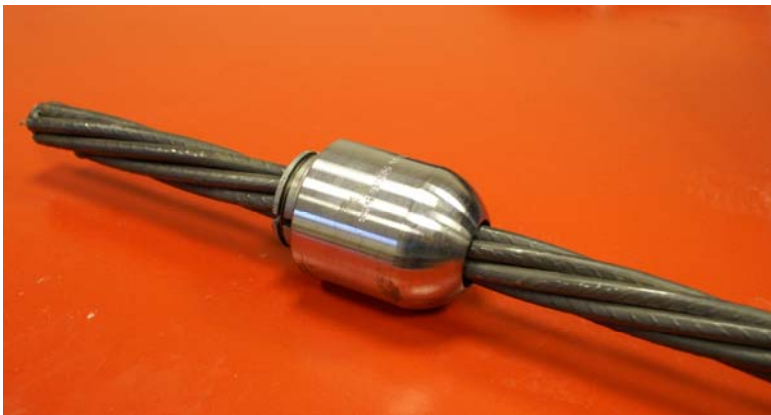
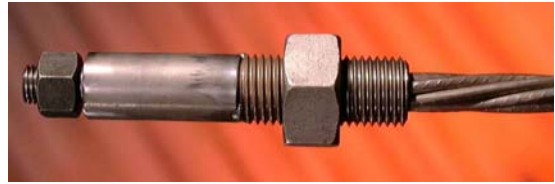




Osborn Strata Products





Osborn Strata Products



Company Presentation

Based in Rotherham, England, Osborn Strata Products is a division of Osborn Metals Limited specialising in the manufacture of strata reinforcement equipment.

Since 1989 Osborn has been providing bolts and accessories to mines across the world and have become acknowledged as an innovative, high quality and cost efficient supplier. We are particularly effective in those areas where strata conditions are at their most demanding.

We also design and assemble a unique type of plastic mesh face salvage kit, which our engineers will help install at the working face if required.

Our manufacturing policy enables us to meet the tightest of delivery deadlines and we are able to back up our products with trained sales and service engineers. Free on-site training for our bolt installation and usage is also available.

Many of our products are patented but we are continuously researching and developing new ideas and products as well as seeking to improve our manufacturing techniques. This enables us to retain our position as the market leader.

Osborn Strata Products is accredited to ISO 9002 and appropriate industry standards.



Osborn Strata Products



Reflex Flexible Bolt

Mid length flexible tendon for high performance reinforcement close to the face

- Very high shear and tensile strength
- Optimum bond strength / system stiffness
- Easy to install at or near the face
- Full column bonding with standard resin
- Fixed or pre-tensionable

Specifications:

Ultimate tensile strength	50 tonnes
Shear strength (RMT test)	38 - 43 tonnes
Shear strength (DMT test)	57 tonnes
Bolt diameter	23 mm
Recommended hole diameter	27 - 32 mm
Typical length	up to 8 metres

Fitted with full strength end termination – threaded, plain or barrel & wedge system.

**PATENT OR COPYRIGHT PROTECTED
THROUGHOUT THE WORLD**



Osborn Strata Products



Reflex Lifting Bolt

Specifications:

Gives greater flexibility compared to rigid lifting bolts

Lifting capacity (5:1 safety factor)	6 tonnes
Maximum lift angle (to vertical)	45 degrees
Bolt diameter	23 mm
Recommended bit diameter	27 mm
Typical length	1.8 to 5 m

Fully approved No. UKC 252G

To be installed using standard resins

Installation equipment:

