As the worldwide leader in the cable industry, Prysmian Group believes in the effective, efficient and sustainable supply of energy and information as a primary driver in the development of communities.

With this in mind, we provide major global organisations in many industries with best-in-class cable and accessory solutions, based on state-of-the-art technology. Through two renowned commercial brands - Prysmian and Draka - based in almost 50 countries, we’re constantly close to our customers, enabling them to further develop the world’s energy and telecoms infrastructures, and achieve sustainable, profitable growth.

In our energy business, we design, produce, distribute and install cables and systems for the transmission and distribution of power at low, medium, high and extra high voltage.

In telecoms, the Group is a leading manufacturer of all types of copper and fibre cables, systems and accessories - covering voice, video and data transmission.

Drawing on over 130 years’ experience and continuously investing in R&D, we apply excellence, understanding and integrity to everything we do, meeting and exceeding the precise needs of our customers across all continents, at the same time shaping the evolution of our industry.

Whatever links the oil and gas industry from end to end?

Cable solutions to support the sector around the world

In applications ranging from drilling, extraction and storage equipment to platform and processing facilities operation, Prysmian’s state-of-the-art cable systems support many major customers in the oil, gas and petrochemical industry, along with related businesses.

Whether they’re deployed in Brazil, the Gulf of Mexico, the North Sea or South-East Asia, our cable solutions are proving their value in harsh off shore and onshore environments; helping customers minimize environmental impact and achieve sustainable, profitable growth.
Prismian Group’s dedicated Components facility based in Wrexham, Wales manufactures and supplies the market with products which are widely used in industrial, commercial and domestic power distribution systems. In addition it offers products for more specialist applications such as Utilities, Railways, Oil, Gas and Petrochemical, Hazardous Areas, Wind and Solar Energy. Today’s BICON® product ranges represent over 100 years of cable accessory development and quality engineering building on the pedigree of our previous company names - going back to BICC. Of course Prysmian Group’s Components products are the perfect installation accessory for the Company’s vast range of quality, approved cables.

Prysmian Group’s comprehensive component product range includes:

- BICON® Cable Glands
- BICON® Cable Cleats
- BICAST® Joints & Terminations
- BICON® Connectors and Tooling
- Flexo® Modular Power Systems
- Flexo® Rail products
- JEM™ Rail products
- Connecta System®

Introduction to Bicon® Cable Glands

Prismian Group’s Components business unit, based in Wrexham, is the UK’s most experienced manufacturer of Cable Glands. Bicon® cable glands are supplied for use in both industrial and hazardous locations. Through many years of industry experience and working closely with our customers, Prysmian Group is able to offer glands to terminate all cable types on the market. As the world’s number one manufacturer of cables, Prysmian Groups Bicon® cable glands are designed and manufactured utilising all the knowledge of the critical requirements to safely terminate cables in all types of installations.

Bicon® Cable Glands are mechanical cable entry devices that attach and secure the end of a cable to an enclosure or directly into equipment providing for mechanical support, earth continuity and protection against the ingress of dust and moisture. Additionally, in hazardous areas they prevent the migration of gases and control and contain any potential explosions.

The Bicon® ranges of glands have been designed and tested with The Prysmian Group cable products. They are the recommended and preferred method of installation for all Prysmian and Draka cables.

When installing fire resistant and Low Smoke Zero Halogen (LSOH) cables it is important that the accessories used meet the same performance requirements as the cable. Thus, the accessory does not impact on the system performance as a whole in the event of a fire. As the world market leader in both of these types of cables it is no surprise that the Prysmian Group is able to offer specific glanding solutions. Look out for the FP, Aflumex, FT and Saffire logos in the catalogue which highlight these.

Bicon® LSOH industrial gland kits have been granted LUL approvals. These products are highlighted in the catalogue. Please note the relevant LUL APR Product ID numbers on the relevant pages.

Bicon® cable glands are manufactured in either aluminium, brass or nylon as standard. In the event that the installation requires electroless nickel plated brass these can also be supplied.

Bicon® glands have been used on a vast number of major electrical engineering projects including: Terminal 5 Heathrow, oil platforms in the North Sea, and power stations in the UK and Europe.
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LSOH or LSF materials – Making the right choice!

Low Smoke Zero Halogen materials known as LSOH, should be used in any environment where public safety is a consideration. These include locations such as offices, schools, stations or underground systems etc.

Safety considerations have resulted in materials being developed and specified that, in a fire, will emit less of the harmful gases particularly smoke and halogens.

The materials that do not emit any significant halogen gas and have reduced smoke emission properties are termed LSOH (Low Smoke Zero Halogen) - these materials must emit less than 0.5% Hydrogen Chloride (HCl).

High levels of HCl has a damaging effect on the human respiratory system when inhaled, as well as being damaging to electronic circuits or machinery.

Some materials are misleadingly labelled LSF (low smoke and fume) – this does not indicate that they emit low HCl – for example, a modified PVC could give off over 15% HCl and still be sold as LSF.

