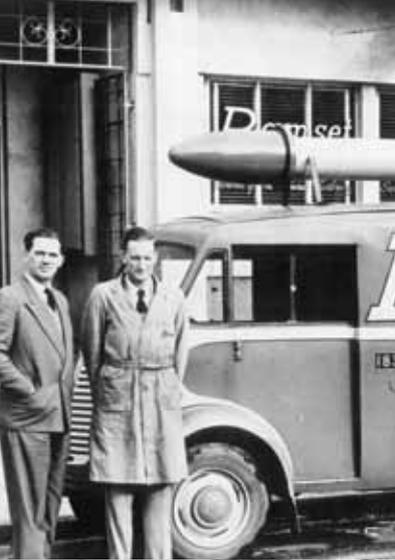




Ramset™

**Anchoring
& Chemicals**
Product Catalogue





Ramset™



Mechanical Anchoring



Page 3

Chemical Anchoring



Page 81

Construction Chemicals



Page 117



Ramset™



Mechanical Anchoring



Ramset™ have been offering mechanical anchors to the Australian market for nearly 50 years. During this time, trusted Ramset™ brand names, like DynaBolt™ and TruBolt™, have become so renowned for their quality, reliability and performance that their names have entered into common language on building sites all over Australia.

Unlike any direct competitor, Ramset™ develops and manufactures a significant portion of its product range in Australia for both local and overseas markets. Ramset™ also extensively and rigorously tests the performance of all its anchoring products here in Australia, in Australian substrates for Australian applications and conditions to ensure the supply of accurate information required for anchor design, selection and safe installation purposes, in Australia.

This Product Guide is designed to provide information to assist in the selection, ordering and installation of the appropriate Ramset™ mechanical anchor for general anchoring applications. It has been divided into six categorised sections - Heavy Duty Anchors, Medium Duty Anchors, Light Duty Anchors, Specialised Anchors, Plasterboard & Cavity Anchors, and Self Drilling Screws - for ease of use. For more specific or technical information, or for the purpose of anchor design and strength limit state calculations, please refer to the Ramset™ Specifier's Resource Book.





Anchoring Principles

6

Selection Guide

8

Heavy Duty Anchors

9

- SpaTec™ Plus
- Boa™ Coil
- TruBolt™



Medium Duty Anchors

17

- AnkaScrew™
- DynaBolt™
- Loxin™
- DynaSet™



Light Duty Anchors

31

- RamPlug™
- EasyDrive™
- Nylon Anchors
- ShureDrive™
- RediDrive™
- Concrete Nails
- Plastic Plugs & Spaghetti



Specialised Anchors

47

- AnkaScrew™ Rod & Stud
- TruFast™
- Catenary Wire Eye
- Vertical Flange Clip
- DynaClip™
- InsulFast™ Drill Anchor



Plasterboard & Cavity Anchors

59

- Hollow Wall Anchors
- WallMate™
- ToggleMate™
- Spring Toggle
- RamToggle™



Self Drilling Screws

69

- Plasterboard
- Metal
- Particleboard
- Cabinet
- Cement Sheet

Types of Mechanical Anchor

Ramset™ offers a number of different types of mechanical anchor. These can be characterised by a combination of their method of setting and their method of anchoring. For example, the Ramset™ DynaBolt™ is described as a torque setting expansion anchor. Its setting method is torque and its anchoring method is expansion.

The various setting and anchoring methods are explained below.

Setting Methods

Torque

Torque Setting Anchors, also known as Torque Controlled Anchors, require the application of a recommended or “controlled” assembly torque, or twisting force, to the nut or bolt head to be correctly set and achieve published loads. This is applied and measured with a torque wrench and is checkable after installation.

Rotation

Rotation Setting Anchors are set by rotation. These anchors will achieve published loads when tight without the need for the application of a “controlled” torque.

Displacement

Displacement Setting Anchors, are set by driving a captive expander component into the bottom end of the anchor, usually with hammer blows, to a controlled depth that is checkable after anchor installation.

Impact

Impact Setting Anchors are set with hammer blows. They can either be a single element or an anchor with an expander component. The difference between Impact Setting Anchors and Displacement Setting Anchors is that Impact Setting Anchors do not require a controlled measure to achieve a set.

Load Assisted

Load Assisted Anchors are set by the application of a tension load. They also do not require a controlled measure to achieve a set. This type of anchor is usually only used as a suspension anchor.

Anchoring Methods

Expansion

Expansion Anchors are generally installed in a pre-drilled hole with a diameter slightly larger than the outer diameter of the anchor. The anchor's diameter is then expanded at the bottom end utilising the appropriate setting method. This expansion creates a high friction force between the base of the anchor and the wall of the hole. The surrounding substrate contains and restricts the expansion forces and holds the anchor in place.

Thread Forming

Thread Forming Anchors tap their own thread in a pre-drilled hole that is slightly smaller than the outer diameter of the anchor, creating a mechanical interlock between the anchor and the substrate. This method of anchoring does not apply expansive forces or burst the substrate, making it suitable for close-to-edge or close-to-anchor applications.

Interference Fit

Interference or Friction Fit Anchors achieve anchorage by applying a friction force between the anchor and the wall of the hole along the anchor's length. The surrounding substrate contains the forces and holds the anchor in place. This anchoring method is usually reserved for light duty applications.

Deformation

Deformation Anchors are used for cavity fixing. Anchorage is achieved by changing the shape of the anchor on the inside of the cavity and clamping the anchor body up against the substrate via the appropriate setting method.

Types of Substrate

Ramset™ Mechanical Anchors are suitable for use in a number of different substrates. Please refer to the Selection Guide on page 8 for suitability of specific anchors to each substrate type.

The load capacities, depths, spacings and edge distances published in this guide are recommended only for the substrates specified in the data tables for each anchor and are to be used for reference only. Different substrates may require a different design. Load capacities are also dependent on the strength of the substrate.

Should your anchoring scenario vary from the basis of the published data, please consult the Ramset™ Specifiers Resource Book or qualified engineer for more information.

Load Directions

Load capacities published in this guide refer to Tensile and Shear. These load directions are defined below.

Tensile ($0^\circ \leq \alpha \leq 10^\circ$)



Shear ($80^\circ \leq \alpha \leq 90^\circ$)



If your required load angle is more complex, i.e. a combination of tensile and shear loads, please consult the Ramset™ Specifiers Resource Book or qualified engineer for more information.

Load Classification

Static Load

An applied load is static when it changes very little over time.

Vibrating Load

A variable cyclic load of relatively low amplitude and high frequency e.g. motor or fan vibration.

Dynamic Load

An irregular variable load of relatively medium or high amplitude e.g. wind.

Shock Load

An isolated high load applied in a very short period of time.

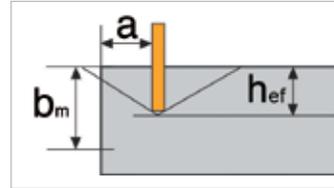
These loads can be occasional or permanent.

All published data in this guide is based on static load cases. Should your load case be classified as anything other than static, please consult the Ramset™ Specifiers Resource Book or a Ramset™ engineer for more information.

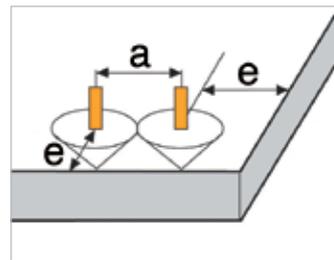
Anchor Spacing

Taking into account the stress values created by mechanical anchors and the loads they are designed to support, the following points must be considered when establishing the performance of each individual product (recommended load):

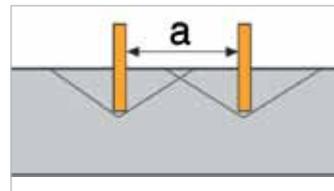
- The minimum thickness of the base material (b_m) (determined by anchor effective depth h_{ef})



- The minimum distance between anchors (a)
- The distance of anchors from edges of the slab or structure (e)



- The coincidence of stress cones of adjacent anchors in concrete reduces their tensile performance.



Anchor Effective Depth: h_{ef}

Each anchor has a minimum anchorage depth which guarantees its minimum rated load (recommended load). Certain anchor types may be embedded deeper with a resulting increase in performance.

For further information consult the Ramset™ Specifiers Resource Book.

Reduced Distance Between Anchors

The distance between anchors and from edges and corners can also be reduced in some cases. Such reduction will affect the recommended load of the anchor and one or more reduction coefficients will have to be applied.

For further information consult the Ramset™ Specifiers Resource Book.



Mechanical Anchor		Concrete	Solid Stone	Solid Block	Solid Brick	Hollow Block	Hollow Slab	Hollow Brick	Plasterboard	Aerated Concrete	Steel Purilins	Sheet Metal	Particleboard	Timber	Cement Sheet
	SpaTec™ Plus Safety Anchors	✓	▲												
	Boa™ Coil Expansion Anchors	✓	▲												
	TruBolt™ Stud Anchors	✓	▲												
	AnkaScrew™ Screw-in Anchors	✓	▲	✓	✓	✓	✓	✓							
	DynaBolt™ Sleeve Anchors	✓	▲	✓	✓	✓	✓	✓							
	Loxin™ Shield Anchors	✓	✓	✓	✓	●	●	●							
	DynaSet™ Drop-in Anchors	✓	▲												
	RamPlug™ Nylon Frame Anchors	✓	✓	✓	✓	✓	✓	✓		✓					
	EasyDrive™ Nylon Drive Anchors	✓	✓	✓	✓	✓	✓	✓		✓					
	Nylon Anchors	✓	✓	✓	✓										
	ShureDrive™ Drive Anchors	✓	✓	✓	✓	✓	✓	✓							
	RediDrive™ Hammer-in Anchors	✓	▲												
	Concrete Nails	✓	▲	✓											
	Plastic Plugs	✓	✓	✓	✓	●	●	●							
	Plastic Spaghetti	✓	✓	✓	✓	●	●	●							
	TruFast™ Suspension Anchors	✓	▲												
	Catenary Wire Eye	✓	▲												
	AnkaScrew™ Rod & Stud	✓	▲	✓	✓	✓	✓	✓							
	Vertical Flange Clip										✓				
	DynaClip™ Spring Steel Clip										✓				
	InsulFast™ Drill Anchor	✓	✓	✓	✓										
	Hollow Wall Anchors								✓				✓	✓	✓
	WallMate™ Plasterboard Anchor								✓	✓					
	ToggleMate™ Plasterboard Anchor								✓						
	RamToggle™ Cavity Fasteners								✓						
	Spring Toggle Cavity Fasteners								✓						
	Plasterboard Self Drilling Screws								✓			✓*		✓	
	Metal Self Drilling Screws											✓			
	Particleboard Self Drilling Screws												✓	✓	
	Cabinet Self Drilling Screws											✓		✓	
	Cement Sheet Self Drilling Screws											✓		✓	✓

* Light guage steel only

✓ Recommended ● Recommended with care ▲ Site tests should be implemented

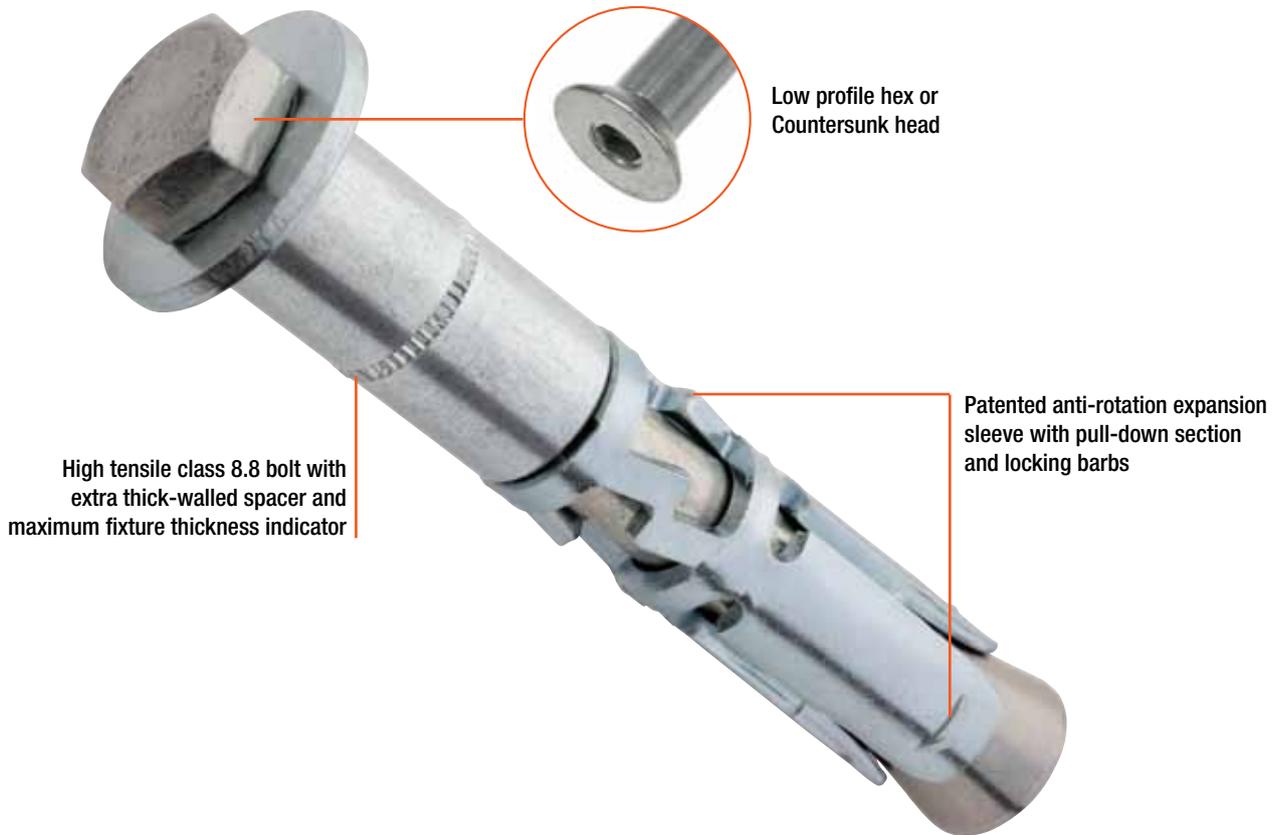


Ramset™

Heavy Duty
Anchors

Heavy Duty Anchors





Low profile hex or Countersunk head

High tensile class 8.8 bolt with extra thick-walled spacer and maximum fixture thickness indicator

Patented anti-rotation expansion sleeve with pull-down section and locking bars

Description

The SpaTec™ Plus Safety Anchor is a heavy duty, torque controlled expansion anchor, with an integrated pull-down section, designed for high performance in both static and dynamic load applications, in both cracked and non-cracked concrete*. The SpaTec™ Plus is ideally suited for through fixing into concrete when security and reliability are paramount.

* Whether a concrete element is classified as cracked or non-cracked is to be determined by a qualified structural engineer.

Specification

Material - Bolt	Class 8.8 High Tensile Carbon Steel (316 (A4) Stainless Steel available to order)
Corrosion Protection	Zinc Plating
Head Styles	Hex or Countersunk. (SP16145ESS-Hex Nut)
Fixing Method	Through Fixture
Setting Method	Torque Controlled
Anchoring Method	Expansion
Thread Diameters	M10, M12, M16, M20
Drilled Hole Diameters	15mm, 18mm, 24mm, 28mm
Anchor Lengths	105mm, 110mm, 120mm, 130mm, 145mm, 170mm
Maximum Fixture Thickness*	10mm, 20mm, 25mm, 27mm, 40mm
Indicative Working Loads in 32MPa Concrete*	Max Tensile 16.7kN - 46.0kN Max Shear 19.3kN - 75.8kN
Substrates	Concrete

* Refer to load table

Related Products

DynaDrill™	Hole Cleaning Brush
Carbide Drill Bits	Hole Cleaning Pump
Diamond Motor	Wet and Dry Vacuum
Diamond Core Drill Bits	



Features & Benefits

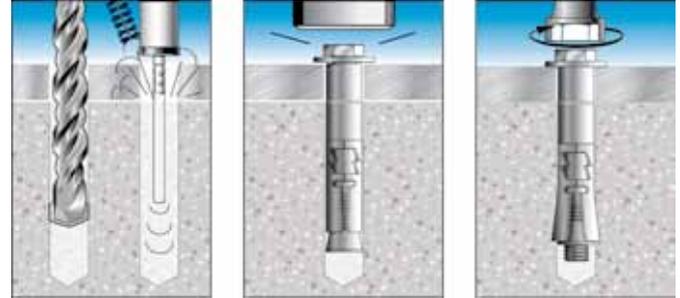
- The combination of a high tensile class 8.8 bolt with an extra thick-walled spacer allows a smaller diameter bolt to be used for easier installation while still providing both excellent tensile and shear performance. The spacer also incorporates a visual maximum fixture thickness indicator for ease of use.
- The patented anti-rotation expansion sleeve is designed with sharp angled protrusions that grip the sides of the hole, preventing anchor rotation during installation. As expansion of the sleeve begins, the locking bars also grip the sides of the hole, further embedding as expansion progresses, giving extra holding power. The sleeve pulls down during tightening ensuring excellent pressure between the fixture and the concrete.
- The low profile hex or countersunk heads provide a neat finish.

Trades & Applications

	Steel Fabricator	Maintenance Fitter	Plumbing Contractor	Electrical Contractor	Construction Contractor	Elevator Installer
Anchoring structural steel columns/beams	✓					
Anchoring HVAC units			✓	✓		
Machinery hold down		✓				
Anchoring crane rails					✓	
Anchoring Elevator Guide Rails						✓

Installation

1. Drill or core a hole to the recommended diameter and depth using the fixture as a template. Clean the hole thoroughly with a hole cleaning brush. Remove the debris with a hand pump, compressed air, or vacuum.
2. After ensuring that the anchor is assembled correctly, insert the anchor through the fixture and drive with a hammer until the washer contacts the fixture.
3. Tighten the bolt with a torque wrench to the specified assembly torque.



Heavy Duty Anchors



SpaTec™ Plus Safety Anchors - Hex Bolt - Zinc Plated

Part No	Thread Size	Max Fixture Thickness (mm)	Overall Anchor Length (mm)	Drilled Hole Ø (mm)	Fixture Hole Ø (mm)	Min Hole Depth (mm)	Effective Length (mm)	Order Qty
SP10105	M10	20	105	15	17	95	90	25
SP12105	M12	10	105	18	20	95	90	25
SP12120	M12	25	120	18	20	115	105	25
SP16145	M16	25	145	24	26	135	125	10
SP20170	M20	25	170	28	30	165	150	5



SpaTec™ Plus Safety Anchors - Countersunk Head - Zinc Plated

Part No	Thread Size	Max Fixture Thickness (mm)	Overall Anchor Length (mm)	Drilled Hole Ø (mm)	Fixture Hole Ø (mm)	Min Hole Depth (mm)	Effective Length (mm)	Order Qty
SP10105F	M10	27	105	15	17	95	97	25
SP12120F	M12	40	130	18	20	105	120	10



Available to order.
Lead times apply.

SpaTec™ Plus Safety Anchors - Hex Bolt - Stainless Steel Grade AISI 316 (A4)

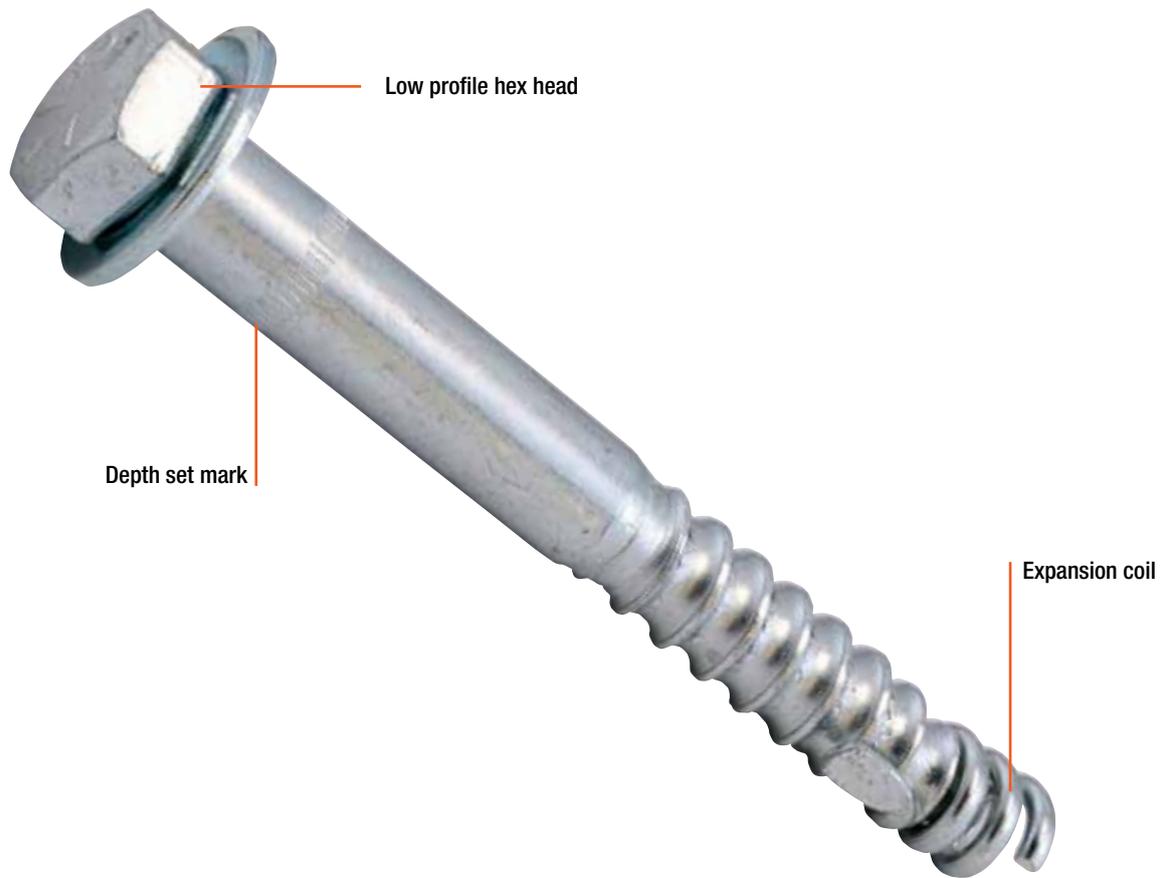
Part No	Thread Size	Max Fixture Thickness (mm)	Overall Anchor Length (mm)	Drilled Hole Ø (mm)	Fixture Hole Ø (mm)	Min Hole Depth (mm)	Effective Length (mm)	Order Qty
SP10110SS	M10	25	110	15	17	100	90	25
SP12120SS	M12	25	120	18	20	120	105	25
SP16145ESS*	M16	25	145	24	26	130	125	10

*Hex nut assembly

SpaTec™ Plus Safety Anchors - Indicative Working Loads in 32MPa Concrete

Thread Size	Embedment Depth (mm)	Tightening Torque (Nm)	Min Edge Distance (mm)	Min Anchor Spacing (mm)	Max Tensile Load, N _a (kN)*	Max Shear Load, V _a (kN)*
M10	80	50	120	240	16.7	19.3
M12	95	80	145	285	22.6	27.6
M16	115	120	175	345	32.4	52.3
M20	140	200	210	420	46.0	75.8

*The design engineer should ensure the structural element is capable of supporting these loads. Refer to Ramset™ Specifiers Resource Book for more information or explanation of technical data.



Description

The Boa™ Coil Expansion Anchor is a removable, high strength, heavy duty, rotation setting expansion anchor for concrete. The Boa™ is ideally suited for tough fixing into concrete when cast-in performance or clean removal is required.

Specification

Material - Bolt	Carbon Steel
Corrosion Protection	Zinc Plating
Head Styles	Hex
Fixing Method	Through Fixture
Setting Method	Rotation
Anchoring Method	Expansion
Drilled Hole Diameters	13mm, 16mm, 19mm
Anchor Lengths	75mm, 85mm, 90mm, 100mm, 115mm, 125mm
Maximum Fixture Thickness*	6mm, 12mm, 25mm, 30mm, 40mm
Indicative Working	Max Tensile 12.6kN - 19.6kN
Loads in 32MPa Concrete*	Max Shear 15.4kN - 28.4kN
Substrates	Concrete

* Refer to load table



Features & Benefits

- High load capacity is achieved due to the expansion coil locking into the sides of the hole, when set, to give cast-in type performance.
- High clamping load and resistance to cyclic loading result from the pull-down effect achieved through the rotation setting action of the anchor.
- Low profile hex head provides a neat finish.
- Removal is easy, clean and fast, as the expansion coil stays in the hole leaving no protruding metal parts to grind off. The bolt can even be re-used with a new coil.

Related Products

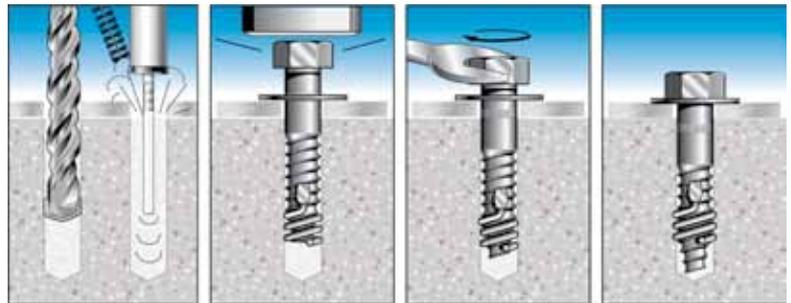
DynaDrill™	Hole Cleaning Pump
Carbide Drill Bits	Wet and Dry Vacuum
Diamond Motor	Impact Wrench
Diamond Core Drill Bits	Boa™ Coils
Hole Cleaning Brush	

Trades & Applications

	Steel Fabricator	Concrete Formworker	Scaffold Contractor	Maintenance Fitter
Installing handrails, balustrades & safety barriers	✓			
Formwork support		✓		
Scaffold support			✓	
Anchoring structural steel columns/beams	✓			
Machinery hold down				✓

Installation

1. Drill or core a hole to the recommended diameter and depth using the fixture as a template. Clean the hole thoroughly with a hole cleaning brush. Remove the debris with a hand pump, compressed air, or vacuum.
2. After ensuring that the anchor is assembled correctly (the coil tab points up the anchor), insert the anchor through the fixture. Tap the anchor down to the depth set mark, with a hammer, and stop.
3. Wind the anchor down, with an appropriately sized spanner or socket wrench, until the washer is firmly held to the fixture and stop (5 turns). Ensure washer is tight and snug fit.
4. The Boa™ Coil anchor is ready to take load. (The bolt can be removed leaving the coil in the hole. To re-insert, follow steps 3 and 4.)



Boa™ Coil Expansion Anchors - Hex Bolt - Zinc Plated

Part No	Anchor Size (mm)	Max Fixture Thickness (mm)	Overall Anchor Length (mm)	Drilled Hole Ø (mm)	Fixture Hole Ø (mm)	Min Hole Depth (mm)	Effective Length (mm)	Order Qty
BAC08075	13	12	75	13	14	90	59	50
BAC08100	13	30	100	13	14	100	84	50
BAC10090	16	12	90	16	19	105	71	25
BAC10125	16	40	125	16	19	130	106	25
BAC12085	19	6	85	19	21	105	63	20
BAC12115	19	25	115	19	21	120	93	20

Boa™ Coils Only - Zinc Plated

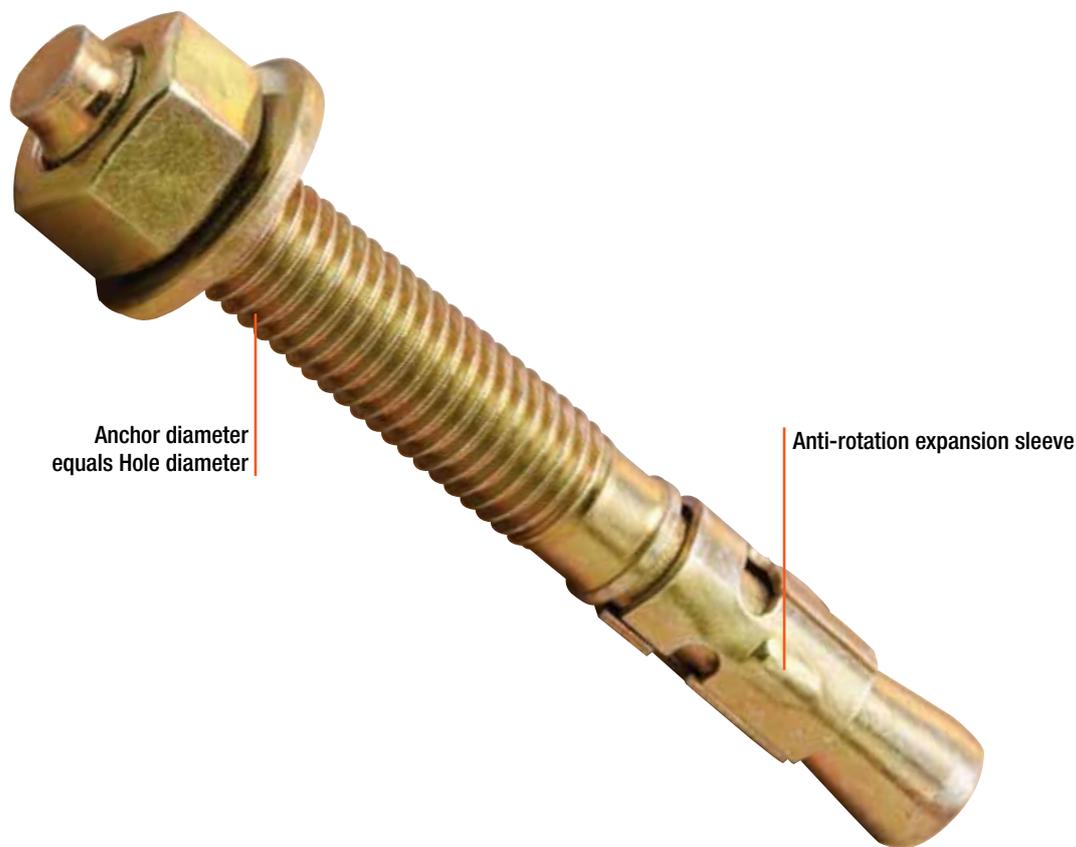
Coil Only Part No	Order Qty
BAC08	100
BAC10	50
BAC12	50



Boa™ Coil Expansion Anchors - Indicative Working Loads in 32MPa Concrete

Anchor Size	Embedment Depth (mm)	Torque (turns to set)	Min Edge Distance (mm)	Min Anchor Spacing (mm)	Max Tensile Load, N _a (kN)*	Max Shear Load, V _a (kN)*
13	75	5 turns	80	160	12.6	15.4
16	90	5 turns	100	200	18.6	26.0
19	80	5 turns	120	230	19.6	28.4

*The design engineer should ensure the structural element is capable of supporting these loads. Refer to Ramset™ Specifiers Resource Book for more information or explanation of technical data.



Description

The TruBolt™ Stud Anchor is a true-to-size, heavy duty, torque controlled expansion anchor, for permanent anchoring into concrete.

Specification

Material - Bolt	Carbon Steel, Stainless Steel 316 (A4)
Corrosion Protection	Zinc Plating, Hot Dipped Galvanising
Head Styles	Hex Nut
Fixing Method	Through Fixture
Setting Method	Torque Controlled
Anchoring Method	Expansion
Thread Diameters	M6, M8, M10, M12, M16, M20
Drilled Hole Diameters	6mm, 8mm, 10mm, 12mm, 16mm, 20mm
Anchor Lengths	55mm, 65mm, 75mm, 80mm, 85mm, 90mm, 100mm, 120mm, 125mm, 140mm, 150mm, 160mm, 175mm, 180mm, 215mm
Maximum Fixture Thickness*	6mm, 8mm, 10mm, 12mm, 15mm, 20mm, 25mm, 30mm, 35mm, 40mm, 45mm, 50mm, 65mm, 70mm, 80mm, 90mm, 100mm
Indicative Working Loads in 32MPa Concrete*	Max Tensile 3.4kN - 32.5kN Max Shear 2.8kN - 27.3kN
Substrates	Concrete

* Refer to load table

Related Products

DynaDrill™
Carbide Drill Bits
Diamond Motor
Diamond Core Drill Bits
Hole Cleaning Brush

Hole Cleaning Pump
Wet and Dry Vacuum



Features & Benefits

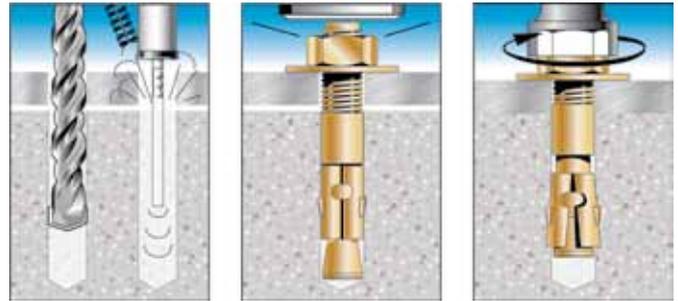
- The TruBolt™ diameter equals the required hole diameter providing maximum shear capacity for hole size and making drill bit selection simple. Its cold forged construction ensures superior strength and reliability.
- The anchor design ensures maximum expansion of the sleeve and pull-down on the fixture. These actions are both further assisted by the application of load.
- The anti-rotation expansion sleeve is designed to grip the sides of the hole, preventing anchor rotation during installation.

Trades & Applications

	Steel Fabricator	Elevator Installer	Construction Contractor	Seating Contractor	Racking Installer
Installing handrails, balustrades & safety barriers	✓				
Anchoring elevator guide rails		✓	✓		
Anchoring structural steel columns/beams	✓				
Stadium seating				✓	
Pallet racking					✓

Installation

1. Drill or core a hole to the recommended diameter (same as the TruBolt™) and depth using the fixture as a template. Clean the hole thoroughly with a hole cleaning brush. Remove the debris with a hand pump, compressed air, or vacuum.
2. Insert the anchor through the fixture and drive with a hammer until the washer contacts the fixture.
3. Tighten the nut with a torque wrench to the specified assembly torque.



Heavy Duty Anchors



TruBolt™ Stud Anchors - Hex Nut - Zinc Plated

Part No	Thread Size	Max Fixture Thickness (mm)	Overall Anchor Length (mm)	Drilled Hole Ø (mm)	Fixture Hole Ø (mm)	Min Hole Depth (mm)	Effective Length	Order Qty
T06055	M6	15	55	6	8	55	38	100
T06085	M6	45	85	6	8	75	68	100
T06120	M6	80	120	6	8	75	103	50
T06150	M6	110	150	6	8	75	133	100
T06180	M6	140	180	6	8	75	163	100
T08065	M8	12	65	8	10	65	45	50
T08090	M8	40	90	8	10	75	70	50
T10075	M10	12	75	10	12	80	52	50
T10090	M10	30	90	10	12	90	67	50
T10120	M10	50	120	10	12	100	97	20
T12080	M12	6	80	12	15	90	58	20
T12100	M12	25	100	12	15	105	71	20
T12120	M12	45	120	12	15	105	93	20
T12140	M12	65	140	12	15	105	111	20
T12180	M12	100	180	12	15	125	151	20
T16100	M16	8	100	16	19	115	67	20
T16125	M16	20	125	16	19	135	85	20
T16150	M16	45	150	16	19	145	110	20
T16175	M16	70	175	16	19	145	135	20
T20120	M20	10	120	20	24	140	85	10
T20160	M20	35	160	20	24	170	115	10
T20215	M20	90	215	20	24	200	170	10



TruBolt™ Stud Anchors - Hex Nut - Hot Dipped Galvanised

Part No	Thread Size	Max Fixture Thickness (mm)	Overall Anchor Length (mm)	Drilled Hole Ø (mm)	Fixture Hole Ø (mm)	Min Hole Depth (mm)	Effective Length	Order Qty
T08090GH	M8	40	90	8	10	75	70	50
T10090GH	M10	30	90	10	12	90	67	50
T12080GH	M12	6	80	12	15	90	58	20
T12100GH	M12	25	100	12	15	105	71	20
T12140GH	M12	65	140	12	15	105	111	20
T12180GH	M12	100	180	12	15	125	151	20
T16100GH	M16	8	100	16	19	115	67	20
T16125GH	M16	20	125	16	19	135	85	20
T16150GH	M16	45	150	16	19	145	110	20
T16175GH	M16	70	175	16	19	145	135	20
T20120GH	M20	10	120	20	24	140	85	10
T20160GH	M20	35	160	20	24	170	115	10
T20215GH	M20	90	215	20	24	200	170	10



TruBolt™ Stud Anchors - Hex Nut - Stainless Steel Grade AISI 316 (A4)

Part No	Thread Size	Max Fixture Thickness (mm)	Overall Anchor Length (mm)	Drilled Hole Ø (mm)	Fixture Hole Ø (mm)	Min Hole Depth (mm)	Effective Length	Order Qty
T06055SS	M6	15	55	6	8	55	38	100
T06085SS	M6	45	85	6	8	75	68	100
T08065SS	M8	12	65	8	10	65	45	100
T08090SS	M8	40	90	8	10	75	70	50
T10075SS	M10	12	75	10	12	80	52	50
T10090SS	M10	30	90	10	12	90	67	50
T12080SS	M12	6	80	12	15	90	58	20
T12100SS	M12	25	100	12	15	105	71	20
T12140SS	M12	65	140	12	15	105	111	20
T16100SS	M16	8	100	16	19	115	67	20
T16125SS	M16	20	125	16	19	135	85	20
T16150SS	M16	45	150	16	19	145	110	20
T16175SS	M16	70	175	16	19	145	135	20
T20120SS	M20	10	120	20	24	140	85	10
T20160SS	M20	35	160	20	24	170	115	10

TruBolt™ Stud Anchors - Indicative Working Loads in 32MPa Concrete

Thread Size	Embedment Depth (mm)	Tightening Torque (Nm)	Min Edge Distance (mm)	Min Anchor Spacing (mm)	Max Tensile Load, N _a (kN)*	Max Shear Load, V _a (kN)*
M6	32	10	50	100	3.4	2.8
M8	54	20	80	160	7.2	4.9
M10	72	35	110	220	9.9	6.8
M12	86	50	130	260	12.7	8.6
M16	115	155	170	340	20.9	14.4
M20	145	355	220	440	32.5	27.3

*The design engineer should ensure the structural element is capable of supporting these loads. Refer to Ramset™ Specifiers Resource Book for more information or explanation of technical data.

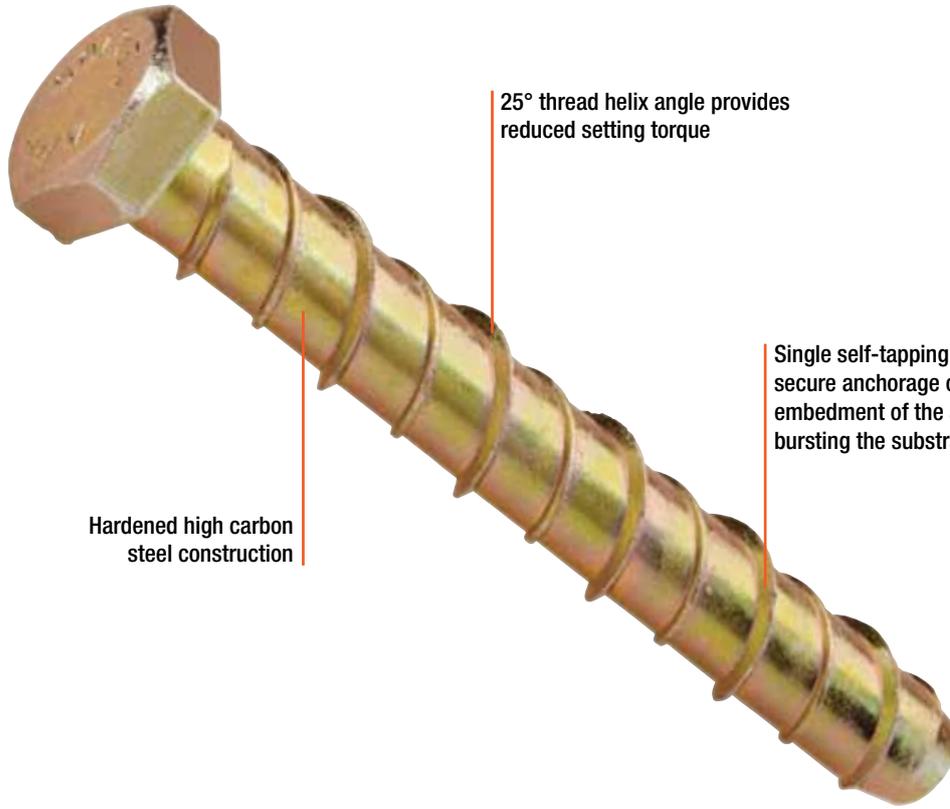


Ramset™

Medium Duty
Anchors

Medium Duty Anchors





Hardened high carbon steel construction

25° thread helix angle provides reduced setting torque

Single self-tapping thread provides secure anchorage over the full embedment of the anchor without bursting the substrate

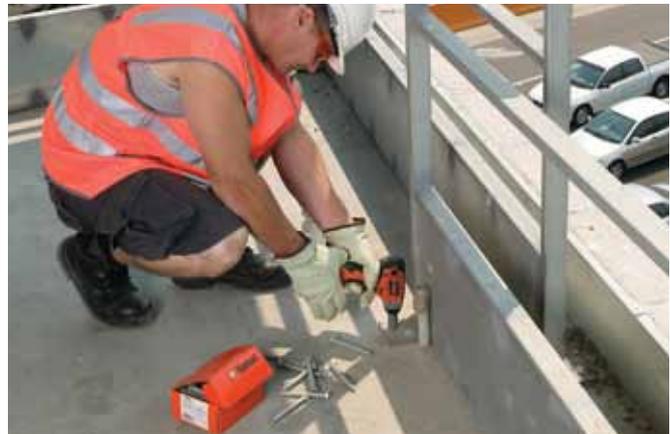
Description

The AnkaScrew™ Screw-In Anchor is a totally removable, medium duty, rotation setting, thread forming anchor, ideal for either temporary or permanent anchoring into substrates such as concrete, brick, hollow brick or block. The AnkaScrew™ is particularly well suited to close-to-edge or close-to-anchor fixing as it does not expand and burst the surrounding substrate.

Specification

Material	High Carbon Steel
Corrosion Protection	Zinc Plating, Mechanical Galvanising
Head Style	Flanged Hex (5mm & 6mm), Hex (8mm, 10mm & 12mm)
Fixing Method	Through Fixture
Setting Method	Rotation
Anchoring Method	Thread Forming
Drilled Hole Diameters	5mm, 6mm, 8mm, 10mm, 12mm
Anchor Lengths	30mm, 50mm, 60mm, 75mm, 100mm, 150mm
Maximum Fixture Thickness*	5mm, 10mm, 15mm, 20mm, 25mm, 35mm, 40mm, 45mm, 50mm, 60mm, 70mm, 90mm, 100mm
Indicative Working Loads in 32MPa Concrete*	Max Tensile 1.4kN - 14.4kN Max Shear 1.5kN - 16.7kN
Substrates	Concrete, Solid Brick, Solid Block, Hollow Block, Hollow Slab, Hollow Brick

* Refer to load table



Features & Benefits

- The AnkaScrew™ is both fast and easy to install as it simply screws into a pre-drilled hole.
- The AnkaScrew™ is even faster and easier to remove. It simply screws out leaving an empty hole with no protruding metal parts to grind off.
- The AnkaScrew™ is ideal for close-to-edge and close-to-anchor installation as its self-tapping, rotation setting method of installation is not subject to any expansion pressure, therefore does not burst the substrate.

Related Products

DynaDrill™
Carbide Drill Bits
Diamond Motor
Diamond Core Drill Bits
Hole Cleaning Brush

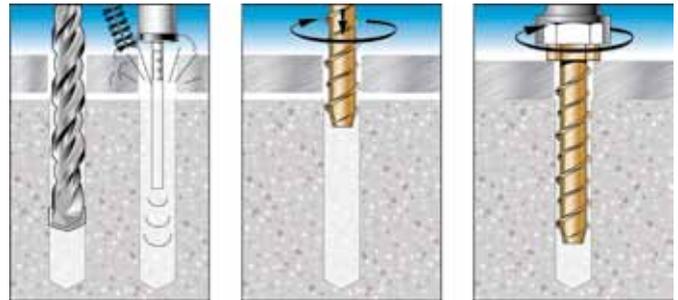
Hole Cleaning Pump
Wet and Dry Vacuum
Impact Wrench
Impact Sockets

Trades & Applications

	Carpenter	Construction Contractor	Racking Installer	Concrete Formworker
Bottom plates	✓			
Temporary hand rails/safety barriers		✓		
Pallet racking			✓	
Formwork support				✓

Installation

1. Drill or core a hole to the recommended diameter and depth using the fixture as a template. Clean the hole thoroughly with a hole cleaning brush. Remove the debris with a hand pump, compressed air, or vacuum.
2. Insert the AnkaScrew™ through the fixture and screw it into the hole with either a socket wrench or an impact wrench using slight pressure until the self-tapping action begins.
3. Tighten the AnkaScrew™ until the fixture is held firm. If resistance is experienced when tightening, unscrew the anchor one turn and re-tighten. Ensure that you do not over tighten.


Medium Duty Anchors

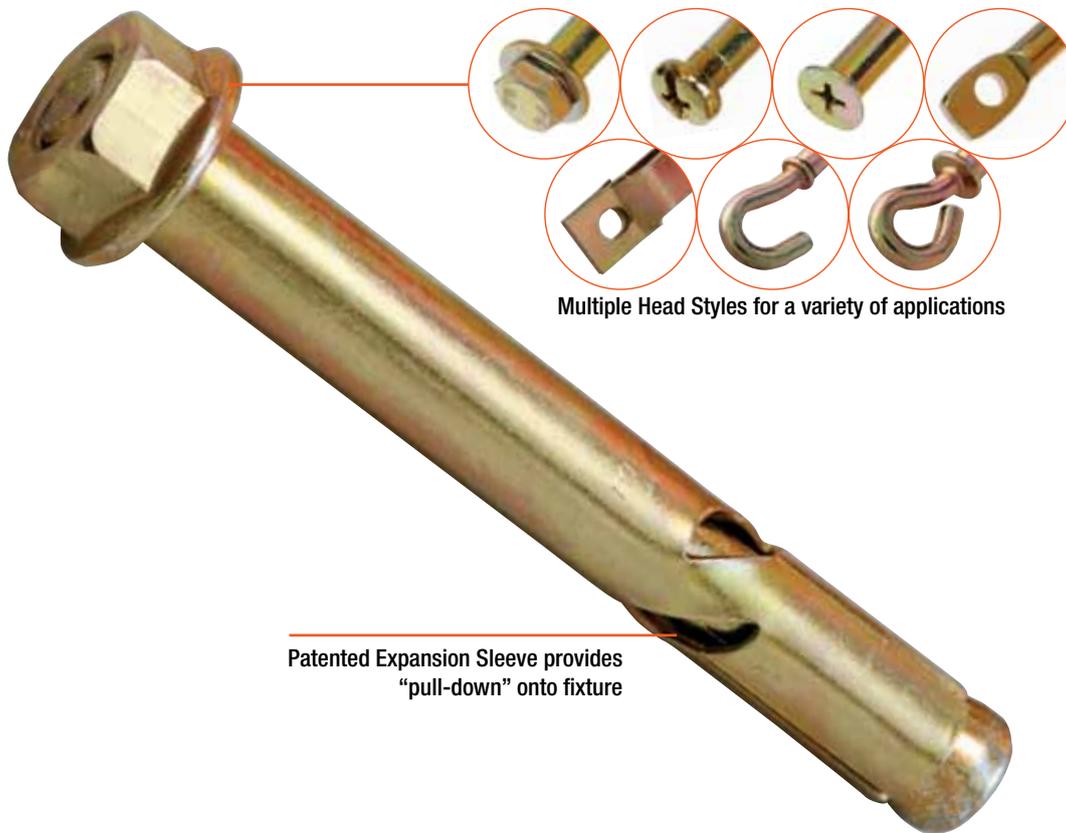

AnkaScrew™ Screw-In Anchors - Zinc Plated & Mechanically Galvanised

Part No. Zinc Plated	Part No. Mechanically Galvanised	Anchor Size (mm)	Maximum Fixture Thickness (mm)	Overall Anchor Length (mm)	Drilled Hole Ø (mm)	Fixture Hole Ø (mm)	Min Hole Depth (mm)	Effective Length (mm)	Order Qty
AS05030H	-	5	5	30	5	7	30	28	100
AS06050H	AS06050HGH	6	20	50	6	8	60	44	100
AS06075H	AS06075HGH	6	45	75	6	8	65	69	100
AS06100H	AS06100HGH	6	70	100	6	8	65	94	100
AS08060H	AS08060HGH	8	20	60	8	10	75	54	100
AS08075H	AS08075HGH	8	35	75	8	10	75	69	100
AS08100H	AS08100HGH	8	60	100	8	10	80	94	100
AS10060H	AS10060HGH	10	10	60	10	12	80	54	50
AS10075H	AS10075HGH	10	25	75	10	12	85	69	50
AS10100H	AS10100HGH	10	50	100	10	12	95	94	50
AS12075H	AS12075HGH	12	15	75	12	14	100	69	50
AS12100H	AS12100HGH	12	40	100	12	14	110	94	50
AS12150H	AS12150HGH	12	90	150	12	14	110	144	20

AnkaScrew™ Screw-In Anchors - Indicative Working Loads in 32MPa Concrete

Anchor Size/ Hole Ø (mm)	Embedment Depth (mm)	Min Edge Distance (mm)	Min Anchor Spacing (mm)	Max Tensile Load, N _a (kN)*	Max Shear Load, V _a (kN)*
5	25	15	15	1.4	1.5
6	45	25	50	4.1	4.5
8	60	35	70	6.6	8.4
10	75	40	80	9.8	13.8
12	90	50	100	14.4	16.7

*The design engineer should ensure the structural element is capable of supporting these loads. Refer to Ramset™ Specifiers Resource Book for more information or explanation of technical data.



