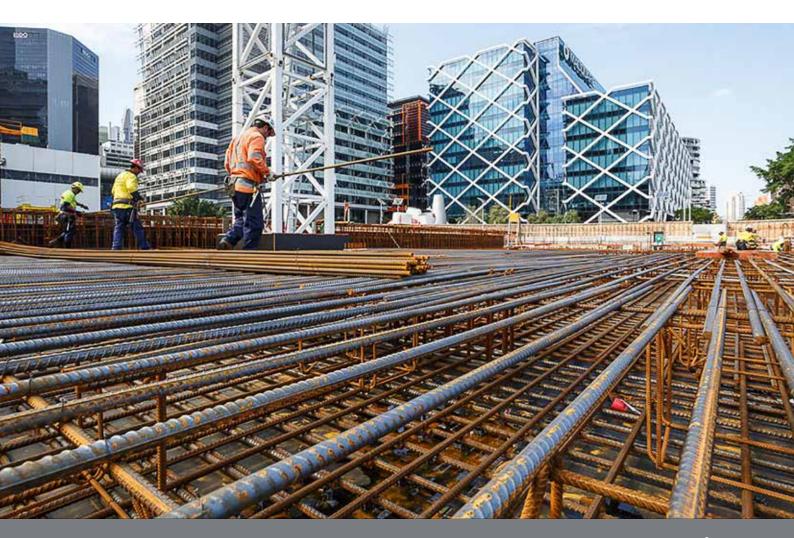




National Reinforcing Products and Services

4TH EDITION







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Please note: Updates, changes and additions to this guide can be accessed at www.infrabuild.com

Specifications and services

Delivery Offer

The InfraBuild Reinforcing delivery offer includes the following:

- Delivery to site
- Delivery hours
- Vehicles
- First drops (Timed deliveries)
- Order lead time
- Return of goods (pick-ups), subject to return fees.

To obtain the delivery offer in your area please contact your nearest InfraBuild Reinforcing branch.

Customer Pick-Up

Customers have the option of collecting goods from InfraBuild Reinforcing branches, saving you time and money.

Note: Loading of customer vehicles is subject to the appropriate roads authority loading guide.

Scheduling, Estimating and Detailing

InfraBuild Reinforcing provides scheduling and estimating services, including detailed take-offs from engineering and architectural drawings.

Note: Charges may apply.

Bundling

500PLUS® Reinforcing Bar and ONEMESH® is bundled with a maximum nominal mass of two tonnes per bundle unless otherwise requested. Content of rebar bundles is determined by InfraBuild Reinforcing.

Special Bundling Sizes

Special bundling sizes are available – details on request.

Tolerances

500PLUS® and ONEMESH® are cut and bent to the appropriate tolerances in AS/NZS 4671 Steel for the reinforcement of concrete, AS5100 Bridge design and/or AS 3600 Concrete structures. ONEMESH® Reinforcing Mesh and 500PLUS® bar are manufactured to AS/NZS 4671. Tolerances tighter than those specified in AS 3600 are possible and may incur an additional charge. Prices available on request.

Pre-Galvanized Wire

Purchasers should assess suitability for end-use applications.

Hot Dip Galvanized

InfraBuild Reinforcing can provide a high-quality galvanizing service that meets AS/NZS 4680 Hot dip galvanized (zinc) coatings on fabricated ferrous articles.

Cut and Bent Mesh

ONEMESH® Reinforcing Mesh and HANDIMESH® can be cut and/or bent to suit specific requirements. Prices and delivery lead times available on application.

Mesh Made To Order

InfraBuild Reinforcing can produce mesh to suit your requirements. For further details on prices, capability, minimum order quantities and delivery, please contact your nearest InfraBuild Reinforcing branch.

Prefabrication

InfraBuild Reinforcing are Australia's prefab experts that you can rely on at every step of the prefab process through planning, production and delivery. Our prefab solutions consist of six innovative products: PROPILE™, PROCAGE™, CUSTOMCAGE™, BAMTEC®, BARMAT® and ROMTECH®. Prefabrication solutions comply with all relevant Australian Standards.

Solutions

InfraBuild Reinforcing manufacture and distribute a number of other products and construction systems such as ReidBar™. Full details are available on request.

Construction Accessories

A wide range of accessories are available from our branches.

Metric Threading

Metric threading services are available.

Saw Cutting

InfraBuild Reinforcing provides an accurate and quality saw cutting service.

Lump Sum or Supply and Fix

For selected projects, InfraBuild Reinforcing is able to offer Lump Sum or Supply and Fix rates.

Please Note

To improve our service, when ordering please:

- quote a job reference number / product codes
- provide written confirmation of order
- email or fax details of cut and/or bent bar / mesh.

For delivery

- Quote your order number, delivery site address, contact name and phone number
- Supply the nearest cross street and/or landmark to the site
- Supply any other site access or opening and closing time information
- Supply site contact details.

Disclaimer

The information contained in this publication is provided as a service to those interested in concrete reinforcing steel. Since the information is provided for general guidance only, and in no way replaces the services of professional consultants on particular projects or subjects, no legal liability can be accepted by InfraBuild Reinforcing for its use.

GBCA

The Green Building Council of Australia (GBCA) is a national authority on sustainable buildings, communities and cities.



- The GBCA administers the Green Star® environmental rating system for commercial, residential, industrial, healthcare and education buildings
- In Australia, Green Star® is a trusted mark of quality for the design, construction and operation of sustainable buildings, fit-outs and communities
- Green Star® ratings are specified by the majority of CBD commercial multi-storey developments and government projects
- In 2017, the Green Building Council of Australia updated its Design and As Built Guidelines. The following lists the Steel Credit points available under the current guidelines v1.3:

Points under D&AB Tool					
Points Rating Outcome					
45 – 59	Four Star	Australian Best Practice			
60 – 74	Five Star	Australian Excellence			
75+	Six Star	World Leadership			

Life Cycle Impacts – Steel Credit 19B.2B – Points available: 1

• One point is available where project teams can demonstrate a 5% reduction in the mass of reinforcing steel used in the building when compared to standard practice.

Responsible Building Materials Credit 20 – Points available: 1

• One point is available where 95% of the building's steel (by mass) is sourced from a responsible steel maker and at least 60% (by mass) of all reinforcing bar and mesh is produced using an energy reducing process in its manufacture (measured by average mass by steel maker annually).

Sustainable Products - Credit 21

- **Up to three (3) points are available** when project teams can demonstrate that a specified percentage of eligible products meet one of the following initiatives:
 - A. Reused Products, in accordance with 21A
 - **B.** Recycled Content Products, in accordance with 21B
 - **C.** Environmental Product Declarations, in accordance with 21C
 - **D.** Third-Party Certification, in accordance with 21D, or
 - **E.** Stewardship Programs, in accordance with 21E.

Points are awarded based on the percentage value of the products that meet one of the specified initiatives. This is demonstrated by calculating the Project Sustainability Value (PSV) and comparing it with the Project Contract Value (PCV) as a percentage.

Innovation Challenge – High-strength Fitments

As of June 2019, **one point is available** for the use of 750N fitments, under the following conditions:

- A minimum of 70% of the structural columns for the entire building, by length, are concrete and require steel reinforcement
- and 95% or more of the fitments used in these columns are ≥750 MPa replacing the equivalent 500 MPa fitments**
- and 95% or more of the fitments are supplied by a steel maker that meets the Responsible Steel Maker requirements in the Responsible Building Materials (20.1) credit
- and the fitments supplied meet Australian Standard AS 3600 and have a CEV value not exceeding 0.49; and is a trademarked product
- and the project team achieves either
 one (1) point in the Reduced Use of Steel
 Reinforcement (Concrete framed building) credit
 (19B.2B), not including the reduction in mass of
 fitments; or an improvement of 4% in the Climate
 Change Impact category of the Life Cycle Assessment
 credit (19A) across all modules as a whole, excluding
 the B6 Operational Energy module.

GBCA FAQ 00112 pertaining to this credit is available on the GBCA website (www.gbca.org.au).

InfraBuild Reinforcing can help achieve the Green Star® steel credit requirements in the following ways:

- InfraBuild Steel has a valid ISO 14001 Environmental Management System in place
- InfraBuild Steel is a member of the World Steel Association's Climate Action Programme

- InfraBuild Reinforcing can assist in all five aspects of Credit 21 of the GBCA Green Star scheme
- At least 60% of InfraBuild Reinforcing' steel is produced using Polymer Injection Technology (PIT) – an energy-reducing process used in manufacturing
- At least 95% of InfraBuild Reinforcing' rebar and REOMESH® meets or exceeds 500 MPa strength grade
- InfraBuild Reinforcing can assist
 with a 5% reduction in the mass of reinforcing steel
 used in the building when compared to standard
 practice.

For more information on Green Star® related products visit the Green Star page of our website.

How InfraBuild Reinforcing can assist in the reduction of steel mass:

- Engineered Reinforcing Bar Carpet (BAMTEC®) reinforcing bar fabricated as a carpet offsite for rolling out onsite. Variable bar diameter, length and spacing to match original design intent
- Engineered/Customised solution (BARMAT®) tailored Class N, special size, engineered mat, variable bar diameters, spacings and lengths
- Prefabricated Reinforcing Cages prefabricated reinforcing cages for concrete elements such as walls, cores, columns, piles and slabs
- Couplers InfraBuild Reinforcing can provide the best coupler option to reduce lapping
- Use of Viribar®750N fitments in columns.

^{** 500} MPa 10 mm diameter can be replaced by 750 MPa 8.2 mm dia 500 MPa 12 mm dia can be replaced by 750 MPa 9.8 mm dia 500 MPa 16 mm dia can be replaced by 750 MPa 13.1 mm dia

ISCA

InfraBuild Reinforcing and the Infrastructure Sustainability Council of Australia's (ISCA) IS Rating Scheme.



ISCA aims to improve the productivity and liveability of industry and communities through sustainability in infrastructure. ISCA developed and administers the Infrastructure Sustainability (IS) Rating Scheme.

The IS scheme is Australia's only comprehensive rating system for evaluating sustainability across design, construction and operation of infrastructure.

The scheme evaluates the sustainability (including environmental, social, economic and governance aspects) of infrastructure projects and assets.

There are two versions of the IS materials calculator. Projects will be awarded an IS Rating based on an overall score:

ISv1.2

There are 7 points available under the materials category; 6 points for the materials calculator and 1 point for environmentally labelled products.

ISv1.2					
Points Rating Level					
25 – 49+	Commended				
50 – 74+	Excellent				
75+	Leading				

Related ISv1.2 Credits
Mat-1, Mat-2, Pro-2, Pro-4, Was-1, Was-2, Was-3
Rating Phases: As Built, Design, Planning

ISv2.0

There are 6 points available under the materials category: 4.5 points for the materials calculator and 1.5 points for environmentally labelled products.

ISv2.0				
Points	Rating Level			
25 – 39	Bronze			
40 – 59	Silver			
60 – 79	Gold			
80 – 94	Platinum			
95+	Diamond			

Related ISv2.0 Credits
Ecn-1, Ecn-4, Inn-1, Lea-1, Lea-2, Lea-3, Rso-4, Rso-5, Rso-6, Rso-7, Spr-2, Spr-3, Wfs-4
As Built, Design, Operαtions

Under Both Versions

Three points are available to reward design and practice that reduces life cycle impacts via reduced material use such as Prefabricated Reinforcing Elements, Engineered Reinforcing Bar Carpet (BAMTEC®) or Engineered Mat (BARMAT®).

Three points are available to reward environmentally labelled products and supply chains:

- One point is available via the use of products covered by our EPDs
- Two additional points are available if >9% of materials/products (by value) have an ISCA- approved environmental label, such as our EPD.

Sustainability Outcomes

InfraBuild publishes Environmental Product Declarations (EPDs) that cover our hot-rolled structural steel, reinforcing bar and mesh, pre-stressing strand and rail products. InfraBuild EPDs may help your project achieve ISv2.0 Rso-6 and ISv1.2 Mat-2 credits.

InfraBuild has a range of policies and procedures that demonstrates strong social, economic, safety and environmental credentials, which may contribute to additional IS credits such as ISv2.0 Lea-1, Lea-2, Lea-3, Inn-1 Spr-2, Spr-3, Rso-4, Rso-6, Wfs-4 (L3.4), Ecn-1 and Ecn-4 and ISv1.2 Mat-1, Mat-2, Pro-2, Pro-4, Was-1, Was-2, Was-3. InfraBuild also publishes Corporate Sustainability reports.

Early collaboration with InfraBuild fosters opportunities for innovation, reduced environmental impacts, risk minimisation, knowledge sharing, offsite fabrication, design and logistics optimisation and waste minimisation, as well as broader supply chain engagement contributing to the above credits.

InfraBuild's products are all manufactured to the relevant Australian Standards. InfraBuild has ACRS Certification for our reinforcing products, which further underpins our strong compliance credentials.

Our product traceability and transparency through the supply chain provides confidence to the market that the material supplied meets the design, quality and sustainability specifications of the project.

Read more about the IS Rating Scheme at the ISCA website (www.isca.org.au).

ACRS

InfraBuild Reinforcing REOMESH®, wire and rebar are certified by the Australasian Certification Authority for Reinforcing and Structural Steels (ACRS).



Does reinforcing bar and mesh comply with Australian Standards?

- Concrete reinforcing steel used in commercial buildings, bridges, civil structures, house slabs, patios, extensions, driveways, footpaths, etc. should have the correct chemical and mechanical properties
- Not all reinforcing bar and mesh meets Australian Standards. Materials sourced widely in Australia and from overseas are manufactured to varying standards. Check to confirm you are getting what you have specified
- There are potentially serious consequences as a result of using non-compliant materials. For example: serviceability (excessive cracking or deflections due to poor bond); and robustness (low-strength reinforcing)
- Australian Standards require concrete reinforcing steel
 to have the necessary chemical and mechanical
 properties (strength and ductility) appropriate to the
 engineering design assumptions on which they are
 based. The Building Code of Australia (BCA) references
 Australian Standards. InfraBuild Reinforcing' steels
 comply with the relevant Australian Standards and
 therefore the requirements of the BCA. ACRS is an
 independent third-party assessment body that checks
 reinforcement for compliance to AS/NZS 4671 Steel
 for the reinforcement of concrete
- ACRS certification independently confirms that the materials comply with the Standard

- Ask for proof that the reinforcing mesh and bar you are supplied complies with AS/NZS 4671 Steel for the reinforcement of concrete
- The easiest way to check is to ask to see your supplier's ACRS Certificate.

Full details of ACRS can be found at: www.steelcertification.com

Relevant Concrete Construction Standards

AS/NZS 4671 Steel for the reinforcement of concrete

 Specification for steel bars, wire and mesh for use in reinforced concrete structures, designed in accordance with AS 3600 or AS 5100 and other Standards.

AS 3600 Concrete structures

 Design and detailing of concrete structures and elements, with or without steel reinforcement or prestressing tendons, based on the principles of structural engineering mechanics.

AS 5100.5 Bridge design: Concrete

- Minimum requirements for the design and construction of concrete bridges and associated structures including members that contain reinforcing steel and tendons, or both
- Although AS 5100.5 closely follows the design rules of AS 3600, there are some differences in regard to the detailing of reinforcing steel in concrete elements.

AS/NZS 1170 Structural design actions Part 1: Permanent, imposed and other actions (Loading code)

 Specifies permanent, imposed, static liquid pressure, ground water, rainwater ponding and earth pressure actions to be used in the limit state design of structures and parts of structure.

AS 2327.1 Composite structures Part 1: Simply supported beams

 Sets out minimum requirements for the design, detailing and construction of simply supported composite beams composed of a steel beam and a concrete slab interconnected with shear connectors, including applications where the slab incorporates profiled steel sheeting.

AS 1554.3 Structural steel welding Part 3: Welding of reinforcing steels

- The welding of reinforcing steel used in concrete structures that are designed and constructed in accordance with AS 3600 and other Standards
- References: AS/NZS 4671.

AS 1100-Part 501 Technical drawing: Structural engineering drawing

• This Standard references AS/NZS 4671 and thus covers the use of reinforcing bar and mesh.

AS 3727.1 Pavements Part 1 - Residential

- Guidelines for the selection and construction of pavements associated with residential buildings consisting of single houses or multiple dwellings in medium density housing development
- Recommends mesh sizes for concrete slabs, depending on the service requirements.

AS 2870 Residential slabs and footings

- This standard covers slab-on-ground for housing
- Classification of a site and the design and construction of a footing system for a single dwelling house, townhouse or the like, which may be detached or separated by a party wall or common wall, but not situated vertically above or below another dwelling.

AS 2783 Use of reinforced concrete for small swimming pools

- Structural design and construction of reinforced concrete pools
- References AS 3600 and AS 3735 Concrete structures for retaining liquids.

AS/NZS 2425 Bar chairs in reinforced concrete – Product requirements and test methods

- This Standard specifies requirements for bar chairs, spacers, continuous bar chairs
- Covers strength, permanent deflection and accuracy of manufacturing within acceptable tolerances
- Prescribes requirements for identification/batch/ supplier traceability and fixing
- Specifies minimum requirements for load capacity testing of bar chairs and spacers
- Sets out durability requirements for concrete bar chairs.

SRIA

InfraBuild Reinforcing is a proud member of the Steel Reinforcement Institute of Australia (SRIA). The following Publications and Technical Notes are available from the SRIA website.



Publications

- Guide to Seismic Design and Detailing of Reinforced Concrete Buildings in Australia
- Guide to Historical Steel Reinforcement in Australia

Technical Notes

- 1: Surface Condition of Steel Reinforcement
- 2: Substitution of N12 Rebar in AS 2870 Residential slabs and footings
- 3: Restrictions on the Use of Wire Bar Chairs
- 4: Fabrication and Site Handling of Reinforcing Bars
- 5: Guidelines for Economical Assembly of Reinforcement
- 6: Design to AS 3600 of Suspended Concrete Floors Reinforced with Class L Mesh
- 7: Stress Development and Lap Splicing of Straight D500N Tensile Reinforcing Bars to AS 3600

Download the SRIA technical notes from the SRIA website (www.sria.com.au).

Rebar and Reo Wire Product Designations

All certified reinforcing steel is identified by designators which distinguish shape, strength, ductility and size. Designations are stated in that order (e.g. D500N16) and are critical in identifying and communicating which reinforcing steel is required.

AS/NZS 4671 Designation	InfraBuild Designation*	Yield Stress (MPa)	Ductility Class**	Product Description	Source Material Type	Size Range#
D500N_	N_	500		Hot-rolled deformed rebar (500PLUS® rebar)	Tempcore (TC) MicroAlloy (MA) ContiStretch (CS)	N10, N12 – N40 (4 mm increments)
R250N_	R_		N			R6, R10, R12 R16 – R28
D250N_	S_	250		Hot-rolled deformed rebar (POOLSTEEL®)	Mild Steel	S12
D500L_	RW_	F00	500 L Cold rolled ribbed wire Cold drawn round wire			RW4.75 – RW11.9
R500L_	W_	300				W4 – W12
R750N_	V_	750	N^	Viribar®	MicroAlloy (MA)	V8.2, V9.9, V11.2

^{*} _ indicates bar diameter (mm), e.g. N24

^{**} Minimum Uniform Strain N : Normal (≥5%), N^ = For 750 MPa (≥4%), L : Low (≥1.5%)

 $D = Deformed, R = Round, N = Normal Ductility, L = Low Ductility, S = Swimming Pool, RW = Ribbed Wire, V = Viribar^{\circ}, W = Wire # indicates InfraBuild size range using product codes$

Construction solutions

Commercial Solutions

InfraBuild Reinforcing has a range of innovative concrete reinforcing steel solutions to streamline construction and take steelfixing off the critical path, adding to time, cost and labour savings.

Optimisation and Buildability

InfraBuild Reinforcing has a team of engineers that will assist you to minimise cost by optimising steel usage, while retaining all-important buildability so the project remains on schedule.

Detailing and Scheduling

Accurate and timely scheduling is crucial in keeping a project running smoothly. InfraBuild Reinforcing has highly skilled and experienced scheduling teams across Australia that are available to ensure your project stays on track, on-time and trouble free.

Prefabrication

Offsite prefabrication offers numerous benefits, ranging from minimising onsite risks to workers to earning Green Star® rating points for your project. InfraBuild Reinforcing offers superior prefabricated products and service.

Project Management

We know the critical importance of keeping strict control of a project's costs, logistics and supply chain. InfraBuild Reinforcing has dedicated project managers to work with your team to manage the changes while keeping everyone informed and the project on schedule.



Logistics Management

We look at the details such as how prefabricated elements need to be lifted and handled, whether lifting points are required, whether loads have to be pre-slung before they leave the yard and, if so, how and where. InfraBuild Reinforcing understands these requirements to save you time and improve safety onsite.

Safety and Risk Management

Our customers call on us to solve their problems, not create them. Our team members take no chances on safety and we ensure our onsite and product handling safety procedures align with yours to eliminate confusion and minimise risk.

Infrastructure Solutions

In addition to our standard range of processed reinforcing bar and cut and bent reinforcing mesh, InfraBuild Reinforcing has a number of infrastructure solutions to provide you with the opportunity to save money, time and effort.

Staged Construction Efficiencies

Whether it is a staged construction or column-to-wall connections, utilising ReidBar™ with coupler systems allows continuous reinforcing through the slab. Simplifying detailing and reducing congestion of reinforcing are just some of the many ways InfraBuild Reinforcing can help improve the construction process.

Continuous Reinforced Concrete Pavements (CRCP)

By incorporating 500PLUS® BAMTEC® rollout carpets into CRCP projects such as highway construction, critical paths can be considerably shortened along with substantially reducing costs and excess labour on site.

Logistics Management and Safety

We look at details such as how prefabricated elements need to be lifted and handled, whether lifting points are required, whether loads have to be pre-slung before they leave the yard and, if so, how and where. InfraBuild Reinforcing understands these requirements to save you time and improve safety onsite.

Detailing and Scheduling

Accurate and timely scheduling is crucial in keeping a project running smoothly. InfraBuild Reinforcing has the largest and most experienced scheduling team in Australia, available to ensure your project stays on track, on time and trouble free.

Project Management

InfraBuild Reinforcing has dedicated project managers to work with your team to manage changes while keeping everyone informed and the project on schedule.

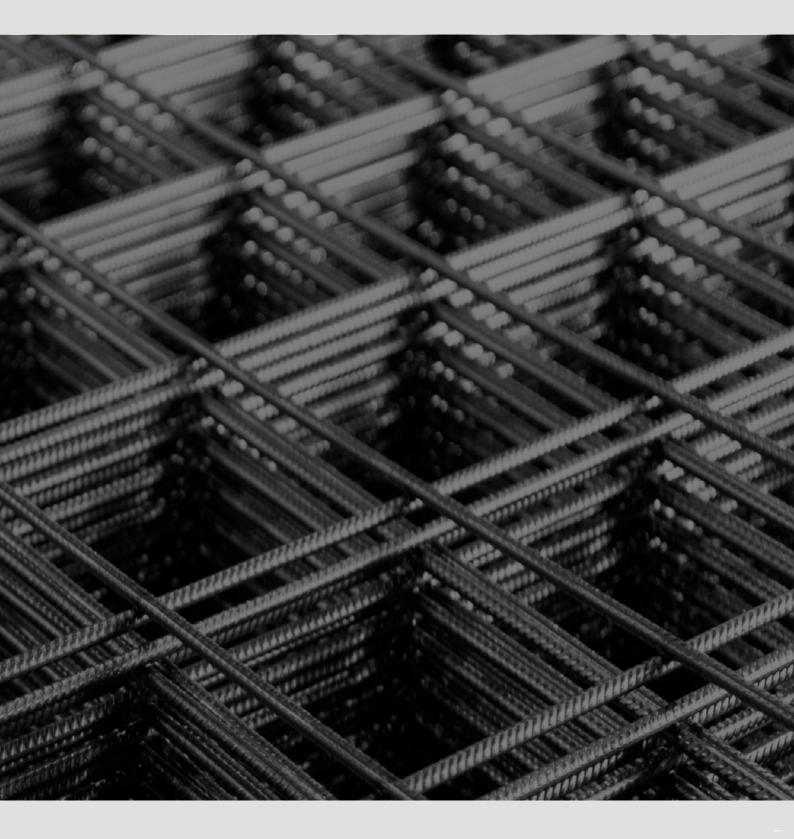
Prefab Columns and Cages

Offsite prefabrication significantly increases accuracy and speed on infrastructure projects. Reinforcing columns, cages and other reinforcing elements can be manufactured in various shapes, diameters and sizes, then transported to site when required, reducing onsite congestion.





