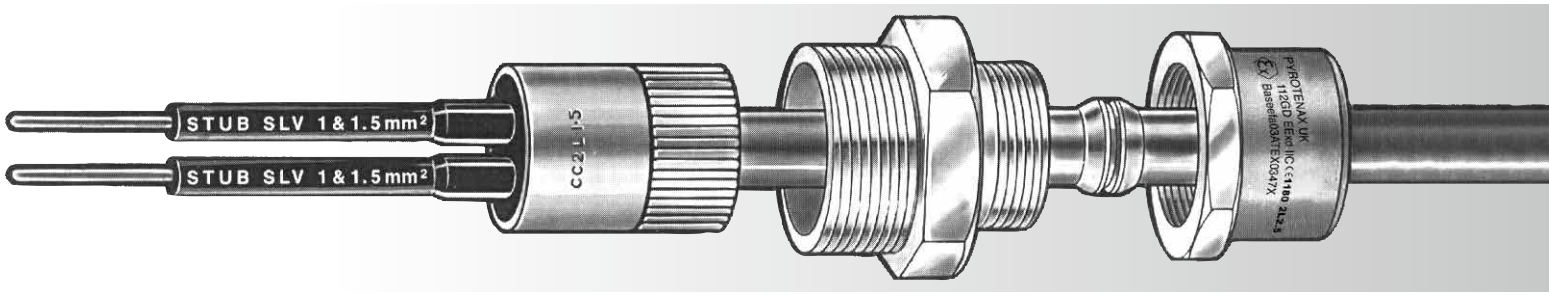
# **PYROTENAX** PYRO MI FIRE SURVIVAL CABLE

## INSTALLATION RECOMMENDATION FOR TERMINATING PYRO MI WIRING CABLES USING SCREW ON SEALS




### Terminations

A termination is required at each end of a length of cable and it should be fitted as soon as the cable end has been prepared ie. cut to length and sheath removed.
A complete termination consists of seal or insulator plus a gland, if required. All Pyro Mi Terminations meet the requirements of BS EN 60702-2. A variety of seals and insulators are available to suit diverse environmental conditions. Whilst they all utilise a brass screw on pot, the compound, pot closure and conductor insulating sleeves will vary.

The following table details these variations.
The components for the standard, medium temperature and increased safety seals are not ordered separately because packs of seals contain all the necessary components. The glazed insulator, the fire and radiation resistant seals utilise the brass pot from the standard seal but the alternative components as necessary may be ordered separately.

| Seal Type | Maximum Operating Temperature | Reference | | Compound | Pot Closure | Conductor Insulation | Extension Sleeving |
|---|---|---|---|---|---|---|---|
| | | Plain | Earth Tail | | | | |
| Standard | 105˚C | RPS | RPSL | Grey Plastic Ref. RMX | Black Plastic Stub Cap | PVC Sleeving Ref. RZP | Not required |
| | | | | | Black Plastic Disc | Headed PVC Sleeving Ref. RZD | PVC Sleeving Ref. RZE |
| Glazed Insulator | 250˚C | - | Not Available | Glazing Flux Ref. RMG | Not Required | PTFE Sleeving Ref. RZPT | Not Required |
| Fire & Radiation Resistant | 105˚C (950˚C - 3hr) | - | - | Grey Plastic Ref. RMX | Black Plastic Stub Cap | Silicone Elastomer/Glass Sleeving Ref. RZPS | Not Required |
| Increased Safety† | 85˚C | RPA | RPAL | Grey Plastic Ref. RMX | Pink Plastic Disc | Headed PVC Sleeving Ref. RZD* | PVC Sleeving Ref. RZE |

