


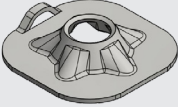



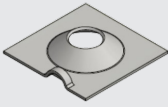
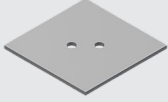

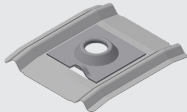
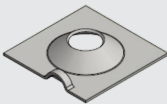






HARDROCK GROUND SUPPORT



PRODUCT SELECTION GUIDE




ALWAYS AHEAD >>>>

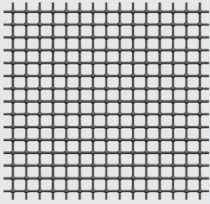
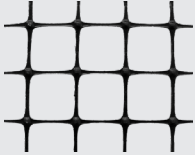
Product Family	Product Name	Product Characteristics	Product Application
Chemical Bolts 	Secura Bolt R24/ R28 	<ul style="list-style-type: none"> > Solid 22mm/25mm reinforcing bar that is threaded at one end with an R (Nova) thread profile and an integrated 36AF dome torque nut. > Standard lengths 1.8-3m, additional sizes are available upon request. > Design includes a unique paddle system to improve resin mixing providing higher bond strength in large diameter boreholes. 	<ul style="list-style-type: none"> > Permanent primary support. > Galvanized finish available for corrosive applications. > Primary use is strata reinforcement in underground hardrock mines.
	Secura DB (Debonded) 	<ul style="list-style-type: none"> > Smooth solid bar with paddle on one end. The bolt end is equipped with Nova R thread and an integrated 36AF dome torque nut. > Standard lengths 1.8-3m, additional sizes are available upon request. > Custom Alloy steel enables the smooth section of the bar between the anchor point and face plate capable of deforming thereby absorbing large amounts of energy in dynamic grounds. 	<ul style="list-style-type: none"> > Highly effective ground support element in underground installations and tunnels, subjected to large deformations in rock mass such as rock burst and squeezing rock.
Chemical Bolt Plates 	Crown Plates	<ul style="list-style-type: none"> > Crown plates are high load bearing capacity plates that provide optimal support in a range of strata 	<ul style="list-style-type: none"> > Primary use is strata reinforcement in underground mines. > Designed to transfer the load onto the rockface and secure the mesh.
	Combi Crown Plates	<ul style="list-style-type: none"> > Combi Crown plate is where a Crown plate is welded onto a strata plate. Combi plates are typically used for meshing application with Secura bolts 	<ul style="list-style-type: none"> > Combi Crown plates are available with or without a utility slot for supporting miscellaneous services. > Plates can be supplied in black steel or hot dip galvanised.
Cable Bolts 	Twin Strand Cable Bolts	<ul style="list-style-type: none"> > Cable bolt range includes continuous roll or cut to length cable bolts. Available in various lengths and bulb configurations. > Available in 15.2 mm plain and bulbed cable bolts and Superstrand 21.8mm diameter cables. 	<ul style="list-style-type: none"> > Primary use is hard rock mining. > Bulbs at the top to aid resin capsule mixing. Reinforced bulbs every 1000/500mm down the groutable length of the cable. > Tensionable to 25 tonnes

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Cable Bolt Plates	Dome Plates 	<ul style="list-style-type: none"> > High load bearing capacity plates that provide optimal support in a range of strata conditions. > Available in various sizes to suit flat/domed Barrel & Wedge type and diameter. 	<ul style="list-style-type: none"> > Dome plate applicable for single strand use, flat plate applicable for single and twin strand cables. > Designed to transfer the load onto the rockface and secure the mesh.
	Flex Plates 		
Friction Bolts 	Strata Bolt	<ul style="list-style-type: none"> > Bolts provide immediate frictional support at the face and can be installed with handheld or mechanised equipment. > Pull test collars available for QA. > For additional load bearing capacity, the bolts can be post grouted with cement grouts. > Diameter available: 34mm, 40mm 47mm 	<ul style="list-style-type: none"> > Primary use is strata reinforcement in underground mines. > Designed to transfer the load onto the rockface and secure the mesh. > > Combi Crown plates are available with or without a utility slot for supporting miscellaneous services. > Plates can be supplied in black steel or hot dip galvanised.
	HCF Bolt (High Capacity Friction Bolt)	<ul style="list-style-type: none"> > HCF Bolt increased loadperformance in heavy ground conditions. > Diameter available: 47mm 	
Friction Bolt Plates	Combi Plates 	<ul style="list-style-type: none"> > Combi plates are high load bearing capacity plates that provide optimal support in a range of strata conditions. > Combi plates are designed where a dome plate is welded onto a strata plate. > Assists in improving mine efficiency by reducing handling multiple plates > Available in: 280x300x1.8mm 	<ul style="list-style-type: none"> > Primary use is strata reinforcement in underground mines. > Designed to help prevent loose material from falling between the roof bolt patterns and provide strength to the immediate roof.
	Dome Plates 	<ul style="list-style-type: none"> > High load bearing capacity plates that provide optimal support in a range of strata conditions. > Available in various sizes to suit application. 	<ul style="list-style-type: none"> > Available in black and galvanised versions to suit installation conditions.

