

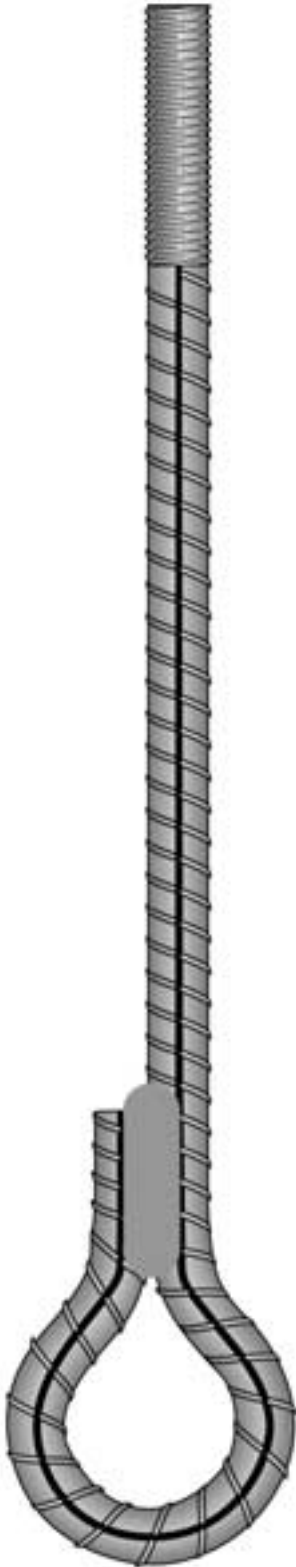
INDEX SECTION E



MISCELLANEOUS PRODUCTS

| PRODUCT GROUP | PRODUCT | PRODUCT CODE PREFIX | DATA SHEET |
|-----------------------------|----------------------------|---------------------|------------|
| HANGER SYSTEMS | 24mm Eye Bolts | EB4 | E1.1 |
| | 20mm Eye Bolts | EB2 | E1.2 |
| | 16mm Eye Bolts | EB6 | E1.3 |
| | Hanger Nuts | MH79 | E1.4 |
| | M Clips | MH80 | E1.5 |
| | Service Line Clips | MH80 | E1.6 |
| | Service Line Brackets | MH80 | E1.7 |
| CHEMICAL ANCHOR ACCESSORIES | Chemical Anchor Installers | PLASINST | E1.8 |
| | Support Cubes | FOAM | E1.9 |
| SCALING BARS | Scaling Bars - Aluminum | SCALBAR | E1.10 |





Two types of 24mm Eye Bolts are available for hanging of light services in mining applications.

GENERAL FEATURES

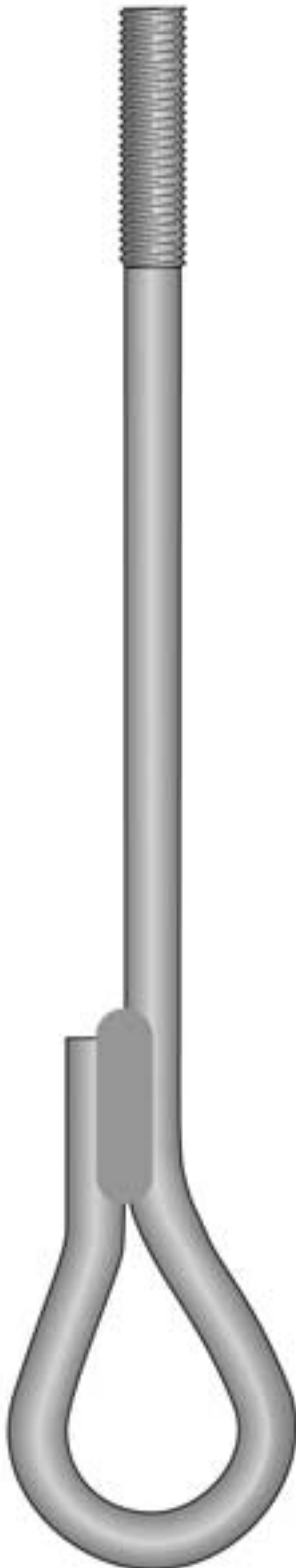
- Available with a M24 x 150mm long rolled thread to accept 24mm expansion shell mechanical anchor, refer data sheet B4.9, or slotted 150mm long x 2.5mm wide to accept a steel wedge, refer data sheet B4.8.
- Inside diameter of eye is 75mm.
- Nominated bolt length is measured from under eye to the end of the bolt.
- Feed material around eye is lapped back along the bolt shank for a minimum of 50mm before being fillet welded on both sides to AS1554.1-1991.
- Manufactured from mild steel grade.
- May be supplied hot dipped galvanized. Refer to section H for specifications.