Standard drilling machines with installation adaptor



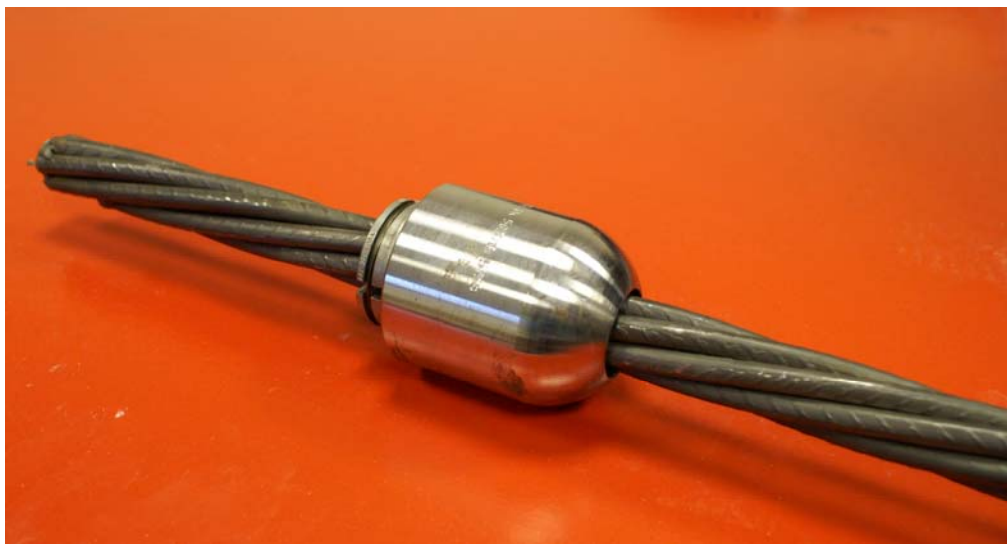
Osborn Strata Products



Pre-tensionable Reflex Bolt

Mid length high performance flexible tendon fitted with a barrel & wedge end termination.

- Very high shear and tensile strength
- Optimum bond strength / system stiffness
- Easy to install at or near the face
- Full column bonding with standard resin and grouts
- Pre-tensionable
- World wide patented protection



Osborn Strata Products



Former Reflex Bolt Pre-Tensionable Assembly



Assembly: blue grout tube and black thin breather tube go through a separate hole of the washer plate.



Osborn Strata Products



Pre-tensionable Reflex Bolt



Specifications:

❖ Ultimate tensile strength	55 - 60 tonnes
❖ Shear strength (RMT test)	38 - 43 tonnes
❖ Shear strength (DMT test)	57 tonnes
❖ Barrel & wedge end load	53 - 57 tonnes
❖ Bolt diameter	23 mm
❖ Recommended hole diameter	27 - 32 mm
❖ Typical length	2 to 8 metres
❖ Pre-tension range	5 to 30 tonnes

PATENT OR COPYRIGHT PROTECTED



Osborn Strata Products



Birdcaged Cable Bolts

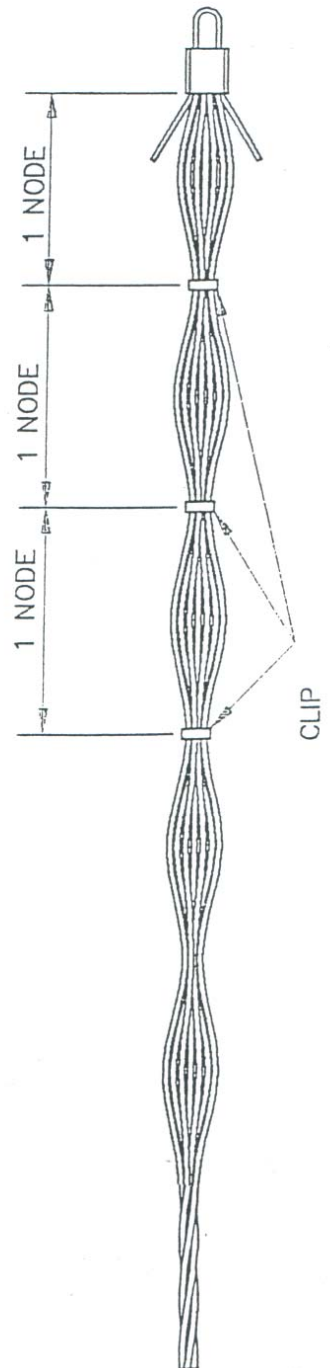
Birdcage geometry for optimum bond stiffness

- Meets current BSI Standard
- Tailored and packaged to your requirements

Specifications:

	Single	Double
Ultimate tensile strength (t)	30	60
Shear strength (t)	18	37
Diameter (mm)	38	48
Recommended hole diameter (mm)	43	55
Typical length	5 to 10 metres	
Termination	barrel & wedge anchor or trussing systems	

Suitable for use with cementitious grout or pumpable resin.