However, Halogens are not alone in their tendency to produce toxic gasses during combustion. There are many polymeric materials which, although halogen free, will also produce toxic by-products in the event of a fire.

London Underground Specification 1-085 (A3) states that combustible materials must not contain halogens, nitrogen or sulphur. Materials that do contain these elements must undergo additional testing to ensure compliance with the toxic emission potential requirements of BS6853.

Nylon, for example, contains nitrogen which, during a fire, can produce toxic gasses such as ammonia, mixed oxides of nitrogen and small amounts of hydrogen cyanide.

The materials used in Bicon® LSOH accessories are not only halogen free but do not contain any other elements likely to result in toxic gas emission.

As a result Bicon® gland kits have been approved by LUL - look out for the LUL APR product number.
Introduction to Ingress Protection Index (EN 60529)

<table>
<thead>
<tr>
<th>1st No.</th>
<th>Protection against solids</th>
<th>2nd No.</th>
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<td>No-protection</td>
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<td>Protection against vertically falling drops of water (Condensation)</td>
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<td>2</td>
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<td>Protected against drops of water falling at up to 15° from vertical</td>
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<td>5</td>
<td>Protected against dust (no harmful deposits)</td>
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<td>Protected against jets of water from all directions</td>
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<td>6</td>
<td>Completely protected against dust</td>
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<tr>
<td>7</td>
<td>Protection against the effects of immersion</td>
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<td>Protection against the effects of submersion</td>
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Introduction to Deluge Testing  DTS01

This test was developed by Shell & ERA Technology in 1991 to address the needs of the offshore sector where emergency deluge systems are commonly installed.

The deluge test requires that glands are 1st pre-conditioned by exposure to vibration and thermal ageing at high humidity levels. The test then simulates the offshore deluge systems by using a specially designed deluge chamber with nozzles firing high pressure salt water at the glands for 3 hours.
Correctly selected and installed Cable Glands will attach and secure the end of a cable to an enclosure/equipment providing for:

- Mechanical support
- Earth continuity
- Protection against ingress of dust
- Protection against ingress of moisture

See Selection chart below for Industrial gland Selection

**INDUSTRIAL GLAND SELECTION CHART**

**INDUSTRIAL CABLE GLAND REQUIRED**

**IS THE CABLE ARMOURED**

No - Un-armoured

Yes - Braid Armours

Cable Type & Diameter

- Cable 25mm Ø
- < 12mm Ø

Armour Type

- Aluminium Wire Armour (AWA)
- Steel Wire Armour

Fault Current Level

- Standard
- High

Equipment Fixed or Mobile

- Fixed
- Mobile

Cable type & Diameter

- < 12mm Ø
- 12mm Ø

Where is the gland installed?

- Standard
- High

Fault Current Level

- Standard
- High

Cable Type

- CV, SY types < 21mm Ø
- All Braids

Where is the cable armoured?

- Yes - Armoured
- No - Un-armoured

Is the cable armoured?

- Yes - Armoured
- No - Un-armoured

Non Armoured Glands

Brass or Plastic

Industrial Cable Gland Required
# INDUSTRIAL GLANDS CONTENTS

<table>
<thead>
<tr>
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<th>Armour</th>
<th>Gland</th>
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<td>SWA</td>
<td>BW Gland Kit</td>
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<td>BW LSOH Gland Kit</td>
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<td>A Type Nylon Gland for Fire alarm Cables</td>
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<td>CV SV Braid AXT Gland Kit</td>
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<td>CW Gland Kit - Elongated Equipment Thread</td>
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<td>Dual Copper</td>
<td>Dual Screen Cable Gland Kit</td>
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**BW Gland Kit**

**Indoor Cable Gland (KA410 Series)**

**Features and benefits:**
- Indoor type for SWA cable.
- Brass indoor gland and accessories
- For galvanized-steel single-wire armour plastic or rubber sheathed cables
- For use in dry, dust free situations
- Provides mechanical cable retention and electrical continuity via armour locking mechanism

**Technical Information:**
Suitable for use with all Steel Wire Armoured Cables inc: BS 5467, BS 6622, BS 5308
CuZn39Pb3 brass alloy used for guaranteed strength and performance
Complies with BS 6121-1: 2005
Service temperature range -20°C to +90°C

**Kit comprises:**
BW Gland
Brass Earth Tag
Brass Locknut
PVC Shroud
(2 per kit up to and including 25mm size)

**Specifications**

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<thead>
<tr>
<th>Gland Kit Reference</th>
<th>Cable Dimensions mm</th>
<th>Gland Dimensions mm</th>
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Kit comprises:
- BW Gland
- Brass Earth Tag
- Brass Locknut
- PVC Shroud
(2 per kit up to and including 25mm size)
BW LSOH Gland Kit
Indoor Cable Gland (420LSF Series)