PACKAGING

Bundles of 10 units or larger quantities supplied on pallets.

NOTES

- Only DSI Arnall rock bolt components should be used to enable the optimum performance of the system to be obtained.
- DSI Arnall Mining Products Division is Quality Assured to AS 9002, License No.406.



20mm Eye Bolts are available for hanging of light services in mining applications.

GENERAL FEATURES

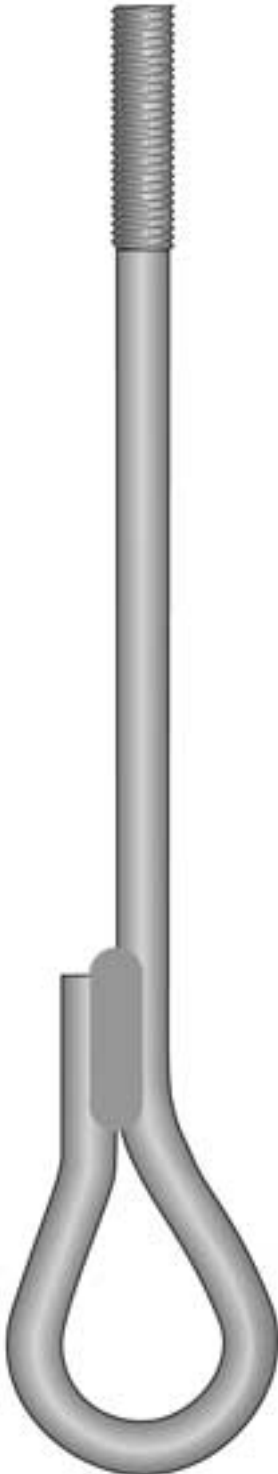
- Available with a rolled thread M20 x 150mm long to accept a 20mm expansion shell mechanical anchor, refer data sheet B4.9.
Note: The slotted option as per 24mm Eye Bolts is **not** available in 20mm Eye Bolts.
- Inside diameter of eye is 75mm.
- Nominated bolt length is measured from under the eye to the end of the bolt.
- Feed material around eye is lapped back along the bolt shank for a minimum of 50mm before being filet welded on both sides to AS1554.1-1991.
- Manufactured from round bar feed in AS1442/U1040 material.
- May be supplied hot dipped galvanized. Refer to section G for specifications.

PACKAGING

- Bundles of 10 units or larger quantities supplied on pallets.

NOTES

- Only DSI Arnall rock bolt components should be used to enable the optimum performance of the system to be obtained.
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16mm Eye Bolts are available for hanging of light services in mining applications.

GENERAL FEATURES

- Available with a rolled thread M16 x 150mm long to accept 16mm expansion shell mechanical anchors, refer data sheet B4.9.
Note: The slotted option as per 24mm Eye Bolts is **not** available for 16mm Eye Bolts.
- Inside diameter of eye is 75mm.
- Nominated bolt length is measured from under the eye to the end of the bolt.
- Feed material around eye is lapped back for a minimum of 50mm along the bolt shank before being fillet welded on both sides to AS1554.1-1991.
- Manufactured from round bar feed in As1442/U1040 material.
- May be supplied hot dipped galvanized. Refer to section G for specifications.