Multiple Head Styles for a variety of applications

Patented Expansion Sleeve provides "pull-down" onto fixture

Description

The DynaBolt™ Plus Sleeve Anchor is a medium duty, torque controlled, expansion anchor, with an integrated pull-down section, designed for medium duty anchoring of timber and steel fixtures to concrete, brick or block. The DynaBolt™ Plus is available in a variety of different head styles and finishes.

Specification

Material	Carbon Steel, Stainless Steel 316 (A4)
Corrosion Protection	Zinc Plating, Hot Dipped Galvanising
Head Style	Hex Nut, Hex Bolt, Countersunk/Flat Head, Round Head, Hook, Eye, Tie Wire
Fixing Method	Through Fixture
Setting Method	Torque Controlled
Anchoring Method	Expansion
Thread Sizes	M4.5, M6, M8, M10, M12, M16
Drilled Hole Diameters	6mm, 8mm, 10mm, 12mm, 16mm, 20mm
Anchor Lengths	26mm, 32mm, 34mm, 38mm, 40mm, 41mm, 45mm, 49mm, 55mm, 57mm, 60mm, 62mm, 65mm, 66mm, 70mm, 75mm, 76mm, 80mm, 81mm, 85mm, 92mm, 98mm, 100mm, 103mm, 105mm, 106mm, 110mm, 113mm, 124mm, 125mm, 126mm, 140mm, 157mm
Maximum Fixture Thickness	3mm, 5mm, 6mm, 8mm, 10mm, 12mm, 15mm, 20mm, 25mm, 30mm, 32mm, 35mm, 45mm, 49mm, 50mm, 55mm, 60mm, 65mm, 70mm, 80mm
Indicative Working Loads in 32MPa Concrete	Max Tensile 2.7kN -16.6kN Max Shear 2.5kN - 15.6kN
Substrates	Concrete, Solid Brick, Solid Block, Hollow Brick, Hollow Block, Hollow Slab



Features & Benefits

- The DynaBolt™ Plus patented expansion sleeve closes gaps of up to 5mm, pulling down on the fixture to induce clamp load and provide improved security.
- The DynaBolt™ Plus is a fully assembled through fixture anchor. Therefore, assembly, marking out and re-positioning of fixtures is eliminated making installation fast and easy.
- The choice of multiple head styles makes the DynaBolt™ Plus a versatile anchor for a variety of different applications.

Related Products

DynaDrill™
Carbide Drill Bits
Diamond Motor
Diamond Core Drill Bits

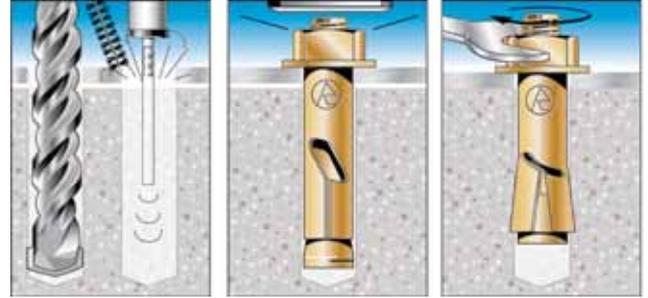
Hole Cleaning Brush
Hole Cleaning Pump
Wet and Dry Vacuum
Screwdriver Bits

Trades & Applications

	Carpenter	Construction Contractor	Window Installer	Racking Installer
Bottom plates	✓			
Hand rails		✓		
Window frames			✓	
Pallet racking				✓

Installation

1. Drill or core a hole to the recommended diameter and depth using the fixture as a template. Clean the hole thoroughly with a hole cleaning brush. Remove the debris with a hand pump, compressed air, or vacuum.
2. Insert the DynaBolt™ Plus through the fixture and drive with a hammer until the washer contacts the fixture.
3. Tighten the DynaBolt™ Plus, allowing the sleeve to twist and pull down the fixture firmly onto the substrate. For optimum performance, a torque wrench should be used.


Medium Duty Anchors


DynaBolt™ Sleeve Anchor Hex Nut - Zinc Plated

Part No.	Thread Size	Max Fixture Thickness (mm)	Overall Anchor Length (mm)	Drilled Hole Ø (mm)	Fixture Hole Ø (mm)	Min Hole Depth (mm)	Effective Length (mm)	Order Qty
D6026	M4.5	3	26	6	8	30	23	100
DP06040	M4.5	12	38	6	8	45	34	100
DP06060	M4.5	30	57	6	8	55	53	100
DP08040	M6	6	40	8	10	50	34	100
DP08065	M6	25	66	8	10	65	60	50
DP08090	M6	50	92	8	10	75	86	50
DP10040	M8	3	41	10	12	50	34	50
DP10050	M8	20	49	10	12	55	42	50
DP10075	M8	30	76	10	12	65	69	50
DP10100	M8	50	103	10	12	80	96	25
DP10125	M8	80	124	10	12	85	117	25
DP12060	M10	10	55	12	15	70	47	25
DP12070	M10	15	70	12	15	70	62	25
DP12100	M10	45	98	12	15	95	90	20
DP12125	M10	70	126	12	15	95	118	20
DP16065	M12	6	62	16	19	80	51	20
DP16110	M12	35	106	16	19	120	95	10
DP16140	M12	65	140	16	19	120	129	10
DP20080	M16	8	81	20	24	100	70	10
DP20115	M16	25	113	20	24	125	102	5
DP20160	M16	70	157	20	24	155	146	5



DynaBolt™ Sleeve Anchor Hex Nut - Hot Dipped Galvanised

Part No.	Thread Size	Max Fixture Thickness (mm)	Overall Anchor Length (mm)	Drilled Hole Ø (mm)	Fixture Hole Hole Ø (mm)	Min Hole Depth (mm)	Effective Length (mm)	Order Qty
DP10040GH	M8	3	41	10	12	50	34	50
DP10050GH	M8	20	49	10	12	55	42	50
DP10075GH	M8	30	76	10	12	65	69	50
DP10100GH	M8	50	103	10	12	80	96	25
DP12060GH	M10	10	55	12	15	70	47	25
DP12070GH	M10	15	70	12	15	70	62	25
DP12100GH	M10	45	98	12	15	95	90	20
DP12125GH	M10	70	126	12	15	95	118	20
DP16065GH	M12	6	62	16	19	80	51	20
DP16110GH	M12	35	106	16	19	120	95	10
DP16140GH	M12	65	140	16	19	120	129	10
DP20080GH	M16	8	81	20	24	100	70	10
DP20115GH	M16	25	113	20	24	125	102	5



DynaBolt™ Plus Sleeve Anchor Hex Nut - Stainless Steel Grade AISI 316 (A4)

Part No.	Thread Size	Max Fixture Thickness (mm)	Overall Anchor Length (mm)	Drilled Hole Ø (mm)	Fixture Hole Hole Ø (mm)	Min Hole Depth (mm)	Effective Length (mm)	Order Qty
DP06040SS	M4.5	12	38	6	8	45	34	100
DP06060SS	M4.5	30	57	6	8	55	53	100
DP08040SS	M6	6	40	8	10	50	34	100
DP08065SS	M6	25	66	8	10	65	60	50
DP10050SS	M8	20	49	10	12	55	42	50
DP10075SS	M8	30	76	10	12	65	69	50
DP10100SS	M8	50	103	10	12	80	96	25
DP12060SS	M10	10	55	12	15	70	47	25
DP12070SS	M10	15	70	12	15	70	62	25
DP12100SS	M10	45	98	12	15	95	90	20
DP12125SS	M10	70	126	12	15	95	118	20



DynaBolt™ Sleeve Anchor Hex Bolt - Zinc Plated

Part No.	Thread Size	Max Fixture Thickness (mm)	Overall Anchor Length (mm)	Drilled Hole Ø (mm)	Fixture Hole Hole Ø (mm)	Min Hole Depth (mm)	Effective Length (mm)	Order Qty
DP08045H	M6	15	45	8	10	55	34	100
DP08070H	M6	32	70	8	10	65	60	50
DP10045H	M8	8	45	10	12	55	34	50
DP10055H	M8	20	55	10	12	55	42	50
DP10080H	M8	30	80	10	12	80	69	50
DP10105H	M8	60	105	10	12	85	96	25
DP12065H	M10	15	65	12	15	75	47	25
DP12075H	M10	20	75	12	15	75	62	25
DP12105H	M10	50	110	12	15	95	90	20
DP16110H	M12	49	110	16	19	95	95	10


DynaBolt™ Sleeve Anchor Hex Bolt - Stainless Steel Grade AISI 316 (A4)

Part No.	Thread Size	Max Fixture Thickness (mm)	Overall Anchor Length (mm)	Drilled Hole Ø (mm)	Fixture Hole Hole Ø (mm)	Min Hole Depth (mm)	Effective Length (mm)	Order Qty
DP08045HSS	M6	15	45	8	10	55	34	100
DP08070HSS	M6	32	70	8	10	65	60	50
DP10045HSS	M8	8	45	10	12	55	34	50
DP10060HSS	M8	20	60	10	12	60	56	50
DP10080HSS	M8	30	80	10	12	80	69	50
DP10105HSS	M8	60	105	10	12	85	96	25
DP12075HSS	M10	20	75	12	15	75	62	25


DynaBolt™ Sleeve Anchor Round Head - Zinc Plated

Part No.	Thread Size	Max Fixture Thickness (mm)	Overall Anchor Length (mm)	Drilled Hole Ø (mm)	Fixture Hole Hole Ø (mm)	Min Hole Depth (mm)	Effective Length (mm)	Order Qty
D6032R	M4.5	5	32	6	8	40	30	100
DP06055R	M4.5	25	55	6	8	50	25	100


DynaBolt™ Sleeve Anchor Countersunk Head - Zinc Plated

Part No.	Thread Size	Max Fixture Thickness (mm)	Overall Anchor Length (mm)	Drilled Hole Ø (mm)	Fixture Hole Hole Ø (mm)	Min Hole Depth (mm)	Effective Length (mm)	Order Qty
D6034F	M4.5	10	34	6	8	40	30	100
DP06060F	M4.5	30	60	6	8	50	25	100
DP06075F	M4.5	45	75	6	8	50	25	100
DP06100F	M4.5	70	100	6	8	60	25	100
DP08060F	M6	20	60	8	10	70	30	100
DP08085F	M6	45	85	8	10	75	30	50
DP10075F	M8	30	75	10	12	85	34	50
DP10100F	M8	55	100	10	12	85	34	50
DP10125F	M8	80	125	10	12	105	34	25


DynaBolt™ Sleeve Anchor Countersunk Head - Stainless Steel Grade AISI 316 (A4)

Part No.	Thread Size	Max Fixture Thickness (mm)	Overall Anchor Length (mm)	Drilled Hole Ø (mm)	Fixture Hole Hole Ø (mm)	Min Hole Depth (mm)	Effective Length (mm)	Order Qty
DP06060FSS	M4.5	30	60	6	8	50	25	100
DP06075FSS	M4.5	45	75	6	8	50	25	100



DynaBolt™ Sleeve Anchor - Set Lok Bolt - Zinc Plated

Part No.	Thread Size	Max Fixture Thickness (mm)	Overall Anchor Length (mm)	Drilled Hole Ø (mm)	Fixture Hole Ø (mm)	Min Hole Depth (mm)	Effective Length (mm)	Order Qty
D06026S	M4.5	-	26	6	-	30	23	500
D06038S	M4.5	-	38	6	-	41	34	100



DynaBolt™ Sleeve Anchor - Tie Wire Bolt - Zinc Plated

Part No.	Thread Size	Max Fixture Thickness (mm)	Overall Anchor Length (mm)	Drilled Hole Ø (mm)	Fixture Hole Ø (mm)	Min Hole Depth (mm)	Effective Length (mm)	Order Qty
D08042E	M6	-	42	8	-	50	34	100



DynaBolt™ Sleeve Anchor - Hook Bolt - Zinc Plated

Part No.	Thread Size	Max Fixture Thickness (mm)	Overall Anchor Length (mm)	Drilled Hole Ø (mm)	Fixture Hole Ø (mm)	Min Hole Depth (mm)	Effective Length (mm)	Order Qty
D08045K	M6	-	47	8	-	55	32	100



DynaBolt™ Sleeve Anchor - Eye Bolt - Zinc Plated

Part No.	Thread Size	Max Fixture Thickness (mm)	Overall Anchor Length (mm)	Drilled Hole Ø (mm)	Fixture Hole Ø (mm)	Min Hole Depth (mm)	Effective Length (mm)	Order Qty
D08045X	M6	-	47	8	-	55	32	100

DynaBolt™ Sleeve Anchors - Indicative Working Loads in 32MPa Concrete

Anchor Size (mm)	Thread Size	Embedment Depth (mm)	Tightening Torque (Nm)	Min Edge Distance (mm)	Min Anchor Spacing (mm)	Max Tensile Load, N _a (kN)*	Max Shear Load, V _a (kN)*
6	M4.5	25	10	55	75	2.7	2.5
8	M6	35	15	60	105	4.2	4.0
10	M8	45	35	70	135	5.9	6.4
12	M10	50	55	75	150	7.7	7.9
16	M12	65	85	100	195	11.9	10.5
20	M16	85	165	130	255	16.6	15.6

*The design engineer should ensure the structural element is capable of supporting these loads. Refer to Ramset™ Specifiers Resource Book for more information or explanation of technical data.


DynaBolt™ Decorative Post Head - Tie Wire - Zinc Plated

Part No.	Thread Size	Max Fixture Thickness (mm)	Overall Anchor Length (mm)	Drilled Hole Ø (mm)	Fixture Hole Ø (mm)	Min Hole Depth (mm)	Effective Length (mm)	Order Qty
REM06	M6	-	44	-	-	-	-	100
REM08	M8	-	47	-	-	-	-	100
REM10	M10	-	52	-	-	-	-	50


DynaBolt™ Decorative Post Head - Countersunk - Zinc Plated & Stainless Steel 316

Part No.	Thread Size	Max Fixture Thickness (mm)	Overall Anchor Length (mm)	Drilled Hole Ø (mm)	Fixture Hole Ø (mm)	Min Hole Depth (mm)	Effective Length (mm)	Order Qty
DF045SS*	M4.5	-	23	-	8	-	-	100
RFM06	M6	-	23	-	10	-	-	100
DF06SS*	M6	-	23	-	10	-	-	100
RFM08	M8	-	27	-	12	-	-	100
DF08SS*	M8	-	27	-	12	-	-	100

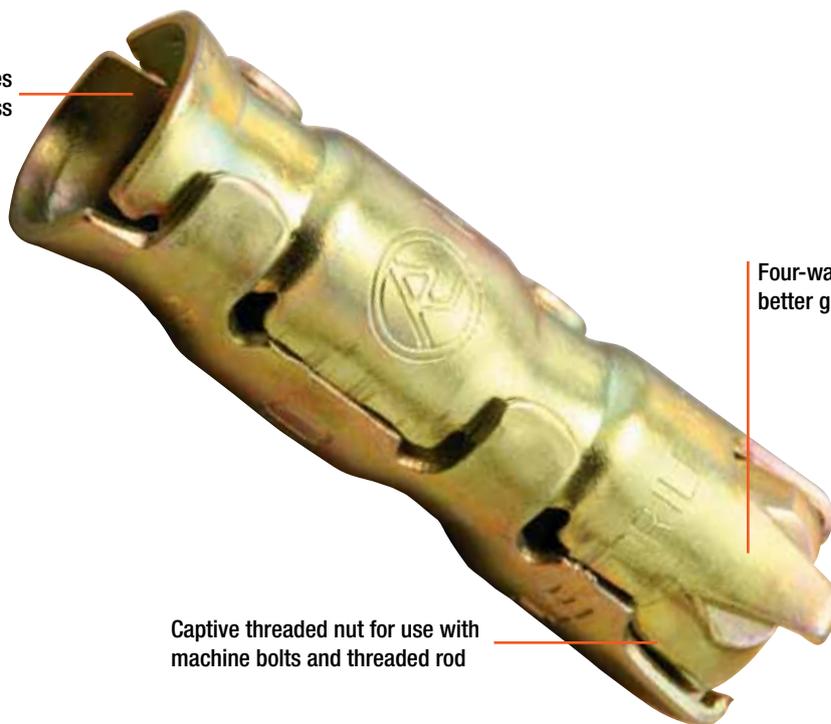
*Denotes Stainless Steel Grade AISI 316 (A4)


DynaBolt™ Decorative Post Head - Round - Zinc Plated & Stainless Steel 316

Part No.	Thread Size	Max Fixture Thickness (mm)	Overall Anchor Length (mm)	Drilled Hole Ø (mm)	Fixture Hole Ø (mm)	Min Hole Depth (mm)	Effective Length (mm)	Order Qty
DR045SS*	M4.5	-	22	-	8	-	-	100
DR06	M6	-	22	-	10	-	-	100
DR06SS*	M6	-	22	-	10	-	-	100

*Denotes Stainless Steel Grade AISI 316 (A4)

Internally threaded anchor places no restrictions on fixture thickness



Four-way expansion provides better grip in weaker substrates

Captive threaded nut for use with machine bolts and threaded rod

Description

The Loxin™ Shield Anchor is a medium duty, torque controlled, internally threaded, expansion anchor, designed for use in solid substrates such as concrete, brick, block and stone. The Loxin™ requires the installation of a machine bolt or threaded rod to set.

Specification

Material	Carbon Steel
Corrosion Protection	Zinc Plating
Head Style	-
Fixing Method	Fixture Aligned
Setting Method	Torque Controlled
Anchoring Method	Expansion
Thread Sizes	M6, M8, M10, M12, M16
Drilled Hole Diameters	13mm, 16mm, 22mm, 26mm
Anchor Lengths	35mm, 52mm, 65mm, 75mm
Maximum Fixture Thickness*	-
Indicative Working Loads in 32MPa Concrete*	Max Tensile 2.2kN -10.1kN Max Shear 1.3kN -10.2kN
Substrates	Stone, Concrete, Solid Brick, Solid Block

* Refer to load table



Features & Benefits

- The Loxin™ fits flush with the surface of the substrate, leaving no protrusions when not in use.
- The anchor's internal thread facilitates the use of machine bolts and threaded studs of any length removing restrictions on fixture thickness.
- The Loxin™ requires only shallow embedment, which reduces the risk of striking rebar during hole drilling.
- Four-way expansion provides better grip in weaker substrates.

Related Products

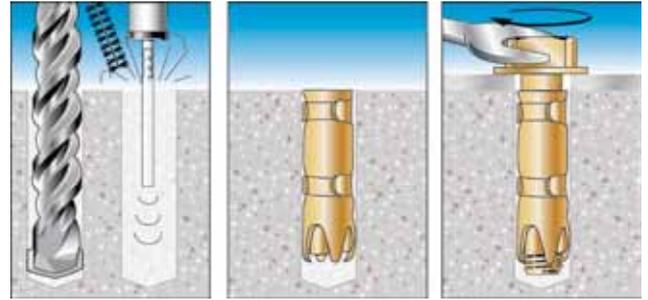
DynaDrill™	Hole Cleaning Brush
Carbide Drill Bits	Hole Cleaning Pump
Diamond Motor	Wet and Dry Vacuum
Diamond Core Drill Bits	

Trades & Applications

	Electrical Contractor	Mechanical Services Contractor	Racking Installer
Electrical Service Suspension	✓		
Mechanical Service Suspension		✓	
Pallet Racking			✓

Installation

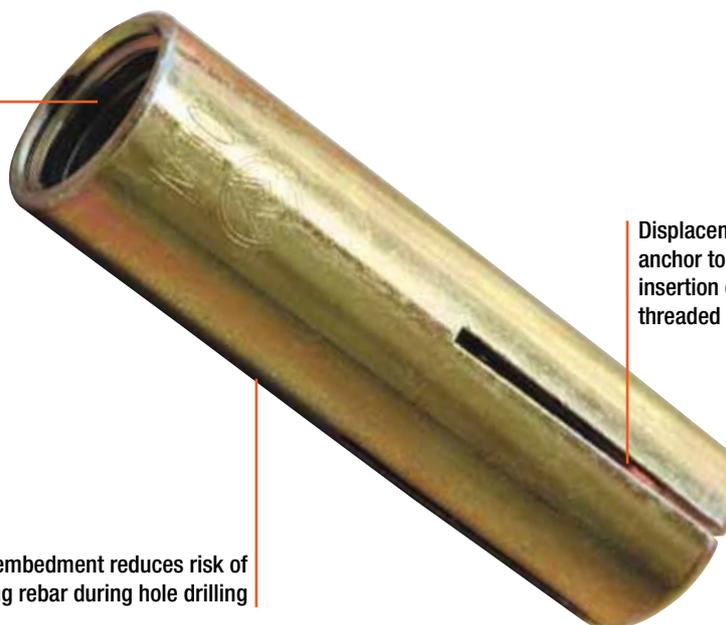
1. Drill or core a hole to the recommended diameter and depth. Clean the hole thoroughly with a hole cleaning brush. Remove the debris with a hand pump, compressed air, or vacuum.
2. Insert the Loxin™ into the hole, nut end first, and tap with a hammer until it sits flush with the surface of the substrate.
3. Position the fixture over the Loxin™, insert the correct diameter bolt or stud through the fixture and tighten.


Medium Duty Anchors


Loxin™ Shield Anchors - Zinc Plated

Part No.	Thread Size	Max Fixture Thickness (mm)	Overall Anchor Length (mm)	Drilled Hole Ø (mm)	Fixture Hole Ø (mm)	Min Hole Depth (mm)	Effective Length (mm)	Order Qty
RLM06	M6	-	35	13	-	40	40	50
RLM08	M8	-	52	16	-	60	55	25
RLM10	M10	-	52	16	-	60	55	25
RLM12	M12	-	65	22	-	70	70	25
RLM16	M16	-	75	26	-	80	75	25

Internally threaded anchor places no restrictions on fixture thickness



Displacement setting allows the anchor to remain in place without insertion of machine bolt or threaded rod

Shallow embedment reduces risk of striking rebar during hole drilling

Description

The DynaSet™ Drop-In Anchor is an all steel, medium duty, displacement setting, expansion anchor designed to provide a permanent anchorage point in concrete. Its internal thread allows it to be used with both machine bolts and threaded rod, placing no restrictions on fixture thickness. The DynaSet™ requires the use of the correct setting tool to ensure full expansion of the anchor body. The setting tool also acts as visual check for correct setting of the anchor.

Specification

Material	Carbon Steel, Stainless Steel 316 (A4)
Corrosion Protection	Zinc Plating
Head Style	-
Fixing Method	Fixture Aligned
Setting Method	Displacement
Anchoring Method	Expansion
Thread Sizes	M6, M8, M10, M12, M16, M20
Drilled Hole Diameters	8mm, 10mm, 12mm, 15mm, 16mm, 20mm, 25mm
Anchor Lengths	25mm, 30mm, 40mm, 50mm, 60mm, 65mm, 80mm
Maximum Fixture Thickness*	-
Indicative Working	Max Tensile 2.5kN - 15.8kN
Loads in 32MPa Concrete*	Max Shear 2.2kN - 13.1kN
Substrates	Concrete

* Refer to load table

Related Products

DynaDrill™	Hole Cleaning Pump
Carbide Drill Bits	Wet and Dry Vacuum
Diamond Motor	DynaSet™ Setting Tool
Diamond Core Drill Bits	Safety Ring Anchor
Hole Cleaning Brush	



Features & Benefits

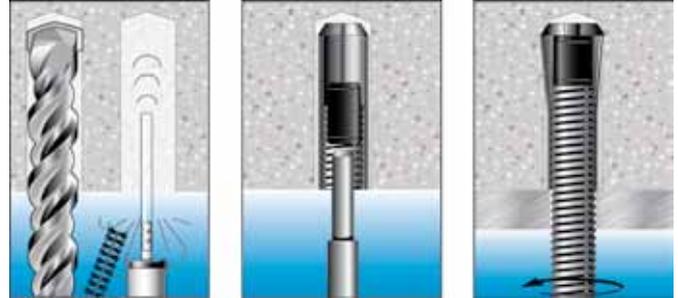
- The Dyna Set™ fits flush with, or just below, the surface of the substrate, leaving no protrusions when not in use and allowing for easy patch work.
- The anchor's internal thread facilitates the use of machine bolts and threaded studs of any length, removing restrictions on fixture thickness.
- The DynaSet™ requires only shallow embedment, which reduces the risk of drilling into rebar.
- The setting tool provides a visual expansion check for correct setting of the anchor.
- The flanged version (zinc plated only) has a retaining lip to keep the anchor flush with the surface of the substrate. This also allows for consistent threaded rod drop lengths.

Trades & Applications

	Electrical Contractor	Mechanical Services Contractor	Ceiling & Partitioning Contractor
Electrical Service Suspension	✓		
Mechanical Service Suspension		✓	
Ceiling Suspension			✓

Installation

1. Drill or core a hole to the recommended diameter and depth. Clean the hole thoroughly with a hole cleaning brush. Remove the debris with a hand pump, compressed air, or vacuum.
2. Insert the anchor into the hole. Using a hammer and the appropriate setting tool, drive the expansion plug into the anchor until the shoulder of the tool rests against the surface of the anchor.
3. Position the fixture, insert the bolt or threaded rod and tighten with a spanner.


Medium Duty Anchors


DynaSet™ Drop-in Anchors - Zinc Plated - Standard

Part No	Thread Size	Thread Length (mm)	Overall Anchor Length (mm)	Drilled Hole Ø (mm)	Min Hole Depth (mm)	Setting Tool	Order Qty
DSM06	M6	11	25	8	28	SETDS1	100
DSM08	M8	13	30	10	33	SETDS2	100
DSM10	M10	16	40	12	43	SETDS3	50
DSM12	M12	21	50	16	53	SETDS4	50
DSM16	M16	28	65	20	68	SETDS5	25
DSM20	M20	35	80	25	83	SETDS6	25



DynaSet™ Drop-in Anchors - Zinc Plated - Flanged

Part No	Thread Size	Thread Length (mm)	Overall Anchor Length (mm)	Drilled Hole Ø (mm)	Min Hole Depth (mm)	Setting Tool	Order Qty
DSF06	M6	11	25	8	28	SETDS1	100
RAP06*	M6	11	25	8	28	SETDS1	500
DSF10	M10	14	30	12	33	SETDF3	100
RAP01*	M10	14	30	12	43	SETDF3	500
DSF12	M12	21	50	16	53	SETDS4	50
RAP012*	M12	21	50	16	53	SETDS4	200

* Rod Anchoring Pack (RAP) includes setting tool in a handy carry bucket



DynaSet™ Drop-in Anchors - Stainless Steel AISI 316(A4)

Part No	Thread Size	Thread Length (mm)	Overall Anchor Length (mm)	Drilled Hole Ø (mm)	Min Hole Depth (mm)	Setting Tool	Order Qty
DSM06SS	M6	11	25	8	28	SETDS1	100
DSM08SS	M8	13	30	10	33	SETDS2	100
DSM10SS	M10	16	40	12	43	SETDS3	50
DSM12SS	M12	21	50	15	53	SETDS4*/SETDSA4	50
DSM16SS	M16	28	60	20	68	SETDS5	25

* Not to be used with DSM12SS when installing Safety Ring Anchor

DynaSet™ Drop-in Anchors - Indicative Working Loads in 32MPa Concrete

Thread Size	Embedment Depth (mm)	Tightening Torque (Nm)	Min Edge Distance (mm)	Min Anchor Spacing (mm)	Max Tensile Load, N _a (kN)*	Max Shear Load, V _a (kN)*
M6	23	6	80	60	2.5	2.2
M8	28	10	100	70	3.5	2.9
M10	38	20	135	95	5.4	3.5
M10 Flanged	28	12	100	70	3.4	2.9
M12	48	40	170	120	7.7	6.6
M16	63	95	220	160	11.5	10.4
M20	78	180	275	195	15.8	13.1

***The design engineer should ensure the structural element is capable of supporting these loads. Refer to Ramset™ Specifiers Resource Book for more information or explanation of technical data.**



DynaSet™ Setting Tools

Part No	Description	Suits	Order Qty
SETDS1	M6 x 25 Setting Tool	DSM06/DSF06 / DSM06SS	1
SETDS2	M8 x 30 Setting Tool	DSM08 / DSM08SS	1
SETDS3	M10 x 40 Setting Tool	DSM10 / DSM10SS	1
SETDF3	M10 x 30 Setting Tool	DSF10	1
SETDS4*	M12 x 50 Setting Tool	DSM12 / DSF12 / DSM12SS	1
SETDSA4	M12 x 50 Setting Tool	DSM12SS	1
SETDS5	M16 x 65 Setting Tool	DSM16 / DSM16SS	1
SETDS6	M20 x 80 Setting Tool	DSM20	1

* Not to be used with DSM12SS when installing Safety Ring Anchor



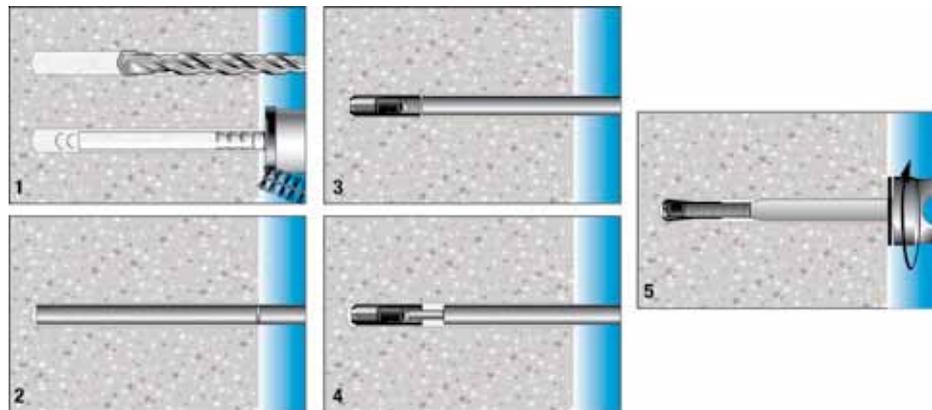
Safety Ring Anchor System

Part No	Thread Size	Internal Ring Diameter (mm)	Overall Length (mm)	For use only with	Setting Tool	Order Qty
RSR12GM(Gal)	M12	16	138	DSM12SS	SETSA4	4
RSR12SS(AISI 316[A4])	M12	16	138	DSM12SS	SETSA4	4

Note: When installed in accordance with Ramset™ specifications, anchor performance is fully compliant with AS/NZS1891.4:2000 "Industrial fall-arrest systems and devices".

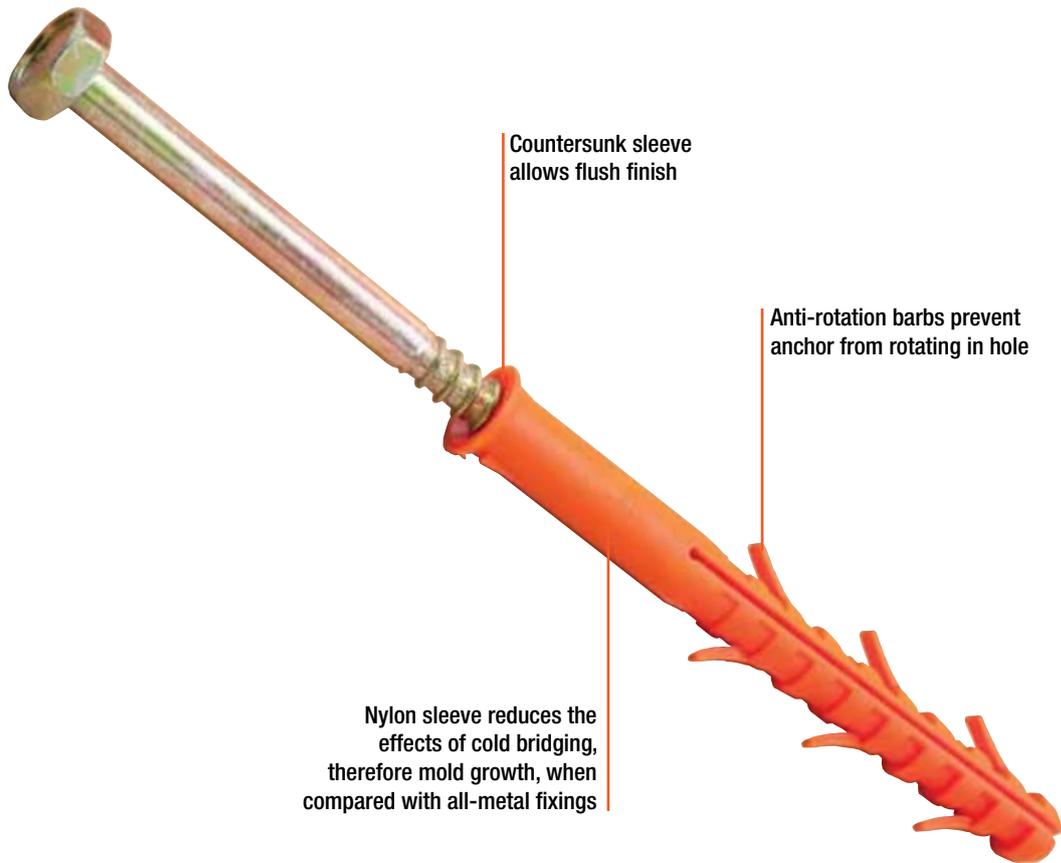
Installation

1. Drill or core a \varnothing 15mm hole to depth of 130mm \pm 2.5mm. Clean the hole thoroughly with a hole cleaning brush. Remove the debris with a hand pump, compressed air, or vacuum.
2. Check depth is correct, using the reverse end of the setting tool (SETSA4). The depth indicator groove MUST be level with the concrete surface.
3. Insert the DSM12SS into the hole by knocking it in, using the reverse end of the setting tool.
4. Using a hammer and the setting tool, drive the expansion plug into the anchor until the depth indication groove is level with the concrete surface. **If this cannot be achieved, an alternative anchor point location must be selected.**
5. Insert safety ring anchor and rubber seal. Tighten with a bar to the following Tightening Specification:
 - a. Using a bar not more than 100mm long (the bar should not bend during installation).
 - b. Using a 150mm long bar, not more than 10mm in diameter and of yield strength not exceeding 300MPa. R10 reinforcement bar is suitable for this purpose. When the bar starts to bend, the anchor ring should be returned back to the closest vertical orientation. **Ensure the anchor ring is left in a vertical position.** The Dynaset™ will remain in position if the safety ring anchor is removed.





Light Duty Anchors



Countersunk sleeve allows flush finish

Anti-rotation barbs prevent anchor from rotating in hole

Nylon sleeve reduces the effects of cold bridging, therefore mold growth, when compared with all-metal fixings

Pictured - Hex Head Ultra Long Plug

Description

The RamPlug™ Nylon Frame Anchor is a light duty, rotation setting, interference fit anchor, designed for use in a variety of substrates such as concrete, stone, solid brick, hollow brick, solid block, hollow block, hollow slab block and lightweight concrete (AAC) block. Available in Standard, Long and Ultra Long, with (Ultra Long only) or without a countersunk or hex head screw, there is a RamPlug™ for a range of light duty anchoring applications.

Specification

Material - Sleeve	Nylon
Material - Screw	Carbon Steel
(Ultra Long only)	
Corrosion Protection	Zinc Plating
(Ultra Long only)	
Head Style	Countersunk, Hex
(Ultra Long only)	
Fixing Method	Through Fixture (Long, Ultra Long) Fixture Aligned (Standard)
Setting Method	Rotation
Anchoring Method	Interference Fit
Screw Gauge	5 - 24
Drilled Hole Diameters	5mm, 6mm, 7mm, 8mm, 10mm, 12mm
Anchor Lengths	25mm, 30mm, 40mm, 50mm, 60mm, 80mm, 100mm, 135mm, 160mm
Maximum Fixture Thickness'	10mm, 45mm, 70mm
(Ultra Long and Long only)	
Substrates	Concrete, Stone, Solid Brick, Hollow Brick, Solid Block, Hollow Block, Hollow Slab, Lightweight Concrete (AAC) Block



Features & Benefits

- Anti-rotation barbs prevent the anchor from rotating in the hole
- Countersunk sleeve allows for flush finishing.
- Nylon sleeve reduces the effects of cold bridging, e.g. mold growth, when compared to all-metal anchors.

Related Products

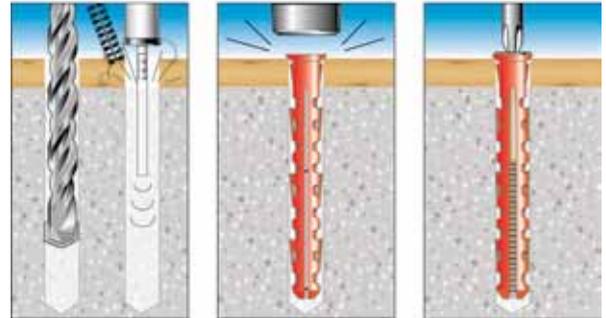
- | | |
|----------------------------------|------------------|
| DynaDrill™ / Hammer Drill Driver | Impact Driver |
| Carbide Drill Bits | Hex Sockets |
| Hole Cleaning Brush | Drill Driver |
| Hole Cleaning Pump | Screw Gun |
| Wet and Dry Vacuum | Screwdriver Bits |

Trades & Applications

	Carpenter	Flooring Contractor	Garage Door Installer	Window/Door Installer
Anchoring Wall/Base Plates & Battens	✓	✓		
Fitting Door & Window Frames	✓			✓
Fitting Garage Doors			✓	

Installation (Long & Ultra Long Plugs)

1. Drill a hole to the recommended diameter and depth using the fixture as a template. If the fixture thickness is less than the maximum, increase the hole depth accordingly. Clean the hole thoroughly with a hole cleaning brush. Remove the debris with a hand pump, compressed air, or vacuum.
2. Insert the anchor through the fixture and tap with a hammer until the collar of the anchor contacts the fixture.
3. Tighten screw until the head of the screw is flush with the collar of the anchor.


Light Duty Anchors


RamPlug™ Anchors - Standard*

Part No	Anchor Size (mm)	Max Fixture Thickness (mm)	Overall Anchor Length (mm)	Drilled Hole (mm)	Min Hole Depth (mm)	Screw Gauge	Order Qty
DNPO5	5	-	25	5	30	5 - 7	100
DNPO6	6	-	30	6	40	6 - 9	100
DNPO7	7	-	30	7	40	9 - 12	100
DNPO8	8	-	40	8	50	10 - 14	100
DNP10	10	-	50	10	60	14 - 18	50
DNP12	12	-	60	12	75	18 - 24	25

* Screw not supplied



RamPlug™ Anchors - Long Plug*

Part No	Anchor Size (mm)	Max Fixture Thickness (mm)	Overall Anchor Length (mm)	Drilled Hole (mm)	Min Hole Depth (mm)	Screw Gauge	Order Qty
DLP08	8	10	80	8	90	10 - 14	100
DLP10	10	10	80	10	90	14 - 18	50

* Screw not supplied



RamPlug™ Anchors - Ultra Long Plug*

Part No	Anchor Size (mm)	Max Fixture Thickness (mm)	Overall Anchor Length (mm)	Drilled Hole (mm)	Min Hole Depth (mm)	Head Style	Order Qty
DUP10080F	10	10	80	10	90	Countersunk	25
DUP10080H	10	10	80	10	90	Hex	25
DUP10100F	10	10	100	10	110	Countersunk	25
DUP10100H	10	10	100	10	110	Hex	25
DUP10135F	10	45	135	10	145	Countersunk	25
DUP10135H	10	45	135	10	145	Hex	25
DUP10160F	10	70	160	10	170	Countersunk	25
DUP10160H	10	70	160	10	170	Hex	25

* Supplied complete with screws



Saw tooth thread makes driving and unscrewing easier

Wide, flat collar with collapsable sleeve design ensures tight fixing

Innovative design ensures the anchor can be hammered all the way in without pre-expansion

Description

The EasyDrive™ Nylon Drive Anchor is a removable light duty, impact/rotation setting, interference fit anchor, designed for use in a variety of substrates such as concrete, stone, solid brick, solid block, hollow brick, hollow block and hollow slab.

Specification

Material - Sleeve	Nylon
Material - Drive Screw	Carbon Steel, Stainless Steel 316 (A4)
Corrosion Protection	Zinc Plating
Head Style - Drive Screw	Countersunk
Fixing Method	Through Fixture
Setting Method	Impact/Rotation
Anchoring Method	Interference Fit
Drilled Hole Diameters	5mm, 6mm, 8mm
Anchor Lengths	33mm, 42mm, 50mm, 55mm, 70mm, 75mm, 120mm
Maximum Fixture Thickness	6mm, 12mm, 25mm, 30mm, 40mm, 75mm
Substrates	Concrete, Stone, Solid Brick, Solid Block, Hollow Block, Hollow Slab, Hollow Brick



Features & Benefits

- The innovative design of the EasyDrive™ ensures that it can be hammered all the way into the hole without pre-expansion.
- The drive screw's saw tooth thread makes it easy to drive and unscrew.
- A wide, flat collar with collapsable sleeve design, ensures tight fixing.
- Nylon body provides insulation between drive screw and work surface.

Related Products

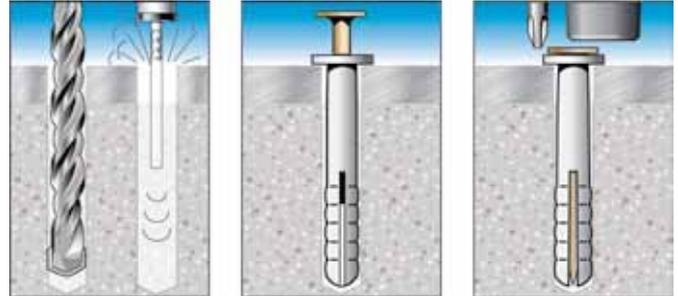
DynaDrill™ / Hammer Drill Driver	Drill Driver
Carbide Drill Bits	Screw Gun
Hole Cleaning Brush	Screwdriver Bits
Hole Cleaning Pump	
Wet and Dry Vacuum	

Trades & Applications

	Electrical Contractor	Bricklayer	Plumbing Contractor
Electrical Fitting Installation	✓		
Brick Tie Installation		✓	
Pipe/Conduit Saddle Installation	✓		✓

Installation

1. Drill a hole to the recommended diameter and depth using the fixture as a template. If the fixture thickness is less than the maximum, increase the hole depth accordingly. Remove the debris with a hand pump, compressed air, or vacuum.
2. Insert the anchor through the fixture until the collar of the anchor contacts the fixture.
3. Screw or tap home the drive screw with a hammer until the head is flush with the collar of the anchor. The drive screw can easily be removed with a screwdriver.


Light Duty Anchors

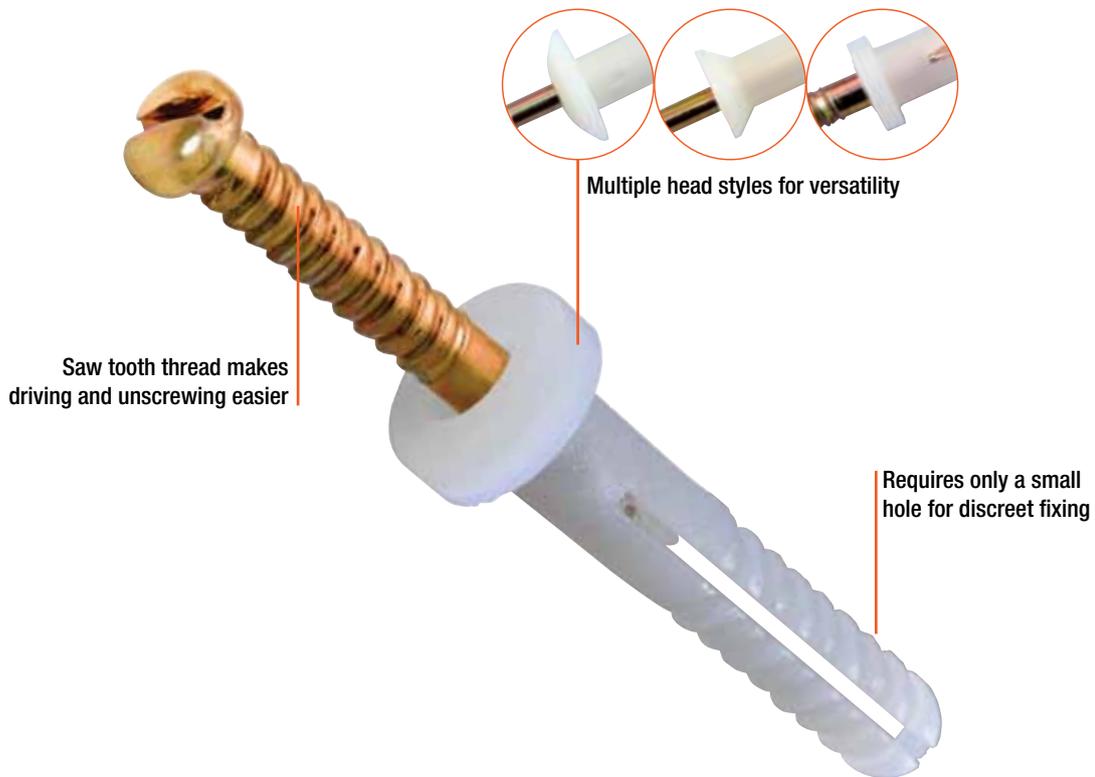

EasyDrive™ Nylon Anchors - Zinc Plated Drive Screw

Part No	Anchor Size (mm)	Max Fixture Thickness (mm)	Overall Anchor Length (mm)	Drilled Hole Ø (mm)	Min Hole Depth (mm)	Order Qty
ED05033	5	6	33	5	40	100
ED05050	5	20	50	5	45	100
ED06042	6	12	42	6	50	100
ED06055	6	25	55	6	50	100
ED06075	6	40	70	6	50	100
ED08080	8	30	75	8	80	50
ED08120	8	75	120	8	95	50



EasyDrive™ Nylon Anchors - Stainless Steel AISI 316 (A4) Drive Screw

Part No	Anchor Size (mm)	Max Fixture Thickness (mm)	Overall Anchor Length (mm)	Drilled Hole Ø (mm)	Min Hole Depth (mm)	Order Qty
ED05033SS	5	6	33	5	40	100
ED06042SS	6	12	42	6	50	100
ED06055SS	6	25	55	6	50	100
ED06075SS	6	40	70	6	50	100

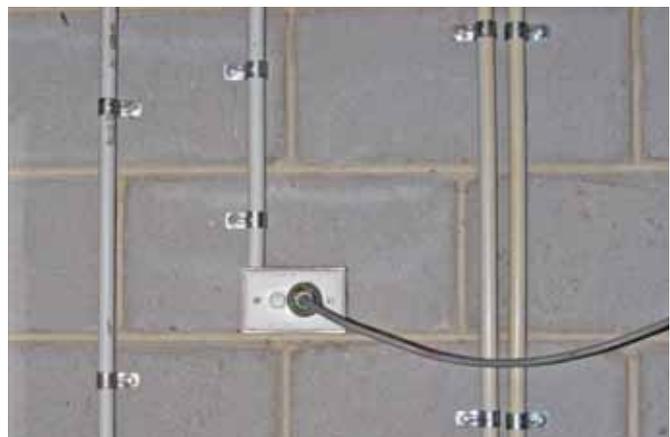


Description

The Ramset™ Nylon Anchor is a removable light duty, impact/rotation setting, interference fit anchor, with a variety of head styles, designed for use in a variety of substrates such as concrete, stone, solid brick, solid block, grout filled block and hollow block.

Specification

Material - Sleeve	Nylon
Material - Drive Screw	Carbon Steel, Stainless Steel 316 (A4)
Corrosion Protection	Zinc Plating
Head Style - Anchor	Mushroom, Round, Countersunk, Flat
Fixing Method	Through Fixture
Setting Method	Impact/Rotation
Anchoring Method	Interference Fit
Drilled Hole Diameters	5mm, 6.5mm
Anchor Lengths	20mm, 25mm, 38mm, 50mm, 75mm
Maximum Fixture Thickness	2mm, 5mm, 13mm, 25mm, 50mm
Substrates	Concrete, Stone, Solid Brick, Solid Block



Features & Benefits

- Available in multiple head styles for versatility.
- The drive screw's saw tooth thread makes it easy to drive and unscrew.
- Requires only small diameter holes for discreet fixing.
- Nylon body provides insulation between drive screw and work surface.

