN)
M6	26	5	2.8	3.2	2.8	3.9
M8	26	10	5.1	4.9	5.1	5.9
M10	35	17	8.3	5.0	8.3	6.3
M12	46	30	11.6	7.3	11.6	9.1
M16	57	75	20.9	12.3	20.9	15.3
M20	67	144	23.3	13.9	23.3	17.4
M24	112	250	29.0	32.5	29.0	40.7

* Safety factor for all loads = 3

* Shear load is calculated using Grade 8.8 steel or A4-80 stainless steel bolt

* This table does not consider edge distance and anchor spacing effects. Please refer to Ramset Design Guide for more information.

* Pull out test for single anchor = working load x 1.5

* Reinforcing CIM is CIM connected to reinforcing bar of specified length.

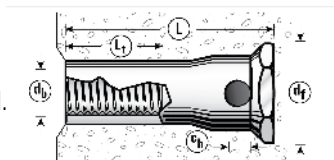
3.2 Connections

Metric Threaded Systems

ELEPHANT FOOT FERRULES™

Premium quality, premium performance ferrules, suitable for all applications where cast-in female threaded inserts are required.

- Full capacity without a cross bar.



d_b Thread Size	L Ferrule Length (mm)	C_h Cross Hole to suit	L_t Thread Length (mm)	d_f Nom Foot Dia.	Pack Qty	Zn	Part No GAL	$A4$ 316
M10	45	R8	20	21	250	FE10045	--	FE10045SS
M12	55	R8	25	27	200	FE12055	FE12055GH	FE12055SS
	95	R10	25		150	FE12095	FE12095GH	-
M16	70	Y12	32	35	100	FE16070	FE16070GH	FE16070SS
	95	Y12	32		75	FE16095	FE16095GH	-
M20	70	Y12	35	37	75	FE20070	FE20070GH	-
	95	Y12	38		50	FE20095	FE20095GH	FE20095SS
M24	95	Y12	50	43	40	FE24095	FE24095GH	-

Elephant Foot Cast-in Anchors (Zn Plate) - Recommended Working Loads in 40N/mm² non-cracked Concrete

Thread \emptyset	Embedment Depth (mm)	Torque (Nm)	Unreinforced ferrule	
			Shear Load (kN)	Tensile Load (kN)
M10	41	17	7.9	5.7
M12	41	30	10.4	9.7
M12	91	30	18.6	20.1
M16	66	75	17.4	14.7
M16	91	75	24.0	23.8
M20	66	144	20.6	16.5
M20	91	144	28.4	26.6
M24	91	250	35.0	29.2

* Safety factor for all loads = 3

* Shear load is calculated using Grade 8.8 steel or A4-80 stainless steel bolt

* This table does not consider edge distance and anchor spacing effects. Please refer to Ramset Design Guide for more information.

* Pull out test for single anchor = working load x 1.5

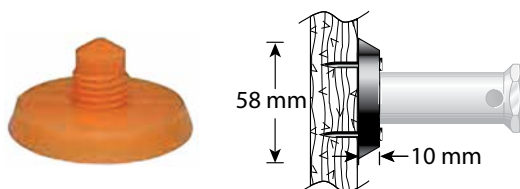
* Reinforcing CIM is CIM connected to reinforcing bar of specified length.

SET-UP, STRIPPING, HANDLING, STORAGE & TRANSPORT

3.2 Connections

METRIC NAILING PLATE

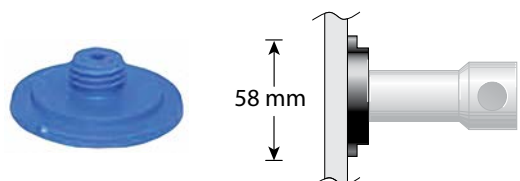
Reusable locator for ferrules on timber form.



To Suit	Pack Qty	Colour	Part No
M12	100	Red	FM12N
M16	100	Green	FM16N
M20	100	Blue	FM20N
M24	100	Yellow	FM24N

GLUE ON NAILING PLATES

Glue on nailing plates are used to attach ferrules to steel formwork or casting beds, where screwing or drilling is not desired. Designed to be used with *Reid™* Double Sided Spots, they have a recess on the bottom side that allows for easy removal after the panel has been lifted.



To Suit	Pack Qty	Colour	Part No
M12	100	Red	NP12GLUE
M16	100	Green	NP16GLUE
M20	100	Blue	NP20GLUE
M24	100	Yellow	NP24GLUE

Double Sided Spots to Suit:

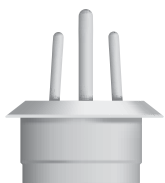
Diam	Pack Qty	Part No
58mm	100	NPSPOT



ANTENNA CAPS

- Antennae simplify ferrule locating.
- Push fit, easy to remove.

To Suit	Pack Qty	Colour	Part No
M12	100	Red	ANTCAP M12
M16	100	Green	ANTCAP M16
M20	100	Blue	ANTCAP M20
M24	100	Yellow	ANTCAP M24



FERRULE ANCHOR BARS

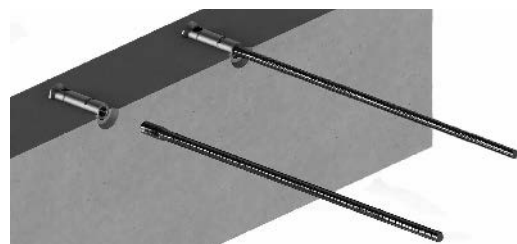


Ferrule Anchor Bars are ideal for applications requiring a full capacity fixing close to an edge or at close spacings. The bar provides deeper anchorage so that considerably higher tension loads are possible than with the ferrule alone.

- N Grade Bar
- M16 to M20
- Available with Zinc Ferrule

Thread Dia. (mm)	Bar Diam x Length (mm)	Part No
M16	N12 x 450	FB16N12
M20	N16 x 450	FB20N16

ELEPHANT BARS



Reid™ Elephant Bars are the perfect starter bar for use in conjunction with *Reid™* Elephant Foot ferrules for wall to slab connections, offering a cost effective and superior system to traditional threaded "starter bars" for this application.

Made from grade HRB400 Reinforcing bar complying with GB1499-1998 with a minimum yield of 400MPa and a max ultimate of 570MPa.

This bar is up formed on one end and then thread rolled to produce a high quality metric thread, free from the stress concentrations associated with cutting threads into reinforcing bars.

- N Grade Bar
- M16 to M20
- Available with Zinc Ferrule

Thread Dia. (mm)	Bar Diam x Length (mm)	Part No
M16	N12 x 450	STBM16
M20	N16 x 450	STBM20

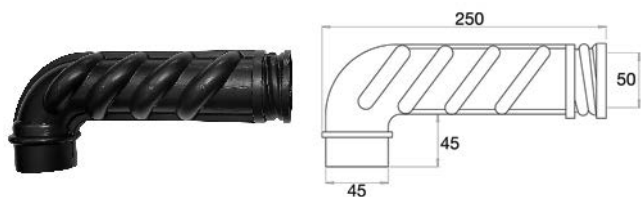
3.2 Connections

Panel Connection & Dowels

PLASTIC GROUT TUBES

Black Polyethylene Grout tubes are a superior modular system for grouted wall to slab dowel connections.

GROUT TUBE



The grout tube is cast in panels to create a void necessary for shear connections. Extendible in 100mm and 200mm increments.

- End Cap - Extensions (200 & 100mm)

Easily screw together



SPIRAL DUCT & END CAPS

Made of high grade galvanised steel. Available in 50mm diameter. Internal support plug with tapered sides to fit inside 50mm spiral duct can be nailed to formwork.



Description	Size	Pack Qty	Part No
Spiral Duct	50mm x 2500mm	100 lengths per pallet	DS050
Pipe Locator End Caps	50mm	100	FWPL50

Other sizes available in pallet lots upon request.

- Universal Chair

To suit panels 150, 175, 180 and 200mm.



Description	Pack Qty	Part No
Grout Tube (sub 150mm)	100	GT150
100mm grout tube extension	100	GTEXT100
200mm grout tube extension	130	GTEXT200
Universal Chair	200	GTBARCHAIR
End Cap	200	GTEC50

3.3 Lifting Systems



Introduction

in 1977 Reids™ revolutionised the safety and speed of lifting cast concrete elements with the introduction of the *SwiftLift™* lifting system. The *SwiftLift™* system utilised a fully engineered approach, combining cast in lifting anchors, recess formers, custom fitting lifting clutches, and full engineering backup.

Traditional lift process of casting in bent reinforcing steel or other hook attachment points generally had no engineering basis and gave poor margins of safety. This meant that lifting points were easily overstressed with failures and accidents commonly occurring. This resulted in hazardous work sites, costly damage and construction delays.