Reinforcing Mesh



Reinforcing Mesh

ONEMESH® is a Class L reinforcing mesh made from 500 MPa welded ribbed wires.

ONEMESH® Properties Slab Mesh

Square Mesh (SL) with edge lap wires							
Product Code SL62 SL72 SL82 SL92 SL102 SL81						SL81	
Cross Sectional	Longitudinal Wires	339	429	544	694	852	1134
Area	Cross Wires	848	1074	1361	1743	2126	2722

Rectangular Mesh (RL)							
Product Code RL718 RL818 RL918 RL1018 RL1118 RL12					RL1218		
Cross Sectional	Longitudinal Wires	895	1134	1452	1772	2248	2781
Area	Cross Wires	1361	1361	1361	1361	1361	1361

Trench Mesh – 8 mm							
	Product Code	L8TM200	L8TM300	L8TM400			
	Width (mm)	200	300	400			
	Mass (kg)	6.8	9.2	11.6			
V	Vire Diameter (mm)		7.6				
No.		3	4	5			
Longitudinal Wires	Cross Sectional Area (mm²)	136	181	227			

Trench Mesh – 11 mm								
	Product Code	L11TM200	L11TM300	L11TM400				
	Width (mm)	200	300	400				
	Mass (kg)	13.3	17.7	22.3				
V	Vire Diameter (mm)		10.7					
No.		3	4	5				
Longitudinal Wires	Cross Sectional Area (mm²)	270	360	450				

Trench Mesh – 12 mm							
	Product Code	L12TM200	L12TM300	L12TM400			
	Width (mm)	200	300	400			
	Mass (kg)	15.8	21.2	26.5			
V	Vire Diameter (mm)		11.9				
No.		3	4	5			
Longitudinal Wires	Cross Sectional Area (mm²)	334	445	556			

ONEMESH® Ribbed Square Mesh

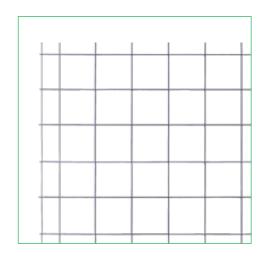
Typical Uses

- Concrete pavements
- Flooring
- Precast concrete sections
- Driveways and patios

Features

- Multi-purpose square mesh
- Length may vary*
 - Non-structural flying ends removed for safety

- AS/NZS 4671 Steel for the reinforcement of concrete
- AS 3600 Concrete structures
- AS 3727 Guide to residential pavements
- AS 2870 Residential slabs and footings



ONEMESH® Ribbed Square Mesh – 500L					
Product Code	Std Unit	Longitudinal Wires**	Cross Wires**	Nominal Mass (kg)	Effective Area (m)
SL62		10 x 6 @ 200 + 4 x 4.24 @ 100	30 x 6 @ 200	33	
SL72		10 x 6.75 @ 200 + 4 x 4.75 @ 100	30 x 6.75 @200	41	
SL82	Ch t	10 x 7.6 @ 200 + 4 X 5.35 @ 100	30 x 7.6 @ 200	52	5.8 x 2.4
SL92	Sheet	10 x 8.6 @ 200 + 4 X 6 @ 100	30 x 8.6 @ 200	66	
SL102		10 x 9.5 @ 200 + 4 x 6.75 @ 100	30 x 9.5 @ 200	80	
SL81		25 x 7.6 @ 100	60 x 7.6 @ 100	105	5.9 x 2.4

^{*}Effective length is 5.8 m and 5.9 m between the outer most cross wires. Total length can be up to 6 m with non-structural fly ends

^{**} Number of Wires x Diameter (mm) @ Spacing (mm)

ONEMESH® Ribbed Rectangular Mesh

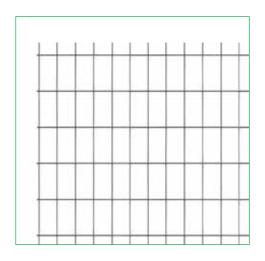
Typical Uses

- Concrete pavements
- Flooring
- Precast concrete sections
- Suspended flooring

Features

- Mutli-purpose rectangular mesh
- Length may vary*
 - Non-structural flying ends removed for safety

- AS/NZS 4671 Steel for the reinforcement of concrete
- AS 3600 Concrete structures
- AS 3727 Guide to residential pavements
- AS 2870 Residential slabs and footings construction



ONEMESH® Ribbed Rectangular Mesh – 500L					
Product Code	Std Unit	Longitudinal Wires**	Cross Wires**	Nominal Mass (kg)	Effective Area (m)
RL718		25 x 6.75 @ 100		67	
RL818	Sheet	25 x 7.6 @ 100		79	
RL918		25 x 8.6 @ 100	20 , 7 (@ 200	93	F 9 v 2 /
RL1018		25 x 9.5 @ 100	30 x 7.6 @ 200	109	5.8 x 2.4
RL1118		25 x 10.7 @ 100		130	
RL1218		25 x 11.9 @ 100		157	

 $^{^*} Effective \ length \ is \ 5.8 \ m \ between \ the \ outer \ most \ cross \ wires. \ Total \ length \ can \ be \ up \ to \ 6 \ m \ with \ non-structural \ fly \ ends$

^{**} Number of Wires x Diameter (mm) @ Spacing (mm)

Plain Mesh 4 mm

Typical Uses

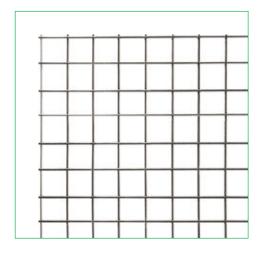
- Concrete tanks
- Precast concrete sections

Features

- Mutli-purpose square mesh
- Available in sheets and rolls

Relevant Standards

• Note: not manufactured to AS/NZS 4671



Plain Square Mesh							
Product Code	Std Unit	Longitudinal Wires*	Cross Wires*	Mass (kg)	Dimensions (m)		
F411	Roll	25 x 4 @ 100	604 / 6 400	290	60.27		
F41ST		23 x 4 @ 100	601 x 4 @ 100	275	60 x 2.4		
F41	Sheet	25 x 4 @ 100	61 x 4 @ 100	29	6 x 2.4		

^{*} Number of Wires x Diameter (mm) @ Spacing (mm)

ONEMESH® Ribbed UTEMESH®

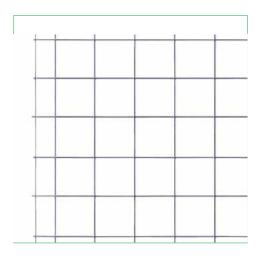
Typical Uses

- Concrete pavements
- Driveways and patios
- Alfresco slabs

Features

- Mesh for ute trays and small truck trays
- Versatile and lightweight
- Minimises wastage
- Legal to transport
- Easy to set up, place and tie
- Can be handled by one person (using the correct handling techniques)

- AS/NZS 4671 Steel for the reinforcement of concrete
- AS 3600 Concrete structures
- AS 3727 Guide to residential pavements
- AS 2870 Residential slabs and footings construction



ONEMESH® Ribbed UTEMESH® 500L					
Product Code	Std Unit	Longitudinal Wires*	Cross Wires*	Mass (kg)	Dimensions (m)
SL62UTE		8 x 6 @ 200 +4 x 4.24 @ 100	20 x 6 @ 200	18	
SL72UTE	Sheet	8 x 6.75 @ 200 +4 x 4.75 @ 100	20 x 6.75 @ 200	23	4 x 2
SL82UTE		8 x 7.6 @ 200 +4 x 5.35 @ 100	20 x 7.6 @ 200	30	

^{*} Number of Wires x Diameter (mm) @ Spacing (mm)



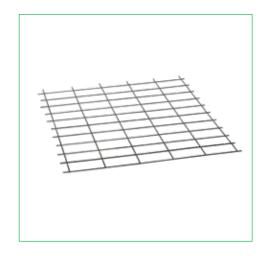
Made-to-Size Mesh

Made-to-Size (MTS) mesh is a customised mesh manufactured by InfraBuild Reinforcing. Sheets up to 9×3 m are manufactured on state-of-the-art equipment. MTS mesh minimises waste and saves time and labour by eliminating excess carrying, cutting, tying and lapping of mesh sheets. MTS mesh can also create construction efficiency with precast tilt-up concrete panels manufactured on site. The machine is able to offer reduced flying ends and variable wire spacing in order to maximise the efficiency of mesh use.

Features

- Minimises waste
- Saves time and labour

- AS/NZS 4671 Steel for the reinforcement of concrete
- AS 3600 Concrete structures
- AS 3727 Guide to residential pavements
- AS 2870 Residential slabs and footings construction





Trench Mesh Reinforcing Mesh

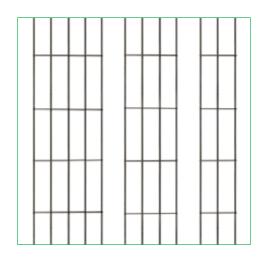
Typical Uses

• Residential, industrial and commercial footing trenches

Features

• Available in a variety of sheet sizes and wire diameters

- AS/NZS 4671 Steel for the reinforcement of concrete
- AS 3600 Concrete structures
- AS 3727 Guide to residential pavements
- AS 2870 Residential slabs and footings construction



Trench Mesh 500L – 8 mm						
Product Code	Std Unit	Longitudinal Wires*	Mass (kg)	Dimensions (m)		
L8TM200		3 × 7.6 @ 100	6.8	6 × 0.2		
L8TM300	Chaat	4 × 7.6 @ 100	9.2	6 × 0.3		
L8TM400	Sheet	5 × 7.6 @ 100	11.6	6 × 0.4		
L8TM500		6 × 7.6 @ 100	13.9	6 × 0.5		

Trench Mesh 500L – 11 mm						
Product Code	Std Unit	Longitudinal Wires*	Mass (kg)	Dimensions (m)		
L11TM200		3 × 10.7 @ 100	13.3	6 × 0.2		
L11TM300	Chaat	4 × 10.7 @ 100	17.7	6 × 0.3		
L11TM400	Sheet	5 × 10.7 @ 100	22.3	6 × 0.4		
L11TM500		6 × 10.7 @ 100	26.8	6 × 0.5		

Trench Mesh 500L – 12 mm						
Product Code	Std Unit	Longitudinal Wires*	Mass (kg)	Dimensions (m)		
L12TM200		3 × 11.9 @ 100	15.8	6 × 0.2		
L12TM300	Clt	4 × 11.9 @ 100	21.2	6 × 0.3		
L12TM400	Sheet	5 × 11.9 @ 100	26.5	6 × 0.4		
L12TM500		6 × 11.9 @ 100	31.9	6 × 0.5		

Trench Mesh 500L – 16 mm					
Product Code	Std Unit	Longitudinal Wires*	Mass (kg)	Dimensions (m)	
FTM16200	Cl	3 × 16 @ 100	30.6	6 × 0.2	
FTM16300	Sheet	4 × 16 @ 100	41.1	6 × 0.3	

^{*} Number of Wires x Diameter (mm) @ Spacing (mm)

Reinforcing Wire



Reinforcing Wire

Class L Smooth and Ribbed Wire

Typical Uses

• Reinforcing elements

Features

- Available in a range of diameters
- Wire products can be processed on request

Relevant Standards

• AS/NZS 4671 Steel for the reinforcement of concrete



Smooth Wire – 500L						
Product Code	Wire Diameter (mm)	Length (m)	Mass (kg/m)	Length (m/t)*		
W4S	3.97		0.10	10140		
W5S	4.75		0.15	6490		
W6.00S	6.23		0.25	4500		
W7S	7.02	6	0.31	3310		
W8.00S	7.90		0.40	2530		
W10S	9.88		0.62	1580		

Ribbed Wire – 500L						
Product Code	Wire Diameter (mm)	Length (m)	Mass (kg/m)	Length (m/t)*		
RW6.00S	6		0.23	4500		
RW6.75S	6.75		0.29	3560		
RW7.60S	7.6		0.39	2810		
RW8.60S	8.6	6	0.47	2190		
RW9.50S	9.5		0.59	1800		
RW10.70S	10.7		0.74	1408		
RW11.90S	11.9		0.89	1145		

^{*} Approximate

Fitments

Typical Uses

- Used to form footing cages and provide shear reinforcement in concrete beams
- Separates top and bottom layers of trench mesh

Features

• Available to suit a wide range of footing beam sizes



Fitments – 250N			
Product Code	Dimensions (mm)	Bar diameter (mm)	No. Per Bundle
R6F2015	200 x 150		
R6F3015	300 x 150		
R6F4015	400 x 150		
R6F2020	200 x 200		
R6F2520	250 x 200		
R6F3020	300 x 200		
R6F3520	350 x 200		
R6F4525	450 x 250		
R6F3025	300 x 250	6.5	
R6F4025	400 x 250		
R6F3030	300 x 300		4.0
R6F3530	350 x 300		10
R6F4030	400 x 300		
R6F4530	450 x 300		
R6F4020	400 x 200		
R6F4035	400 x 350		
R6F4540	450 x 400		
R10F2020	200 x 200		
R10F3020	300 x 200		
R10F3030	300 x 300	10	
R10F3520	350 x 200		
R10F4020	400 x 200		

Viribar®750

Viribar®750 is a new range of high-strength reinforcing steels with normal ductility for column fitments.

With 33% less mass than 500N Standard fitments, Viribar®750 requires less raw material and energy to produce, and so is more sustainable. The reduced mass delivers savings in fixing costs and reduces transport and cranage costs. It results in lighter manual handling with reduced risk of back injuries and other on-site risks, and has the potential to significantly improve the sustainability credentials of construction projects.

Produced in Equivalent Force Capacity diameters to make the direct substitution of Viribar®750 fitments for 500N fitments easy with no redesign requirements for the general case, it conforms to Australian Standards and is compliant to the National Construction Code (NCC) because it conforms to the Building Code of Australia (BCA).

Typical Uses

• Sustainable substitution fitment for 500N Standard fitments

Features

- Available in equivalent force capacity diameters that allow it to be directly substitutable for standard 500N fitment
- No redesign requirements for the general case
- Identifiable by a rolled-in mark showing the bar to 750N
- Recognised by GBCA and ISCA
- Lower transport, handling and fixing costs
- Reduced safety risk



Relevant Standards

- AS/NZS 4671 Steel for the reinforcement of concrete
- AS 3600:2018 Clause 10.7.3.3
- NCC and BCA deemed-to-satisfy

To lodge an enquiry, visit the Viribar®750 enquiries page: www.infrabuild.com/en-au/resource-centre/forms/viribar-enquiries/



Substitution Table:

Ec	Minimum Conceity		
Standard $f_{\text{sy.f}} = 500 \text{ MPa}$	Viribar®750 f _{sy.f} = 750 MPa	Viribar®750 Designation	Minimum Capacity (kN) A _{b.fit} x f _{sy.f}
10	8.2	V8.2	39.3
12	9.8	V9.8	56.5
16	13.1	V13	100.5

Mass savings using Viribar™750 vs equivalent 500 MPa fitments:

Viribar®750		500	MPa	Mass Saving	Saving
Designation	on Mass (kg/m)	Designation	Mass (kg/m)	(kg/m)	(%)
V8.2	0.43	N10	0.64	0.21	33
V9.8	0.62	N12	0.93	0.31	33
V13	1.10	N16	1.65	0.55	33



VIRIBAR® **750**

A new range of high-strength reinforcing steels with normal ductility for column fitments



With 33% less mass than 500N Standard fitments, Viribar[™]750 is more sustainable, delivers savings in fixing costs and reduces transport and cranage costs. The reduced mass of Viribar[™]750 also results in lighter manual handling with reduced risk of back injuries and other on-site risks.









Fabricated Cages

Fabricated cages increase the speed of installation for various footing applications. Available in Class N bar or Class L wire, fabricated Z cages are available in heights from 200 – 500 mm for bar cages and 200 – 400 mm for wire cages.

Fabricated Z Cage

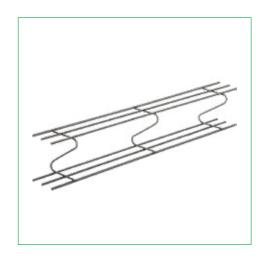
Typical Uses

• Z cages provide reinforcing for various concrete strip footing applications

Features

• Increase the speed of installation for various footing applications

- AS/NZS 4671 Steel for the reinforcement of concrete
- AS 2870 Residential slabs and footings construction



Fabricated Z Cage – 500L						
Product Code	No. of Wires	Height (mm)	Width (mm)			
ZC111		200				
ZC711	6 x RW10.70	300	200			
ZC811		400				
ZC11	8 x RW10.70	200	300			
ZC18	0 X KW 10.70	300	300			

Fabricated Z Cage – 500N						
Product Code	No. of Bars	Height (mm)	Width (mm)			
ZC4Y	4 x N12	200	200			
ZCY12435	4 X IN 1 Z	350	150			
ZC9Y		300	200			
ZC10Y	6 x N12	400	200			
ZC12635	OXIVIZ	350	150			
ZC11Y		500	200			
ZC16Y	6 x N16	300	200			



Footing Bars

Features

 Provides a positive connection between the slab and the footing beam reinforcing

Relevant Standards

- AS/NZS 4671 Steel for the reinforcement of concrete
- AS 2870 Residential slabs and footings construction



Z Bar – 250N							
Product Code	Wire Diameter (mm)	Dimensions (mm)	No. Per Bundle				
R10Z203030		200 x 300 x 300					
R10Z203530		200 x 350 x 300					
R10Z204030	10	200 x 400 x 300	25				
R10Z204530		200 x 450 x 300					
R10Z2032		200 x 320 x 200					

Non-Standard Wire Fitments

Typical Uses

- Used to form footing cages and provide shear reinforcement in concrete beams
- Separates top and bottom layers of trench mesh

Features

• Available to suit a wide range of footing beam sizes



Wire Fitments – 500L							
Product Code	Dimensions (mm)	Wire Diameter (mm)					
W6F		6					
W8F	Variable	8					
W10F		10					

Footing Cages

Typical Uses

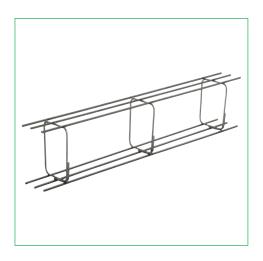
• Z cages provide reinforcing for various concrete strip footing applications

Features

• Increase the speed of installation for various footing applications

Relevant Standards

- AS/NZS 4671 Steel for the reinforcement of concrete
- AS 2870 Residential slabs and footings construction



Footing Cages										
Depth (mm)	Product Code		Top & tom	L11TM Top & Bottom		L12TM Top & Bottom		L8TM200 Top & L11TM200 Bottom		
			Cage Width (mm)							
		200	300	200	300	200	300	200		
200	SE QLD	ZC110	ZC12	ZC111	ZC11	_	_	_		
200	NSW	8ZC2020	8TC3020	11ZC2020	11TC3020	12ZC020	_	_		
300	SE QLD	ZC210	ZC17	ZC711	ZC18	ZC9Y	_	ZC7A		
300	NSW	8ZC2028	8TC3030	11ZC2028	11TC3030	12ZC2028	12TC3028	_		
/ 00	SE QLD	ZC310	FC19	ZC811	FC20	_	_	FC8A		
400	NSW	8ZC2040	_	11ZC2040	_	12ZC2040	_	_		

Note: Standard length = 6 m

Reinforcing Bar



Rebar and REOMESH®

Identification Markings





Identification markings are rolled into the different types of rebar and the wire in REOMESH® so the manufacturing facility of origin and steel type can be identified.

The identifiers for rebar have been standardised as a combination of horizontal marks placed between the ribs at intervals as shown to the right:

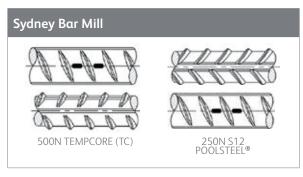








The identifiers for REOMESH® have been standardised as a combination of horizontal and diagonal marks placed between the ribs at intervals. Before 2010, InfraBuild rolled the word 'one' into wire for REOMESH®.









Reinforcing wire/mesh identifiers for manufacturing facilities

AS/N7S 4671 Grade 5001: 5 - 12 mm

Brisbane − Acacia Ridge™ - /
Sydney − Revesby™ - \
Melbourne − Sunshine™ // -

500PLUS® Design Information

	Cross sectional area (mm²)								
				Bar c	diameter	(mm)			
Number of Bars	10	12	16	20	24	28	32	36	40
1	79	113	201	314	452	616	804	1018	1257
2	157	226	402	628	905	1232	1608	2036	2513
3	236	339	603	942	1357	1847	2413	3054	3770
4	314	452	804	1257	1810	2463	3217	4072	5027
5	393	565	1005	1571	2262	3079	4021	5089	6283
6	471	679	1206	1885	2714	3695	4825	6107	7540
7	550	792	1407	2199	3167	4310	5630	7125	8796
8	628	905	1608	2513	3619	4926	6434	8143	10053
9	707	1018	1810	2827	4072	5542	7238	9161	11310
10	785	1131	2011	3142	4524	6158	8042	10179	12566

	Cross sectional area per unit width (mm²/m)								
				Bar c	liameter	(mm)			
Bar Spacing (mm)	10	12	16	20	24	28	32	36	40
100	790	1130	2010	3140	4520	6160	8040	10180	12570
125	632	904	1608	2512	3616	4928	6432	8144	10056
150	527	753	1340	2093	3013	4107	5360	6787	8380
175	451	646	1149	1794	2583	3520	4594	5817	7183
200	395	565	1005	1570	2260	3080	4020	5090	6285
225	351	502	893	1396	2009	2738	3573	4524	5587
250	316	452	804	1256	1808	2464	3216	4072	5028
275	287	411	731	1142	1644	2240	2924	3702	4571
300	263	377	670	1047	1507	2053	2680	3393	4190

	Approximate number of bars per tonne							
				Length (m)				
Bar Diameter (mm)	6	7	8	9	10	12	15	
10	258	_	_	_	_	_	_	
12	179	153	134	119	107	89	_	
16	100	86	75	67	60	50	_	
20	64	55	48	43	38	32	25	
24	44	38	33	29	26	22	17	
28	33	28	24	22	19	16	13	
32	25	21	18	16	15	12	10	
36	19	17	14	13	11	9	7	
40	_	_	_	_	_	-	6	

Shaded areas are standard stock lengths. Not all stock lengths are available at InfraBuild Reinforcing branches.

Positioning Tolerances for Reinforcement to AS 3600

In accordance with Clause 17.5.3:

	Application	Allowable Deviation	
	Beams, slabs, columns and walls	-5, +10 mm	
Position controlled by cover	Slabs on ground	-10, +20 mm	
	Footings cast in ground	-10, +40 mm	
Decition not controlled by	End of reinforcement	50 mm	
Position not controlled by cover	Spacing of bars or fitments in walls, slabs, beams or columns	10% of the specified spacing or 15 mm whichever is greater	

Note: A positive value indicates the amount the cover may increase and a negative value indicates the amount the cover may decrease relative to the specified cover.

Calculating Reinforcing and Accessory Quantities

Accessories for REOMESH®

Mesh Round Up:

Slab Area $(m^2) \div 12.5 = No. \text{ of } 6 \times 2.4 \text{ m sheets}$

Bar Chairs:

Slab Area (m^2) ÷ 0.56 = No. of bar chairs

Polyethylene Film:

Slab Area $(m^2) \div 180 = No. \text{ of } 200 \text{ m}^2 \text{ rolls}$

Duct Tape: 2 rolls per 200 m² roll of Polyethylene film

Accessories for Rebar

Bar Chairs:

Slab area (m^2) ÷ 0.56 = No. of bar chairs

Tie Wire

3 kg per tonne of rebar (for bar sizes up to 20 mm) 1.5 kg per tonne of rebar (for bar sizes above 20 mm)

Accessories for Strip Footings

Support Chairs:

7 chairs per 6 m length

Rebar

Number of Bars:

Round Up $\left(\frac{\text{Coverage Length (m)}}{\text{Bar Spacing (m)}}\right) + 1$

Bar Length:

Concrete dimension (mm) – Σ {cover each end (mm)}

Stock Bars:

Allow for lapping of bars when calculating No. of bars.