Related Products

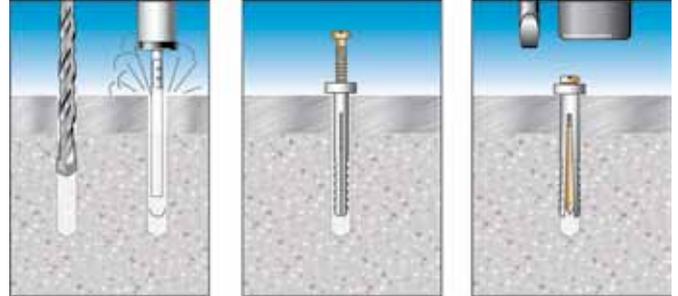
DynaDrill™ / Hammer Drill Driver	Drill Driver
Carbide Drill Bits	Screw Gun
Hole Cleaning Pump	Screwdriver Bits
Wet and Dry Vacuum	

Trades & Applications

	Electrical Contractor	Signwriter	Plumbing Contractor
Electrical Fitting Installation	✓		
Sign Installation		✓	
Pipe/Conduit Saddle Installation	✓		✓

Installation

1. Drill a hole to the recommended diameter and depth using the fixture as a template. If the fixture thickness is less than the maximum, increase the hole depth accordingly. Remove the debris with a hand pump, compressed air, or vacuum.
2. Insert the anchor through the fixture until the collar of the anchor contacts the fixture.
3. Screw or hammer home the drive screw until the head is flush with the collar of the anchor. The drive screw can easily be removed with a screwdriver.



Light Duty Anchors



Nylon Anchor - Mushroom Head

Part No	Anchor Size (mm)	Anchor Length (mm)	Drilled Hole Ø (mm)	Hole Depth (mm)	Max Fixture Thickness (mm)	Order Qty
TNM320	5	20	5	25	2	100
TNM325#	5	25	5	30	5	100
TNM425#	6.5	25	6.5	30	5	100
TNM438	6.5	38	6.5	40	13	100
TNM450	6.5	50	6.5	45	25	100
TNM475	6.5	75	6.5	55	50	50

Available with stainless steel expansion nail. Add SS to end of Part No.



Nylon Anchor - Round Head

Part No	Anchor Size (mm)	Anchor Length (mm)	Drilled Hole Ø (mm)	Hole Depth (mm)	Max Fixture Thickness (mm)	Order Qty
TNR325#	5	25	5	30	5	100
TNR338	5	38	5	40	13	100
TNR425	6.5	25	6.5	30	5	100
TNR438	6.5	38	6.5	40	13	100
TNR450	6.5	50	6.5	45	25	100

Available with stainless steel expansion nail. Add SS to end of Part No.



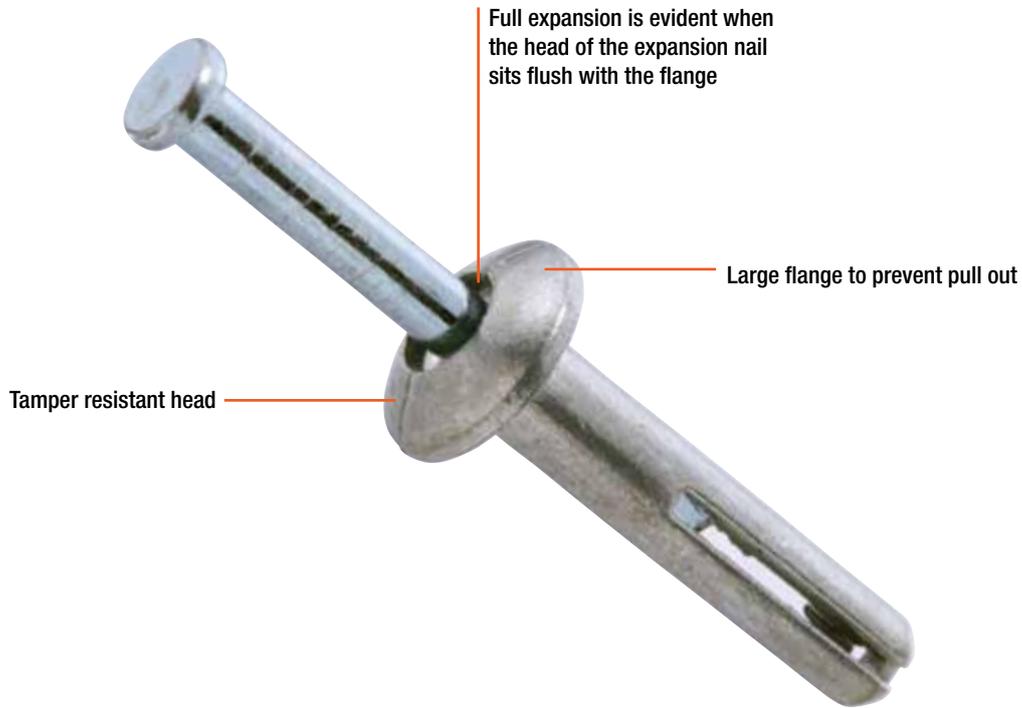
Nylon Anchor - Countersunk Head

Part No	Anchor Size (mm)	Anchor Length (mm)	Drilled Hole Ø (mm)	Hole Depth (mm)	Max Fixture Thickness (mm)	Order Qty
TNF425	6.5	25	6.5	30	5	100
TNF438	6.5	38	6.5	40	13	100
TNF450	6.5	50	6.5	45	25	100
TNF475	6.5	75	6.5	55	50	50



Nylon Anchor - Flat Head

Part No	Anchor Size (mm)	Anchor Length (mm)	Drilled Hole Ø (mm)	Hole Depth (mm)	Max Fixture Thickness (mm)	Order Qty
TNL325	5	25	5	30	5	100



Description

The ShureDrive™ Drive Anchor is an all metal light duty, impact setting, interference fit anchor, designed for tamper resistant use in a variety of substrates such as concrete, stone, solid brick, solid block, hollow brick, hollow block and hollow slab.

Specification

Material	Zinc Alloy Body, Carbon Steel Nail
Corrosion Protection	Zinc Plating
Head Style - Anchor	Mushroom
Fixing Method	Through Fixture
Setting Method	Impact
Anchoring Method	Interference Fit
Drilled Hole Diameters	5mm, 6mm
Anchor Lengths	22mm, 30mm, 50mm
Maximum Fixture Thickness	3mm, 5mm, 25mm
Substrates	Concrete, Stone, Solid Brick, Solid Block, Grout Filled Block, Hollow Brick, Hollow Block, Hollow Slab



Features & Benefits

- Hammer-in method makes installation quick and easy.
- Full expansion of the anchor is evident when the head of the expansion nail sits flush with the flange.
- Once fully set, the ShureDrive™ becomes tamper resistant.
- The anchor's large flange prevents pullout.

Note: The ShureDrive™ Drive Anchor should not be used for top fix or overhead applications

Related Products

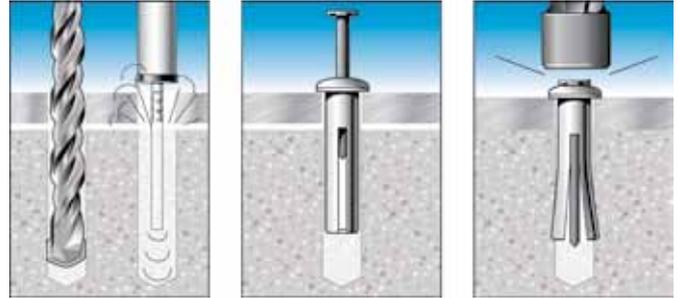
DynaDrill™ / Hammer Drill Driver
 Carbide Drill Bits
 Hole Cleaning Pump
 Wet and Dry Vacuum

Trades & Applications

	Electrical Contractor	Signwriter	Plumbing Contractor	Bricklayer
Brick Tie Installation				✓
Sign Installation		✓		
Pipe/Conduit Saddle Installation	✓		✓	

Installation

1. Drill a hole to the recommended diameter and depth using the fixture as a template. Remove the debris with a hand pump, compressed air, or vacuum.
2. Insert the anchor through the fixture until the flange of the anchor contacts the fixture.
3. Hammer home the expansion nail until the head is flush with the flange of the anchor.



Light Duty Anchors



ShureDrive™ Anchors

Part No	Anchor Size (mm)	Max Fixture Thickness (mm)	Overall Anchor Length (mm)	Head Ø (mm)	Drilled Hole Ø (mm)	Fixture Hole Ø (mm)	Min Hole Depth (mm)	Order Qty
SDM05022	5	3	22	11	5	6	30	100
SDM06030	6	5	30	13	6	7	35	100
SDM06030SS	6	5	30	13	6	7	35	100
SDM06050	6	25	50	13	6	7	55	100



Tamper resistant and flush finishing mushroom head

100% hole contact provides maximum holding power

Dog point for easy insertion and installation

Description

The RediDrive™ Hammer-In Anchor is a one-piece, all steel, light duty, impact setting, interference fit anchor designed for use in concrete. The RediDrive™ is simply hammered through the fixture into a pre-drilled hole. Its tamper resistant mushroom head sits flush and its interference fit is permanent.

Specification

Material	Carbon Steel
Corrosion Protection	Mechanical Zinc Plating
Head Style - Anchor	Mushroom
Fixing Method	Through Fixture
Setting Method	Impact
Anchoring Method	Interference Fit
Drilled Hole Diameters	5mm
Anchor Lengths	30mm, 40mm, 50mm, 65mm, 75mm
Maximum Fixture Thickness*	5mm, 15mm, 20mm, 35mm, 45mm
Substrates	Concrete



Features & Benefits

- The RediDrive™ features a dog point for easy insertion and installation.
- Hammer-in method makes installation quick and easy.
- The anchor makes 100% contact with the wall of the pre-drilled hole providing a perfect interference fit and maximum holding power.
- The anchor's mushroom head provides a tamper resistant flush finish.

Related Products

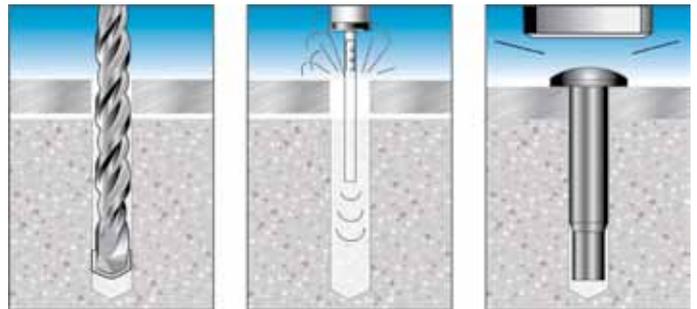
DynaDrill™ / Hammer Drill Driver
 Carbide Drill Bits
 Hole Cleaning Pump
 Wet and Dry Vacuum

Trades & Applications

	Carpenter	Signwriter	Plumbing Contractor	Electrical Contractor
Timber Batten/Window Frame Installation	✓			
Sign Installation		✓		
Pipe/Conduit Saddle Installation			✓	✓
Fire collar retrofit			✓	

Installation

1. Drill a 5mm hole to the recommended depth using the fixture as a template.
2. Remove the debris with a hand pump, compressed air, or vacuum.
3. Insert the dog point through the fixture and drive the anchor with a mash hammer until the head is flush with the fixture.

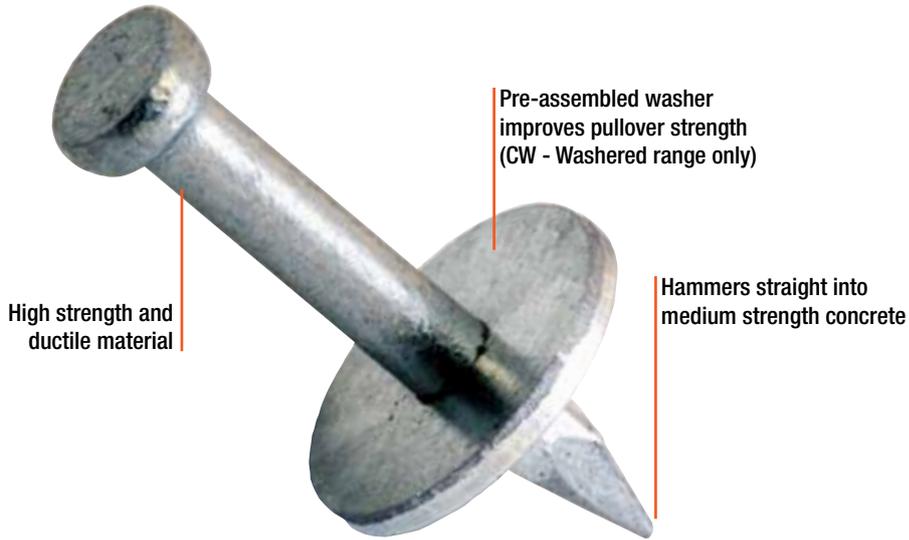


Light Duty Anchors



RediDrive™ Hammer-In Anchors

Part No	Anchor Size (mm)	Max Fixture Thickness (mm)	Overall Anchor Length (mm)	Drilled Hole Ø (mm)	Fixture Hole Ø (mm)	Min Hole Depth (mm)	Order Qty
RD05030	5	5	30	5	6.5	40	100
RD05040	5	15	40	5	6.5	47	100
RD05050	5	20	50	5	6.5	47	100
RD05065	5	35	65	5	6.5	57	100
RD05075	5	45	75	5	6.5	52	100



Description

Ramset™ concrete nails are manufactured from ductile, high strength carbon steel and are available in a number of different styles to suit a range of applications. They are designed for hand hammer driving into medium strength concrete and solid block.

Caution

Always wear eye protection when setting concrete nails.
Always strike the nail head squarely with the hammer face.

Specification

Material	Carbon Steel
Corrosion Protection	Zinc Plating, Mechanical Galvanising
Head Style	Flat, Countersunk, Bullet
Fixing Method	Through fixture
Setting Method	Impact
Anchoring Method	Interference fit
Shank Diameters	2.4mm, 3.2mm, 3.6mm, 3.8mm, 4.0mm, 4.2mm
Anchor Lengths	15mm, 20mm, 25mm, 30mm, 38mm, 40mm, 50mm, 60mm, 63mm, 75mm, 100mm
Maximum Fixture Thickness*	up to 75mm
Substrates	Concrete, Solid Block



Features & Benefits

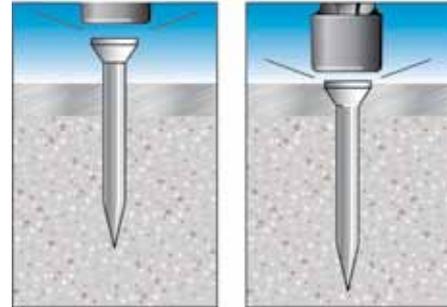
- Manufactured from ductile, high strength material to avoid breakage.
- Available with pre-assembled washers to improve pullover strength.
- Available with either a plain or striated shank and in a range of different sizes and head styles.

Trades & Applications

	Carpenter	Signwriter	Plumbing Contractor	Electrical Contractor	Concrete Formworker
Timber Batten Installation	✓				
Sign Installation		✓			
Pipe/Conduit Saddle Installation			✓	✓	
Formwork support					✓

Installation

1. Hammer the concrete nail through the fixture into the concrete until the nail head is flush with the fixture.



Light Duty Anchors



CK - Striated



CF - Plain Shank



CD - Plain Shank



Concrete Nails

Part No	Description	Shank Ø (mm)	Overall Length (mm)	Order Qty
CD425	Plain	2.4	25	100
CD430	Plain	2.4	30	100
CD440	Plain	2.4	40	100
CD525	Plain	3.2	25	100
CD540	Plain	3.2	40	100
CF650	Plain	3.8	50	100
CF660	Plain	3.8	60	100
CF675	Plain	3.8	75	100
CW415	Washed	2.4	15	100
CW415Q500	Washed	2.4	15	500
CW420	Washed	2.4	20	100
CW420Q500	Washed	2.4	20	500
CW425	Washed	2.4	25	100
CW425Q500	Washed	2.4	25	500
CW430	Washed	2.4	30	100
CW430Q500	Washed	2.4	30	500
CW440	Washed	2.4	40	100
CK540	Striated	3.2	38	100
CK750	Striated	3.6	50	100
CK760	Striated	4.0	63	100
CK775	Striated	4.2	75	100



Neat and convenient frame pack

Colour coded to indicate plug size

Description

Ramset™ plastic plugs and spaghetti are inexpensive, traditional expansion plugs for light duty anchoring in concrete, stone, solid brick and solid block. Both may be used with screws. Spaghetti may also be used with nails.

Specification

Material	Plastic
Fixing Method	Fixture Aligned
Setting Method	Rotation/Impact
Anchoring Method	Expansion
Screw Gauges	4.5-6, 8-9, 10-12, 14-16
Drilled Hole Diameters	5mm, 5.5mm (Spaghetti), 6mm, 7mm, 8mm
Plug Lengths	25mm, 32mm, 38mm, 50mm
Spaghetti Roll Lengths	5m, 50m
Roll Plug Lengths	100m
Maximum Fixture Thickness'	
Substrates	Concrete, Stone, Solid Brick, Solid Block



Features & Benefits

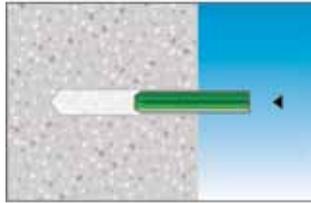
- Ramset™ plastic plugs are tapered at one end for quick and easy insertion.
- Ramset™ plastic plugs are available in a neat and convenient frame pack or economical 100m roll.
- Ramset™ cut-to-length spaghetti is available in either 5m or 50m rolls and may be used with either screws or nails.

Related Products

DynaDrill™ / Hammer Drill Driver	Drill Driver
Carbide Drill Bits	Screw Gun
Hole Cleaning Pump	Screwdriver Bits
Wet and Dry Vacuum	

Trades & Applications

	Miscellaneous Trades	Signwriter	Plumbing Contractor	Electrical Contractor
Light Hook/Bracket Installation	✓			
Sign Installation		✓		
Pipe/Conduit Saddle Installation			✓	✓



Installation

1. Drill a hole to the appropriate diameter and depth. Remove the debris with a hand pump, compressed air, or vacuum.
2. Insert the plug/spaghetti into the hole.
3. Screw the screw through the fixture into the plug/spaghetti until fixture is firm against the substrate.

Plastic Plugs (Frame Packs)

Part No	Colour	Drilled Hole Ø (mm)	Plug Length (mm)	Screw Guage	Order Qty
WPWH25	White	5	25	4.5 - 6	1,000
WPRD25	Red	6	25	8 - 9	1,000
WPRD32	Red	6	30	8 - 9	1,000
WPRD38	Red	6	35	8 - 9	1,000
WPRD50	Red	6	50	8 - 9	1,000
WPGR25	Green	7	25	10 - 12	1,000
WPGR32	Green	7	30	10 - 12	1,000
WPGR38	Green	7	35	10 - 12	500
WPGR50	Green	7	50	10 - 12	500
WPBU38	Blue	8	35	14 - 16	500
WPBU50	Blue	8	50	14 - 16	500



Plastic Plugs (Roll)

Part No	Colour	Drilled Hole Ø (mm)	Plug Length (metres)	Screw Guage	Order Qty
720115	Red	6	100	8 - 9	1
720122	Green	7	100	10 - 12	1
720139	Blue	8	100	14 - 16	1



Plastic Spaghetti

Part No	Colour	Drilled Hole Ø (mm)	Plug Length (metres)	Screw Guage	Order Qty
463609	Orange	5	5	4.5 - 6	1
RSP	Orange	5	50	4.5 - 6	1



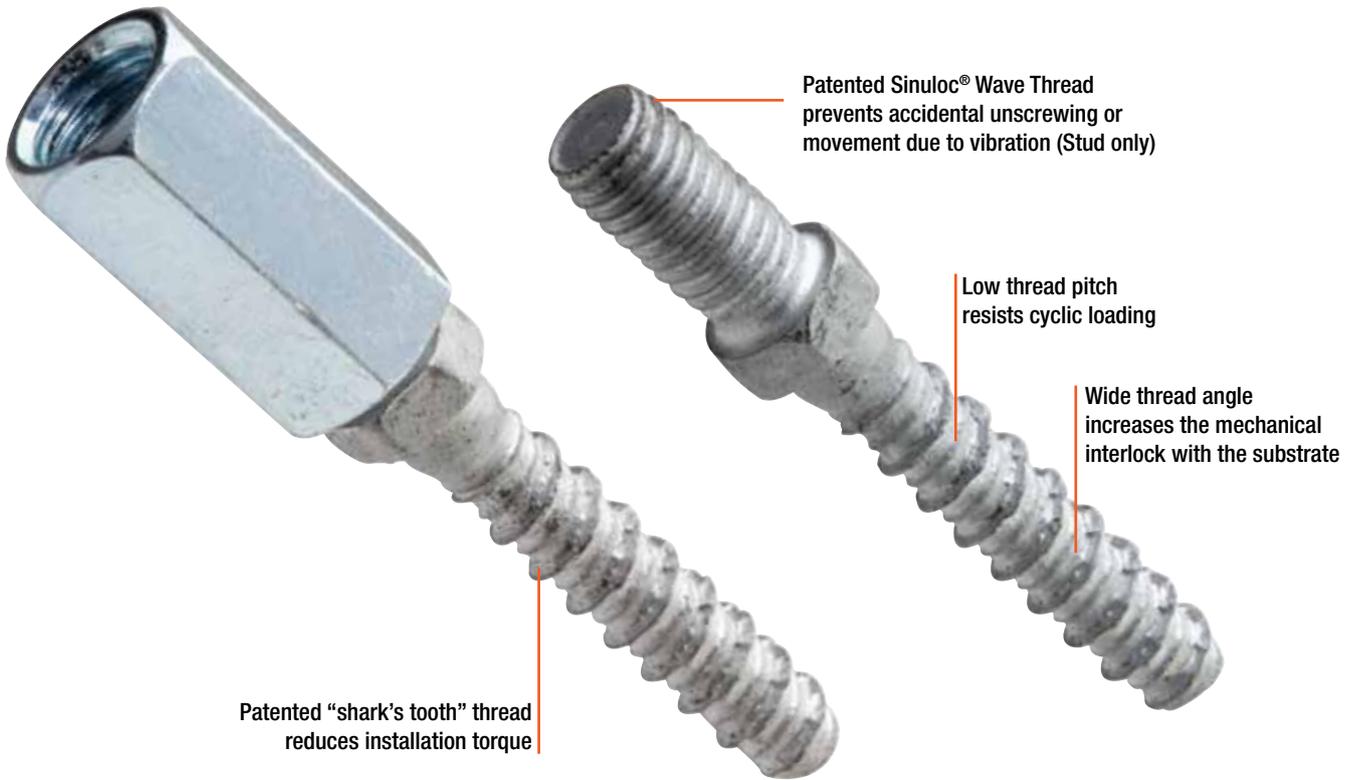


Ramset™

**Specialised
Anchors**

Specialised Anchors





Description

Designed specifically for overhead threaded rod applications, AnkaScrew™ Rod provides a faster screw-in anchoring solution than traditional drop-in anchors. AnkaScrew™ Rod is suitable for suspension of sprinkler pipe systems, metal and plastic pipes, steel ductwork, steel trays, steel channel and steel trapeze and can be used for overhead, horizontal and vertical applications. AnkaScrew™ Stud is ideal for fast, direct to surface mounting of steel pipe clamps, metal brackets, steel trays and sprinkler clamps. AnkaScrew™ Stud provides users with the same features and benefits as AnkaScrew™ Rod. Both anchors are well suited to close-to-edge or close-to-anchor fixing as they do not expand and risk bursting the surrounding substrate.

Specification

Material	High Carbon Steel
Corrosion Protection	Mechanical Galvanising
Head Style	M10 Internally Threaded 13mm Hex Head (AnkaScrew™ Rod), M8 Externally Threaded Stud with 10mm Hex (AnkaScrew™ Stud)
Fixing Method	Fixture Aligned
Setting Method	Rotation
Anchoring Method	Thread Forming
Drilled Hole Diameters	6mm
Anchor Lengths	35mm
Substrates	Concrete, Solid Brick, Solid Block, Hollow Brick, Hollow Block, Hollow Slab

Related Products

DynaDrill™ / Hammer Drill Driver Impact Wrench
 Carbide Drill Bits Long Impact Sockets (10mm
 Hole Cleaning Pump Stud/13mm Rod)
 Wet and Dry Vacuum



Features & Benefits

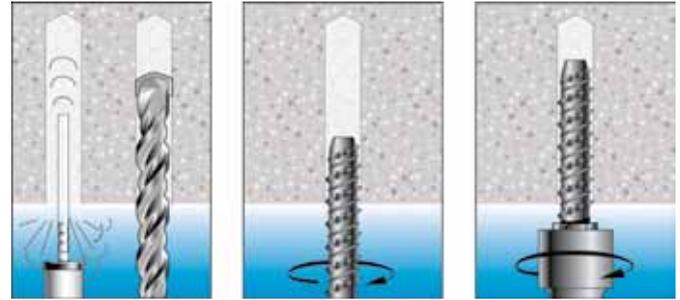
- Fire Rated to and complies with AS1530.4
- The patented “shark’s tooth” thread reduces installation torque, while the wide thread angle and low thread pitch increases the mechanical interlock with the substrate and resists cyclic loading.
- Both AnkaScrew™ Rod and Stud are fast and easy to install as they simply screw into a small (6mm) pre-drilled hole, using an impact driver, reducing the risk of incorrect setting, as well as the dust, noise and fatigue associated with traditional overhead anchoring methods that require larger (10mm and 12mm) holes and manual setting.
- Short body length minimises re-bar strikes, increasing carbide life.
- Both AnkaScrew™ Rod and Stud are easily removed leaving an empty hole with no protruding metal parts to grind off.
- Ideal for close-to-edge and close-to-anchor installation. Self-tapping, rotation setting method of installation is not subject to any expansion pressure, therefore does not risk bursting the substrate.

Trades & Applications

	Plumbing Contractor	Electrical Contractor	Mechanical Services Contractor
Pipe Suspension	✓		✓
Cable & Cable Tray Suspension		✓	✓
Duct Suspension			✓

Installation

1. Drill a 6mm diameter x 45mm (min) deep hole in the desired position. Remove the debris with a hand pump, compressed air, or vacuum.
2. Insert the AnkaScrew™ Rod or Stud and screw it into the hole with either a socket wrench or an impact wrench using slight pressure until the self-tapping action begins.
3. Tighten the AnkaScrew™ Rod or Stud until firm. If resistance is experienced when tightening, unscrew the anchor one turn and re-tighten. Ensure that you do not over tighten.


Specialised Anchors


AnkaScrew™ Stud



AnkaScrew™ Rod

AnkaScrew™ Suspension Anchors - Mechanically Galvanised

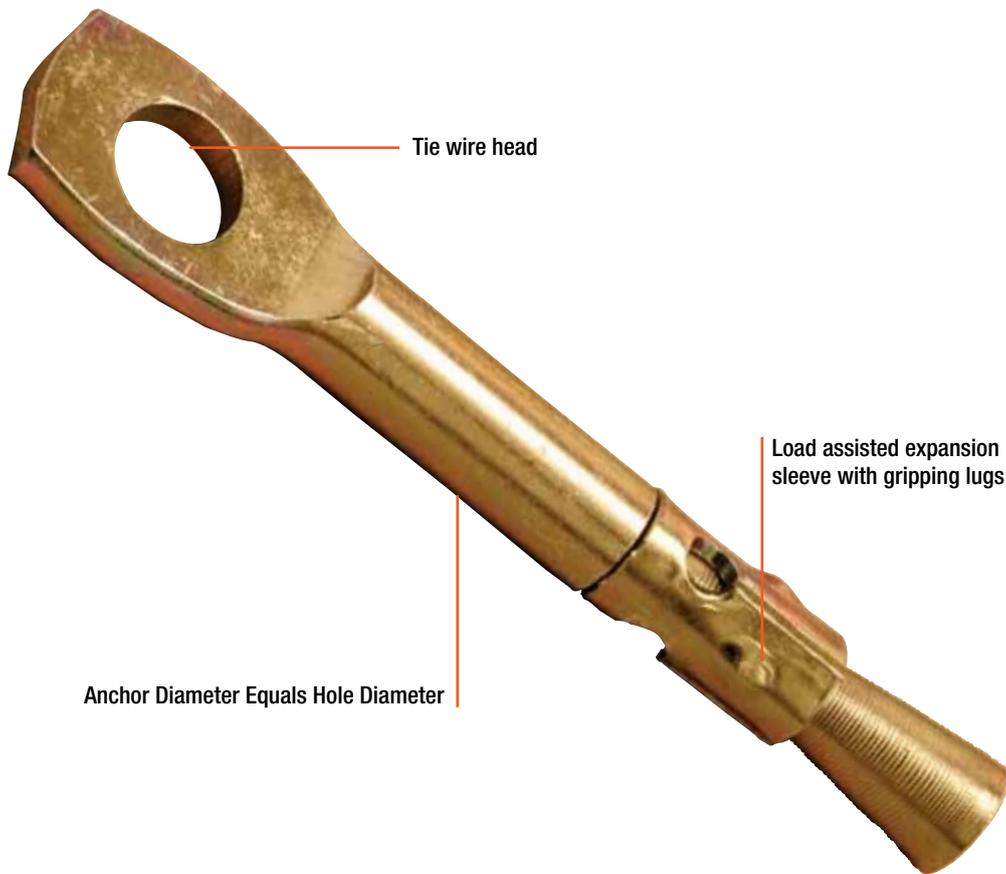
Part No	Description	Anchor Size (mm)	Anchor Length (mm)	Drilled Hole Ø (mm)	Min Hole Depth (mm)	Order Qty
AS06035R	AnkaScrew™ Rod - M10 Thread	6	35	6	45	50
AS06035S	AnkaScrew™ Stud - M8 Thread	6	35	6	45	100

AnkaScrew™ Suspension Anchors - Indicative Working Loads in 32MPa Concrete

Anchor Size/ Hole Ø (mm)	Embedment Depth (mm)	Min Edge Distance (mm)	Min Anchor Spacing (mm)	Working Load Limit (Tension)*
6	45	25	50	500kg

* This value incorporates a factor of safety FoS = 3 from the tested characteristic load = 1.5t

***The design engineer should ensure the structural element is capable of supporting these loads. Refer to Ramset™ Specifiers Resource Book for more information or explanation of technical data.**



Description

The TruFast™ Push-Pull Suspension Anchor is an all metal, tie wire, load assisted expansion anchor designed for fixing suspended ceiling cables to concrete soffits.

Specification

Material	Carbon Steel
Corrosion Protection	Zinc Plating
Head Style	Tie Wire
Fixing Method	In Place
Setting Method	Applied load
Anchoring Method	Expansion
Drilled Hole Diameter	6mm
Anchor Length	55mm, 120mm
Eye Diameter	6.5mm
Substrates	Concrete



Features & Benefits

- The TruFast™ Suspension Anchor's body diameter equals the hole diameter providing maximum shear capacity for hole size. Its cold forged construction ensures superior strength and reliability.
- The anchor design ensures maximum expansion of the sleeve. This action is further assisted by the application of load - ideal for a suspension anchor.
- The gripping lugs on the expansion sleeve grip the sides of the hole to aid full expansion during setting.

Related Products

DynaDrill™ / Hammer Drill Driver
 Carbide Drill Bits
 Hole Cleaning Pump
 Wet and Dry Vacuum

Trades & Applications

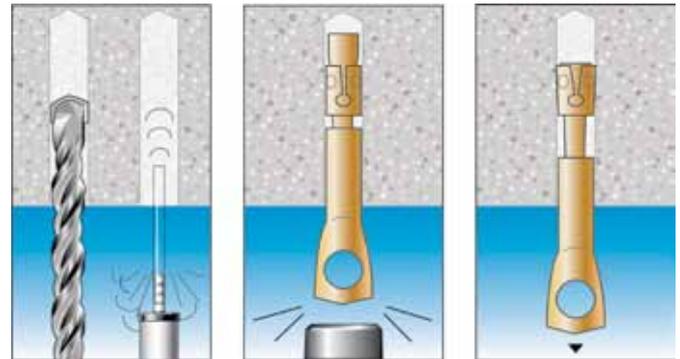
Ceiling & Partitioning Contractor

Suspended Ceiling Installation



Installation

1. Drill a 6mm diameter hole, to the recommended depth, into the concrete soffit. Remove the debris with a hand pump, compressed air, or vacuum.
2. Insert the anchor into the hole and tap with a hammer until the anchor can go no further.
3. Using the claw of a hammer, pull down on the head of the anchor until set.


Specialised Anchors


TruFast™ Push-Pull Suspension Anchors

Part No	Anchor Size (mm)	Anchor Length (mm)	Eye Ø (mm)	Drilled Hole Ø (mm)	Min Hole Depth (mm)	Order Qty
TFE06	6	55	6.5	6	45	100
TFE06120	6	120	6.5	6	110	100

Indicative tensile working load in concrete 25MPa or greater is 1.9kN

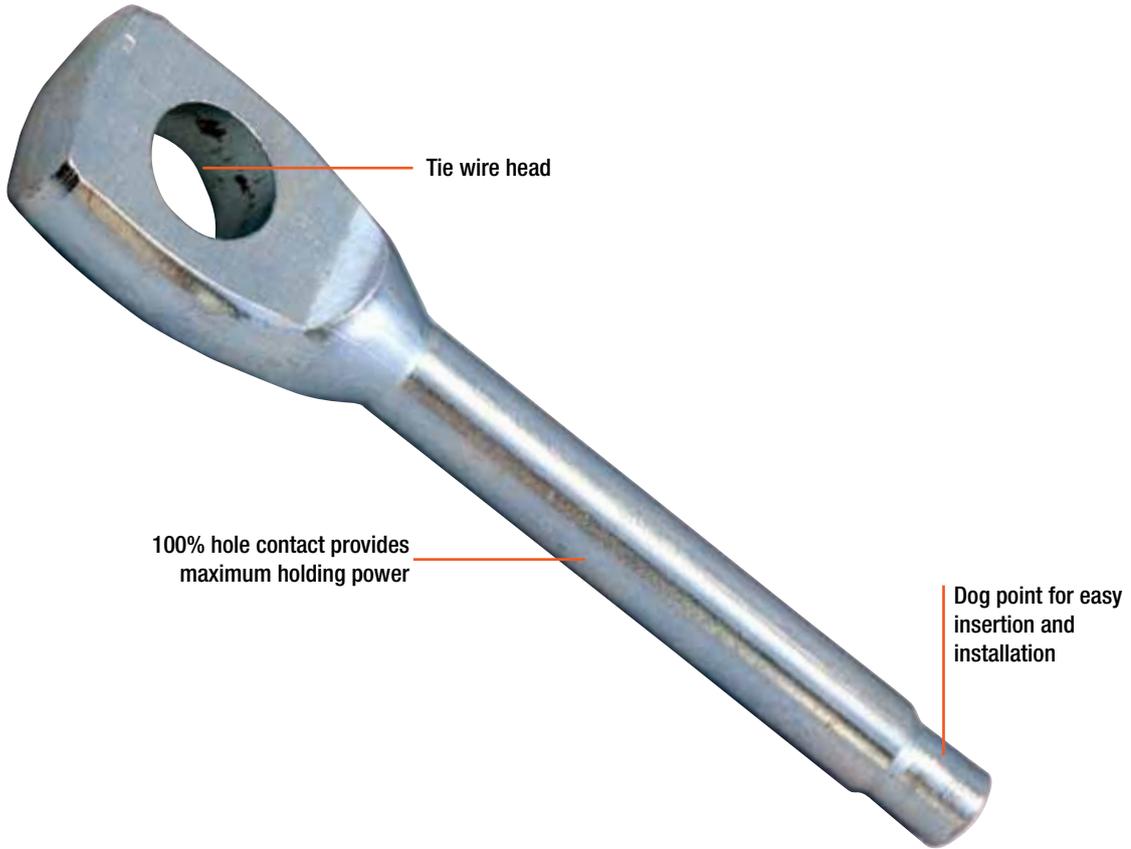
Catenary Wire Eye

Suspension Anchor



Ramset™

Specialised Anchors



Description

The Ramset™ Catenary Wire Eye is a one-piece, all steel, light duty, impact setting, interference fit suspension anchor designed for use in concrete soffits. The anchor is simply hammered into a pre-drilled hole where its 100% interference fit is permanent.

Specification

Material	Carbon Steel
Corrosion Protection	Zinc Plating
Head Style - Anchor	Tie Wire
Fixing Method	In Place
Setting Method	Impact
Anchoring Method	Interference Fit
Drilled Hole Diameter	5mm
Anchor Lengths	40mm
Eye Diameter	7mm
Substrates	Concrete



Features & Benefits

- The Ramset™ Catenary Wire Suspension Anchor features a dog point for easy insertion and installation.
- Hammer-in method makes installation quick and easy.
- The anchor makes 100% contact with the wall of the pre-drilled hole providing a perfect interference fit and maximum holding power.

Related Products

DynaDrill™ / Hammer Drill Driver
Carbide Drill Bits
Hole Cleaning Pump
Wet and Dry Vacuum

Trades & Applications

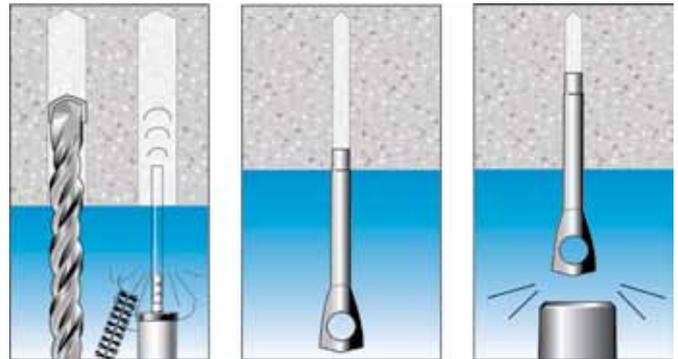
Ceiling & Partitioning Contractor

Suspended Ceiling Installation



Installation

1. Drill a 5mm hole to 40mm deep.
2. Remove the debris with a hand pump, compressed air, or vacuum.
3. Insert the dog point into the pre-drilled hole and hammer the anchor in.

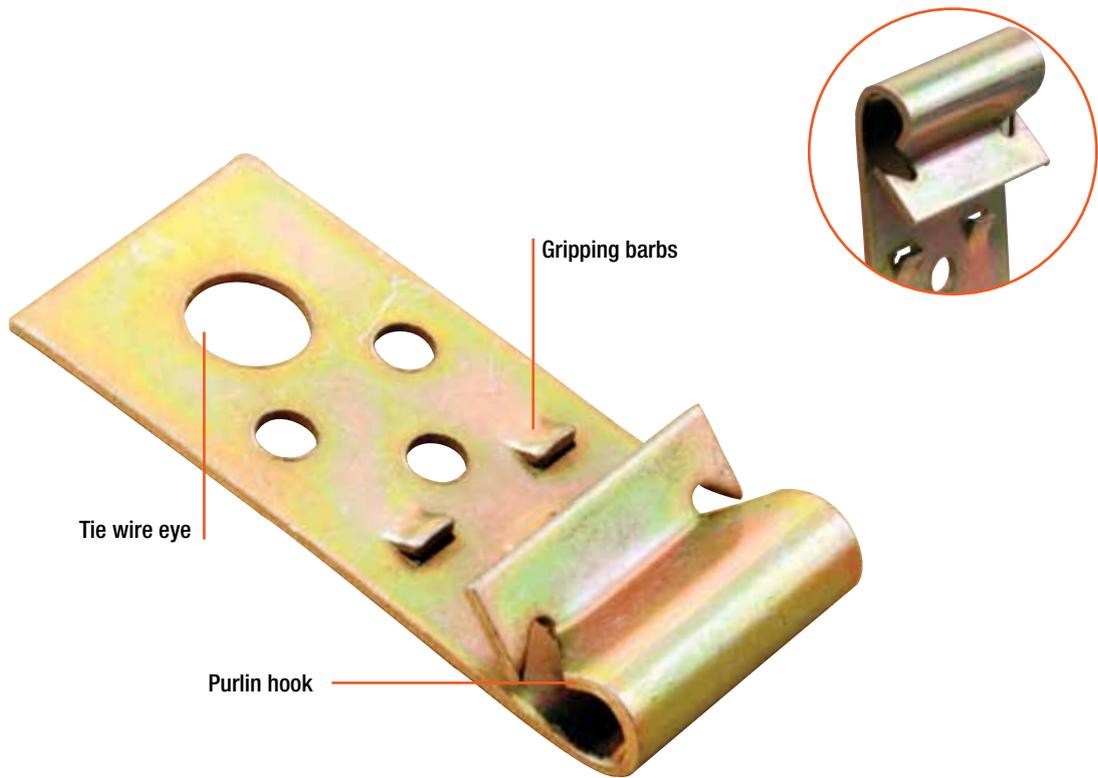


Specialised Anchors



Catenary Wire Eye

Part No	Anchor Size (mm)	Anchor Length (mm)	Eye Ø (mm)	Drilled Hole Ø (mm)	Min Hole Depth (mm)	Order Qty
CWE05040	5	40	7	5	40	100



Description

The Ramset™ Vertical Flange Clip is a suspension anchor, designed for use with steel “C” Section purlins.

Specification

Material	Pressed Steel
Corrosion Protection	Zinc Plating
Head Style	Purlin Hook
Fixing Method	In Place
Setting Method	Impact
Anchoring Method	Gravity/Clamping
Hole Diameters	3mm & 6mm
Anchor Length	42mm
Purlin Gauges	1.6mm - 2.5mm
Substrates	Steel “C” Section Purlins

Features & Benefits

- The Ramset™ Vertical Flange Clip features gripping barbs for a firm hold on the flange of the “C” purlin.
- For suspended ceilings, angle trim may be bolted through the larger hole using M6 bolts.



Installation

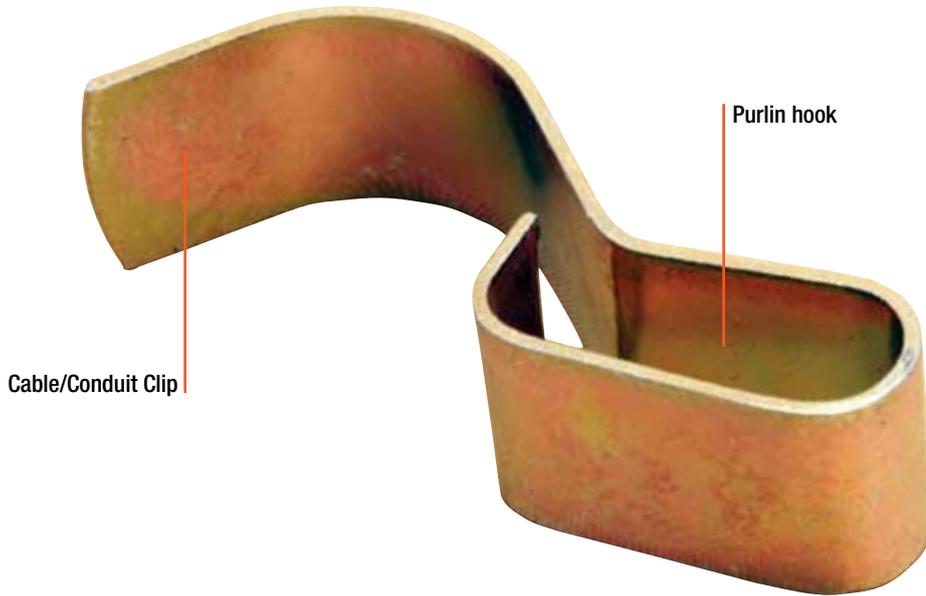
1. Place the purlin hook profile over the vertical flange of the “C” purlin.
2. Tap into place with a hammer.
3. Connect drop wire or chains through the “eye” of the clip.

Trades & Applications

	Electrical Contractor	Ceiling & Partitioning Contractor
Fixing Electrical Cable to Steel Purlins		✓
Fixing Lighting Systems to Steel Profiles	✓	
Fixing Suspended Ceilings to Steel Profiles		✓

Vertical Flange Clip

Part No	Description	Flange Thickness (mm)	Small Hole Ø (mm)	Order Qty
VF1	For Flanges 1.6 - 2.5mm	7	3	100



Description

The DynaClip™ is a spring steel clip system for quick, simple attachment of cables and conduit to steel profiles.

Specification

Material	Spring Steel
Corrosion Protection	Zinc Plating
Head Style	Purlin Hook
Fixing Method	In Place
Setting Method	Impact
Anchoring Method	Clamping
Cable/Conduit Diameters	6mm-10mm, 16mm-20mm, 25mm-32mm
Anchor Lengths	43mm, 57mm
Purlin Gauges	2mm-10mm
Substrates	Steel Profiles

Features & Benefits

- The DynaClip™ Spring Steel Clip is quick and easy to attach to steel profiles.
- The DynaClip™ is all steel and therefore fire resistant.
- Available for a range of cable/conduit diameters.



Installation

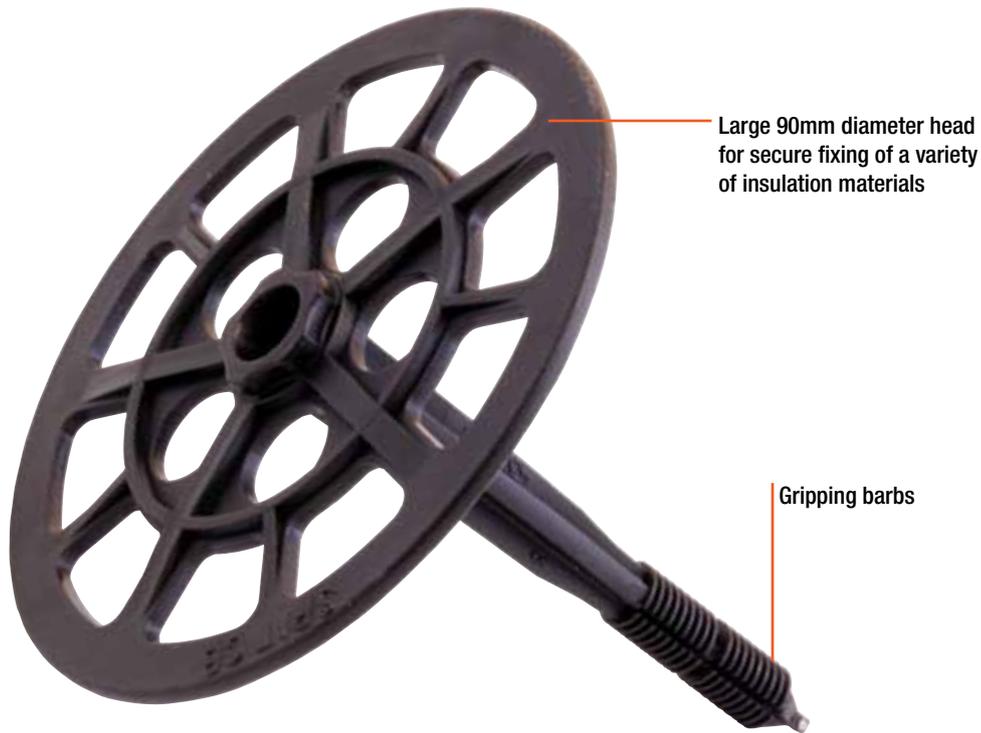
1. Place the hook profile over the horizontal of the steel profile.
2. Tap into place with a hammer.

Trades & Applications

	Electrical Contractor	Ceiling & Partitioning Contractor
Fixing Electrical Cable to Steel Purlins		✓
Fixing Lighting Systems to Steel Profiles	✓	
Fixing Suspended Ceilings to Steel Profiles		✓

DynaClip™

Part No	Description	Flange Thickness	Order Qty
DK20	For Cables 16 - 20mm	2.0 - 10.0	100
DK32	For Cables 25 - 32mm	2.0 - 10.0	100



Description

The InsulFast™ Drill Anchor is a light duty, impact set, interference fit anchor, designed for fixing the majority of insulation materials to solid substrates such as concrete, brick, block and stone.