SUITABLE FOR USE WITH ALL LSOH STEEL WIRE ARMOURED CABLES

Features and benefits:
• Indoor type for LSOH SWA cable
• Brass indoor gland and LSOH accessories
• For galvanized-steel single-wire armour plastic or rubber LSOH sheathed cables
• For use in dry, dust free situations
• Provides mechanical cable retention and electrical continuity via armour locking mechanism

Technical Information:
Suitable for use with all Steel Wire Armoured Cables inc: BS 6724
CuZn39Pb3 brass alloy used for guaranteed strength and performance
Complies with BS 6121-1: 2005
Service temperature range -20°C to +90°C
Complies with LU Standard 1-085 for installation in all sub-surface locations
LUL APR Product ID 1968

Specifications

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Kit comprises:
BW Gland
Brass Earth Tag
Brass Locknut
LSOH Shroud
(2 per kit up to and including 25mm size)
**BWL Gland Kit**

**Indoor Cable Gland (KJ417 Series)**

**Suitable for use with all Steel Wire Armoured Cables**

**Features and benefits:**
- Indoor type for SWA cable.
- Three Part Gland with separate locking ring
- Brass indoor gland and accessories
- For galvanized-steel single-wire armour plastic or rubber sheathed cables
- For use in dry, dust free situations
- Provides mechanical cable retention and electrical continuity via armour locking mechanism

**Technical Information:**
Suitable for use with all Steel Wire Armoured Cables inc.: BS 5467, BS 6622, BS 5308
CuZn39Pb3 brass alloy used for guaranteed strength and performance
Complies with BS 6121-1: 2005
Service temperature range -20°C to +90°C

**Kit comprises:**
- BW Gland
- Brass Earth Tag
- Brass Locknut
- PVC Shroud
(2 per kit up to and including 25mm size)

### Specifications

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**Nylon Cable Gland**

**Cable Gland (403K Series)**

SUITABLE FOR USE WITH CIRCULAR UN-ARMoured CABLEs

**Features and benefits:**
- Suitable for indoor and outdoor applications.
- Suitable for use with all unarmoured circular cables.
- "Cable Grab Claw," design - to grip cable firmly
- Available in four colours: black, red, white and grey.
- Supplied with locknut & entry thread seal

**Technical Information:**
Material: UL approved nylon 66 94V-2
IP 68 rated

**Kit comprises:**
- Nylon Gland
- Rubber entry thread seal
- Nylon lock nut

**Specifications**

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<th>Gland Kit Reference</th>
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Replace * to specify colour:  B=Black , W=White , R=Red , G=Grey
Nylon Cable Gland
Cable Gland (FP250)

SUITABLE FOR USE WITH FIRE ALARM CABLES

Features and benefits:
- Suitable for indoor and outdoor applications.
- Suitable for use with all Fire Alarm Cables
- “Cable Grab Claw” design – to grip cable firmly
- Compressible entry thread seals moulded into gland body
- Available in two colours: red and white
- Supplied complete with locknut

Technical Information:
Material: Flame Retardent Nylon
IP 68 rated
Complies with BS EN 50262

Specifications

<table>
<thead>
<tr>
<th>Gland Kit Reference</th>
<th>Cable Dimensions mm</th>
<th>Gland Dimensions mm</th>
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Replace * to specify colour: R=Red, W=White

Kit comprises:
Nylon Gland
Nylon lock nut
Specifications

Features and benefits:
- Indoor & outdoor type for un-armoured cable.
- Brass indoor and outdoor gland and accessories
- For circular, unarmoured plastic or rubber sheathed cables
- Suitable for most climatic conditions, weatherproof and waterproof

Technical Information:
Suitable for use with all Un-armoured Cables
CuZn39Pb3 brass alloy used for guaranteed strength and performance
Complies with BS EN 50262 & BS 6121-1: 1989
Service temperature range -20°C to +90°C
Gland rated to IP66 with use of suitable sealing washer or thread sealant at gland interface
Metric & NPT Nickel Plated versions available

Specifications

<table>
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<th>Cable Dimensions mm</th>
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Kit comprises:
A1/A2 Gland
Brass Locknut
PVC Shroud
(2 per kit up to and including 25mm size)

*KP Kits contain only Gland & Locknut
**NPT threaded glands are supplied as glands only.
**A1/A2 LSOH Gland Kit**

**Indoor / Outdoor Cable Gland (423LSF Series)**

**Suitable for use with circular LSOH un-armoured cables**

### Features and benefits:
- Indoor & outdoor type for LSOH un-armoured cable.
- Brass indoor and outdoor gland and accessories
- For circular, unarmoured plastic or rubber LSOH sheathed cables
- Suitable for most climatic conditions, weatherproof and waterproof

### Technical Information:
- Suitable for use with all LSOH un-armoured Cables
- CuZn39Pb3 brass alloy used for guaranteed strength and performance
- Complies with BS EN 50262 & BS 6121-1: 1989
- Gland rated to IP66 with use of suitable sealing washer or thread sealant at gland interface
- Service temperature range -20°C to +90°C
- Complies with LU Standard 1-085 for installation in all sub-surface locations
- LUL APR Product ID 1971
- Nickel Plated and standard versions available