Spirals

Diameter:

Concrete dimension (mm) - cover each side (mm)

Pitch:

Specified on drawing. Maximum of half diameter of spirals

No. of Turns:

Round Up

$$\left(\frac{\text{Coverage Length (m)}}{\text{Bar Spacing (m)}}\right) + 4$$

Processing Tolerances for Reinforcement to AS 3600

The nominal internal diameter of a reinforcement bend or hook shall be taken as the diameter of the pin around which the reinforcement is bent. The diameter of the pin shall be not less than the value determined from the table as appropriate.

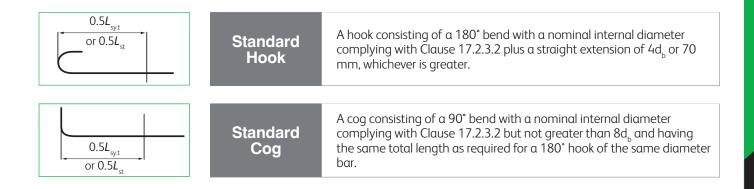
- Must be indicated on drawing that bars are to be straightened or rebent
- InfraBuild recommends that 500PLUS® TEMPCORE® be used as pull-out bars rather than MicroAlloy or ContiStretch rebar.

Standard Processing Tolerances:

Product Use	Tolerance	Allowable Tolerance (mm)
On any overall dimension for bars and	≤ 600 mm overall	-25, +0
mesh except where used as a fitment	> 600 mm overall	-40, +0
On any overall dimension of bars and	Deformed bars and mesh	-15, +0
mesh used as a fitment	Plain round bars and wire	-10, +0
For offset dimension of a cranked column bar		-0, +10

500PLUS® Rebar Standard Hooks and Cogs

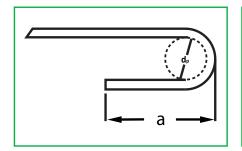
In accordance with Clause 13.1.2.6 of AS 3600, a standard hook or cog provides half of the tensile development length for that end of the bar, measured from the outside of the hook/cog. In accordance with Clause 13.1.2.7, their details are as follows:

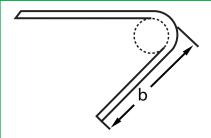


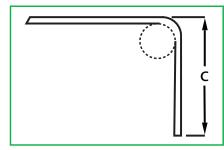
Standard Hooks and Cogs to Clause 13.1.2.7 of AS 3600

Minimum Dimensions:

D500N bar	Pin diameter factor (f _p)	180° hook	135° hook	90° cog
diameter, d _b (mm)	(Pin diameter $d_p = f_p d_b$)	a (mm)	b (mm)	c (mm)
10	4 for fitments	100	120	140
10	5	105	130	155
12	4 for fitments	110	130	155
12	5	115	145	170
4.6	4 for fitments	120	150	185
16	5	130	165	205
20	4 for fitments	140	180	220
20	5	150	200	245
	4 for fitments	170	220	265
24	5	180	240	295
28	5	210	280	345
32	5	240	320	395
36	5	270	355	440
40	5	300	395	490







Minimum Dimensions for Standard Shapes Processed to AS 3600

Minimum Dimensions (mm) for Class N 500PLUS® and Rebar standard shapes that can be processed complying with AS 3600:

Std Pin Size	50	d _b	5d _b	5d _b	5d _ь	5d _ь		4d _b
Rebar Type and Size	<u> </u>	<u> </u>	<u>a</u> [<u>a</u>	<u>a</u>	a	<u>a</u> _	a l
	α	b	α	α	α	α	α	α
N10	130	80	170	130	150	130	400	140
N12	135	95	190	160	160	155	400	160
N16	150	125	220	210	210	210	420	210
N20	175	155	260	260	260	260	500	260
N24	205	185	315	315	315	315	550	315
N28	235	220	365	365	365	365	600	365
N32	265	250	420	420	420	420	800	420
N36	295	280	470	470	470	470	1000	_
N40	325	310	520	520	520	520	1200	_

Minimum Dimensions for Standard Shapes Processed to AS 3600

Minimum Dimensions (mm) for R rebar and standard shapes that can be processed complying with AS 3600:

Code Pin Size	40	d _b	5d _b	5d _b	5d _b	5d _b		3d _b
Rebar Type and Size	_ a <u>b</u>	<u>!</u>	<u>a</u>	<u>a</u>	<u>a</u>	a	<u>a</u> _	_ a a
	α	b	α	α	α	α	α	α
R6	165	50	200	80	90	80	150	105
R10	175	80	230	130	150	130	170	140
R12	185	90	250	155	160	155	200	160

The pin sizes used in this table are for hot-rolled bar, which are not to be subsequently straightened or rebent. Values indicated are a guide only and may vary depending on equipment of supply locations. Some values are governed by processing equipment rather than minimum standard requirements. If you require a shape smaller than indicated please contact your InfraBuild Reinforcing representative.

Processing 500PLUS® Rebar and Wire to AS 3600

Technical Notes

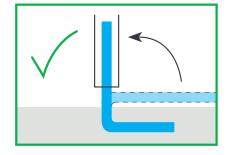
Rebar Bending and Rebending/Straightening

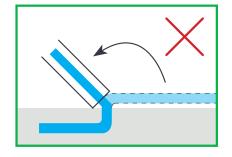
- Bending of 500PLUS® Rebar should be carried out in accordance with Clause 17.2.3 of AS 3600
- If engineers/builders request pin diameters smaller than those required by AS 3600, such bends can only be supplied if the engineer gives written approval to the order
- Rebending 500PLUS® Rebar on site due to limitations of adequate rebending facilities on site, we recommend that the customer's attention is drawn to the guidelines set out in AS 3600
- Care must be taken when bending, straightening or rebending is performed on a construction site. to ensure that the bend radii are not formed below the prescribed minimum sizes in AS 3600
- InfraBuild Reinforcing recommends that 500PLUS® TEMPCORE® be used as pull-out bars rather than MicroAlloy or ContiStretch Rebar.

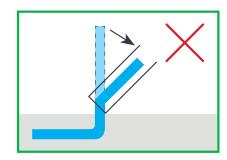
Bending Reinforcing Bars to Clause 17.2.3.3 – AS 3600:

Product Use	Product Description	Pin Size
(a) Fitments	Ribbed or round 500L wire and 250N rebar	3d _b
(α) Fitments	D500N rebar	4d _b
(b) Other than specified in (c) or (d)	Reinforcement of any grade	5d _b
	≤ 16 mm diameter	4d _b
(c) Reinforcement in which the bend is intended to be straightened or rebent* (Note: not for galvanized)	20 or 24 mm diameter	5d _b
(Note. Not for gaivanized)	≥ 28 mm diameter	6d _b
(d) Reinforcement that is galvanized or epoxy	≤ 16 mm diameter	5d _b
coated either before or after bending	≥ 20 mm diameter	8d _b

^{*} A number of situations may arise where bars must be bent or rebent on site, or where pre-bent bars must be straightened. For smaller diameter bars (i.e. 10, 12 and 16 mm), this is preferably performed at ambient temperature. See the diagram below:







Diameter (mm)	AS 3600 Requirements (d _b)	Galvanized or Epoxy Coated Bars* (d _b)
≤ 16	5 generally, but 4 for fitments	5
≥ 20	5 generally, but 4 for fitments	8

^{*} The bending limits shown in this column have been specified in AS 3600 to minimise spalling of the galvanized coating.

Diameter (mm)	AS 3600 Limits
≤ 16	4d _b
20 or 24	5d _b
≥ 28	6d _b

In accordance with Clause 17.2.3.1 of AS 3600, to cold bend D500N bars not exceeding 16 mm in diameter:

- The initial bend should be performed around a mandrel or former of diameter not less than 4d_b
- Do not use impact blows to bend or rebend the steel
- Take care to minimise mechanical damage to the bar surface and visually inspect rebent area for cracks.

For larger diameter bars, the application of heat (e.g. from an acetylene flame) may be used to reduce the bending force, but a reduction in bar strength may result. Ref: AS 3600 Clause 17.2.3.1(b).

A pipe must not be used to make the initial bend, or to rebend back past the straight position. Rebending of bars that have been bent prior to galvanizing is not recommended, as cracking on the inside of the original bend may result.

Rebending or straightening should be performed using a powered bending tool, or a pipe with an internal diameter not greater than $2 \times$ the nominal bar diameter.

Heating and Welding 500PLUS® Rebar

After heating, the resultant ambient temperature properties of reinforcing steels may be significantly altered. This is an important consideration if the bars have been welded or heat has been applied to assist with bending or the bars have been subjected to heat from fire. To indicate the temperature during the heating or welding process the use of temperature indicator crayons is recommended.

Heating

Heating should be avoided if the original bar properties are required. Bending should always be around a former of the appropriate size (refer processing to AS 3600). AS 3600, Clause 17.2.3.1 states that reinforcement may be bent hot, provided that all of the following are complied with:

- i) the steel is heated uniformly through and beyond the portion to be bent
- ii) the temperature of the steel does not exceed 600°C
- iii) the bar is not cooled by quenching, and
- iv)if during heating the temperature of the bar exceeds 450° C, the characteristic Yield Stress (f_{sy}) of the steel after bending is taken as 250 MPa.

Welding

500PLUS® Rebar produced by the TEMPCORE®, MicroAlloyed and ContiStretch processes has a maximum carbon equivalent (CEV) of 0.46 and, as such, requires no pre-heating prior to welding. Pre-heating is not required when bars are welded in accordance with AS/NZS 1554.3 Part 3 – Welding of reinforcing steels. Hydrogen controlled electrodes are required for all weld types, and matching-strength electrodes are required for butt welds.

Note: Some types of welded splices can reduce the ductility of the connected bars.

Threading 500PLUS® Rebar

The design tensile capacities of fine-threaded 500PLUS® Rebar can be determined in accordance with AS 4100 Steel structures. Based on the results of testing, fine-threaded 500PLUS® Rebar has a reduced characteristic Yield Stress equal to 75% of the normal characteristic Yield Stress (500 MPa) and a reduced characteristic tensile strength equal to 85% of the lower characteristic tensile strength (540 MPa) based on the thread stress area.

It follows that InfraBuild Reinforcing' 500PLUS® Rebar when cut with AS 1275 metric threads and fitted with AS 1112 ISO metric hexagon nuts property Class 5 nuts, has the values of design tensile capacity specified in the below table. These design tensile capacities are based

on the effective tensile stress areas (A_s) from AS 1275: Metric screw threads for fasteners, a strength reduction factor (Φ) = 0.8, and a characteristic tensile strength equal to 0.85 × 540 = 459 MPa. Design Tensile Capacity = Φ A_s × 0.85 × TS where TS = 540 MPa.

Bar Diameter (mm)	Normal Thread Size (mm)	Stress Area (mm²)	500PLUS® Rebar Design Tensile Capacity (kN)
12	M10	58	21
16	M12	84	31
20	M16	157	58
24	M20	245	90
28	M24	353	130
32	M30	561	205
36	M33^	694	255
40	M36	817	300

[^] Denotes second choice thread size. Nuts may be difficult to obtain. N.B. Engineers should be aware that threading reinforcing bars this way may reduce the ductility to less than the minimum requirements for Class N bars specified in AS/NZS 4671.

Reinforcing Bar

Deformed Bar

Deformed reinforcing bar, also known as rebar, is a Class N reinforcing bar. It is available in 500 MPa in 10-50 mm bar diameters. In addition to stock lengths, rebar can be processed to suit your project requirements. Always consult an engineer before choosing the bar suited for your application.

Typical Uses

• Used to increase tensile strength in various concrete applications

Features

- Available in a range of stock lengths, commonly stocked in 6, 9 or 12 m lengths
- Diameters ranging 10 50 mm

Relevant Standards

- AS/NZS 4671 Steel for the reinforcement of concrete
- AS 3600 Concrete structures
- AS 5100.5 Bridge design: Concrete



Deformed Reinforcing Bar – Class N						
Product Code	Mass (kg/m)	Length* (m/t)				
N10S	0.64	1552				
N12S	0.93	1077				
N16S	1.65	605				
N20S	2.58	387				
N24S	3.71	269				
N28S	5.05	198				
N32S	6.59	151				
N36S	8.35	119				
N40S**	10.3	97				
N50S**	16.02	64				

^{*} Approximate ** Available only on request – lead time required

Plain Reinforcing Round Bar

Round rebar is a Class N (normal ductility) bar and is available in 250 MPa for diameters 10-36 mm.

In addition to stock lengths, round bar can be processed to suit your project requirements. Always consult an engineer before choosing the bar suited for your application.

Typical Uses

• Commonly used to manufacture fitments and dowel bars

Features

- Available in a range of stock lengths, commonly stocked in 6 m lengths (available in other lengths on request)
- Diameters ranging 10 36 mm

Relevant Standards

• AS/NZS 4671 Steel for the reinforcement of concrete



Plain Reinforcing Round Bar – 250R					
Product Code	Mass (kg/m)	Length* (m/t)			
R10S	0.64	1552			
R12S	0.93	1077			
R16S	1.65	606			
R20S	2.58	387			
R24S	3.71	269			
R28S	5.05	198			
R30S	5.8	172			
R32S	6.59	151			
R36S	8.35	119			

^{*} Approximate

POOLSTEEL®

POOLSTEEL® Rebar (reinforcing bar) has been specifically developed for use in concrete swimming pools.

Typical Uses

• In-ground pools

Features

- 250N Grade 12 mm diameter
- Can be bent on-site for design flexibility
- ACRS Certified

Relevant Standards

• AS/NZS 4671 Steel for the reinforcement of concrete



POOLSTEEL® (S12) – 250N						
Product Code	Mass (kg/m)	Stock Lengths (m)	Bars per Tonne*			
S12S6	0.03	6	179			
S12S9	0.93	9	119			

^{*} Approximate





POOLSTEEL®

Independently certified and trusted for use in all Australian pools





POOLSTEEL® 250N Grade 12 mm diameter is preferred by steel fixers. Its durability has been proven in thousands of swimming pools across Australia over many years.

POOLSTEEL® meets AS/NZS 4671 and is ACRS independently certified.



Metric Threaded Bar

Typical Uses

• General purpose fastening in commercial and infrastructure projects

Features

- Available in 12 mm, 16 mm and 20 mm bar diameters
- Various lengths available



Metric Threaded Bar						
Product Code	Bar diameter (mm)	Length (mm)	Mass (kg)			
N12TB50	12	500	0.46			
N12TB65*	12	650	0.59			
N16TB55	16	550	0.9			
N16TB60		600	0.97			
N16TB75*		750	1.23			
N20TB60		600	1.67.			
N20TB65	20	650	1.64			
N20TB90*		900	2.31			

^{*} QLD Stock Codes

Wall Bars/Starter Bars

Typical Uses

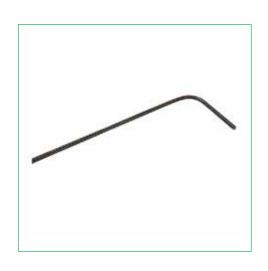
• Tying concrete or masonry walls to slabs and footings

Features

- Available in 12 mm and 16 mm bar diameters
- Various lengths available

Relevant Standards

• AS/NZS 4671 Steel for the reinforcement of concrete



Wall Bars/Starter Bars						
Product Code	Bar diameter (mm)	Dimensions (mm)	Mass (kg)			
N12L5050		500 x 500	0.9			
N12L8020		800 x 200	0.9			
N12L10015		1000 x 150	1.05			
N12L10020	12	1000 x 200	1.03			
N12L6060		600 x 600	1.1			
N12L10515		1050 x 150	1.1			
N12L26015		2600 x 150	2.5			
N16L7070		700 x 700	2.27			
N16L8080		800 x 800	2.59			
N16L10018	16	1000 x 180	1.91			
N16L6060		600 x 600	1.94			
N16L26015		2600 x 150	4.45			

Starter Bar (Darwin Only)					
Product Bar diameter Dimensions Code (mm) (mm) Mass (kg)					
N12HL100150	12	1000 x 150	1.24		
N12V10045	12	65 x 450 x 100	0.56		





Reinventing reinforcing for a sustainable future

InfraBuild Reinforcing is committed to providing reinforcing steel solutions to enable safe, efficient and sustainable construction throughout Australia.

Building for sustainability

Sustainability is no longer a negotiable in construction – it is essential to the building of a more liveable, functional infrastructure and built environment for a future full of possibilities.

Sustainable steelmaking

We lead the development of groundbreaking innovations in lighter, stronger products and the use of recycled steel and sustainably sourced energy in the manufacture of reinforcing steel. Our team bring expertise in optimising materials usage. Our range of prefabricated products and solutions help minimise waste in construction.

Sustainability credentials

Our products are supplied with Environmental Product Declarations recognised by the Infrastructure Sustainability Council of Australia (ISCA) and the Green Building Council of Australia (GBCA) to support customers' sustainability objectives.

Collaboration for sustainability

Our team collaborates with customers early in the design stage to identify and recommend design solutions for reinforcing material optimisation. And we understand the importance of consistency and reliability in delivering to our customers what we promise.

We believe in a future full of possibilities.
InfraBuild Reinforcing.
Building Possibilities.

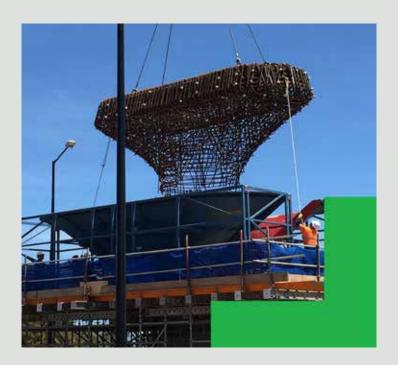
www.infrabuild.com





Prefabrication Solutions

Optimised performance with reduced waste



InfraBuild Reinforcing offers a wide range of offsite reinforcing prefabrication solutions that help optimise the efficiency, safety and sustainability of construction projects. Our wide range of products and services, which include columns, cages, mesh, mats and other reinforcing elements, and come in various sizes, shapes and diameters, are used in commercial and infrastructure projects around Australia.



Minimise onsite risks



Earn Green Star® and IS rating points



Construction accuracy and speed

ONEMESH®

Made-to-size engineered mesh minimises duplication of reinforcing steel and scrap losses that result from excess lapping and trimming of mesh sheets.

BARMAT®

Engineered mat with customisable variable bar sizing and spacing, made to bespoke specifications. Offers efficiencies and reduction of waste.

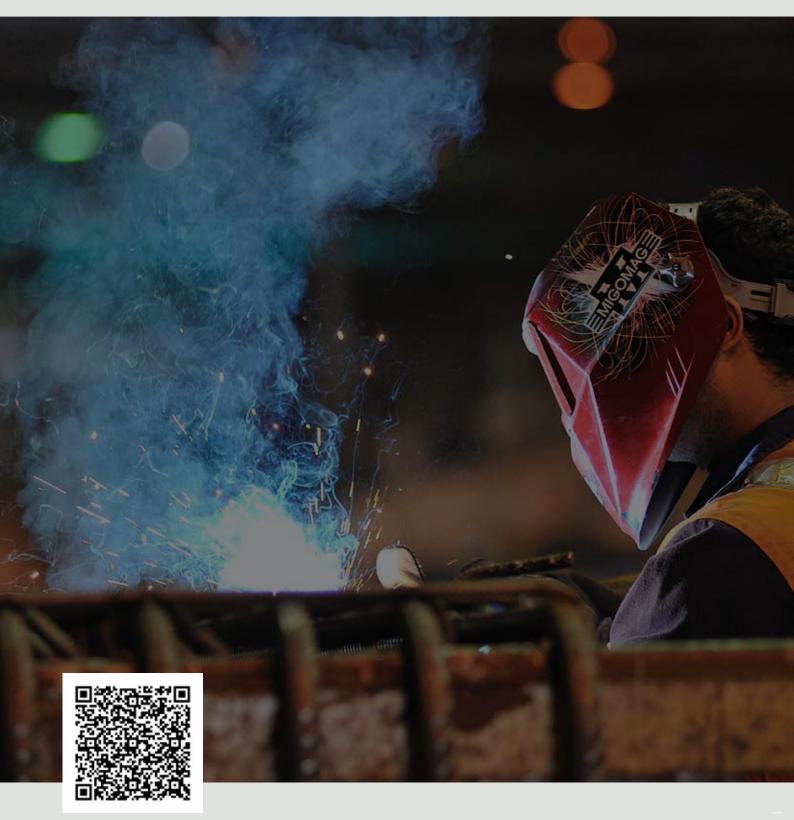
BAMTEC®

Engineered reinforcing bar carpet, with variable bar diameter, length and spacing reduces the need for off-cuts associated with traditional onsite steel-fixing.

PROCAGE™, PROPILE™, CUSTOMCAGE™ and ROMTECH®

Prefabricated cage column and lattice solutions that enable optimised size and positioning of reinforcing steel.

Prefabrication Solutions





Cage	Cage	Cage	Bar	Spiral	Spiral
Diameter (mm)	Diameter (mm)	Length	Diameter	Diameter	Pitch
Machine Made	Manual Fabrication	(m)	(mm)	(mm)	(mm)
250 – 1950	160 – 2500	Up to 15 m	12 – 40	10, 12, 16 & 20	50 – 300

• Commercial, Civil and Infrastructure, Residential, Industrial

Certification

• Lifting certification available upon request

Application

• Bored piers, precast piles

Benefits

- Enhanced quality made in controlled environment
- Improved efficiency
- Reduction of waste and on-site labour
- Speed and simplicity of construction
- Increased site safety
- Customised to meet project requirements

Note: Please check with your local InfraBuild Reinforcing representative for availability of products and services and to discuss your requirements.

Fabricated using machine and manual processes, PROPILE™ provides accuracy, flexibility and robustness. Plus, downtime on site is reduced because off-site fabrication isn't weather dependent.







Cage	Cage	Bar
Configurations	Length (m)	Diameter (mm)
Custom Shape	Up to 15 m	10 – 40

• Commercial, Civil and Infrastructure, Residential, Industrial, High-rise

Certification

• Lifting certification available upon request

Application

• Columns, headstocks, beams, footings, diaphragm walls

Benefits

- Customised to meet project specific requirements
- Enhanced quality made in controlled environment
- Reduction of waste and on-site labour
- Speed and simplicity of construction
- Increased site safety
- Improved efficiency

Note: Please check with your local InfraBuild Reinforcing representative for availability of products and services and to discuss your requirements.

Factory fabricated using manual processes, ${\sf CUSTOMCAGE}^{\sf IM}$ is customised to suit your project requirements.







Mat Width (m)	Mat Length (m)	Configuration	Diameter (mm)	Bar length and spacing
0.8 – 4	0.8 – 12	Any shape with penetrations. Perimeter shapes and angles also available	8, 10, 12, 16, 20 (Class N) 7.6, 8.55, 9.75 (Class L)	Variable to Suit

Add On: trimmer and additional bars to suit design.

Markets

• Precast, Commercial, Civil and Infrastructure, High-rise

Certification

• Lifting certification available upon request

Application

 Precast panels and culverts, parapet, diaphragm walls, shotcrete walls, suspended slab, sound barrier

Benefits

- Significantly reduces steel fixing
- Potential for reduced concrete
- Tighter tolerances with offsite prefabrication
- Reduces lapping
- Less offcuts and wastage
- Reduces congestion on site
- Improves safety through less handling
- Increases site safety
- Off Coil manufacturing minimises waste

Note: Can be bent to shape.



BARMAT® is a customised prefab bar mat offering. Fabricated offsite, using automated machine manufacturing that allows steel to be prefabricated with variable bar sizes. and spacing in a variety of mat shapes, configurations and sizes.





Cage	Cage	Bar
Configurations	Length (m)	Diameter (mm)
Round, rectangular, square	Up to 15 m	10 – 40

• Commercial, Civil and Infrastructure, Residential, Industrial, High-rise

Certification

• Lifting certification available upon request

Application

• Columns, beams, footings, walls, pile caps

Benefits

- Enhanced quality made in controlled environment
- Improved efficiency
- Reduction of waste and on-site labour
- Speed and simplicity of construction
- Increased site safety
- Customised to meet project requirements

Note: Please check with your local InfraBuild Reinforcing representative for availability of products and services and to discuss your requirements.