PACKAGING

- Bundles of 10 units or larger quantities supplied on pallets.

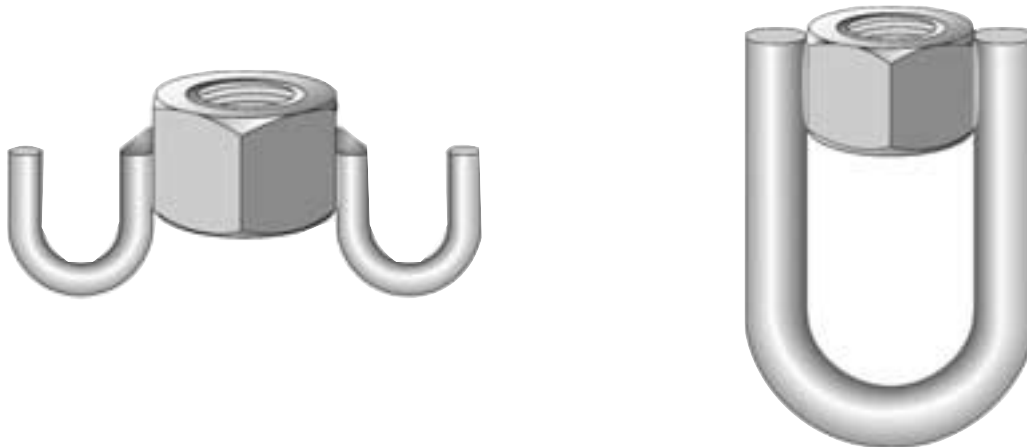
NOTES

- Only DSI Arnall rock bolt components should be used to enable the optimum performance of the system to be obtained.
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A range of Hanger Nuts are available for hanging of light services from rock and roof bolts in mining applications.

GENERAL FEATURES

- Standard product manufactured from 24 mm roof bolt nuts as per data sheet B4.3.
- A range of external forms, or configurations, are available to provide flexibility to suit various application.
- Additional hanger forms and nut sizes available by negotiation.
- Corrosion protection can be provided by zinc plating to AS1789 - 1984.



PACKAGING

- Hanger Nuts are normally supplied in hessian bags.

NOTES

- Only DSI Arnall rock bolt components should be used to enable the optimum performance of the system to be obtained.
- For details of Hanger Nuts, load limitations, service factors and other options please contact your DSI Arnall Technical Sales Engineer.
- DSI Arnall Mining Products Division is Quality Assured to AS 9002, License No.406.

Two types of M Clips are available for hanging of light services from W Strap in mining applications.

GENERAL FEATURES



- M Clips, when placed over the edge of the W Strap vee, are self locking and are used for suspension of light services.
- The 20mm wide M Clip is usually used with cord and can suspend loads up to 20kg when placed adjacent to a roof bolt.
- The 32mm wide M Clip includes a 40mm x 7mm wide slot for use with light chain for suspension of services.

- Recommended maximum loads to be carried are:-
20mm wide clip - adjacent to bolt is 20kg
300mm from bolt is 15kg
600mm from bolt is 10kg

- 32mm wide clip - adjacent to bolt is 40kg
300mm from bolt is 30kg
600mm from bolt is 20kg

Loads are valid for static load only with no allowance being made for shock load or vibration.



N.B. M Clips must be pushed fully home against the edge of the W Strap.

- Corrosion protection is provided by 'dip' painting as standard. i.e. 20mm painted yellow and the 32mm painted white.