### Specifications

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AXT Gland Kit
Indoor / Outdoor Cable Gland
(423AX Series)

FEATURES AND BENEFITS:
• Indoor & outdoor type for flexible wire braided cable.
• Brass indoor and outdoor gland and accessories
• For circular unarmoured, or wire braid or screened, plastic or rubber sheathed cables
• Superior retention capability
• Suitable for most climatic conditions, weatherproof and waterproof

TECHNICAL INFORMATION:
Suitable for use with CY & SY type cables
CuZn39Pb3 brass alloy used for guaranteed strength and performance
Complies with BS EN 50262
Gland rated to IP66 with use of suitable sealing washer or thread sealant at gland interface
Service temperature range -50°C to +200°C

KIT COMPRISSES:
AXT Gland
2 x Flat Brass Washers
Brass Earth Tag
Steel Locknut
PVC Shroud
(2 per kit)

SPECIFICATIONS

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<th>Cable Dimensions mm</th>
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Features and benefits:
• Indoor & outdoor type for SWA cable.
• Brass indoor & outdoor gland and accessories
• For galvanized-steel single-wire armour plastic or rubber sheathed cables
• Suitable for most climatic conditions, weatherproof and waterproof
• Three part amour lock with separate armour locking ring, ideal for checking electrical continuity

Technical Information:
CuZn39Pb3 brass alloy used for guaranteed strength and performance
Complies with BS EN 50262 & BS 6121-1: 1989
Gland rated to IP66 with use of suitable sealing washer or thread sealant at gland interface
Service temperature range -20°C to +90°C
Metric & NPT versions available

Specifications

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*NPT threaded glands are supplied as glands only.
**Other NPT sizes available upon request.
CW-B Gland Kit (Long entry thread)
Indoor / Outdoor Cable Gland
(KA419-B Series)

Suitable for use with all Steel Wire Armoured Cables

Features and benefits:
• Indoor & outdoor type for SWA cable.
• 15mm Entry threads to facilitate extra seals / Lock washers
• Brass indoor & outdoor gland and accessories
• For galvanized-steel single-wire armour plastic or rubber sheathed cables
• Three part amour lock with separate armour locking ring, ideal for checking electrical continuity
• Suitable for most climatic conditions, weatherproof and waterproof

Technical Information:
Suitable for use with all Steel Wire Armoured Cables inc: BS 5467, BS 6622, BS 5308
CuZn39Pb3 brass alloy used for guaranteed strength and performance
Complies with BS EN 50262 & BS 6121-1: 1989
Gland rated to IP66 with use of suitable sealing washer or thread sealant at gland interface
Service temperature range -20°C to +90°C

Kit comprises:
CW Gland
Brass Earth Tag
Brass Locknut
PVC Shroud
(2 per kit up to and including 25mm size)

Specifications

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<th>Gland Kit Reference</th>
<th>Cable Dimensions mm</th>
<th>Gland Dimensions mm</th>
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CW LSOH Gland Kit
Indoor / Outdoor Cable Gland (422LSF Series)

Suitable for use with all LSOH Steel Wire Armoured Cables

Features and benefits:
- Indoor & outdoor type for LSOH SWA cable.
- Brass indoor & outdoor gland and LSOH accessories
- For galvanized-steel single-wire armour LSOH plastic or rubber sheathed cables
- Suitable for most climatic conditions, weatherproof and waterproof
- Three part amour lock with separate armour locking ring, ideal for checking electrical continuity

Technical Information:
Suitable for use with all Steel Wire Armoured Cables inc: BS 6724, BS 8519, BS 7846, BS 6387, BS 7835
CuZn39Pb3 brass alloy used for guaranteed strength and performance
Complies with BS EN 50262 & BS 6121-1: 1989
Gland rated to IP66 with use of suitable sealing washer or thread sealant at gland interface
Service temperature range -20°C to +90°C
Complies with LU Standard 1-085 for installation in all sub-surface locations
LUL APR Product ID 1969
Nickel Plated and standard versions available

Kit comprises:
- CW Gland
- Brass Earth Tag
- Brass Locknut
- LSOH Shroud
(2 per kit up to and including 25mm size)

Specifications

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**Features and benefits:**
- Aluminium indoor & outdoor gland and accessories
- For Aluminium -wire armour plastic or rubber sheathed cables
- Suitable for most climatic conditions, weatherproof and waterproof
- Three part armour lock with separate armour locking ring, ideal for checking electrical continuity
- No Risk of Bi-metallic corrosion when clamping Aluminium Armours

**Technical Information:**
Suitable for use with all Aluminium Wire Armoured Cables inc: BS 5467, BS 6622, BS 5308
Constructed using 6082-T6 Aluminium alloy
Complies with BS EN 50262 & BS 6121-1: 1989
Gland rated to IP66 with use of suitable sealing washer or thread sealant at gland interface
Service temperature range -20°C to +90°C