The *SwiftLift™* system introduced a new era in lifting heavy concrete elements, eliminating many of the safety issues and saving time and money in the process.

FEATURES

- Full engineering support.
- Full range of lifting solutions.
- Remote release system.
- Innovative lifting systems.
- Forged steel and hot dipped galvanised components.
- Commitment to continued product development.
- Skilled, helpful and practical staff.
- Easy to install and use.

BENEFITS

- Experienced support staff.
- No special tools required for installation or use.
- Free lift design service.
- Reduces installation time.
- Reduced construction cost.
- Increased safety.
- Technical backup.
- Range of support products.
- Manuals and support literature available.



Swiftlift's Remote Release is faster and safer.



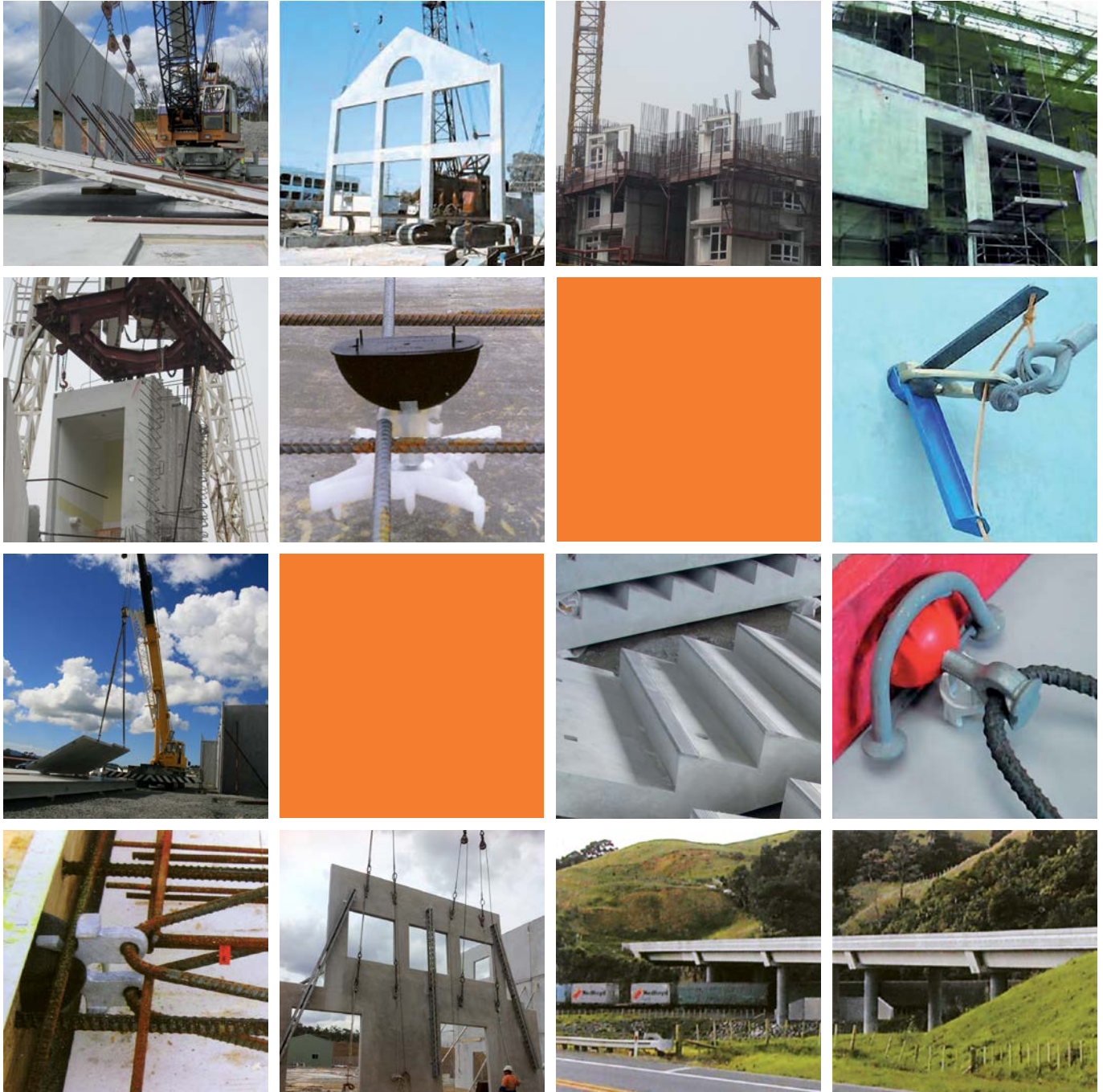
Avoid risking the safety of staff and reduce time and labour costs.

SPECIAL CAUTIONS

Reid Lifting Anchors and Lifting Clutches must not be modified by welding in any form or subjected to extreme heat as this could change the metallurgical properties of the components. Never attach anchors to reinforcing steel by spot welding.



3.3 Lifting Systems



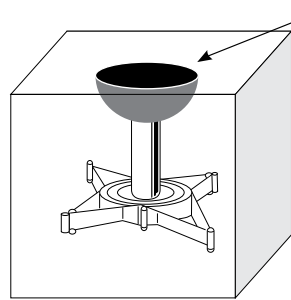
3.3 Lifting Systems

Anchor Installation

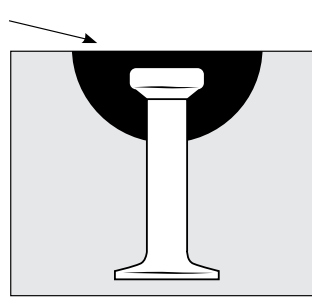
Installing Swiftlift Foot Anchors



Swiftlift Anchors are cast into the concrete with recess formers to create the void in the concrete permitting the lifting clutch to attach to the head of the anchor. Figure below shows the two main Foot Anchor installations. Recess formers may be plastic, steel, or rubber depending on application or casting process.



PCHAIRS – installed prior to casting concrete.

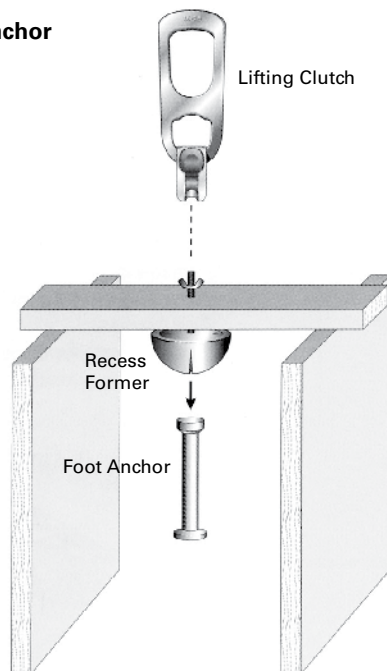


Puddle in – placed as the concrete is cast and worked.

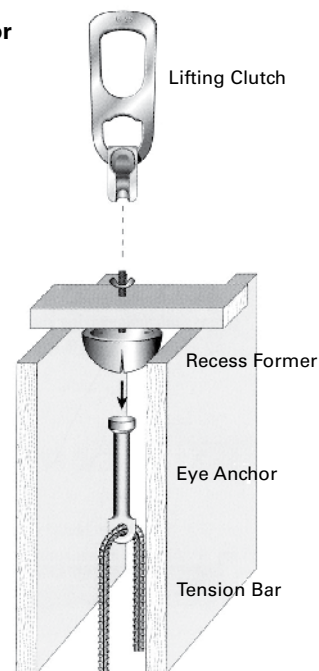


Foot Anchor Installation

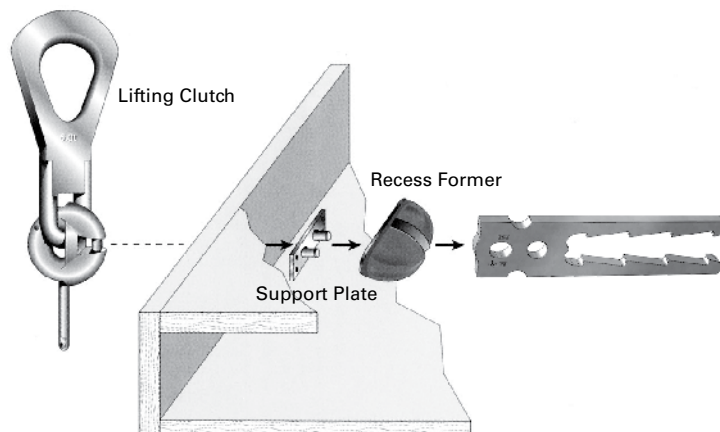
Foot Anchor System



Eye Anchor System



Edgelift Anchor System



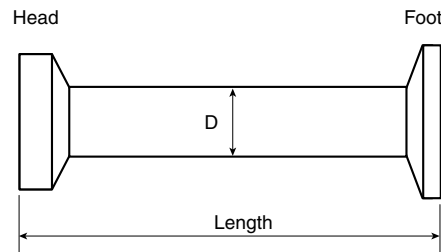
3.3 Lifting Systems

General Lifting

SWIFTLIFT™ FOOT ANCHORS

SwiftLift™ Foot Anchors are the most versatile and widely used anchors in the system. They are very efficient and come in a range of Working Load Limits (WLL). All SwiftLift™ Foot Anchors exceed the requirements of AS3850-2003.