Specification

Material	Polypropylene
Temperature Range	-30°C to + 80°C
Head Style	Disc
Fixing Method	Through Fixture
Setting Method	Impact
Anchoring Method	Interference Fit
Drilled Hole Diameter	8mm
Anchor Lengths	95mm, 115mm, 135mm
Min/Max Insulation Thickness'	50/60mm, 70/80mm, 90/100mm
Indicative Tensile Loads	Concrete - 10kg Solid Brick - 8kg Stone/Solid Block - 6kg
Substrates	Stone, Concrete, Solid Brick, Solid Block



Features & Benefits

- The InsulFast™ Drill Anchor is quick and easy to install through insulation.
- Although best suited to rigid insulation, such as extruded polystyrene, the anchor's large 90mm diameter head allows secure fixing of a variety of insulation materials.
- Made of polypropylene, the InsulFast™ Drill Anchor is suited to a wide temperature range of between -30°C to + 80°C

Related Products

DynaDrill™ / Hammer Drill Driver
Carbide Drill Bits

Trades & Applications

Insulation Fixing

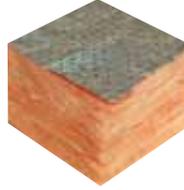
Insulation Contractor



Compatible Insulation Types



Extruded Polystyrene



Fibreglass / Rockwool
 (Compatibility dependent on ability
 to drill through insulation)

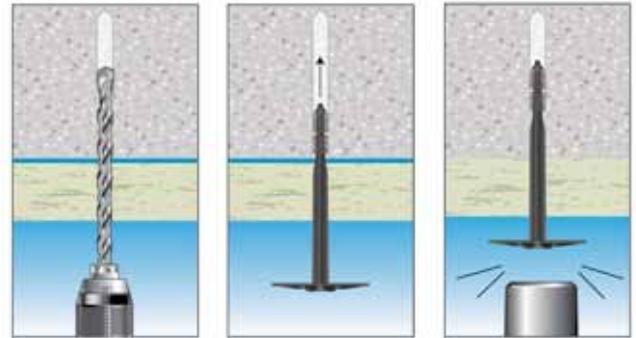


Expanded Polystyrene

Specialised Anchors

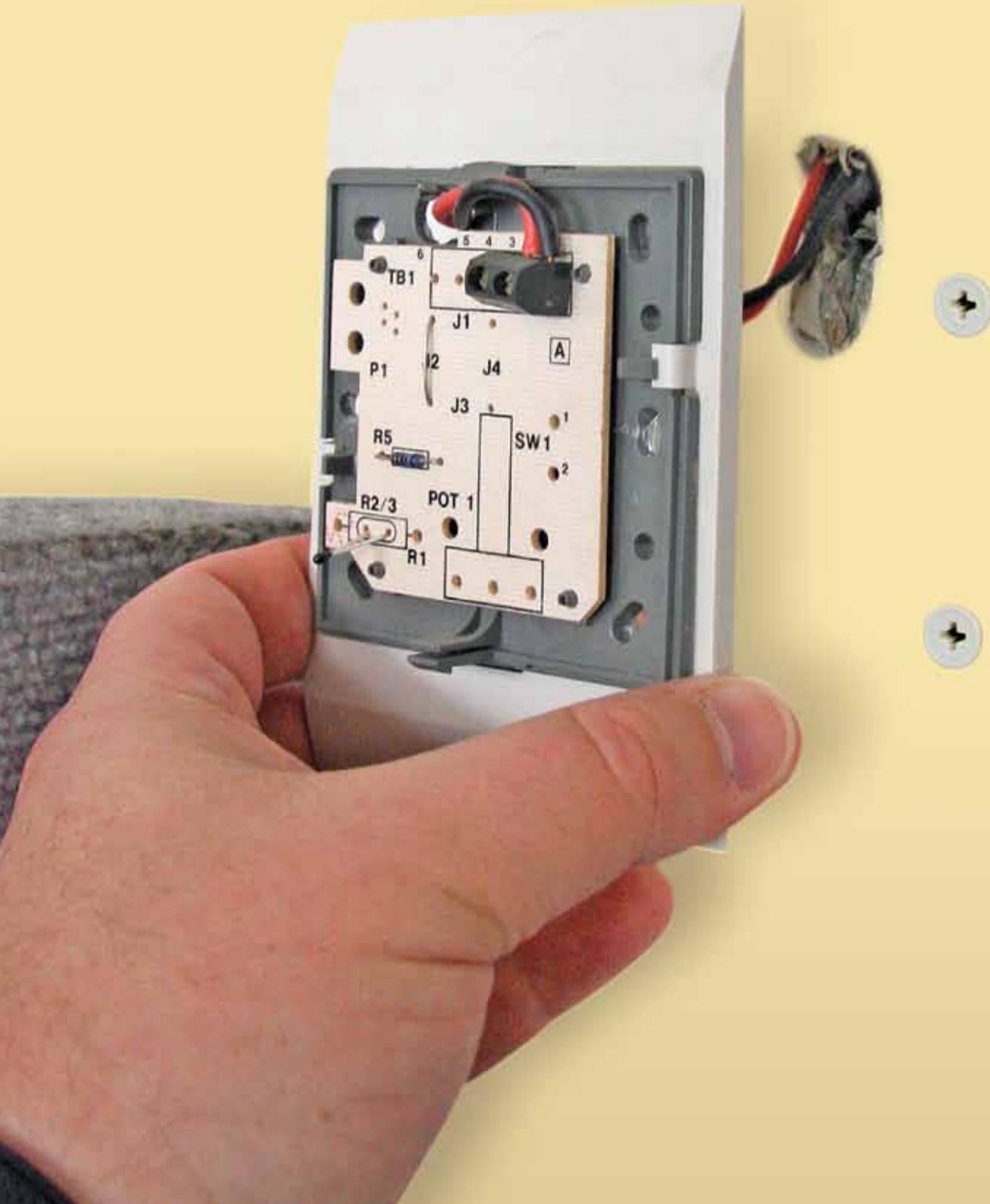
Installation

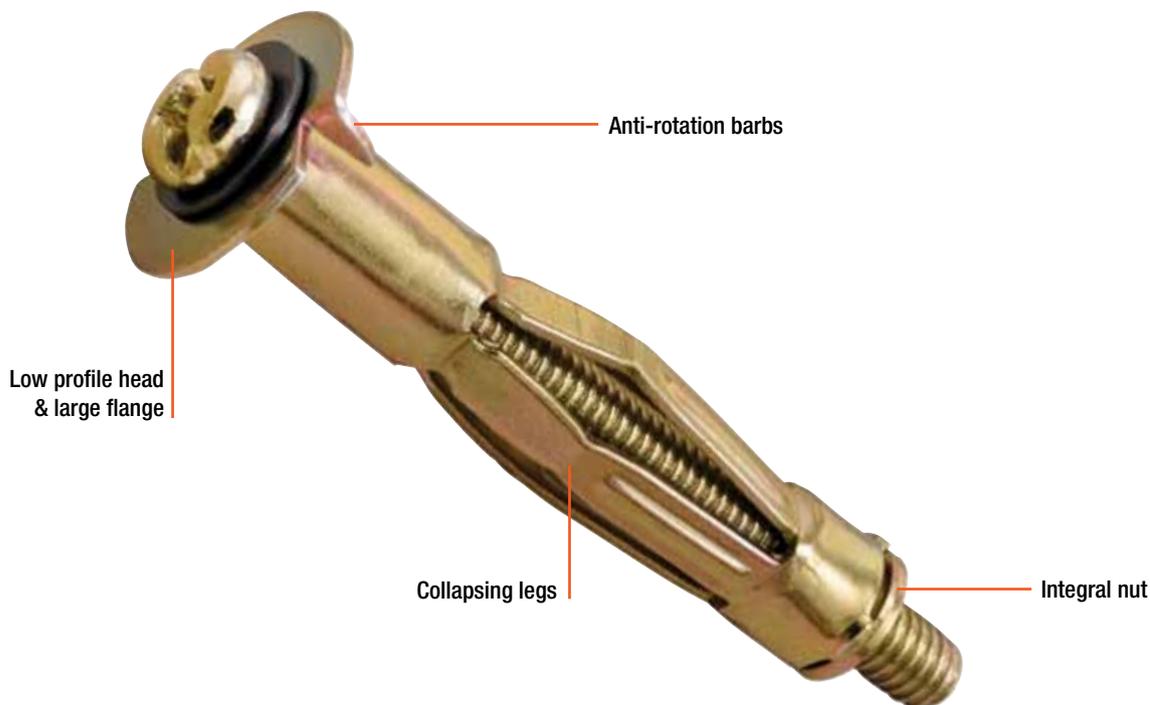
1. Drill an 8mm hole through the insulation and a further 45mm into the substrate.
2. Insert the anchor through the insulation and into the pre-drilled hole.
3. Using light hammer blows, drive the anchor into the hole until the head of the anchor is in contact with the insulation and the insulation is firmly held against the substrate.



InsulFast™ Drill Anchor

Part No	Min./Max. Insulation Thickness (mm)	Overall Anchor Length (mm)	Drilled Hole Ø (mm)	Min Hole Depth (mm)	Order Qty
CB5060	50/60	95	8	45	200
CB7080	70/80	115	8	45	200
CB90100	90/100	135	8	45	200





Description

The Ramset™ Hollow Wall Anchor is an all metal, light duty, cavity fixing for plasterboard and other hollow wall materials up to 38mm.

Specification

Material	Pressed Steel Body, Carbon Steel Screw
Corrosion Protection	Zinc Plating
Head Style	Slotted Philips Button Head
Fixing Method	Fixture Aligned
Setting Method	Setting Tool/Rotation
Anchoring Method	Deformation
Thread Diameters	M4, M5, M6
Drilled Hole Diameters	8mm, 9mm, 13mm
Wall Thickness'	0mm-5mm, 6mm-10mm, 6mm-16mm, 8mm-13mm, 16mm-24mm, 34mm-38mm
Maximum Fixture Thickness'	10mm, 15mm, 17mm, 20mm, 22mm
Substrates	Plasterboard, Ply Wood, Cement Sheet



Features & Benefits

- The Hollow Wall Anchor's low profile head allows for flush finishing.
- The anchor's large flange prevents the head from pulling into the substrate.
- Anti-rotation barbs, incorporated in the flange, prevent the anchor from spinning in the hole.
- Collapsing legs with an integral nut provide high strength and allow the screw to be removed without loosening the anchor inside the cavity.

Related Products

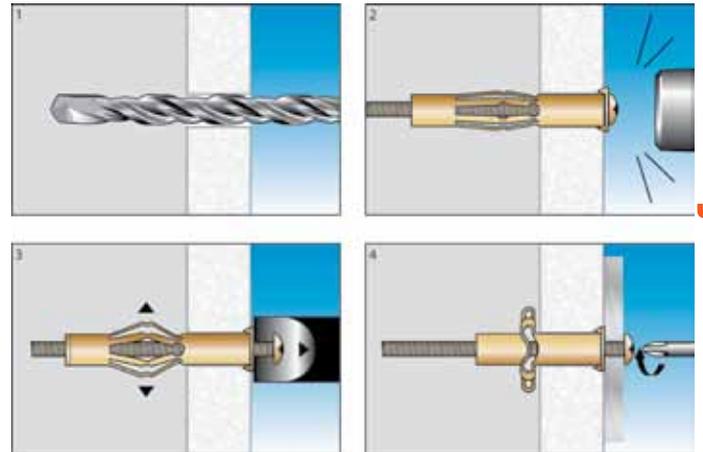
Drill	Screwdriver Bits
Drill Bits	Hollow Wall Anchor Setting Tool
Drill Driver	
Screw Gun	

Trades & Applications

	Miscellaneous Trades	Plumbing Contractor	Electrical Contractor
Light Hook/Bracket Installation	✓		
Electrical Fitting Installation			✓
Pipe/Conduit Saddle Installation		✓	✓

Installation

1. Drill a hole to the recommended diameter. (HW10M4P may be hammered into plasterboard)
2. Tap the anchor into the hole until it is flush with the surface of the substrate.
3. Attach the setting tool to the head of the screw. Squeeze the trigger to expand the anchor. (Small sizes may be set using a screwdriver)
4. Remove the screw and place it through the fixture then back into the anchor. Tighten the screw until the fixture is fixed.



HW10M4P - Pointed

Hollow Wall Anchor

Part No	Thread Size	Wall Thickness (mm)	Max Fixture Thickness (mm)	Drilled Hole Ø (mm)	Order Qty
HW05M4	M4	0 - 5	10	8	100
HW10M4	M4	6 - 10	15	8	100
HW10M4P	M4	6 - 10	17	8	100
HW13M4	M4	8 - 13	15	8	100
HW24M4	M4	16 - 24	17	8	100
HW38M4	M4	34 - 38	15	8	100
HW14M5	M5	8 - 13	20	9	100
HW16M6	M6	6 - 16	22	13	100

Hollow Wall Anchor - Setting Tool

Part No	Description	Order Qty
SETHWG	Setting Tool	1

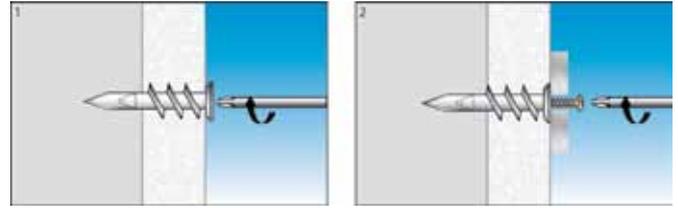


Trades & Applications

	Miscellaneous Trades	Plumbing Contractor	Electrical Contractor
Light Hook/Bracket Installation	✓		
Electrical Fitting Installation			✓
Bathroom Accessory Installation		✓	

Installation

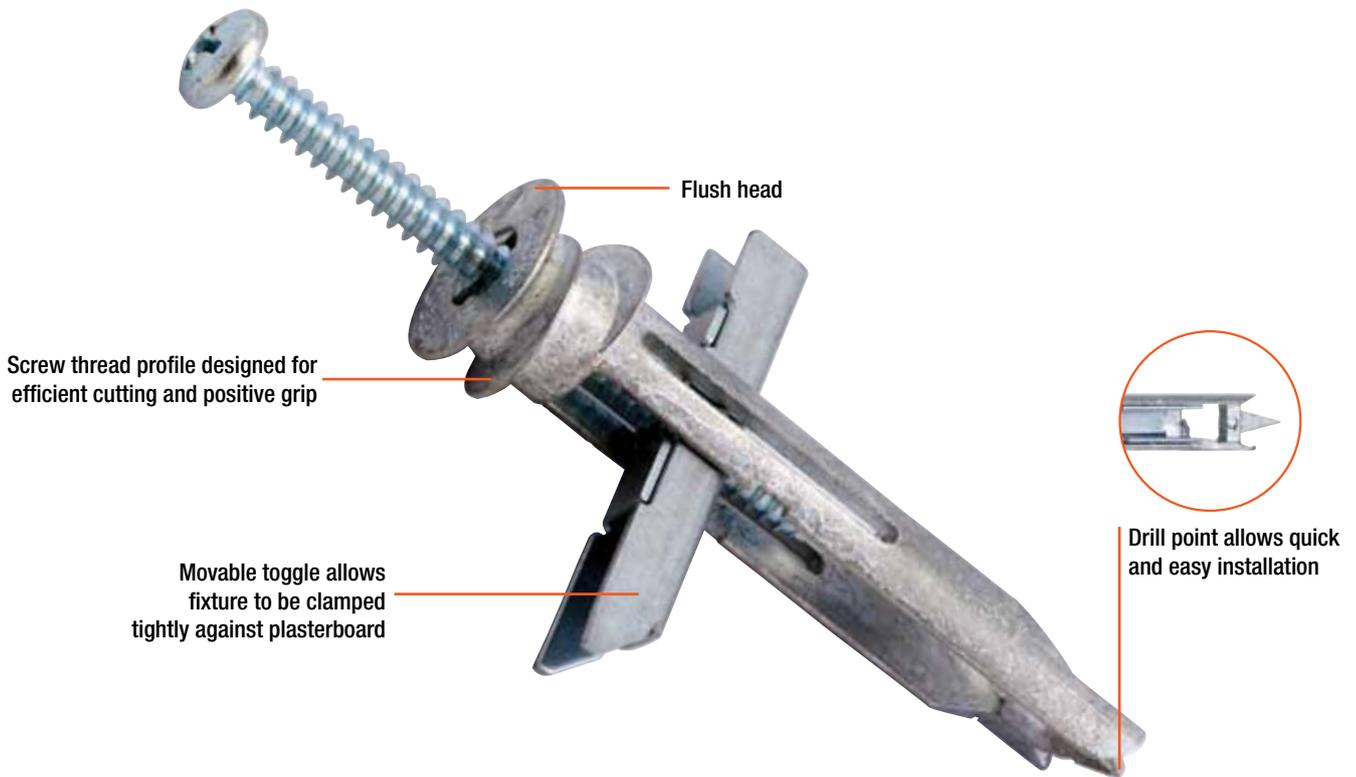
1. Insert the point of a #2 Phillips Head screwdriver into the recess of the WallMate™, place the drill point against the wall, lightly piercing the face paper, and screw the anchor into the plasterboard until the head is flush with the surface.
2. Place the fixture over the anchor, insert the appropriate gauge screw through the fixture, into the head of the WallMate™ and tighten the fixture in place.



WallMate™ - Plasterboard Anchor

Part No	Anchor Length (mm)	Min Screw Length (mm)	Drilled Hole Ø* (mm)	Screw Gauge	Body Type	Order Qty
WMZ	42	20	8	6-8	Metal	100
WM25	42	20	8	6-8	Nylon	100

* For pre-drilling into aerated concrete



Description

The ToggleMate™ is a self drilling toggle anchor for heavy duty, vibration resistant fixing in plasterboard.

Specification

Material	Zinc Composite
Corrosion Protection	-
Head Style (Anchor)	Flush - Phillips #2
Head Style (Screw)	Pan - Phillips #2
Fixing Method	Fixture Aligned
Setting Method	Rotation
Anchoring Method	Deformation
Screw Gauges	8
Anchor Length	64mm
Screw Length	55mm
Substrates	Plasterboard



Features & Benefits

- The ToggleMate™ features an effective drill point for easy penetration of plasterboard and fast installation.
- The anchor's screw thread profile is designed for efficient cutting and positive grip, while the movable toggle allows the anchor to clamp the plasterboard for added strength.
- Both the screw and the ToggleMate™ can be easily removed without losing the anchor inside the cavity.
- The low profile head allows for flush fixing.

Related Products

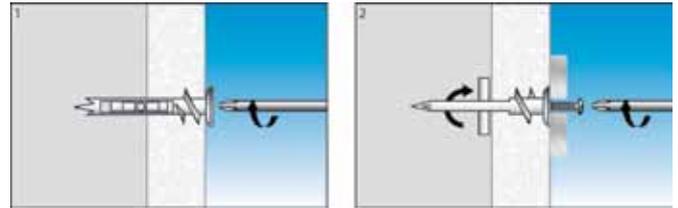
- Drill Driver
- Screw Gun
- Screwdriver Bits

Trades & Applications

	Miscellaneous Trades	Plumbing Contractor	Electrical Contractor
Light Hook/Bracket Installation	✓		
Electrical Fitting Installation			✓
Bathroom Accessory Installation		✓	

Installation

1. Insert the point of a #2 Philips Head screwdriver into the recess of the ToggleMate™, place the drill point against the wall, lightly piercing the face paper, and screw the anchor into the plasterboard until the head is flush with the surface.
2. Place the fixture over the anchor, insert the 8 gauge screw through the fixture, into the head of the ToggleMate™ and turn to engage the clamp. Continue to turn the screw until the clamp is pulled tight against the plasterboard.



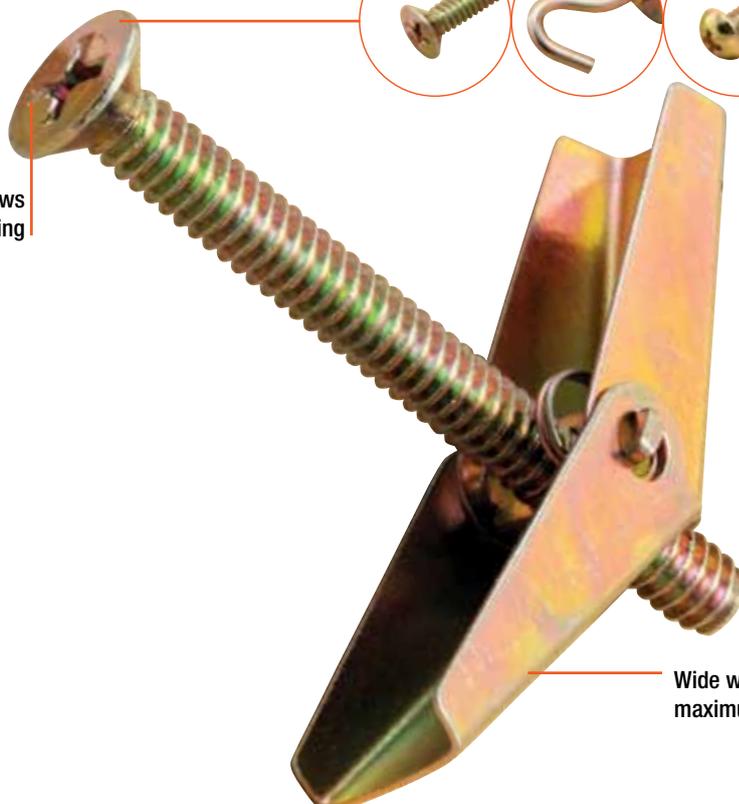
ToggleMate™ - Plasterboard Anchor

Part No	Anchor Length (mm)	Screw Length (mm)	Screw Gauge	Body Type	Order Qty
TM16	64	55	8	Metal	50

Multiple Head Styles for a variety of applications



No protruding flange allows for ultra flush fixing



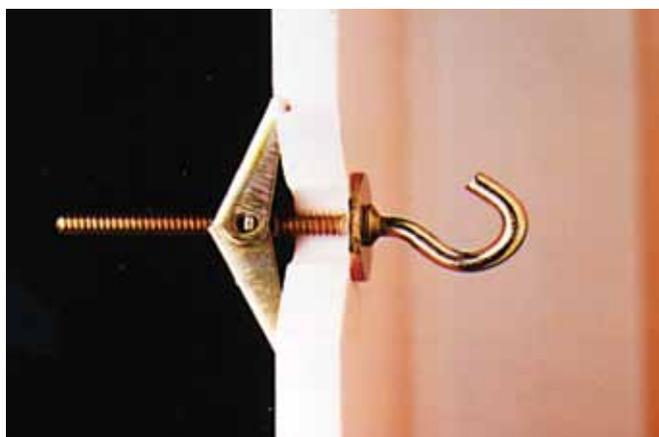
Wide wingspan for maximum holding power

Description

Ramset™ Spring Toggles are all metal wing cavity anchors, ideal for both wall and ceiling applications.

Specification

Material	Carbon Steel
Corrosion Protection	Zinc Plating
Head Style	Round, Countersunk, Hook
Fixing Method	Screw Through Fixing
Setting Method	Rotation
Anchoring Method	Deformation
Screw Gauges	1/8", 3/16"
Drilled Hole Diameters	7/16", 9/16"
Anchor Lengths	50mm, 75mm, 100mm
Maximum Fixture + Wall Thickness'	15mm, 40mm, 65mm
Substrates	Plasterboard



Features & Benefits

- Ramset™ Spring Toggles have a wide wingspan to give high loadings in both plasterboard wall and ceiling applications.
- No protruding flanges allow for ultra flush fixing (Countersunk and Round head only).
- Low profile round or countersunk screw heads suit various fixture recesses. Handy hook profile also available.

Related Products

Drill
Drill Bits
Drill Driver

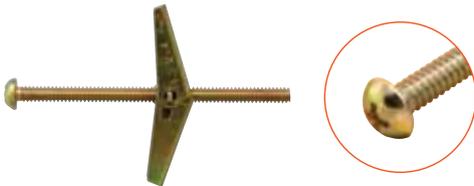
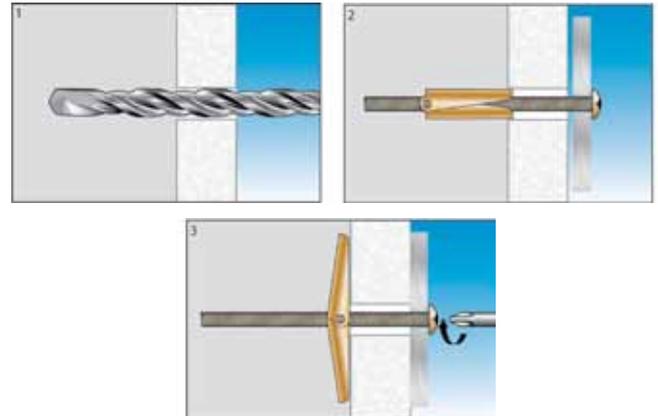
Screw Gun
Screwdriver Bits

Trades & Applications

	Miscellaneous Trades	Plumbing Contractor	Electrical Contractor
Light Hook/Bracket Installation	✓		
Electrical Fitting Installation			✓
Bathroom Accessory Installation		✓	

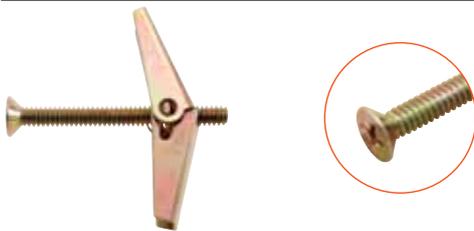
Installation

1. Drill the recommended sized hole through the plasterboard.
2. Pass the screw through the fixture and into the toggle for a few turns. Compress the toggle wings and insert the anchor into the hole. The wings will spread behind the cavity wall.
3. Pull back on the fixture to hold the toggle in place against the reverse side of the cavity wall and tighten with a screwdriver, pulling the wings of the anchor firm against the cavity wall.



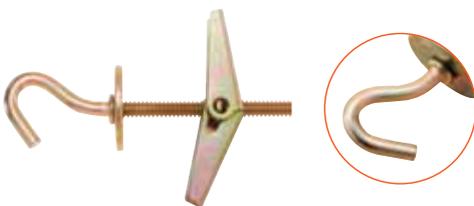
Spring Toggle - Cavity Fastener - Round Head - Zinc Plated

Part No	Screw Gauge	Max Fixture + Wall Thickness (mm)	Screw Length (mm)	Drilled Hole Ø (mm)	Order Qty
STR04050	1/8"	15	50	7/16"	100
STR05050	3/16"	15	50	9/16"	100
STR05075	3/16"	40	75	9/16"	50
STR05100	3/16"	65	100	9/16"	50



Spring Toggle - Cavity Fastener - Countersunk Head - Zinc Plated

Part No	Screw Gauge	Max Fixture + Wall Thickness (mm)	Screw Length (mm)	Drilled Hole Ø (mm)	Order Qty
STF05050	3/16"	15	50	9/16"	100
STF05075	3/16"	40	75	9/16"	50



Spring Toggle - Cavity Fastener - Hook - Zinc Plated

Part No	Screw Gauge	Max Wall Thickness (mm)	Screw Length (mm)	Drilled Hole Ø (mm)	Order Qty
STK05050	3/16"	15	50	9/16"	50



Description

The RamToggle™ is a one piece, light duty nylon cavity fastener.

Specification

Material	Nylon
Corrosion Protection	-
Head Style	Flush
Fixing Method	Fixture Aligned
Setting Method	Rotation
Anchoring Method	Deformation
Screw Gauges	6-8
Hole Diameters	8mm
Required Screw Lengths	30mm, 35mm, 40mm
Maximum Wall Thickness*	5mm-10mm, 8mm-12mm, 12mm-18mm
Substrates	Plasterboard

Features & Benefits

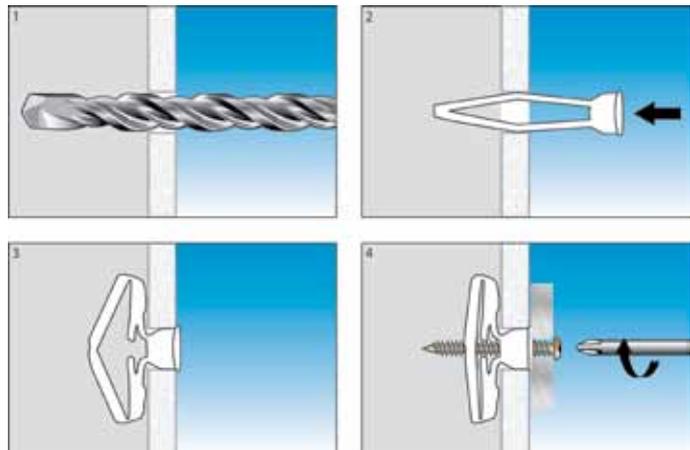
- The RamToggle™ features a wide wingspan for maximum holding power
- Anti-rotation fins prevent spinning in the hole when installing the screw.
- The low-profile head allows for flush fixing.
- The nylon body is non-conductive.

Related Products

Drill, Drill Bits, Drill Driver, Screw Gun, Screwdriver Bits

Trades & Applications

	Miscellaneous Trades	Plumbing Contractor	Electrical Contractor
Light Hook/Bracket Installation	✓		
Electrical Fitting Installation			✓
Bathroom Accessory Installation		✓	



Installation

1. Drill an 8mm hole through the plasterboard.
2. Compress the wings of the RamToggle™ and insert the anchor into the hole. If necessary, tap with a hammer to ensure a flush fit with the surface.
3. The wings will spread behind the cavity wall.
4. Insert the appropriate gauge screw through the fixture, into the RamToggle™ and tighten, pulling the wings of the anchor firm against the cavity wall.

RamToggle™ - Nylon Cavity Fastener

Part No	Hole Ø (mm)	Screw Gauge	Wall Thickness (mm)	Order Qty
RT10	8	6-8	5-10	100
RT12	8	6-8	8-12	100
RT16	8	6-8	12-18	100

Self Drilling Screws





Available in either needle or drill point



Some sizes available collated as pictured



Bugle head pulls down neatly below the surface of the plasterboard without damaging the board or the face paper

Description

Ramset™ Self Drilling Plasterboard Screws are designed for fixing plasterboard to timber or light gauge steel.

Specification

Material	Fine Grain High Carbon Steel
Corrosion Protection	Zinc Plating
Head Style	Bugle - Phillips
Point Styles	Needle, Drill
Thread Styles	Twinfast, Coarse
Fixing Method	Through Fixing
Setting Method	Rotation
Anchoring Method	Thread Forming
Screw Gauges	6, 7, 8, 10
Thread Pitch's	8, 9, 15, 16, 18, 20
Screw Lengths	25mm, 30mm, 32mm, 38mm, 40mm, 41mm, 45mm, 65mm
Max Steel Thickness	Needle Point - 0.6mm, Drill Point - 2.3mm
Substrates	Timber, Light Gauge Steel



Features & Benefits

- Ramset™ Self Drilling Plasterboard Screws are manufactured from fine grain high carbon steel and are heat treated for strength.
- The bugle head pulls down neatly below the surface of the plasterboard without damaging the board or the face paper.
- Ramset™ Self Drilling Plasterboard Screws can be used for either wall or ceiling fixing.
- Available loose or collated.

Related Products

- Drill Driver
- Screw Gun
- Screwdriver Bits

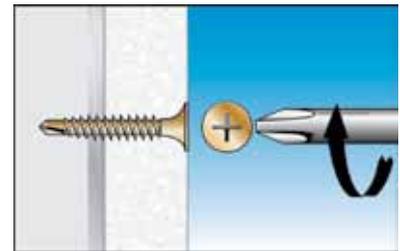
Trades & Applications

Ceiling & Partitioning Contractor

Fixing Plasterboard Ceilings	✓
Fixing Plasterboard Walls	✓

Installation

- Using a drill driver or screw gun, insert the point of a Philips Head screw driver bit into the recess of the screw, place the screw point against the plasterboard surface, lightly piercing the face paper, and drive the screw into the plaster board until the head is flush with the surface.



Self Drilling Screws

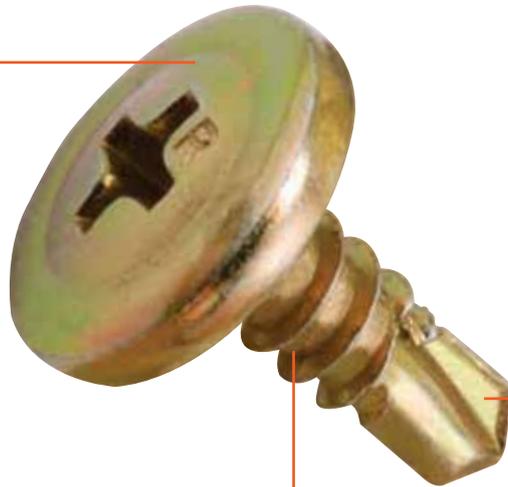


Self Drilling Plasterboard Screws

Part No	Head Style	Point Style	Thread Style	Collated/Loose	Gauge	Pitch	Length	Order Qty
RSN06025YBTC	Bugle Head	Needle	Twinfast	Collated	6	18	25mm	1000
RSN06032YBTC	Bugle Head	Needle	Twinfast	Collated	6	18	32mm	1000
RSN06025YBT	Bugle Head	Needle	Twinfast	Loose	6	18	25mm	1000
RSN06041YBTC	Bugle Head	Needle	Twinfast	Collated	6	18	41mm	1000
RSN06030YBT	Bugle Head	Needle	Twinfast	Loose	6	18	30mm	1000
RSN06041YBT	Bugle Head	Needle	Twinfast	Loose	6	18	40mm	1000
RSN07045YBT	Bugle Head	Needle	Twinfast	Loose	7	16	45mm	1000
RSN08065YBT	Bugle Head	Needle	Twinfast	Loose	8	15	65mm	1000
RSN07025YBF	Bugle Head	Needle	Coarse	Loose	7	9	25mm	1000
RSN07030YBF	Bugle Head	Needle	Coarse	Loose	7	9	30mm	1000
RSN10038YBF	Bugle Head	Needle	Coarse	Loose	10	8	38mm	1000
RSD06025YBTC	Bugle Head	Drill Point	Twinfast	Collated	6	18	25mm	1000
RSD06032YBTC	Bugle Head	Drill Point	Twinfast	Collated	6	18	32mm	1000
RSD06041YBTC	Bugle Head	Drill Point	Twinfast	Collated	6	18	41mm	1000
RSD06025YBB	Bugle Head	Drill Point	Twinfast	Loose	6	20	25mm	1000
RSD06030YBB	Bugle Head	Drill Point	Twinfast	Loose	6	20	30mm	1000
RSD06045YBB	Bugle Head	Drill Point	Twinfast	Loose	6	20	40mm	1000



Multiple Head Styles for a variety of applications



Available in either needle or drill point



Fine thread pitch for metal tapping

Pictured - Drill Point Large Wafer (Truss) Head

Description

Ramset™ Self Drilling Metal Screws drill, tap and fasten into steel up to 6mm thick in one single operation, eliminating alignment problems and increasing fastening speed.

Specification

Material	Fine Grain High Carbon Steel
Corrosion Protection	Zinc Plating, XP3™ (AS3566 Class 3)
Head Style	Wafer, Large Wafer (Truss), Flat - Phillips Hex Washer - Hex
Point Styles	Needle, Drill, Extended Drill
Thread Styles	Metal
Fixing Method	Through Fixing
Setting Method	Rotation
Anchoring Method	Thread Forming
Screw Gauges	8, 10, 12
Thread Pitch's	16, 18, 24
Screw Lengths	12mm, 16mm, 32mm, 50mm
Max Steel Thickness	Needle Point - 0.6mm, 8g Drill Point - 2.5mm, 10g Drill Point - 3.5mm, Extended Drill Point - 12.0mm
Substrates	Steel



Features & Benefits

- Ramset™ Self Drilling Metal Screws are manufactured from fine grain high carbon steel and are heat treated for strength.
- Available in a range of popular head styles for a variety of applications.
- Fine thread pitch for metal tapping.

Related Products

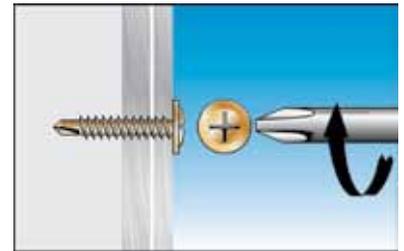
- Drill Driver
- Screw Gun
- Screwdriver Bits

Trades & Applications

	Building Contractor	Signwriter	Electrical Contractor	Ceiling & Partitioning Contractor
Fixing Foil Insulation	✓			
Sign Installation		✓		
Electrical Fitting Installation			✓	
Stud to Track Fixing				✓

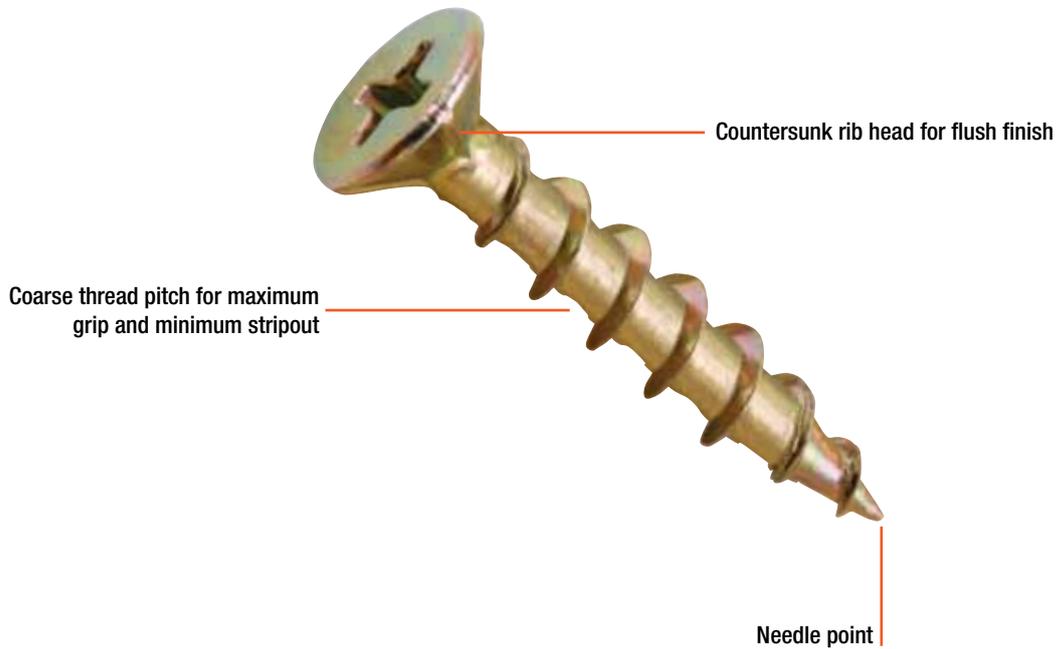
Installation

- Using a drill driver or screw gun set to approx 2500rpm, insert the point of a Philips Head screwdriver bit into the recess of the screw, place the screw point against the surface to be fastened, push sharply to create a starting point, and drive the screw into the material with firm pressure until the head is flush with the surface.



Self Drilling Metal Screws

Part No.	Head Style	Point Style	Thread Style	Collated/Loose	Gauge	Pitch	Length	Order Qty
RSD08012YLB	Large Wafer (Truss)	Drill Point	Metal	Loose	8	18	12mm	1000
RSD08016YLB	Large Wafer (Truss)	Drill Point	Metal	Loose	8	18	16mm	1000
RSD08012YWB	Wafer	Drill Point	Metal	Loose	8	18	12mm	1000
RSD10016YWB	Wafer	Drill Point	Metal	Loose	10	16	16mm	1000
RQ512032MHC*	Hex Washer	Extended Drill Point	Metal	Loose	12	24	32mm	1000
RQ512050MHC*	Hex Washer	Extended Drill Point	Metal	Loose	12	24	50mm	1000
RNPSHZY1016	Flat	Needle Point	Metal	Loose	10	16	16mm	1000
RSDSHZY1016	Flat	Drill Point	Metal	Loose	10	16	16mm	1000



Description

Ramset™ Self Drilling Particleboard Screws are designed for attaching particleboard and soft timbers to particleboard or soft timbers. Ideal for furniture, cabinet making and office partitioning applications.

Specification

Material	Fine Grain High Carbon Steel
Corrosion Protection	Zinc Plating
Head Style	Countersunk Rib - Phillips
Point Styles	Needle
Thread Styles	Coarse
Fixing Method	Through Fixing
Setting Method	Rotation
Anchoring Method	Thread Forming
Screw Gauge	8
Thread Pitch	10
Screw Lengths	20mm, 25mm, 28mm, 32mm, 40mm, 45mm, 50mm
Substrates	Particleboard (Chipboard, MDF), Soft Timber



Features & Benefits

- Ramset™ Self Drilling Particleboard Screws are manufactured from fine grain high carbon steel and heat treated for strength.
- The countersunk rib head self-embeds below the surface of the particleboard or timber for a flush finish.
- Coarse thread for maximum grip and minimum stripout.

Related Products

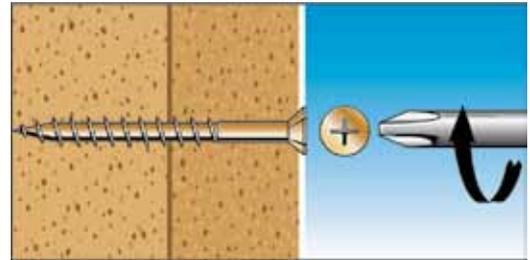
Drill Driver
Screw Gun
Screwdriver Bits

Trades & Applications

	Ceiling & Partitioning Contractor	Building Contractor	Cabinet Maker
Office Partitioning Installation	✓		
Brace Board Installation		✓	
Cabinet Construction & Installation			✓

Installation

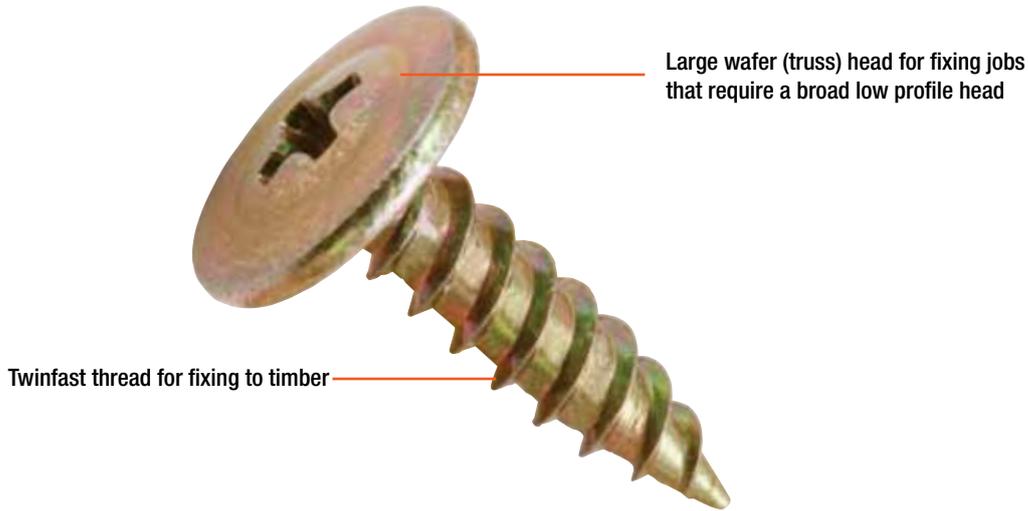
- Using a drill driver or screw gun set to approx 1000rpm, insert the point of a Phillips Head screwdriver bit into the recess of the screw, place the screw point against the surface to be fastened, push sharply to create a starting point, and drive the screw into the material until the head is flush with the surface.



Self Drilling Screws

Self Drilling Partical Board Screws

Part No	Head Style	Point Style	Thread Style	Collated/Loose	Gauge	Pitch	Length	Order Qty
RSC08020YSF	Countersunk Rib	Needle	Coarse	Loose	8	10	20mm	1000
RSC08025YSF	Countersunk Rib	Needle	Coarse	Loose	8	10	25mm	1000
RSC08028YSF	Countersunk Rib	Needle	Coarse	Loose	8	10	28mm	1000
RSC08032YSF	Countersunk Rib	Needle	Coarse	Loose	8	10	32mm	1000
RSC08041YSF	Countersunk Rib	Needle	Coarse	Loose	8	10	40mm	1000
RSC08045YSF	Countersunk Rib	Needle	Coarse	Loose	8	10	45mm	1000
RSC08051YSF	Countersunk Rib	Needle	Coarse	Loose	8	10	50mm	1000



Description

Ramset™ Self Drilling Cabinet Screws are designed for attaching particleboard, timber, insulation foil or sheet metal to timber. Ideal for furniture, cabinet making, signage, foil insulation and office partitioning applications.

Specification

Material	Fine Grain High Carbon Steel
Corrosion Protection	Zinc Plating
Head Style	Large Wafer (Truss) - Phillips
Point Styles	Needle
Thread Styles	Twinfast
Fixing Method	Through Fixing
Setting Method	Rotation
Anchoring Method	Thread Forming
Screw Gauges	8
Thread Pitch's	15
Screw Lengths	12mm, 16mm, 25mm
Substrates	Timber



Features & Benefits

- Ramset™ Self Drilling Cabinet Screws are manufactured from fine grain high carbon steel and heat treated for strength.
- The large wafer head is ideal for jobs that require a broad, low-profile head.
- Twinfast thread for maximum grip in timber.

Related Products

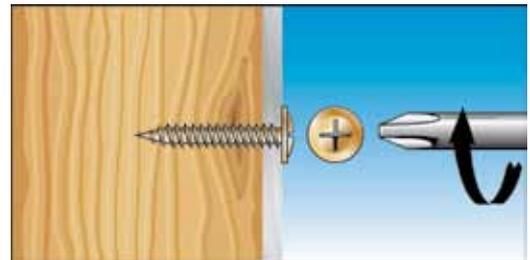
Drill Driver
Screw Gun
Screwdriver Bits

Trades & Applications

	Building Contractor	Signwriter	Cabinet Maker
Fixing Foil Insulation	✓		
Sign Installation		✓	
Cabinet Construction & Installation			✓

Installation

- Using a drill driver or screw gun, insert the point of a Philips Head screwdriver bit into the recess of the screw, place the screw point against the surface to be fastened, push sharply to create a starting point, and drive the screw into the material until the head is flush with the surface.

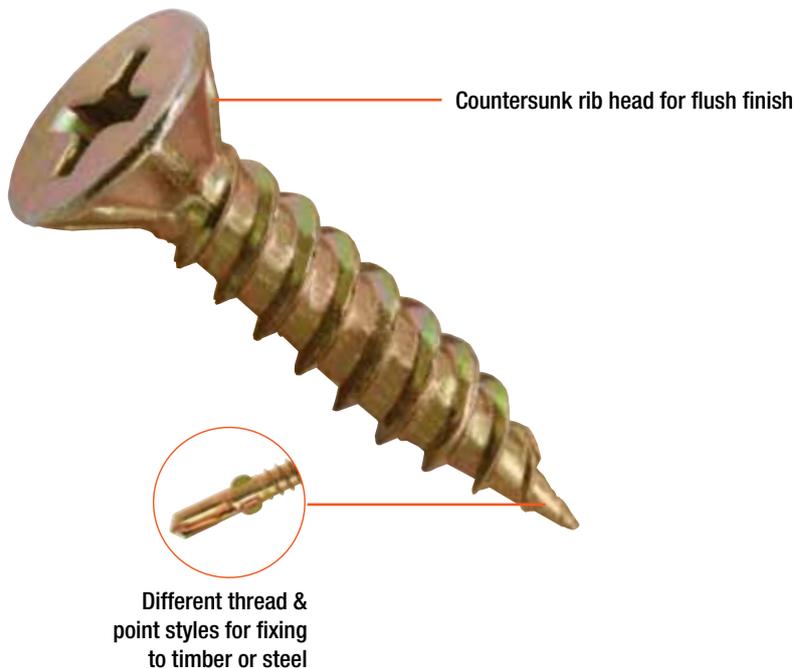


Self Drilling Screws



Self Drilling Cabinet Screws

Part No	Head Style	Point Style	Thread Style	Collated/Loose	Gauge	Pitch	Length	Order Qty
RSN08012YLT	Large Wafer (Truss)	Needle	Twinfast	Loose	8	15	12mm	1000
RSN08016YLT	Large Wafer (Truss)	Needle	Twinfast	Loose	8	15	16mm	1000
RSN08025YLT	Large Wafer (Truss)	Needle	Twinfast	Loose	8	15	25mm	1000



Pictured - Needle Point Twinfast Thread

Description

Ramset™ Self Drilling Cement Sheet Screws are designed for fixing cement sheet to timber or steel.

Specification

Material	Fine Grain High Carbon Steel
Corrosion Protection	Zinc Plating, XP3™ (AS3566 Class 3)
Head Style	Countersunk Rib - Phillips
Point Styles	Needle, Winged Drill
Thread Styles	Twinfast, Metal
Fixing Method	Through Fixing
Setting Method	Rotation
Anchoring Method	Thread Forming
Screw Gauges	8, 10
Thread Pitch's	15, 16, 18
Screw Lengths	20mm, 22mm, 30mm, 32mm, 40mm, 45mm
Substrates	Timber, Steel



Features & Benefits

- Ramset™ Self Drilling Cement Sheet Screws are manufactured from fine grain high carbon steel and heat treated for strength.
- The countersunk rib head self-embeds below the surface of the cement sheet for a flush finish.
- Available for fixing to both timber and steel.

Related Products

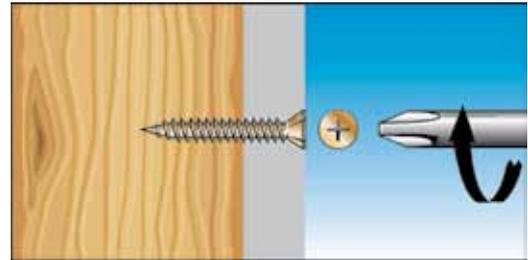
Drill Driver
Screw Gun
Screwdriver Bits

Trades & Applications

	Ceiling & Partitioning Contractor	Building Contractor	Tiler
Wall Lining Installation	✓		
Cladding Installation		✓	
Underlay Installation			✓

Installation

1. Using a drill driver or screw gun set to approx 2500rpm for winged drill point or 1500rpm for needle point, insert the point of a Philips Head screw driver bit into the recess of the screw, place the screw point against the surface to be fastened, push sharply to create a starting point, and drive the screw into the material maintaining firm pressure, until the head is flush with the surface.



Self Drilling Screws



Self Drilling Cement Sheet Screws

Part No.	Head Style	Point Style	Thread Style	Collated/Loose	Gauge	Pitch	Length	Order Qty
RSN08020YST	Countersunk Rib	Needle	Twinfast	Loose	8	15	20mm	1000
RSN08030YST	Countersunk Rib	Needle	Twinfast	Loose	8	15	30mm	1000
RSD08022MSBW*	Countersunk Rib	Winged Drill Point	Metal	Loose	8	18	22mm	1000
RSD08032MSBW*	Countersunk Rib	Winged Drill Point	Metal	Loose	8	18	32mm	1000
RSD08040MSBW*	Countersunk Rib	Winged Drill Point	Metal	Loose	8	18	40mm	1000
RSD10045YSBW	Countersunk Rib	Winged Drill Point	Metal	Loose	10	16	45mm	1000



Ramset™



Chemical Anchoring



The Ramset™ Chemical Anchoring range consists of ChemSet™ Injection Adhesives and ChemSet™ Maxima™ glass capsules. ChemSet™ is the leading Chemical Anchoring brand in Australia due to its high quality, reliability and versatility.