Osborn Strata Products



Mini - Cage Cable Bolts

Clear flow bulb construction for better grout migration

- Meets current BSI Standard
- Tailored and packaged to your requirements

Specifications:

	Single	Double
Ultimate tensile strength (t)	30	60
Shear strength (t)	18	37
Diameter (mm)	28	41
Recommended hole diameter (mm)	32	45
Typical length	5 to 15 metres	
Termination	barrel & wedge anchor or trussing systems	

Suitable for use with cementitious grout or pumpable resin.



Osborn Strata Products



Model GB7 C/M Grout Pump





Osborn Strata Products



Model GB7 C/M Grout Pump

The GB7 C/M Grout Pump is a high performance robust pump specifically designed to meet the rugged and demanding conditions within the mining industry.

Various mixtures such as grout, water / cement, gunite-type materials are delivered via either a 25 mm (1 inch) or 32 mm (1 ¼ inch) hose.

The design and modern manufacturing techniques used ensure the long life of the pump.

Specifications:

The following specifications are an extract of tests performed by a leading Australian University.

	Metric	Imperial
Air consumption		
• Water only at 60 P.S.I	51 M ³ / H	30 CFM
Pump performance		
• Rate of Pumping - Water	53L / M	12 GPM
• Rate of pumping - Grout	23 L/ M	5 GPM
Maximum Pump Pressure	14 MPA	2000 PSI

**Osborn Strata Products is the official distributor of
Model GB7C/M Grout Pumps in Europe.**





Osborn Strata Products



Reflex Tensioning Jack



Pre-tension Reflex Bolts up to 25 tonnes

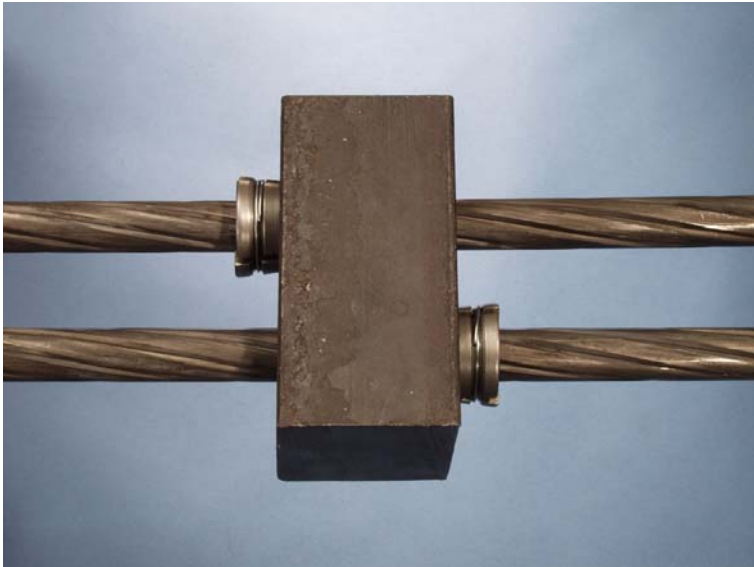
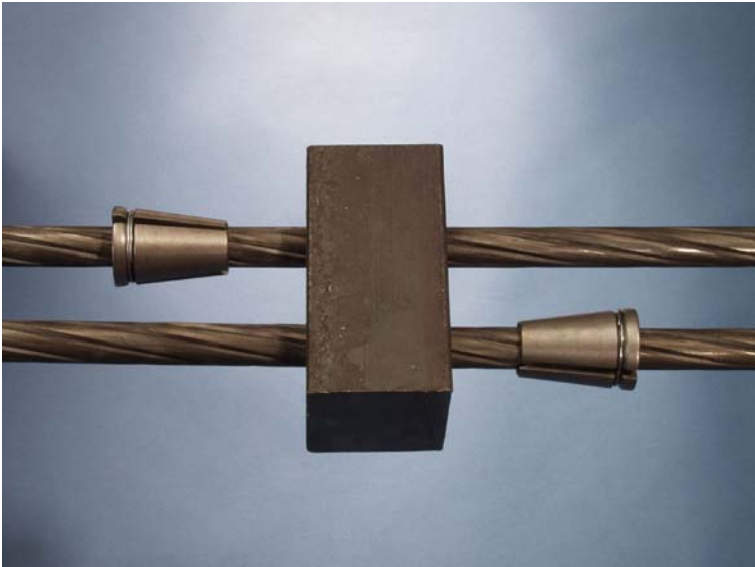