For Hong Kong project, please apply an overall safety factor of 4 in design consideration.



Description	D	Length	Pack Qty	BL Part No	GAL Part No	A4 316 Part No	Clutches to match	Actual Load used in H.K. with FOS 4
1.3 tonne WLL (Max)	10						1LE	0.975T
35mm Foot Anchor		35	200		1FA035	1FASS035		
45mm Foot Anchor		45	200		1FA045	1FASS045		
55mm Foot Anchor		55	200		1FA055	1FASS055		
66mm Foot Anchor		66	200		1FA066	1FASS066		
85mm Foot Anchor		85	100		1FA085	1FASS085		
120mm Foot Anchor		120	100		1FA120	1FASS120		
2.5 tonne WLL (Max)	14						2LE	1.875T
55mm Foot Anchor		55	100		2FA055	2FASS055		
75mm Foot Anchor		75	100		2FA075	2FASS075		
90mm Foot Anchor		90	100		2FA090	2FASS090		
120mm Foot Anchor		120	50	2FA120P	2FA120	2FASS120		
170mm Foot Anchor		170	25	2FA170P	2FA170	2FASS170		
5 tonne WLL (Max)	20						5LE or 5LERR	3.75T
75mm Foot Anchor		75	50		5FA075	5FASS075		
95mm Foot Anchor		95	25		5FA095	5FASS095		
120mm Foot Anchor		120	25		5FA120	5FASS120		
170mm Foot Anchor		170	25	5FA170P	5FA170	5FASS170		
240mm Foot Anchor		240	25	5FA240P	5FA240	5FASS240		
10 tonne WLL (Max)	28						10LE	7.5T
150mm Foot Anchor		150	10		10FA150	10FASS150		
200mm Foot Anchor		200	10		10FA200			
340mm Foot Anchor		340	5		10FA340	10FASS340		
20 tonne WLL (Max)	38						20LE	15T
250mm Foot Anchor		250	5		20FA250			
340mm Foot Anchor		340	2		20FA340	20FASS340		
500mm Foot Anchor		500	2		20FA500	20FASS500		
32 tonne WLL (Max)	50						32LE	24T
700mm Foot Anchor		700	1		32FA700			
1200mm Foot Anchor		1200	1		32FA1200			

NOTE: Load capacity may be limited by concrete strength and will be affected by the close proximity of other anchors or edges. See technical and design information for all details.

Stainless Steel Foot Anchors available on request and subject to lead times.

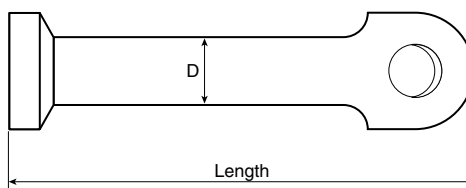
For non-coated foot anchor, please put remark of 'P' behind part no. of hot-dip galvanised anchor, example : 2FA170P.





SET-UP, STRIPPING, HANDLING, STORAGE & TRANSPORT

SWIFTLIFT™ EYE ANCHORS

SwiftLift™ Eye Anchors are higher load anchors which provide deeper anchorage and increased load capacity in thin wall or low strength concrete elements. They are ideal for bridge beams and other heavy precast concrete elements. All SwiftLift™ Eye Anchors comply with AS3850-2003.

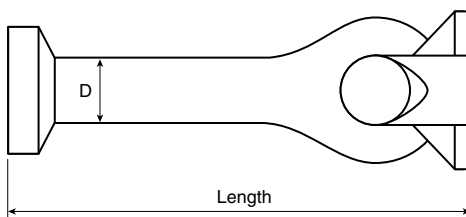



Description	D	Length	Pack Qty	 Part No	 Part No	Clutches to match	Harger bar size	Actual Load used in H.K. with FOS 4
2.5 tonne WLL (Max)	14					2LE	Y12	1.875T
2.5T x 90mm Thin Panel Eye Anchor		90	100	2RAE090P	2RAE090			
5 tonne WLL (Max)	20					5LE	Y16	3.75T
5T x 120mm Thin Panel Eye Anchor		120	25	5RAE120P	2RAE120			
10 tonne WLL (Max)	28					10LE	Y25	7.5T
10T x 180mm Eye Anchor		180	10		10EA180			
20 tonne WLL (Max)	39					20LE	Y32	15T
20T x 250mm Eye Anchor		250	5		20EA250			
32 tonne WLL (Max)	50					32LE	Y40	24T
32T x 300mm Eye Anchor		300	1		32EA300			

NOTE: All SwiftLift™ Eye Anchors require a **reinforcing hanger bar** as per the technical and design information. Load capacity may be limited by concrete strength and will be affected by the close proximity of other anchors or edges. See technical and design information for all details. See page 25 for clutch details.

SWIFTLIFT™ COMBINATION ANCHORS

SwiftLift™ Combination Anchors feature a combined foot and eye. When used with a **reinforcing hanger bar** they are able to provide deeper anchorage and increased load capacity in thin wall or low strength concrete elements. The cut-out foot and saddle like moulded eye opening provide support for the reinforcing hanger bar. All SwiftLift™ Combination Anchors comply with AS3850-2003. Patented.



Description	D	Length	Pack Qty	 Part No	Clutches to match	Harger bar size	Actual Load used in H.K. with FOS 4
1.3 tonne WLL (Max)	10				1LE	Y10	0.975T
1.3T x 50mm Combination Anchor		50	200	1REA050			
2.5 tonne WLL (Max)	14				2LE	Y12	1.875T
2.5T x 90mm Combination Anchor		90	100	2REA090			
5 tonne WLL (Max)	20				5LE or 5LERR	Y16	3.75T
5T x 120mm Combination Anchor		120	25	5REA120			

NOTE: Load capacity may be limited by concrete strength and will be affected by the close proximity of other anchors or edges. See technical and design information for all details. See page 25 for clutch details.

3.3 Lifting Systems

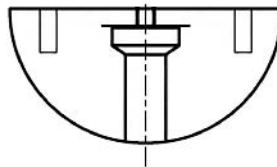
General Lifting

SWIFTLIFT™ VOID FORMER SYSTEMS

- Rubber Void Former

The Rubber Void Former is supplied with a bolt and wing nut for fixing to formwork. The recess former is split into two hinged halves that clamp around the head of the anchor as the wing nut is tightened against the outside of the formwork.

Anchor Load Group (T)	Part No
1.3t	1RRFRO
2.5t	2RRFRO
5.0t	5RRFRO
10.0t	10RRFRO
20.0t	20RRFRO
32.0t	32RRFRO

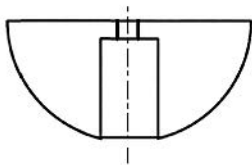


The void former includes a setting bolt and plaque

NOTE: Narrow style is available subject to special request.

- Steel Round Void Former

Steel formers are used predominantly in precast factories. Steel formers are held in place using a central bolt through the formwork.



Part No

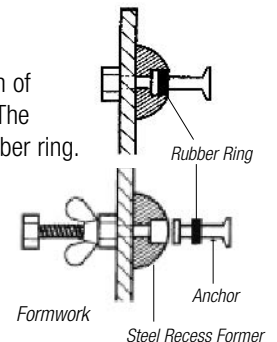
Anchor Load Group (T)	Void Former	Rubber Ring (Pack Qty-100)	Setting Bolt
1.3T	1SRFRO	1RRI	SBM8
2.5t	2SRFRO	2RR	SBM12
5.0t	5SRFRO	5RR	SBM12

- Rubber Rings

Rubber Rings are used for the interaction of anchors into Steel Round Void Formers. The anchor is secured by insertion of the rubber ring.

- Setting Bolt

Setting Bolts are used to secure the steel void former to the formwork.



NOTE: Other sizes of magnetised and narrow style are available subject to special request.

- Plastic Round Void Former

Plastic void formers are disposable formers. Round plastic void formers are designed for use with *SwiftLift™* anchors.