With customisable cage shape options, bar diameters and lengths available, PROCAGE™ is manufactured bespoke to match individual project needs for above ground applications.







Carpet Length (m)	Bar Diameter (mm)	Bar spacing	Carpet Mass (t)
Up to 12 m	10 – 32	Variable to Suit	Up to 1.5

• Commercial, Civil and Infrastructure, Industrial, Precast

Certification

• Lifting certification available upon request

Application

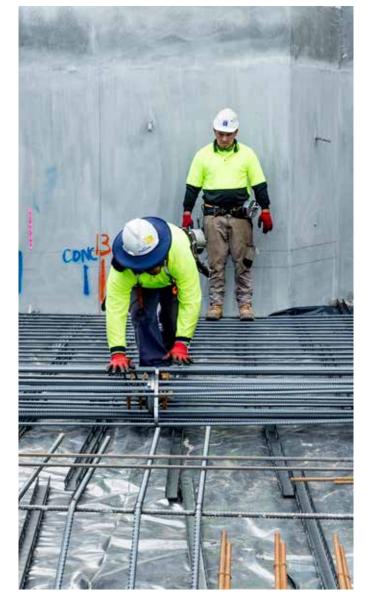
• Slab-on-ground, suspended slab, Continuously Reinforced Concrete Pavement (CRCP), wind farm foundation, precast panels

Benefits

- Design efficiency fabricated to specified bar centres
- Reduction of waste and on-site steel fixers
- Speedy, efficiency and accuracy of site installation
- Increased site safety
- Enhanced quality

Note: Please check with your local InfraBuild Reinforcing representative for availability of products and services and to discuss your requirements.

BAMTEC® reinforcing rollout bar carpets are used to speed up construction and reduce steelfixing on commercial and infrastructure applications.







Lattice Girder Configuration	Length (m)	Truss and Cord Diameter (mm)
Manufactured to bespoke design	Custom length	12 – 32

• Civil and Infrastructure

Certification

• Lifting certification available upon request

Application

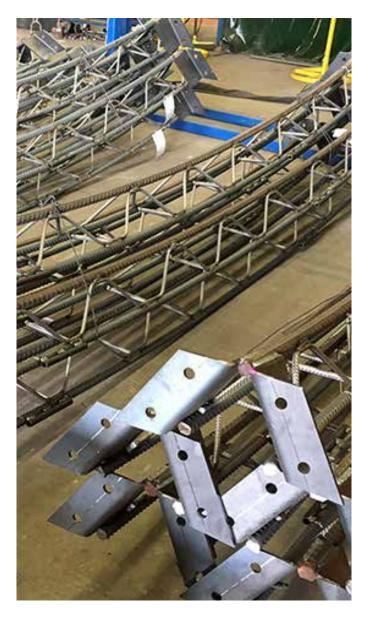
• Strata control, tunnel and ground support (hard and soft ground conditions)

Benefits

- Customised to meet project-specific requirements
- High strength-to-weight ratio
- Simplified transport and handling due to lightweight sections
- Ease of installation due to simple connection details
- Enhanced quality made in a controlled environment
- Ease of installation due to simple connection details
- Increased site safety

Note: Please check with your local InfraBuild Reinforcing representative for availability of products and services and to discuss your requirements.

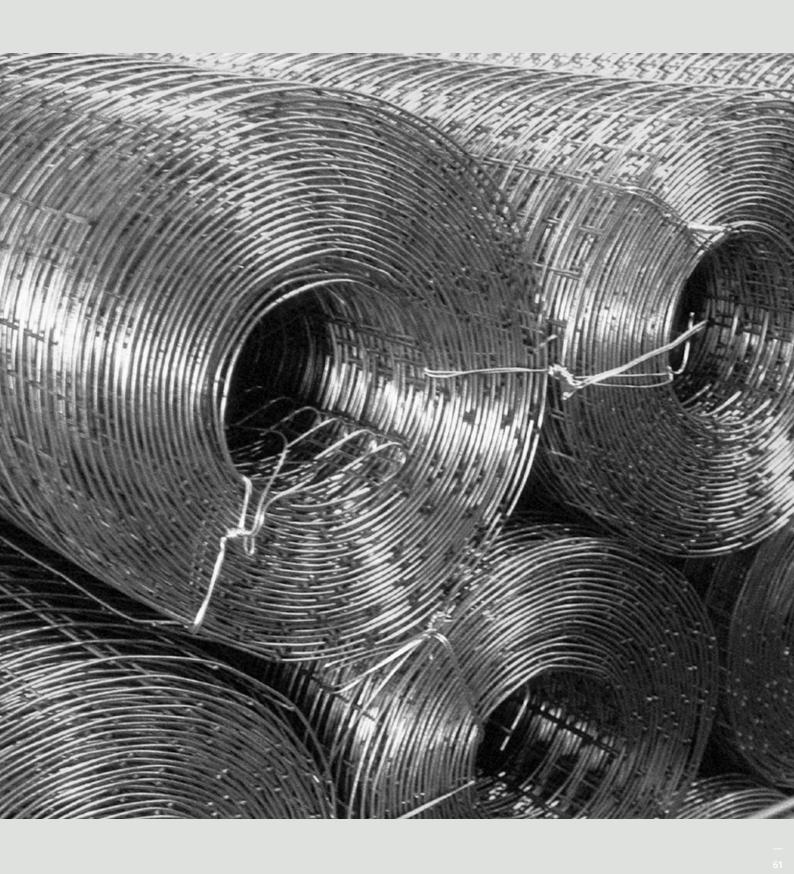
ROMTECH® is an innovative tunnel support system of rebar lattice girders.







Other Mesh



HANDIMESH®

HANDIMESH® is a versatile, general purpose welded mesh used for a wide range of applications and DIY projects such as fencing, shelving, security applications, guarding, trailers and gates.

HANDIMESH® Sheet

Typical Uses

- Used from simple domestic applications to commercial and industrial projects
- Ideal for pet enclosures, garden arches, security screens, wine racks, storage bins, fishpond covers, shelving, guarding, fencing, trailer enclosures
- Handi-sized sheets are ideal for small jobs



HANDIMESH®					
Product Code	Std Unit	Longitudinal Wires*	Cross Wires*	Mass (kg)	Dimensions (m)
B224		40. 40.50	61 x 4 @ 50	29	
B234	Sheet	49 x 4 @ 50	41 x 4 @ 75	24	3 x 2.4
B445		25 x 4.75 @ 100	31 x 4.75 @ 100	23	

HANDIMESH® Sheet – Galvanized					
Product Code	Std Unit	Longitudinal Wires*	Cross Wires*	Mass (kg)	Dimensions (m)
G112A		97 x 2.5 @ 25	121 x 2.5 @ 25	22	
G122A		97 X 2.3 @ 23	61 x 2.5 @ 50	17	
G113		07,422.625	121 x 3.2 @ 25	36	
G123		97 x 3.2 @ 25	61 x 3.2 @ 50	27	
G234		49 x 4 @ 50	41 x 4 @ 75	24	
G235	Sheet	49 x 5 @ 50	41 x 5 @ 75	38	3 x 2.4
G224		49 x 4 @ 50	61 x 4 @ 50	29	
G225		49 x 5 @ 50	61 x 5 @ 50	45	
G445		25 x 5 @ 100	31 x 5 @ 100	23	
G445A		25 45 6 @ 100	31 x 5.6 @ 100	29	
G465A		25 x 5.6 @ 100	21 x 5.6 @ 150	24	

^{*} Number of Wires x Diameter (mm) @ Spacing (mm).

HANDIMESH® Sheet Handi Sized – Galvanized						
Product Code	Std Unit	Longitudinal Wires*	Cross Wires*	Mass (kg)	Dimensions (m)	
G112AHS	Sheet	81 @ 25	49 x 2.5 @ 25	8		
G122AHS			01 @ 25	81@23	25 x 2.5 @ 50	6
G224HS		/1 / / @ 50	25 x 4 @ 50	10	2 x 1.2	
G234HS		41 x 4 @ 50	17 x 4 @ 75	8		
G444HS		21 @ 100	13 x 4 @ 50	5		

HANDIMESH® Sheet Handy Sized – Galvanized					
Product Code	Std Unit	Longitudinal Wires*	Cross Wires*	Mass (kg)	Dimensions (m)
G112AHS24	Sheet	81 @ 25	49 x 2.3 @ 25	9	
G122AHS24			25 x 2.3 @ 50	7	
G224HS24		/1 // @ 50	25 x 4 @ 50	12	2.4 X 1.2
G234HS24		41 x 4 @ 50	17 x 4 @ 75	10	
G444HS24		25 x 4 @ 100	13 x 4 @ 100	6	

^{*} Number of Wires x Diameter (mm) @ Spacing (mm).



Stockyard Mesh

IRONBARK® Stockyard Mesh is a range of steel reinforcing mesh products specifically developed for rural applications including stockyards, farm gates, rural gates and infill panels.

IRONBARK®

Typical Uses

- Stockyards
- Farm gates and rural gates
- Farm fencing
- Infill panels

Features

- Galvanized
- \bullet 100% fire-proof and rot-proof



IRONBARK® Stockyard Mesh Sheet – Black						
Product Code	Horizontal Spacing (mm)	Vertical Spacing (mm)	Wire Diameter (mm)	Mass (kg)	Dimensions (m)	
STB569			Г	15	6 X 0.9	
STB5611	100	150	5	18	6 X 1.1	
STB8812	100	00	0	46	6 X 1.2	
STB8814		200	8	51	6 X 1.4	

IRONBARK® Stockyard Mesh Sheet – Galvanized					
Product Code	Horizontal Spacing (mm)	Vertical Spacing (mm)	Wire Diameter (mm)	Mass (kg)	Dimensions (m)
STG5109		250		13	6 X 0.9
STG51011		250	5	15	6 X 1.1
STG569	100	150	5	15	6 X 0.9
STG5611	100	150	130	18	6 X 1.1
STG8812		150	0	47	6 X 1.2
STG8814		200	8	51	6 X 1.4

IRONBARK® Stockyard Mesh Roll – Black					
Product Code	Horizontal Spacing (mm)	Vertical Spacing (mm)	Wire Diameter (mm)	Mass (kg)	Dimensions (m)
STB569R	100	150	F	73	30 x 0.9
STB5611R	100	150	5	88	30 x 1.1

IRONBARK® S	IRONBARK® Stockyard Mesh Roll – Galvanized					
Product Code	Horizontal Spacing (mm)	Vertical Spacing (mm)	Wire Diameter (mm)	Mass (kg)	Dimensions (m)	
STG5109R		250		63	30 x 0.9	
STG51011R	100	230	5	76	30 x 1.1	
STG569R	100			75	30 x 0.9	
STG5611R		150		90	30 x 1.1	
STG5615R	150			194	60 x 1.5	

IRONBARK® Farm Gate Infill – Galvanized						
Product Code	Horizontal Spacing (mm)	Vertical Spacing (mm)	Wire Diameter (mm)	Mass (kg)	Dimensions (m)	
FGI8		106		7	2.35 x 1.1	
FGI10		196	190	8	2.95 x 1.1	
FGI12	100	107	5	10	3.55 x 1.1	
FGI14		197		11	4.15 x 1.1	
FGI16		198		13	4.65 x 1.1	

SENTINEL® MINEMESH®

New breakthrough technology SENTINEL® Coal MINEMESH® is lighter, stronger, better.

Introducing a major breakthrough from the people who brought you the original MINEMESH®.

High-tensile SENTINEL® Coal MINEMESH® harnesses groundbreaking steel technology backed by 25 years of experience in strata control and ground support mesh solutions.

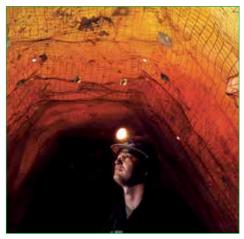
Manufactured from quality Australian steel, this new technology is exclusive to SENTINEL® Coal. The product is manufactured using a proprietary high-tensile process, patented worldwide.

What's the difference?

With wire strength that is 50% greater, allowing a mass reduction of 25-30%, SENTINEL® Coal offers equivalent performance and strength to standard MINEMESH® with significantly reduced mass.

SENTINEL® Coal is Australian made and has key benefits compared with standard MINEMESH®

• Smaller wire diameter allowing more sheets per pack, more sheets per truck and more sheets per pod





- Better productivity through:
 - Fewer product movements both above and below ground, with a 25 % reduction in transport cycles
 - 25 % fewer truck movements for delivery of mesh
 - More sheets per load of mesh to the mine face, resulting in a faster development rate and reduced delays
 - Reduced storage space above and below ground
 - Improved ergonomics, as a direct result of being 25
 - -30 % lighter
- Environmental sustainability SENTINEL® Coal delivers up to 25% reduction in carbon emissions in the manufacturing process

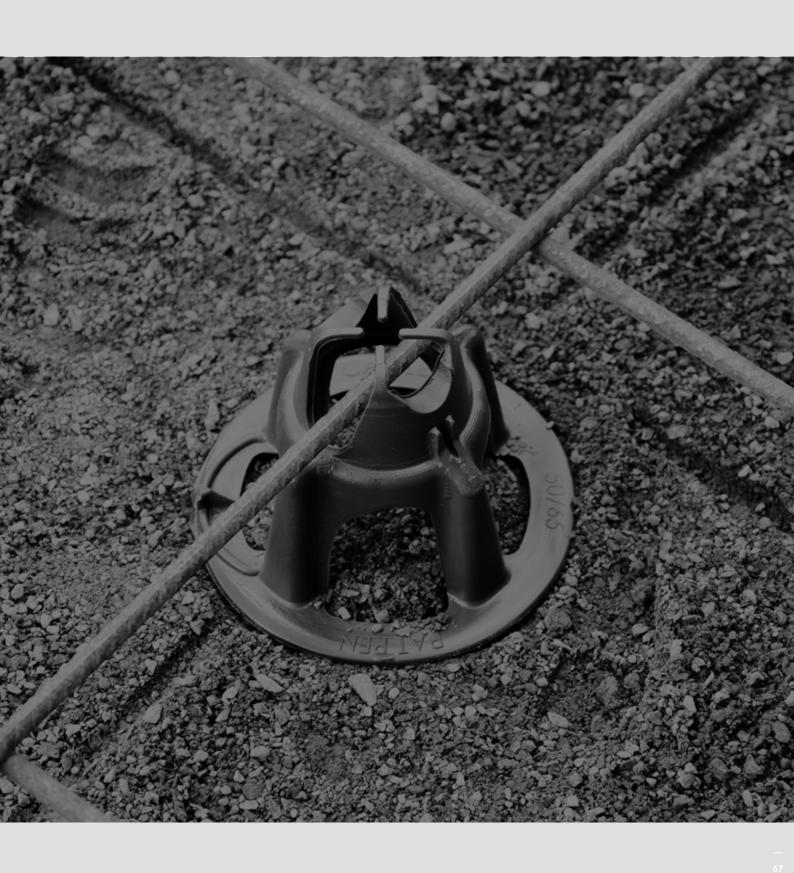
SENTINEL® Coal – Modules for all roof conditions

		Wire Diameter (mm)		Sheet	
Gra	de	Double Wire Strap	Mesh	Length (m)	Width (m)
Light	L	4			
Medium	М	4.75	4	4 – 5.5	0.6 – 2
Heavy	Н	5.6			



eXtra (x) Mid sheet strap for intermediate bolting available on all of the above.

Bar Chairs



Bar Chairs

Concrete Block Chairs

Concrete block chairs are used as a high-load spacer in steel reinforcement projects. Heat resistant and designed with a flat base to eliminate tilting and rolling, our range of concrete block chairs provide appropriate concrete cover of the reinforcing. Concrete Block Chairs conform to AS/NZS 2425 Bar chairs in reinforced concrete – Product requirements and test methods.

Plain Concrete Block Chairs

Typical Uses

• Slab-on-ground

Features

- Available in a wide variety of sizes
- Multiple heights



Product Code	Dimensions (mm)	No./Bag	Mass (kg/Bag)
CB653	65 x 50 x 32	50	12.5
CB654	65 x 50 x 40	30	15
CB754	75 x 50 x 40	2.5	9
CB765	75 x 65 x 50	25	15
CB777	75 x 75 x 75	15	15
CB1077	100 x 75 x 75	10	13
CB1119	115 x 100 x 90	10	20

Galvanized Tie Wire Concrete Block Chairs

Typical Uses

- Civil and infrastructure construction projects
- Slab-on-ground

Features

- Complies with roads authority requirements
- Sets concrete cover
- Stable integrated galvanized tie wire



Product Code	Concrete Cover (mm)	No./Bag	Mass (kg/Bag)
CB20G	20	200	8.5
CB25G	25	100	15
CB30G	30	100	6
CB35G	35		11
CB40G	40		13
CB45G	45	50	9
CB50G	50		15
CB55G	55		16
CB60G	60		13
CB65G	65	2.5	14
CB70G	70	25	15
CB75G	75		16
CB80G	80		13
CB85G	85		10
CB90G	90	15	15
CB95G	95	15	11
CB100G	100		12
CB110G	110		16

Metal Bar Chairs

Metal bar chairs are used to set reinforcing bar and reinforcing mesh to the correct position in a variety of steel reinforcement applications. Metal bar chairs conform to AS/NZS 2425 Bar chairs in reinforced concrete – *Product requirements and test methods*.

Plastic-tipped Metal Bar Chair

Typical Uses

• Suspended slab, slab-on-ground with metal base

Features

- Plastic-tipped
- Sets concrete cover
- Four leg wire bar chairs



Product Code	Concrete Cover (mm)	No./Bag	Mass (kg/Bag)
MC20	20		
MC25	25		2
MC30	30		
MC35	35		
MC40	40		3
MC45	45		3
MC50	50		5
MC60	60	100	
MC65	65		
MC70	70		6
MC75	75		
MC80	80		
MC85	85		7
MC90	90		
MC100	100		8

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Product Code	Concrete Cover (mm)	No./Bag	Mass (kg/Bag)
MC110	110		
MC120	120		6
MC130	130		
MC140	140		
MC150	150		7
MC160	160		
MC170	170		10
MC180	180		10
MC190	190	50	11
MC200	200		
MC210	210		
MC220	220		12
MC230	230		
MC240	240		13
MC250	250		1/
MC260	260		14
MC270	270		15
MC280	280		
MC290	290		8
MC300	300		
MC310	310		
MC320	320	25	
MC340	340		9
MC350	350		
MC360	360		
MC380	380		10
MC400	400		11

Metal Bases

Typical Uses

- Slab-on-ground
- Spreading point loads from bar chairs over wider area of support
- For protecting polyethylene film from puncture by legs of bar chairs

Features

- For use with plastic-tipped metal bar chairs
- Corrosion-resistant steel



Product Code	Product Description	No./Bag
MB	130 x 130 mm – suit metal chair ≤ 110 mm	100
MBS	150 mm dia. base – suit metal chair ≤ 110 mm	100
MBL	230 mm dia. base – suit metal chair ≥ 110 mm	50

Metal Top Hat Bases

Typical Uses

• Deep raft slab construction

Features

- Serves as base for U-Bars that support top layer reinforcing steel
- Sits on second layer of reinforcing steel



Product Code	Suit Bar (mm)	Length (mm)
THB16	16	F00
THB20	20	500

Note: Other sizes available on request.

Plastic Bar Chairs

Plastic bar chairs are used to set reinforcing bar and mesh to the correct position within the concrete. Plastic bar chairs supplied by InfraBuild Reinforcing conform to AS/NZS 2425 – Bar chairs in reinforced concrete – Product requirements and test methods.

Plastic Bar Chair Combination

Typical Uses

• Slab-on-ground, polystyrene pod slab, swimming pools

Features

- Sets concrete cover
- Dual heights
- Clip-on mechanism for stability
- Integrated base to minimise puncture of polyethylene film
- 50 or 65 mm height chairs available in a convenient
 20 piece bag for smaller jobs



Plastic Bar Chairs			
Product Code	Concrete Cover (mm)	No./Bag	
COM2540	25 or 40		
COM5065	50 or 65		
COM5065 C	50 or 65		
COM7590	75 or 90		
COM7590C	75 or 90		
COM85100	85 or 100		
COM105110	105 or 110	100	
COM115120	115 or 120		
COM125130	125 or 130		
COM135140	135 or 140		
COM145150	145 or 150		
COM155160	155 or 160		
COM165170	165 or 170		

C= Clip-on

Plastic Bar Chairs – Convenie	nt 20 Pack	
Product Code	Concrete Cover (mm)	No./Bag
COM5065C20	50 or 65	20

Plastic Bar Chair Combination Deck Chair

Typical Uses

• Suspended slab and beams, tilt-up panels, precast panels and beams, slab-on-ground when used with base

- Sets concrete cover
- Dual heights
- Corrosion-free support
- Leaves minimal footprint



Product Code	Concrete Cover (mm)	No./Bag
COMDC2025	20 or 25	
COMDC2530	25 or 30	
COMDC3035	30 or 35	
COMDC3040	30 or 40	100
COMDC3540	35 or 40	100
COMDC3545	35 or 45	
COMDC4050	40 or 50	
COMDC4550	45 or 50	
COMDC6575	65 or 75	
COMDC7590	75 or 90	
COMDC90100	90 or 100	
COMDC110120	110 or 120	F0 - 100
COMDC130140	130 or 140	50 or 100
COMDC150160	150 or 160	
COMDC170180	170 or 180	
COMDC190200	190 or 200	
COMDCBASE	-	100

Plastic Bar Chair Novabones

Typical Uses

• Columns, super T beams, civil projects, slab-on-ground with blinding layer

Features

- Designed for heavy-duty application
- Suits large bar diameter
- Central hole for tie wire
- Withstands high ambient temperature
- Approved for roads authority projects
- Dual heights



Product Code	Concrete Cover (mm)	No./Bag
FAST2530	25 or 30	100
FAST4050	40 or 50	100
FAST6070	60 or 70	50

Continuous Plastic Bar Chair

Action Products

Typical Uses

• BAMTEC® suspended slab, slab-on-ground with concrete blinding layer

- Continuous spacer
- Allows rapid chairing and placement of reinforcing steel
- Provides stable support for reinforcing steel
- Ideal for structures near the coast corrosion-free support



Product Code	Concrete Cover (mm)	Length (mm)	No./Bundle
CC20	20		
CC25	25		100
CC30	30	2000	
CC40	40		FO.
CC50	50		50

Circular Clip-On Plastic Bar Chair

Typical Uses

• Columns and piers, vertical concrete elements and commercial construction

- Easy clip-on
- Wide range to suit different bar sizes



Product Code	Concrete Cover (mm)	Suit Bar Size (mm)	No./Bag
CPC15	15	1 16	
CPC20	20	4 – 16	
CPC206	20	6	
CPC25	25	4 – 16	
CPC25A	25	12 – 20	
CPC30	20	4 – 16	
CPC30A	30	12 – 20	
CPC40	/0	4 – 16	100
CPC40A	40	12 – 20	100
CPC50	Γ0	8 – 12	
CPC50A	50	12 – 20	
CPC60	60	8 – 12	
CPC60	60	12 – 20	
CPC65	65	8 – 12	
CPC75	75	8 – 12	
CPC75A	/5	12 – 20	

Clipfast Plastic Bar Chair

Typical Uses

• Pre-cast and tilt-up, walls and panels

- Designed specifically for bar
- Easy clip-on
- Small foot configuration minimal exposure at concrete surface
- Suits different bar sizes



Product Code	Concrete Cover (mm)	Suit Bar Size (mm)	No./Bundle
PC20B	20		
PC25B	25		
PC30B	30		
PC32B	32		
PC35B	35	4 – 16	
PC40B	40	4 – 16	
PC50B	50		
PC55B	55		100
PC65B	65		100
PC75B	75		
PC40B+	40		
PC45B+	45		
PC50B+	50	10 20	
PC55B+	55	18 – 28	
PC65B+	65		
PC75B+	75		
РСВ		Base	

^{+ =} Large

Clipfast Plastic Bar Chair Mesh

Danley™

Typical Uses

• Pre-cast and tilt-up, walls and panels

Features

- Designed specifically for mesh
- Easy clip-on
- Small foot configuration minimal exposure at concrete surface
- Suits different mesh sizes



Product Code	Concrete Cover (mm)	No./Bag
PC20M	20	
PC25M	25	
PC30M	30	
PC32M	32	100
PC40M	40	100
PC50M	50	
PC65M	65	
PC75M	75	

Trench Mesh Support Plastic

Typical Uses

• Footing beams, waffle pod slab perimeter

- Support and locate trench mesh
- Suits all trench mesh sizes



Product Code	Concrete Cover (mm)	Suit Bar Size (mm)	No./Bag
TMS65	65	8 – 12	J.F.
TMS6016	60	16	25

SOG® Plastic Bar Chair

Danley™

Typical Uses

- Thick slabs and roadways, commercial and civil projects
- Continuously Reinforced Concrete Pavement (CRCP)

Features

- Lightweight chairs with integral bases
- 500 kg capacity



Product Code	Concrete Cover (mm)	No./Bag
RSOG95	95	
RSOG100	100	
RSOG110	110	
RSOG120	120	
RSOG130	130	
RSOG140	140	
RSOG150	150	100
RSOG95C	95	
RSOG100C	100	
RSOG105C	105	
RSOG108C	108	
RSOG115C	115	
RSOG127C	127	

C = Clip-on

Continuous Deck Rail Plastic Bar Chair

Danley™

Typical Uses

- BAMTEC® suspended slab, slab-on-ground with concrete blinding layer
- Precast, Tilt-up panels

Features

- Continuous spacer
- Allows rapid chairing and placement of reinforcing steel
- Provides strong and stable support for reinforcing steel
- Minimum soffit exposure
- Plastic base to suit slab-on-ground application
- Male and female connection to extend length



Product Code	Concrete Cover (mm)	Length (mm)	No./Bag
CDR25C	25		
CDR30C	30		
CDR35C	35		
CDR40C	40		
CDR45C	45		
CDR50C	50		
CDR55C	55		25
CDR60C	60	750	
CDR65C	65		
CDR70C	70		
CDR75C	75		
CDR80C	80		
CDR85C	85		
CDR90C	90		
CDR95C	95		
CDR100C	100		
CDRBASE	Base	740	

Note: When using Deck Rail Base, customers should consider the 5 mm thickness of the base which may affect concrete cover.