The versatile ChemSet™ range provides different options of cost and performance for anchoring threaded studs, reinforcing bars and starter bars into solid and hollow substrates.

Only ChemSet™ Injection anchoring adhesive cartridges have the unique tap valve, which is essential to preserve contents of part used cartridges for use later on, the next day or even the next job.

ChemSet™ is the specifiers' choice, with easy to use engineering data created by Ramset™ engineering professionals and backed by rigorous testing at the Ramset™ Product Engineering Laboratory.





Introduction 84

Selection Guide 85



Injection Adhesives 86

- ChemSet™ Reo 502™
- ChemSet™ 801
- Structaset™ 401
- ChemSet™ 101
- UltraFix™ Plus



Maxima™ Anchoring Capsules 96



ChemSet™ Anchor Fixings 98

- ChemSet™ Anchor Studs
- Remedial Wall Ties
- Threaded Inserts
- Hollow Block & Brick Anchoring Accessories



ChemSet™ Anchoring Accessories 106

- ChemSet™ Injection Applicators
- Hole Cleaning Accessories
- Static Mixing Nozzles

Installation Guide 108

Estimating Charts 112



About ChemSet™

Ramset™ introduced chemical anchoring into Australia in 1981 in the form of ChemSet™ glass capsules. The product grew in popularity due to its close to edge and close anchor spacing advantages and its ease of use.

Since then the name ChemSet™ has entered into every day language on building sites across Australia.

Over the last 20+ years Ramset has extended the ChemSet™ range to include injection adhesives and accessories to enable ChemSet™ to be used in a broader range of applications.

Today the ChemSet™ Chemical Anchoring range is still the leading brand in Australia due to its high quality, reliability and versatility.

ChemSet™ is the specifiers' choice, with easy to use engineering data created by Ramset™ engineering professionals and backed by rigorous testing at the Ramset™ Product Engineering Laboratory in Melbourne. Ramset's conservative method of deriving load capacity means engineers can specify ChemSet™ adhesives with confidence that the connections will be safe and reliable.

The story continues into the future with Ramset™ continuing to expand the range with new products to improve ease of use, strength, safety and lift site productivity.

ChemSet™ Chemical Anchoring Range

The ChemSet™ Chemical Anchoring range consists of ChemSet™ Injection Adhesives and ChemSet™ Maxima™ glass capsules.

Central to the ChemSet™ Injection range is the unique ChemSet™ Universal Applicator that dispenses all of the ChemSet™ Injection adhesives. The advantage is that contractors can change ChemSet™ adhesive or pack size without having to purchase another applicator.

Got a BIG job with lots of fixings? The ChemSet™ pneumatic powered Universal Applicator will make the job easier and faster with less fatigue.

Only ChemSet™ Injection anchoring adhesive cartridges have the unique tap valve, which is essential to preserve contents of part used cartridges for use later on, the next day or even the next job.

The ChemSet™ Chemical Anchoring range consists of 6 specialised products, each available in different pack sizes to suit different jobs.

ChemSet™ Reo502™

Best Bar Anchoring... Bar none

Extra heavy duty epoxy adhesive for reinforcing bars and threaded studs.

For carbide or diamond drilled holes in solid concrete, stone and solid brick; dry, wet, or even flooded.

ChemSet™ Injection 801

Heavy duty anchoring of threaded studs and reinforcing bars in corrosive environments.

For carbide or diamond drilled holes in solid concrete, stone and solid brick.

Structaset™ 401

Fast cure, heavy duty anchoring of threaded studs and reinforcing bars in solid and hollow substrates.

For carbide or diamond drilled holes in solid concrete, stone, solid brick, hollow brick and hollow concrete block.

ChemSet™ Injection 101

Fast cure, medium duty anchoring of threaded studs and reinforcing bars in solid and hollow substrates.

For carbide drilled holes in solid concrete, stone, solid brick, hollow brick and hollow concrete block.

Ultrafix™ Plus

Fast cure, medium duty anchoring of threaded studs in solid and hollow substrates in handy 300 ml tube that fits standard silicone caulking gun

For carbide drilled holes in solid concrete, stone, solid brick, hollow brick and hollow concrete block.

ChemSet™ Maxima™ Spin Capsules

Rapid cure, extra heavy duty anchoring of threaded studs in small jobs with few fixings.

For carbide or diamond drilled holes in solid concrete, stone and solid brick; dry, wet or even underwater.



Which ChemSet™ anchoring adhesive should I use?

Product	UltrFix™ Plus	ChemSet™ Injection				ChemSet Maxima™
Property		101	Structaset™ 401	801	Reo 502™	Spin Capsules
Chemical Type	Polyester	Polyester	Epoxy Acrylate	Epoxy	Epoxy	Acrylic
Working Time (min) @ 20°C	6 to 10	5 to 10	6	6 to 10	15 to 20	2 to 3
Loading Time @ 20°C	50 Minutes	90 Minutes	50 Minutes	14 Hours	3 Hours	20 Minutes
Min Installation Temp (°C)	0	0	0	5	5	-5
Max Installation Temp (°C)	35	43	40	40	40	43
Dry Holes	✓	✓	✓	✓	✓	✓
Damp Holes	✓	✓	✓		✓	✓
Wet Holes (Water removed)					✓	✓
Flooded Holes					✓	✓
Underwater					✓	✓
For Anchoring Into						
Solid Concrete	✓	✓	✓	✓	✓	✓
Stone	✓	✓	✓	✓	✓	✓
Masonry	✓	✓	✓	✓	✓	✓
Hollow Masonry	✓	✓	✓			
Brick Work	✓	✓	✓			
Hole Orientation						
Vertical Down	✓	✓	✓	✓	✓	✓
Horizontal	✓	✓	✓	✓	✓	✓
Vertical Up (Overhead)	✓	✓	✓	Contact Ramset™	Contact Ramset™	✓
Drill Type						
Carbide Drilled	✓	✓	✓	✓	✓	✓
Diamond Drilled			✓	✓	✓	✓
Properties After Cure						
Load Capacity	✓	✓	✓✓	✓✓	✓✓✓	✓✓✓
Chemical Resistance	✓	✓	✓✓	✓✓✓	✓✓	✓✓
Cyclic Loading	✓	✓	✓✓	✓✓	✓✓✓	✓✓
Min Service Temp (°C)	-10	-10	-40	-10	-10	-23
Max Service Temp (°C)	80	80	80	80	80	60
Immersion After Cure	✓	✓	✓	✓	✓	✓
Potable Water				✓		
Suitable Fixings						
Threaded Rod - Grade 4.6	✓	✓	✓	✓	✓	✓
Threaded Rod - Grade 5.8	✓	✓	✓	✓	✓	✓
Threaded Rod - Grade 8.8	✓	✓	✓	✓	✓	✓
Threaded Rod - AISI 304	✓	✓	✓	✓	✓	✓
Threaded Rod - AISI 316	✓	✓	✓	✓	✓	✓
Reinforcing Bar	✓	✓	✓	✓	✓	

Legend

- Good ✓
- Better ✓✓
- Best ✓✓✓



Key Features

- Extra heavy duty epoxy
- Quick 3 hour cure time
- Dry, damp, wet and flooded holes
- Suitable underwater
- Long 20 minute working time for deep embedment



Description

Extra heavy duty anchoring of reinforcing bar and threaded studs into solid concrete and stone. Two-component, high bond strength epoxy adhesive specially designed for structural connections, such as reinforcing bar. Suitable for dry, damp, wet and flooded holes. Quick setting for improved productivity. Long working time to reduce nozzle wastage. Bar development lengths in accordance with AS3600. Structural reinforcing bar connections in slabs, columns, beams and walls. Structural steel columns, raker angles, seating.

Typical Properties

Properties	Typical Value
Appearance	Part A: White Part B: Black Mixed: Light Grey
Density	1.28 kg /litre @ 20°C
Heat Distortion Temperature	Approx. 80°C
Hardness	> Shore D 80
Compressive Strength (ASTM C579-01)	105 MPa
Dielectric Constant	3.95
Conductivity	8×10^{-11} ohmS/m
Service Temperature Limits	-10°C to 80°C
Chemical Resistance	See Technical Data Sheet
Substrates	Solid Concrete, Solid Stone (Proof loading recommended), Solid Brick



Features & Benefits

- Quick cure for improved productivity.
- Sag resistant formula for horizontal holes
- Bonds to carbide and diamond core drilled holes – strong bond
- For Grade 500 reinforcing bar
- Excellent electrical insulation properties

Related Products

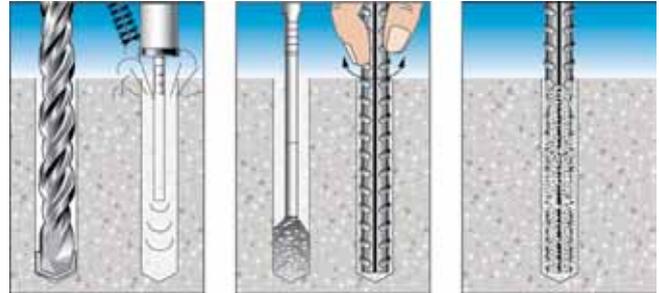
- | | |
|-------------------------|-----------------------|
| DynaDrill™ | Impact Wrench |
| Carbide Drill Bits | Wet/Dry Vacuum |
| Diamond Motor | Hole Cleaning Brushes |
| Diamond Core Drill Bits | Hole Cleaning Pump |

Trades & Applications

	Concreter	Building Contractor	Civil Contractor	Steel Fabricator	Balustrade Contractor	Formworker	Bricklayer	Fitter
Post-installing reinforcing bar	✓	✓	✓			✓		
Starter bars	✓	✓	✓			✓	✓	
Threaded studs		✓	✓	✓	✓			✓

Installation in Solid Concrete

1. Drill or core hole to specified diameter and depth
2. Remove dust and debris by brushing and blowing 3 times each (If hole is wet or flooded, brush only remove water and slurry with wet/dry vacuum)
3. Screw mixing nozzle onto cartridge and dispense 2-3 trigger pulls of adhesive to waste until colour is light grey with no streaks
4. Insert tip of nozzle to bottom of hole and dispense adhesive
5. Fill hole to about 2/3 full
6. Insert threaded stud or reinforcing bar with rotating motion to release trapped air
7. Wait until adhesive has fully cured before loading (see Working / Loading Time chart below)
8. Clean up with acetone



Refer to Technical Data Sheet and MSDS available from www.ramset.com.au, for precautions and further detailed installation instructions

Recommended Installation Temperatures

	Minimum	Maximum
Substrate	5°C	40°C
Adhesive	20°C	32°C

Working and Loading Time

Substrate Temperature (°C)	Gel Time (min)	Cure Time (hours)
10	21	8
16	18	5
20	20	3
27	12	2.5
32	8.5	2

Hole Condition

Hole Condition	Suitable
Dry	Yes
Damp	Yes
Wet	Yes
Flooded	Yes
Drill Bit Type	
Carbide	Yes
Diamond Core	Yes
Hole Orientation	
Vertical Down	Yes
Horizontal	Yes
Vertical Up (Overhead)	Contact Ramset™

ChemSet™ Reo 502™ Anchoring Adhesive

Description	Part No	Box Quantity
Jumbo Cartridge (750 ml) + 1 Nozzle	RE0502J	12
ChemSet™ Universal Applicator	CUA	1
ChemSet™ Pneumatic Universal Applicator	CUAPN	1
Mixing Nozzles for Epoxy with Extension	ISNE	5
Mixing Nozzle Turbo (Easier Dispensing)	ISNET	1

Description	Part No	Box Quantity
Hole Cleaning Pump	HCP	1
Hole Cleaning Pump High Volume	HCPHV	1
Hole Cleaning Brush 13 mm	HCBT13	1
Hole Cleaning Brush 20 mm	HCBT20	1
Hole Cleaning Brush 26 mm	HCBT26	1

ChemSet™ Reo 502™ - Indicative Working Loads in 32 MPa Concrete with ChemSet™ Anchor Studs

Thread Size	Drilled Hole Ø (mm)	Min Hole Depth (mm)	Tightening Torque (Nm)	Min Edge Distance (mm)	Min Anchor Spacing (mm)	Max Tensile Load, N _a (kN)	Max Shear Load, V _{as} (kN)*
M8	10	80	10	35	50	6.3	4.4
M10	12	90	20	40	60	10.3	7.1
M12	14	110	40	50	75	15.3	10.5
M16	18	125	95	65	100	29.4	19.9
M20	24	150	180	80	120	37.9	29.9
M20	24	170	180	80	120	43.0	29.9
M24	26	160	315	100	145	40.9	43.3
M24	26	210	315	100	145	53.6	43.3
M30	32	270	600	120	180	72.4	90.4+
M36	38	330	1050	145	220	101.5	131.7+

Bold working load values in tension are limited by steel. All other values limited by concrete and adhesive bond
 * For shear acting towards a concrete edge please contact a Ramset Engineer for further design assistance
 + M30 and M36 steel shear values are for Grade 8.8 carbon steel. All other values are for Grade 5.8 carbon steel.
 For water saturated or under water holes, reduce tensile load capacity by 30%

Working load capacity was derived from characteristic ultimate load capacity by applying the following factors:
Tension: Concrete = 3, Steel = 2.2
Shear: Steel = 2.5

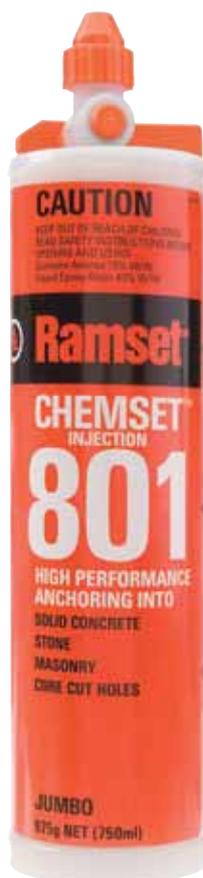
The design engineer should ensure the structural element is capable of supporting these loads.
 Refer to Ramset™ Specifiers Resource Book for more information or explanation of technical data.



ISNE



C801C (380ml)



C801J (750ml)

Key Features

- Excellent chemical resistance
- Suitable for use in contact with drinking water
- Strong bond

Description

Heavy duty anchoring of threaded studs and reinforcing bar into solid concrete and stone in corrosive environments. Two component, chemical resistant epoxy. Tough and reliable for extra security. High bond strength for diamond and carbide drilled holes. Steel beams and columns, heavy plant, safety barriers, reinforcing bars, bottom plate fixing

Typical Properties

Properties	Typical Value
Appearance	Part A: White Part B: Black Mixed: Dark Grey
Density	1.30 kg /litre @ 20°C
Heat Distortion Temperature	Approx. 80°C
Hardness	> Shore D 80
Compressive Strength (AS1012.9)	75 MPa
Water Absorption (ASTM D570)	< 0.2% (10 days @ 25°C)
Modulus of Elasticity	> 4 GPa
Tensile Strength BS2782	>25 MPa
Flexural Strength BS6319	Approx. 22 MPa
Service Temperature Limits	-10°C to 80°C
Contact with Drinking Water AS/NZS4020	PASS
Chemical Resistance	See Technical Data Sheet
Substrates	Solid Concrete, Solid Stone (Proof loading recommended), Solid Brick



Features & Benefits

- Carbide and diamond core drilled holes – strong bond
- Excellent chemical resistance
- Suitable for use in contact with drinking water
- Sag resistant formula for horizontal holes
- Low odour

Related Products

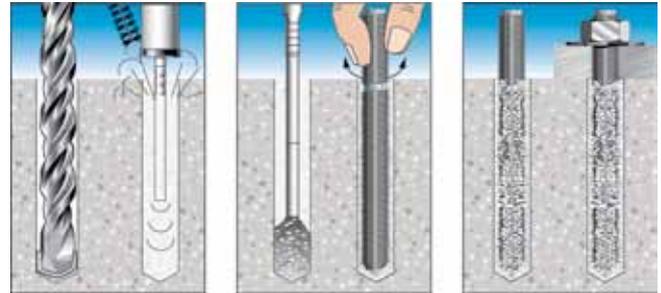
- | | |
|-------------------------|-----------------------|
| DynaDrill™ | Impact Wrench |
| Carbide Drill Bits | Wet/Dry Vacuum |
| Diamond Motor | Hole Cleaning Brushes |
| Diamond Core Drill Bits | Hole Cleaning Pump |

Trades & Applications

	Concreter	Building Contractor	Civil Contractor	Steel Fabricator	Balustrade Contractor	Formworker	Bricklayer	Fitter	Seating Contractor
Threaded Studs		✓		✓	✓			✓	✓
Starter bars	✓	✓	✓			✓	✓		

Installation in Solid Concrete

1. Drill or core hole to specified diameter and depth
2. Remove dust and debris by brushing and blowing 3 times each (If hole is wet or flooded remove water with wet/dry vacuum and allow to dry)
3. Screw mixing nozzle onto cartridge and dispense 2-3 trigger pulls of adhesive to waste until colour is dark grey with no streaks
4. Insert tip of nozzle to bottom of hole and dispense adhesive
5. Fill hole to about 2/3 full
6. Insert threaded stud or reinforcing bar with rotating motion to release trapped air
7. Wait until adhesive has fully cured before loading (see Working / Loading Time chart below)
8. Protect from water contact for 24 hours
9. Clean up with acetone



Refer to Technical Data Sheet and MSDS available from www.ramset.com.au, for precautions and further detailed installation instructions

Recommended Installation Temperatures

	Minimum	Maximum
Substrate	5°C	40°C
Adhesive	18°C	35°C

Working and Loading Time

Substrate Temperature (°C)	Working Time (min)	Cure / Loading Time (hours)
5	75	36
10	40	24
20	6	14
25	4	12
30	3	10

Hole Condition

Hole Condition	Suitable
Dry	Yes
Damp	No
Wet	No
Flooded	No
Drill Bit Type	
Carbide	Yes
Diamond Core	Yes
Hole Orientation	
Vertical Down	Yes
Horizontal	Yes
Vertical Up (Overhead)	Contact Ramset™

ChemSet™ 801 Anchoring Adhesive

Description	Part No	Box Quantity
Jumbo Cartridge (750 ml) + 1 Nozzle	C801J	12
Cartridge (380 ml) + 1 Nozzle	C801C	24
ChemSet™ Universal Applicator	CUA	1
ChemSet™ Pneumatic Universal Applicator	CUAPN	1
Mixing Nozzles for Epoxy with Extension	ISNE	5
Mixing Nozzle Turbo (Easier Dispensing)	ISNET	1

Description	Part No	Box Quantity
Hole Cleaning Pump	HCP	1
Hole Cleaning Pump High Volume	HCPHV	1
Hole Cleaning Brush 13 mm	HCBT13	1
Hole Cleaning Brush 20 mm	HCBT20	1
Hole Cleaning Brush 26 mm	HCBT26	1

ChemSet™ 801 - Indicative Working Loads in 32 MPa Concrete with ChemSet™ Anchor Studs

Thread Size	Drilled Hole Ø (mm)	Min Hole Depth (mm)	Tightening Torque (Nm)	Min Edge Distance (mm)	Min Anchor Spacing (mm)	Max Tensile Load, N _a (kN)	Max Shear Load, V _{as} (kN)*
M8	10	80	10	35	50	6.5	4.4
M10	12	90	20	40	60	9.9	7.1
M12	14	110	40	50	75	14.4	10.5
M16	18	125	95	65	100	19.6	19.9
M20	24	150	180	80	120	28.1	29.9
M20	24	170	180	80	120	33.9	29.9
M24	26	160	315	100	145	33.3	43.3
M24	26	210	315	100	145	50.1	43.3

Bold working load values in tension are limited by steel. All other values limited by concrete and adhesive bond
 * For shear acting towards a concrete edge please contact a Ramset Engineer for further design assistance
 Shear values are for Grade 5.8 carbon steel.

Working load capacity was derived from characteristic ultimate load capacity by applying the following factors:
Tension: Concrete = 3, Steel = 2.2
Shear: Steel = 2.5

The design engineer should ensure the structural element is capable of supporting these loads.
 Refer to Ramset™ Specifiers Resource Book for more information or explanation of technical data.



ISNP

S401C (380ml)

Key Features

- Fast 50 minute cure
- Strong bond
- Low odour styrene free
- Easy dispensing all year round



C380A Applicator

Description

Heavy duty Epoxy Acrylate for anchoring threaded studs and reinforcing bar into solid concrete, stone, hollow brick and hollow concrete block. High bond strength for diamond and carbide drilled holes. Fast cure for high productivity. Non-drip formula, ideal for over-head installation. Styrene free low odour formula. Steel columns, and beams, starter bars, road stitching, seating, hand rails.

Typical Properties

Properties	Typical Value
Appearance	Part A: Off White Part B: Black Mixed: Grey
Density	1.7 g / ml
Service Temperature Limits	-40°C to 80°C
Substrates	Solid Concrete, Solid Brick, Stone (proof loading recommended), Hollow Concrete Block, Hollow Brick



Features & Benefits

- Easy dispensing even in cold weather
- Carbide and diamond drilled holes – strong bond
- Fast cure for high productivity

Related Products

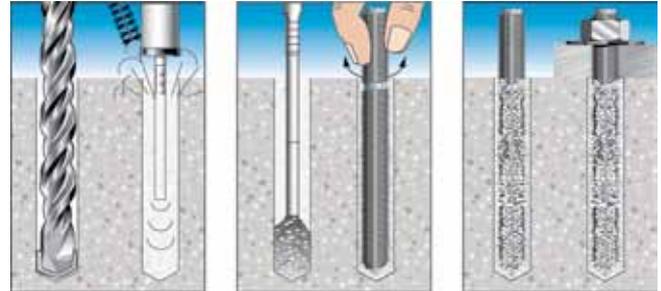
- | | |
|-------------------------|-----------------------|
| DynaDrill™ | Impact Wrench |
| Carbide Drill Bits | Wet/Dry Vacuum |
| Diamond Motor | Hole Cleaning Brushes |
| Diamond Core Drill Bits | Hole Cleaning Pump |

Trades & Applications

	Concrete	Building Contractor	Civil Contractor	Steel Fabricator	Balustrade Contractor	Formworker
Threaded Studs		✓	✓	✓	✓	
Starter bars	✓	✓	✓			✓
Hollow Masonry Sleeves		✓		✓	✓	
Threaded Inserts		✓		✓	✓	

Installation in Solid Concrete

1. Drill or core hole to specified diameter and depth
2. Remove dust and debris by brushing and blowing 3 times each (if hole is wet or flooded, remove excess water using wet/dry vacuum)
3. Screw mixing nozzle onto cartridge and dispense 2-3 trigger pulls of adhesive to waste until colour is grey with no streaks
4. Insert tip of nozzle to bottom of hole and dispense adhesive
5. Fill hole to about 2/3 full
6. Insert fixing with rotating motion to release trapped air
7. Wait until adhesive has fully cured before loading (see Working Time / Loading Time chart below)
8. Clean up with Acetone



Refer to **Technical Data Sheet** and **MSDS** available from www.ramset.com.au, for precautions and further detailed installation instructions

Recommended Installation Temperatures

	Minimum	Maximum
Substrate	0°C	40°C
Adhesive	5°C	40°C

Working and Loading Time

Substrate Temperature (°C)	Gel Time (min)	Cure Time (min)
5	18	145
10	10	85
20	6	50
25	5	40
30	4	35

Hole Condition

Hole Condition	Suitable
Dry	Yes
Damp	Yes
Wet	No
Flooded	No
Drill Bit Type	
Carbide	Yes
Diamond Core	Yes
Hole Orientation	
Vertical Down	Yes
Horizontal	Yes
Vertical Up (Overhead)	Yes

Structaset™ 401 Anchoring Adhesive

Description	Part No	Box Quantity
Cartridge (380 ml) + 1 Nozzle	S401C	12
ChemSet™ Applicator 380ml*	C380A	1
Mixing Nozzles for Polyester	ISNP	5
Hole Cleaning Pump	HCP	1
Hole Cleaning Pump High Volume	HCPHV	1

Description	Part No	Box Quantity
Hole Cleaning Brush 13 mm	HCBT13	1
Hole Cleaning Brush 20 mm	HCBT20	1
Hole Cleaning Brush 26 mm	HCBT26	1
Nylon Sleeves for Hollow Block	See Page 104	100
Fine Metal Mesh Sleeves	See Page 104	100

* Introductory pack size not suitable for ChemSet™ Universal Applicator

Structaset™ 401 - Indicative Working Loads in 32 MPa Concrete with ChemSet™ Anchor Studs

Thread Size	Drilled Hole Ø (mm)	Min Hole Depth (mm)	Tightening Torque (Nm)	Min Edge Distance (mm)	Min Anchor Spacing (mm)	Max Tensile Load, N _a (kN)	Max Shear Load, V _{as} (kN)*
M8	10	80	10	35	50	6.5	4.4
M10	12	90	20	40	60	10.1	7.1
M12	14	110	40	50	75	15.3	10.5
M16	18	125	95	65	100	20.8	19.9
M20	24	150	180	80	120	24.4	29.9
M20	24	170	180	80	120	27.7	29.9
M24	26	160	315	100	145	33.0	43.3
M24	26	210	315	100	145	43.3	43.3

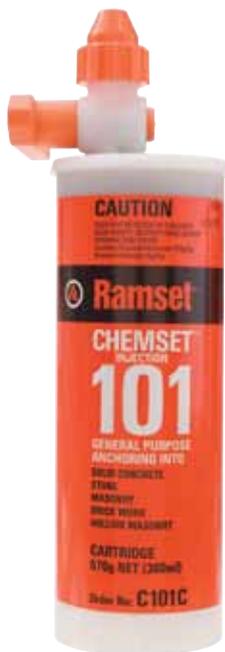
Bold working load values in tension are limited by steel. All other values limited by concrete and adhesive bond
 * For shear acting towards a concrete edge please contact a Ramset Engineer for further design assistance
 Shear values are for Grade 5.8 carbon steel.

Working load capacity was derived from characteristic ultimate load capacity by applying the following factors:
Tension: Concrete = 3, Steel = 2.2
Shear: Steel = 2.5

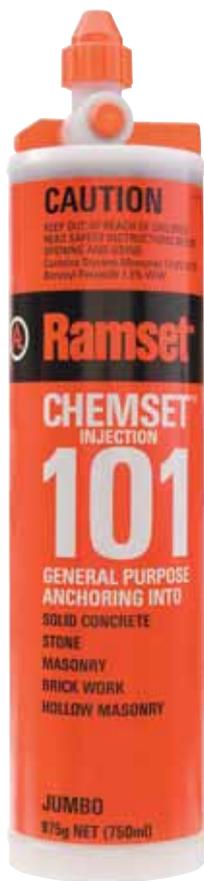
The design engineer should ensure the structural element is capable of supporting these loads.
 Refer to Ramset™ Specifiers Resource Book for more information or explanation of technical data.



ISNP



C101C (380ml)



C101J (750ml)



ISKP (2 x 380ml)

Key Features

- Fast cure
- Solid and hollow substrates
- Easy dispensing all year round

Description

Fast cure, medium duty anchoring of threaded studs and reinforcing bar into solid concrete, stone, hollow brick and hollow concrete block. Versatile, multi-purpose two part polyester anchoring system. Fast cure for high productivity. Non-drip formula, ideal for overhead installation. Steel columns and beams, seating, machinery, facade pins, handrails, gates, starter bars, bottom plate fixing

Typical Properties

Properties	Typical Value
Appearance	Part A: Mauve Part B: Green Mixed: Green / Grey
Density	1.55 kg /litre @ 20°C
Heat Distortion Temperature	Approx. 80°C
Hardness	> Shore D 80
Compressive Strength (AS1012.9)	20 MPa
Service Temperature Limits	-10°C to 80°C
Chemical Resistance	See Technical Data Sheet
Substrates	Solid Concrete, Solid Stone (Proof loading recommended), Solid Brick, Hollow Concrete Block, Hollow Brick



Features & Benefits

- Easy dispensing, even in cold weather
- Sag resistant formula for horizontal holes and overhead applications
- Tap Valve to preserve contents between uses

Related Products

DynaDrill™
Carbide Drill Bits
Impact Wrench

Wet/Dry Vacuum
Hole Cleaning Brushes
Hole Cleaning Pump

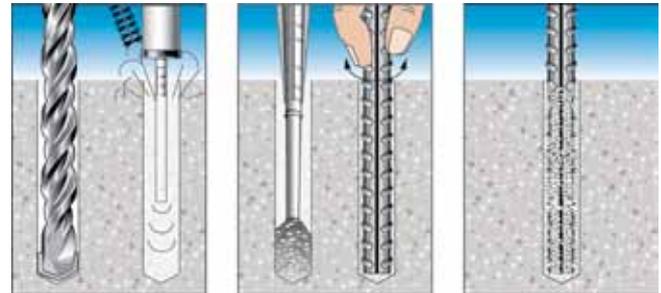
Trades & Applications

	Concreter	Building Contractor	Civil Contractor	Steel Fabricator	Balustrade Contractor	Form worker	Bricklayer	Fitter	Seating Contractor	Facade Contractor
Threaded Studs		✓		✓	✓			✓	✓	✓
Starter bars	✓	✓	✓			✓	✓			
Hollow Masonry Sleeves		✓		✓	✓			✓		
Remedial Wall Ties		✓					✓			

Installation in Solid Concrete

1. Drill hole to specified diameter and depth
2. Remove dust and debris by brushing and blowing 3 times each (If hole is wet or flooded, remove excess water with wet/dry vacuum)
3. Screw mixing nozzle onto cartridge and dispense 2-3 trigger pulls of adhesive to waste until colour is green / grey with no streaks
4. Insert tip of nozzle to bottom of hole and dispense adhesive
5. Fill hole to about 2/3 full
6. Insert threaded stud or reinforcing bar with rotating motion to release trapped air
7. Wait until adhesive has fully cured before loading (see Working / Loading Time chart below)
8. Clean up with acetone

Refer to Technical Data Sheet and MSDS available from www.ramset.com.au, for precautions and further detailed installation instructions



Recommended Installation Temperatures

	Minimum	Maximum
Substrate	0°C	43°C
Adhesive	15°C	30°C

Working and Loading Time

Substrate Temperature (°C)	Gel Time (min)	Cure Time (hours)
0	40	7
5	30	5
20	5 - 10	1.5
30	7	1
40	4	0.75

Hole Condition

Hole Condition	Suitable
Dry	Yes
Damp	Yes
Wet	No
Flooded	No

Drill Bit Type

Carbide	Yes
Diamond Core	No

Hole Orientation

Vertical Down	Yes
Horizontal	Yes
Vertical Up (Overhead)	Yes

ChemSet™ 101 Anchoring Adhesive

Description	Part No	Box Quantity
Jumbo Cartridge (750 ml) + 1 Nozzle	C101J	12
Cartridge (380 ml) + 1 Nozzle	C101C	20
2 x Cartridges (380 ml) + 4 Nozzles	ISKP	10
ChemSet™ Universal Applicator	CUA	1
ChemSet™ Pneumatic Universal Applicator	CUAPN	1
Mixing Nozzles for Polyester	ISNP	5
Hole Cleaning Pump	HCP	1

Description	Part No	Box Quantity
Hole Cleaning Pump High Volume	HCPHV	1
Hole Cleaning Brush 13 mm	HCBT13	1
Hole Cleaning Brush 20 mm	HCBT20	1
Hole Cleaning Brush 26 mm	HCBT26	1
Nylon Sleeves for Hollow Block	See Page 104	100
Fine Metal Mesh Sleeves	See Page 104	100

ChemSet™ 101 - Indicative Working Loads in 32 MPa Concrete with ChemSet™ Anchor Studs

Thread Size	Drilled Hole Ø (mm)	Min Hole Depth (mm)	Tightening Torque (Nm)	Min Edge Distance (mm)	Min Anchor Spacing (mm)	Max Tensile Load, N _a (kN)	Max Shear Load, V _{as} (kN)*
M8	10	80	10	35	50	4.5	4.4
M10	12	90	20	40	60	6.0	7.1
M12	14	110	40	50	75	8.6	10.5
M16	18	125	95	65	100	13.5	19.9
M20	24	150	180	80	120	22.3	29.9
M20	24	170	180	80	120	25.2	29.9
M24	26	160	315	100	145	32.7	43.3
M24	26	210	315	100	145	42.9	43.3

Bold working load values in tension are limited by steel. All other values limited by concrete and adhesive bond
 * For shear acting towards a concrete edge please contact a Ramset Engineer for further design assistance

Working load capacity was derived from characteristic ultimate load capacity by applying the following factors:
Tension: Concrete = 3, Steel = 2.2
Shear: Steel = 2.5

The design engineer should ensure the structural element is capable of supporting these loads.
 Refer to Ramset™ Specifiers Resource Book for more information or explanation of technical data.



UFP300 (300ml)

Key Features

- Fast cure
- Solid and hollow substrates
- Low odour
- Easy dispensing
- Fits standard silicone caulking gun

Description

Fast cure, medium duty anchoring of threaded studs and reinforcing bar into solid concrete, stone, hollow brick and hollow concrete block. Versatile, multi-purpose two part polyester anchoring system. For standard silicone caulking gun. Great for small jobs or around the home. Steel fencing, gates, brackets, hinges, guard rails, hand rails

Typical Properties

Properties	Typical Value
Appearance	Part A: Cream Part B: Black Mixed: Grey
Density	1.55 kg /litre @ 20°C
Heat Distortion Temperature	Approx. 80°C
Hardness	> Shore D 80
Compressive Strength (AS1012.9)	20 MPa
Service Temperature Limits	-10°C to 80°C
Substrates	Solid Concrete, Solid Stone (Proof loading recommended), Solid Brick, Hollow Concrete Block, Hollow Brick



Features & Benefits

- Easy dispensing, even in cold weather
- Sag resistant formula for horizontal holes and overhead applications
- Low odour

Related Products

- DynaDrill™
- Carbide Drill Bits
- Impact Wrench
- Wet/Dry Vacuum
- Hole Cleaning Brushes
- Hole Cleaning Pump

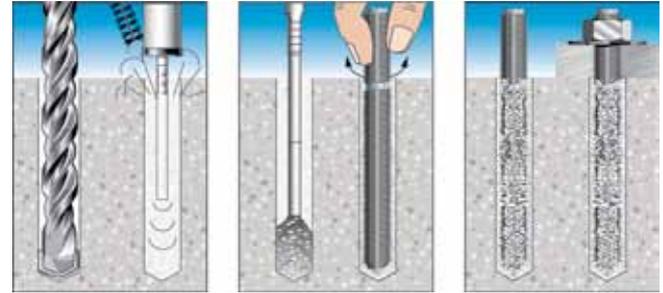
Trades & Applications

	Concrete	Building Contractor	Civil Contractor	Steel Fabricator	Balustrade Contractor	Formworker	Bricklayer	Fitter	Seating Contractor
Threaded Studs		✓		✓	✓			✓	✓
Starter Bars	✓	✓	✓			✓	✓		
Hollow Masonry Sleeves		✓		✓	✓			✓	

Installation in Solid Concrete

1. Drill hole to specified diameter and depth
2. Remove dust and debris by brushing and blowing 3 times each (If hole is wet or flooded, remove excess water with wet/dry vacuum)
3. Screw mixing nozzle onto cartridge and dispense 2-3 trigger pulls of adhesive to waste until colour is grey with no streaks
4. Insert tip of nozzle to bottom of hole and dispense adhesive
5. Fill hole to about 2/3 full
6. Insert threaded stud or reinforcing bar with rotating motion to release trapped air
7. Wait until adhesive has fully cured before loading (see Working / Loading Time chart below)
8. Clean up with acetone

Refer to Technical Data Sheet and MSDS available from www.ramset.com.au, for precautions and further detailed installation instructions



Recommended Installation Temperatures

	Minimum	Maximum
Substrate	0°C	35°C
Adhesive	5°C	30°C

Working and Loading Time

Substrate Temperature (°C)	Working Time (min)	Cure / Loading Time (min)
5	18	145
10	10	85
20	6	50
25	5	40
30	4	35

Hole Condition

Hole Condition	Suitable
Dry	Yes
Damp	Yes
Wet	No
Flooded	No
Drill Bit Type	
Carbide	Yes
Diamond Core	No
Hole Orientation	
Vertical Down	Yes
Horizontal	Yes
Vertical Up (Overhead)	Yes

Ultrafix™ Plus Anchoring Adhesive

Description	Part No	Box Quantity
Cartridge (300 ml) + 2 Nozzles	UFP300P	10
Cartridge (300 ml) + 2 Nozzles	UFP300	4
Caulking Gun for 300 ml Cartridges	CAGU300	1
Mixing Nozzles for Polyester	ISNP	5
Hole Cleaning Pump	HCP	1
Hole Cleaning Pump High Volume	HCPHV	1

Description	Part No	Box Quantity
Hole Cleaning Brush 13 mm	HCBT13	1
Hole Cleaning Brush 20 mm	HCBT20	1
Hole Cleaning Brush 26 mm	HCBT26	1
Nylon Sleeves for Hollow Block	See Page 104	100
Fine Metal Mesh Sleeves	See Page 104	100

Ultrafix™ Plus - Indicative Working Loads in 32 MPa Concrete with ChemSet™ Anchor Studs

Thread Size	Drilled Hole Ø (mm)	Min Hole Depth (mm)	Tightening Torque (Nm)	Min Edge Distance (mm)	Min Anchor Spacing (mm)	Max Tensile Load, N _a (kN)	Max Shear Load, V _{as} (kN)*
M8	10	80	10	35	50	4.5	4.4
M10	12	90	20	40	60	6.0	7.1
M12	14	110	40	50	75	8.6	10.5
M16	18	125	95	65	100	13.5	19.9
M20	24	150	180	80	120	22.3	29.9
M20	24	170	180	80	120	25.2	29.9
M24	26	160	315	100	145	32.7	43.3
M24	26	210	315	100	145	42.9	43.3

Bold working load values in tension are limited by steel. All other values limited by concrete and adhesive bond
 * For shear acting towards a concrete edge please contact a Ramset Engineer for further design assistance

Working load capacity was derived from characteristic ultimate load capacity by applying the following factors:
Tension: Concrete = 3, Steel = 2.2
Shear: Steel = 2.5

The design engineer should ensure the structural element is capable of supporting these loads.
 Refer to Ramset™ Specifiers Resource Book for more information or explanation of technical data.

Anchoring Capsules



Key Features

- Fast cure
- No mixing, no waste
- One capsule per fixing
- Use underwater

Description

Rapid cure, extra heavy duty anchoring of threaded studs into solid concrete and stone. For small jobs with few fixings. One capsule for one hole - no mixing, no mess, no waste. Carbide or diamond drilled holes. Dry, wet or even underwater. Cures in 30 minutes! Balustrade posts, fencing, sheds, structural steel columns, hand rails, seating, machinery hold down

Typical Properties

Properties	Typical Value
Appearance	Part A: Clear Honey Part B: White Powder Mixed: Dark Grey
Service Temperature Limits	-23°C to 60°C
Substrates	Solid Concrete, Solis Stone (Proof loading recommended), Solid Brick



Features & Benefits

- Non-drip formula for horizontal holes and overhead applications
- Glass becomes part of the aggregate
- No applicator
- Strong bond for extra security

Related Products

- DynaDrill™
- Carbide Drill Bits
- Diamond Motor
- Diamond Core Drill Bits
- Impact Wrench
- Wet/Dry Vacuum
- Hole Cleaning Brushes
- Hole Cleaning Pump

Trades & Applications

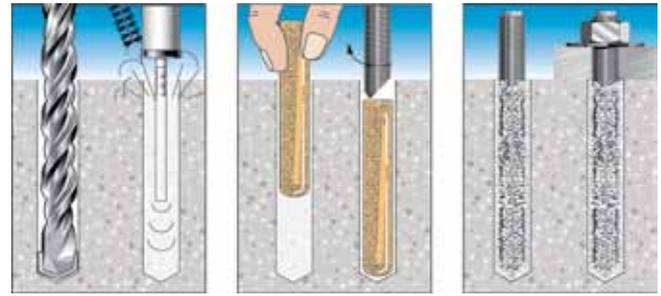
	Building Contractor	Civil Contractor	Steel Fabricator	Balustrade Contractor	Fitter	Seating Contractor
Threaded Studs	✓	✓	✓	✓	✓	✓



Installation in Solid Concrete

1. Drill or core hole to specified diameter and depth
2. Remove dust and debris by brushing and blowing 3 times each (If hole is wet or flooded, brush only)
3. Insert capsule into hole
4. Fit socket into drill and use to rotate and drive a ChemSet™ Anchor Stud into the hole
5. The stud rotation will mix the capsule contents
6. Wait until adhesive has fully cured before loading (see Loading Time chart below)

Refer to Technical Data Sheet and MSDS available from www.ramset.com.au, for precautions and further detailed installation instructions



Recommended Installation Temperatures

	Minimum	Maximum
Substrate	-5°C	43°C
Adhesive	-5°C	43°C

Working and Loading Time

Substrate Temperature (°C)	Cure / Loading Time (min)	
	Dry	Damp or Wet
≥ 20	20	40
10 to 20	30	60
0 to 10	60	120
-5 to 0	5 hours	10 hours

Hole Condition

Hole Condition	Suitable
Dry	Yes
Damp	Yes
Wet	Yes
Flooded	Yes
Drill Bit Type	
Carbide	Yes
Diamond Core	Yes
Hole Orientation	
Vertical Down	Yes
Horizontal	Yes
Vertical Up (Overhead)	Yes

ChemSet™ Maxima™ Anchoring Capsule

Description	Part No	Box Quantity
ChemSet™ Maxima™ Capsule M8	CHEM08	10
ChemSet™ Maxima™ Capsule M10	CHEM10	10
ChemSet™ Maxima™ Capsule M12	CHEM12	10
ChemSet™ Maxima™ Capsule M16	CHEM16	10
ChemSet™ Maxima™ Capsule M20	CHEM2024	6
ChemSet™ Maxima™ Capsule M24	CHEM2024	6

Description	Part No	Box Quantity
Hole Cleaning Pump	HCP	1
Hole Cleaning Pump High Volume	HCPHV	1
Hole Cleaning Brush 13 mm	HCBT13	1
Hole Cleaning Brush 20 mm	HCBT20	1
Hole Cleaning Brush 26 mm	HCBT26	1

ChemSet™ Maxima™ - Indicative Working Loads in 32 MPa Concrete with ChemSet™ Anchor Studs

Thread Size	Drilled Hole Ø (mm)	Min Hole Depth (mm)	Tightening Torque (Nm)	Min Edge Distance (mm)	Min Anchor Spacing (mm)	Max Tensile Load, N _a (kN)	Max Shear Load, V _{as} (kN)*
M8	10	80	10	35	50	6.5	4.4
M10	12	90	20	40	60	10.3	7.1
M12	14	110	40	50	75	15.3	10.5
M16	18	125	95	65	100	22.3	19.9
M20	24	150	180	80	120	35.7	29.9
M20	24	170	180	80	120	40.5	29.9
M24	26	160	315	100	145	41.3	43.3
M24	26	210	315	100	145	54.2	43.3

Bold working load values in tension are limited by steel. All other values limited by concrete and adhesive bond
 * For shear acting towards a concrete edge please contact a Ramset Engineer for further design assistance
 Shear values are for Grade 5.8 carbon steel.

Working load capacity was derived from characteristic ultimate load capacity by applying the following factors:
Tension: Concrete = 3, Steel = 2.2
Shear: Steel = 2.5

The design engineer should ensure the structural element is capable of supporting these loads. Refer to Ramset™ Specifiers Resource Book for more information or explanation of technical data.



Description

ChemSet™ Anchor Studs are made from Grade 5.8 carbon steel to get the most out of adhesive tensile capacities and provide higher shear capacities than regular Grade 4.6 grade studs. Galvanising of ChemSet Anchor Studs meets Australian Standards. Stainless Steel ChemSet™ Anchor Studs are high corrosion resistant AISI 316 (A4).

Specification

Material - Bolt	Carbon Steel, Stainless Steel 316 (A4)
Corrosion Protection	Zinc Plating, Hot Dipped Galvanising
Head Styles	Hex Nut
Fixing Method	Through Fixture
Setting Method	Chemical
Anchoring Method	Chemical
Thread Diameters	M8, M10, M12, M16, M20, M24
Anchor/Hole Diameters	10mm, 12mm, 14mm, 18mm, 24mm, 26mm
Anchor Lengths	110mm, 130mm, 160mm, 190mm, 260mm, 300mm
Maximum Fixture Thickness	15mm, 25mm, 30mm, 50mm, 40mm, 45mm, 80mm, 90mm, 105mm
Substrates	Concrete, Solid Brickwork



Features and Benefits

- High Performance Grade 5.8 Carbon Steel
- Zinc Plated for indoor or dry climates
- Hot dip galvanised to AS1650 and AS1214
- Hot dip galvanised to 42 micron for exterior applications
- High Performance AISI316 Stainless Steel for Coastal Applications
- Pre-cut to standard chemical anchoring lengths
- Supplied with nuts and washers
- Depth set mark to ensure correct embedment
- Reliable external hex drive for installing capsules
- Ramset™ Quality

Related Products

DynaDrill™
Carbide Drill Bits
Diamond Motor
Diamond Core Drill Bits

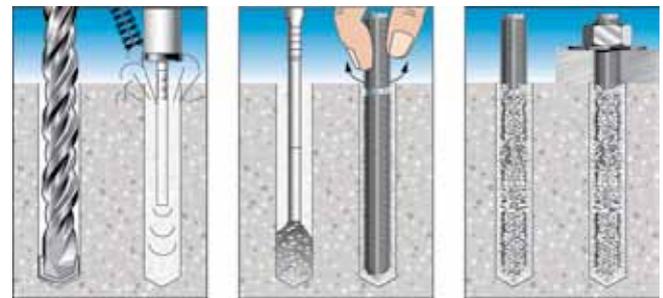
Impact Wrench
Wet/Dry Vacuum
Hole Cleaning Brushes
Hole Cleaning Pump

Trades & Applications

	Building Contractor	Steel Fabricator	Balustrade Contractor	Bricklayer	Fitter	Seating Contractor	Facade Contractor
Machinery hold down					✓		
Structural steel connections		✓					
Seating						✓	✓
Hand rails	✓	✓	✓				
Fencing		✓	✓		✓		

Installation

See recommendations for each ChemSet™ anchoring adhesive on previous pages.



ChemSet™ Anchor Studs

Description	Part No	Box Quantity
ChemSet™ Anchor Stud M8 x 110 Zinc	CS08110	10
ChemSet™ Anchor Stud M8 x 110 Galvanised	CS08110GH	10
ChemSet™ Anchor Stud M8 x 110 Stainless	CS08110SS	10
ChemSet™ Anchor Stud M10 x 130 Zinc	CS10130	10
ChemSet™ Anchor Stud M10 x 130 Galvanised	CS10130GH	10
ChemSet™ Anchor Stud M10 x 130 Stainless	CS10130SS	10
ChemSet™ Anchor Stud M12 x 160 Zinc	CS12160	10
ChemSet™ Anchor Stud M12 x 160 Galvanised	CS12160GH	10
ChemSet™ Anchor Stud M12 x 160 Stainless	CS12160SS	10
ChemSet™ Anchor Stud M12 x 180 Zinc	CS12180	10

Description	Part No	Box Quantity
ChemSet™ Anchor Stud M16 x 190 Zinc	CS12190	10
ChemSet™ Anchor Stud M16 x 190 Galvanised	CS12190GH	10
ChemSet™ Anchor Stud M16 x 190 Stainless	CS12190SS	10
ChemSet™ Anchor Stud M20 x 260 Zinc	CS20260	6
ChemSet™ Anchor Stud M20 x 260 Galvanised	CS20260GH	6
ChemSet™ Anchor Stud M20 x 260 Stainless	CS20260SS	6
ChemSet™ Anchor Stud M24 x 300 Zinc	CS24300	6
ChemSet™ Anchor Stud M24 x 300 Galvanised	CS24300GH	6
ChemSet™ Anchor Stud M24 x 300 Stainless	CS24300SS	6

Other sizes and steel types available on request.
(Maybe subject to lead time)

ChemSet™ Anchor Studs - Typical Properties

See working loads of each anchoring adhesive in previous pages

Thread Size	Overall Length, L (mm)	Effective Length, L _e (mm)	Max Fixture Thickness, t (mm)	Yield Strength, f _y (MPa)	Carbon Steel UTS, f _u (MPa)	Yield Strength, f _y (MPa)	Stainless Steel UTS, f _u (MPa)	Section Modulus, Z (mm ³)
M8	110	95	15	430	540	450	650	31.2
M10	130	115	25	430	540	450	650	62.3
M12	160	140	30	430	540	450	650	109.2
M12	180	160	50	430	540	450	650	109.2
M16	190	165	40	420	520	450	650	277.5
M20	260	225	80	420	520	450	650	540.9
M24	300	265	105	420	520	450	650	935.5

The design engineer should ensure the structural element is capable of supporting these loads. Refer to Ramset™ Specifiers Resource Book for more information or explanation of technical data.