Available upon request.

- SwiftLift™ Shear Bar

Suits	Bar Size	Part No
SJU / SJH / SJS	16mm	5ELASB

Gal plated double footed shear bar.



SET-UP, STRIPPING, HANDLING, STORAGE & TRANSPORT

SwiftLift™ Clutches

The *SwiftLift™* Clutches have been exclusively designed and approved for use with *Reid™ SwiftLift™* Anchors. They are available in a range of Working Load Limits. They have been designed so that they cannot spontaneously disengage whilst the system is under load at any orientation, provided they are correctly connected to the head of the correct anchor in the recess. When the lift is complete and the load released, the *SwiftLift™* Clutch can be quickly and simply disengaged.

A special "remote release" *SwiftLift™* Clutch is available for Tilt-up or removing clutch at height.

SWIFTLIFT™ STANDARD

For lifting a variety of precast concrete elements.

WLL (Max)	Pack Qty	Part No
1.3t	1	1LE
2.5t	1	2LE
5.0t	1	5LE
10.0t	1	10LE
20.0t	1	20LE
32.0t	1	32LE



SWIFTLIFT™ REMOTE RELEASE CLUTCH

For lifting Tilt-Up concrete panels with optional remote release guide. The new remote release guide perfects alignment of clutches to assist remote release.

Description	Part No
5.0t WLL (max) Clutch Only	5LERR



SWIFTLIFT 3Dx™**3Dx™ 8.5t Anchor****3 dimensional forged design made from tough Alloy Steel.**

Provides greater concrete anchorage and anchor strength. Faster Installation for precasters: The compact design of the 3Dx™ is easier to manoeuvre around the mesh and fittings, yet delivers 8.5t capacity.

I-Beam design and elongated tension bar hole.

Provides maximum shear capacity without the need for a shear bar! Eliminates the congestion between the tension bar and the central mesh. Provides precasters with both a lower in-place-cost and installation efficiencies over comparative flame cut anchors.

Rounded outer edges.

Forged design eliminates the sharp edges and burrs commonly found on conventional flame cut anchors. Reduces OH&S risk in the precast yard.

Symmetrical tapered clutch engagement hole.

Forging allows for the profile of the clutch engagement hole to better match the profile of the clutch bolt. Provides for easier, and faster clutch engagement and remote release.

3Dx™ 8.5t Clutch**Forged Alloy Steel.**

Provides for a smaller, lighter and stronger clutch that achieves 8.5t tensile capacity. The compact 3Dx™ clutch is easy to carry around the precast yard and on site, reducing OH&S risks.

Slim waisted handle design.

Improved clearance between the clutch and the panel edge during lifting. Preserves the quality of your panel edges and eliminates the need for remedial repairs to damaged edges sustained during the initial lift, storage, transportation, rotation or the placement of the panels on site.

Patented new Torus design.

Contributes to the improved clearance of the clutch from the panel edge. Increased capacity utilising the smallest possible void.

Backwards compatibility...

The new 3Dx™ Torus is backwards compatible with a range of Reid™ proprietary lifters including the 5t FL050 Face Lift and the JAWS™ Edge Lift SJST™, SJHT™ and SJMT™ anchors*. Improved versatility of the 3Dx™ clutch across a range of lifters reduces idle crane time caused by clutch change over. 3Dx™ 8.5t Clutch

3Dx™ Void Former**Exterior shape design.**

The voids created in the panel edges provide far smoother clutch engagement and release than competing edge lifting systems.

Void former seals.

Improved sealing around the head of the anchor results in less slurry ingress that otherwise needs to be removed in order to fit the clutch properly. Saves time and headaches on site.

Heavy duty support plate.

Designed in conjunction with the 3Dx™ Void Former, the robust support plate is the perfect accessory to further enhance the fitment of the anchor. The use of the support plate improves the seal of the void former around the anchor, reducing concrete ingress. Versatile: The support plate can also be fixed to the shutter.

Improved rubber material grade.

Precast Yard Tough! The 3Dx™ Void Former is easy to clean without the need for solvents, but can handle the harshest of cleaning products and processes that a precast crew can dish up. Improved material grade provides longer life.

Versatile...

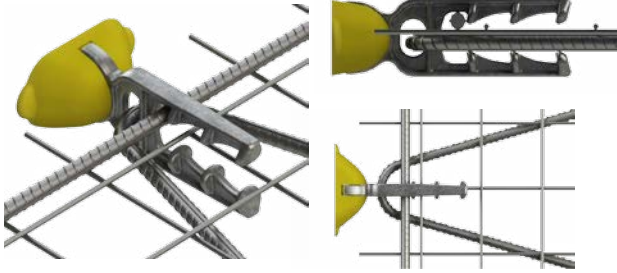
Compatible with Reid™ JAWS™ SJST™, SJHT™ and SJMT™ Edge Lift anchors.



SET-UP, STRIPPING, HANDLING, STORAGE & TRANSPORT

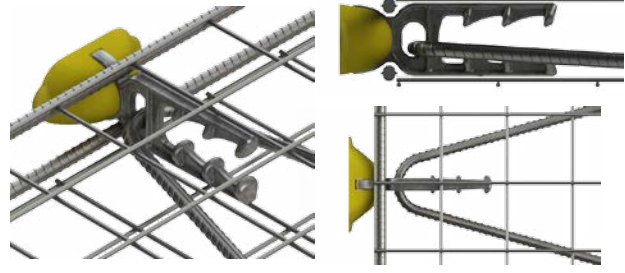
3

How to Use 3Dx™



Central Mesh Application:

The tension bar runs beneath the central mesh.
The perimeter bar can either be placed on the mesh (as shown above) or on the neck of the anchor.



Double Mesh Application:

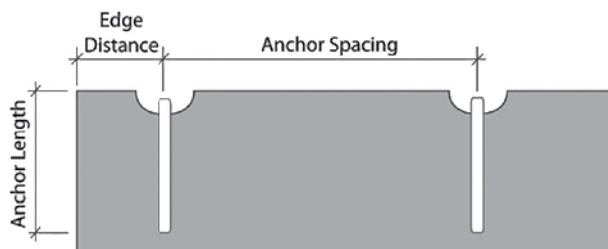
The tension bar rests on top of the bottom layer of mesh.
Perimeter bars rest in the neck of the anchor

Product Data

					
Part No.		3Dx85	3Dx85LC	3Dx85VF	3Dx85NP
Weight		1 Kg	4.1 Kg	330 g	110 g
Length		210 mm	350 mm	145 mm	85 mm
Width		76 mm	115 mm	75 mm	30 mm
Finish		Hot Dip Galvanised	Painted	Moulded	Zinc Plate
Material		Alloy Steel	Alloy Steel	Rubber	Mild Steel
Pack Qty.		250	1	1	1

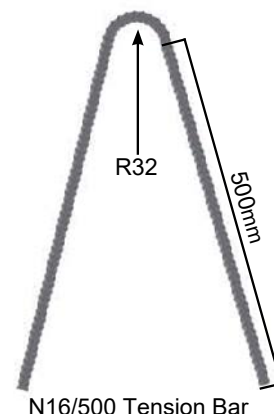
Performance Data (WLL)

Panel Thickness (mm)	Part #	Max WLL (tonne) Fos = 3	Max WLL (tonne) Fos = 4	STRIPPING (Fos = 4)			PLACEMENT (Fos = 4)			Tension Bar Ø and Length (mm)
				10MPa	15MPa	20MPa	25MPa	32MPa	40MPa	
				Tensile/Shear	Tensile/Shear	Tensile/Shear	Tensile	Tensile	Tensile	
150	3Dx85	8.5	6.38	5.25 / 1.61	5.63 / 1.84	6.00 / 2.12	6.19	6.38	6.38	N16 / 500mm
175				5.25 / 1.84	5.63 / 2.03	6.00 / 2.25	6.38			
200				5.25 / 1.99	5.63 / 2.10	6.00 / 2.25	6.38			



Minimum Edge and Spacing Limits

Minimum Panel Thickness (mm)	Edge Distance (mm)	Anchor Spacing (mm)
120	420	840



3.4 Panel Insulation System

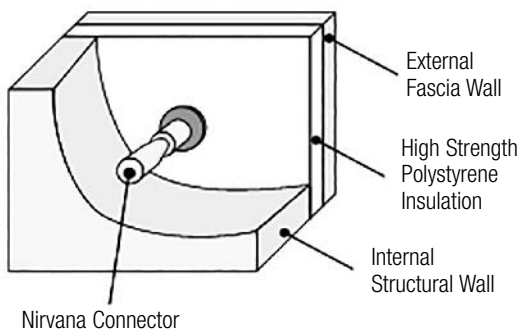
NIRVANA™

Nirvana™ is an insulated concrete sandwich panel system that maximises thermal efficiency by combining insulation with the high thermal mass properties of concrete.