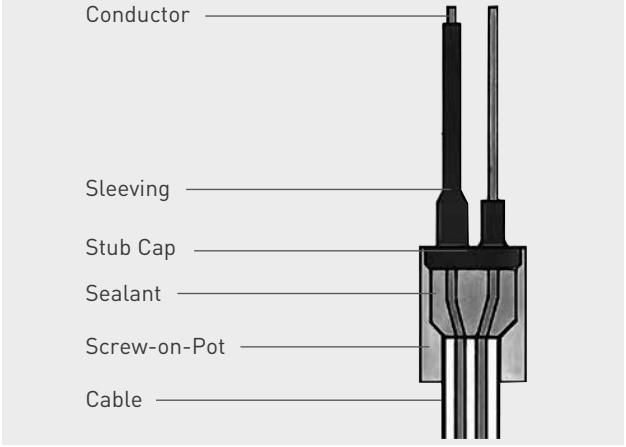
† Not available for 12 and 19 core cables.
* Headed PFTE Sleeving Ref: RZHT used for certain sizes of earth tail seal.

This publication contains instructions for the fitting of 105˚C, Fire and Radiation Resistant Seals. The sheath stripping and pot fitting methods described are also applicable to the 250˚C Insulator and Increased Safety Seals.

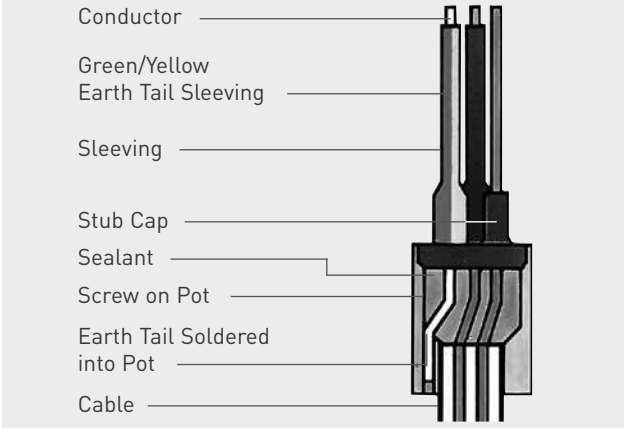
Further detailed instructions necessary for completing the 250˚C Insulator are contained in Installation Recommendation CDE-0924 Rev. 0-1/06 while the Increased Safety Seal is covered in Installation Recommendation CDE-0928 Rev. 0-1/06 (instructions are also included in the pack).

## Typical Pyro Mi Brass Seal Assemblies

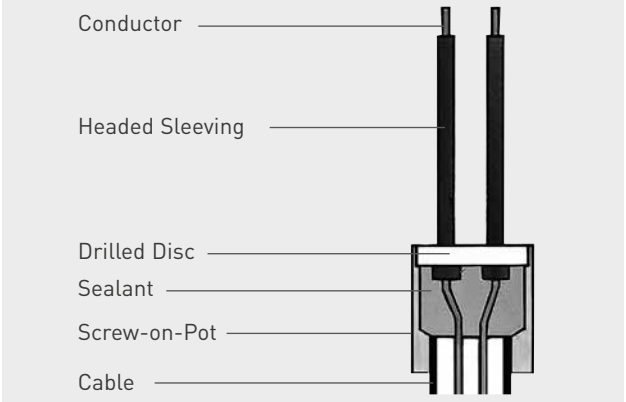
### Seal with Stub Cap Pot Closure



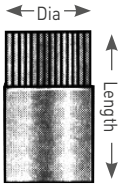

### Earth Tail Seal with Stub Cap Pot Closure




### Seal with Disc Pot Closure




Earth Tail seals are available incorporating a 150mm length of protective conductor identified by green/yellow striped sleeving. The dimensions of screw-on pots are shown below.