Osborn Strata Products



Cable Bolt Trussing Blocks

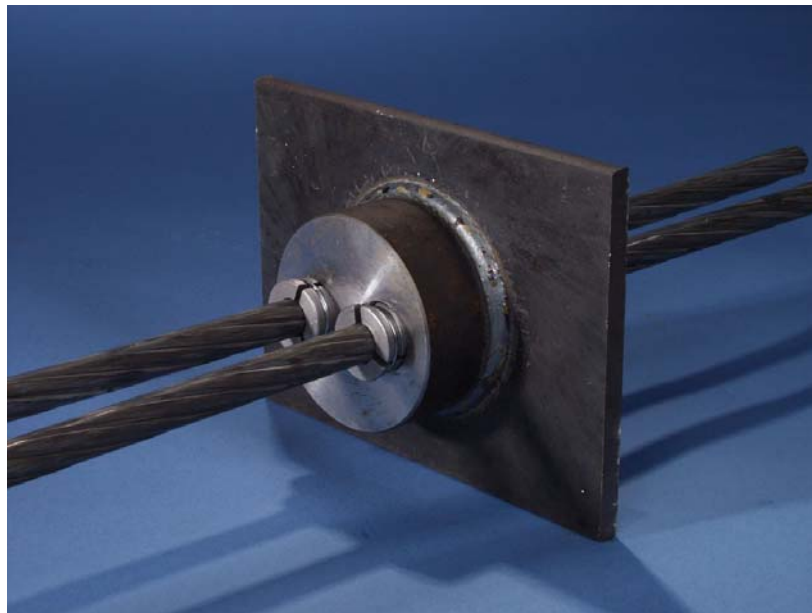




Osborn Strata Products



Cable Bolt End Termination
Barrel & Wedge System

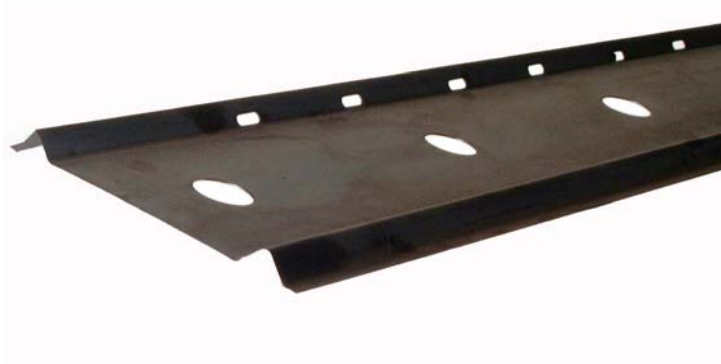


Osborn Strata Products



W Straps

Applications: Support of mine roofs and rock walls in conjunction with rock bolts.



Strong	Max. strength with min. weight
Safe	Mill edge steel
Flexible	Follows the contours of the rock face
Customised	Made to measure

- 280 mm **wide**
- 1.8 mm **thick**
- Up to 7000 mm **long**

Domed Indicator & Butterfly Plates

Sizes:

Domed Indicator Plates

- 100 x 100 mm
- 110 x 110 mm
- 150 x 150 mm

Thickness: 8, 10 and 12 mm

Load range: up to 55 tonnes

Butterfly Plate

300 mm x 280 mm x 1.8 mm



Osborn Strata Products



20t Flexible Strap

20t Flexible Strap designed to support bulking roof and ribs.

