

# Steel Accessories Product Data



Solutions from Materials Technology



# Steel Accessories

Minova is the World's leading design, manufacture and supplier of steel and chemical strata support components for the underground mining, tunnelling and civil construction industries. In addition to a complete range of steel and chemical components, Minova can also provide an extensive and complimentary range of accessories for steel strata support requirements.

Minova's range of steel product accessories includes:

<b>Strata Strap</b>	<ul style="list-style-type: none"><li>• W shaped steel mining strap available in various lengths</li></ul>
<b>Mechanical Anchors</b>	<ul style="list-style-type: none"><li>• Expansion shell anchors available for a range of rock bolt and hole diameters</li></ul>
<b>Mine Nuts</b>	<ul style="list-style-type: none"><li>• Rock bolt nuts available for a range of bolt sizes and threads</li></ul>
<b>Hanger Nuts</b>	<ul style="list-style-type: none"><li>• A rock bolt nut and hanger loop assembly to enable hanging of services</li></ul>
<b>Dome Ball Washers</b>	<ul style="list-style-type: none"><li>• Domed washers used to assist in the alignment of rock bolts with plates</li></ul>
<b>Couplings</b>	<ul style="list-style-type: none"><li>• Round or hexagonal steel tubes to join double ended rock bolts</li></ul>
<b>Eye Bolts</b>	<ul style="list-style-type: none"><li>• Rock bolts with a loop formed and welded on one end</li></ul>
<b>Service Hangers</b>	<ul style="list-style-type: none"><li>• Multiple hook configurations available</li></ul>
<b>L Pins</b>	<ul style="list-style-type: none"><li>• L shaped rock bolts available with threaded ends</li></ul>
<b>Pull Collars</b>	<ul style="list-style-type: none"><li>• A round collar for use with Strata Bolts to enable pull testing</li></ul>



# Steel Accessories

## General Information

Product	General Description	General Features
Strata Strap	W shaped steel strap used to provide additional surface support between rock bolts, custom sizes available	280mm wide, supplied in various lengths with multiple holes, available black or galvanised
Mechanical Anchors	Mechanical anchors are used to provide immediate point anchored load bearing support to installed rock bolts. Anchors are attached to the inserted end of rock bolts and are set in place by rotating the bolt to draw the anchor through the wedges. Mechanical anchors are available to suit various thread forms. Typical hole sizes used with mechanical anchors are 32mm and 45mm diameter.	Load bearing capacity can be dependent on ground type. Anchors are designed to be installed in specific hole diameters. Oversized holes diameters can result in lower than acceptable anchorage. Undersized holes can result in anchor damage during installation resulting in unacceptable or no load. Mechanical anchor bolts will generally lose load over time and should not be considered long term support. Can be supplied black or galvanised.
Mine Nuts	Plain rock bolt nuts can be supplied separately to enable additional plating of the bolts and other uses.	Various nut size and thread form combinations can be supplied to suit any Minova rock bolt available. Can be supplied black or galvanised.
Hanger Nuts	A rock bolt nut and hanger loop assembly to enable hanging of services from previously installed rock bolts	Various nut size and thread form combinations can be supplied to suit any Minova rock bolt available. Can be supplied black or galvanised.
Dome Ball Washers	Domed washers are used to assist in the alignment of rock bolts with rock bolt plates during installation on irregular surfaces or at angles of up to 18°. Used to transfer load from the bolt to the plate, and assist during installation by reducing the probability of the bolt thread catching on the inside edge of the plates hole.	Most suitable for use with dome shaped plates. Can be supplied separately, and are typically supplied on most rock bolts. Available black, galvanised or coloured to indicate bolt length.
Couplings	Round or hexagonal steel tubes used to join double ended rock bolts to enable longer length bolting in confined spaces.	Couplings are available with a range of thread forms to suit any Minova rock bolt. Can be supplied black or galvanised.
Eye Bolts	Rock bolts with a loop formed and welded on one end, and a thread rolled onto the other end. Typically used with a mechanical anchor to enable instant use.	Available in various diameter bars and thread forms. Can also be slotted if required. Inside diameter of eye loop is 75mm. Can be supplied black or galvanised.
Service Hangers	Hangers incorporating multiple hook configurations that are typically attached to mesh or rock bolts to enable hanging of multiple service lines including water and compressed air.	Can be supplied black or galvanised.
L Pins	L shaped rock bolts available with threaded ends	Available in various diameter bars and thread forms. Can be supplied black or galvanised.
Pull Collars	A round collar for use with Strata Bolts to enable pull testing	Available to suit all diameter Strata Bolts and can be supplied separately or included on specific number of bolts per pack. Available black or galvanised.