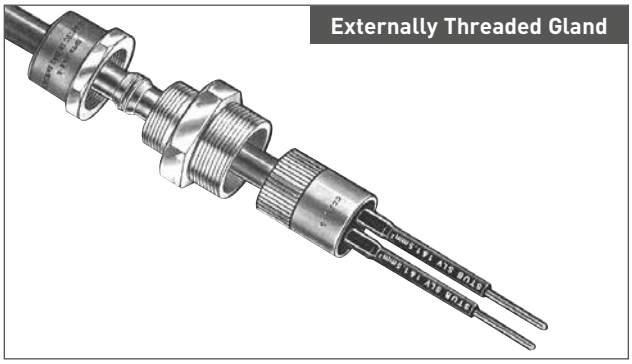

| SEAL POT SIZE | DIA | LENGTH |
|---|---|---|
| 20 | 14.8mm | 16.7mm |
| 25 | 21.2mm | 25.5mm |
| 32 | 26.8mm | 31.8mm |
| 40 | 33.2mm | 34.2mm |

## Compound

Additional 100g packs of grey plastic compound are available, sufficient to fill 32 x 20mm, 10 x 25mm, 5 x 32mm or 2 x 40mm sealing pots.

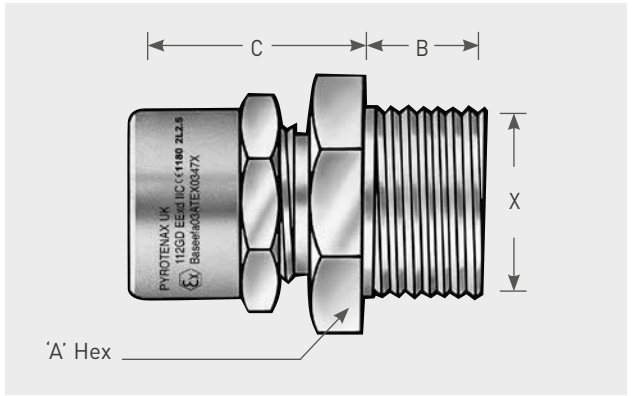
## Glands

**Externally Threaded Gland - Ref. RGM**




RGM Glands are ATEX certified for use in hazardous areas. This means that the RGM gland can be used with flameproof apparatus sub-groups IIA, IIB, IIC. It is also suitable for all other "types of protection" and all general applications.

| Entry thread | 'X' | 20mm | 25mm | 32mm | 40mm |
|---|---|---|---|---|---|
| Gland body hexagon | A/F | 22mm | 27mm | 36mm | 46mm |
| A' max | A/C | 25.4mm | 31.2mm | 41.6mm | 53.1mm |
| Entry thread Length 'B' | | 11mm | 11mm | 11mm | 11mm |
| Assembled Length 'C' (approx.) | | 21mm | 24mm | 26mm | 28mm |




Brass locknuts can be supplied for securing externally threaded glands into unthreaded entries. Locknut dimensions are as follows.

| Thread size | 20mm | 25mm | 32mm | 40mm |
|---|---|---|---|---|
| Hexagon across flats | 24mm | 30mm | 36mm | 46mm |
| Hexagon across corners | 27.7mm | 34.6mm | 41.6mm | 53.1mm |

## Stripping The Cable Sheath

First cut the cable to length with a hacksaw. Next mark off the required length of tail plus the measurement as indicated in the table below for different size seals. Then, using one of the 3 methods described later, strip back the sheath to this mark thus exposing the conductors.

| Seal size | 20 | 25 | 32 | 40 |
|---|---|---|---|---|
| Length of tail plus | 11mm | 17mm | 20mm | 25mm |

## Cable with Outer Covering

After cutting cable end square, offer up the shroud to the cable end, in reverse, to determine the amount to be cut off to ensure a tight fit over the covering. Cut the shroud accordingly. Mark the covering to the required tail length, plus an additional amount as indicated in the table below for different gland sizes. Remove the covering to the mark with a knife, taking care not to nick the metal sheath. Then mark and strip the copper sheath as above.

| Gland size | 20 | 25 | 32 | 40 |
|---|---|---|---|---|
| Length of tail plus | 70mm | 70mm | 80mm | 90mm |