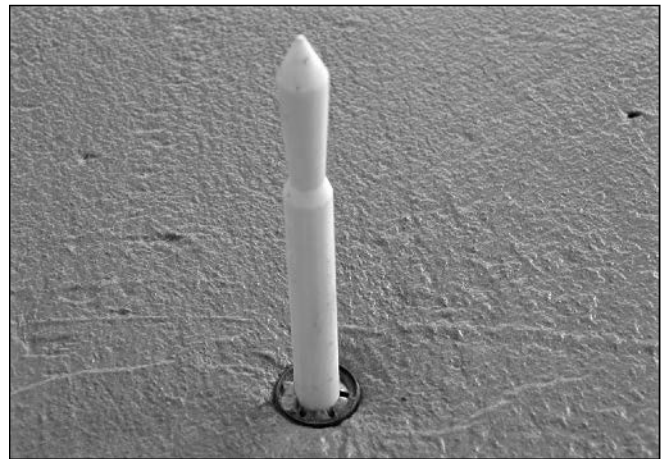
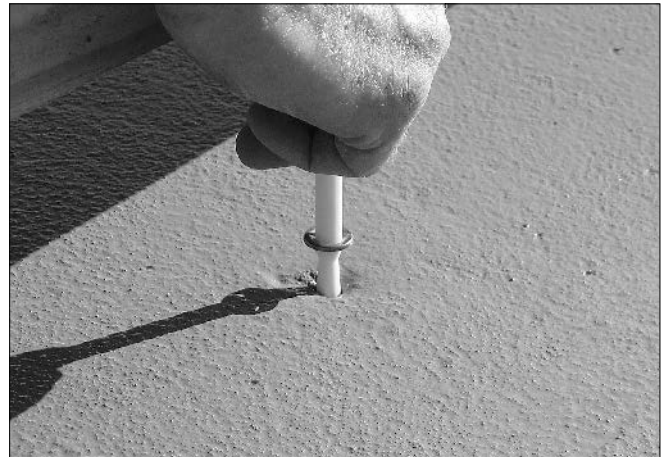
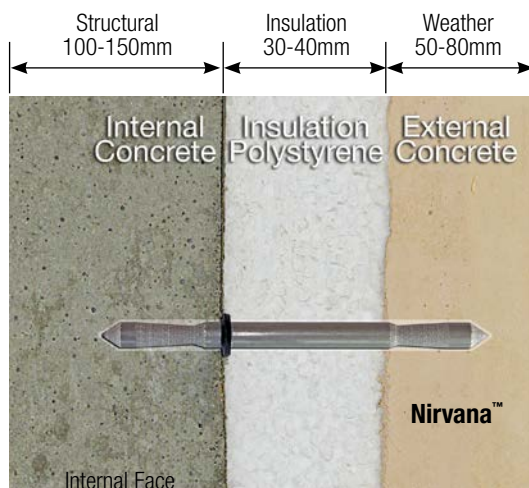
As a result, you can use Nirvana™ to construct concrete walls incorporating a central insulating core - a concrete sandwich. Exceptional temperature stability is achieved via the thermal mass of concrete, which dampens temperature fluctuations indoors through the development of a temperature lag between the indoor occupied environment and the external conditions.

The key to constructing these walls is the Nirvana™ connector, a non-conducting, fibre-composite element made of the same material used for non-metallic reinforcing of concrete. The insulation is a high strength, high density, polystyrene foam, which does not rot or degrade over the long term.

Nirvana™ Concrete Panel - Cross Section



Nirvana™ Concrete Panel - Side View



Pins are placed at max 600mm centres in a grid pattern. Additional pins at 600mm max centres should be placed evenly around the perimeters of opening.

Description	Part No	Qty per pack
Nirvana™ Connector for 30mm thick insulation board	NVC10130	200
Nirvana™ Connector for 50mm thick insulation board	NVC10150	200
Nirvana™ Connector for 70mm thick insulation board	NVC10170	200

Manufactured from pultruded glass reinforced polyester resin.

Tensile strength of rod : 800MPa

Shear strength of rod : 50MPa

SET-UP, STRIPPING, HANDLING, STORAGE & TRANSPORT

Reid™ Nirvana Pin Engineering Property

Table 1 shows the ultimate strength of the Reid™ Nirvana Connector Pin™

Property	Ultimate Strength (*)	Strength Reduction		Design Capacity (*)
		Factor (Φ)		
Tensile	N_p	24.4kN	0.8	ΦN_p 19.5kN
Shear	V_p	4.3kN	0.6	ΦV_p 2.6kN
Bending	M_p	58.9kN.mm	0.8	ΦM_p 47.1kN.mm

(* - the subscript "p" refers to pin)

Tensile Strength

Table 2: Maximum pullout capacity in various concrete strengths

Connector Tension Capacity in Concrete (kN)	Concrete Strength				
	20	25	30	35	40
	5.38	6.18	6.96	7.74	8.46



4.1 Fixing



OrbiPlate

OrbiPlate™ overcomes a major challenge faced every day in concrete construction. Accurately locating cast-in ferrules and the elements to be connected to them has always been challenging, and methods to overcome this have been time consuming, costly and often structurally inadequate. OrbiPlate™ is used when connecting steel to steel, or steel to concrete elements and allows for generous tolerances in all directions, effectively overcoming alignment issues of cast-in ferrules on site.

OrbiPlate™ is made from high tensile steel with a Zinc Passivated and Hot Dip Galvanised Finishes. Overall Diameter 80mm. Supplied as a set comprising 1 main and 1 small washer, and bolt or nut, OrbiPlate™ provides up to 20mm tolerance in all directions.

Installing OrbiPlate™

OrbiPlate™ is quick and easy to install. The steel member is supplied to site with a pre-formed hole (70mm), which can be punched or cut at the centre of the ferrule location. The main washer is then placed over the hole, rotated to locate the ferrule, then secured using a metric bolt which can be positioned anywhere along the elongated slot, providing up to 20mm tolerance in all directions. (AS3850 states that the total accumulation of tolerances shall not be greater than 20mm). Secure the connection with an 8.8Gr bolt, and walk away. Connection done.

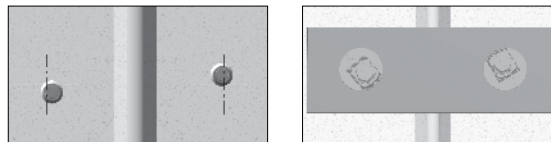
Suits all types of steelwork connections to:

- pre-cast concrete
- in-situ concrete
- machine bases and base plates.

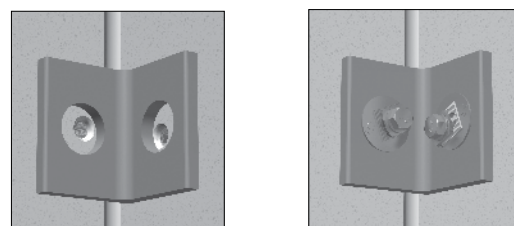


Typical Application

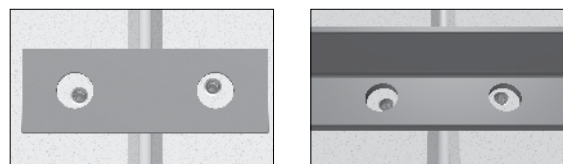
Panel to Panel



Corner Panel to Panel

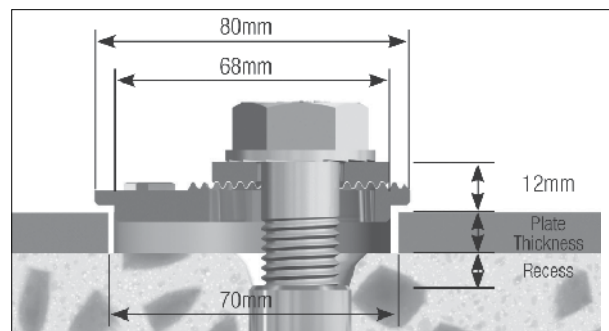


Raker Angles



Assembly

OrbiPlate™ fits into a pre-formed hole in steel component (diameter 70mm ± 1mm)



Calculating Bolt length (mm) M20 (12 + Plate thickness + Recess + 30)

Ordering OrbiPlate™

Supplied as a zinc plated or hot dip galvanised kit comprising the OrbiPlate™ washers and a M16 or M20 bolt.