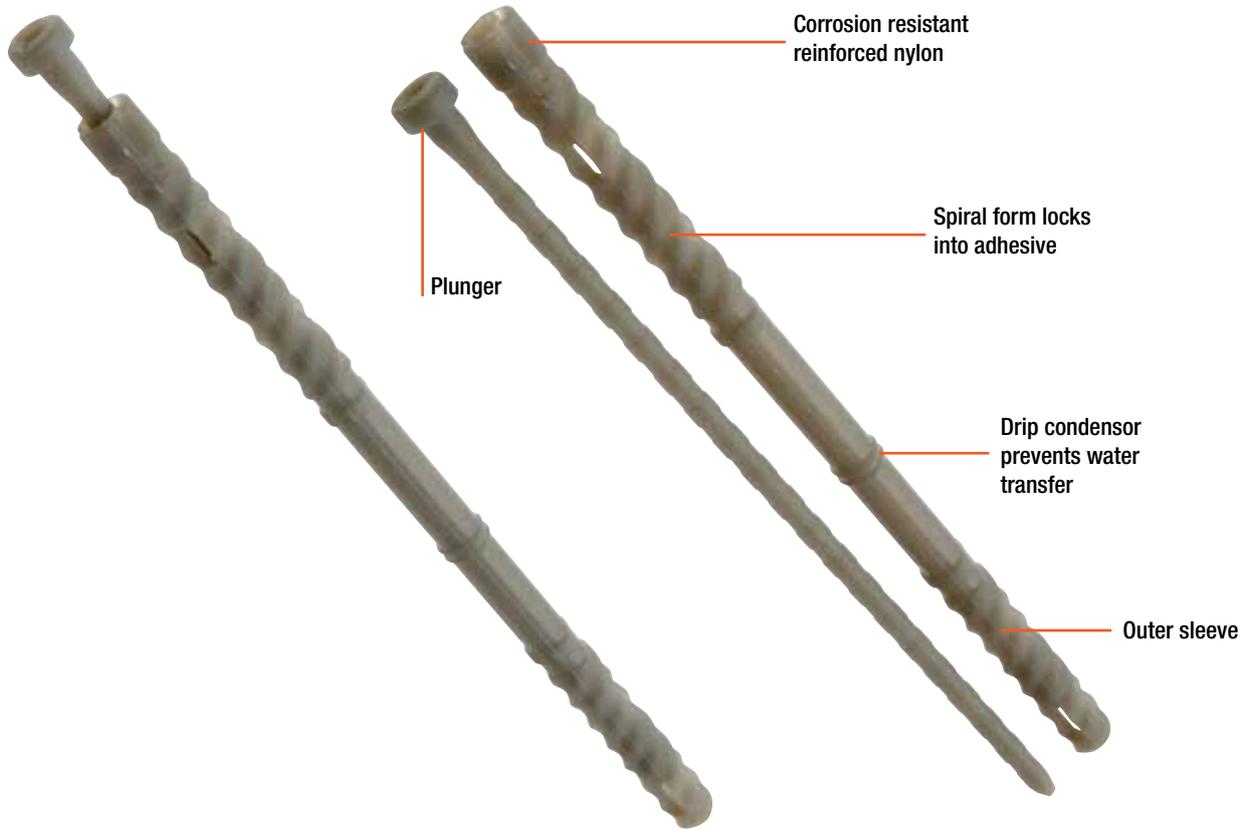
Remedial Wall Ties

Medium Duty Anchoring



Ramset™

ChemSet™ Anchor Fixings



Remedial Wall Ties

An innovative high strength, corrosion resistant nylon solution to replacing corroded brick ties. Fast and easy to install.

Typical Properties

Property	Typical Value
Overall Length	220.0 mm
Nominal Diameter	12 mm
Material	Glass Filled Nylon
Service Temperature	-5°C to 40°C
Yield Strength Tension ASTM D638	170 MPa
Substrates	Solid Brick, Solid Concrete

Quantity of Wall Ties Per ChemSet™ 101 Pack

Pack Size	Quantity Of Wall Ties
380ml	48
750ml	98

Trades & Applications

	Brick Layer
Replacing Brick Ties	✓



Features and Benefits

- High strength, corrosion resistant glass reinforced nylon
- No expansion stress on bricks
- Non-destructive installation
- Easy, simple and quick to install
- Install from either side of the wall
- No setting tool required
- Fast setting time (in conjunction with ChemSet™ 101 and Ultrafix™ Plus)
- Recessed for neat finish
- Designed to prevent water transfer between cavities
- Suitable for installation in damp conditions (with ChemSet™ 101 and Ultrafix™ Plus)

Related Products

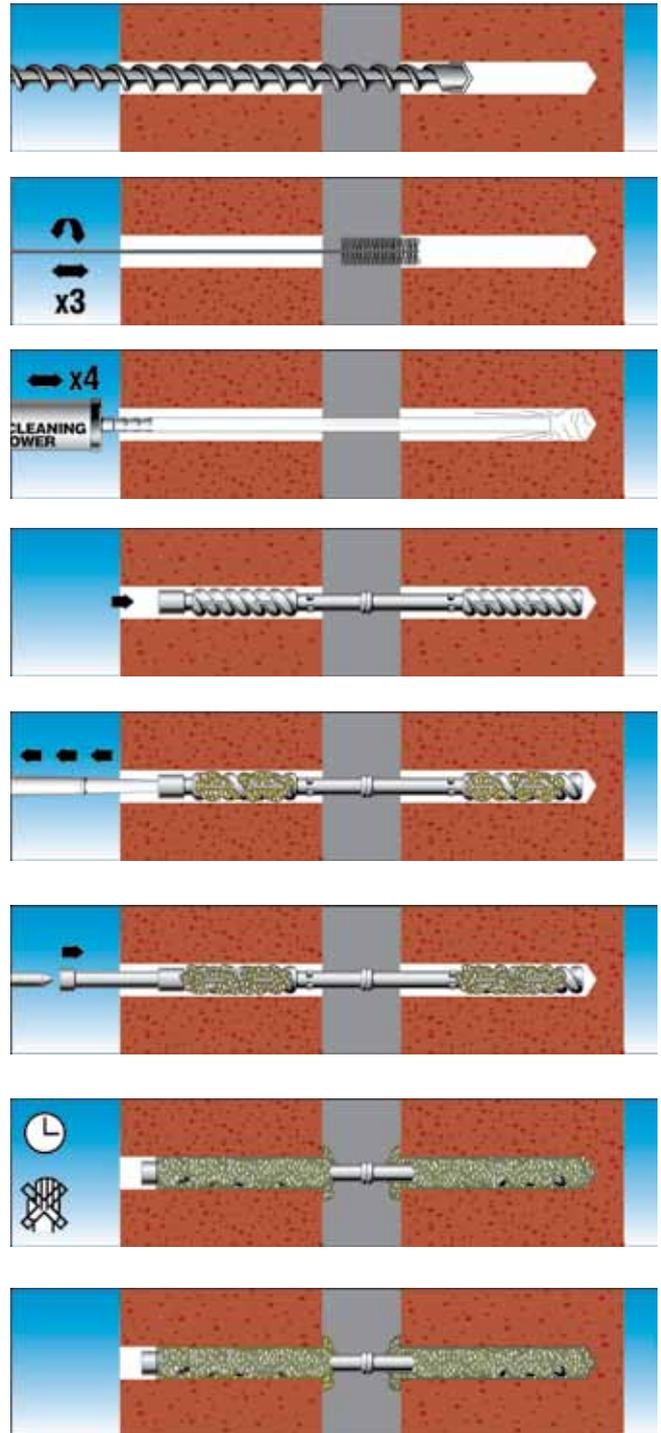
DynaDrill™
Carbide Drill Bits
Diamond Motor

Diamond Core Drill Bits
Hole Cleaning Brushes
Hole Cleaning Pump

Installation

1. Drill a 12 mm diameter hole in solid brick using a masonry drill bit all the way through the nearest brick and maximum 70 mm into the second brick
2. Brush and blow dust out of holes
3. Insert outer sleeve through first brick into the second until it reaches the back of the hole
4. Insert ChemSet 101 or Ultrafix™ Plus mixing nozzle into outer sleeve and dispense adhesive until sleeve is full
5. Insert the wall tie plunger into the outer sleeve all the way in
6. Adhesive will cure and hold the two brick leaves together

Refer to Technical Data Sheet and MSDS available from www.ramset.com.au, for precautions and further detailed installation instructions

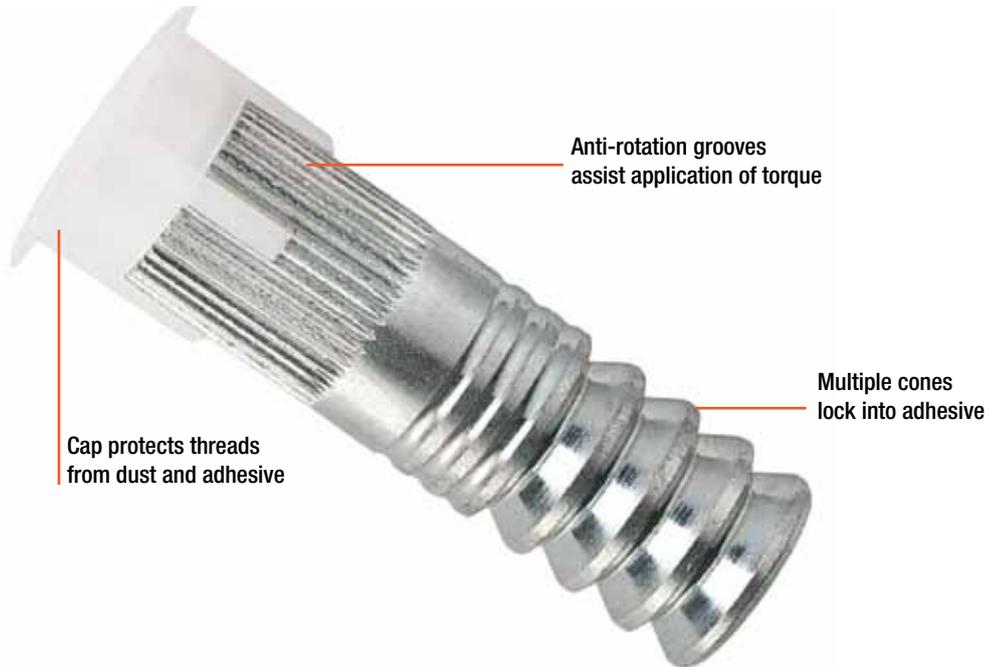


Characteristic Loads in Red Clay Brick at 1.5 mm deflection with ChemSet™ 101

	Characteristic Load
Tension	0.87 kN
Compression	2.05 kN

Remedial Wall Ties

Description	Part No	Box Quantity
Remedial Wall Tie	RA225	100



Description

Internally threaded steel inserts are for use with ChemSet™ injection Adhesives. Available in zinc plated carbon steel or high corrosion resistant AISI 316 (A4). Ideal for applications where a bolt finish is required.

Typical Properties

Steel Grades	500 MPa Carbon Steel AISI 316 (A4) Stainless Steel
--------------	---



Features and Benefits

- High Performance Grade 5.8 Carbon Steel
- Zinc Plated for indoor or dry climates
- High Performance AISI316 Stainless Steel for Coastal or fresh water Applications
- Supplied with protective cap to protect threads during installation

Related Products

DynaDrill™
Carbide Drill Bits
Diamond Motor
Diamond Core Drill Bits
Hole Cleaning Brushes

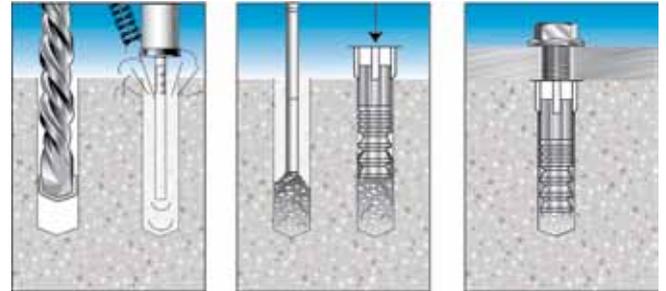
Hole Cleaning Pump
Structaset™ 401
ChemSet™ 801
ChemSet™ Reo502™

Trades & Applications

	Building Contractor	Steel Fabricator	Balustrade Contractor	Fitter	Seating Contractor	Facade Contractor
Machinery hold down				✓		
Structural steel connections		✓				
Seating					✓	✓
Hand rails	✓	✓	✓			
Balustrade posts			✓			

Installation

1. Drill or core hole to specified diameter and depth
2. Remove dust and debris by brushing and blowing 3 times each (If hole is wet or flooded, consult adhesive product information to determine its suitability for this condition)
3. Screw mixing nozzle onto cartridge and dispense 2-3 trigger pulls of adhesive to waste until colour is grey with no streaks
4. Insert tip of nozzle to bottom of hole and dispense adhesive
5. Fill hole to about 2/3 full
6. Insert threaded insert with rotating motion to release trapped air
7. Wait until adhesive has fully cured before loading (see Working / Loading Time chart for each adhesive)



Refer to **Technical Data Sheet and MSDS** available from www.ramset.com.au, for precautions and further detailed installation instructions

Typical Properties

Thread Size	Overall Length, L (mm)	Effective Length, L _e (mm)	Thread Length, L ₂ (mm)	Carbon Steel		Stainless Steel	
				Tensile Yield Strength, f _y (MPa)	UTS, f _u (MPa)	Yield Strength, f _y (MPa)	UTS, f _u (MPa)
M8	60	60	25	420	520	350	650
M10	65	65	32	420	520	350	650
M12	75	75	38	420	520	350	650
M16	125	125	50	420	520	-	-
M20	170	170	63	420	520	-	-

Threaded Inserts (Available on request. Lead time applies)

Description	Part No	Box Quantity	Description	Part No	Box Quantity
Threaded Insert M8 x 60 Zinc	062770	10	Threaded Insert M12 x 75 Stainless	063100	10
Threaded Insert M8 x 60 Stainless	062860	10	Threaded Insert M16 x 125 Zinc	062800	10
Threaded Insert M10 x 65 Zinc	062480	10	Threaded Insert M16 x 125 Stainless	051175	10
Threaded Insert M10 x 65 Stainless	062960	10	Threaded Insert M20 x 170 Zinc	062810	10
Threaded Insert M12 x 75 Zinc	062760	10			

Threaded Inserts - Indicative Working Loads in 32 MPa Concrete with Structaset™ 401

Thread Size	Drilled Hole Ø (mm)	Min Hole Depth (mm)	Tightening Torque (Nm) 5.8 A4 Bolt	Tightening Torque (Nm) 8.8 Bolt	Min Edge Distance (mm)	Min Anchor Spacing (mm)	Max Tensile Load, N _a (kN)	Max Shear Load, V _{as} (kN)*
M8	14	65	10	15	65	120	7.3	5.4
M10	20	70	22	30	65	130	11.5	8.7
M12	24	75	36	70	85	150	16.7	12.5
M16	28	130	80	120	125	250	31.1	23.3
M20	35	175	120	200	170	340	50.4	36.3

Bold working load values in tension are limited by steel. All other values limited by concrete and adhesive bond
 * For shear acting towards a concrete edge please contact a Ramset Engineer for further design assistance
 Shear values are for Grade 8.8 carbon steel.

Working load capacity was derived from characteristic ultimate load capacity by applying the following factors:
Tension: Concrete = 2.1
Shear: Steel = 2.2

The design engineer should ensure the structural element is capable of supporting these loads.
 Refer to Ramset™ Specifiers Resource Book for more information or explanation of technical data.



Hollow Brick and Block Anchoring Accessories

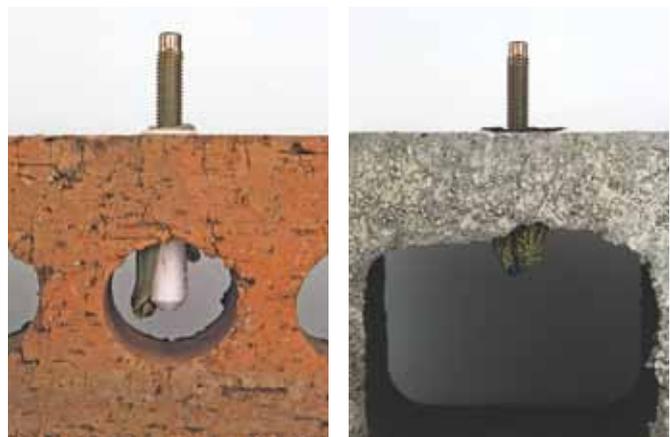
Use with ChemSet™ 101 and UltraFix™ Plus to anchor threaded studs into hollow brick and block

- Forms a solid plug of adhesive in the brick or block cavity to provide secure anchoring point
- Durable nylon sleeves ideal for 3 hole brick and hollow concrete block
- Fine Metal Mesh Sleeves ideal for 10 hole brick

Typical Properties

For Thread Size	Nylon Sleeve		Wire Mesh Sleeve	
	Overall Length (mm)	Nominal Diameter (mm)	Overall Length (mm)	Nominal Diameter (mm)
M6	-	-	1000	12.5
M8	64	12	1000	12.5
M10	64	14	1000	15.0
M12	64	16	1000	15.0
M16	-	-	1000	20.5

Substrates Wire Cut Extruded Clay Brick, Hollow Concrete Block



Features and Benefits

- Resistant to vibrating loads
- Corrosion resistant nylon
- No expansion stress on bricks
- Non-destructive installation
- Easy, simple and quick to install

Related Products

DynaDrill™
Carbide Drill Bits
Diamond Motor
Diamond Core Drill Bits

Hole Cleaning Brushes
Hole Cleaning Pump
UltraFix™ Plus
ChemSet™ 101

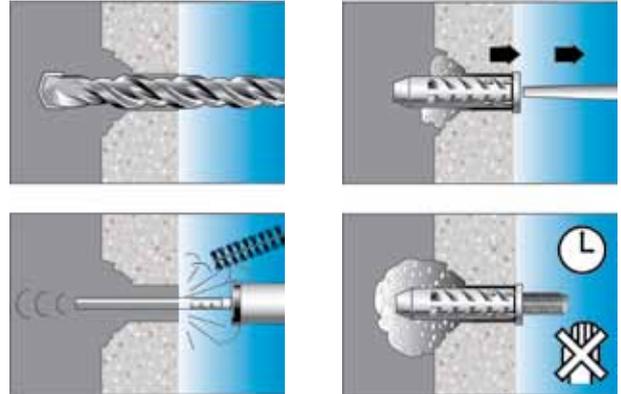
Trades & Applications

	Building Contractor	Steel Fabricator	Balustrade Contractor	Fitter
Hand rails			✓	✓
Gate Hinges		✓		
Timber Beams	✓			
Steel Beams	✓	✓		

Installation

1. Drill hole to specified diameter in brick or block using a masonry drill bit
2. Brush and blow dust out of holes
3. Cut wire mesh sleeves to length nominated in table below and fold or twist one end to close it
4. Insert nylon or wire mesh sleeve into hole
5. Insert ChemSet 101 or Ultrafix™ Plus mixing nozzle into sleeve and dispense adhesive, withdrawing nozzle as it fills
6. Insert threaded rod or stud into sleeve
7. Allow adhesive to cure before loading

Refer to Technical Data Sheet and MSDS available from www.ramset.com.au, for precautions and further detailed installation instructions



Hollow Brick and Block Anchoring Accessories

Description	To Suit	Part Number	Pack Quantity
Nylon Sleeve 12 mm Diameter	M8 Thread	ISS08	100
Nylon Sleeve 14 mm Diameter	M10 Thread	ISS10	100
Nylon Sleeve 16 mm Diameter	M12 Thread	ISS12	100
Fine Metal Mesh Sleeve 12 x 1000 mm	M8 Thread	ISM08	1
Fine Metal Mesh Sleeve 16 x 1000 mm	M10 / M12 Thread	ISM12	1
Fine Metal Mesh Sleeve 22 x 1000 mm	M16 Thread	ISM16	1

Indicative Working Loads in Hollow Brick/Block with ChemSet™ 101, Ultrafix™ Plus & ChemSet™ Hollow Block Accessories

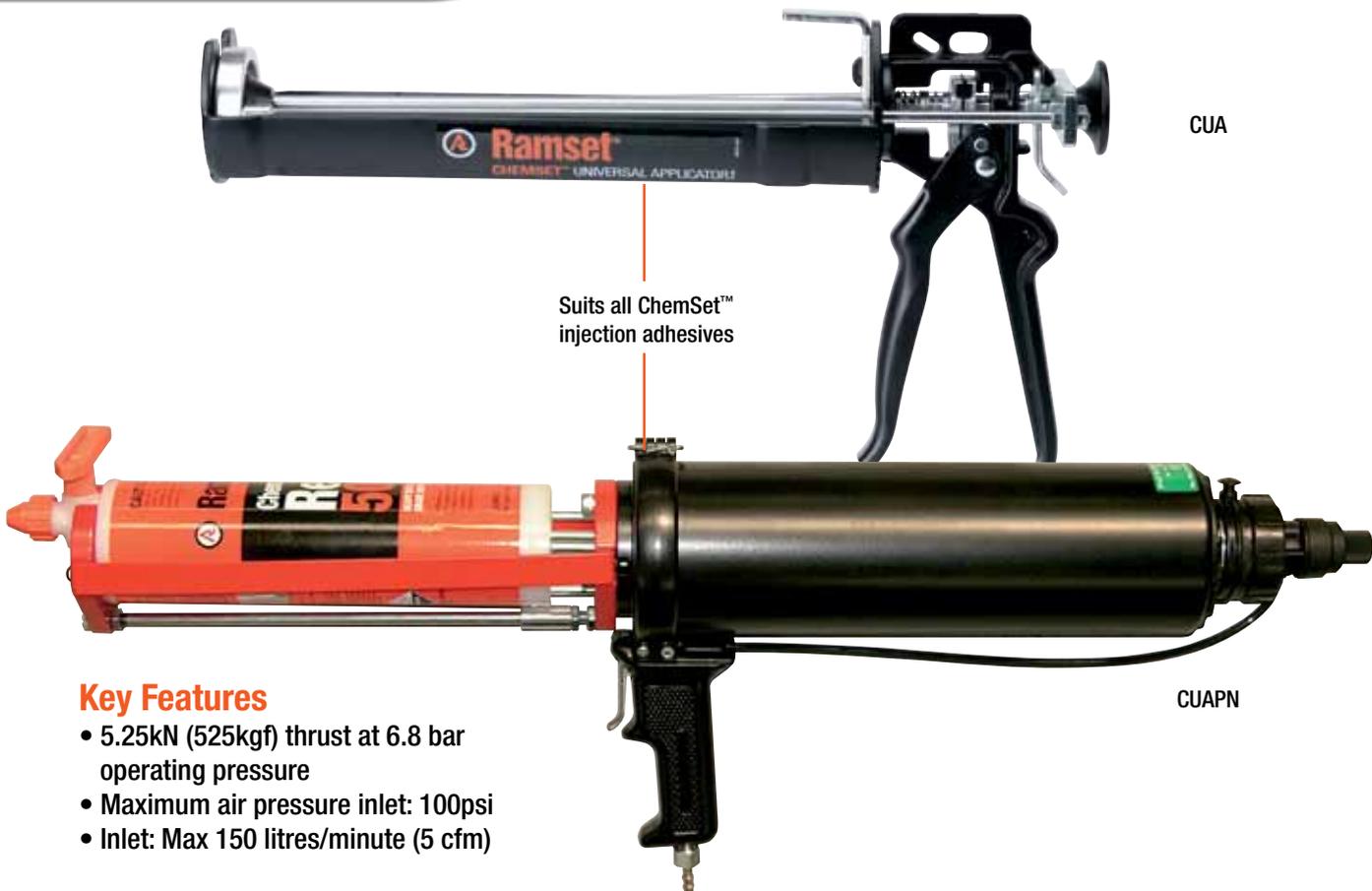
Anchor size, d _b (mm)	Substrate	Sleeve/Sieve Type	Installation details				Working Load Limit (kN)	
			Drilled hole diameter, d _h (mm)	Fixture hole diameter, d _f (mm)	Anchor effective depth, h (mm)	Tightening torque, T _r (Nm)	Solid Brick	
							Shear, V _a	Tension, N _a
M8	Solid Clay Brick	-	10	10	80	10	4.4	1.4
M10			12	12	85	20	4.8	1.5
M12			14	15	85	40	5.2	1.6
M16			18	19	85	95	5.2	1.7

Note: Use specified hole size for solid brick. Use of larger hole and/or sleeve/sieve will result in lower capacities.

Anchor size, d _b (mm)	Substrate	Installation details				Working Load Limit (kN)						
		Drilled hole diameter, d _h (mm)		Fixture hole diameter, d _f (mm)	Anchor effective depth, h (mm)	Tightening torque, T _r (Nm)	3 Hole Brick		10 Hole Brick		Concrete Block	
		Nylon Sleeve	S/S Sieve				Shear, V _a	Tension, N _a	Shear, V _a	Tension, N _a	Shear, V _a	Tension, N _a
M8	3 Hole Brick, 10 Hole Brick or Concrete Block	12	12	10	64	10	3.8	2.5	3.0	1.0	1.8	1.8
M10		14	16	12		20	4.6	2.5	4.6	1.0	2.0	1.8
M12		16	16	15		40	5.0	2.5	5.0	1.0	2.0	1.8
M16		-	22	19		95	5.0	2.5	5.0	1.0	2.0	1.8

The strength in tension of ChemSet™ fixings for hollow block exceeds the strength of hollow brick and concrete block. Therefore load capacity of the fixing is limited by the strength of the brick or block. Over loading the fixing will risk destruction of the brick or block. Shear properties based on grade 4.6 carbon steel threaded rod.

The design engineer should ensure the structural element is capable of supporting these loads. Refer to Ramset™ Specifiers Resource Book for more information or explanation of technical data.



CUA

Suits all ChemSet™ injection adhesives

CUAPN

Key Features

- 5.25kN (525kgf) thrust at 6.8 bar operating pressure
- Maximum air pressure inlet: 100psi
- Inlet: Max 150 litres/minute (5 cfm)



ChemSet™ Universal Applicator

Dispenses all of the products in the ChemSet™ Injection Range

- Robust all-metal construction
- Twin drive for powerful dispensing

ChemSet™ Pneumatic Powered Applicator

Effortless dispensing of all products in the ChemSet™ Injection range

- Powered by compressed air
- Reduces fatigue when dispensing a large number of cartridges

Recommended ChemSet™ Cartridges

Pack Size	Product	Part Number
380ml	ChemSet 101™	C101C, ISKP, ISKPT
380ml	ChemSet 801™	C801C
750ml	ChemSet 101™	C101J
750ml	ChemSet 801™	C801J
750ml	ChemSet Reo502™	RE0502J

Chemical Anchoring Kit



Part No. CHEMKITBAG


HCBT13, HCBT20, HCBT26

HCPHV

HCP

Hole Cleaning Accessories

Cleaning dust and debris from holes is necessary to obtain full adhesion and load capacity from Chemical Anchors.

- Ramset™ provides a full range of hole cleaning accessories to ensure the best results from Ramset™ Chemical Anchoring products
- To remove dust and debris after drilling
- Removing dust ensures rated load capacities are achieved

Description	To Suit	Part Number	Pack Quantity
Hole Cleaning Pump (Blower)	All hole sizes	HCP	1
Hole Cleaning Pump (High Volume)	All hole sizes	HCPHV	1
Hole Cleaning Brush 13 mm	8 – 12 mm Diameter Holes	HCBT13	1
Hole Cleaning Brush 20 mm	16 – 20 mm Diameter Holes	HCBT20	1
Hole Cleaning Brush 26 mm	20 – 24 mm Diameter Holes	HCBT26	1

Longer brushes for deep holes available on request.

Retaining Collars for Hollow Base Materials and Overhead Applications in Solid Materials

- Prevents drip in overhead installations

Description	Part Number	To Suit	Pack Quantity
10mm Retaining Collar	ISR10	CS10130	100
12mm Retaining Collar	ISR12	CS12160	100
16mm Retaining Collar	ISR16	CS16190	100


ISNP

ISNE

ISNET

Mixing Nozzles

Always use recommended mixing nozzles for each adhesive. Using the incorrect nozzle will result in improper mixing and poor load resistance.

Description	Length	Length with Extension
Epoxy Mixing Nozzles	255mm	440mm
Fast Dispensing Epoxy Nozzles - Turbo	440mm	-
Polyester Mixing Nozzles	215mm	-

Description	To Suit	Part Number	Pack Quantity
Epoxy Mixing Nozzles	C801C, C801J, RE0502J, S401C	ISNE	5
Fast Dispensing Epoxy Nozzles - Turbo	C801C, C801J, RE0502J	ISNET	1
Polyester Mixing Nozzles	C101C, C101J, ISKP, S401C UFP300, UFP300P	ISNP	5

Solid Substrates

The following installation instructions are for ChemSet™ 101, Structaset™ 401, ChemSet™ 801, ChemSet™ Reo 502™ and Ultrafix™ Plus anchoring adhesives into solid concrete.

Precautions

- For ease of use ensure the **adhesive** temperature is greater than the minimum installation temperature listed on the pack.
- When **substrate** temperature is less than the minimum listed on the pack, the adhesive may fail to cure. Satisfactory results may be obtained by first warming the cartridges, studs and / or rebar to about 20° to 25°C then warming the concrete with a blow torch or similar before injecting the adhesive. (Do not use flame near adhesives)
- In cold conditions, avoid applying excessive pressure to the dispensing gun. Excessive pressure may damage the dispensing gun or result in adhesive loss from the back of the cartridge.
- Use only the correctly mixed adhesive – incorrect mix ratio will cause a reduction in load capacity.
- **IMPORTANT** - Always ensure hole is properly cleaned. Refer to cartridge or product information to determine if suitable for wet holes.
- Prevent exposure of ChemSet™ 801 to moisture or water for at least 24 hours after installation to allow for maximum curing.
- Do not dilute adhesive with any solvents and/or other chemicals.
- Always use the correct mixing nozzle listed on the pack. Other nozzles may cause ineffective mixing and reduce the properties of the adhesive.
- Do not install into concrete less than 3 days old
- Full load capacity will not be achieved in concrete less than 28 days old.
- Full load capacity will be achieved in concrete greater than 28 days old, even if installed earlier than 28 days
- Do not remove spiral mixer from nozzles.
- Do not cut or shorten nozzles.
- Roughen diamond core drilled holes prior to installing ChemSet™ 101 or Ultrafix™ Plus

Installation Instructions:

Read the "Precautions" section of these instructions prior to use. Read safety directions on the pack before opening or using. In general, wear safety goggles, gloves and hearing protection when drilling and using anchoring adhesive.

Setting and technical data provided applies to:

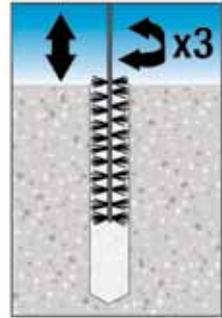
- Holes drilled with Rotary Hammers using drill bits toleranced in accordance with DIN8035, and where holes have been cleaned using a brush and air pump.
- Holes cored with diamond coring equipment that have been cleaned using a brush and air pump or wet/dry vacuum.
- Always wear safety goggles.

Solid Substrates

1. Drill hole using correctly sized rotary hammer drill bit or diamond core bit to the specified depth. (see cartridge label, product information or engineering drawings)

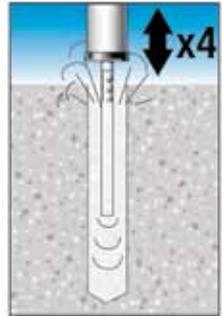


2. Clean hole with correctly sized cleaning brush with stiff nylon or wire bristles. Using a combination Push/Pull and twisting (rotation) motion, ensure the sides of the hole are scrubbed at least 3 times for the full depth of the hole. (See page 107 for correct brush size)



3. Remove debris, dust etc. from the hole using a hole cleaning blower with at least 4 swift pumps, alternatively a strong blast of compressed air or wet/dry vacuum maybe used.

4. Reinforcing bars, internally threaded sockets, threaded rods or studs to be used should be cleaned and free from oil, grease, flaking rust or debris. Threaded rods or studs should be chisel ended to prevent them unthreading from the cured adhesive.



5. If holes are not dry, consult product pack to determine if adhesive is suitable for the hole condition. If holes have been left for a prolonged period since drilling, re-cleaning in accordance with '2 & 3' above is recommended.

6. Remove nut from the cartridge and attach the correct Ramset mixing nozzle. Screw down tight. (Ultrafix™ Plus cut plastic bag before attaching mixing nozzle)

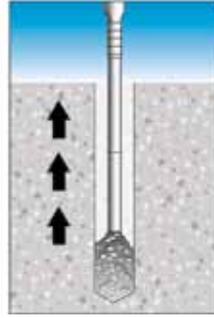


7. Mount assembled cartridge into the Ramset Universal Applicator (Mount Ultrafix™ Plus in regular caulking gun).

8. Open the orange valve (Not necessary for Ultrafix™ Plus). Turn so arrow points forward. Dispense adhesive to waste until an even, uniform colour is achieved. Approximately 2-3 trigger pulls should be adequate. See pack or product information for correct colour. The initial flow is unsuitable for fastening and must not be used.



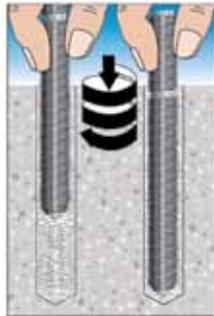
9. Insert mixer nozzle to the base of the hole and inject.
 10. To avoid creating air pockets, slowly withdraw the nozzle as the hole fills with each squeeze. Use an extension tube for deep holes.
- See trigger pulls guide in this section to estimate the required amount of adhesive to just fill the hole with minimal waste.



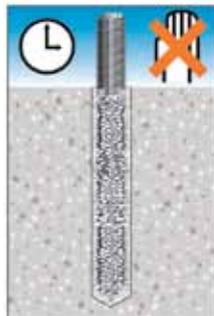
11. Once the required fill is obtained, release pressure by pressing rear trigger. Close orange valve to preserve contents.



12. Insert the stud, bar or socket into the hole using a slow twisting motion to release trapped air. Wipe away the excess material from the concrete surface around the fixing.



13. Load anchor when curing is complete. See cartridge label or product information for curing times.



14. Attach fixture and tighten nut in accordance with recommended tightening torque

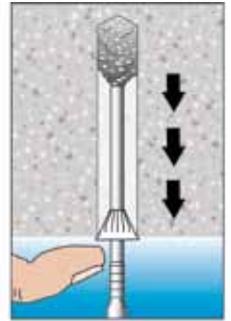


Overhead Installation in Solid Substrates

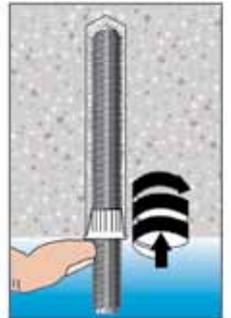
The following installation instructions are for ChemSet™ 101, Structaset™ 401 and Ultrafix™ Plus anchoring adhesives into solid concrete.

For overhead installation into solid substrate, prepare hole and cartridge as per installation instructions, solid substrate 1 to 8

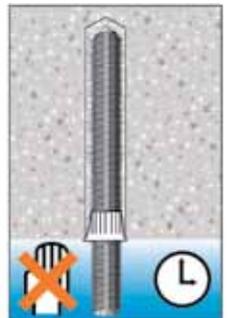
9. Insert correct retaining collar into hole, see page 107.



10. Slowly withdraw the nozzle as the hole fills with each trigger squeeze, while continuing to hold retaining collar against substrate. Use an extension tube for deep holes.



11. Once the required fill is obtained release pressure by pressing rear trigger and wipe off the excess material.



12. Still holding the retaining collar, push the stud into the hole using a slow twisting motion. Wipe away excess material.

13. Do not touch anchor until mixture has gelled and do not load anchor until curing is complete. See cartridge label or product information for curing times.



14. Attach fixture and tighten nut in accordance with recommended tightening torque.

Refer to Technical Data Sheet and MSDS available from www.ramset.com.au, for precautions and further detailed installation instructions

Stud Size	Hole Dia. (mm)	Hole Depth (mm)	Carbide Drill Bit	TRIGGER PULLS				
				ChemSet™ 101		ChemSet™ 801		ChemSet™ Reo502™
				380 ml	750 ml	380 ml	750 ml	750 ml
M8	10	80	DDR310100	1	1	1	1	1
M10	12	90	DDR312125	1	1	1	1	1
M12	14	110	DDR314200	1.5	1.5	1.5	1.5	1.5
M16	18	125	DQR318200	2.5	2	2	2	2
M20	24	150	DYSM24200	6	5	6	5	5
M24	26	160	DYSM26250	6	5	6	5	5

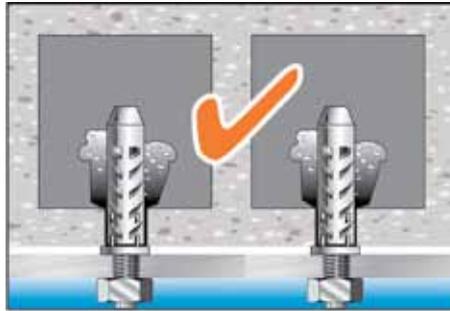


Hollow Block, Hollow Brick and Hollow Core Panels

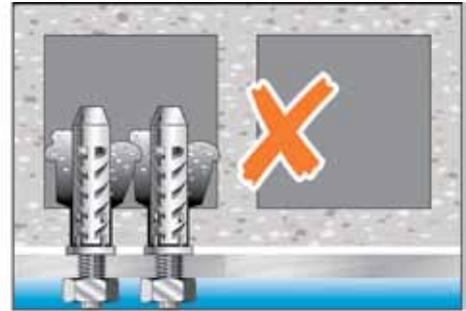
The following installation instructions are for ChemSet™ 101, Structaset™ 401 and Ultrafix™ Plus anchoring adhesives into hollow pre-manufactured masonry units.

Fixing positions Hollow Block

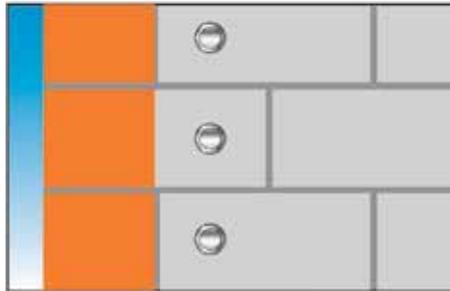
1. One fixing per block cavity only.
2. Minimum edge distance - ½ block



Correct installation

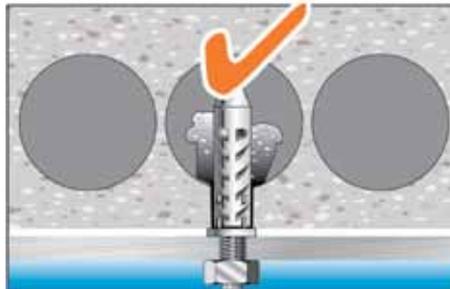


Incorrect installation - not recommended

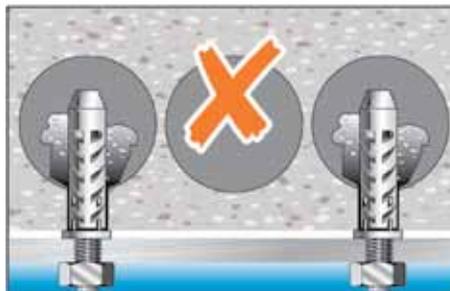


Do not fix in orange areas

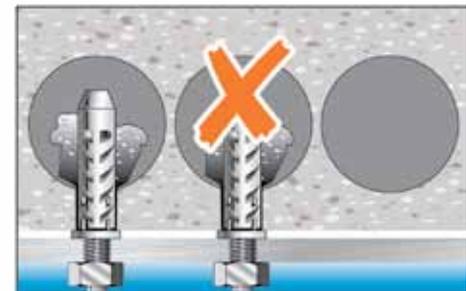
Fixing positions Hollow Brick



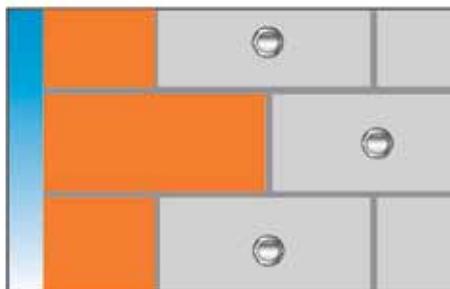
Correct installation



Performance will be significantly reduced



Incorrect installation - not recommended



Do not fix in orange areas

1. Only one fixing recommended per brick.
2. Minimum edge distance – 1 brick

Refer to Technical Data Sheet and MSDS available from www.ramset.com.au, for precautions and further detailed installation instructions

Installation Instructions:

Read the "Precautions" section of these instructions prior to use, see page 108.

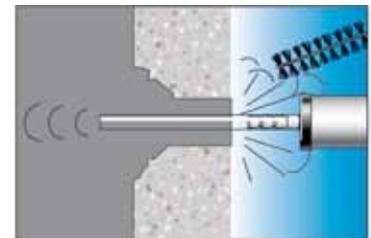
Setting and technical data provided applies to:

- Holes drilled with Rotary Hammers using drill bits toleranced in accordance with DIN8035, and where holes have been cleaned using a brush and air pump.
- Always wear safety goggles.

1. Drill hole using correctly sized drill bit through wall of hollow block or brick, see pack or product information

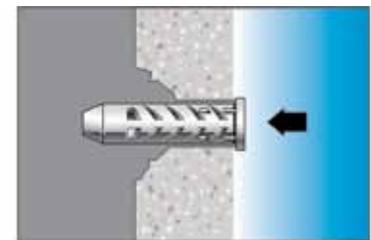


2. Clean hole with correctly sized hole cleaning brush with stiff nylon or wire bristles. Using a combination Push/Pull and twisting (rotation) motion, ensure the sides of the hole are scrubbed at least 3 times for the full depth of the hole.



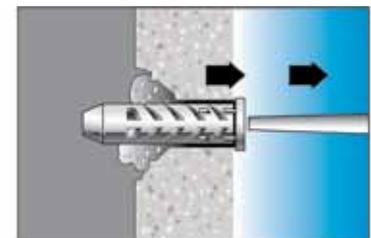
3. Hollow block studs, threaded studs or threaded rod to be used should be cleaned and free from oil, grease, flaking rust or debris.

4. Insert correct sleeve or sieve into hole, see page 105.



5. Remove nut from the cartridge and attach the correct Ramset mixing nozzle screw down tight. (Ultrafix™ Plus pull out and cut plastic bag)

6. Mount assembled cartridge into the Ramset Universal Applicator (Mount Ultrafix™ Plus in regular caulking gun).



7. Open the orange valve (Not necessary for Ultrafix™ Plus). Turn so arrow points forward. Dispense adhesive to waste until an even, uniform colour is achieved. Approximately 2-3 trigger pulls should be adequate. See pack or product information for correct colour. The initial flow is unsuitable for fastening and must not be used.

8. Inject adhesive until the sleeve/sieve is filled to $\frac{3}{4}$ of depth, slowly withdraw nozzle and complete filling.

9. Once the required fill is obtained release the pressure by pressing rear trigger and wipe off excess material.

10. Push the stud into the hole using a slow twisting motion. Wipe away excess material.

11. Do not touch anchor until mixture has gelled and do not load anchor until curing is complete

12. Attach fixture and tighten nut in accordance with recommended tightening torque.



Quantity of 750ml (Jumbo) Cartridges For Reinforcing Bar Anchoring

Estimating Charts

		Number of N10 Bars												
		20	30	40	50	60	70	80	90	100	125	150	175	200
Hole Diameter (mm)	Hole Depth (mm)	Number of 750 ml cartridges for various quantities of N10 bars												
14	60	1	1	1	1	1	1	1	1	1	1	1	2	2
	70	1	1	1	1	1	1	1	1	1	1	1	2	2
	90	1	1	1	1	1	1	1	1	1	2	2	2	2
	100	1	1	1	1	1	1	1	1	2	2	2	2	3
	110	1	1	1	1	1	1	1	2	2	2	2	2	3
	120	1	1	1	1	1	1	1	2	2	2	2	3	3
	140	1	1	1	1	1	2	2	2	2	2	3	3	3
	150	1	1	1	1	1	2	2	2	2	2	3	3	4
	160	1	1	1	1	1	2	2	2	2	3	3	3	4
	180	1	1	1	1	2	2	2	2	2	3	3	4	4
	230	1	1	1	2	2	2	2	3	3	3	4	5	5
	255	1	1	2	2	2	2	3	3	3	4	4	5	6
	275	1	1	2	2	2	2	3	3	3	4	5	5	6
	300	1	1	2	2	2	3	3	3	4	4	5	6	7
400	1	2	2	3	3	3	4	4	5	6	7	8	9	

		Number of N12 Bars												
		20	30	40	50	60	70	80	90	100	125	150	175	200
Hole Diameter (mm)	Hole Depth (mm)	Number of 750 ml cartridges for various quantities of N12 bars												
16	70	1	1	1	1	1	1	1	1	1	2	2	2	2
	80	1	1	1	1	1	1	1	1	1	2	2	2	2
	90	1	1	1	1	1	1	1	1	2	2	2	2	3
	100	1	1	1	1	1	1	1	2	2	2	2	3	3
	110	1	1	1	1	1	1	2	2	2	2	2	3	3
	125	1	1	1	1	1	2	2	2	2	2	3	3	4
	150	1	1	1	1	2	2	2	2	2	3	3	4	4
	200	1	1	1	2	2	2	2	3	3	4	4	5	5
	210	1	1	2	2	2	2	3	3	3	4	4	5	6
	235	1	1	2	2	2	2	3	3	3	4	5	5	6
	250	1	1	2	2	2	3	3	3	4	4	5	6	7
	270	1	1	2	2	2	3	3	3	4	5	5	6	7
	310	1	2	2	2	3	3	3	4	4	5	6	7	8
	335	1	2	2	3	3	3	4	4	5	6	7	8	9
	400	1	2	2	3	3	4	4	5	5	7	8	9	10
500	2	2	3	4	4	5	5	6	7	8	10	11	13	

		Number of N16 Bars												
		20	30	40	50	60	70	80	90	100	125	150	175	200
Hole Diameter (mm)	Hole Depth (mm)	Number of 750 ml cartridges for various quantities of N16 bars												
20	100	1	1	1	1	1	2	2	2	2	2	3	3	4
	125	1	1	1	1	2	2	2	2	2	3	3	4	4
	150	1	1	1	2	2	2	2	3	3	3	4	5	5
	175	1	1	2	2	2	2	3	3	3	4	5	5	6
	200	1	1	2	2	2	3	3	3	4	4	5	6	7
	225	1	2	2	2	3	3	3	4	4	5	6	7	7
	250	1	2	2	2	3	3	4	4	4	5	6	7	8
	270	1	2	2	3	3	3	4	4	5	6	7	8	9
	350	2	2	3	3	4	4	5	5	6	7	9	10	11
	450	2	3	3	4	5	5	6	7	7	9	11	13	14
	495	2	3	4	4	5	6	7	7	8	10	12	14	16
	600	2	3	4	5	6	7	8	9	10	12	14	17	19

Number of 380ml cartridges is approximately double 750ml quantity.
 Tables assume no waste other than amount contained in mixing nozzle.



Quantity of 750ml (Jumbo) Cartridges For Reinforcing Bar Anchoring

Hole Diameter (mm)	Hole Depth (mm)	Number of N20 Bars													
		20	30	40	50	60	70	80	90	100	125	150	175	200	
25	125	1	1	2	2	2	3	3	3	4	4	5	6	7	
	150	1	2	2	2	3	3	3	4	4	5	6	7	8	
	170	1	2	2	3	3	3	4	4	5	6	7	8	9	
	200	1	2	2	3	3	4	4	5	5	6	7	8	9	10
	225	2	2	3	3	4	4	5	5	6	7	8	9	10	11
	250	2	2	3	4	4	5	5	6	7	8	10	11	13	
	275	2	2	3	4	4	5	6	6	7	9	10	12	14	
	300	2	3	3	4	5	6	6	7	8	10	11	13	15	
	350	2	3	4	5	6	6	7	8	9	11	13	15	17	
	455	3	4	5	6	7	8	9	10	12	14	17	20	23	
	500	3	4	5	7	8	9	10	11	13	16	19	22	25	
	585	3	5	6	8	9	10	12	13	15	18	22	25	29	
	635	4	5	7	8	10	11	13	14	16	20	24	27	31	
700	4	6	7	9	11	12	14	16	17	22	26	30	34		

Hole Diameter (mm)	Hole Depth (mm)	Number of N24 Bars												
		10	20	30	40	50	60	70	80	90	125	150	175	200
30	150	1	2	2	3	3	4	4	5	5	7	8	10	11
	175	1	2	2	3	4	4	5	5	6	8	10	11	13
	210	1	2	3	3	4	5	6	6	7	10	11	13	15
	225	1	2	3	4	4	5	6	7	8	10	12	14	16
	250	1	2	3	4	5	6	7	7	8	11	14	16	18
	275	1	2	3	4	5	6	7	8	9	13	15	17	20
	300	2	3	4	5	6	7	8	9	10	14	16	19	21
	320	2	3	4	5	6	7	8	9	11	14	17	20	23
	335	2	3	4	5	6	8	9	10	11	15	18	21	24
	400	2	3	5	6	7	9	10	12	13	18	21	25	28
	480	2	4	6	7	9	11	12	14	16	21	26	30	34
	565	2	4	6	8	10	12	14	16	18	25	30	35	40
	740	3	6	8	11	13	16	19	21	24	33	39	46	52
	805	3	6	9	12	15	17	20	23	26	36	43	50	57
900	4	7	10	13	16	19	22	26	29	40	48	55	63	

Hole Diameter (mm)	Hole Depth (mm)	Number of N28 Bars												
		10	20	30	40	50	60	70	80	90	125	150	175	200
35	170	1	2	3	4	5	5	6	7	8	11	13	15	17
	200	1	2	3	4	5	6	7	8	9	12	15	17	19
	225	2	3	4	5	6	7	8	9	10	14	17	19	22
	250	2	3	4	5	6	8	9	10	11	15	18	21	24
	270	2	3	4	6	7	8	9	11	12	17	20	23	26
	300	2	3	5	6	8	9	10	12	13	18	22	25	29
	325	2	4	5	7	8	10	11	13	14	20	24	27	31
	350	2	4	5	7	9	10	12	14	15	21	25	30	34
	400	2	4	6	8	10	12	14	16	18	24	29	34	38
	500	3	5	8	10	12	15	17	19	22	30	36	42	48
	680	4	7	10	13	17	20	23	26	30	41	49	57	65
	780	4	8	12	15	19	23	26	30	34	47	56	65	74
	880	5	9	13	17	21	26	30	34	38	53	63	74	84
	960	5	10	14	19	23	28	32	37	41	57	69	80	92
1050	5	10	15	20	25	30	35	40	45	63	75	88	100	

Number of 380ml cartridges is approximately double 750ml quantity.
 Tables assume no waste other than amount contained in mixing nozzle.