Tilt Wall Panel Plastic Bar Chair

Danley™

Typical Uses

• Pre-cast and tilt-up, walls and panels

Features

- Clip-on and dual height
- Protrusion at leg base for minimal concrete surface exposure
- Strong and stable



Product Code	Concrete Cover (mm)	No./Bag
BCTWP3040	30 or 40	
BCTWP5060	50 or 60	100
BCTWP6575	65 or 75	

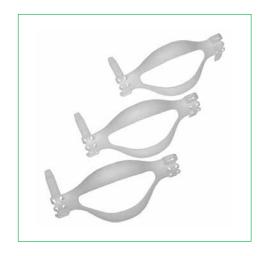
kwik ZIP® Centralizers

Typical Uses

- Soil nails
- Rock bolts
- Anchors
- Other post-tension systems

Features

• Wide bow and simple integrated 'cable tie' method of assembly



Product Code	Bow Height (mm)	Suit Bar Size (mm)	No./Box	
KWIKZIP10	10			
KWIKZIP20	20	20 – 50	100	
KWIKZIP30	10	20 – 50	100	
KWIKZIP40	20			

Bar Size (mm)	No. of Units per Assembly
20 – 28	2
32 – 40	3
50	4

Bow Height = distance between the surface of the bar and the hole.

Fibre Concrete Spacers

Australia's premier supplier of fibre concrete spacers and bars, Max Frank offers products to meet horizontal and vertical reinforcement needs.

Max Frank bars and spacers conform to AS/NZS 2425 Bar chairs in reinforced concrete – Product requirements and test methods.

Fibre Concrete Square Bar

Typical Uses

• For particularly heavy reinforcement

Features

• Large support area spreads load and prevents tipping



Product Code	Concrete Cover (mm)	Length (mm)	No./Pallet	Mass* (kg/Pallet)
FCSB50330	50	330	600	1065
FCSB501000	50	1000	250	1318
FCSB701000	70	1000	100	1037

^{*} Approximate

Fibre Concrete B Rail Bar

(Lead time required)

Typical Uses

• High load-bearing capacity

Features

- Curve-shaped for stability
- Rapid and efficient laying



Product Code	Concrete Cover (mm)	Length (mm)	No./Pallet	Mass* (kg/Pal- let)
FCRB50330	50		1080	650
FCRB75330	75	330	800	1000
FCRB100330	100		1000	1300
FCRB1001000	100	1000	600	850

^{*} Approximate

Fibre Concrete Banana N Bar

(Lead time required)

Typical Uses

• Designed for use with exposed concrete

- Curve-shaped for stability
- Notches provide fewer points of contact with formwork



Product Code	Concrete Cover (mm)	Length (mm)	No./Pallet	Mass* (kg/Pallet)
FCBB35330	35		2060	1200
FCBB50330	50	330	1080	650
FCBB75330	75		700	600

^{*} Approximate

Fibre Concrete Triangular Bar

Typical Uses

• For support of horizontal mesh and loose bars

- Continuous spacer for ease of steel fixing
- High compressive strength
- Impermeable to water
- Equilateral triangle, same concrete cover in any position



Fibre Concrete Triangular Bar – 330mm					
Product Code	Concrete Cover (mm)	Length (mm)	No./Pallet	Mass* (kg/Pallet)	
FCTB50330	50		1089	1330	
FCTB55330	55		990	1426	
FCTB60330	60	330	500	845	
FCTB65330	65	330	300	900	
FCTB70330	70		400	918	
FCTB75330	75		400	920	

Fibre Concrete Triangular Bar – 1000mm				
Product Code	Concrete Cover (mm)	Length (mm)	No./Pallet	Mass* (kg/Pallet)
FCTB251000	25		1000	1010
FCTB301000	30		1000	1350
FCTB351000	35		750	1348
FCTB401000	40		500	1165
FCTB451000	45		400	1128
FCTB501000	50		250	1440
FCTB551000	55		350	1490
FCTB601000	60	1000	300	1535
FCTB651000	65		200	1232
FCTB701000	70		250	1740
FCTB751000	75		150	1185
FCTB801000	80			880
FCTB901000	90		100	1173
FCTB1001000	100			1418

^{*} Approximate

Pile Wheels

Co-Packers' pile wheels come in a range of sizes and strengths to ensure correct concrete cover. They are suitable for different bar sizes and meet the requirements of AS/NZS 2425 Bar chairs in reinforced concrete – Product requirements and test methods.

Heavy Duty Pile Wheel

Typical Uses

• For pile cages, diaphragm walls and deep foundations

- Circular plastic spacer
- Provides perimeter cover
- Push fit for ease of installation
- Wider flange rim and rigid spoke wheel minimises skew action
- Suits different bar sizes



Product Code	Concrete Cover (mm)	Spiral (mm)	Thickness (mm)	No./Bag
CPCH25HD	25		30	250
CPCH35HD	35		//0	200
CPCH40HD	40		40	100
CPCH50HD	50		42	60
CPCH65HD	65	10 – 19	40	40
CPCH75HD	75		39	30
CPCH80HD	80		45	25
CPCH85HD	85		44	25
CPCH100HD	100		43	30

Pile Cage Foot

Typical Uses

• For pile cages, diaphragm walls and deep foundations

Features

- Provides concrete cover at the bottom end of the reinforcing pile cage
- Suitable for 16 40 mm bars



Product Code	Concrete Cover (mm)	Maximum Load Capacity (kg)	No./Bag
PCF85	85		
PCF100	100	500	60
PCF150	150		

Carbon Fibre Pile Wheel

Typical Uses

• For pile cages, diaphragm walls and deep foundations

- Expands to bond and seal inside concrete
- Flame resistant
- Suitable compressive strength for use with concrete
- Polymer-based spacer compliant with roads authority requirements
- Compliant with roads authority requirements



Product Code	Concrete Cover (mm)	Spiral (mm)	Thickness (mm)	No./Bag
CPCH40CF	40		40	100
CPCH50CF	50		42	60
CPCH65CF	65		40	40
CPCH75CF	75	10 – 19	39	30
CPCH80CF	80		45	25
CPCH85CF	85		44	23
CPCH100CF	100		43	30

Accessories



Safety Caps

Plastic Safety Caps reduce the risk of cuts and abrasions from exposed reinforcing bar ends, dowels and star pickets.

Safety Caps

Typical Uses

- Bar ends
- Star pickets

Features

- Suit all bar sizes
- Reduce the chance of cuts and abrasions from exposed bar ends
- Coloured for visibility
- Not designed for high-load vertical impacts



Product Code	Colour	No./Bag
BSC	Yellow	100

Start-A-Cap®

Action Products

Typical Uses

- Bar ends
- Star pickets
- Safety barriers

- Protection from exposed bars or star pickets
- UV-stabilised polypropylene
- Reusable
- High-visibility colours



Product Code	Suit Bar (mm)	Colour	No./Bag
STARTACAP1220	12 – 20	Yellow	F0
STARTACAP2436	24 – 36	Green	50

Lifeguard™ Safety Caps Plastic

Danley™

Typical Uses

- Bar ends
- Safety barriers

Features

- Manufactured from robust, UV-stabilised polypropylene
- Offer protection from exposed or protruding reinforcing steel bars
- Encapsulated domed steel plate 2 mm thick with central raised boss
- Internal ribs within sleeve to hold cap centrally on bar
- Reusable



Product Code	Suit Bar (mm)	Colour	No./Bag
LIFEGUARD1220	12 – 20	Yellow	F0
LIFEGUARD2436	24 – 36	Orange	50

Reosok® Safety Caps Plastic

Danley™

Typical Uses

- Bar ends
- Safety barriers

- Manufactured from robust, UV-stabilised polypropylene
- Offer protection from exposed or protruding reinforcing steel bars
- Can be connected in unison with a lacer bar for added fall protection
- Internal ribs within sleeve to hold cap centrally on bar
- Reusable



Product Code	Suit Bar (mm)	Colour	No./Bag
REOSOK12	12 – 20	Yellow	F0
REOSOK24	24 – 36	Orange	50

Safety Cushion Caps

$Connolly^{\hbox{\scriptsize $\mathbb R$}}$

Typical Uses

• Guarding against injury from protruding steel reinforcing bars and star pickets

- Concave top design and supporting internal webbing minimises the risk of injury by absorbing impact
- Injection moulded for accurate tolerances and consistency
- Reflective stripe on large cap for excellent night time visibility
- Small caps fit bars 12 20 mm
- Large caps fit bars 20 mm up to 33 mm and star pickets
- Colour and strength of caps not degraded by UV exposure
- Reusable



Product Code	Suit Bar (mm)	Suits Star Picket	Colour	No./Bag
CSCC1220	12 – 20	No	Caraca	F0
CSCC2032	20 – 32	Yes	Green	50

Tie wire

Tie wire is used as a steel fixing aid, suitable for tying bars and mesh. Tie wire is available in galvanized and black finishes.

Tie Wire Belt Pack

Typical Uses

• Tying bar and mesh

Features

Annealed wire



Tie Wire Belt Pack – Black				
Product Code	Wire Diameter (mm)	Length (m)		
BP1.4	1.4	100		
BP1.5	1.57	93		

Tie Wire Belt Pack – Galvanized				
Product Code	Wire Diameter (mm)	Length (m)		
BP1.5GAL	1.5	93		

Bag Tie

Typical Uses

• Tying bar and mesh

- Annealed wire
- Pre-cut lengths
- Bundles of 2000
- Available in black and galvanized finishes
- Used with a twisting tool or nips



Bag Tie – Black			
Product Code	Length (mm)		
BT110	110		
BT125	125		
BT150	150		
BT175	175		
BT200	200		

Bag Tie – Galvanized			
Product Code	Length (mm)		
BT110G	110		
BT125G	125		
BT150G	150		
BT200G	200		

Tie Wire Roll Black

Typical Uses

• Tying bar and mesh

Features

• Annealed wire



Product Code	Wire Diameter (mm)	Length* (m)
TW		60
TW5	1.6	320
TW10		650
TW315	3.15	16

^{*} Approximate

Tie Wire Pre-cut Black

Typical Uses

• Tying bar and mesh

- Annealed wire
- Pre-cut lengths
- \bullet For use with a twisting tool or nips



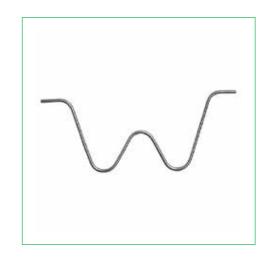
Product Code	Wire Diameter (mm)	Length (mm)	Mass* (kg)
TWC11	1.57	280	
TWC14	1.57	355	2
TWC125280	1 25	280	3
TWC125355	1.25	355	

^{*} Approximate

Bond Beam Ties

Typical Uses

- Closing-off concrete blocks where core filling is not required beneath bond beams, lintel beams or sill beams (block out plates)
- Holding bars in bond beams and block walls where two bars are specified (W ligs)

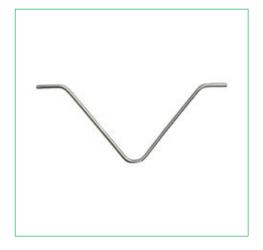


Product Code	Description	No./Bag
BBVT	V Tie	
ВОР	Block Out Plate	100
WLIGS	Fitment	

Block Wall Ties

Typical Uses

- Tying in unreinforced block walls
- Controlling cracking where blocks do not intersect or overlay



Product Code	No./Bundle
BWT250	50

Polyethylene Building Films

Polyethylene building films act as a vapour barrier and waterproof membrane for slab-on-ground applications.

Polyethylene Building Film

Typical Uses

 Slab-on-ground moisture barrier and/or overlay curing sheets for newly poured concrete

Features

- High and medium impact polyethylene building film available
- Wide range of widths, lengths and thicknesses

Relevant Standards

- AS 2870 Residential slabs and footings
- AS/NZS 2904 Damp-proof courses and flashings



Polyethylene Building Film – High Impact Black				
Product Code	Thickness (µm)	Width (m)	Length (m)	Mass* (kg)
PB22H		2	50	18
PB2425H	200	200	25	10
PB24H	200	4	50	26
PB26H		6	33	36

Polyethylene Building Film – Medium Impact Black							
Product Code	Product Code Thickness (µm) Width (m) Length (m) Mass* (kg						
PB141	100	4	100	36			
PB22		2	50	18			
PB24		4	30	36			
PB2425	200	4	25	18			
PB26		6	33	36			
PB26300		O	FO.	54			
PB34	300	4	50	54			

* Approximate

Tables continued next page.

Polyethylene Building Film – Medium Impact Orange						
Product Code Thickness (µm) Width (m) Length (m) Mass* (kg)						
PBO34	300	4	25	28		
PO22	200	2	50	18		
PO24	200	4	50	36		

Polyethylene Building Film – High Impact Orange							
Product Code Thickness (µm) Width (m) Length (m) Mass							
POV24H	200		25	18			
POV34H	300	4	23	27			
POV26		6	33	36			
POV22	200	2	F0	18			
POV24		4	50	36			

Polyethylene Building Film – Medium Impact Clear						
Product Code Thickness (µm) Width (m) Length (m) Mass* (kg						
PN053	50	3		14		
PN12	100	2	100	9		
PN14	100	4		18		

^{*} Approximate

Polyethylene Building Tape

Typical Uses

• For joining and sealing polyethylene building film

- Silver and orange colours
- Lengths of 30 m and 75 m



Product Code	Width (mm)	Length (m)	Colour
PTR	/ 0	30	Silver
PVC	48	75	Orange

STEGO® Tape

Typical Uses

- STEGO® seaming tape, a low-permeance tape designed for protective sealing, hanging, seaming, splicing and patching applications that has been engineered to bond specifically to STEGO® wrap for sealing seams and penetrations
- STEGO[®] claw tape, a multi-layered tape used to seal STEGO[®] wrap around the perimeter of the slab while the concrete is placed
- STEGO® tack tape, a double-sided adhesive strip used to bond and seal STEGO® wrap to concrete, masonry, wood, metal and other surfaces. Its flexibility and mouldability allow for a variety of applications and installations including sealing the perimeter



Product Code	Туре	Width (mm)	Length (m)
STEGOST95	Seaming Tape	95	FF
STEGOCT75	Claw Tape	75	55
STEGOTT51	Tack Tape	51	15

Dowels

Dowels are short steel bars that allow movement and load transfer between slabs. Highly durable and resistant to corrosion, dowels supplied by InfraBuild Reinforcing are available in a range of sizes, shapes, lengths and finishes.

Square Reinforcing Dowels

Typical Uses

• Concrete construction

- Friction cut
- Provide positive load transfer across concrete joints
- Smooth bars allow movement in the joint due to shrinkage and temperature changes



Product Code	Size (mm)	Length (mm)	Finish
SQ16D400F		400	
SQ16D500F	16	500	
SQ16D600F		600	
SQ20D400F		400	
SQ20D500F	20	500	Black
SQ20D600F		600	
SQ25D400F		400	
SQ25D500F	25	500	
SQ25D600F		600	
SQ16D400FG		400	
SQ16D500FG	16	500	
SQ16D600FG		600	
SQ20D400FG		400	
SQ20D500FG	20	500	Galvanized
SQ20D600FG		600	
SQ25D400FG		400	
SQ25D500FG	25	500	
SQ25D600FG		600	

Round Reinforcing Dowels

Typical Uses

• Concrete construction

- Friction cut
- Provide positive load transfer across concrete joints
- Smooth bars allow movement in the joint due to shrinkage and temperature changes
- Other diameters and lengths are available



Round Dowels – Black					
Product Code	Diameter (mm)	Length (mm)			
R16D300F		300			
R16D400F	16	400			
R16D450F	16	450			
R16D600F		600			
R20D300F		300			
R20D350F		350			
R20D450F	20	450			
R20D600F		600			
R20D1000F		1000			
R24D450F	2/	450			
R24D600F	24	600			

Round Dowels - Galvanized		
Product Code	Diameter (mm)	Length (mm)
R12D300FG	12	300
R12D600FG	12	600
R16D300FG		300
R16D400FG		400
R16D450FG	16	450
R16D500FG	10	500
R16D600FG		600
R16D1000FG		1000
R20D300FG		300
R20D350FG		350
R20D450FG	20	450
R20D600FG	20	600
R20D1000FG		1000
R20D1200FG		1200
R24D350FG		350
R24D450FG	24	450
R24D600FG	24	600
R24D1000FG		1000

Glass Fibre Reinforced Polymer Dowel

Typical Uses

- Structures near the coast / marine environment
- Medical facilities requiring electromagnetic neutrality
- Footpaths, slab-on-ground, ports, tunnels

- Corrosion resistant
- No locking of the joint in the slab
- Electromagnetic neutrality
- Lighter than steel (2 g/cm³, 4 x lighter)
- Other diameters are available. Lead time applies



Product Code	Diameter (mm)	Length (mm)
GFRPD18	18	
GFRPD20	20	Made to order
GFRPD25	25	



Diamond® Dowels

Danley™

A high-load capacity plate that allows movement and minimises differential deflection between concrete slabs, Danley™ Diamond® Dowels are ideal for perimeter-of-pour dowel applications at construction joints. The flange on the sleeve ensures the dowel is perpendicular to the form board and is stable.

Typical Uses

• Perimeter-of-pour dowel applications at construction joints

- Colour-coded one-piece PVC sleeves
- Minimises differential deflection between slabs
- Allows two-directional movement in the horizontal plane
- Flange-on-sleeve ensures dowel is perpendicular to form board and is stable
- Supplied with fixing nails
- Stainless steel alternatives are available. Lead time applies
- Other thicknesses are available





PD3™ Plate Dowel® Cradles with RynoBar™

Danley™

PD3™ Plate Dowel® Cradles with RynoBar™ are used in concrete construction and are tapered plate dowels assembled into cradles of 3 m nominal length, offering a highly efficient dowel system well suited for contraction joints. The tapered plate dowels are 300 mm long and are made from AS/NZS 3679.1 Grade 300 steel. The RynoBar™ self yielding travel bar device eliminates the need to cut bars before concrete delivery.



Typical Uses

• For limiting joint deflection to provide superior joint stability

Features

- The PD3™ Plate Dowel Cradle features a plate dowel with bond breaker allowing concrete-to-steel contact
- It utilises a tapered plate dowel that allows lateral movement without the use of a plastic sleeve
- The wire cradle construction ensures the accurate placement and alignment of the plate dowels at the correct centres and height within the slab

Relevant Standards

- Exceeds CI360R-10 design specifications for <0.25 mm load deflection
- AS/NZS 3679.1 Structural steel

PD3™ Plate Dowel® Cradles – Black						
Product Code	Plate Thickness (mm)	Dowel Length (mm)	Dowel Spacing (mm)	Suit Slab (mm)	Cradle Length (m)	
PD306450125B	6			125		
PD306450150B				150		
PD306450175B				175		
PD306450200B		300	450	200	3	
PD310450150B				150		
PD310450175B	10			175		
PD310450200B				200		

PD3™ Plate Dowel® Cradles – Galvanized						
Product Code	Plate Thickness (mm)	Dowel Length (mm)	Dowel Spacing (mm)	Suit Slab (mm)	Cradle Length (m)	
PD306450125G				125		
PD306450150G	6			150		
PD306450175G				175		
PD306450200G			450	200	3	
PD310450150G	10			150		
PD310450175G		300		175		
PD310450200G				200		
PD320300250G			200	230 – 275	1.2	
PD320300300G	20		300	280 – 330	1.2	
PD320400350G			/00	340 – 390	1.6	
PD320400400G			400	400 – 450	1.6	

Square Flange Box with Galvanized Dowels

Danley™

Square Dowels with flange dowel boxes are used in construction joints in both ground and elevated slabs. Suitable for post-tension slab joints and also in elevated slabs as a shear connector, they allow for large lateral movement and have expansion joint capability.

Typical Uses

- Construction joints in ground and elevated slabs
- Post-tension slab joints
- Elevated slabs as a shear connector

- Allows for large lateral movement
- Expansion joint capability
- Formed from galvanized sheet steel
- Rigid foam void filler inside
- Supplied with integral nailing flanges with location marks

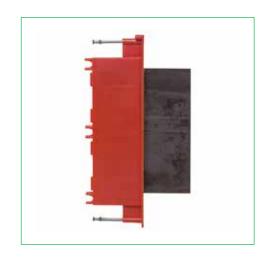


Product Code	Dowel Size (mm)	Dowel Length (mm)	Flange Box Length (mm)
FDBS16G	16 x 16	400	
FDBS20G	20 x 20	200	220
FDBS25G	25 x 25	300	
FDBS32G	32 x 32	500	270
FDBS40G	40 x 40	400	220

Biscuit Plate Dowels

Connolly[®]

Biscuit Plate Dowels are designed to transfer loads across construction joints in slab-on-ground applications. The plastic sleeve encases one half of the plate dowel to de-bond the dowel from the concrete. Connolly® Biscuit Plate Dowels allow for expansion, contraction and lateral movement at the joint. With pre-installed nails and V-notches on all sides, they can easily and accurately be installed on conventional formwork, ensuring dowel alignment. Injection moulded from polystyrene for accuracy and stiffness, Biscuit Dowel Sleeves minimise the vertical movement across the joint. Biscuit Dowel Sleeves are colour coded to indicate the plate dowel thickness.



Typical Uses

• Load transfer in construction joints

Features

- Minimises differential deflection between slabs
- Allows for contraction, expansion and lateral movement
- V-notches and pre-installed nails for ease of installation
- Speeds up dowel installation
- Available in black or hot dip galvanized finish

Relevant Standards

- AS/NZS 3679.1 Structural steel Hot-rolled bars and sections
- AS/NZS 4680 Hot dip galvanized (zinc) coatings on fabricated ferrous articles

Biscuit Plate Dowels – Black					
Product Code	Plate Thickness (mm)	Size (mm)	No./Box	Sleeve cover	
BPD6B	6	110 x 150	10	Red	
BPD10B	10	110 X 150		Green	

Biscuit Plate Dowels – Galvanized					
Product Code	Product Code Plate Thickness (mm) No./Box				
BPD6G	6	110 v 150	10	Red	
BPD10G	10	110 x 150		Green	

Plate Dowel Cradles

Connolly®

Plate Dowel Cradles are used for load transfer in saw cut contraction joints. They are a welded wire assembly that ensures the horizontal and vertical alignment of dowels at the correct spacing and height. All Connolly® Plate Dowel Cradles are supplied with a de-bonding sleeve to one half of the dowel to allow for contraction and lateral movement. Manufactured in a rigid 6 mm welded wire assembly, they are capable of withstanding the harsh treatment they frequently encounter during construction activities. Cradles are easy to transport, handle and install, saving time and money for the contractor.