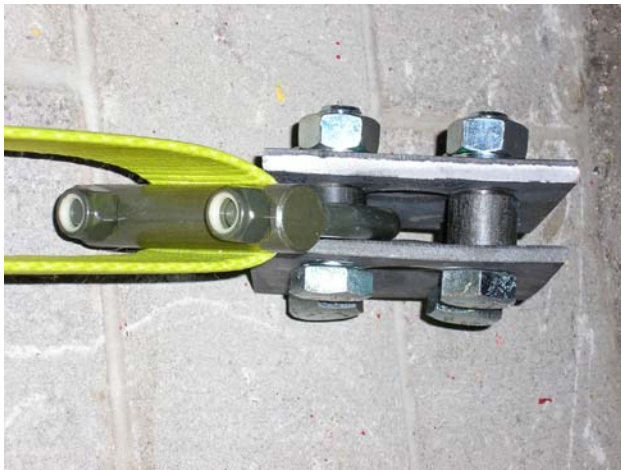
- This is a **very light weight tensionable system** that can be installed in heavily bolted and confined conditions.
- Straps can be **cut to length on site** using simple knives or scissors.
- All Straps are supplied with **anchor brackets** and **tensioning buckles**.



Osborn Strata Products



20t Flexible Strap

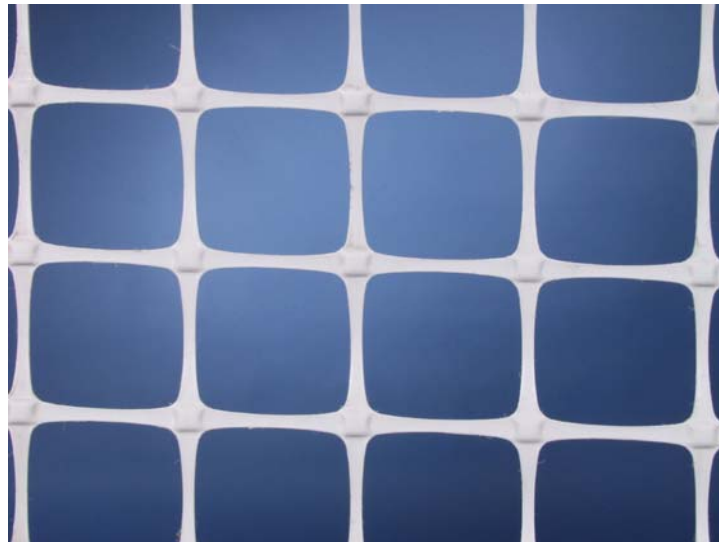


Osborn Strata Products



OSBORN MM 20 Mining Mesh

Osborn Strata Products supply high strength fire resistant bi-axial polypropylene mining mesh, which is used to reinforce mine roadways.



Benefits:

- Lightweight
- Safe to handle
- Cuttable with simple tools
- Cuttable with power loaders
- Resistant to solutions of salts, acids and alkalis
- Not susceptible to hydrolysis

The preferred alternative to conventional metallic meshes for containment of roof debris and restraint of ribs.



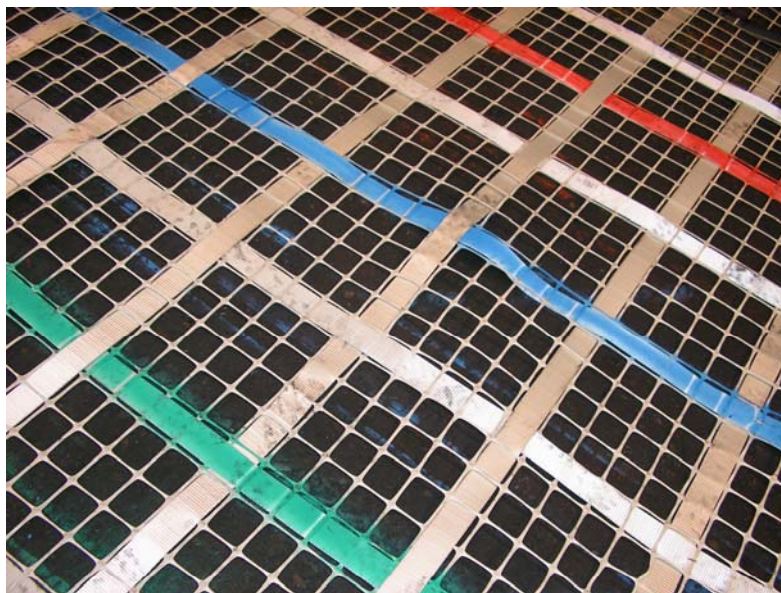
Osborn Strata Products



General purpose reinforcement webbing

**Plastic mesh reinforced with FRAS (Fire Resistant Anti-Static)
5t or 10t breaking load to provide up to 60t/m² load bearing**

- Mesh can be supplied in
 - ❖ panels,
 - ❖ cut pieces or
 - ❖ full 50m x 4m rolls.
- Typical mesh salvage panels 26 x 14 meters
- Tailor-made to suit customer needs.