PACKAGING

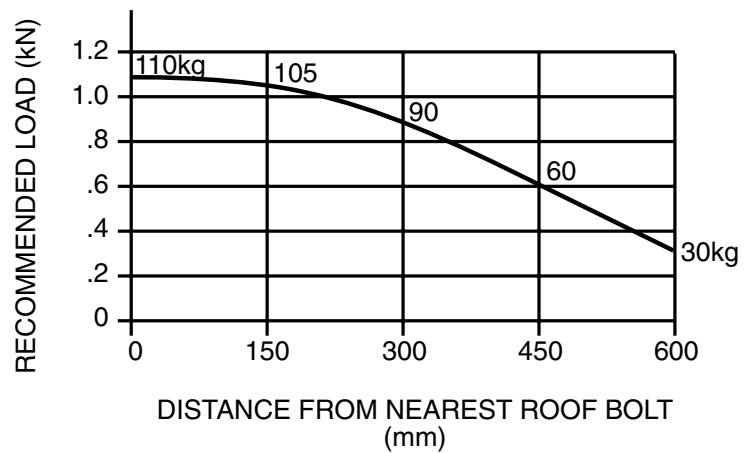
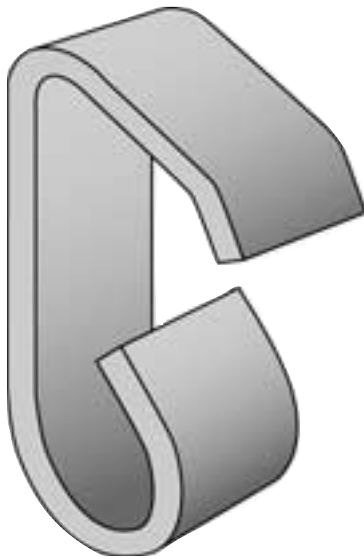
- Hanger clips are normally supplied in hessian bags.

NOTES

- Only DSI Arnall rock bolt components should be used to enable the optimum performance of the system to be obtained.
- For details of M Clips, load limitations and service factors please contact your DSI Arnall Technical Sales Engineer.
- DSI Arnall Mining Products Division is Quality Assured to AS 9002, License No. 406.

GENERAL FEATURES

- Service Line Hanger Clips are used in conjunction with service line slots which are pre-punched in W Straps vee's.
- The clips are used for suspension of light mine services.
- Recommended loads are as per graph. A safety factor of 6:1 has been applied to failure load.
- Loads are valid for static loads only with no allowance being made for shock load or vibration.
- Corrosion protection can be provided by zinc plating to AS1789 - 1984.



PACKAGING

- Service Line Clips are normally supplied in hessian bags.