Typical Uses

• Load transfer in saw cut contraction joints

Features

- Pre assembled and welded to ensure accuracy
- Ensures dowel alignment is maintained during concrete placement
- Minimises dowel installation time
- Custom cradles are available

Relevant Standards

- AS/NZS 3679.1 Structural Steel Hot-rolled bars and sections
- AS/NZS 4680 Hot dip galvanized (zinc) coatings on fabricated ferrous articles

Plate Dowel Cradles – Black						
Product Code	Plate Thickness (mm)	Dowel Length (mm)	Dowel Spacing (mm)	Suit Slab Length (mm)	Cradle Length (m)	
CCP6450125				125		
CCP6450150	c	300	450	150		
CCP6450175	6			175		
CCP6450200				200	3	
CCP10450180				180		
CCP10450200	10			200		
CCP10450250				250		

Plate Dowel Cradles – Galvanized						
Product Code	Plate Thickness (mm)	Dowel Length (mm)	Dowel Spacing (mm)	Suit Slab Length (mm)	Cradle Length (m)	
CCP6450125G				125		
CCP6450150G	6	300	450	150		
CCP6450175G				175		
CCP6450200G				200	3	
CCP10450180G				180		
CCP10450200G	10			200		
CCP10450250G				250		

DSD Shear Load Connectors

Ancon[®]

Ancon® DSD Shear Load Connectors are used in expansion and contraction joints of reinforced concrete structures to transfer vertical shear loads while allowing the required expansion and contraction. Each connector is a two-part assembly comprising a stainless steel sleeve and a stainless steel dowel component.

Ancon® DSD Shear Load Connectors are double dowels that come in a wide range of load classes to suit different conditions. Ancon® ESD single dowels are used where loads are small, but where alignment is critical.

The Ancon® ESDQ and DSDQ shear load connector uses the same dowel as the ESD and DSD respectively, but the cylindrical sleeve is contained within a rectangular box section to allow lateral movement or rotation in addition to longitudinal movement.

Typical Uses

• Slab-to-slab / Slab-to-wall



Features

- Effective in transferring loads and allowing movement
- Nail plate on the sleeve ensures subsequent alignment of the dowel component
- Elimination of traditional dowels
- Manufactured from stainless steel to ensure a high degree of corrosion resistance
- Q product range allows lateral movement

DSD Double Shear Load Connectors						
Product Code	Dowel Diameter (mm)	Dowel Length (mm)	Sleeve Length (mm)	Lateral Movement		
DSD25	14	250	120			
DSD30	16	260	120			
DSD50	18	280	135			
DSD65	20	300	155	No		
DSD75	22	340	155			
DSD100	30	400	210			
DSD130	35	470	265			
DSD150	42	550	275			
DSDQ30	16	260	140			
DSDQ50	18	280	160			
DSDQ65	20	300	175	Yes		
DSDQ75	22	340	1/3			
DSDQ100	30	400	240			
DSDQ130	35	470	290			
DSDQ150	42	550	305			

Q = product allows for lateral movement.

ESD Shear Load Connectors

Ancon®

Ancon® ESD Shear Load Connectors are used in expansion and contraction joints of reinforced concrete structures to transfer vertical shear loads while allowing the required expansion and contraction.

Each connector is a two-part assembly comprising a stainless steel sleeve and a stainless steel dowel component.

Ancon® ESD single dowels are used where loads are small, but where alignment is critical.

The Ancon® ESDQ shear load connector uses the same dowel as the ESD, but the cylindrical sleeve is contained within a rectangular box section to allow lateral movement or rotation in addition to longitudinal movement.

Typical Uses

• Slab-to-slab / Slab-to-wall



Features

- Effective in transferring loads and allowing movement
- Nail plate on the sleeve ensures subsequent alignment of the dowel component
- Elimination of traditional dowels
- Manufactured from stainless steel to ensure a high degree of corrosion resistance
- Q product range allows lateral movement

ESD Single Shear Load Connectors						
Product Code	Dowel Diameter (mm)	Dowel Length (mm)	Sleeve Length (mm)	Lateral Movement		
ESD10	20					
ESD15	22	300	175	No		
ESD20	30			INO		
ESD25	35	350	200			
ESDQ10	20					
ESDQ15	22	300	175	Yes		
ESDQ20	30			ies		
ESDQ25	35	350	195			

Q = product allows for lateral movement.

Lockable Dowels

Ancon[®]

Ancon® Lockable Dowels are designed for use in temporary movement joints. They allow initial shrinkage of the concrete to take place and are then locked in position, by mechanical and chemical means, to prevent further movement taking place.

Ancon® Lockable Dowels eliminate the need for complicated formwork and are ideal for slab-to-slab and slab-to-wall connections in a variety of steel reinforcement applications.

The complete dowel set comprises the dowel itself, the sleeve including the lid, the locking plate, and a 2-part epoxy resin.

Typical Uses

- Slab-to-slab
- Slab-to-wall
- Temporary movement joints

- Eliminate pour strips
- Reduce propping times
- Reduce formwork
- Faster, safer construction
- Proven performance and simple installation
- Guaranteed alignment allows movement
- Allows for inspection before locking

Product Code	Size (mm)	Sleeve Size (mm)	Application
ESDQL20	435 x 30	240 x 170	Slab-to-slab
HLDQL30	475 x 30	280 x 170	Slab-to-slab High Load
ESDQL20W	270 x 30	240 x 170	Slab-to-wall



EGCODORN® Shear Dowels

Max Frank

Expansion joints are provided in concrete structures to decouple components and avoid stress cracks. EGCODORN® shear dowels are used for the transmission of shear forces which occur in such joints.

Typical Uses

• Permanent Movement Joint (PMJ), alternative to corbel design

- Shear dowel
- Stainless steel sleeve, load-bearing core and silicone rubber end capping
- Type WQ for longitudinal and lateral movements and mainly used for static loads



Product Code	Size (mm)	Туре	Mass* (kg)
EDWQ40	40		3.1
EDWQ50	50		4.6
EDWQ70	70		6.5
EDWQ95	95		9.3
EDWQ100	100		
EDWQ120	120	WQ	16.2
EDWQ150	150		17.3
EDWQ210	210		30
EDWQ300	300		32
EDWQ350	350		35.8

^{*} Approximate

Dowel Caps and Sleeves

Round Dowel Caps

Features

• Allows longitudinal movement



Product Code	Suit Dowel Diameter (mm)	No./Bag
DCP16	16	
DCP1620	16 or 20	100
DCP2024	20 or 24	100
DCP24	24	

Round Expansion Caps

Typical Uses

• Concrete reinforcement applications

- Allows longitudinal movement
- Designed with hinged cap providing firm fit over the dowel
- 10 mm internal pin to locate dowel centrally and to create void for expansion



Product Code	Suit Dowel Diameter (mm)	No./Bag
DCPX	12 – 20	100
DCP36	24 – 36	100

Round Dowel Sleeves – Speed Sleeve™ Danley™

Speed SleeveTM Round Dowel Sleeves are designed for concrete reinforcement applications and minimise vertical movement and reduce damage at joints. Speed SleevesTM are easy to install and eliminate the need for greased bars and drilling foam boards. Speed SleevesTM are also suitable for galvanized dowels. Reusable nailing plates are available for fixing to forms sold separately.

Typical Uses

• Concrete reinforcement applications

- Eliminates need for drilling form boards
- Eliminates greased bars
- Minimises vertical movement at joint
- Reusable nailing plate
- Nailing plates available for fixing to forms



Product Code	Description	Suit Dowel Diameter (mm)	Length (mm)	Colour	
DSPSLR1620	Sleeve		240		
DSPSLR1630	Sieeve	16	310	Green	
DSPSLNP16	Nailing Plate		_		
DSPSLR2020	Sleeve		240		
DSPSLR2030	Sieeve	20	310	Red	
DSPSLNP20	Nailing Plate		-		
DSPSLR2420	Clasus		240		
DSPSLR2430	Sleeve	24	24	310	Brown
DSPSLNP24	Nailing Plate		-		
DSPSLR3320	Sleeve	33	240		
DSPSLR3330	Sieeve		310	Blue	
DSPSLNP33	Nailing Plate		-		

Square Dowel Sleeves - Dowelmaster™ Danley™

A plastic cover for square dowels that allows slab movement in two directions and prevents slab lock-up, Danley Dowelmaster Square Dowel Sleeves are suitable for 300 mm and 400 mm dowels. Simply secure the sleeves to the construction joint forms with the optional nailing plates, pour the concrete, strip the forms and insert square dowels into the sleeves — ready for the second pour.

Typical Uses

• Concrete reinforcement applications

- Allows slab movement in two directions
- Prevents slab lock-up
- Nailing plate available for wood forms
- Supplied with fixing stake and wedge
- Compatible with Danley™ Key Joint
- Also suitable for timber formwork utilising the nail plates
- 25 mm Dowelmaster™ has built-in nailing flange

Product Code	Description	Colour	Suit Dowel Diameter (mm)	Length (mm)
DWLM16	Sleeve	White	10	200
DWLM16NP	Nailing Plate	white	16	_
DWLM20	Sleeve	V II	20	250
DWLM20NP	Nailing Plate	Yellow	20	_
DWLM25	Sleeve with Built-in Nailing Flange	Purple	25	250

Universal Dowel Sleeves

Connolly®

Universal Dowel Sleeves (UDS) are available for round and square dowels to allow for load transfer across joints in slab-on-ground applications. The sleeve encases one half of the dowel to de-bond the dowel from the concrete. All Connolly® Universal Dowel Sleeves allow for expansion and contraction at the joint. Square UDS also allow for lateral movement at the joint.

Typical Uses

• Construction, contraction and expansion joints

- \bullet Patented Twist and Lock feature integrates with Connolly $^{\! @}$ Key Joints and Expansion Joints
- Patented integrated support leg
- Colour coded
- Available for square and round dowels
- Square dowel sleeves provide for lateral movement
- Includes nailing plate



Product Code	Suit Dowel Size (mm)	Suit Dowel Length (mm)	Colour	Suit Dowel Shape
UDSR16230	16	450	Pink	
UDSR16300	10	600	PITIK	
UDSR20230	20	450	Dive	
UDSR20300	20	600	Blue	
UDSR24230	24	450	Brown	Round
UDSR33230	22		C	
UDSR33300	33	600	Cream	
CUDSR36230	36	450	White	
CUDSR36300	30	600	vviite	
UDSSQ16230	16	450	C	
UDSSQ16300	16	600	Green	C
UDSSQ20230	20	450	Vellaur	- Square
UDSSQ20300	20	600	Yellow	

Round Dowel Sleeves Dowelsert

Danley™

Typical Uses

• Concrete reinforcement applications

- Two-piece cast-in socket for construction joint dowels
- High-density black polypropylene ensures positive bearing capacity between the dowel and concrete



Product Code	Suit Dowel Diameter (mm)	Length (mm)
DWLSERT16	16	200
DWLSERT20	20	300

Pullout Bar Boxes

Keybox Reinforcement Continuity System

Ancon[®]

The Ancon® Keybox Reinforcement Continuity System simplifies formwork design and eliminates drilling of shutters. Each unit consists of a galvanized steel casing that is dimpled to provide an effective concrete bond. Pre-bent reinforcement bars are housed within the casing and are enclosed by a protective cover. When the cover is removed the reinforcement bars can be straightened ready for lapping onto the main reinforcement.

Quick and easy to install, Ancon® Keybox maintains continuity of reinforcement at construction joints and includes 12 mm reinforcement bar. The embedded bar is available in a variety of different shapes and configurations.



• Slab-to-slab wall connections

Features

- Quick and easy to install
- Maintains continuity of reinforcement at construction joints in concrete
- Simplification of formwork design
- No need for drilling shutters

Relevant Standards

- AS/NZS 4671 Steel for the reinforcement of concrete
- AS 3600 Concrete structures

See table on next page.



See product on previous page.

Product Code	Bar Diameter (mm)	Bar Spacing (mm)	Box Length (mm)	Bar Shape	Suit Slab* (mm)
KB85L7		150			00 1/0
KB85L9		110		L	90 – 140
KB120U4		250	1000		
KB120U5		200	1000		140 – 160
KB120U7		150			
KB150U5		200			
KB150U6		200	1200		
KB150U7		150	1000		160 – 200
KB150U9		110	1000		
KB150U11	12	110	1200		
KB190U5	12	200			
KB190U7		150	1000	U	
KB190U9		110			200 – 250
KB190U11		110	1200		200 – 250
KB190U4		250	1000		
KB190U6		200	1200		
KB220U5		200	1000		
KB220U9		110	1000		220 200
KB220U6		200	1200		220 – 300
KB220U11		110	1200		

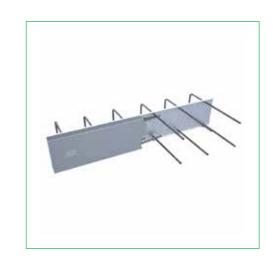
^{*} Minimum slab dimensions based on 20 mm cover to reinforcement.

ReBox™ Pull Out Box Connection System

Reid™

Features

- Floor-to-wall reinforcing bar joining system
- Unique dimpled rebate box stays in place eliminating the need for scabbling
- Galvanized steel rebate box
- The Reid™ Rebox™ is easily attached to formwork and/or the reinforcing cage
- After the concrete has been poured and the formwork stripped, the design of the Rebox™ allows for easy opening of the unit and access to the reinforcement bars ready for deployment



Relevant Standards

• AS 3600 Concrete structures

Product Code	Bar Diameter (mm)	Bar Spacing (mm)	Suit Slab (mm)	Box Length (mm)
REB151512	12	150		
REB151516	16	150		
REB152012	12	200		
REB152016	16		150 160	
REB152512	12	250	150 – 160	1000
REB152516	16			
REB153012	12	300		
REB153016	16	300		
REB181512	12	150		1000
REB181516	16	150		
REB182012	12	200		
REB182016	16	200	100 200	
REB182512	12	350	180 – 200	
REB182516	16	250		
REB183012	12			
REB183016	16	300		

Table continued on next page.

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Product Code	Bar Diameter (mm)	Bar Spacing (mm)	Suit Slab (mm)	Box Length (mm)		
REB251512	12	150				
REB251516	16	150				
REB252012	12	200				
REB252016	16	200	350			
REB252512	12	350	250	- 1000		
REB252516	16	250				
REB253012	12	300				
REB253016	16		150			
REB301512	12	150		1000		
REB301516	16					
REB302012	12	200				
REB302016	16	200	200			
REB302512	12	250	300			
REB302516	16	250				
REB303012	12	300				
REB303016	16	300				

Stabox® Continuity Strip

Max Frank

Typical Uses

- Light shaft connection
- Ground slab
- Underground parking
- Basement stairway connection
- Wall-to-slab

- Simplification of formwork
- No need to pierce the formwork
- A variety of stirrup widths



Product Code	Bar Diameter (mm)	Bar Spacing (mm)	Suit Slab (mm)	Box Length (mm)
STABOX141012			140	
STABOX191012		100	190	
STABOX221012		100	220	
STABOX251012			250	
STABOX121512			120	
STABOX141512	12		140	
STABOX191512		150	190	1250
STABOX221512			220	1230
STABOX251512			250	
STABOX122012			120	
STABOX142012			140	
STABOX192012		200	190	
STABOX222012			220	
STABOX252012			250	



Expertise in high-rise construction



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We collaborate closely with customers to optimise steel usage and ensure project cost efficiencies, and provide a comprehensive range of AS/NZS-compliant, ACRS-certified and sustainable reinforcing products and solutions.

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Formwork

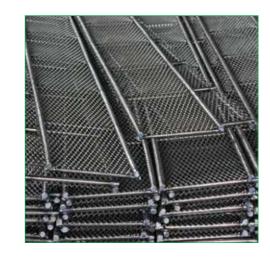
Suitable for permanent formwork in floor slabs, ceilings and walls Stremaform® lies between the continuous reinforcement layers so that there is no need to interrupt the reinforcement. An expanded metal sheet welded between the bars provides a rough surface that eliminates concrete scabbling.

Stremaform® Standard Max Frank

Typical Uses

- Construction joints in deep slabs, hydrostatic slabs and composite slabs
- High-strength column containment
- Lost formwork in form slabs, ceilings and walls

- Expanded metal sheet welded between bars provides rough surface that eliminates concrete scabbling
- Reinforcing bar continuity from one pour to another
- A range of sizes is available



Stremaform® – Standard						
Product Code	Height (mm)	Length (mm)	Mass* (kg)			
STREMASTD0100	100		2.4			
STREMASTD0200	200		4.1			
STREMASTD0250	250		4.5			
STREMASTD0300	300		5			
STREMASTD0350	350	2400	6.2			
STREMASTD0400	400	2400	6.6			
STREMASTD0450	450		7.1			
STREMASTD0500	500		8.3			
STREMASTD0600	600		9.2			
STREMASTD1000	1000		15.2			

Stremaform® – Strong with Stiffening					
Product Code	Height (mm)	Length (mm)	Mass* (kg)		
STREMASTIFF0600	600	2400	11.4		
STREMASTIFF1000	1000	2400	19		

^{*} Approximate

Stremaform® Water Bar Cage

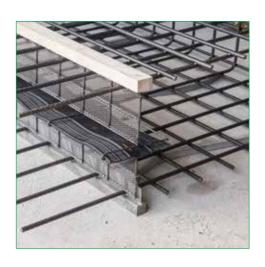
Max Frank

Typical Uses

- Construction joints in deep slabs, hydrostatic slabs and composite slabs
- High-strength column containment
- Lost formwork in form slabs, ceilings and walls

Features

- Expanded metal sheet welded between bars provides rough surface that eliminates concrete scabbling
- Reinforcing bar continuity from one pour to another
- A range of sizes is available



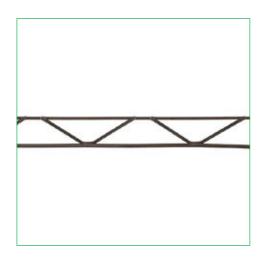
Product Code	Height (mm)	Length (mm)	Mass* (kg)
STREMACAGE0420	420		2.59
STREMACAGE0525	525	2400	2.78
STREMACAGE0670	670		3.94

^{*} Approximate

Stremaform® Girders

Max Frank

- Can be used to accommodate any slab depth
- Ideal for large structural components
- Rear anchoring in the first concrete pour, hence no additional formwork required for the second concrete pour



Product Code	Length (mm)	
STREMAGIRDER	2400	

Stremaform® Spacer

Max Frank

Typical Uses

- Suitable for slabs with very heavy reinforcement
- Construction joints in deep slabs, hydrostatic slabs and composite slabs

Features

- Various concrete covers available
- Suitable for slabs with very heavy reinforcement
- Custom cleavages available



Product Code	Height (mm)	Length (mm)	Mass* (kg)
STREMASPACER0050	50	1200	1.5

^{*} Approximate

Pecafil®

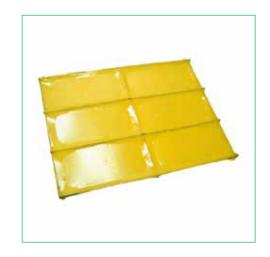
Max Frank

Max Frank Pecafil® is a flat sheet wire mesh with a heat-shrunk layer of polyethylene applied to both sides. Strong and lightweight, it is an alternative to conventional formwork.

Typical Uses

• An alternative to conventional formwork

- Flat sheet wire mesh with a heat-shrunk layer of polyethylene applied to both sides
- Strong and lightweight
- Can be pre-formed prior to delivery
- Backfill after installation and pour concrete
- Does not require stripping



Product Code	Vertical Wire Size (mm)	Horizontal Wire Size (mm)	Width (mm)	Length (mm)
PECAFIL6600			600	
PECAFIL6900			900	
PECAFIL61200	5.5	4	1200	2250
PECAFIL61500			1500	
PECAFIL61800			1800	

ReidBar™ System

ReidBar™ is manufactured to AS/NZS 4671 Steel for the reinforcement of concrete. The bars are hot-rolled with the deformations forming a continuous right hand thread. ReidBar™ is part of a proprietary system using a range of fittings to simplify reinforcement. ReidBar™ fittings are designed to develop the breaking strength of the ReidBar™ bar, with the exception of some Reidbrace™ and formwork fittings.

- A continuously threaded, hot-rolled, Grade 500
 reinforcing bar that can be cut at any point along its
 length, then simply joined end to end by a coupler.
 This unique feature enables an entirely new approach
 to reinforcement placing and fixing
- Ultimate strength development is possible with short embedment depths
- Suitable for thin concrete sections, such as wall panels

- Full range of threaded fittings for joining, anchoring and terminating
- Splice at any point along the bar without specialised splicing equipment
- Reduces bar congestion problems
- Eliminates cast-in starter bars to simplify transport and handling
- Eliminates the need to drill holes in formwork and shutters for starter bars

Specifications and Sizes								
		Nominal	Cha	racteristic Va	lues			
Product Code	Bar Diameter (mm)	Thread Pitch (mm)	Yield Strength* (kN)	Ultimate Strength* (kN)	Shear* (0.62 x ultimate strength)	Mass (kg/m)	Nominal Area (mm²)	
RB12	12	8	56.5	61.0	37.8	0.91	113	
RBA16	16	9	100.6	108.5	67.3	1.62	201	
RBA20	20	10	157.0	169.6	105.2	2.53	314	
RB25	25	12.9	245.5	265.1	164.4	3.95	491	
RB32	32	16.4	402.0	434.2	269.2	6.47	804	

Bar Diameter (mm)	Cross- sectional Area (mm²)	Yield Stress (MPa)	Design Yield Capacity (kN)	Design Tensile Capacity (kN)	Max Tensile Working Load (kN)	Design Shear Capacity (0.62 min ult) (kN)	Minimum Hole for Clearance (mm)	Minimum Length 'a' for L bar with Coupler (mm)(5d _b pin)
RB12	113		56.5	61.0	39.0	37.8	15	145
RBA16	201		100.6	108.5	70.0	67.3	20	185
RBA20	314	500	157.0	169.6	109.0	105.2	24	230
RB25	491		245.5	265.1	171.0	164.4	29	295
RB32	804		402.0	434.2	281.0	269.2	38	365

^{*} The load that a threaded insert can provide is dependent on its anchorage (refer to ReidBar™ Design Guide).

ReidBar™

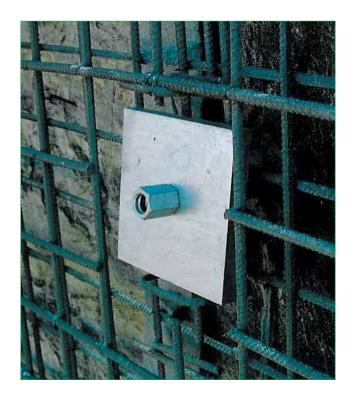
This unique system consists of continuously threaded 500N Grade reinforcing bar and a complementary range of fittings and accessories that have been proven to simplify the detailing and fixing of reinforcing bar. ReidBar™ reinforcing bars can be cut and joined together at any point without the loss of strength, or the material wastage arising from lapped connections.

Note: Additional lead time is required for galvanized bars and fittings.

ReidBar™ is a hot-rolled, continuously coarse-threaded concrete reinforcing steel bar that complies with the requirements in AS/NZS 4671 for Class N reinforcing.

When used in conjunction with ReidBar $^{\mathbb{M}}$, it offers the designer flexibility to overcome challenging design or buildability issues. These tables list the material properties and the common accessories available for ReidBar $^{\mathbb{M}}$.

ReidBar™ Design Guide and case studies are available from www.infrabuild.com



Note: InfraBuild does not recommend ReidBar™ for use in formwork.