Quantity of 750ml (Jumbo) Cartridges For Reinforcing Bar Anchoring

Estimating Charts

		Number of N32 Bars												
		5	10	15	20	25	30	50	70	90	125	150	175	200
Hole Diameter (mm)	Hole Depth (mm)	Number of 750 ml cartridges for various quantities of N32 bars												
40	210	1	2	2	3	4	4	7	10	12	17	20	23	27
	250	1	2	3	4	4	5	8	11	14	20	24	28	32
	275	1	2	3	4	5	6	9	12	16	22	26	30	35
	300	1	2	3	4	5	6	10	14	17	24	28	33	38
	325	2	3	4	5	6	7	11	15	19	26	31	36	41
	350	2	3	4	5	6	7	11	16	20	28	33	38	44
	375	2	3	4	5	6	7	12	17	21	30	35	41	47
	390	2	3	4	5	7	8	13	17	22	31	37	43	49
	450	2	3	5	6	7	9	14	20	26	35	42	49	56
	550	2	4	6	7	9	11	18	24	31	43	52	60	69
	680	3	5	7	9	11	13	22	30	38	53	64	74	85
	800	3	5	8	10	13	15	25	35	45	63	75	87	100
	1035	4	7	10	13	17	20	33	45	58	81	97	113	129
1130	4	8	11	15	18	22	36	50	64	88	106	123	141	
1250	4	8	12	16	20	24	39	55	70	97	117	136	156	

		Number of N36 Bars												
		5	10	15	20	25	30	50	70	90	125	150	175	200
Hole Diameter (mm)	Hole Depth (mm)	Number of 750 ml cartridges for various quantities of N36 bars												
45	225	1	2	3	4	5	6	9	13	16	22	27	31	36
	250	1	2	3	4	5	6	10	14	18	25	30	35	40
	275	2	3	4	5	6	7	11	16	20	27	33	38	43
	300	2	3	4	5	6	8	12	17	22	30	36	42	47
	330	2	3	4	6	7	8	13	19	24	33	39	46	52
	375	2	3	5	6	8	9	15	21	27	37	44	52	59
	400	2	4	5	7	8	10	16	22	29	40	47	55	63
	425	2	4	5	7	9	10	17	24	30	42	50	59	67
	430	2	4	6	7	9	11	17	24	31	43	51	59	68
	550	3	5	7	9	11	13	22	31	39	54	65	76	86
	650	3	6	8	11	13	16	26	36	46	64	77	89	102
	800	4	7	10	13	16	19	32	44	57	79	94	110	126
	920	4	8	11	15	18	22	36	51	65	90	108	126	144
	1190	5	10	14	19	24	28	47	66	84	117	140	163	186
	1300	6	11	16	21	26	31	51	72	92	127	153	178	204
1400	6	11	17	22	28	33	55	77	99	137	165	192	219	

		Number of N40 Bars												
		4	6	8	10	25	30	50	70	90	125	150	175	200
Hole Diameter (mm)	Hole Depth (mm)	Number of 750 ml cartridges for various quantities of N40 bars												
50	225	1	2	2	3	6	7	11	16	20	28	33	38	44
	250	1	2	2	3	7	8	13	17	22	31	37	43	49
	275	2	2	3	3	7	8	14	19	24	34	40	47	54
	300	2	2	3	3	8	9	15	21	27	37	44	51	58
	360	2	3	3	4	9	11	18	25	32	44	53	61	70
	400	2	3	4	4	10	12	20	27	35	49	58	68	78
	425	2	3	4	5	11	13	21	29	37	52	62	72	82
	450	2	3	4	5	11	14	22	31	40	55	66	76	87
	500	2	3	4	5	13	15	25	34	44	61	73	85	97
	650	3	4	6	7	16	19	32	44	57	79	94	110	126
	800	4	5	7	8	20	24	39	54	70	97	116	135	155
	950	4	6	8	10	23	28	46	65	83	115	138	161	184
	1045	5	7	9	11	26	31	51	71	91	126	152	177	202
	1355	6	8	11	14	33	40	66	92	118	164	196	229	262
	1475	6	9	12	15	36	43	72	100	128	178	214	249	285
	1550	6	9	12	15	38	45	75	105	135	187	225	262	299

Number of 380ml cartridges is approximately double 750ml quantity.
 Tables assume no waste other than amount contained in mixing nozzle.



Quantity of Cartridges for ChemSet™ 101 and Structaset™ 401 with ChemSet™ Anchor Studs at Standard Embedment Depths

Stud Size x Depth	Cartridge Size	Number of Fixings																								
		10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250
M8 80 mm	750 ml	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2
	380 ml	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3
M10 90 mm	750 ml	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	3	3	3	3	4	4	4
	380 ml	1	1	1	1	1	1	2	2	2	2	2	2	3	3	3	3	3	3	4	4	4	4	4	4	4
M12 110 mm	750 ml	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3
	380 ml	1	1	1	1	2	2	2	3	3	3	3	4	4	4	4	4	5	5	5	5	5	6	6	6	6
M16 125 mm	750 ml	1	1	1	1	1	2	2	2	2	2	2	3	3	3	3	3	4	4	4	4	4	4	4	5	5
	380 ml	1	1	2	2	2	3	3	3	4	4	5	5	5	6	6	6	7	7	7	7	8	8	9	9	9
M20 150 mm	750 ml	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	9	9	10	10	10	11	11
	380 ml	1	2	3	4	5	6	7	8	9	10	11	11	12	13	14	15	16	17	18	19	20	21	21	22	23
M24 160 mm	750 ml	1	1	2	2	3	3	3	4	4	5	5	6	6	6	7	7	8	8	8	9	9	10	10	11	11
	380 ml	1	2	3	4	5	6	6	7	8	9	10	11	11	12	13	14	15	16	17	17	18	19	20	21	22

Quantity of cartridges for ChemSet™ 801 and ChemSet™ Reo 502™ with ChemSet™ Anchor Studs at Standard Embedment Depths

Stud Size x Depth	Cartridge Size	Number of Fixings																								
		10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250
M8 80 mm	750 ml	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2
	380 ml	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3
M10 90 mm	750 ml	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	3	3	3	3	4	4	4
	380 ml	1	1	1	1	1	1	2	2	2	2	2	2	3	3	3	3	3	3	4	4	4	4	4	4	5
M12 110 mm	750 ml	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3
	380 ml	1	1	1	1	2	2	2	3	3	3	3	4	4	4	4	4	5	5	5	5	5	6	6	6	7
M16 125 mm	750 ml	1	1	1	1	1	2	2	2	2	2	3	3	3	3	3	3	4	4	4	4	4	4	5	5	5
	380 ml	1	1	2	2	2	3	3	4	4	4	5	5	6	6	6	7	7	8	8	8	9	9	9	10	10
M20 150 mm	750 ml	1	1	2	2	3	3	4	4	5	5	6	6	6	7	7	8	8	9	9	10	10	11	11	11	12
	380 ml	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
M24 160 mm	750 ml	1	1	2	2	3	3	3	4	4	5	5	6	6	6	7	7	8	8	9	9	9	10	10	11	11
	380 ml	1	2	3	4	5	6	7	8	9	9	10	11	12	13	14	15	16	17	18	18	19	20	21	22	23

Quantity of Structaset™ 401 380ml Cartridges with Threaded Inserts

Thread	Drill Depth	Number of Fixings																								
		10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250
M8	65	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	4	
M10	70	1	1	1	2	2	2	3	3	3	4	4	4	5	5	5	6	6	6	7	7	7	8	8	9	
M12	80	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	10	11	11	12	12
M16	130	2	3	4	5	7	8	9	10	12	13	14	15	17	18	19	20	22	23	24	25	27	28	29	30	32
M20	175	3	5	8	10	13	15	18	20	23	25	28	30	33	35	38	40	43	45	48	50	53	55	58	60	63

Tables assume no waste other than amount contained in mixing nozzle.



Ramset™



Construction Chemicals



Welcome to the range of Ramset™ Construction Chemicals products. Ramset™ supply a quality range of popular construction Sealants, Adhesives, Grouts, Expanding Foams and Concrete additives for all building trades.

Ramset™ keep up to date with the latest environmental, health and safety trends, including Green Star, and provide VOC certificates for all Construction Chemical products. Ramset™ specialise in Fire Rated products and provide extensive fire rated sealant design information to assist compliance with increasingly stringent fire rating standards.

In summary, Ramset™ Construction Chemical products can be used with confidence that they comply with building standards, health and safety regulations, resulting in speedier inspections and sign off.



Sealant Estimating Charts	120
Joint Design Guide	121
Selection Guide	122
Grout Estimating Charts	123



Sealants **124**

- BlazeBrake™ Sealant – Fire Rated Acrylic
- FyreBrake™ Sealant – Fire Rated Polyurethane
- Gap Seal – Paintable Acrylic Gap Sealant
- Duct Seal – Sheet Metal Duct Sealant
- DynaSeal™ – Acrylic Construction Sealant
- HiSeal™ – Polyurethane Construction Sealant
- Water Seal – Sanitary Grade Construction Sealant
- Roof Seal – Neutral Cure Construction Sealant

Adhesives **134**

- NailFree™ – Construction Adhesive
- Safe-T-Bond™ – Construction Adhesive

Self-Expanding Foams **136**

- BlazeBrake™ Foam – Fire Rated Self-Expanding Polyurethane
- FomoFill™ – Straw Applied Self-Expanding Polyurethane Foam
- FomoPlus™ – Gun Applied Self-Expanding Polyurethane Foam

Additives **140**

- Cemcrete™ – Polymer Bonding & Sealing Agent
- Concrebond™ - Acrylic Bonding & Sealing Agent

Grouts **142**

- Premier Grout MP™ – Class A Non-Shrink Cement Grout
- Epoxy Grout – 2 Part Grouting Epoxy

Concrete Patch & Repair **146**

- Epoxy Patch – 2 Part Bonding & Patching Agent
- Epoxy Putty – 2 Part Repair Putty
- Ultrafix™ Concremate™ - Non-Shrink Patching Cement

Accessories **150**

Sealant Estimating Chart

Lineal Metres per 960 g (600ml) Sachet (Approx)

Joint Depth (mm)	Nominal Joint Width (mm)							
	6	8	10	12	15	20	25	50
6	16.6	--	--	--	--	--	--	--
8	x	9.4	--	--	--	--	--	--
10	x	x	6.0	5.0	4.0	3.0	-	-
12.5	x	x	x	x	x	x	1.9	--
25	x	x	x	x	x	x	x	0.5

Lineal Metres per 450 g (300ml) Cartridge (Approx)

Joint Depth (mm)	Nominal Joint Width (mm)							
	6	8	10	12	15	20	25	50
6	8.3	--	--	--	--	--	--	--
8	x	4.7	--	--	--	--	--	--
10	x	x	3.0	2.5	2.0	1.5	--	--
12.5	x	x	x	x	x	x	1.0	--
25	x	x	x	x	x	x	x	0.3

Coverage based on nominal dimensions

"--" Shallow joint. Risk of sealant tearing. Make joint deeper.

"x" Joint depth > width. Risk of sealant tearing. Adjust depth with backing rod.

Refer next page for correct joint design details.

Quantity of 300 ml cartridges required

Lineal Metres

Joint Width (mm)	Joint Depth (mm)	Lineal Metres								
		1	5	10	20	30	40	50	75	100
6	6	1	1	2	3	4	5	6	9	12
8	8	1	2	3	5	7	9	11	16	22
10	10	1	2	4	7	10	14	17	25	34
12	10	1	2	4	8	12	16	20	30	40
15	10	1	3	5	10	15	20	25	38	50
20	10	1	4	7	14	20	27	34	50	67
25	12.5	2	6	11	21	32	42	53	79	105
50	25	5	21	42	84	125	167	209	313	417

Quantity of 600 ml sausages required

Lineal Metres

Joint Width (mm)	Joint Depth (mm)	Lineal Metres								
		1	5	10	20	30	40	50	75	100
6	6	1	1	1	2	2	3	3	5	6
8	8	1	1	2	3	4	5	6	8	11
10	10	1	1	2	4	5	7	9	13	17
12	10	1	1	2	4	6	8	10	15	20
15	10	1	2	3	5	8	10	13	19	25
20	10	1	2	4	7	10	14	17	25	34
25	12.5	1	3	6	11	16	21	27	40	53
50	25	3	11	21	42	63	84	105	157	209

Joint Configuration & Design

Configuring joints in concrete structures for optimum sealant performance

General Details

Movement of joints in concrete structures is caused by:

- Changes in Temperature (Opening and Closing)
- Concrete Shrinkage (Opening)
- Concrete Creep (Closing)

The factors that cause joints to open are the most significant when optimising joint design for sealants.

Because joints move, sealants must be elastic and flexible to avoid splitting, tearing and loss of adhesion.

A sealant's flexibility is defined by its strain capacity, expressed as a percentage change in nominal joint width.

Sealant	Description	Strain Capacity
HiSeal™	1-Part Polyurethane Construction Sealant	± 25%
FyreBrake™	1-Part Polyurethane Fire Rated Sealant	± 25%
Roof Seal	1-Part Neutral Cure Silicone Roofing Sealant	± 25%
Joint Seal	1-Part Neutral Cure Silicone Construction Sealant	± 25%
Glass Seal	1-Part Acetic Cure Silicone Glazing Sealant	± 25%
Water Seal	1-Part Acetic Cure Silicone Mould Resistant Sealant	± 25%
BlazeBrake™	1-Part Fire and Acoustic Rated Acrylic Sealant	± 15%
DynaSeal™	1-Part Urethane-Acrylic Construction Sealant	± 20%
Gap Seal	1-Part Acrylic Painters Sealant	± 6%

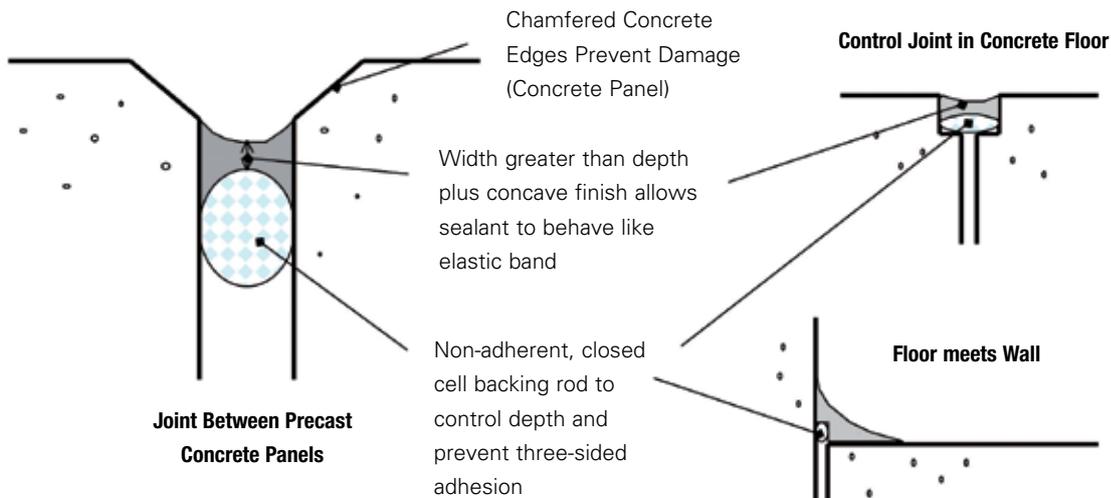
Joint Configuration

The shape of the sealant within a joint influences its ability to stretch with movement.

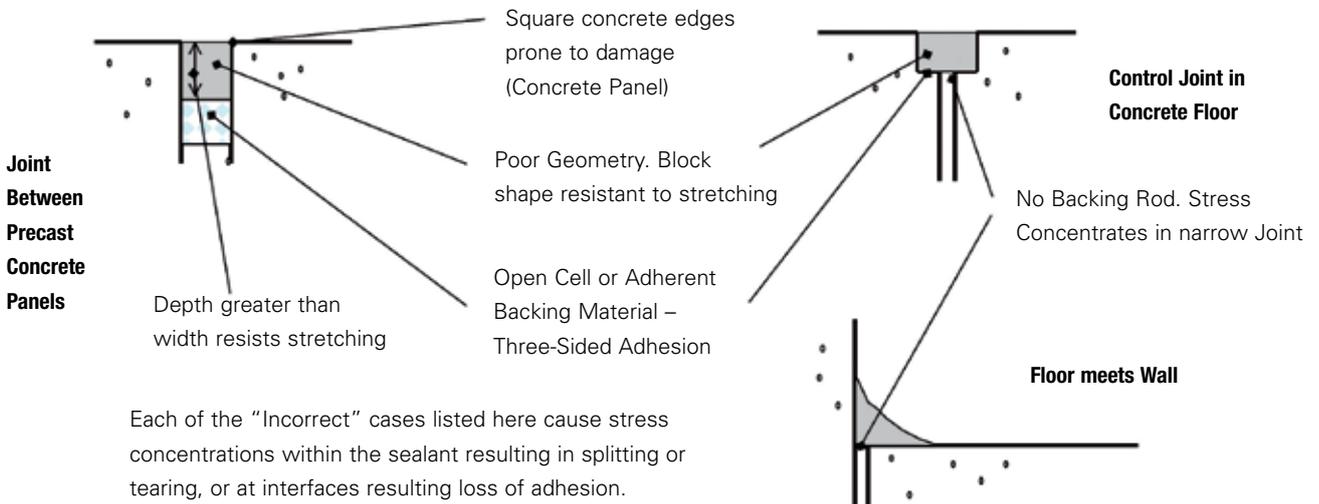
Correct Width to Depth Ratio

Joint Width	Joint Depth
6mm to 10mm	Equal to joint Width
10mm to 20mm	10mm
20mm to 50mm	Equal to 1/2 joint Width

CORRECT Joint Configuration



INCORRECT Joint Configuration



Sealant and adhesive selector guide

Selection Guide

Product	Recommended Substrates											Properties									
	Brick	Concrete	Plasterboard	Timber	Glass	Cement Sheet	Polystyrene Foam	MDF	Steel	Galvanised Steel	Aluminium	Particle Board	Flexible	Water Resistant	Immersion	Heat Resistant	Fire Rated	Low VOC	Paintable	Water Clean Up	Exterior Use
BlazeBrake™	✓	✓	✓	✓		✓	✓					Yes				Yes	Yes	Yes	Yes	SC*	Acrylic
BlazeBrake™ Foam	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		Yes			Yes		Yes		SC*	Polyurethane
Duct Seal™									✓	✓							Yes	Yes	Yes		Acrylic
DynaSeal™	✓	✓	✓	✓		✓	✓	✓			✓	Yes					Yes	Yes	Yes	SC*	Acrylic
FomoFill™	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		Yes					Yes		SC*	Polyurethane
FomoPlus™	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		Yes					Yes		SC*	Polyurethane
FyreBrake™	✓	✓	✓			✓	✓		✓	✓	✓	Yes	Yes			Yes	Yes	Yes		Yes	Polyurethane
Gap Seal	✓	✓	✓	✓		✓	✓				✓						Yes	Yes	Yes		Acrylic
HiSeal™	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	Yes	Yes				Yes	Yes		Yes	Polyurethane
Roof Seal	✓	✓	✓	✓		✓	✓		✓	✓	✓	Yes	Yes	Yes	Yes		Yes			Yes	Silicone
Water Seal			✓	✓	✓	✓						Yes	Yes	Yes	Yes		Yes			Yes	Silicone
Adhesives																					
Nail Free™	✓	✓	✓	✓		✓		✓	✓	✓	✓		Yes					Yes		Yes	Synthetic Rubber
Safe T Bond™		✓	✓	✓		✓	✓	✓	✓	✓	✓						Yes	Yes	Yes		Acrylic

*SC = Special conditions; see product page for more details

Grout and concrete repair selector guide

Product	Grouting	Patching	Repair	Bonding	Sealing	Cavity Fill	Exterior Use	Low VOC	Chemical Type
Premier Grout MP™	✓					✓	Yes	Yes	Cement
Epoxy Grout	✓					✓	Yes	Yes	Epoxy
UltraFix™ Concremate™		✓	✓			✓	Yes	Yes	Cement
Epoxy Patch		✓	✓	✓	✓	✓	Yes	Yes	Epoxy
Epoxy Putty		✓	✓	✓	✓	✓	Yes	Yes	Epoxy
Cemcrete™			✓	✓	✓		Yes	Yes	Resin
Concrebond™			✓	✓	✓		Yes	Yes	Acrylic



Estimating chart for grouting in hollow sections into core drilled holes for posts, bollards etc

Litres of Grout for Core Drilled Holes in Concrete																
Core Diameter (mm)	Hole Depth (mm)															
	100	140	160	180	190	200	210	220	230	240	250	260	270	280	290	300
66	0.4	0.5	0.6	0.7	0.7	0.7	0.8	0.8	0.8	0.9	0.9	0.9	1.0	1.0	1.0	1.1
76	0.5	0.7	0.8	0.9	0.9	1.0	1.0	1.0	1.1	1.1	1.2	1.2	1.3	1.3	1.4	1.4
82	0.6	0.8	0.9	1.0	1.1	1.1	1.2	1.2	1.3	1.3	1.4	1.4	1.5	1.5	1.6	1.6
91	0.7	1.0	1.1	1.2	1.3	1.4	1.4	1.5	1.5	1.6	1.7	1.7	1.8	1.9	1.9	2.0
101	0.9	1.2	1.3	1.5	1.6	1.7	1.7	1.8	1.9	2.0	2.1	2.1	2.2	2.3	2.4	2.5
116	1.1	1.5	1.7	2.0	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	3.0	3.1	3.2
126	1.3	1.8	2.0	2.3	2.4	2.5	2.7	2.8	2.9	3.0	3.2	3.3	3.4	3.5	3.7	3.8
131	1.4	1.9	2.2	2.5	2.6	2.7	2.9	3.0	3.1	3.3	3.4	3.6	3.7	3.8	4.0	4.1
151	1.8	2.6	2.9	3.3	3.5	3.6	3.8	4.0	4.2	4.3	4.5	4.7	4.9	5.1	5.2	5.4

Estimating chart for grouting into cavities for underpinning

Litres of Grout Required for Rectangular Cavities																	
Width (mm)	Length (mm)	Hole Depth (mm)															
		150	160	170	180	190	200	220	240	260	280	300	320	340	360	380	400
100	1000	15	16	17	18	19	20	22	24	26	28	30	32	34	36	38	40
200	1000	30	32	34	36	38	40	44	48	52	56	60	64	68	72	76	80
300	1000	45	48	51	54	57	60	66	72	78	84	90	96	102	108	114	120
400	1000	60	64	68	72	76	80	88	96	104	112	120	128	136	144	152	160
500	1000	75	80	85	90	95	100	110	120	130	140	150	160	170	180	190	200
600	1000	90	96	102	108	114	120	132	144	156	168	180	192	204	216	228	240
700	1000	105	112	119	126	133	140	154	168	182	196	210	224	238	252	266	280
800	1000	120	128	136	144	152	160	176	192	208	224	240	256	272	288	304	320
900	1000	135	144	153	162	171	180	198	216	234	252	270	288	306	324	342	360

Estimating chart for grouting in square solid or capped hollow sections into core drilled holes for posts, bollards etc

Litres of Grout for Core Drilled Holes in Concrete																	
Core Diameter (mm)	Post (mm)	Hole Depth (mm)															
		100	140	160	180	190	200	210	220	230	240	250	260	270	280	290	300
66	50	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
76	50	0.3	0.3	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.7
82	50	0.3	0.4	0.5	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.9	0.9
91	50	0.5	0.6	0.7	0.8	0.8	0.9	0.9	0.9	1.0	1.0	1.1	1.1	1.1	1.2	1.2	1.3
101	50	0.6	0.8	0.9	1.0	1.1	1.2	1.2	1.3	1.3	1.4	1.4	1.5	1.5	1.6	1.6	1.7
116	100	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
126	100	0.3	0.4	0.4	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.8	0.8
131	100	0.4	0.5	0.6	0.7	0.7	0.7	0.8	0.8	0.8	0.9	0.9	1.0	1.0	1.0	1.1	1.1
151	100	0.8	1.2	1.3	1.5	1.6	1.6	1.7	1.8	1.9	1.9	2.0	2.1	2.2	2.3	2.3	2.4



Key Features

- Complies to AS1530.4
- Fire rating of up to 4 hours
- Fire rated to suit:
 - concrete joint widths 10 mm to 80 mm
 - copper pipe up to 80 mm dia.(nominal)
 - multiple small copper pipes
 - cable bundles
 - concrete floor & walls
 - plasterboard FR walls
- Acoustic rating

Description

BlazeBrake™ 201 is a highly flexible fire rated and acoustic acrylic sealant, suitable for interior and exterior sealing of concrete joints, cable, metal pipe and service penetrations. Prevents the spread of flames, smoke and gases through walls and floors or between building compartments.

Typical Properties

Colour	Grey
Chemical Type	Acrylic co-polymer
Service Temperature	-20°C to + 90°C
Specific Gravity (Density)	Wet 1.6 Kg / L Dry 1.8 Kg / L
Application Temperature	+5°C to + 35°C
Tool Working Time	15 minutes at 25°C
Max. Joint Movement	± 15%
Max. Joint Width	50mm
Full Cure	7 days at 25°C
	Rain resistant after 24 hours
Acoustic Rating	Rw 56
VOC	17 g / ml
Fire Rating	Up to 4 hours
Substrates	Concrete, Brickwork, Concrete Blockwork, FR Plaster Board, Fibre Cement Sheet

Related Products

BlazeBrake™ Foam - Fire Rated Self Expanding Polyurethane
 FyreBrake™ Sealant - Fire Rated Polyurethane
 Caulking Gun / Sausage Barrel Gun
 Backing Rod



Features & Benefits

- Flexible and crack resistant
- Joint movement ± 15%
- Suitable for exterior use (see precautions)
- Easy to dispense in cold weather.
- Non toxic. Low odour. Easy tooling
- Water clean up. Sag resistant
- Not HAZARDOUS – no isocyanates, no heavy metals, no solvents and no asbestos
- Low VOC
- Paintable with acrylic coatings and oil-based coatings after 24 hours at 20°C.

BlazeBrake™ Sealant

Order No.	Pack Size	Order Qty
BLBRGYC	300ml/450g cartridge	1
BLBRGYS	600ml/960g sausage	1



Trades & Applications

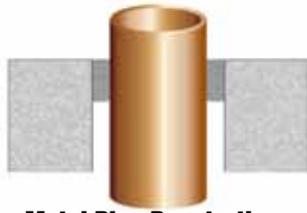
	Builder	Plumbing Contractor	Electrical Contractor	Mechanical Services	Passive Fire Specialist	Maintenance Services
Precast and tiltup concrete walls	✓	✓	✓	✓	✓	✓
Concrete ceilings & floors	✓	✓	✓	✓	✓	✓
Metal pipe penetrations	✓	✓		✓	✓	✓
Cable penetrations			✓	✓	✓	✓
Plasterboard FR wall	✓	✓	✓	✓	✓	✓

Installation

Consult technical data for tested applications and fire ratings, before commencing use. For detailed technical data and instructions go to www.ramset.com.au. For applications outside those tested, refer to your Fire Consultant for compliance advice. Fire Rating Certificates Available on Request. Refer to BRANZ Fire Test Certificates 439, 440 and 441.

Cable and Metal Pipe Penetrations

Up to 4 hours Fire Rating in Concrete Floor



Metal Pipe Penetration

- BlazeBrake™ Acrylic Sealant
- Copper pipe up to 80mm (nom)
- Copper pipe 200mm (nom)



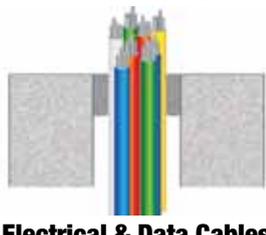
Metal Pipe Penetration

- BlazeBrake™ Acrylic Sealant
- Multiple copper pipes - 3 x 20mm (nom)



Metal Pipe Penetration

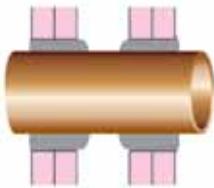
- BlazeBrake™ Foam with or without Acrylic Sealant
- Steel pipe 34mm (nom)



Electrical & Data Cables

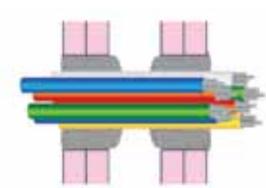
- BlazeBrake™ Acrylic Sealant
- Cable bundle - 65mm diam. (max)

Up to 2 hours Fire Rating in Plasterboard FR Wall



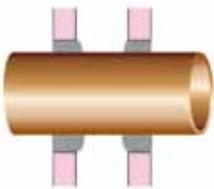
2hr Metal Pipe Penetration

- BlazeBrake™ Acrylic Sealant
- Copper pipe up to 80mm (nom)
- FR wall thickness 26mm



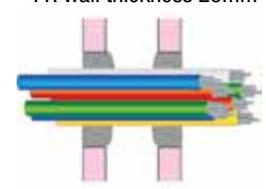
2hr Cable Penetration

- BlazeBrake™ Acrylic Sealant
- Electrical and data cable bundle 65mm diam. (max)
- FR wall thickness 26mm



1hr Metal Pipe Penetration

- BlazeBrake™ Acrylic Sealant
- Copper pipe up to 80mm (nom)
- FR wall thickness 16mm



1hr Cable Penetration

- BlazeBrake™ Acrylic Sealant
- Electrical and data cable bundle 65mm diam. (max)
- FR wall thickness 16mm

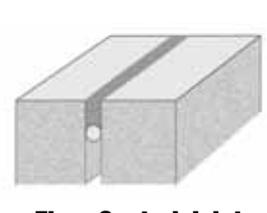
Sealing of Joints and Cavities

Up to 4 hours Fire Rating in Concrete Floor/Wall



Vertical Joints (up to 80mm)

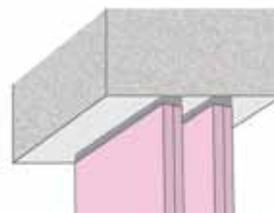
- BlazeBrake™ Foam with or without Acrylic Sealant
- Joint width from 10 to 80mm
- Joint depth from 100 to 200mm



Floor Control Joint

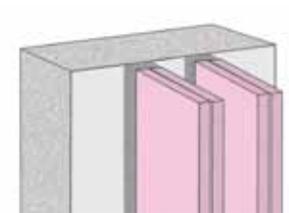
- BlazeBrake™ Acrylic Sealant
- Joint width 25mm
- Sealant depth 12mm with foam backer rod

Up to 2 hours Fire Rating in Plasterboard FR Wall



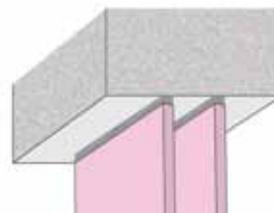
2hr Deflection Head

- BlazeBrake™ Acrylic Sealant
- Joint width 20mm
- FR wall thickness 26mm



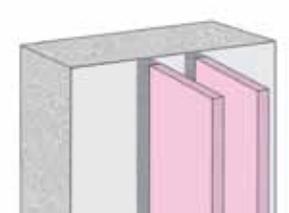
2hr Intersection / Masonry

- BlazeBrake™ Acrylic Sealant
- Joint width 15mm
- FR wall thickness 26mm



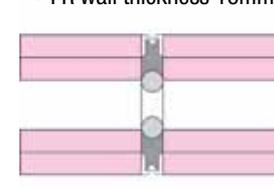
1hr Deflection Head

- BlazeBrake™ Acrylic Sealant
- Joint width 20mm
- FR wall thickness 16mm



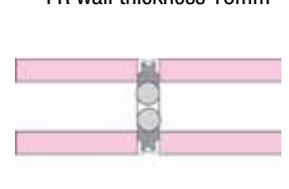
1hr Intersection / Masonry

- BlazeBrake™ Acrylic Sealant
- Joint width 15mm
- FR wall thickness 16mm



2hr Control Joint

- BlazeBrake™ Acrylic Sealant
- Joint width 20mm
- FR wall thickness 26mm
- Rondo® P35 control joint



1hr Control Joint

- BlazeBrake™ Acrylic Sealant
- Joint width 20mm
- FR wall thickness 16mm
- Rondo® P35 control joint



Key Features

- Complies to AS1530.4
- Fire rating of up to 4 hours
- High joint movement $\pm 25\%$
- Acoustic 5 star rating (AAAC)
- Meets BCA acoustic requirements

Description

FyreBrake™ is a high performance, 100% polyurethane construction sealant, which does not shrink, dry out or crack. FyreBrake™ is fire and acoustic rated for sealing residential and office partitions, concrete block, tilt-up and precast concrete.

Typical Properties

Typical properties after 7 days cure at 25°C and 50% RH

Appearance	Grey, Non sag smooth thixotropic paste
Chemical Type	Polyurethane
Specific Gravity	1.6
Sag ASTM C639	None
Application Temperature	+4°C to + 40°C
Tool Working Time	2 – 4 hours @ 24°C, 50% RH
Cure Rate	2 mm per 24 hour period Full cure within 7 days
Max. Joint Movement	$\pm 25\%$
Max. Joint Width	50mm
Elongation at Break ASTM D412	500%
Cure Hardness ASTM C661	Shore A 47
Peel Adhesion ASTM C794	67 N
Max Tensile Strength ASTM D412	2.24 N/mm ²
Service Temperature	-40°C to + 93°C
Water Resistance AAMA 800	Passes
VOC	20 gram / litre
Acoustic Rating	Up to Rw (STC) = 60 Rw + C _{TR} = 52

Substrates Plasterboard, Fibre Cement Sheet, Solid Concrete, Brick, Concrete Block, Aluminium Steel



Features & Benefits

- VOC Rated
- UV and Weather Resistant. No sagging or running
- Easy to dispense in cold weather
- Strong adhesion. Excellent flexibility – joint movement $\pm 25\%$
- Non-corrosive neutral cure
- Paintable with acrylic based surface coatings
- Complies with:
 - TT-S-00230 C (Type II) Class A, Non-sag, One component
 - ASTM C920 Type S, Grade NS, Class 25, Use-NT, Use-A, Use-M, Use-G, Use-O
 - AAMA 808.3-92

Related Products

BlazeBrake™ Foam - Fire Rated Self Expanding Polyurethane
 BlazeBrake™ Sealant - Fire Rated (450g or 960g)
 Caulking Gun / Sausage Barrel Gun
 Backing Rod

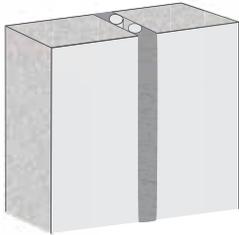
Trades & Applications

	Builder	Ceiling & Partitioning Contractor	Window & Door Installers	Passive Fire Specialist	Maintenance Services
Precast and tiltup concrete walls	✓		✓	✓	✓
Concrete ceilings & floors	✓	✓		✓	✓
Plasterboard FR wall	✓	✓	✓	✓	✓

Installation

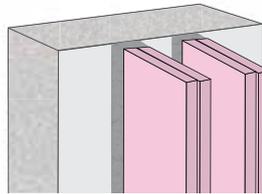
Consult technical data for tested applications and fire ratings, before commencing use. For detailed technical data and instructions go to www.ramset.com.au. For applications outside those tested, refer to your Fire Consultant for compliance advice. Fire Rating Certificates Available on Request. Refer to (CSIRO Test Reports FS1202 & FS1203)

Sealing of Joints and Cavities - in Concrete Floor/Wall



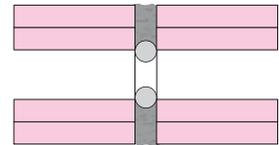
Up to 4 hours Fire Rating Vertical Joints (2 Sides Sealed)

- FyreBrake™ Sealant with backer rod
- Joint width up to 20mm
- Joint depth 10mm



Up to 2 hours Fire Rating Plasterboard / Masonry (2 Sides Sealed)

- FyreBrake™ Sealant
- Double wall
- Joint width up to 20mm



Up to 2 hours Fire Rating Plasterboard / Plasterboard (2 Sides Sealed)

- FyreBrake™ Sealant with backer rod
- Double wall
- Joint width up to 20mm

Acoustic Installation

The following detail was extracted from Graeme E. Harding & Associates Report 056-202, available from Ramset™ or the website.

Wall Construction

Frame: Rondo 92 mm wide floor, edge and head channels. Rondo 92 mm wide vertical channels at 600 mm spacings.

Cavity Insulation: 60 mm thick Bradford Soundscreen R1.6 Rockwool Partition Batts

Cladding - Transmission Side: 2 layers of 13 mm Boral fire rated plasterboard installed horizontally with nominal 10 mm gap top and bottom and 5 mm gap on each side. Sheets of outer layer staggered to cover joints between sheets in inner layer. Joints were not taped or set.

Cladding - Receiving Side: 3 layers of 13 mm Boral fire rated plasterboard installed horizontally with nominal 10 mm gap top and bottom and 5 mm gap on each side. Sheets of outer layers staggered to cover joints between sheets in inner layers. Joints were not taped or set.

Ramset™ Fyrebrake™ sealant was installed in the perimeter gaps after measuring sound insulation of the uncaulked wall.

Total Mass: 54.6 kg / m² Total Thickness: 157 mm

Test Results

	Rw (dB)	Ctr (dB)	Rw + Ctr (dB)
Uncaulked Wall	24	0	24
Wall caulked with Fyrebrake™ Sealant	60	-8	52

The wall was designed to achieve an $R_w = 58 + 2$ dB. The test demonstrated that using Ramset™ Fyrebrake™ sealant in the perimeter gaps enabled the wall's full design insulation to be achieved.

FyreBrake™ Sealant

Part No.	Colour	Volume	Order Qty
FYBRGYS	Grey	960g Sausage	1

Gap Seal

Paintable Acrylic Gap Sealant



Ramset™

Sealants



Description

Gap Seal paintable acrylic sealant is flexible to resist cracking when used to seal gaps and cracks prior to painting. Gap Seal provides a neat and tidy finish around architraves, skirtings, chair and picture rails and is paintable with acrylic and oil based surface coatings.

Typical Properties

Appearance	White, non-sag smooth thixotropic paste
Chemical Type	Water-based Acrylic
Service Temperature	-10°C to + 80°C
Application Temperature	+5°C to + 35°C
Tool Working Time	15 minutes at 20°C
Max. Joint Movement	± 5%
Max. Joint Width	50mm
Elongation at Break ASTM D412	400%
Cure Rate	2mm per 24 hour period
Cure Hardness	Shore D 50
Skinning Time	30 minutes @ 20°C
Paintable	Acrylic and Vinyl paints – 30 minutes at 20°C Oil based paints – 24 hours
Substrates	Plasterboard, MDF, Plywood, Ceramic Tiles, Laminated Plastics, Timber, Fibre cement, Concrete & Brick

Flexibility	Low	Low VOC	Yes
Water Resistance	Low	Paintable	Yes
Water Immersion	No	Water Clean Up	Yes
Heat Resistant	No	Exterior Use	No
Fire Rated	No	UV Resistant	No

Features & Benefits

- Resists cracking - flexible
- Paintable
- User Friendly – clean up with water
- User Friendly – low odour
- Easy to use – sag resistant
- Low VOC

Trades & Applications

	Ceiling & Partitioning	Shop Fitter	Painter
Sealing Partition Joints	✓		✓
Sealing Joinery		✓	✓

Related Products

Caulking Gun

Installation

1. Ensure surfaces are clean and dry
2. For best results mask around gap to be filled
3. Dispense Gap Seal sealant into gap or joint with continuous trigger pressure
4. Tool sealant to create a neat finish
5. Remove masking tape before Gap Seal Skins
6. Clean up Gap Seal with a damp cloth before it dries.

Refer to Technical Data Sheet and MSDS available from www.ramset.com.au, for precautions and further detailed installation instructions

Gap Seal

Part No.	Colour	Volume	Order Qty
GPSLWHG450	White	300mL Cartridge	20



Description

Duct Seal is tough and flexible to prevent air leakage when used to seal lap joints in sheet metal ductwork. It is made from low odour water borne acrylic polymer for easy clean up and user comfort.

Typical Properties

Appearance	White, smooth thixotropic paste
Chemical Type	Water-based Acrylic
Service Temperature	-10°C to + 80°C
Application Temperature	+5°C to + 35°C
Paintable	Acrylic and Vinyl paints – 30 minutes at 20°C Oil based paints – 24 hours
Substrates	Galvanised Steel

Flexibility	Low	Low VOC	Yes
Water Resistance	Low	Paintable	Yes
Water Immersion	No	Water Clean Up	Yes
Heat Resistant	No	Exterior Use	No
Fire Rated	No	UV Resistant	No



Sealants

Features & Benefits

- Flexible and tough – resists blow-out
- Paintable
- Solvent Free
 - Low Odour
 - Not flammable
 - Clean up with water
 - Zero VOC

Trades & Applications

	Mechanical Services
Sealing Duct Work	✓

Related Products

Caulking Gun

Installation

1. Ensure surfaces are clean and dry
2. Dispense Duct Seal onto one surface and assemble components.
3. Drill and rivet lap joint as required
4. Protect from contact with water for at least 12 hours
5. Pressure test after 48 hours at 20°C. Longer in low temperatures or high humidity.

Refer to Technical Data Sheet and MSDS available from www.ramset.com.au, for precautions and further detailed installation instructions

Duct Seal

Part No.	Colour	Volume	Order Qty
DSLWG450	Grey	300mL Cartridge	20



Description

DynaSeal™ is a flexible acrylic/urethane co-polymer sealant for general joint sealing in building and construction applications. For internal and external conditions. DynaSeal™ Sealant provides a flexible, elastic seal in joints in interior fit-out and concrete, brick and concrete block-work construction.

Typical Properties

Appearance	Non sag smooth thixotropic paste
Chemical Type	Polyurethane / Acrylic co-polymer
Service Temperature	-20°C to + 90°C
Specific Gravity	1.5
Application Temperature	+5°C to + 35°C
Tool Working Time	15 minutes at 25°C
Max. Joint Movement	± 20%
Max. Joint Width	50mm
Elongation ASTM D412	290 to 340%
Full Cure	7 days at 25°C

Substrates

Timber, Concrete, Concrete Block, Medium Density Fibreboard (MDF), Hardboard, Particleboard, Plywood, Brick, Plasterboard, Fibre Cement Sheet, Ceramic Tiles (unglazed edges), Laminate

Flexibility	Mod.	Low VOC	Yes
Water Resistance	Mod.	Paintable	Yes
Water Immersion	No	Water Clean Up	Yes
Heat Resistant	No	Exterior Use	Yes
Fire Rated	No	UV Resistant	Yes

Features & Benefits

- User Friendly
- No Fumes
- Low VOC
- Water Clean Up
- Easy Dispensing in Cold Weather
- Elastic and Flexible
- Paintable with acrylic based surface coatings
- Non-toxic
- Easy tooling

Trades & Applications

	Ceiling & Partitioning	Sealing & Waterproofing	Bricklayer	Shop Fitter
Partition Joints	✓			
Precast Joints		✓		
Brick & Block Joints			✓	
Joinery				✓

Related Products

Caulking Gun / Sausage Barrel Gun
Battery Powered Caulking Gun
Nozzle Set
Backing Rod

Installation

1. Ensure surfaces are clean and dry
2. For best results mask around gap to be filled
3. Dispense Dynaseal™ sealant into gap or joint with continuous trigger pressure
4. Tool sealant to create a neat finish
5. Remove masking tape before Dynaseal™ skins
6. Clean up Dynaseal™ with a damp cloth before it dries.

Refer to Technical Data Sheet and MSDS available from www.ramset.com.au, for precautions and further detailed installation instructions

DynaSeal™

Part No.	Colour	Volume	Order Qty
DYSLGRG450	Grey	300mL Cartridge	20
DYSLGYG900	Grey	600mL Sausage	15



Description

HiSeal™ is a high performance polyurethane sealant that provides a tough, elastic, UV resistant and weatherproof seal in exterior joints in concrete, brick and concrete block-work construction. Highly resistant to dynamic joint movement.

Typical Properties

Appearance	Non sag smooth thixotropic paste
Chemical Type	Polyurethane
Specific Gravity	1.2
Application Temperature	+5°C to + 35°C
Tool Working Time	30 minutes at 20°C
Tack Free Time	6 to 12 hours
Cure Rate	2 mm per 24 hour period
Max. Joint Movement	± 25%
Max. Joint Width	50mm
Elongation at Break	900%
Cure Hardness	Shore A 30
Tensile Strength	1.3 N / mm ²
Service Temperature	-40°C to + 70°C
Substrates	Concrete and Cement, Brick, Concrete Block, Aluminium, Ceramic Tiles, Laminate, Stainless Steel, Galvanised Steel, Timber, Particleboard, MDF, Plywood, Plasterboard

Flexibility	High	Low VOC	Yes
Water Resistance	High	Paintable	Yes
Water Immersion	No	Water Clean Up	No
Heat Resistant	No	Exterior Use	Yes
Fire Rated	No	UV Resistant	Yes

Features & Benefits

- UV and Weather Resistant
 - Excellent resistance to aging and weathering
- Low VOC
- High bond strength
- Thixotropic - No sagging or running
- Excellent flexibility – joint movement ± 25%
- Suitable for Acoustic Applications
- Suitable for contact with drinking water – AS4020-1994
- Non-corrosive neutral cure
- Paintable with acrylic based surface coatings

Trades & Applications

	Ceiling & Partitioning	Sealing & Waterproofing	Bricklayer	Shop Fitter
Partition Joints	✓			
Precast Joints		✓		
Brick & Block Joints			✓	
Joinery				✓

Related Products

- Caulking Gun / Sausage Barrel Gun
- Battery Powered Caulking Gun
- Nozzle Set
- Backing Rod

Installation

Mask around joints before applying sealant.
 Dispense HiSeal™ into joint. Tool sealant for neat finish.
 Use tool with a convex profile.
 Tooling Time: within 30 minutes of application.
 Remove masking tape before sealant skins (about 30 minutes).
Refer to Technical Data Sheet and MSDS available from www.ramset.com.au, for precautions and further detailed installation instructions

Approvals

AS4020-1994 Contact with drinking water
 AS1157-1972 Fungus and mildew resistance

HiSeal™

Part No.	Colour	Volume	Order Qty
HYSLGYG375	Grey	300mL Cartridge	25
HYSLGYG720	Grey	600mL Sausage	20

Water Seal

Sanitary Grade Construction Sealant



Sealants



Description

Water Seal is waterproof and contains a fungicide to inhibit mould growth, for general wet-area applications, such as bathrooms, kitchens and laundries. Water Seal is permanently flexible to resist cracking making it a perfect replacement for tile grout in internal corners and around baths and vanity basins.

Typical Properties

Chemical Type	Acetoxy Silicone
Skin Time BS5889	6 minutes
Tack Free Time ASTM C679	30 minutes
Tool Working Time ASTM C679	Up to 10 min @ 25°C 50%RH
Slump MIL – A-46106A	None
Application Temperature	-10 to 40°C
Cure Rate	1.3 mm / 24 hours
Service Temperature	-50 to 150°C
Max. Joint Movement ASTM C920	± 25%
Tensile Strength ASTM D412	1.80 N / mm ²
Modulus at 100% Elongation ASTMD412	0.40 N / mm ²
Elongation at Rupture ASTMD412	520%
Peel Strength after UV Through Glass FED TT-00-1543A	50 N / 25 mm
Cure Hardness ASTM C661	Shore A 20

Substrates

Glass, Anodised Aluminium, Colour Coated Steel and Aluminium, Timber, Laminate, Acrylic, Stainless Steel, Vitreous Enamel, Glazed Ceramics, Unglazed Ceramics

Flexibility	High	Low VOC	Yes
Water Resistance	High	Paintable	No
Water Immersion	Yes	Water Clean Up	No
Heat Resistant	Yes	Exterior Use	Yes
Fire Rated	No	UV Resistant	Yes

Features & Benefits

- Waterproof – retains adhesion and flexibility in contact with water
- Permanently flexible
- Sag Resistant – No sagging or running
- Mould and Mildew Resistant
- Excellent flexibility – joint movement ± 25%.
- Strong adhesion

Trades & Applications

	Plumber	Shop Fitter
Sealing around bathroom fixtures	✓	✓
Sealing around kitchen fixtures	✓	✓
Sealing around laundry fixtures	✓	

Related Products

Caulking Gun

Installation

1. Ensure surfaces are clean and dry
2. For best results mask around gap to be filled
3. Dispense Water Seal sealant into gap or joint with continuous trigger pressure
4. Tool sealant to create a neat finish
5. Remove masking tape before Water Seal skins
6. Clean up Water Seal with mineral turps before it sets.