STRAP WITHOUT LIP



STRAP WITH LIP



HANGER TO STRAP ATTACHMENT



CHAIN ATTACHMENT EQUAL LOADING



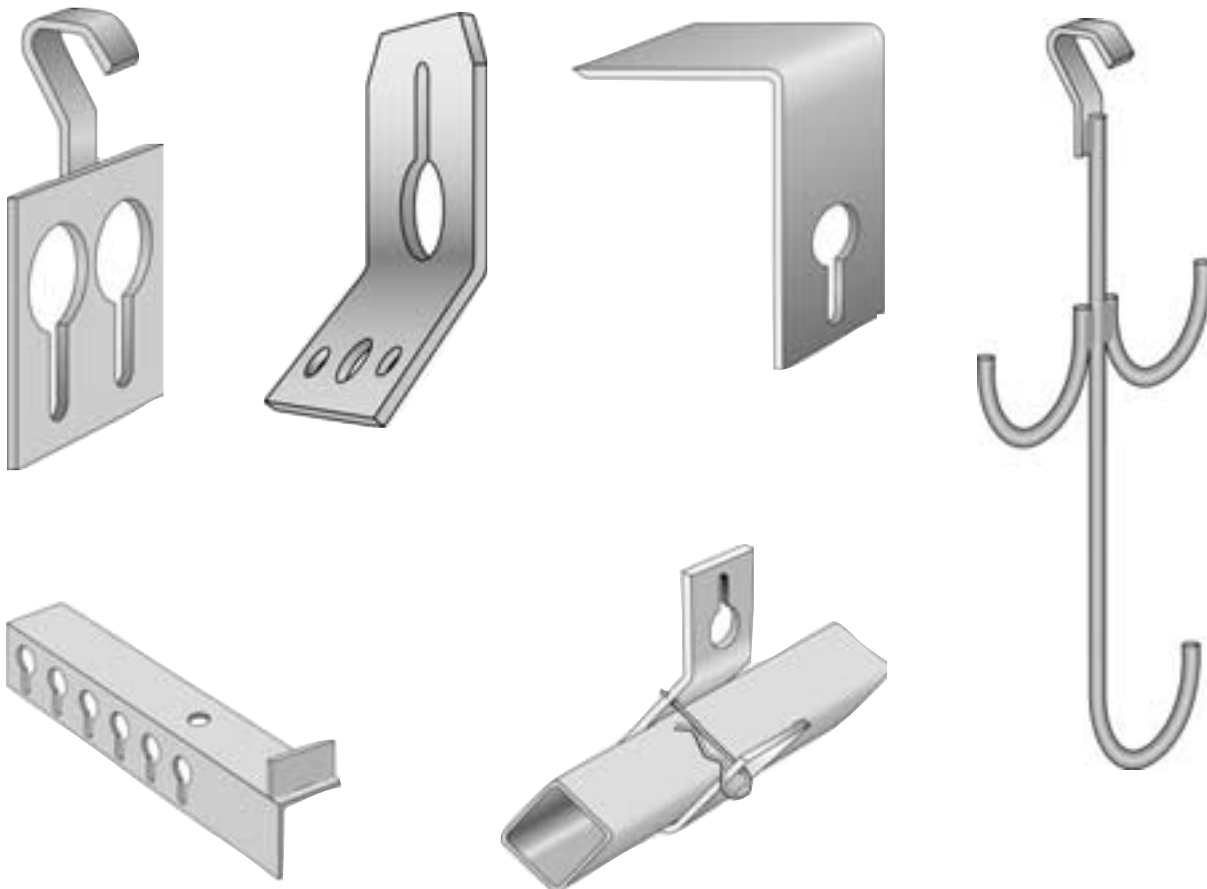
NON VERTICAL LOADS

NOTES:

- For details of Service Line Clips, load limitations and other factors please contact your DSI Arnall Technical Sales Engineers.
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GENERAL FEATURES