ReidBar™ Starter Bar System

Threaded ReidBar™ Starter Bar Systems have been developed to provide full-strength and positive connections between precast concrete panels, floor slabs and in situ suspended floors.

The system comprises ReidBar™ Threaded Inserts, ReidBar™ Starter Bars, specially designed Placement Chairs, Nailing Plates and Antenna Caps.

The versatility of the system allows the contractor to set up the ReidBar™ Inserts prior to the panel being poured or to 'puddle them in' before the panel is finished.

Whatever the method used, ReidBar™ Starter Bar Systems offer strength, stability, price effectiveness and ease of operation that you just don't get with standard N Bar starter bars.

- Available in RB12, RBA16 and RBA20 off the shelf
- Thread diameter is true to size not an
 N20 bar with a thread turned down to 16 mm
- Coarse thread on the bar resists damage and minimises foreign materials blocking the threads of the cast-in ReidBar™ insert
- System components are purpose designed and offer speed of set up and installation either in the precast yard or on site
- Non-standard lengths are easily catered for as starter bars are cut from standard 6 or 12 m lengths of ReidBar™

Comparison Table ReidBar™ – Starter Bars vs N-bar Starter Bars							
Product Code	Grade (MPa)	Metric Thread	Stressed Area (mm²)	Maximum Force Capacity (kN)	Limit State Strength* øf _{sy} (kN)		
N12		M10	58	22	17		
RB12	500	RB12	113	57	45		
N16		M12	84	32	25		
RBA16		RBA16	201	101	80		
N20		M16	157	59	47		
RBA20		RBA20	314	157	126		
N24		M20	245	92	74		
RB25		RB25	491	246	196		

^{*} Refer to the Reid Design Manual

ReidBar™ Soil and Rock Anchoring

- ReidBar[™] has closely defined mechanical properties that provide consistent performance under long-term anchor loading
- Supplied in the hot-rolled condition
- Class N and smooth, relatively flat rate of strain hardening ensures a high margin of safety against tensile/shear overload in the case of transverse movements in the rock or soil
- Resists dynamic loads (e.g. traffic wheel loads)
- Preloading to the full working load ensures that the load transmitted to the anchorage medium (rock or soil) is constant; i.e. live loads are not transmitted to the anchorage medium
- Rugged thread is resistant to damage
- May be tensioned, released and re-tensioned with ease

- Simplicity in applying the prestress with jacks, torque wrenches or air operated tools
- The rigidity of the anchors makes them easy to install especially in overhead applications
- High shear bond as deformations are designed for shear interlock with concrete or resin
- Transmits the anchor forces efficiently to the grout body without additional fittings
- Offcut bars may be used for all standard concrete reinforcement applications in the construction site while small pieces are ideal for formwork, starter bars or hangers in underground works
- Can be cut and spliced at any point along its length

Mechanical Properties and Working Loads – ReidBar™							
Product Code	Bar Diameter (mm)	Yield Stress* (MPa)	Strength* (kN)	Ult Strength* (kN)	Shear 0.62 ultimate* (kN)		
RB12	12		56.5	61	37.8		
RBA16	16		100.6	108.5	67.3		
RBA20	20	500	157.0	169.6	105.2		
RB25	25		245.5	265.1	164.4		
RB32	32		402.0	434.2	269.2		

^{*} Minimum Characteristic

ReidBar™ Frequently Asked Questions

Is tightening torque critical in the performance of ReidBar™ components?

Provided the bar is screwed tightly against the centre stop, or fully through the component, whichever is appropriate, the full breaking strength of the bar will be developed.

Reid recommends using a wrench with a minimum length of 300 mm to ensure the bar is fully engaged.

Can ReidBar[™] be bent and rebent?

Rebending ReidBar™ is not recommended because steel strain hardens when it is bent and loses some of its ductility, an effect that is usually increased when the steel is rebent.

Can cast ReidBar™ fittings be welded?

Although cast SG Iron fittings can be welded using specialised techniques it is not a recommended practice because it will degrade the strength and ductility of the fitting and it will no longer meet the performance characteristics stated in this manual. Hot forged nuts can be welded and nuts manufactured from free machining steels can also be welded but caution needs to be exercised if load capacity is critical. If you have further questions regarding welding contact Reid for clarification.

How does ReidBar™ connect one precast concrete element to another?

The best way to join two concrete elements is by casting a ReidBar $^{\text{M}}$ Grout Sleeve into the top of the lower element and a ReidBar $^{\text{M}}$ Coupler into the bottom

of the upper element. This eliminates the need for any starter bars protruding from the precast elements that are susceptible to damage and bending. Immediately prior to final placing a starter bar of the correct length is screwed into the coupler and non-shrink grout is poured into the grout sleeve cup.

The two elements are then brought together into the final position, levelled and propped.

Note: This pre-grout method avoids the necessity for casting in grout tubes and the need for a separate grouting operation. To effectively anchor a grout sleeve it requires a lap length of bar protruding from and screwed into the threaded end.

What is the best way of cutting ReidBar™ before joining?

It is preferable to cut ReidBar $^{\mathbb{M}}$ with an abrasive cut-off wheel or cut-off saw.

What end treatment is required before coupling?

If difficulty is encountered because of burring or distortion of the end during cutting or shearing then a light dressing with an angle grinder to remove the damage is all that is required.

What are the minimum cover requirements for ReidBar™ and fittings?

ReidBar™: Standard requirements for reinforcing must be observed. Refer to AS 3600 Concrete structures.

Components: Because the two main factors to be considered are Fire and Corrosion sufficient protection for the components should be specified by the designer according to the requirements of the application, taking into consideration the relevant standards and the following notes.

Fire: The temperature of the concrete reinforcing steel is affected by the cover of concrete over the full extent of the embedded bar. The temperature is averaged over the steel by conduction along its length which acts to quickly dissipate any localised temperature variations. A minor reduction in the cover in a very localised area (e.g. at a coupler) would therefore not lead to any significant increase in steel temperature and no increased loss in strength.

Corrosion: (1) Those metal ReidBar[™] components not made of ductile iron require the same cover as the bar itself unless galvanized or otherwise protected.

(2) ReidBar™ components in sizes larger than RB12 are generally manufactured from alloyed high strength ductile iron. Ductile iron corrodes at about 30% of the rate of reinforcing steels and the products of the corrosion are not expansive. Therefore it does not lead to the spalling and flaking problems commonly associated with the corrosion of steels in concrete. Because of this good corrosion resistance cover for

Ductile Iron components can be reduced, although it is suggested that cover be maintained to at least 50% of standard requirements for reinforcing steel. The exception to the better corrosion resistance of ductile iron is sea water and in that case, it is preferable to use the same cover limitation as the bar.

Can the ReidBar™ system be used at temperatures below freezing?

All low-temperature applications should be considered carefully, especially where impact loads are also present.

ReidBar™ Stock

Typical Uses

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

Features

- Ultimate strength development is possible with short embedment depths
- Suitable for thin concrete sections, such as wall panels
- Full range of threaded fittings for joining, anchoring and terminating
- Splice at any point along the bar without specialised splicing equipment
- Reduces bar congestion problems
- Eliminates cast-in starter bars to simplify transport and handling
- Eliminates the need to drill holes in formwork and shutters for starter bars



• AS/NZS 4671 Steel for the reinforcement of concrete



eidBar™ Stock – Black					
Product Code	Diameter (mm)	Length (m)			
RB12S6	12				
RBA16S6	16				
RBA20S6	20	6			
RB25S6	25				
RB32S6	32				
RBA16S12	16				
RBA20S12	20	12			
RB25S12	25	- 12			
RB32S12	32				

ReidBar™ Stock - Galvanized					
Product Code	Diameter (mm)	Length (m)			
RB12SG	12				
RBA16SG	16				
RBA20SG	20	6			
RB25SG	25				
RB32SG	32				

ReidBar™ Processed

Typical Uses

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

Features

- Can be cut at any point along its length, then simply joined end to end by a coupler
- Ultimate strength development is possible with short embedment depths
- Suitable for thin concrete sections, such as wall panels
- Full range of threaded fittings for joining, anchoring and terminating
- Splice at any point along the bar without specialised splicing equipment
- Reduces bar congestion problems
- Eliminates cast-in starter bars to simplify transport and handling
- Eliminates the need to drill holes in formwork and shutters for starter bars

Relevant Standards

• AS/NZS 4671 Steel for the reinforcement of concrete



ReidBar™ Processed – Black				
Product Code	Diameter (mm)			
RB12	12			
RBA16	16			
RBA20	20			
RB25	25			
RB32	32			

ReidBar™ Processed - Galvanized				
Product Code	Diameter (mm)			
RB12G	12			
RBA16G	16			
RBA20G	20			
RB25G	25			
RB32G	32			

Note: Cut-to-length and / or bent-to-shape as required.

ReidBar™ Couplers

Reid™

Typical Uses

• Beams, columns, slab-to-slab, core wall and beam-to-slab applications

- Internally threaded couplers for joining Grade 500N ReidBar™ lengths
- Provides continuity of reinforcing, especially for heavily congested areas
- Eliminates the need for lapping and protruding bars



ReidBar™ Couplers – Black					
Product Code	Suit ReidBar™ (mm)	Length (mm)	Thread Depth (mm)	Body OD (mm)	Hex A/C (mm)
RB12C	12	90	43	22	29
RBA16C	16	102	47	30	34
RBA20C	20	129	55	33	42
RB25C	25	180	87	43	52
RB32C	32	210	102	55	66

ReidBar™ Couplers – Galvanized					
Product Code	Suit ReidBar™ (mm)	Length (mm)	Thread Depth (mm)	Body OD (mm)	Hex A/C (mm)
RB12CG	12	90	43	22	29
RBA16CG	16	102	47	30	34
RBA20CG	20	129	55	33	42
RB25CG	25	180	87	43	52
RB32CG	32	210	102	55	66

ReidBar™ Nut

Reid™

Typical Uses

- Beams, columns, slab-to-slab, core wall and beam-to-slab applications
- Fastening of structural elements
- Bracing and tie-back applications
- Soil anchorings



ReidBar™ Nut – Black						
Product Code	Suit ReidBar™ (mm)	Length (mm)	Hex A/F (mm)	Hex A/C (mm)		
RB12N	12	40	25	25		
RBA16N	16	/ 5	30	34		
RBA20N	20	45	36	42		
RB25N	25	65	46	53		
RB32N	32	82	55	63.5		

ReidBar™ Nut – Galvanized						
Product Code	Suit ReidBar™ (mm)	Length (mm)	Hex A/F (mm)	Hex A/C (mm)		
RB12NG	12	40	25	25		
RBA16NG	16	45	30	34		
RBA20NG	20	45	36	42		
RB25NG	25	65	46	53		
RB32NG	32	82	55	63.5		

ReidBar™ Threaded Insert

Reid™

Typical Uses

• Beams, columns, slab-to-slab, core wall-to-slab and beam-to-slab applications

- \bullet Cast into concrete and designed to accept ReidBar $^{\!\scriptscriptstyle M}$
- Provides full anchorage in thin walled panels
- Ensures sufficient embedment to develop the full strength of the bar
- On-site bending of bar is eliminated and site efficiencies are improved, resulting in faster floor cycles



ReidBar™ Threaded Inserts – Black					
Product Code	Suit ReidBar™ (mm)	Length (mm)	Thread Length (mm)	OD (mm)	Foot Diameter (mm)
RB12TI	12	100	53	22	38
RBA16TI	16	118	47	30	50
RBA20TI	20	148	60	35	64
RB25TI	25	191	78	43	80
RB32TI	32	210	102	55	101

ReidBar™ Threaded Inserts – Galvanized					
Product Code	Suit ReidBar™ (mm)	Length (mm)	Thread Length (mm)	OD (mm)	Foot Diameter (mm)
RB12TIG	12	100	53	22	38
RBA16TIG	16	118	47	30	50
RBA20TIG	20	148	60	35	64
RB25TIG	25	191	78	43	80

ReidBar™ Grout Sleeve

Reid™

Typical Uses

- Precast elements and tilt-wall panels
- 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 (65 MPa, 28-day compressive strength)
- Connecting ReidBar™ lengths where one side of the connection cannot be spun
- Converting to standard reinforcing bar or for vertical connections where continuity of reinforcing is required



Product Code	Size (mm)	Length (mm)	Depth (mm)	Thread OD (mm)	Max Bar Embedment (mm)
RBA16GS	16	240	47	50	190
RBA20GS	20	290	55	60	224
RB25GS	25	360	78	70	274
RB32GS	32	445	109	75	320

ReidBar™ Galvanized Base Plate and Spherical Washers

Reid™

Typical Uses

• Soil nailing and rock anchoring when the ReidBar™ is not perpendicular to the bearing face

Features

• Accommodates an inclination up to 20 degrees



ReidBar™ Galvanized Base Plate				
Product Code	Suit ReidBar™ (mm)	Length /width (mm)	Thickness (mm)	
RBA20BPG	16 Or 20	100	6	
RB32BPG	25 or 32	150	10	

ReidBar™ Galvanized Spherical Washers					
Product Code	Suit ReidBar™ (mm)	Dimensions – OD x ID x T (mm)			
RBA20SWG	16 or 20	50 x 24 x 18			
RB32SWG	25 or 32	70 x 37 x 24			

ReidBar™ Metric Threaded Couplers

Reid™

Typical Uses

• Ideal when a fully engineered, full capacity fixing is required close to an edge of a panel or at close spacings

Features

• Galvanized finish



Product Code	Suit (mm)	Length (mm)	Metric Thread Length (mm)	Hex A/C (mm)
RB12M16CG	RB12 to M16	90	40	29
RBA16M20CG	RBA16 to M20	102	45	34
RBA20M24CG	RBA20 to M24	119	45	43

ReidBar™ Polyurethane Board

Reid™

Typical Uses

- Max board length 1200 mm
- Customised to suit ReidBar™ connection size and spacing specifications



Product Code	Туре	Width (mm)	Thickness (mm)	Length (mm)	Mass (kg/m)
RBBOARDS	Single	90	30 As	As required	2.8
RBBOARDD	Double	180	30	As required	5.6

ReidBar™ Rebate Insert

Reid™

Typical Uses

• Precast wall panels

- 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 25 mm required to achieve bar break connection

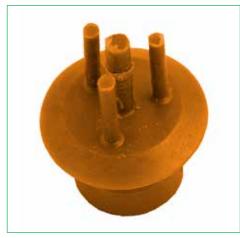


Product Code	Suit ReidBar™ (mm)	Length (mm)	Thread Depth (mm)	Foot Dia (mm)	Cross Hole Dia (mm)
RB12RI	12	78	53	39	1/ 5
RBA16RI	16	96	47	51	14.5

ReidBar™ Caps

Reid™

- Plastic
- Antenna caps are used to seal and locate Reidbar fittings in 'near face' applications
- Sealing caps used to protect the internal thread of the threaderd inserts or couplers



(Antenna cap shown)

ReidBar™ Antenna Caps				
Product Code	Suit Fittings (mm)			
RB12AC	12			
RBA16AC	16			

ReidBar™ Sealing Caps				
Product Code	Suit Fittings (mm)			
RB16CAP	16			
RB20CAP	20			
RB25CAP	25			
RB32CAP	32			

ReidBar™ Tilt Wall Panel

Reid™

Typical Uses

• Precast and tilt-up panels

Features

- Enables ReidBar™ inserts to be easily used in near-face applications
- Fully adjustable
- Can be used for all metric and coil thread inserts with appropriate nailing plate



Product Code	Suit Panel Thickness (mm)	No./Box
RBTICHAIR	125 – 200	90

ReidBar™ Nailing Plates

Reid™

- Plastic
- Support for fixing to formwork for positioning all $\mathsf{ReidBar}^\mathsf{m}$ fittings



Product Code	Suit Fittings (mm)
RB12NP	12
RBA16NP	16
RBA20NP	20
RB25NP	25
RB32NP	32

ReidBar™ Reidbrace™

Reid™

Features

- Eliminates expensive threaded rods
- Eliminates welding and threading
- Over-length bar can be cut without dismantling the bracing assembly
- All components sold separately



Product Code	Suit
RB12BRACE	RB12 and RBA16
RBA20BRACE	RBA20
RB25BRACE	RB25 and RB32
RB12BRACEEND	RB12
RBA16BRACEEND	RBA16
RBA20BRACEEND	RBA20
RB25BRACEEND	RB25
RB32BRACEEND	RB32

Note:

All components are sold separately.

Additional two ReidBar™ nuts are required for each Reidbrace™

ReidBar™ Reidbox Threaded Insert

Reid™

Typical Uses

• Core wall-to-slab applications

- Pre-assembled boxes
- • Offers a fast, cost-effective way to position and locate ReidBar $^{\text{\tiny M}}$ threaded inserts



Product Code	Suit ReidBar™ Threaded Insert (mm)	Insert Spacing (mm)	Inserts/Box	
RBA16BOX150TI		150	5	
RBA16BOX150TI2			2	
RBA16BOX150TI3			3	
RBA16BOX200TI	16		4	
RBA16BOX200TI2		200	2	
RBA16BOX200TI3			2	
RBA16BOX300TI3		300	3	
RBA20BOX150TI			5	
RBA20BOX150TI2		150	2	
RBA20BOX150TI4			,	
RBA20BOX200TI	20		4	
RBA20BOX200TI2	20	200	2	
RBA20BOX200TI3				
RBA20BOX250TI3		250	3	
RBA20BOX300TI3		300		
RB25BOX150TI2			2	
RB25BOX150TI3		150	3	
RB25BOX150TI4		150	4	
RB25BOX150TI5			5	
RB25BOX200TI2	25		2	
RB25BOX200TI3		200	3	
RB25BOX200TI4			4	
RB25BOX300TI2		200	2	
RB25BOX300TI3		300	3	
RB32BOX150TI5		150	5	
RB32BOX200TI2			2	
RB32BOX200TI3	32	200	3	
RB32BOX200TI4			4	
RB32BOX300TI3		300	3	

Dextra

Dextra Griptec® mechanical splices are a full-performance system covering tensions, compression, cyclic and fatigue. Dextra Griptec® are roads authority approved and conform to the slip requirements of AS 3600 and AS 5100.

Griptec® Standard Couplers

Dextra

Dextra Griptec® has a patented extrusion process that includes a systematic, non-destructive tensile test that performs a tension test. Standard Dextra Griptec® splices are achieved by use of a standard female coupler and a standard male coupler of the matching size.

Typical Uses

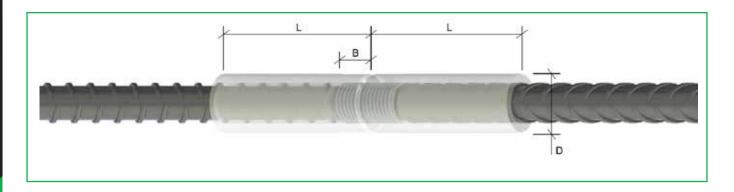
• Dextra Griptec® Standard Couplers provide an easy connection by bar rotation until full thread engagement



- Roads authority approved system
- A full-performance (tension, compression, cyclic, fatigue) mechanical splice designed for the connection of reinforcing bars



Product Code (Male)	Product Code (Female)	Suit Bar Diameter (mm)	D (mm)	B (mm)	L (mm)
GT12CM	GT12CF	12	19	16	72
GT16CM	GT16CF	16	25	21	100
GT20CM	GT20CF	20	31	25	110
GT24CM	GT24CF	24	38	26	120
GT28CM	GT28CF	28	42	30	105
GT32CM	GT32CF	32	47	40	140
GT36CM	GT36CF	36	54	41	143
GT40CM	GT40CF	40	61	52	170



Griptec® Position Couplers

Dextra

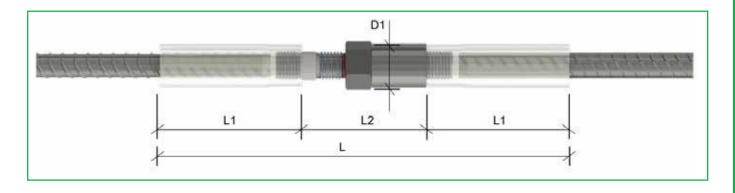
The Dextra Griptec® position coupler assembly is made of a threaded stud, a position coupler and a lock nut.

Typical Uses

 When both reinforcing bars cannot be rotated, a Dextra Griptec® Position Coupler (incorporating a lock nut) can then be used together with standard male and female sleeves



Product Code	Suit Bar Diameter (mm)	D1 (mm)	L1 (mm)	L2 (mm)	L (mm)
GT12CP	12	19	72	60	204
GT16CP	16	25	100	77	277
GT20CP	20	34	110	94	314
GT24CP	24	40	120	107	347
GT28CP	28	44.5	105	119	329
GT32CP	32	50	140	134	414
GT36CP	36	56	143	150	436
GT40CP	40	64	170	162	502



Griptec® Bridging Couplers

Dextra

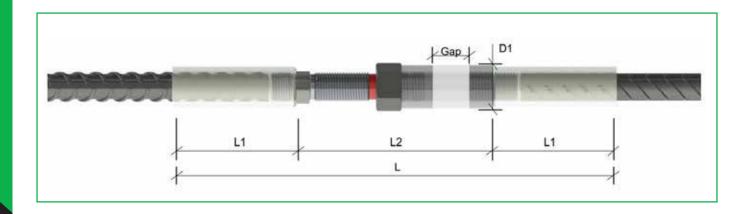
This Dextra Griptec® bridging coupler assembly is made of a threaded stud, a bridging coupler and a lock nut.

Typical Uses

• When the reinforcing bars cannot be rotated nor be brought butt to butt, a Griptec® Bridging Coupler (incorporating a lock nut) can then be used together with standard male and female sleeves



Product Code	Suit Bar Diameter (mm)	D1 (mm)	L1 (mm)	L2 (mm)	L (mm)	GAP (mm)
GT12CB	12	19	72	131	275	35
GT16CB	16	25	100	150	350	36
GT20CB	20	34	110	167	387	37
GT24CB	24	40	120	196	436	45
GT28CB	28	44.5	105	205	415	
GT32CB	32	50	140	220	500	44
GT36CB	36	56	143	240	526	45
GT40CB	40	64	170	254	594	47



Unitec® Couplers

Dextra

Typical Uses

 Dextra Unitec[®] is a shear-bolt coupling system for the connection of concrete reinforcement bars from 12 to 50 mm

Features

- The Dextra Unitec® system does not require any bar end preparation
- Roads authority approved system



Product Code	Suit Bar Diameter (mm)	Outside Diameter (mm)	Length (mm)	Mass (kg)	Bolts per Coupler	Bolt Size	Average Torque to Shear Bolts (Nm)
UNITEC12	12	48	140	1.5	6	M12	140
UNITEC16	16	48	140	1.6	6	M12	140
UNITEC20	20	59	180	2.5	8	M16	140
UNITEC24	24	62	240	2.8	6	M16	250
UNITEC28	28	76	220	6.8	6	M20	680
UNITEC32	32	83	280	8.5	8	M20	680
UNITEC36	36	89	360	12.2	10	M20	680
UNITEC40	40	95	425	15.4	12	M20	680

Sonitec Tubes

Dextra

Typical Uses

- Verification of depth of foundation
- Coring
- Post-grouting

Features

- Enlarged end makes connection between two tubes easy
- Bell mouth and rubber gasket ensure concrete-tight joint
- Fast and easy handling



Product Code	Description	Diameter (mm)	Length (mm)	Wall Thickness (mm)
STTUBE501	Tube	50	5800	1
STCAP501	Сар	50	75	_
STGASKET502	Gasket	51	46	2

Griptec® Anchor Plates

Dextra

Dextra Griptec® Anchor Plates are an efficient alternative to L-shaped/hooked bars as end anchorages in congested areas.