## Method 1 - Using Rotary Stripping Tools

Three rotary stripping tools are available

**A) The Large Pyro Stripper Reference ZSU.**

**B) The Small Pyro Stripper Reference ZSUS.**

**C) The Joistripper Reference ZSJ.**

## The Large Pyro Stripper

The large Pyro Stripper will accommodate all sizes of cable by adjustment of the knurled screw and locknut. The small 'v' of the reversible block will accommodate cables up to 8.5mm diameter (see Fig. 1a). For cable above this size the larger 'v' must be used (see Fig. 1b). Positioning of the appropriate 'v' can be affected by slackening the retaining screw, reversing the block (ensuring that the chamfered edge is on opposite side to cutting wheel) and then retightening the retaining screw.

Fig 1a

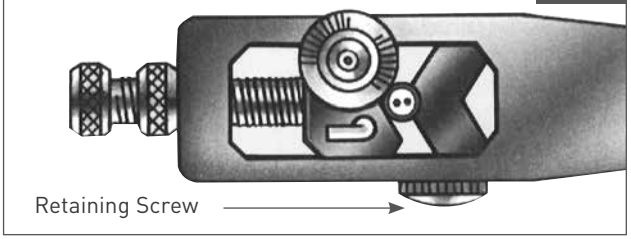
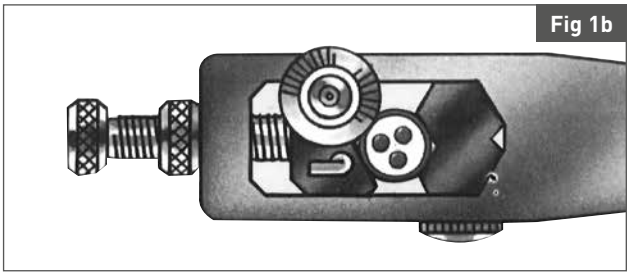



Fig 1b



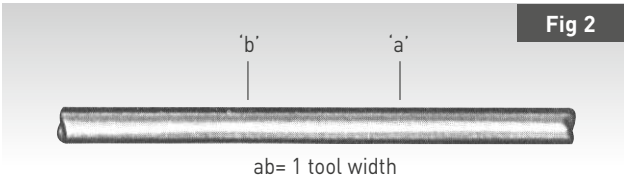
## The Small Pyro Stripper

The Small Pyro Stripper is suitable for use on cables up to 9.0mm diameter. This tool has a fixed 'v' block and is adjusted by means of the knurled screw. A spare cutting blade is provided in the rear body of the tool secured by a small screw.

## The Joistripper

The Joistripper is the sheath removal tool specially recommended for the most popular 2, 3 and 4 core light duty cables.

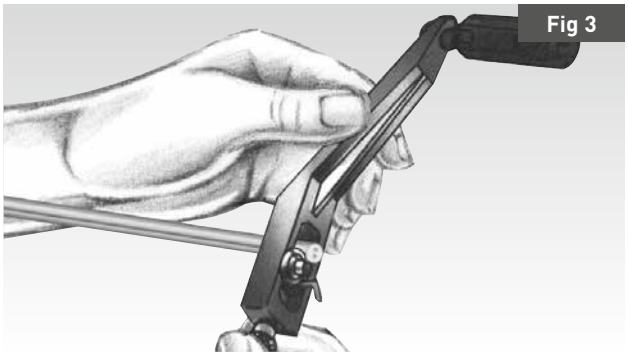
Fig 2




Having previously marked the sheath at the point where stripping is to stop (point 'a' in Fig. 2), add a second pencil mark one tool width further along the sheath (point 'b' in Fig. 2) to indicate the position for location of the pliers. When using tool reference ZSU or ZSUS insert the cable into the tool as far as the face of the cutting wheel (Fig. 3). Tighten knurled screw until the tool can just support its own weight in a horizontal position.

Slightly release screw until tool can just fall under its own weight and finger tighten locknut. (No locknut is fitted to Small Stripper).

Fig 3



When using the Joistripper set the guide block as follows:

Fig 4