Refer to Technical Data Sheet and MSDS available from www.ramset.com.au, for precautions and further detailed installation instructions

Water Seal

Part No.	Colour	Volume	Order Qty
WRSLWHG300	White	300mL Cartridge	20



Features & Benefits

- UV and Weather Resistant
 - Excellent resistance to accelerated aging and weathering to ASTM C792
- Excellent flexibility – joint movement \pm 25%
- Thixotropic - No sagging or running
- Suitable for contact with drinking water – AS4020-1994
- Non-corrosive neutral cure silicone
- Low VOC

Description

Roof Seal is UV and weather resistant for exterior plumbing and roofing applications. Its neutral cure formula is non-corrosive so it is safe to use with all metals including galvanised steel and anodised aluminium. Also suitable for cement, brick and concrete.

Typical Properties

Chemical Type	Oxime Silicone
Skin Time BS5889	8 minutes
Tack Free Time ASTM C679	30 minutes
Tool Working Time ASTM C679	Up to 10 min @ 25°C 50%RH
Slump BS5889	None
Application Temperature	-10 to 40°C
Cure Rate	1.0 mm / 24 hours
Service Temperature	-50 to 150°C
Max. Joint Movement ASTM C920	\pm 25%
Tensile Strength ASTM D412	1.10 N / mm ²
Modulus at 100% Elongation ASTMD412	0.40 N / mm ²
Elongation at Rupture ASTMD412	630%
Peel Strength after UV Through Glass BS5889	50 N / 25 mm
Cure Hardness ASTM C661	Shore A 17 - 22
VOC	40 g / litre

Substrates

Galvanised Steel, Aluminium, Colour Coated Steel (eg. Colorbond®), Timber, Terracotta, Rigid PVC, Pipe, Brick, Concrete and Cement

Flexibility	High	Low VOC	Yes
Water Resistance	High	Paintable	No
Water Immersion	Yes	Water Clean Up	No
Heat Resistant	Yes	Exterior Use	Yes
Fire Rated	No	UV Resistant	Yes

Trades & Applications

	Plumber	Electrician	Concreter	Bricklayer
Sealing flashings, gutturing & downpipes	✓			
Sealing penetrations through concrete	✓	✓		
Sealing penetrations through steel	✓	✓		
Sealing concrete expansion joints	✓		✓	
Sealing brick & Block expansion joints	✓			✓

Related Products

Caulking Gun

Installation

1. Ensure surfaces are clean and dry
2. For best results mask around joint to be sealed
3. Dispense Roof Seal onto one surface and assemble components.
4. Drill and rivet lap joint as required
5. Remove masking tape before Roof Seal skins
6. Clean up Roof Seal with mineral turps before it sets.

Refer to **Technical Data Sheet and MSDS** available from www.ramset.com.au, for precautions and further detailed installation instructions

Roof Seal

Part No.	Colour	Volume	Order Qty
RFSLTRG300	Translucent	300mL Cartridge	20
RFSLALG300	Aluminium	300mL Cartridge	20
RFSLYGY410	Grey	300mL Cartridge	20



Features & Benefits

- Effective on uneven surfaces - Bridges gaps up to 9mm
- Reduces squeaking associated with nail ride in floors.
- Repositionable up to 20 minutes after application or bonds instantly using contact method
- Reduces number of mechanical fasteners required to install floors or walls.
- Natural wood colour
- Strong adhesion to metal

Description

NailFree™ is a synthetic rubber based adhesive for flooring, joinery, wallboards and other general construction assembly. NailFree™ forms strong bonds to a wide variety of building materials in interior and exterior conditions.

Typical Properties

Open Time	1-5 mins.
Full cure	24 hours @ 25°C
Repositioning time	< 20 mins @ 25°C
Service Temperature	0°C to 40°C
Application Temperature	5°C to 35°C
Sag Resistance (AS2329-1999, Appendix A)	< 6mm
Transfer (AS 2329 - 1999, Appendix B)	> 75% after 15 min. open time
Aging (AS2329-1999, Appendix C)	No chipping or cracking after 500 hours at 70°C.
Initial Bond Strength in Shear (AS2329-1999, Appendix D)	> 200 kPa
Adhesion Strength in Tensile Shear (AS2329-1999, Appendix E)	> 1 MPa
Bond Strength in Peel (AS2329 - 1999, Appendix F)	> 40N/25mm
Peel Strength after UV Through Glass FED TT-00-1543A	50 N / 25 mm
Cure Hardness ASTM C661	Shore A 20

Substrates Particleboard / Chipboard, Medium Density Fibreboard (MDF), Fibre Cement Sheet, Softwoods , Hardwoods, Hardboard, Plywood, Polyurethane Foam, Expanded Polystyrene Foam, Galvanised steel

Flexibility	Low	Low VOC	No
Water Resistance	High	Paintable	Yes
Water Immersion	No	Water Clean Up	No
Heat Resistant	No	Exterior Use	Yes
Fire Rated	No	UV Resistant	No

Trades & Applications

	Carpenter	Shop Fitter
Bonding Flooring to Joists	✓	
Bonding wall panels to studs	✓	✓
Bonding Architraves & Skirting boards	✓	✓

Related Products

Caulking Gun (300ml or 850ml)

Installation

1. Ensure surfaces are clean and dry
2. Dispense Nail Free™ onto joists or studs as a continuous bead
3. Place floor or wall panel onto joists or studs and align
4. Nail or screw as required
5. Clean up Nail Free™ with mineral turps before it dries

Refer to Technical Data Sheet and MSDS available from www.ramset.com.au, for precautions and further detailed installation instructions

Approvals

AS2329-1999

NailFree™

Part No.	Volume	Order Qty
NFCAG320	300mL Cartridge	10
NFCAG930	850mL Cartridge	10



Description

Safe-T-Bond™ is formulated with strong initial suction / grab, which makes it ideal for installing wall panelling, flooring, skirting boards and architraves. It has no fumes and can be cleaned up with water.

Typical Properties

Open Time	20 min @ 25°C
Cure Time	24 hours @ 25°C
Repositioning Time	60 minutes @ 25°C
Service Temperature	-5°C to 80°C
Application Temperature	5°C to 35°C
Flammability	Not Flammable
Sag Resistance (AS2329-1999, Appendix A)	< 6mm
Transfer (AS 2329 - 1999, Appendix B)	> 75% after 15 minutes open time
Aging (AS2329-1999, Appendix C)	No chipping or cracking after 500 hours at 70°C.
Initial Bond Strength in Shear (AS2329-1999, Appendix D)	> 200 kPa
Adhesion Strength in Tensile Shear (AS2329-1999, Appendix E)	> 1 MPa
Bond Strength in Peel (AS2329 - 1999, Appendix F)	> 40N/25mm

Substrates

Particleboard / Chipboard, Medium Density Fibreboard (MDF), Fibre Cement Sheet, Softwoods, Hardboard, Plywood, Hardwoods with dry density < 1000 Kg / m³, Concrete, Expanded Polystyrene Foam, Galvanised steel

Flexibility	Low	Low VOC	Yes
Water Resistance	Low	Paintable	Yes
Water Immersion	No	Water Clean Up	Yes
Heat Resistant	No	Exterior Use	No
Fire Rated	No	UV Resistant	No



Features & Benefits

- Low odour – no solvent fumes
- Easy to use
 - Easy clean up - use water
 - Fast initial grab - minimises slippage on vertical surfaces.
 - Easy to dispense at low temperatures.
 - Bridges gaps up to 9 mm - effective on uneven surfaces
 - Long repositioning time - up to 60 minutes
 - Easy to use, re-sealable sausage – no caulking gun
- Will not attack polystyrene foam

Trades & Applications

	Carpenter	Shopfitter	Builder
Bonding Flooring Panels to Joists	✓		✓
Bonding wall panels to studs	✓	✓	✓
Bonding Architraves & Skirting boards	✓	✓	✓
Bonding Polystyrene Foam	✓	✓	✓

Related Products None Required

Installation

1. Ensure surfaces are clean and dry
2. Cut sachet tip to desired diameter.
3. Dispense Safe T Bond™ by squeezing sachet
4. Apply adhesive as a continuous bead onto studs or joists.
5. Place floor or wall panel onto joists or studs and align
6. Nail or screw as required
7. Clean up Safe T Bond™ with a damp cloth before it dries
8. Brace and support wall panels or light objects and remove when adhesive has set (approximately 24 hours).

Refer to Technical Data Sheet and MSDS available from www.ramset.com.au, for precautions and further detailed installation instructions

Approvals

Bond strength exceeds requirements of AS2329 - 1999

Safe-T-Bond™

Part No.	Colour	Volume	Order Qty
STBDL1	White	1 Litre Sausage	10



Key Features

- Complies to AS1530.4-2005
- Fire rating of up to 4 hours
- Fire rated to suit:
 - joint widths 10 mm to 80 mm
 - joint depths 100 mm to 200 mm
 - 34 mm diameter (nominal) steel pipe
- No dispensing tools required
- Acoustic rating ISO140

Description

BlazeBrake™ Fire Rated Foam is a one component expanding PU foam suitable for sealing construction joints and service penetrations. It prevents the penetration and transfer of flames, smoke and gases between building compartments. BlazeBrake™ FR Foam reacts with moisture in the air causing it to expand to fill any shaped hole or cavity. The cured foam can then be cut or shaped and painted as desired.

Typical Properties

Density	20 to 28 Kg / m ³
Yield, Free Expansion	37 litre average
Maximum expansion obtained with container at 20°C. Cold, heat and low humidity will result in lower yields.	
Tack Free	10 min, 23°C, 50% RH
Cutttable (30 mm dia bead)	60 min, 23°C, 50% RH
Weight Bearing Time (30 mm dia bead)	24 hours, 23°C, 50% RH
Heat conductivity coefficient DIN52612	25 to 30 mW/m.K
Compressive Strength ISO844	75 kPa (10% Deformation)
Tensile Strength DIN53455	60 kPa
Elongation at Break DIN53455	20%
Shear Strength DIN53422	30 kPa
Water Absorption DIN53428	0.3 vol%
Temperature Resistance (Long Term)	-40 to 90°C
Temperature Resistance (Short Term)	-40°C to 130°C
Application Temperature	Ambient: +5°C up to +35°C Can: +10°C up to +30°C
Acoustic Rating ISO 140	R _{ST,w} (C;C _{tr}) 58
Shelf Life	9 months maximum



Features & Benefits

- 50% post expansion rate
- Suitable for sealing gaps around window and door frames
- Sound dampening and sealing against draughts and moisture
- High bond strength
- Excellent dimensional stability
- Can be painted and covered with plaster
- Excellent thermal insulator
- CFC & HCFC free (ozone layer friendly)
- VOC data available

Related Products

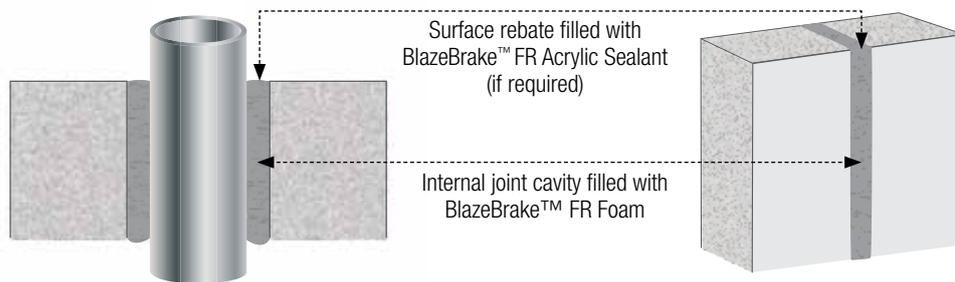
BlazeBrake™ Sealant - Fire Rated Acrylic (450g Cartridge or 960g Sausage)
Fomo Cleaning Solvent (500ml Aerosol Can - FMSVM500)

Trades & Applications

	Builder	Plumbing Contractor	Electrical Contractor	Mechanical Services	Passive Fire Specialist	Maintenance Services
Precast and tiltup concrete walls	✓	✓	✓	✓	✓	✓
Concrete ceilings & floors	✓	✓	✓	✓	✓	✓
Small metal pipe penetrations	✓	✓		✓	✓	✓

Installation

Consult technical data for tested applications and fire ratings, before commencing use. For detailed technical data and instructions go to www.ramset.com.au. For applications outside those tested, refer to your Fire Consultant for compliance advice.



Metal Pipe Penetration

- BlazeBrake™ Foam with or without Acrylic Sealant
- Steel pipe 34mm (nom)

Vertical Joints (up to 80mm)

- BlazeBrake™ Foam with or without Acrylic Sealant
- Joint width from 10 to 80mm
- Joint depth from 100 to 200mm

Concrete Slab Installation Data

Source: CSIRO report FC02662

Dimensions in mm			Rebate Filler	FRL
Joint Width	Joint Depth	Rebate*		
10	210	10	FR Silicone	-/240/240
20	210	-	-	-/240/240
10	210	-	-	-/240/240
20	210	10	FR Silicone	-/240/240
20	200	10	FR Silicone	-/240/240
20	200	10	BlazeBrake™ Sealant	-/240/240
20	200	-	-	-/180/180
80	210	-	-	-/60/60
60	210	-	-	-/90/90
40	210	-	-	-/180/180

Concrete Block Wall Installation Data

Dimensions in mm			Rebate Filler	FRL
Joint Width	Joint Depth	Rebate		
10	100	10	BlazeBrake™ Sealant	-/240/240
10	100	-	-	-/120/120
20	100	10	BlazeBrake™ Sealant	-/180/90
20	100	-	-	-/60/60

Steel Pipe through Aerated Concrete Block Wall Installation Data

Source: CSIRO report FC02680

Dimensions in mm				Rebate Filler	FRL
Hole Dia	Pipe Dia	Hole Depth	Rebate		
80	34	150	-	-	-/60/60
80	34	150	10	BlazeBrake™ Sealant	-/240/90

BlazeBrake™ Foam

Part No.	Colour	Volume	Order Qty
FRF700	Light Grey	750mL Can	1



Description

Versatile FomoFill™ is a polyurethane polymer that reacts with moisture in the air causing it to expand to fill any shaped hole or cavity. The cured foam can then be cut or shaped and painted as desired. FomoFill™ is great for thermal insulation, to block out drafts or to fill or repair big holes prior to painting.

Typical Properties

Yield, Free Expansion 500 g Can	Approx. 12 to 30 L		
Yield, Free Expansion 750 g Can	Approx. 17 to 45 L		
Bulk Density	13 Kg / m ³		
Raw Density (Confined)	25 Kg / m ³		
Tack Free Time	10 minutes		
Cuttable (20 mm Dia Bead)	30 minutes		
Full Cure (20 mm Dia Bead)	After 12 Hours		
Application Temperature	Min 5°C Max 25°C		
Optimum Application Temp	20°C		
Water Absorption (DIN53428)	0.3 Vol %		
Thermal Conductivity (DIN52612)	0.04 W / mK		
Service Temperature Limits	Long Term -15°C to 60°C		
	Short Term -40°C to 130°C		
Shelf Life	9 months		
Substrates	Particleboard / Chipboard, Medium Density Fibreboard (MDF), Fibre Cement Sheet, Timber, Hardboard, Plywood, Concrete, Plasterboard, Galvanised steel, Brick, Mild steel, Ceramic tiles, Acrylic, Cardboard, Stone, Aluminium, Concrete Block, Rigid PVC		
Flexibility	Low	Low VOC	Yes
Water Resistance	High	Paintable	Yes
Water Immersion	No	Water Clean Up	No
Heat Resistant	No	Exterior Use	Yes
Fire Rated	No	UV Resistant	No

Features & Benefits

- Expands to fill BIG holes
- Once cured, can be cut and shaped as required
- Non-shrink
- Can be sanded, filled and painted to produce a neat finish.
- Excellent insulator
- Closed cell structure
- Ozone friendly – CFC, FC and HFC free

Trades & Applications

	Carpenter	Shop-fitter	Builder	Plumber	Electrician	Mech Services
Penetrations through walls & floors			✓	✓	✓	✓
Sealing large gaps		✓	✓			
Filling gaps between window & door frames	✓	✓	✓			

Related Products

Fomo Cleaning Solvent (500ml Aerosol Can - FMSVM500)

Installation

1. Protect surfaces around work area from unwanted drips
2. To aid foam expansion, dampen surfaces using water spray bottle or similar
3. Screw nozzle onto valve on top of can. Take care not to over tighten or activate the valve.
4. Shake can vigorously for approximately 60 seconds, turn can upside down, then point nozzle into the cavity to be filled and depress trigger to dispense the foam
5. Fill cavity to about 1/3 full. Foam will expand and fill cavity
6. Clean up FomoFill™ with Fomo Cleaning Solvent before it sets

Refer to Technical Data Sheet and MSDS available from www.ramset.com.au, for precautions and further detailed installation instructions

FomoFill™

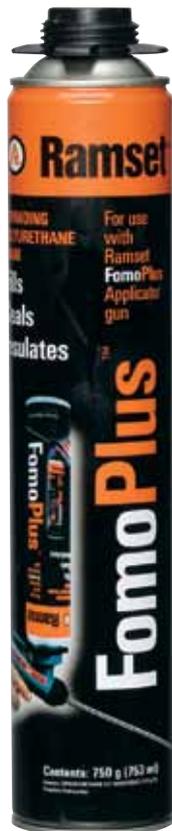
Part No.	Volume	Order Qty
FMFLG500	500mL Aerosol Canister	12
FMFLG750	750mL Aerosol Canister	12



All Metal Applicator (FMPLGU300)



Controlled Flow Applicator (FMPLGU)



Description

Versatile FomoPlus™ is a polyurethane polymer that reacts with moisture in the air causing it to expand to fill any shaped hole or cavity. The cured foam can then be cut or shaped and painted as desired. The FomoPlus™ applicator ensures foam is dispensed accurately to provide a neat finish and reduce waste. FomoPlus™ is ideal for thermal insulation, to block out drafts or to fill or repair big holes prior to painting.

Typical Properties

Yield, Free Expansion 750 g Can	17 to 45 litres (bulk density approx. 15 kg/m ³)
Tack-free time	4 - 10 minutes
Cutable (20 mm dia. bead)	7 - 9 minutes
Full stability load bearing (20mm dia. bead)	After 12 hours
Working temperature	Min + 5°C Max + 25°C
Optimum working temperature	+ 20°C
Water absorption (DIN 53433)	0.3 Vol. -%
Thermal conductivity approx.	0.04 W / mK
Service Temperature	Long-term- 40°C to + 80°C
Service Temperature	Short-term- 40°C to + 100°C
Shelf-life	9 months

Substrates

Particleboard / Chipboard, Medium Density Fibreboard (MDF), Fibre Cement Sheet, Timber, Hardboard, Plywood, Concrete, Plasterboard, Galvanised steel, Brick, Mild steel, Ceramic tiles, Acrylic, Cardboard, Stone, Aluminium, Concrete Block, Rigid PVC

Flexibility	Low	Low VOC	Yes
Water Resistance	High	Paintable	Yes
Water Immersion	No	Water Clean Up	No
Heat Resistant	No	Exterior Use	Yes
Fire Rated	No	UV Resistant	No

Features & Benefits

- Expands to completely fill voids
- Closed cell foam structure - efficient temperature insulation
- Applicator provides neat, accurate dispensing
- Reusable
- Ozone friendly – CFC, FC and HFC free
- Closed cell structure
- Resistant to blockages – ideal for stop / start work

Trades & Applications

	Carpenter	Shop-fitter	Builder	Plumber	Elec-trician	Mech Services	Con-creter
Penetrations through walls & floors			✓	✓	✓	✓	
Sealing large gaps		✓	✓				
Filling gaps - window & door frames	✓	✓	✓				
Filling gaps in formwork							✓

Related Products

- Controlled Flow Applicator
- All Metal Applicator
- Fomo Cleaning Solvent (500ml Aerosol Can - FMSVM500)

Installation

1. Protect surfaces around work area from unwanted drips
2. To aid foam expansion, dampen surfaces using water spray bottle or similar
3. Fit canister onto applicator gun. Take care not to over tighten or activate the valve.
4. Shake can vigorously for approximately 60 seconds, then point gun nozzle into the cavity to be filled and depress trigger to dispense the foam
5. Fill cavity to about 1/3 full. Foam will expand and fill cavity
6. Clean up FomoPlus™ with Fomo Cleaning Solvent before it sets

Refer to Technical Data Sheet and MSDS available from www.ramset.com.au, for precautions and further detailed installation instructions

FomoPlus™

Part No.	Volume	Order Qty
FMPLG750	750mL Aerosol Canister	12

Additives



Features & Benefits

- Improves strength and toughness of cement mixtures
- Improves adhesion of cement mixtures to existing concrete, brick and block
- Strong bond
- Economical
 - High concentration
 - High molecular weight polymer
 - High dilution
- User Friendly – clean up with water
- User Friendly – low odour

Description

CemCrete™ is a high molecular weight polymer concentrate, which is diluted and added to cement mixtures to reduce cracking and improve adhesion. CemCrete™ also aids bonding of concrete, renders, mortars and toppings to existing concrete, block and brick. CemCrete™ is ideal for priming porous surfaces for ceramic tiling and to add flexibility to cement tile grouts and adhesives.

Typical Properties

Chemical Type	High molecular weight resin dispersion
Service Temperature	-15° C to +45° C
Application Temperature	+10° C to +40° C
Colour	White in wet state. Dries clear.
Sealing Coat	1 part Cemcrete™ 4 parts water 35 m ² / litre Coverage
Bond Coat	1 part Cemcrete™ 1 part water 15 m ² / litre Coverage
Cement Admixture	1 part Cemcrete™ 1.5 parts water Coverage not applicable
Substrates	Concrete, Concrete Block, Brick, Timber, Fibre Cement Sheet, Plasterboard

Trades & Applications

	Concrete	Bricklayer	Solid Plasterer	Civil Contractor	Factory Fitter	Builder
Bonding to concrete & brick	✓		✓	✓	✓	✓
Improve adhesion and toughness	✓	✓	✓	✓	✓	✓

Related Products

Small Spiral Mixing Paddle (Mixtures up to 4L)

Large Spiral Mixing Paddle (Mixtures greater than 4L)

Installation

1. Ensure surfaces are clean
2. Primer / Sealer: Prime surface with 1 part Cemcrete™ in 4 parts water
3. Bond Coat: Apply bond coat of 1 part Cemcrete™ and 1 part water
4. Apply primer / bond coat with brush, roller or airless spray
5. Cement admixture: Add 1 part Cemcrete™ in 1.5 parts water as gauging water in render / solid plaster / mortar / concrete / grout

Refer to Technical Data Sheet and MSDS available from www.ramset.com.au, for precautions and further detailed installation instructions

CemCrete™

Part No.	Volume	Order Qty
CMCRL20	20 Litre Jerry Can	1
CMCRL5	5 Litre Jerry Can	1


Additives

Description

ConcreBond™ improves toughness and adhesion when added to cement based mixtures such as render, concrete, mortar, grout and tile adhesives. ConcreBond™ is an acrylic emulsion polymer, which has higher water resistance than conventional concrete bonding agents.

Typical Properties

Chemical Type	Acrylic Resin Dispersion
Service Temperature	-15°C to + 45°C
Application Temperature	+10°C to + 40°C
Colour	White in wet state. Dries clear.
Undiluted	1 part Concrebond™ 0 parts water 10 m ² / litre Coverage
Sealing Coat	1 part Concrebond™ 3 parts water 32 m ² / litre Coverage
Bond Coat	1 part Concrebond™ 1 part water 15 m ² / litre Coverage
Cement Admixture	1 part Concrebond™ 5 parts water Coverage not applicable
Substrates	Concrete, Concrete Block, Brick, Timber, Fibre Cement Sheet, Plasterboard

Features & Benefits

- Improves strength and toughness of cement mixtures
- Improves adhesion of cement mixtures to existing concrete, brick and block
- Strong bond
- Economical
 - High concentration
 - High dilution
- Greater water resistance than conventional bonding agents
- User Friendly – clean up with water
- User Friendly – low odour

Trades & Applications

	Concrete	Bricklayer	Solid Plasterer	Civil Contractor	Factory Fitter	Builder
Bonding to concrete & brick	✓		✓	✓	✓	✓
Improve adhesion and toughness	✓	✓	✓	✓	✓	✓
Improve water resistance of concrete & cement	✓	✓	✓	✓	✓	✓

Related Products

Small Spiral Mixing Paddle (Mixtures up to 4L)

Large Spiral Mixing Paddle (Mixtures greater than 4L)

Installation

1. Ensure surfaces are clean
2. Primer / Sealer: Prime surface with 1 part Concrebond™ in 3 parts water
3. Bond Coat: Apply bond coat of 1 part Concrebond™ and 1 part water
4. Cement admixture: Add 1 part Concrebond™ in 5 parts water as gauging water in render / solid plaster / mortar / concrete / grout

Refer to Technical Data Sheet and MSDS available from www.ramset.com.au, for precautions and further detailed installation instructions

ConcreBond™

Part No.	Volume	Order Qty
CNBDL20	20 Litre Jerry Can	1

Grouts



Description

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

Features & Benefits

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

Typical Properties

		Consistency		
		Dry Pack	Trowellable	Flowable
Litres of water per 20Kg Bag		2.0	2.5 - 3.0	3.5 - 4.0
Vicat Setting Times @ 20°C (AS1012.18)	Initial Set	1.5 hrs	1.5 hrs	1.5 hrs
	Final Set	4.0 hrs	4.0 hrs	4.0 hrs
Time for expansion (AS2073)	Start (Plastic State)	-	30 min	30 min
	Finish (Plastic State)	-	2.0 - 2.5 hrs	2.0 - 2.5 hrs
Unrestrained Expansion (AS2073)		-	>2%	>1.5%
Bleeding (AS1012.6)		0%	0%	0%
Compressive Strength @ 20°C (AS1012.9 & AS2073)	1 Day	40 MPa	25 MPa	15 MPa
	3 Days	60 MPa	45 MPa	25 MPa
	7 Days	65 MPa	55 MPa	40 MPa
	28 Days	70 MPa	70 MPa	50 MPa
Flexural Strength (ASTM C348) @ 20°C	1 Day	-	8.5 MPa	-
	7 Days	-	11.0 MPa	-
Substrates		Concrete		

Trades & Applications

	Steel Fabricator	Ballustrader	Concreter	Civil Contractor	Factory Fitter	Builder
Filling gaps under base plates	✓	✓				
Filling gaps under concrete panels			✓	✓		✓
Filling grout tubes			✓			✓
Grouting bridge beam supports			✓			✓
Filling under machinery baseplates					✓	
Anchoring rod & bar into concrete	✓	✓		✓	✓	✓

Approvals

AS MP20, Part 3 (1977)

Related Products

Small Spiral Mixing Paddle (Mixtures up to 4L)
 Large Spiral Mixing Paddle (Mixtures greater than 4L)

Installation

1. Grind old concrete to expose fresh concrete surface. Pre soak concrete for a minimum of 6 hours prior to placing Premier Grout MP™.
2. Measure the quantity of clean water accurately and add to a container with at least 20L capacity per bag of grout.
3. DO NOT MIX BY HAND.
4. Mix Premier Grout MP™ using a mechanical forced action mixer with a high shear stirrer such as Ramset LSMP.
5. Slowly add the dry Premier Grout MP™ powder while mixing.
6. Continue to mix for approximately 1 minute after all grout powder is added. The grout consistency must be uniform and homogenous.
7. DO NOT ADD ADDITIONAL WATER.
8. Discard any unused grout that has stiffened or hardened.

Placing

8. Remove excess water from concrete surface prior to pouring Premier Grout MP™.
9. To ensure maximum expansion, place grout within 30 minutes of mixing at 20°C.
10. Maximum thickness: 150 mm
11. Minimum thickness: 10mm
12. For section thicknesses > 150 mm, apply grout in several pours allowing the previous one to cool; dowelling between pours will provide better adhesion for subsequent topping.
13. Avoid trapping air and water by placing grout from one side only
14. Use a suitable head box to ensure void is completely filled and to ensure continuous flow
15. To assist flow, rod the grout while pouring
16. Do not use mechanical vibrators to assist grout flow as this will cause segregation of the aggregate and bleeding

Refer to Technical Data Sheet and MSDS available from www.ramset.com.au, for precautions and further detailed installation instructions

Strength Development and Yield

		Consistency		
		Dry pack	Trowellable	Flowable
Compressive Strength @ 20°C (AS1012.9 & AS2073)	1 Day	40 MPa	25 MPa	15 MPa
	3 Days	60 MPa	45 MPa	25 MPa
	7 Days	65 MPa	55 MPa	40 MPa
	28 Days	70 MPa	70 MPa	50 MPa
Flexural Strength (ASTM C348) @ 20°C	1 Day	-	8.5 MPa	-
	7 Days	-	11.0 MPa	-
Yield	Litres per 20 kg Bag	10.3	11.0	11.7
	Fresh wet density kg / m ³	1,950	1,800	1,750
	Bags per cubic metre	96	90	87

Premier GroutMP™

Part No.	Volume	Order Qty
RPGMP	20kg Bag	1

Grouts



Description

Epoxy Grout is a 2-part 100% solventless epoxy resin with graded fillers, which can be used as is or with additional fillers to create a range of application consistencies. Epoxy Grout is tough, durable and specially formulated for strong bond to concrete, brick and block.

Related Products

- Small Spiral Mixing Paddle (Mixtures up to 4L)
- Large Spiral Mixing Paddle (Mixtures greater than 4L)
- FillersFG™ Fine Grade Sand Filler

Typical Properties

Appearance	Part A: Grey thixotropic liquid Part B: Amber liquid Grey when mixed together
Viscosity	Flowable, pourable
Solid content by weight	100%
Tensile strength	30 MPa approx.
Compressive strength 7 days	110MPa approx.
Compressive Strength 24 hours	88 MPa approx.
Flexural strength	25 MPa approx.
Tensile bond strength	10 MPa approx.
Modulus of elasticity	4.5 x 10 ³ MPa
Service temperature	-10°C to + 65°C
Heat distortion temp	80°C approx.

Features & Benefits

- High flow properties – good bonding and penetration
- Bonds to dry and damp concrete
- Pre-measured kits to avoid measuring errors
- High tensile and compressive strength
- Cures at temperatures down to 5°C
- 100% solids epoxy – solvent free and negligible shrinkage
- High mechanical strength
- Resistant to vibration and dynamic loads
- Add graded sand to change consistency

Hardness	> 80 Shore D
Pot life	45 – 50 mins @ 25°C
Tack free time	1.5 – 2.5 hours @ 25°C
Mix ratio	5:1 (part A:B) by volume
Min. Application temp.	5°C
Max. Application temp.	35°C
Density	1.53 kg/Litre
Water absorption*	<0.2% (10 days at 25°C)
Full cure	7 days at 25°C
Min. Thickness	1.5mm
Max. Thickness	50mm
Substrates	Concrete

Trades & Applications

	Steel Fabricator	Ballustrader	Concreter	Civil Contractor	Factory Fitter	Builder
Filling gaps under base plates	✓	✓			✓	
Filling gaps under concrete panels			✓	✓		✓
Filling grout tubes			✓			✓
Grouting bridge beam supports			✓	✓		✓
Filling under machinery baseplates					✓	
Anchoring rod & bar into concrete	✓	✓		✓	✓	✓
Grouting supports for rails				✓		✓
Bonding new to old concrete			✓	✓		✓

Installation

- Epoxy Grout is supplied as pre-measured kits. Where practical mix total contents of each part of 2 L and 4 L kits together to avoid measuring errors
- Ensure concrete is free from dust or contaminants that may interfere with the bond.
- Grit blast or scabble concrete to expose clean surface.
- Remove ponded water. Concrete may be damp but not wet.
- Stir the hardener and base components separately before mixing together, to disperse any settlement.
- Pour the entire contents of the Part B container into the Part A container.
- Mix the two components together using a suitable slow-speed mixer and high-shear mixing paddle (No Fillers: Ramset™ - Small Spiral Mixing Paddle, with Fillers Ramset™ - Large Spiral Mixing Paddle), for 2 minutes, until a fully uniform colour is obtained.
- Scrape the sides of the tin and continue mixing for a further 2 minutes.

Grouting:

- Position and level baseplate
- Construct formwork around base plate with 25 mm clearance
- Coat formwork with a thin film of grease or other release agent to prevent permanent bond
- Form a pouring head with minimum 150 mm above base plate level
- Form 50 mm off-side shutter opposite pouring head to allow air and grout to escape
- Read mixing instructions 1 to 8 above
- Pour Epoxy Grout into the pouring hopper
- Keep pouring until Epoxy Grout has risen in the off-side shutter
- Allow Epoxy Grout to cure for 24 hours before stripping form work

Note: If thickness is greater than 50mm, pour Epoxy Grout in layers maximum 50mm thick.

Refer to Technical Data Sheet and MSDS available from www.ramset.com.au, for precautions and further detailed installation instructions

Typical Properties of Epoxy Grout mixed with FillersFG™

Consistency	Volume of Epoxy Grout (Litres)	Weight of Fillers FG (Kg)	Yield of Mixture (Litres)	Pot Life @ 20°C (Minutes)	Compressive Strength @ 7 days	Tensile Strength @ 7 days (MPa)	Flexural Strength @ 7 days (MPa)
Fluid	1	0.6	1.2	40-45	110	17	32
Pourable	1	2.3	1.9	40-50	100	15	29
Trowellable	1	2.9	2.1	60-70	90	12	26
Dry Pack	1	3.8	2.4	65-80	85	11	26

Recommended Epoxy Grout Hold Down Bolt & Reinforcing Bar Installation Guide

Parameter	Minimum	Maximum
Drilled Hole Diameter Threaded Rod, d_h	Rod / Bar diameter (d_b) + 2 mm	2 x d_b
Drilled Hole Diameter Reinforcing Bar, d_h	d_b + 5 mm	2 x d_b
Effective Hole Depth, h	8 x d_b	-
Critical Edge Distance, e_c	3 x h	-
Critical Anchor Spacing, a_c	6 x h	-
Depth of Concrete Substrate, b_m	1.25 x h	-

More information on Anchoring Technology can be found in the Ramset™ "Specifier's Resource Book". Contact Ramset™ the concrete anchoring experts for a copy or contact your local Ramset™ Engineer.

Epoxy Grout

Part No.	Colour	Volume	Order Qty
EPGRL2	Grey	2 Litre Kit	1
EPGRL4	Grey	4 Litre Kit	1
EPGRL16	Grey	16 Litre Kit	1

Epoxy Patch

2 Part Bonding & Patching Agent



Concrete Patch & Repair



Description

Epoxy Patch is a 2-part 100% solventless epoxy resin which can be used as is or with fillers to create a range of application consistencies. Epoxy Patch has low viscosity to allow it to penetrate deep into cracks in concrete. With fillers it is transformed into a pourable or trowellable patching and grouting compound. Epoxy Patch is tough and durable, specially formulated for strong bond to concrete, brick and block.

Features & Benefits

- High flow properties – good bonding and penetration
- Bonds to dry and damp concrete
- Pre-measured kits to avoid measuring errors
- High tensile and compressive strength
- Cures at temperatures down to 5°C
- 100% solids epoxy – solvent free and negligible shrinkage
- High mechanical strength
- Resistant to vibration and dynamic loads
- Add graded sand to change consistency

Typical Properties

Appearance	Part A: Water white clear liquid Part B: Amber liquid Pale amber when mixed together
Viscosity	Flowable, pourable
Flammability	Non flammable
Solid content by weight	100%
Tensile strength	45 MPa approx.
Compressive strength	100MPa approx.
Flexural strength	50 MPa approx.
Tensile bond strength	15 MPa approx.
Modulus of elasticity	11 x 10 ³ MPa
Service temperature	-10°C to + 70°C
Heat distortion temp	90°C approx.
Hardness	> 80 Shore D
Pot life	20 - 33 mins @ 25°C

Tack free time	2 - 3 hours @ 25°C
Mix ratio	2:1 (part A:B) by volume
Min. Application temp.	5°C
Max. Application temp.	30°C
Density	1.15 kg/Litre
Water absorption*	<0.2% (10 days at 25°C)
Full cure	7 days at 25°C
Min. Thickness	1.5mm
Max. Thickness	50mm
Substrate	Concrete



Trades & Applications

	Bricklayer	Concreter	Civil Contractor	Factory Fitter	Builder
Structural Repairs to concrete & masonry	✓	✓	✓	✓	✓
Bonding new to old concrete		✓	✓	✓	✓
Patching damaged concrete		✓	✓	✓	✓

Related Products

Small Spiral Mixing Paddle (Mixtures up to 4L)

Large Spiral Mixing Paddle (Mixtures greater than 4L)

FillersFG™ Fine Grade Sand Filler

Installation

- Epoxy Patch is supplied as pre-measured kits. Where practical mix total contents of each part of 1 L and 3 L kits together to avoid measuring errors
- Ensure concrete is free from dust or contaminant that may interfere with the bond.
- Grit blast or scabble concrete to expose clean surface.
- Remove ponded water. Concrete may be damp but not wet.
- If fillers are required, add correct weight to Part A and mix with Ramset™ high shear mixing paddle.
- Pour the entire contents of the Part B container into the Part A container.
- Mix the two components together using a suitable slow-speed mixer and high-shear mixing paddle (No Fillers: Ramset™ - Small Spiral Mixing Paddle, with Fillers Ramset™ - Large Spiral Mixing Paddle), for 2 minutes, until a fully uniform colour is obtained.
- Scrape the sides of the tin and continue mixing for a further 2 minutes.

Patching:

- Remove unsound concrete by chasing and chiselling
- Wirebrush exposed reinforcement and degrease
- Use unfilled Epoxy Patch to prime concrete and reinforcement
- Apply primer coat with brush or airless spray
- Read mixing instructions 1 to 8 above
- Apply filled Epoxy Patch when primer coat is tacky
- Allow Epoxy Patch to cure for 24 hours before stripping form work

Note: If thickness is greater than 50mm, pour Epoxy Grout in layers maximum 50mm thick.

Refer to Technical Data Sheet and MSDS available from www.ramset.com.au, for precautions and further detailed installation instructions

Typical Properties of Epoxy Patch mixed with FillersFG™

Consistency	Volume of Epoxy Patch (Litres)	Weight of Fillers FG (Kg)	Yield of Mixture (Litres)	Pot Life @ 20°C (Minutes)	Compressive Strength @ 7 days (MPa)	Tensile Strength @ 7 days (MPa)	Flexural Strength @ 7 days (MPa)
Very Fluid	1	1.7	2.0	35-45	80	16	28
Fluid	1	3.4	3.0	40-50	75	14	26
Pourable	1	5.1	4.0	55-65	70	13	26
Stiff Paste	1	6.8	5.0	55-65	70	11	25
Trowellable	1	8.5	6.0	55-65	70	11	24
Dry Trowellable	1	10.2	7.0	65-70	60	10	21

Epoxy Patch

Part No.	Colour	Volume	Order Qty
EPPHL1	Amber	1 Litre Kit	1
EPPHL3	Amber	3 Litre Kit	1
EPPHL20	Amber	20 Litre Kit	1

Epoxy Putty

2 Part Repair Putty



Concrete Patch & Repair



Description

Epoxy Putty is a 2-part 100% solventless epoxy compound for repairing chips, cracks, spalls and other defects in concrete. Its putty like consistency makes it ideal for repairs where a flowable compounds will not stay in place. Epoxy Patch is tough and durable specially formulated for strong bond to concrete, brick and block.

Typical Properties

Appearance	Part A: White Thixotropic Paste Part B: Black Thixotropic Paste
Mixed Colour	Grey
Flammability	Non flammable
Solid content by weight	100%
Tensile strength	30 MPa approx.
Compressive strength	110MPa approx.
Flexural strength	25 MPa approx.
Tensile bond strength	10 MPa approx.
Modulus of elasticity	4.5 x 10 ³ MPa
Service temperature	-10°C to + 65°C
Heat distortion temp	80°C approx.
Hardness	> 80 Shore D
Pot life	30 - 40 mins @ 25°C
Mix ratio	1:1 (part A:B) by volume
Min. Application temp.	10°C
Max. Application temp.	35°C
Density	1.5 kg/Litre
Full cure	7 days at 25°C
Substrate	Concrete, Concrete Block, Brick, Steel

Features & Benefits

- Sag resistant
- High build consistency
- Suitable for filling voids with thick cross-section – low heat generated during cure
- Trowellable
- High compressive strength
- 100% solids epoxy – solvent free and negligible shrinkage
- Water proof when cured
- Equal Parts Mix Ratio - Easy to use and measure

Trades & Applications

	Brick-layer	Concrete	Civil Contractor	Factory Fitter	Builder	Plumber	Electrician
Structural Repairs to concrete & masonry	✓	✓	✓	✓	✓		
Filling gaps - fixtures & concrete		✓	✓	✓	✓	✓	✓

Related Products

- Small Spiral Mixing Paddle (Mixtures up to 4L)
- Large Spiral Mixing Paddle (Mixtures greater than 4L)

Installation

1. Ensure surfaces are clean and dry
2. Measure equal parts of Part A and Part B onto a flat board
3. Using a spatula knead the two parts together until the colour is a uniform grey with no streaks
4. Apply Epoxy Putty using gloved hand or spatula
5. Smooth surface with a trowel

Refer to Technical Data Sheet and MSDS available from www.ramset.com.au, for precautions and further detailed

Epoxy Putty

Part No.	Colour	Volume	Order Qty
EPPYL1	Grey	1 Litre Kit	1
EPPYL2	Grey	2 Litre Kit	1
EPPYL4	Grey	4 Litre Kit	1
EPPYL20	Grey	20 Litre Kit	1



Concrete Patch & Repair

Features & Benefits

- Fast Setting
- High Strength
- Durable
- Expands To Ensure Strong Bond

Description

UltraFix™ ConcreMate™ is a quick setting, high strength, shrinkage compensating cement for patching, repairing and anchoring. It is easy to mix and apply and is ideal for industrial, mining and general use. Once mixed, UltraFix™ ConcreMate™ sets in 30 minutes and cures rock hard in 1 hour. UltraFix™ ConcreMate™ expands to compensate for drying shrinkage normally found in cement based products. This prevents gaps opening up between the repair and the existing concrete and promotes a strong long lasting bond.

Typical Properties

Property	Typical Value	
	Trowellable	Pourable
Water per 1 Kg	300 ml	400 ml
Wet Density	1900 kg / m3	1800 kg / m3
Working Time	10 minutes @ 20°C	10 minutes @ 20°C
Yield / 10 Kg Pack	6.7 L	7.7 L
Yield / 25 Kg Pack	16.8 L	19.2 L
Trafficable	1 hour @ 20°C	1 hour @ 20°C
Setting Expansion	0.2%	0.2%
Net Expansion After Drying	0.125%	0.125%
Compressive Strength	1 Hour	20 MPa
	24 Hours	70 MPa

Trades & Applications

	Carpenter	Builder	Plumber	Electrician	Mech Services	Concreter
Repairing damage to concrete		✓				✓
Filling gaps between concrete & fixtures	✓	✓	✓	✓	✓	✓
Anchoring rod & bar into concrete	✓	✓				

Related Products

- Small Spiral Mixing Paddle (Mixtures up to 4L)
- Large Spiral Mixing Paddle (Mixtures greater than 4L)

Installation

1. Ensure surfaces are clean. Remove ponded water
2. Add water to an empty container
3. Gradually add Ultrafix™ Concremate™ powder to water while stirring until desired consistency is achieved
4. Continue stirring until mixture is free of lumps
5. Protect Ultrafix™ Concremate™ from rain or evaporation using impervious plastic or similar for at least 24 hours

Refer to Technical Data Sheet and MSDS available from www.ramset.com.au, for precautions and further detailed

UltraFix™ ConcreMate™

Part No.	Colour	Volume	Order Qty
830104	Grey	10kg Pail	1
830111	Grey	25kg Pail	1



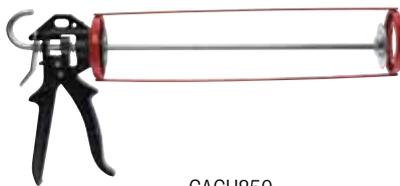
Mixing Paddles

Part No.	Description	Mixing Volume	Order Qty
SSMP	Small Spiral Mixing Paddle	Up to 4 Litres	1
LSMP	Large Spiral Mixing Paddle	Greater than 4 Litres	1

Accessories



CAGU300



CAGU850



SABGU37

Applicator Guns

Part No.	Description	Pack Size	Order Qty
CAGU300	Caulking Gun	300ml Cartridge	1
CAGU850	Caulking Gun	850ml Cartridge	1
SABGU37	Sausage Barrel Gun	600ml Sausage	1



BGUNOZ



BGUNS

Nozzles

For use with sealant barrel gun (SABGU37)

Part No.	Description	Suits	Order Qty
BGUNS	Mixed Nozzle Set (pack of 5)	SABGU37	1
BGUNOZ	Cone Nozzle Set Natural (pack of 10)	SABGU37	1

Backing Rod

Part No.	Description	Diameter x Length	Order Qty
BRPE10	Polyethylene Foam Backing Rod	10mm x 250m Roll	1
BRPE13	Polyethylene Foam Backing Rod	13mm x 50m Roll	1
BRPE15	Polyethylene Foam Backing Rod	15mm x 50m Roll	1
BRPE20	Polyethylene Foam Backing Rod	20mm x 50m Roll	1
BRPE25	Polyethylene Foam Backing Rod	25mm x 2m Roll	1
BRPE30	Polyethylene Foam Backing Rod	30mm x 2m Roll	1



FillersFG™

Fine grade sand filler for use with Epoxy Grout and Epoxy Patch

Part No.	Colour	Net Weight	Order Qty
RFLG	Tan	20kg bag	1





Pneumatic function reduces risk of plunger breaking the sausage

Weighted for comfortable use at different angles

Accessories

Description

Caulking gun for the fast application of sausage cartridges up to 600ml and sealant cartridges up to 300ml.

Specification

Weight (including Batteries)	2.5Kg
Battery Pack	13.2v / 3.0Ah
Battery Type	NiMH
Max Force	1,400Nm
Max Pressure	8.5 Bar
Charging Time	60min

Noise / Vibration Information

Sound Pressure Level:	70.5dB (A)
Sound Power Level:	83.5dB (A)

Wear Eye and Ear Protection

Vibration: The typical weighted acceleration does not exceed 2.5m/s²

Powered Caulking Gun

Part No.	Description	Order Qty
RCG600	Ramset™ Caulking Gun	1

Includes 600mm & 300mm nesting tubes, 2 x batteries, charger & plastic case.



Features & Benefits

- Pneumatic function reducing the risk of the plunger breaking the sausage and damaging the tool
- Increased speed
- Increased productivity
- Weighted for comfortable use at different angles
- Effortless dispensing

Trades & Applications

	Builder	Plumbing Contractor	Electrical Contractor	Mechanical Services	Passive Fire Specialist	Maintenance Services
Precast and tiltup concrete walls	✓	✓	✓	✓	✓	✓
Concrete ceilings & floors	✓	✓	✓	✓	✓	✓
Metal pipe penetrations	✓	✓		✓	✓	✓
Cable penetrations			✓	✓	✓	✓
Plasterboard FR wall	✓	✓	✓	✓	✓	✓



 **Ramset™**



Sales, Orders and Enquiries

Tel: **1300 780 063**

Fax: **1300 780 064**

Email: **enquiry@ramset.com.au**

Web: **www.ramset.com.au**



HEAD OFFICE

296-298 Maroondah Highway
Mooroolbark, Victoria 3138
Tel: 03 9726 6222

STATE BRANCHES VICTORIA

5/71 Victoria Crescent, Abbotsford 3067
296-298 Maroondah Highway,
Mooroolbark 3138

SOUTH AUSTRALIA

115 Sir Donald Bradman Drive,
Hilton 5033

NEW SOUTH WALES

71 Carnarvon Street, Silverwater 2128
563 Gardeners Road, Mascot 2020
3/8 Channel Road, Mayfield West 2034

ACT

5/19 Tennant Street, Fyshwick 2609

QUEENSLAND

281 Montague Road, West End 4101
153 Ingham Road, Townsville 4810

WESTERN AUSTRALIA

1/12 Colin Jamieson Drive, Welshpool 6106

ITW Construction Systems Australia Pty. Ltd. ABN 48 004 297 009 trading as Ramset™. ™Trademarks of Cetram Pty. Ltd. used under licence by Ramset™
© Copyright 2010 RAM/MACACC6/2010

In the interests of product improvement, Ramset™ reserves the right to alter product specifications as required.
Information included in this Product Guide is correct at time of printing.
It is the responsibility of the user to ensure product selected is appropriate for its intended use.
For further technical information go to www.ramset.com.au or contact Ramset™ on the numbers indicated.