**Kit comprises:**
- CW-AL Gland
- Aluminium Earth Tag
- Aluminium Locknut
- PCP Shroud (2 per kit up to and including 25mm size)

### Specifications

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<th>Gland Kit Reference</th>
<th>Cable Dimensions mm</th>
<th>Gland Dimensions mm</th>
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CW-AL LSOH Gland Kit
Indoor / Outdoor Cable Gland
(432LSF Series)

Suitable for use with all LSOH Aluminium Wire Armoured Cables

Features and benefits:
• Indoor & outdoor type for LSOH Aluminium cable.
• Aluminium indoor & outdoor gland and LSOH accessories
• For Aluminium wire armour LSOH plastic or rubber sheathed cables
• Suitable for most climatic conditions, weatherproof and waterproof
• Three part armour lock with separate armour locking ring, ideal for checking electrical continuity
• No Risk of Bi-metallic corrosion when clamping Aluminium Armours

Technical Information:
Suitable for use with all Aluminium Wire Armoured Cables inc:
BS 6724, BS 7835
Constructed using 6082-T6 Aluminium alloy
Complies with BS EN 50262 & BS 6121-1: 1989
Gland rated to IP66 with use of suitable sealing washer or thread sealant at gland interface
Service temperature range -20°C to +90°C

Kit comprises:
CW-AL Gland
Aluminium Earth Tag
Aluminium Locknut
LSOH Shroud
(2 per kit up to and including 25mm size)

Specifications

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Gland Kit Reference                  Cable Dimensions mm                                               Gland Dimensions mm

Kit comprises:
CW-AL Gland
Aluminium Earth Tag
Aluminium Locknut
LSOH Shroud
(2 per kit up to and including 25mm size)
CX Gland Kit
Indoor / Outdoor Cable Gland
(KA414 Series)

SUITABLE FOR USE WITH ALL BRAID WIRE ARMOUR CABLES

Features and benefits:
- Indoor & outdoor type for Wire Braid Armour cable
- Brass indoor & outdoor gland and accessories
- For Wire braid armour plastic or rubber sheathed cables
- Suitable for most climatic conditions, weatherproof and waterproof
- Three part amour lock with separate armour locking ring, ideal for checking electrical continuity

Technical Information:
Suitable for use with all Wire Braid Armoured Cables
CuZn39Pb3 brass alloy used for guaranteed strength and performance
Complies with BS EN 50262 & BS 6121-1: 1989
Gland rated to IP66 with use of suitable sealing washer or thread sealant at gland interface
Service temperature range -20°C to +90°C

Kit comprises:
CX Gland
Brass Earth Tag
Brass Locknut
PCP Shroud
(2 per kit up to and including 25mm size)

Specifications

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* For use with miniature braided cables. These kits do not include a shroud
Features and benefits:
- Indoor & outdoor type for Wire Braid Armour cable.
- 15mm Entry threads to facilitate extra seals / Lock washers
- Brass indoor & outdoor gland and accessories
- For Wire braid armour plastic or rubber sheathed cables
- Suitable for most climatic conditions, weatherproof and waterproof
- Three part amour lock with separate armour locking ring, ideal for checking electrical continuity

Technical Information:
Suitable for use with all Wire Braid Armoured Cables
CuZn39Pb3 brass alloy used for guaranteed strength and performance
Complies with BS EN 50262 & BS 6121-1: 1989
Gland rated to IP66 with use of suitable sealing washer or thread sealant at gland interface
Service temperature range -20°C to +90°C

Specifications

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Kit comprises:
CX Gland
Brass Earth Tag
Brass Locknut
PCP Shroud
(2 per kit up to and including 25mm size)
**E1W Gland Kit**

Outdoor Wet Area Cable Gland (KAA413 Series)

SUITABLE FOR USE WITH ALL STEEL WIRE ARMOURED CABLES

**Features and benefits:**
- Brass indoor & outdoor gland and accessories
- For galvanized-steel single-wire armour, plastic or rubber sheathed cables
- Outer seal grips sheath of cable
- Inner seal grips bedding layer of cable
- Suitable for most climatic conditions, weatherproof and waterproof
- Three part amour lock with separate armour locking ring, ideal for checking electrical continuity

**Technical Information:**
Suitable for use with all Steel Wire Armoured Cables inc: BS 5467, BS 6622, BS 5308
CuZn39Pb3 brass alloy used for guaranteed strength and performance
Complies with BS EN 50262 & BS 6121-1: 1989
Gland rated to IP66 with use of suitable sealing washer or thread sealant at gland interface
Service temperature range -20°C to +90°C
Metric and NPT versions available.