## Technical Data

Product Code	Description	Steel Grade	Dimensions (mm)	Strength	Unit Weight (kg's)	Units per Pack
SS305142	Strata Strap 280mm x 3000mm Black	HA1	280x3000x1.9	N/A	13.0	50
SS305164	Strata Strap 280mm x 3000mm Gal	G2Z275	280x3000x1.9	N/A	13.5	50
SS305143	Strata Strap 280mm x 4000mm Black	HA1	280x4000x1.9	N/A	17.4	50
SS305167	Strata Strap 280mm x 4000mm Gal	G2Z275	280x4000x1.9	N/A	18.0	50
SS305144	Strata Strap 280mm x 5000mm Black	HA1	280x5000x1.9	N/A	21.7	50
SS305168	Strata Strap 280mm x 5000mm Gal	G2Z275	280x5000x1.9	N/A	22.5	50
SS305145	Strata Strap 280mm x 6000mm Black	HA1	280x6000x1.9	N/A	26.1	50
SS305169	Strata Strap 280mm x 6000mm Gal	G2Z275	280x6000x1.9	N/A	27.0	50

  

Product Code	Description	Typical Hole Diameter (mm)	Typical Load		Anchor / Wedge Length (mm)	Unit Weight (kg's)	Units per Box
			Yield Force	Tensile Force			
ES402202	Mechanical Anchor M16x32 RHT Black	32	6 MT	9.1 MT	98 / 57	0.22	50
ES402201	Mechanical Anchor M20x32 RHT Black	32	13 MT	19.9 MT	98 / 57	0.22	50
ES402203	Mechanical Anchor M24x43 RHT Black	45	12.8 MT	19.7 MT	119 / 76	0.46	20

  

Product Code	Description	Steel Grade	Height (mm)	Width (mm)	Unit Weight (kg's)	Units per Pack
NN301425	Nut Plain R24 LHT Black	Grade 8	32	36	0.20	N/A
NN301424	Nut Plain R24 LHT Gal	Grade 8	32	36	0.20	N/A
MN301204	Nut Plain M24 RHT Black	Grade 8	32	36	0.20	N/A
NN301482	Nut Plain R27 Domed LHT Black	Grade 8	40	46	0.29	N/A
NN301483	Nut Plain R27 Domed LHT Gal	Grade 8	40	46	0.29	N/A
NN301490	Nut Hanger R27 RHT Black	Grade 8	105	55	0.35	N/A
NN301491	Nut hanger R27 RHT Gal	Grade 8	105	55	0.35	N/A
WA303100	Dome Ball 24 Black – 25mm dia hole	N/A	22	47 dia	0.17	N/A
WA303150	Dome Ball 24 Gal – 25mm dia hole	N/A	22	47 dia	0.17	N/A
EB203806	Eye Bolt M16x600 RHT Black	1045				N/A
EB203830	Eye Bolt M24x600 RHT Black	1045				N/A
EB203951	Eye Bolt R24x600 RHT Black	1045				N/A
AC905022	Pull Collar 47 Gal	SG Cast				N/A
AC905024	Pull Collar 34 Gal	SG Cast				N/A



## Product Service Support

Minova provides a full service support package to customers, including underground pull testing, operator awareness training, underground audits and stock control assistance. Each service package is developed to suit the individual customers requirements.

All aspects of Minova's product service support service is provided by experienced trained and qualified personnel.

## Additional Information

For additional information relating to any aspect of this product specification data, including product performance, quality, testing, specification, range, availability etc. please contact your nearest Minova office, or email: [technicalsupport@minovaint.com](mailto:technicalsupport@minovaint.com)

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