Typical Uses

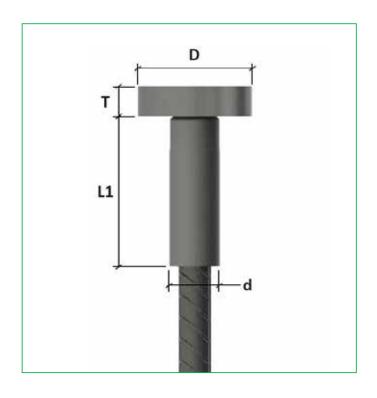
• Beam-column connections, pile caps, cantilevered members, corbels

Features

• Standard Griptec anchor plates are circular, and are fixed to the bar end by screwing them onto male sleeve



Product Code	Suit Bar Diameter (mm)	D (mm)	T (mm)	L1 (mm)	d (mm)	Net Surface Area (mm²)	Area Ratio
GT12AP	12	45	12	72	19	1307	12
GT16AP	16	55	16	100	25	1873	9
GT20AP	20	70	20	110	31	3094	10
GT24AP	24	90	22	120	38	5228	12
GT28AP	28	95	25	105	42	5722	9
GT32AP	32	110	22	140	47	7768	
GT36AP	36	125	32	143	54	9982	10
GT40AP	40	140	38	170	61	12471	



Griptec® Weldable Couplers

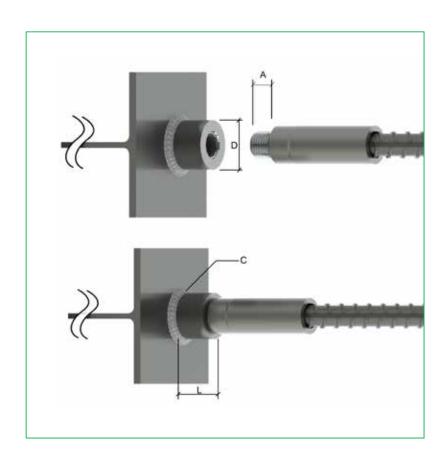
Dextra

Typical Uses

• For composite construction where concrete reinforcement bars must be welded to structural steel



Product Code	Suit Bar Diameter (mm)	D (mm)	L (mm)	A (mm)	C (mm)
GT12CW	12	22	18	12	4
GT16CW	16	28	25	16	5
GT20CW	20	38	35	20	5
GT24CW	24	45	39	22	6
GT28CW	28	50	45	25	5
GT32CW	32	55	40	28	7
GT36CW	36	65	47	32	8
GT40CPW	40	72	51	34	9



Griptec® Transition Stud

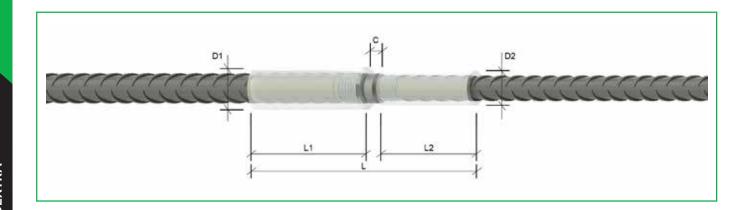
Dextra

Typical Uses

• When there is a need to splice bars of different sizes, the Griptec® Transition Stud connects two standard male sleeves with a two-stepped threaded stud



Product Code	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)	C (mm)	L (mm)
GT1216TS	22	19	85	72	8	165
GT1220TS	21	19	110	/2	11	193
GT1620TS	31	25	110	100		221
GT1624TS	20	25	120	100	12.5	234
GT2024TS	38	24	120	110	13.5	244
GT2032TS	47	31	140	110	16.5	267
GT2428TS	42		105		15	240
GT2432TS	47	38	140	120	16.5	277
GT2440TS	61		170		21	311
GT2832TS	47	42	140	105	16.5	262
GT3236TS	54	47	143	140	16.5	300
GT3240TS	61	4/	170	140	21	331
GT3640TS	01	54	1/0	143	Z I	334



Ancon®

BT Type A Couplers

Ancon[®]

The Ancon® BT coupler system consists of two threaded bars that are connected through an internally threaded coupler. The Type A system utilises an Ancon® BT coupler and two reinforcing bars with Type A threads. To produce a Type A thread the bar end is upset and threaded for half the length of the coupler. The Type A system is suitable for applications where the continuation bar can be rotated.



Typical Uses

- Mechanical splicing of reinforcing bars
- Used for applications where the continuation bar can be rotated

Features

- Available in a wide variety of sizes
- Utilises internally threaded couplers with a single right hand thread
- Fully compliant with roads authority requirements

- AS 3600 Concrete structures
- AS 5100.5 Bridge design: Concrete

Product Code	Suit Bar Size (mm)	Coupler Length (mm)	Coupler Outside Diameter (mm)
BT12A	12	28	22
BT16A	16	40	30
BT20A	20	48	35
BT24A	24	60	42
BT28A	28	66	48
BT32A	32	78	55
BT36A	36	92	60
BT40A	40	98	65

BT Type B Couplers

Ancon[®]

The Type B system utilises an Ancon® BT coupler and two reinforcing bars, one with a Type A thread and the other with a Type B thread. The Type B thread is produced in a similar way to a Type A thread but with a thread length equal to the full coupler length.

Typical Uses

- Mechanical splicing of reinforcing bars
- Used for applications where it is difficult but not impossible to rotate the continuation bar

Features

- Available for all common reinforcing bar diameters
- Utilises internally metric threaded couplers
- Only requires partial rotation of the continuation bar
- Fully compliant with roads authority requirements

- AS 3600 Concrete structures
- AS 5100.5 Bridge design: Concrete



Product Code	Suit Bar Size (mm)	Coupler Length (mm)	Coupler Outside Diameter (mm)
BT12B	12	28	22
BT16B	16	40	30
BT20B	20	48	35
BT24B	24	60	42
BT28B	28	66	48
BT32B	32	78	55
BT36B	36	92	60
BT40B	40	98	65

BT Type C Couplers

Ancon[®]

The Type C system utilises an Ancon® BT coupler, two locknuts and two reinforcing bars, one with a Type C1 thread and the other with a Type C2 thread. To produce a Type C1 thread the bar end is upset and threaded to a length equal to half the length of the coupler plus the length of a locknut. The Type C2 thread is produced in a similar way with a thread length equal to the full coupler length plus a locknut.

Typical Uses

- Mechanical splicing of reinforcing bars
- Used for applications where the continuation bar cannot be rotated

Features

- Available for all common reinforcing bar diameters
- Utilises internally metric threaded couplers
- Does not require any rotation of the continuation bar
- Fully compliant with roads authority requirements



- AS 3600 Concrete structures
- AS 5100.5 Bridge design: Concrete

Couplers BT – Type C							
Product Code	Suit Bar Size (mm)	Coupler Length (mm)	Coupler Outside Diameter (mm)				
BT12C	12	28	22				
BT16C	16	40	30				
BT20C	20	48	35				
BT24C	24	60	42				
BT28C	28	66	48				
BT32C	32	78	55				
BT36C	36	92	60				
BT40C	40	98	65				

Lock Nut			
Product Code	Suit Bar Size (mm)	Coupler Length (mm)	Coupler Outside Diameter (mm)
BT12LN	12	11	22
BT16LN	16	16	30
BT20LN	20	19	34
BT24LN	24	24	42
BT28LN	28	26	48
BT32LN	32	29	55
BT36LN	36	34	60
BT40LN	40	36	65

BT Headed Anchors

Ancon[®]

Ancon® BT Headed Anchors create an anchorage in the concrete, replacing the need for cogged or hooked bar ends. They can simplify scheduling and bar placement, and reduce congestion in the concrete. Ancon® BT Headed Anchors are internally threaded with metric threads to suit the BT coupler system. They create a full strength joint, the mode of failure being bar break.

Typical Uses

- Anchorage of reinforcement bars
- Replaces the need for cogged or hooked bar ends by creating an anchorage in the concrete

28

32

36

40

Features

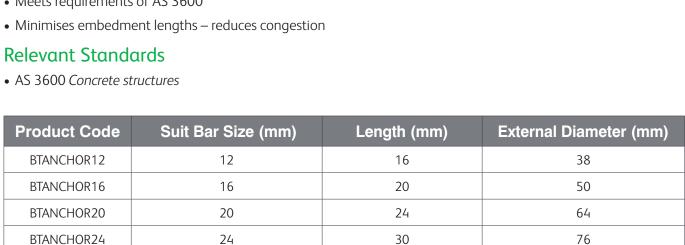
BTANCHOR28

BTANCHOR32

BTANCHOR36

BTANCHOR40

• Meets requirements of AS 3600



33

36

42

45



89

102

114

127

MBT Couplers

Ancon[®]

MBT Couplers provide a method of joining reinforcing bars without the need of bar end preparation such as threading. Bars are locked in place by two serrated saddles and a series of special lockshear bolts, the heads of which shear off when the predetermined tightening torque is reached, providing a visual check of correct installation.

Typical Uses

• Column splicing, bridge applications, piling, splicing to protruding dowels cast in concrete, closure pours, beams

Features

- Mechanically bolted coupler that doesn't require bar end preparation or rotation
- The bolt heads shear off at a predetermined torque to provide an instant check of correct installation.
- Can be used in applications where traditionally couplers do not work

- AS 3600 Concrete structures
- AS 5100.5 Bridge design: Concrete



Product Code	Suit Bar Size (mm)	No. of Bolts	Length (mm)	Coupler Outside Diameter (mm)	Mass (kg)
MBT12	12	6 -	140	33	0.7
MBT16	16		160	42	1.2
MBT20	20	8	204	48	2
MBT24	24	0	258	54	3
MBT28	28	10	212	67	5.8
MBT32	32	10	312	71	6.5
MBT36	36	12	420	75	8.6
MBT40	40	14	484	81	11.3

MBT Headed Anchors

Ancon[®]

MBT Headed Anchors replace the need for cogged or hooked bar ends by creating an anchorage in the concrete. MBT Headed Anchors can simplify scheduling and rebar placement, and reduce congestion in the concrete. They do not require any bar end preparation or rotation of the connected bar.

Typical Uses

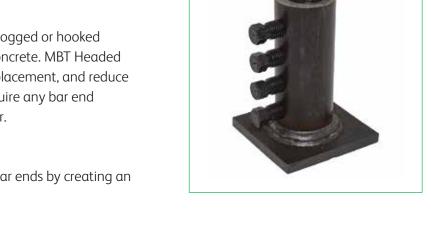
- Replaces the need for cogged or hooked bar ends by creating an anchorage in the concrete
- Pile caps

Features

- Provides end anchorage
- Reduces congestion
- Can be used in applications where traditional end anchors do not work

Relevant Standards

• AS 3600 Concrete structures



Product Code	Suit Bar Size (mm)	No. of Bolts	Length (mm)	Anchor Head Size L x W x T (mm)	Mass (kg)
MBTHA12	12	3	85	70 x 70 x 10	1
MBTHA16	16	5	92	80 x 80 x 10	1.1
MBTHA20	20	,	114	90 x 90 x 10	1.9
MBTHA24	24	4	139	100 x 100 x 10	2.4
MBTHA28	28	5	168	110 x 110 x 12	4
MBTHA32	32	5	171	130 x 130 x 15	5.1
MBTHA36	36	6	230	150 v 150 v 15	7.2
MBTHA40	40	7	262	150 x 150 x 15	7.7

KSN Anchors

Ancon[®]

The use of KSN Anchors with BT threaded reinforcing bars can simplify concrete design at construction joints, typically in wall-to-slab applications. The anchor is cast into the face of the concrete wall. When the formwork and thread protection is removed, the KSN Anchor is ready to receive a reinforcing starter bar that is equipped with an Ancon® BT Thread. Once all other reinforcement is installed, the adjoining slab is cast to complete the installation.

TS 1/2 +

Typical Uses

• Slab-to-wall connections

Features

- Eliminates the drilling of formwork or concrete and the dangers associated with projecting bars and on-site bar straightening
- Replaces cogged or hooked bar ends simplifying bar scheduling
- Minimises congestion in the wall

Relevant Standards

AS 3600 Concrete structures

Product Code	Suit Bar Size (mm)	Length (mm)	Thread (mm)	Mass (kg)
KSN12115	12	115	M1/ v 2 0	0.39
KSN12150	12	150	M14 x 2.0	0.43
KSN16130	16	130		0.66
KSN16160		160	M20 x 2.5	0.81
KSN16190		190		0.95
KSN20150		150		0.99
KSN20190	20	190	M24 x 3.0	1.25
KSN20230		230		1.51

KSN Nailing Plates

Ancon®

Typical Uses

• Securely fasten KSN Anchors to formwork during concrete pour

Features

• They share the same thread as Ancon® BT Reinforcement Couplers meaning they can be used to connect couplers to the formwork wherever the Ancon® BT System is used at construction joints



Product Code	Suit Bar Size (mm)	Colour	Quantity Per Bag
KSN12NP	12	Orange	
KSN16NP	16	Blue	100
KSN20NP	20	Yellow	

Shearfix Punching Shear Reinforcement

Ancon[®]

Shearfix is a custom-made concrete accessory designed to be used as punching shear reinforcement around columns. Ancon® Shearfix is suitable for flat plate construction and offers advantages over loose shear links, which can be time-consuming to install. The custom-made system consists of double-headed studs welded to flat rails, which are positioned in the slab around the column. The studs are welded to the rail at the centres specified in the design to ensure installation at the most effective position. Ancon® provides free software to determine the optimum system design.



Typical Uses

• Column/floor intersection and flat slab construction

Features

- Provides resistance to punching shear failure
- Easy to install either 'top down' or 'bottom up', depending on user preference
- Custom-made to suit
- Faster to install compared to loose shear links
- Free software available through Ancon®
- Lead time applies

Mechanical Splicing

According to AS 3600, splices shall be made by mechanical splices, by welding, or by lapping.





Use of mechanical splices offers several advantages as opposed to the use of lapping or welding.

- Splices for tension-tie members and for bars with diameter larger than 40 mm
- Reduces bar congestion problems in heavily reinforced areas due to lapping, cogs, etc.
- Eliminates cast-in starter bars to simplify transport and handling
- Eliminates the need to drill holes in formwork and shutters for starter bars
- Eliminates material wastage arising from lapped connections
- Offers the designer flexibility to overcome challenging design or buildability issues

InfraBuild Reinforcing offers a wide range of mechanical splicing products and services which include:

ReidBar™

ReidBar[™] is a 'bar break' system such that the ReidBar[™] itself is designed to yield well before the ReidBar[™] connections. ReidBar[™], a parallel and continuously course-threaded Grade 500N reinforcing bar, is a revolutionary development in reinforcement placement and fixing which allows reinforcing to be cut at any point and screwed into one of the large variety of ReidBar[™] components. ReidBar[™] is available in stock at InfraBuild Reinforcing, therefore has a short lead-time.

LENTON®

LENTON® System is a unique self-aligning taper thread mechanical splice that provides continuity and structural integrity. Quick and easy to install, LENTON® System provides excellent cyclic performance and a full load transfer with full strength in tension, compression and stress reversal applications. The LENTON® System requires torque using wrench to tighten the connection due to its taper threads, while other systems only require hand tightening. The LENTON® System is roads authority approved and conforms to the slip requirements of AS 3600 and AS 5100.

Griptec®

Griptec® mechanical splices are a full-performance system covering tensions, compression, cyclic and fatigue. Griptec® has a patented extrusion process that includes a systematic, non-destructive tensile proof testing. The Griptec® mechanical splice system consists of roll-threaded sleeves that are extruded onto the reinforcing bar ends. A combination of male and female sleeves creates the connection. Designed for the connection of concrete reinforcing bars in sizes Ø12 through 40 mm. The Griptec® system uses isometric parallel threads, so its mechanical performance in compression equals that in tension. Griptec® is roads authority approved and conforms to the slip requirements of AS 3600 and AS 5100.

BT System

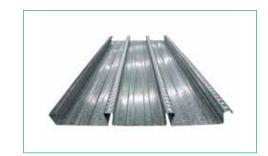
BT System is designed to exceed the tensile strength of reinforcing bars to AS 3600 and AS 4671. The BT system is one of the smallest and the most cost-effective coupler systems when used on large-scale, high-coupler volume projects. The ends of the bars are enlarged and a parallel thread is cut onto the ends to suit the coupler. The BT system is roads authority approved and conforms to the slip requirements of AS 3600 and AS 5100.

Metal Decking

BONDEK® Metal Decking (Galvanized)

Lysaght

BONDEK® is a highly efficient, versatile and robust formwork, reinforcement and ceiling system for concrete slabs for residential, commercial and civil projects. With a yield strength of 550 MPa, BONDEK® metal decking acts as a permanent formwork with minimal propping and requires no stripping.



Typical Uses

 Floor slab construction in residential, commercial and many industrial applications

Features

- Superior spanning capacities for greater strength and less deflection
- Acts as permanent formwork with minimal propping
- Fast and easy to install
- Works as composite slab
- Backed by a BlueScope Steel warranty

BONDEK® Metal Decking – Galvanized					
Product Code	Base Metal Thickness (mm)	Mass (kg/m²)**	Width Coverage (mm)*		
BD60	0.6	8.4 or 8.5			
BD75	0.75	10.3 or 10.5	590		
BD100	1	13.6 or 13.8			

BONDEK® Accessories					
Product Code	Description	Height (mm)	Length (mm)		
BDEND	Poly Filler Strip	54	1200		
BEF100	Edge Form	100			
BEF120	Edge Form	120			
BEF125	Edge Form	125			
BEF150	Edge Form	150	-		
BEF200	Edge Form	200			
BEFM	Edge Form Made to Order				
BEPP	End Plugs (poly)	_			
PLINST	Infill Strip	_	300		

^{*} BONDEK Plus® is an available alternative to BONDEK® which has a width coverage of 600 mm. Note that BONDEK Plus® is only available in QLD, NSW, ACT, and NT.

^{**} Mass variances represent difference between BONDEK Plus® and BONDEK®.

KingFlor® Steel Composite Formwork

Fielders

KingFlor® Steel Composite Formwork is stronger than similar decks due to the patented ReLok corner embossments, which develops a strong mechanical interlock with concrete slabs.

Typical Uses

 Floor slab construction in residential, commercial and many industrial applications

Features

- Greater spanning capacities
- Patented ReLok corner embossments develops a strong mechanical interlock with the concrete slab
- RF55® is stronger than similar decks in positive bending and end shear due to the dovetail ribs, which resist lateral deflection



Kingflor® RF55®						
Base Metal	tal Zing Cooting Yield			Ма	iss	
Thickness	Zinc Coating (g/m²)	Strength (MPa)	Strength (kg/m²)*		(k/n	า)**
(mm)	nm)		2-PAN	3-PAN	2-PAN	3-PAN
0.6			8.6	8.8	3.4	5
0.75	350	550	10.6	10.3	4.2	6.2
1			13.9	13.6	5.6	8.1

KingFlor® KF57						
Product Code	Base Metal Thickness (mm)	Effective Width (mm)	Height (mm)	Mass (kg/m²)		
CKF60	0.6			8.09		
CKF75	0.75	300	57	9.97		
CKF100	1			13.1		

KingFlor® KF70						
Product Code	Base Metal Thickness (mm)	Effective Width (mm)	Height (mm)	Mass (kg/m²)		
KF75	0.75	600	70	8.97		
KF100	1	600	70	11.78		

^{*} Average mass of 2-PAN/3-PAN deck per plan area (kg/m²)

^{**} Mass of individual 2-PAN/3-PAN length (kg/m)

Condeck HP® Composite Decking

Stramit

Stramit Condeck HP $^{\otimes}$ Composite Decking is supplied with a standard Z350 coating, hinged lapping, enclosed ribs and manufactured with no restrictions on shear studs.

Typical Uses

- Floor slab construction in residential, commercial and industrial applications
- Suitable for use in both steel frame and concrete frame construction



- Manufactured from high-strength galvanized steel
- Alternative material available for highly corrosive environments
- Hinged Lapping No need for side lap fasteners. Easier construction, plus time and cost savings
- Flat Soffit Flush fitting panels from an attractive ceiling ready for painting
- Enclosed Ribs No need for end closures
- Effective Width = 300 mm, Height = 55 mm



Condeck HP®					
	Thickness (mm)		Mass		Yield
Product Code	Base Metal Thickness*	Total Coated Thickness*	(kg/m²)	(kg/m)	Strength (MPa)
COND75	0.75	0.78	10.1	3	
COND90	0.9	0.93	12	3.6	550
COND100	1	1.03	13.3	4	

Condeck HP [®] Edgeforma [™]					
Product Code	Width (mm)	Length (mm)			
CEF100	100				
CEF120	120				
CEF125	125	Size to Order			
CEF150	150	Size to Order			
CEF180	180				
CEF200	200				

^{*} Base Metal Thickness (BMT) is used for structural design analysis, while Total Coated Thickness (TCT) values are approximate and given for reference only.



Reinforcing Branch Network

(Additional authorised distributors in other areas)



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Call 1800 663 736 to talk to our reinforcing experts

The InfraBuild Reinforcing difference

Guaranteed quality

- Australian-made rebar and REOMESH®
- Independently certified by ACRS (AS/NZS 4671)
- National Code of Practice compliant

At your service wherever you are

- Australia-wide branch and distributor network
- Unmatched experience and applications knowledge
- Dedicated prefab/cut and bent mesh facilities

Logistics and transport

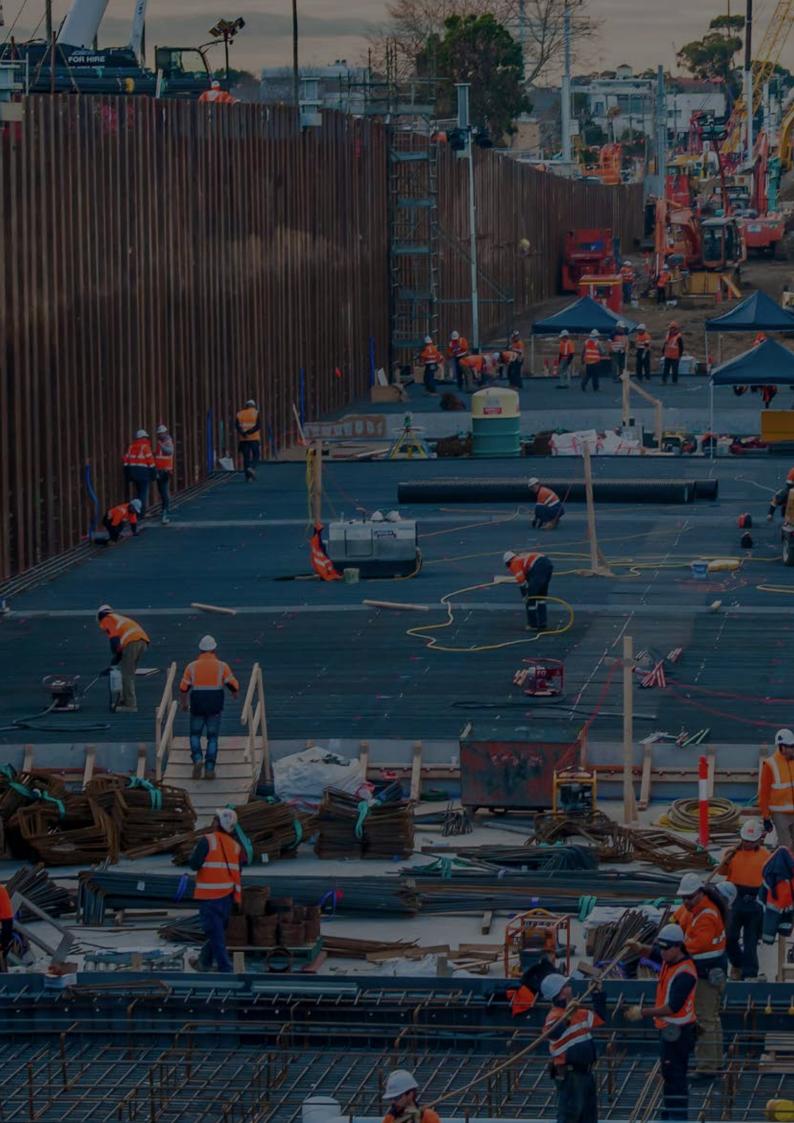
- Experienced in servicing remote locations
- Special containers for long-distance transport
- Pre-slinging and other OH&S initiatives

Scheduling and technical support

- Experienced national and regional engineers
- Specialised design and detailing assistance
- Advanced reinforcement scheduling solutions

Your one-stop reo shop

- Wide range of accessories and materials
- Comprehensive processing options
- Complete package solutions







InfraBuild Reinforcing

For further information contact:

Customer Service T: 1800 663 736

E: constructionsolutions@infrabuild.com

www.infrabuild.com

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