Part No	Description	Pack Qty
ORB2016B	M16 OrbiPlate™ Bolt Kit - Zinc Plated	20
ORB2016BGH	M16 OrbiPlate™ Bolt Kit - Hot Dip Galvanised	20
ORB2020B	M20 OrbiPlate™ Bolt Kit - Zinc Plated	20
ORB2020BGH	M20 OrbiPlate™ Bolt Kit - Hot Dip Galvanised	20

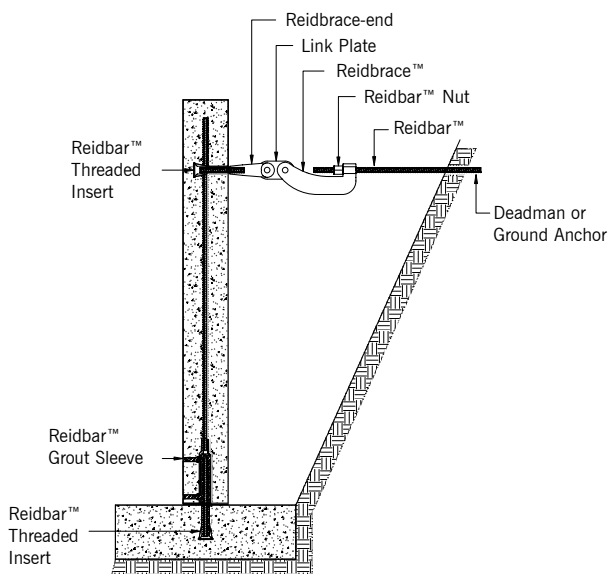
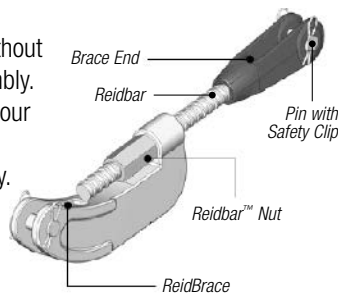
SS bolt is available upon request.

4.2 Bracing

ReidBrace™ System

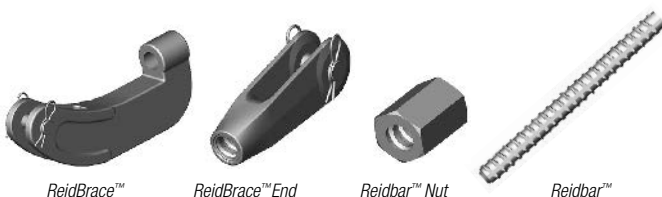
The ReidBrace™ System provides an economic solution for bracing structures and retaining wall tie backs.

- Eliminates expensive threaded rods.
- ReidBrace™ uses Grade 500N Reidbar™ for tendons.
- Eliminates welding and threading.
- Over length bar can be cut without dismantling the bracing assembly.
- Substantial cost savings in labour and materials.
- All components sold separately.
- Engineered design, tested and certified to exceed the ultimate capacity of the Grade 500N Reidbar™.



ReidBrace™ System Table (hot-dipped galvanised):

To Suit	ReidBrace™	ReidBrace™ End	Reidbar™ Nut	Reidbar™
RB12	RBRACE1216	RBRACE12END	RB12NG	RB126G
RBA16	RBRACE1216	RBRACE16END	RBA16NG	RBA166G
RBA20	RBRACE20	RBRACE20END	RBA20NG	RBA206G
RB25	RBRACE2532	RBRACE25END	RB25NG	RB256G
RB32	RBRACE2532	RBRACE32END	RB32NG	RB326G



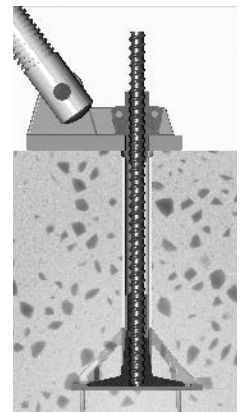
Refer to Reidbar design manual for detailed information.



RapidBrace™ System

The RapidBrace™ assembly can be used for any application where secure anchoring is required in low strength concrete.

Our comprehensive testing has shown that a full bar break connection is achieved with a minimum embedment of 120mm in 8MPa concrete. This eliminates the need for complex calculations and allows the user to design within the well defined mechanical properties of our guaranteed 500MPa Reidbar™.



RAPIDBRACE™ IS IDEAL FOR:

- Secure fixing of panel braces in low strength concrete
- Fast erection of temporary handrails and guardrails
- Quick fixing of safety screens

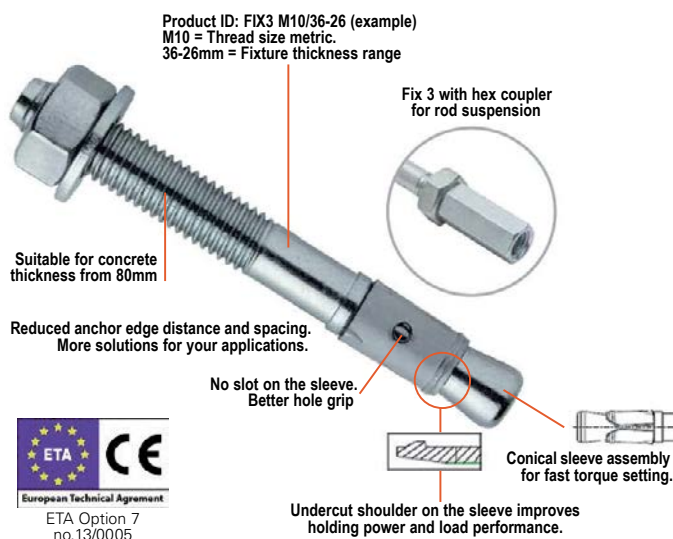
RAPIDBRACE™ ASSEMBLY

Component	Quantity	Part No.
RapidBrace™ Wing Nut	50	RAPIDWN
Reidbar™ (540mm)	25	RB12SB
Reid™ Void Tube SwiftCap	100	SCRVT20
Reid™ Void Tube	10x3m	RRVT20
RapidBrace™ Base	50	RAPIDB
RapidBrace™ Foot	25	RAPIDF

Fixings – Top or bottom

The Fix 3™ Stud Anchor

The Fix 3™ Stud Anchor is a true-to-size, heavy duty, multi purpose expansion anchor, for permanent anchoring into concrete. Designed for heavy duty anchoring in non cracked concrete where reduced edge distance and anchor spacing is required. Undercut shoulder on the sleeve improves hole grip and increases load performance.



Fix 3™ Zn Plated - Recommended Working Load in 40N/mm² non-cracked Concrete

Thread Ø	Embedment Depth (mm)	Tightening Torque (Nm)	Shear Load (kN)*	Tension Load (kN)*
M8	40	15	3.3	5.4
M10	50	30	4.6	7.5
M12	65	50	9.1	11.1
M16	80	100	17.2	15.2
M20	100	160	23.7	21.3

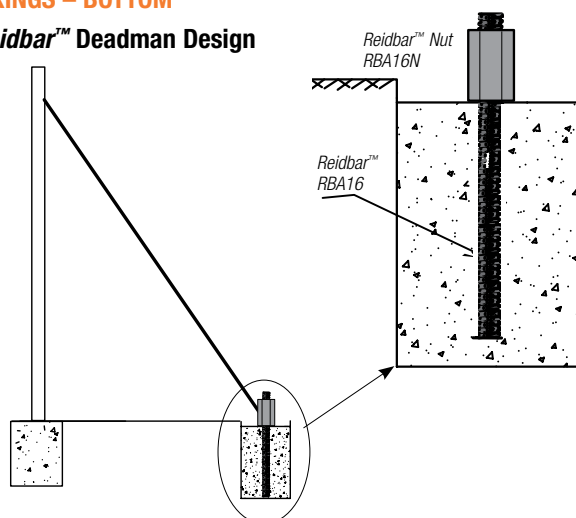
* Safety factor for all loads = 3

* The table does not consider edge distance and anchor spacing effects. Please refer to Ramset Design Guide for more information.

* Pull out test for single anchor = working load x 1.5

FIXINGS – BOTTOM

Reidbar™ Deadman Design



Cementitious Grout

Premier Group MP™

Premier Grout MP™ is a Class A, non shrink cement grout that complies with AS MP20, Part 3 (1977). The product consists of a speciality blend of cement, graded aggregate and other chemically reactive agents that compensate for drying shrinkage commonly found in cement products. Premier Grout MP™ does not contain any ferrous material or Calcium Chloride. High strength Premier Grout MP™ will not shrink making it ideal for filling holes and voids in concrete for installing and repairing posts, bolts, pipe penetrations or structural underpinning.