**Specifications**

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<th>Gland Dimensions mm</th>
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*NPT Threaded glands are supplied as glands only.  **Other NPT sizes available upon request.
Features and benefits:
- Brass indoor & outdoor gland and accessories
- For galvanized-steel single-wire armour plastic or rubber sheathed cables
- Outer seal grips sheath of cable
- Inner seal grips bedding layer of cable
- Suitable for most climatic conditions, weatherproof and waterproof
- Three part amour lock with separate armour locking ring, ideal for checking electrical continuity

Technical Information:
Suitable for use with all Steel Wire Armoured Cables inc: BS 5467, BS 6622, BS 5308
CuZn39Pb3 brass alloy used for guaranteed strength and performance
Complies with BS EN 50262 & BS 6121-1: 1989
Gland rated to IP66 with use of suitable sealing washer or thread sealant at gland interface
Service temperature range -20°C to +90°C
Metric & NPT versions available.

E1W Gland Kit
Outdoor Wet Area Cable Gland (KA413 Series)
SUITABLE FOR USE WITH ALL STEEL WIRE ARMOURED CABLES

Kit comprises:
E1W Gland
Brass Earth Tag
Brass Locknut
PCP Shroud
(2 per kit up to and including 25mm size)

Specifications

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*NPT Threaded glands are supplied as glands only.*
**Other NPT sizes available upon request.**
Features and benefits:

- Brass indoor & outdoor gland and accessories
- For galvanized-steel single-wire armour plastic or rubber sheathed cables
- Outer seal grips sheath of cable
- Inner seal grips bedding layer of cable
- Suitable for most climatic conditions, weatherproof and waterproof
- Three part armour lock with separate armour locking ring, ideal for checking electrical continuity

Technical Information:

Suitable for use with all Steel Wire Armoured Cables inc: BS 6724, BS 8519, BS 7846, BS 6387, BS 7835
CuZn39Pb3 brass alloy used for guaranteed strength and performance
Complies with BS EN 50262 & BS 6121-1: 1989
Gland rated to IP66 with use of suitable sealing washer or thread sealant at gland interface
Service temperature range -20°C to +90°C
Complies with LU Standard 1-085 for installation in all sub-surface locations
LUL APR Product ID 1970

Specifications

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<th>Gland Dimensions mm</th>
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<tr>
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CW Integral Earth Gland Kit
Indoor / Outdoor Cable Gland
(419CE Series)

Features and benefits:
• Indoor & outdoor type for SWA cable.
• Brass indoor & outdoor gland with Earth bonding Connection
• For galvanized-steel single-wire armour plastic or rubber sheathed cables
• Suitable for most climatic conditions, weatherproof and waterproof
• Three part amour lock with separate armour locking ring, ideal for checking electrical continuity

Technical Information:
Suitable for use with all Steel Wire Armoured Cables inc: BS 5467, BS 6622, BS 5308
CuZn39Pb3 brass alloy used for guaranteed strength and performance
Complies with BS EN 50262 & BS 6121-1: 1989
Integral earth connection complies with GDCD 190 Category A - (43.3kA for 1 second)
Gland rated to IP66 with use of suitable sealing washer or thread sealant at gland interface
Service temperature range -20°C to +90°C

Specifications

<table>
<thead>
<tr>
<th>Gland Kit Reference</th>
<th>Cable Dimensions mm</th>
<th>Gland Dimensions mm</th>
</tr>
</thead>
</table>

Kit comprises: CW Integral Earth Gland Brass Locknut

INDUSTRIAL GLANDS
Features and benefits:
- Aluminium indoor & outdoor gland and accessories
- For Aluminium-wire armour plastic or rubber sheathed cables
- Suitable for most climatic conditions, weatherproof and waterproof
- Three part amour lock with separate armour locking ring, ideal for checking electrical continuity
- No Risk of Bi-metallic corrosion when clamping Aluminium Armours

Technical Information:
Suitable for use with all Aluminium Wire Armoured Cables inc: BS 5467, BS 6622, BS 5308
Constructed using 6082-T6 Aluminium alloy
Complies with BS EN 50262 & BS 6121-1: 1989
Integral earth connection complies with GDCD 190 Category A - (43.3kA for 1 second)
Gland rated to IP66 with use of suitable sealing washer or thread sealant at gland interface
Service temperature range -20°C to +90°C

Specifications

<table>
<thead>
<tr>
<th>Gland Kit Reference</th>
<th>Cable Dimensions mm</th>
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**CW-Dual Screen Gland Kit**

Concentric Bonding Cable Gland (422DA Series)

SUITABLE FOR USE WITH SINGLE CORE CONCENTRIC BONDING CABLES WITH DUAL LAYER SCREENS

**Features and benefits:**
- Concentric Bonding Cable gland
- Brass Gland and accessories
- For Dual layer copper wire Screened Concentric Bonding Cables
- Suitable for most climatic conditions, waterproof and weatherproof
- Randomized armour ring & body arrangement for compact termination of 2 layers of Copper screen wires
- Secondary seal & shroud for topside of the steel structure

**Technical Information:**
Suitable for use with all Concentric dual layer copper wire screened bonding cables
Gland rated to IP66 with use of suitable sealing washer or thread sealant at gland interface
Service temperature range -20°C to +90°C

**Kit comprises:**
- Dual Screen CW Gland
- Nylon Sealing Washer
- Top seal assembly
- LSOH Shroud for Top Seal assembly

**Specifications**

<table>
<thead>
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<th>Gland Dimensions mm</th>
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Introduction to Hazardous Areas

Explosive Atmospheres
Explosive Atmospheres are defined as a combination of flammable gases, vapours or solids (dusts & fibres) mixed with air. When combined with a source of ignition the combination will combust burning all of the available flammable mixture.