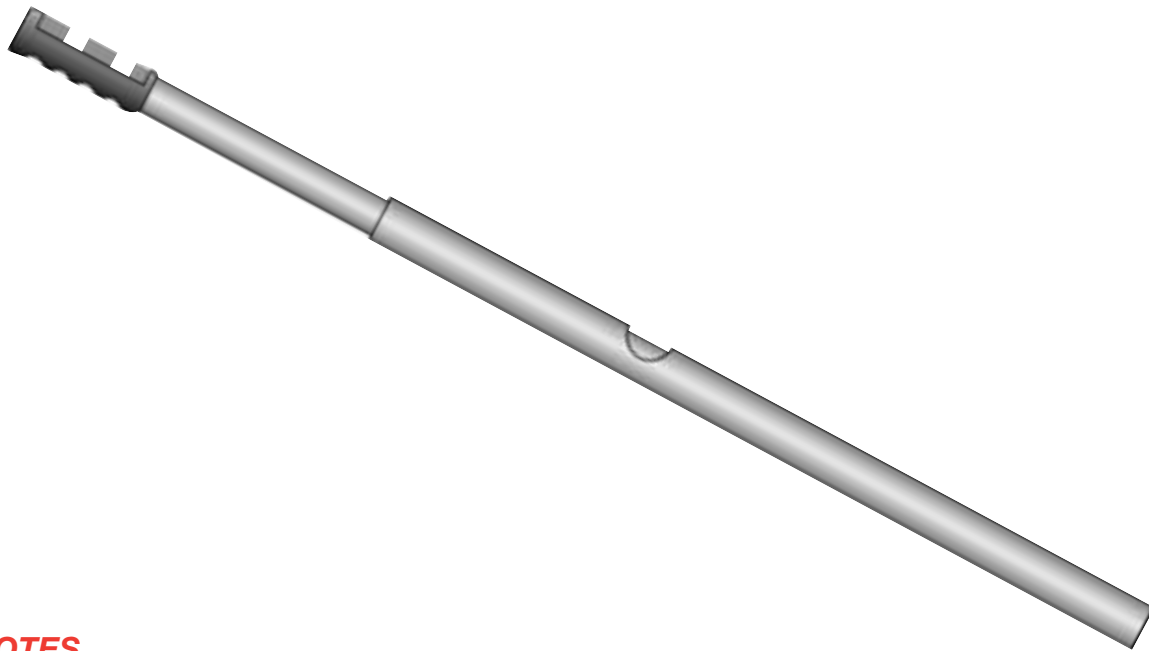
- Service Line Keyhole Brackets are used in conjunction with service line slots which are pre-punched in W strap vee's.
- The Keyhole Brackets are used for suspension of light mine services using chain.
- A safety factor of 6:1 has been applied to the failure load.
- Loads are valid for static loads only with no allowance being made for shock load or vibration.
- Corrosion protection may be provided by hot dip galvanizing. Refer to section G.

**NOTES**

- For details of Keyhole Brackets, load limitations and other factors please contact your DSI Arnall Technical Sales Engineer.
- DSI Arnall Mining Products Division is Quality Assured to AS 9002, License No.406.

GENERAL FEATURES

- The Chemical Anchor Installer assists in the manual installation of chemical anchors in pre-drilled rock and roof bolt holes when the roof height is up to 3.5metres high.
- The Chemical Anchor Installer is also used with, and accepts foam plastic cubes or plastic 'top hats' for physical retention of the placed anchors.
- The installer is light in weight but robust being manufactured from rigid PVC conduit.