Coverage : 11 litres per 20 kg bag, 91 bags per 1m³

Cure time : Full cure 28 days at 20°C

Age	Compressive Strength	Flexural Strength
1 day	25N/mm ²	2N/mm ²
3 days	45N/mm ²	-
28 days	60N/mm ²	10.8N/mm ²
Initial set	5hrs to 6hrs depending on temp.	
Final set	7hrs to 8hrs depending on temp.	
Traffic time	Vehicle 48hrs pedestrian 24hrs	
Application thickness	Max 100mm Min 20mm	

Product Advantages

- High Strength
- Non-shrink
 - Good dimensional stability
 - Complete void filling
- Versatile - Can be dry packed, rammed, trowelled, poured and pumped over short distances
- Economical, low in-place cost
- Ready to use, pre mixed, requires only the addition of water
- Non-staining – chloride and iron free
- Lower water/cement ratio
 - Reduced drying shrinkage
 - Increased hardness and durability
- Reduces Permeability



Description	Volume	Part No.
Premier Grout MP™	20kg Bag	RPGMP

4.3 Versatile Packing Shims

Modfix (Reid) Shimplate

Designed for packing underneath concrete precast or tilt-up panel, to gain alignment with a non-skid surface.

Colour coded by thickness for ease of selection. Modfix packing shims are manufactured from quality plastic and tested with compressive loads up to 20 tonnes.

Horseshoe style with long and short slots, are also available for placement around starter bars, locating bolts and pins etc.

Ideal for

Commercial and civil applications such as packing under panels, machines, door and window frames.

Size availability

Standard size 150 x 100 with 1, 2, 3, 5, 10, 15 and 20mm thickness. Horseshoe and half shims are also available.

Highlights of Feature and Benefits

- Very light to carry that ease the job at height
- No contact corrosion with steel or stainless steel bracket/anchor
- Variety of size and thickness

Material and Properties

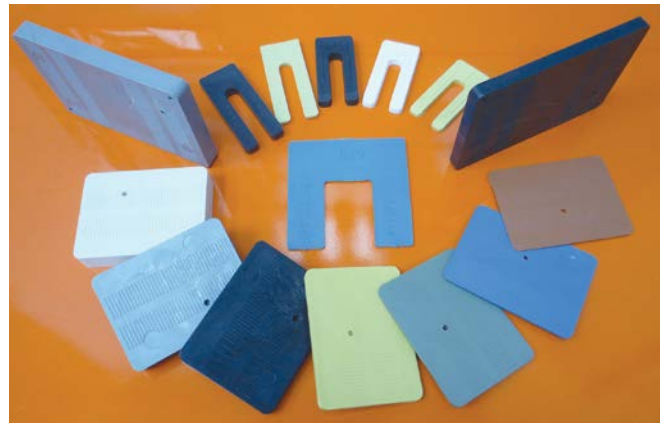
A reinforced polypropylene blend compound, exhibiting excellent surface finish and processability characteristics.

Property	Test Method	Units	Value ⁽²⁾⁽³⁾
Tensile @ Yield	ASTMD638	MPa	28
Elongation @ Break	ASTMD638	%	50
Flexural Strength	ASTMD790	MPa	42
Flexural Modulus	ASTMD790	GPa	2.4

(1) Typical properties; not to be construed as specifications.

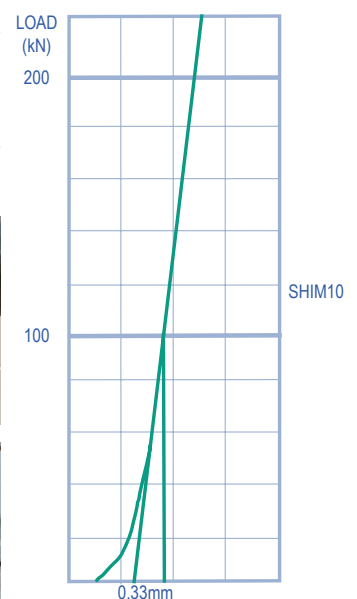
(2) Values quoted are the result of tests on representative samples and the product supplied may not conform in all respects.

(3) Values quoted are the result of tests on Natural/Un-pigmented product. These values may vary on products that contain pigmentation or any other additive.



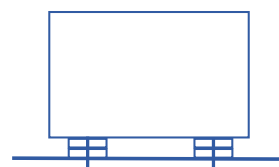
Load Performance

Compression tests on Modfix standard panel shims have been carried out at Monash University, Department of Material Engineering. No Yielding nor any deformation was observed.

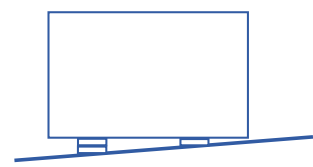


Typical Application

- Bottom of precast panel
- Shim between steel bracket and wall



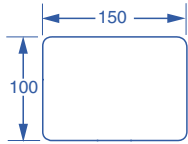
Between holding down bolt



Under Precast and Tilt up panel

Dimension

Full Shim 150mm x 100mm

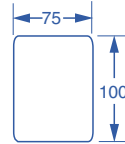


FULL SHIM

FULL

Thickness	Colour	Pack Qty.	Part No.
1	BROWN	100	SHIM01
2	BLUE	200	SHIM02
3	GREEN	100	SHIM03
5	YELLOW	100	SHIM05
10	BLACK	40	SHIM10
15	GREY	40	SHIM15
20	WHITE	30	SHIM20

Half Shim 100mm x 75 mm

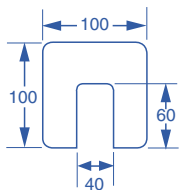


HALF SHIM

HALF

Thickness	Colour	Pack Qty.	Part No.
1	BROWN	200	SHS01
2	BLUE	400	SHS02
3	GREEN	200	SHS03
5	YELLOW	200	SHS05
10	BLACK	80	SHS10
15	GREY	80	SHS15
20	WHITE	60	SHS20

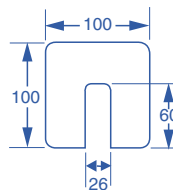
Horseshoe Shim 100mm x 100 mm with slot 60mm x 40mm



TYPE 'C'

Thickness	Colour	Pack Qty.	Part No.
2	BLUE	200	SHHC02-100/40
3	GREEN	200	SHHC03-100/40
5	YELLOW	200	SHHC05-100/40
10	BLACK	100	SHHC10-100/40

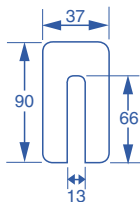
Horseshoe Shim 100mm x 100 mm with slot 60mm x 26mm



TYPE 'C'

Thickness	Colour	Pack Qty.	Part No.
1	BROWN	200	SHHC01-100/26
5	YELLOW	200	SHHC05-100/26

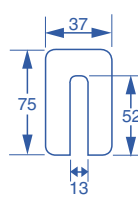
Horseshoe Shim 90mm x 37 mm with slot 66mm x 13mm



TYPE 'B'

Thickness	Colour	Pack Qty.	Part No.
1.5	BROWN	1000	SHHB01.5-90
3	GREEN	1000	SHHB03-90
5	YELLOW	1000	SHHB05-90
10	BLACK	500	SHHB10-90

Horseshoe Shim 75mm x 37 mm with slot 52mm x 13mm



TYPE 'A'

Thickness	Colour	Pack Qty.	Part No.
1.5	BROWN	1000	SHHA01.5-75
3	GREEN	1000	SHHA03-75
5	YELLOW	1000	SHHA05-75
6.5	WHITE	500	SHHA06.5-75
10	BLACK	500	SHHA10-75

ITW CONSTRUCTION SYSTEMS



ITW Construction Systems Australia & New Zealand (ITWCS ANZ) is a newly formed division of the Illinois Tool Works Company (ITW), a Fortune 200 global diversified industrial manufacturer of value added consumables and specialty equipment with related services businesses. ITWCS ANZ comprises of the following well-known companies.



Reid™ Construction Systems offers the complete package of engineered solutions for the Australian and New Zealand concrete construction industry. This includes sales, service, design, engineering expertise, technical support, delivery coordination and more. Reid is at the forefront of innovative concrete technologies, with the design of precast concrete and tilt-up concrete construction systems a particular specialty. Their products help solve construction problems and enable better performing buildings to be constructed more quickly, more efficiently, and at a lower overall cost. Reid supply leading brands including SwiftLift™ Concrete Lifting solutions, Reidbar™ Threaded Reinforcing, Nirvana™ Insulated Concrete Panel System and a range of Architectural Concrete products.