Hazardous Locations
In order to protect personal and equipment from potential explosions the principle of area classification is used - this involves risk assessing the plant area and defining areas according to the type of flammable material and the probability of its release to create an explosive atmosphere.

Area classification
Under the IECEx / Atex systems a plant will be divided into non-hazardous and hazardous areas. The hazardous areas are then sub-divided into Zones.

Combustible Gases & Vapours:
- Zone 0: Explosive Atmosphere permanently present, or present for very long periods.
- Zone 1: Explosive Atmospheres may be present as a result of normal operation.
- Zone 2: Explosive Atmospheres not present as a result of normal operations and if they do occur they are only present for a very short duration.

Combustible Dusts & Fibres:
Zones 20, 21 and 22 are the dust & fibre equivalents of Zones 0, 1 & 2.

Protection Methods - (applicable to Bicon glands)

Ex ia & Ex ib - Intrinsically safe equipment designed in such a way that the energy of any spark is lower than that can ignite a flammable mixture. ia is designed to a higher integrity and can be used in Zone 0 locations whereas ib is only suitable for Zone 1 & 2 locations.

Ex d – Flameproof equipment is designed in such a way that it can contain / control an ignited flammable mixture and prevent it from igniting any flammable mixture that may be outside the equipment. This protection method can be used in Zones 1 & 2.

Ex e – Increased safety equipment is designed using components that cannot create arcs and sparks i.e. result in ignition - these enclosures can be made from thinner section materials but are required to be sealed to a minimum ingress protection level of IP54. This protection method can be used in Zones 1 & 2.

Ex p – Pressurized equipment that is constantly pressurized such that flammable mixtures are continuously expelled from the equipment. This protection method can be used in zones 1 & 2.

Ex nA - Similar to Exe in that equipment should not create arcs and sparks but not to the same stringent levels. This protection method can only be used in Zone 2.

Ex nR - Restricted breathing equipment is fitted with tightly fitting seals which help prevent the ingress of explosive mixtures and thus prevents them from reaching hot components. This protection method can only be used in Zone 2.
Gas Groups

Explosive gases are split into 2 groups:
Group 1: Underground mining related gases i.e Firedamp / Methane
Group 2: Gases present in other locations.

Exd and Exi Equipment used with Group 2 gases are further sub divided into 3 categories IIA, IIB & IIC appropriate to the gas / vapour sub-division.

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<thead>
<tr>
<th>Gas / Vapour</th>
<th>Equipment Sub Group Allowed</th>
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<td>Hydrogen</td>
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<td>Acetylene</td>
<td>IIC</td>
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<td>Carbon Di-Sulphide</td>
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<td>IIC, IIB</td>
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<td>Ethylene Sulphide</td>
<td>IIC, IIB</td>
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<td>IIC, IIB</td>
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<td>Propane</td>
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<td>Butane</td>
<td>IIC, IIB, IIA</td>
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Surface Temperature classification

Temperature Class Max surface Temp °C

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<td>450</td>
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<td>T2</td>
<td>300</td>
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<td>T3</td>
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Temperature Ratings / Classes for Cable Glands

Cable glands are not allocated a ‘T’ class because they are designed as a component part of a piece of equipment and in themselves do not produce heat; therefore it is impossible to assess any heating effects. However glands are allocated a ‘service’ temperature, which is the temperature range to which a gland may be subjected to in service (if not specified in the certification report this is assumed to be -20°C / +40°C and it is the responsibility of the user, in accordance with the installation codes of practice, to select an appropriate gland.

In some cases it may be possible for a gland manufacturer to state that a gland is suitable for a specific ‘T’ class application, i.e. where the glands specified ‘service’ temperature significantly exceeds the limiting temperature of the specified ‘T’ class, but the gland will not be marked with any ‘T’ rating. In most cases the above assessment is best left to the user, since ‘T’ classes are allocated on the basis of a maximum possible external surface temperature, whilst in service the gland may see greater internal temperatures, or vastly reduced temperatures, due to factors like positioning, the external ambient and the geometry of the enclosure to which they are fitted.
Barrier Glands & when required

Selection of cable glands (BS EN 60079-14:2008 10.4.2 Selection of cable glands)

The cable entry system shall comply with one of the following:

A) Cable glands in compliance with IEC 60079-1 and certified as part of the equipment when tested with a sample of the particular type of cable;

B) Where a cable, in compliance with 9.3.1(a) is substantially compact; a flameproof cable gland, in compliance with IEC 60079-1, may be utilized, providing this incorporates a sealing ring and is selected in accordance with Figure 2.