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Lokset Resin Capsules	<p>Classic</p> 	<ul style="list-style-type: none"> > The Lokset® resin capsule consists of a reinforced, thixotropic polyester resin mastic in one compartment and an organic peroxide catalyst separated by a physical barrier in the other. 	<ul style="list-style-type: none"> > The Lokset® resin capsule is used primarily as an anchoring medium for Secura Bolts / Secura DB and Cable Bolts > They provide roof and sidewall support in mines and tunnels. > Suitable for Jumbo installation and/or pneumatic hand bolters. > Suitable for Trajectaflex or alternative resin capsule shooter systems. > The rotation of the bolt during installation ruptures the capsule, shreds the skin and mixes the two components causing a chemical reaction and transforming the resin mastic into a solid anchor.
	<p>Advance®</p> 	<ul style="list-style-type: none"> > Lokset® Advance® Resin has all the advantages of the Lokset Classic, with extended shelf life of 12 months at 25°C reducing waste and disposal. 	<ul style="list-style-type: none"> > The Lokset® Advance® resin capsule is used as an anchoring support in strata especially where long tendon support is required.
	<p>TooSpeedie®</p> 	<ul style="list-style-type: none"> > The Lokset® Toospeedie® is a two-speed resin capsule that is available in variations and combinations from extra-extra slow, to extra fast. > Specific percentages of TooSpeedie® components are available on request. 	<ul style="list-style-type: none"> > The Lokset® Toospeedie® resin capsule is used primarily as an anchoring medium for rockbolts and long tendons. They provide roof and sidewall support in mines and tunnels. Suitable for Jumbo installation and/or pneumatic hand bolters.
	<p>X2</p> 	<ul style="list-style-type: none"> > Lokset® X2 resin capsules have been developed to enable full encapsulated mechanised resin bolting, utilising the Quick-Chem™ resin capsule insertion system. > Prefit Quick-Chem™ versions are available to increase installation efficiency and assist waste reduction. > The Lokset® X2 system incorporates two resin capsule that are joined and folded in half for packaging. Available in 1.5m X2 and 1.2m X2 lengths 	<ul style="list-style-type: none"> > The Lokset® X2 resin capsules are typically installed using development Jumbos in underground headings with an excavation height of 4–6 m, where hand insertion is not safe or practical. > The Lokset® resin capsule is used primarily as an anchoring medium for rockbolts.