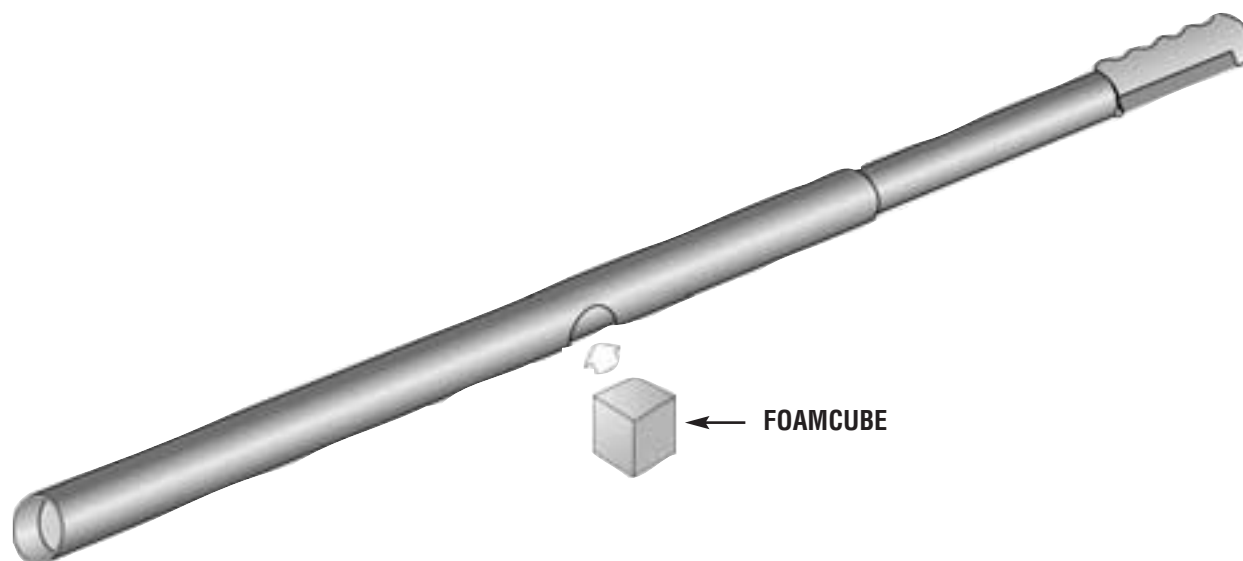
NOTES

- Only DSI Arnall rock bolt components should be used to enable the optimum performance of the system to be obtained.
- For further details of the chemical anchor installer please contact your DSI Arnall Technical Service Engineer.
- DSI Arnall Mining Products Division is Quality Assured to AS 9002, License No.406.

SUPPORT CUBES FOR CHEMICAL ANCHOR

GENERAL FEATURES

- The chemical anchor foam plastic Support Cubes are used with the chemical anchor installer (refer data sheet E1.8) to assist in the manual installation of chemical anchors by holding the anchor(s) up the hole prior to insertion of the roof or rock bolt.
- Two sizes of foam cubes are available being 38 x 38 x 38mm and 50 x 50 x 50mm.



PACKAGING

- In plastic bags of 200.

NOTES

- For further details of Foam Cubes and other products suitable for use in the application please contact your DSI Arnall Technical Service Engineer.
- DSI Arnall Mining Products Division is Quality Assured to AS 9002, License No.406.

SCALING BARS

GENERAL FEATURES

- DSI Arnall aluminium Scaling Bars are used for “scaling” down loose rocks from overhead in underground openings.
- They are lightweight yet robust in construction with the body of the Scaling Bar being manufactured from heavy wall seamless aluminium tube.
- Two tips of hot forged and heat treated tips are available being either straight or bent to suit individual applications.
- DSI Arnall Scaling Bars can be supplied in single or double ended types. The single ended type has a heavy-duty plastic cap fitted into the open end for safety.
- Each type of tip is retained by a locking pin, which allows replacement of the tip if required.

SINGLE ENDED STRAIGHT SCALBAR

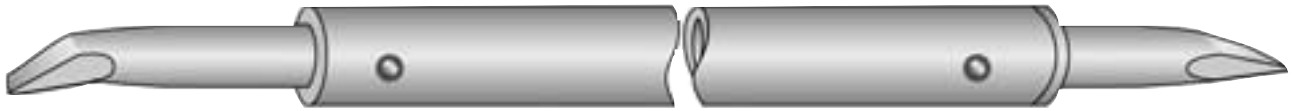


| Length | Tube Length | Weight |
|--------|-------------|--------|
| 2400mm | 2275mm | 3.2kg |
| 3000mm | 2875mm | 3.9kg |
| 3600mm | 3475mm | 4.4kg |

SINGLE ENDED BENT SCALBAR



| Length | Tube Length | Weight |
|--------|-------------|--------|
| 2400mm | 2275mm | 3.2kg |
| 3600mm | 3475mm | 4.4kg |



| Length | Tube Length | Weight |
|--------|-------------|--------|
| 2400mm | 2160mm | 4.1kg |
| 3000mm | 2760mm | 4.7kg |
| 3200mm | 2960mm | 4.8kg |
| 3300mm | 3060mm | 4.9kg |
| 3600mm | 3360mm | 5.2kg |
| 4200mm | 3960mm | 5.8kg |

SAFETY NOTE

- Always wear safety glasses and gloves when scaling/baring down.

PACKAGING

- Supplied as required.

NOTES

- For further details of aluminium Scaling Bars please contact your DSI Arnall Technical Service Engineer.
- DSI Arnall Mining Products Division is Quality Assured to AS 9002, License No. 406.