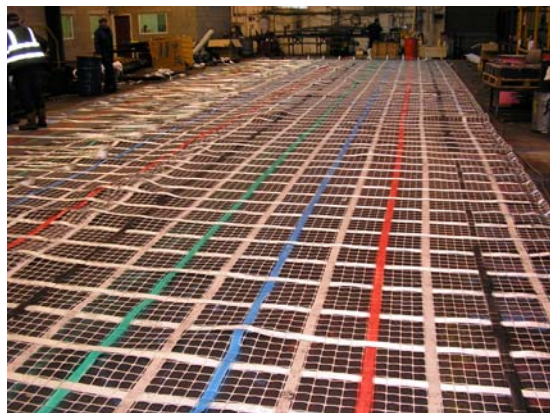
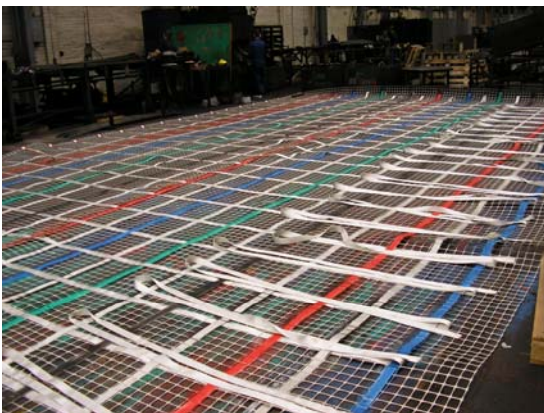
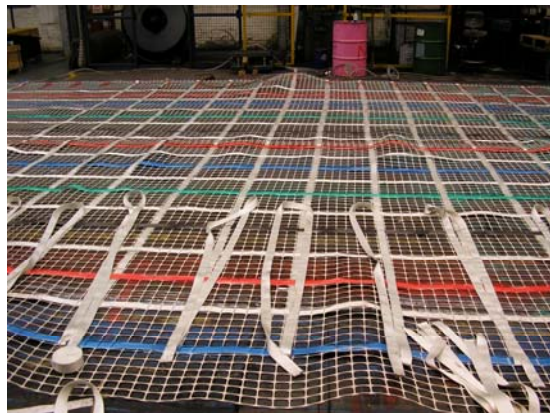
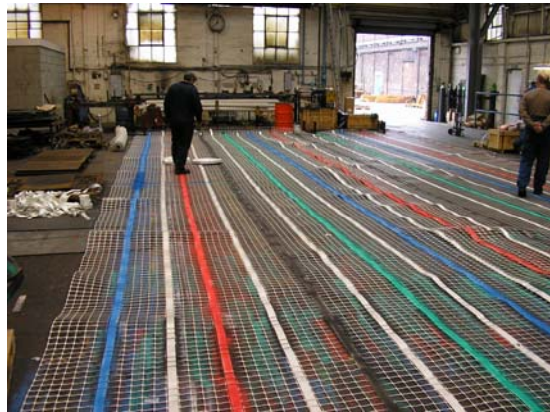




Osborn Strata Products



General purpose reinforcement webbing





Osborn Strata Products



General purpose reinforcement webbing





Osborn Strata Products



General purpose reinforcement webbing



Osborn Strata Products



OSBORN MM 20 Mining Mesh used in face salvages

Osborn Strata Products design and manufacture long wall face salvage systems.

- The systems are **tailor - made to your requirements** using webbing, threaded bars and wire ropes as additional reinforcement.
- **Quick and easy to install**
- **Safe to handle**
- Installation can be supervised by our own engineers.