Danley® Construction Products Specialising in industrial flooring, Danley® have designed and manufactured engineered load transfer and armour joint systems for over 25 years in Australia. Recognising the need in the industry to provide durable floors for today's materials handling and warehousing systems, Danley® incorporate research, design and product testing into every product they manufacture. With well-known brands such as Diamond® Dowel, Armourmate®, Keyjoint, Rebox® and Pecaform™, Danley® have consistently produced products that have proven over time to provide cost effective systems that extend the life of concrete slabs and perform under load.



Miska™ is a leading manufacturer and innovator of Expansion Joint Solutions to the Civil and Architectural markets for over 30 years with design and manufacturing facilities in Australia, supplying worldwide. The Miska™ range offers architecturally inspired engineered solutions for Floor, Wall, Roof, Façade, Ceilings and Seismic applications encompassing options for aesthetics, load, movement, slip resistance, fire, vermin, water, and pathogen resistance. Miska™ have specialist solutions for Retail Centres, Multi-level Carparks, Hospitals, Bridges and most other environments and can work with your design teams to ensure you specify the correct solution for your project.



Modfix™ - manufactures one of the largest ranges of plastic concrete accessories, bar chairs and spacers, as well as components for formwork and precast. Working closely with both customers and end users, Modfix™ has continued to assist in the development of new, cost effective solutions for the building and construction industries.

ITW CONSTRUCTION SYSTEMS



Danley™ innovative systems for industrial flooring and pavements

Specialising in industrial flooring and pavements, Danley™ have designed and manufactured engineered load transfer, armour joints and crack control systems in Australia for over 25 years. Recognising the need in the industry to provide durable floors for today's materials handling and warehousing systems, Danley™ incorporate research, design and product testing into every product they manufacture. With well-known brands such as Diamond™ Dowel, Armourmate™, PD3™, Danley™ have consistently produced systems that have proven over time to improve the quality and life of concrete floors and pavements.

ITW CONSTRUCTION SYSTEMS



Miska™ Civil and Architectural expansion joint systems

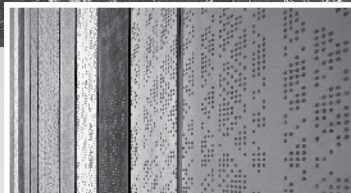
Leading manufacturer and innovator of Expansion Joint Solutions to the Civil and Architectural markets for over 30 years with design and manufacturing facilities in Australia, supplying worldwide. The Miska™ range offers architecturally inspired engineered solutions for Floor, Wall, Roof, Façade, Ceilings and Seismic applications encompassing options for aesthetics, load, movement, slip resistance, fire, vermin, water, and pathogen resistance. Miska™ have specialist solutions for Retail Centres, Multi-level Carparks, Hospitals, Bridges and most other environments and can work with your design teams to ensure you specify the correct solution for your project.

GRAPHIC CONCRETE... CREATE A BIG IMPRESSION!

Textures, raster patterns, repeated patterns, written text, or even sharp images and photos can be created on concrete surfaces.

Add a desired effect to a concrete element by selecting a pattern from one of Graphic Concrete's collections...or simply develop your own!

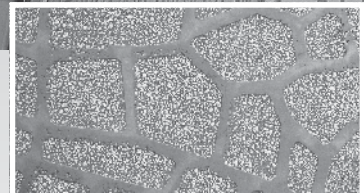
© graphic concrete™



GC Collection™



GC Art & Design™



GC Pro™

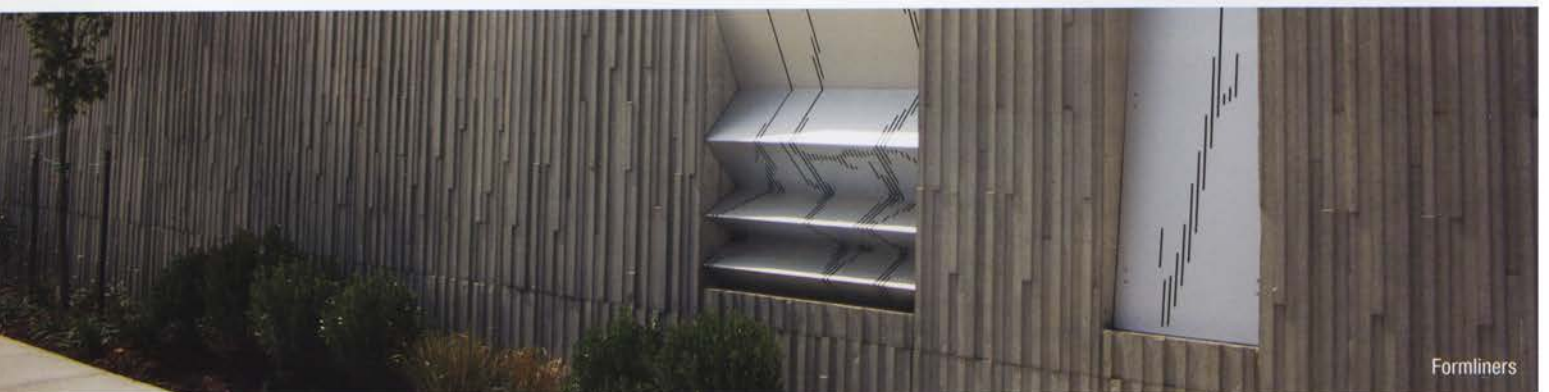


ENGINEERED SOLUTIONS FOR CONCRETE

ITW CONSTRUCTION SYSTEMS



Contact Ramset Technical Department for more information



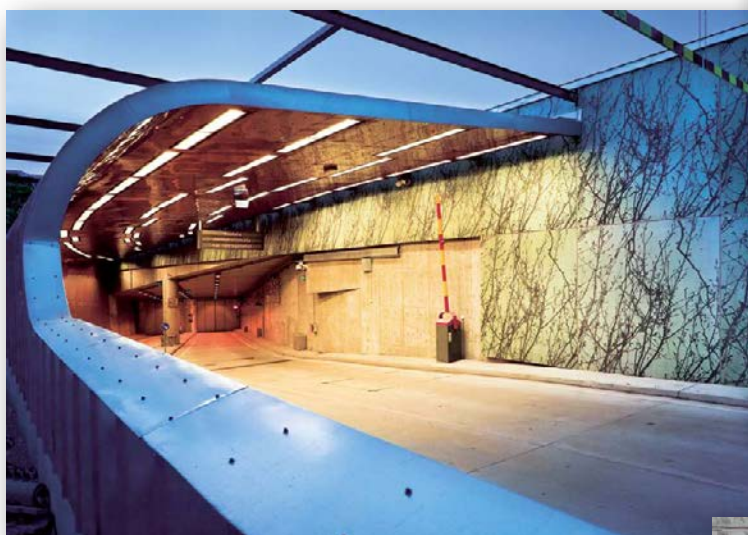
Graphic Concrete™

A new innovative method to produce architecturally patterned concrete surfaces. The patented technology involves applying a surface retarder to a special membrane. The pattern on the concrete surface results from the contrast between the smooth face and the exposed aggregate finish. Graphic Concrete™ can be used to create repeating patterns, photos, text or unique works of art on concrete.

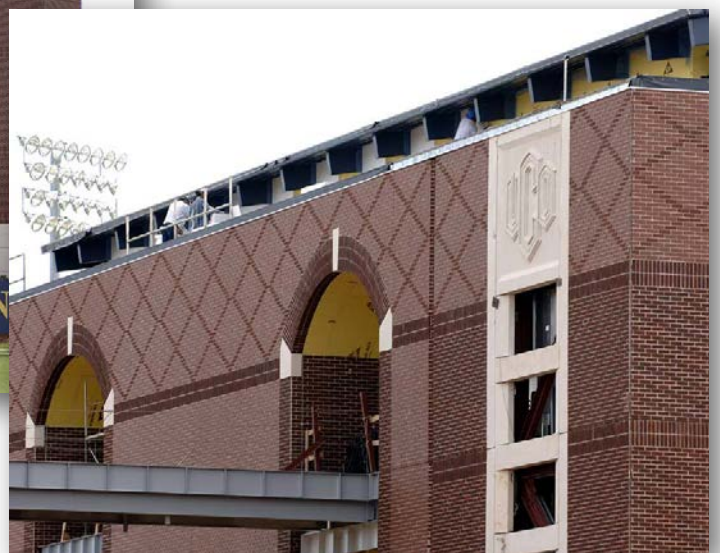
Formliners

Innovative decorative concrete solutions for projects of various size, shape and scope. Replicate stone textures, rock formations, fractured fins, fluted ribs, sandblasted textures, masonry, wooden plank patterns and custom designs utilising either single-use plastic, multi-use plastic or extended re-use elastomeric Formliners.

ITW CONSTRUCTION SYSTEMS



ITW CONSTRUCTION SYSTEMS





PRECAST SOLUTIONS

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