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<p>Quick Chem™ System</p> 	30mm	<ul style="list-style-type: none"> > Quick-Chem™ is a patented system developed to assist resin capsule installation into boreholes for hard-rock bolting. > The Quick-Chem™ system consists of a specially designed cap (Parachute) pre-fit/ suitable for attaching to 30 mm diameter and 36 mm diameter Lokset® resin capsules. > The insertion tube consisting of a threaded R32 adaptor sleeve (that locates in the drill coupling of the Jumbo drifter in seconds) and is secured to a 3-meter length of clear, high strength, flexible plastic tubing 	<ul style="list-style-type: none"> > Safe; enables resin capsule to be inserted in bolt hole from remote location under supported ground. > Quick; no requirement for lifting baskets or manual resin insertion, capsule can often be placed in insertion tube from operator's cab. > Efficient; up to 200-hole insertions can be achieve from each tube. > Easy to use; clear tubing indicates position of resin capsule.
	36mm		<ul style="list-style-type: none"> > Robust; strong and flexible insertion tube. > Versatile; can be used with most drill rigs such as Robolters, Jumbo's, Boltec etc and in most rock bolting situations. > Adaptable; can be inserted through mesh and brokenground. > Reliable; assists the resin capsule in reaching the back of the hole undamaged.
<p>Hybrid Bolts</p> 	MY Bolt® (Minova Yielding Bolt)	<ul style="list-style-type: none"> > MY Bolt is an easy to install mechanical combination bolt. Enables immediate support. > Yield design engineered to effectively absorb exceptionally high dynamic loads. > Available in 2.4M & 3M versions. Additional lengths available to suit mine specifications. > Available in HDG version to extend service life 	<ul style="list-style-type: none"> > Easy installation with standard Jumbo attachments. > Immediate load bearing capacity on installation. > High load bearing capacity without use of grouts or resin. > A versatile bolt designed to accommodate various rockconditions, including fractured, highly fragile, robust, and seismic environments. > No resin or grout application is necessary, streamlining the installation process considerably. It can be seamlessly into wet and fragmented ground without encountering any complexities or impendments.

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Self Drilling Anchors	<p>Carbothix</p> 	<ul style="list-style-type: none"> > Carbothix consists of two resin/hardener components, A and B. > After the two components have been effectively mixed, the resulting viscous emulsion will not absorb any water. 	<ul style="list-style-type: none"> > When intensively mixed together via a specialised static mixer from the metered pumping system the mixture thickens very quickly to form a tough interpenetrating network of nonporous elastic silicate or organomineral resin. > This minimises leakage from the bolt hole, displaces drilling water helping to ensure full encapsulation.
	<p>28, 32 and 38</p> 	<ul style="list-style-type: none"> > The self-drilling anchor system is a bolting solution that enables drilling and grouting in one operation. > The anchor bar features a hollow bore for flushing or simultaneous drilling and grouting. Fitted with a left-hand or right-hand R-thread for easy extension and connection to conventional rock drilling equipment. 	<ul style="list-style-type: none"> > Primary use is strata reinforcement as alternatives to conventional rock bolting systems. > When coupled together, SDA's provide an efficient alternative to long tendon support. > Ideal for use in poor ground conditions and spiling applications.
Mesh	<p>Steel</p> 	<ul style="list-style-type: none"> > Multiple configurations of mesh are available including numerous sheet sizes, apertures, wire diameters and black or galvanised wire. 	<ul style="list-style-type: none"> > Primary use in metal mining and tunneling development used in conjunction with ribbed and friction bolts. > Mesh provides surface support coverage for loose rock.
		<ul style="list-style-type: none"> > Ausro straps are yielding straps which allow the straps to yield under load conditions allowing better load distribution between bolts. 	<ul style="list-style-type: none"> > Ausro straps allow for larger deformation and load distribution as the longitudinal members are able to slip through the looped crossmembers, ensuring containment even with large strata movements. > Applicable in unstable ground conditions where seismic activity is present, to improve surface support and to ensure better connection between the surface support and bolts.

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Mesh	GFRP 	<ul style="list-style-type: none"> > GFRP mesh provides surface support coverage for loose rocks between installed bolts. This mesh complies with standard grid applications while providing the added benefits of durability and cuttability. > The high load capacity at each joint, comparable to welded steel mesh, is unique and makes the design of GFRP grid reinforced RC structures a viable option. > GFRP Mesh is available FRAS rating upon request. 	<ul style="list-style-type: none"> > Primary use is roof support and shotcrete reinforcement in underground mines and tunnels.
	Tensar® 	<ul style="list-style-type: none"> > Tensar Biaxial Geogrid® mesh is a stiff, lightweight and monolithic geogrid mesh made from flame retardant polypropylene. > The mesh has integral junctions that give strength in two directions and a rectangular rib cross-section with square edges. > Available in black or white UV Inhibitor. 	<ul style="list-style-type: none"> > Primary use is roof and rib control and soft bottom reinforcement. > Flexible and can be cut according to the mine site requirements.

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SOLUTIONS



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