C) Compliance with Figure 1 is not necessary if the cable gland complies with IEC 60079-1 and has been tested with a sample of specific cable to repeated ignitions of the flammable gas inside an enclosure and shows no ignition outside the enclosure.

D) Flameproof sealing device (for example a sealing chamber) specified in the equipment documentation or complying with IEC 60079-1 and employing a cable gland appropriate to the cables used. The sealing device shall incorporate compound or other appropriate seals which permit stopping around individual cores. The sealing device shall be fitted at the point of entry of cables to the equipment;

E) Flameproof cable gland, specified in the equipment documentation or complying with IEC 60079-1, incorporating compound filled seals or elastomeric seals that seal around the individual cores or other equivalent sealing arrangements;

---

Internal sources of ignition include sparks or equipment temperatures occurring in normal operation which can cause ignition. An enclosure containing terminals only or an indirect entry enclosure (see 10.4.1) is considered not to constitute an internal source of ignition.
HAZARDOUS GLANDS
HAZARDOUS GLAND SELECTION CHART

METRIC GLANDS TO ATEX & IECEx STANDARDS

Equipment Type?

Armoured Cable?

Armour Type?

Armoured Cable?

Armour Type?

Armoured Cable?

Armour Type?

Armoured Cable?

Armour Type?

Armoured Cable?

Armour Type?

Armoured Cable?

Armour Type?

Armoured Cable?

Armour Type?

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Armoured Cable?

Armour Type?

Armoured Cable?

Armour Type?

Armoured Cable?

Armour Type?

Armoured Cable?

Armour Type?

Armoured Cable?

Armour Type?
# Hazardous Area Gland Contents

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<tr>
<th>Location</th>
<th>Protection</th>
<th>Armour</th>
<th>Gland</th>
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<td>Nylon Exe ATEX Gland &amp; Nut</td>
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<td>SWA</td>
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<td>Braid</td>
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</table>
**Nylon Ex e**

**Cable Gland (403AT Series)**

**Features and benefits:**
- Nylon indoor and outdoor cable gland for use in hazardous locations.
- Suitable for use with all unarmoured circular cables.
- Suitable for most climatic conditions - weather proof & waterproof
- Supplied with nylon locknut

**Technical Information:**
Achieves IP66 and IP68 seal onto cable and to enclosure with suitable sealing washer or thread sealant
Certified II 2GD, Ex e II under ATEX directive 94/9/EC.
Atex Compliance Standards: EN 60079-0, EN 60079-7, EN 61241-0, EN 61241-1
Certificate number LCIE07ATEX6082X.
Service temperature range –35°C to +95°C.

**May be used in:**
- Zones 0, 1 & 2 with Ex ia IIA, B & C equipment
- Zones 1 & 2 with Ex ib IIA, B & C equipment
- Zones 1 & 2 with Ex e II equipment
- Zones 1 & 2 with Ex p II equipment
- Zone 2 with Ex nA II equipment
- Zones 21 & 22 with Ex tD II equipment

**Kit comprises:**
- Nylon Gland
- Nylon lock nut

### Specifications

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<th>Gland Reference</th>
<th>Cable Dimensions mm</th>
<th>Gland Dimensions mm</th>
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A2EX  Ex d IIC / Ex e II
Cable Gland
(494AB Series)

SUITE FOR USE WITH CIRCULAR UN-ARMORED & BRAIDED CABLES

Features and benefits:

• Brass indoor and outdoor cable gland for use in hazardous areas
• Suitable for circular unarmoured cables with extruded oversheath
• Fitted with silicone rubber low smoke, zero halogen seal
• Achieves IP66, IP68 (1 bar) and deluge proof (DTS01:1991) seal onto cable and to enclosure with suitable sealing washer or thread sealant
• Suitable for most climatic conditions – weatherproof, waterproof and deluge proof
• Standard and Nickel plated versions available
• Full Installation Instructions supplied

Technical Information:

Certified II 2GD, Ex e II & Ex d IIC under ATEX directive 94/9/EC
Atex Compliance Standards: EN 60079-0, EN 60079-1, EN 60079-7, EN 61241-0, EN 61241-1
Certificate number Sira99ATEX1086X
IECEx Compliance Standards: IEC 60079-0, IEC 60079-1, IEC 60079-7, IEC 61241-0, IEC 61241-1
Certificate number IECEx SIR 10.0069X
Service temperature range -50°C to +200°C

UL Classified in accordance with IEC 60079-0, 60079-1 and 60079-7 for use in hazardous locations
UL Listed for use in Class 1, Zone 0, 1 and 2 hazardous locations for Canada

Specifications

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<th>Cable Diameter Ø (B) mm</th>
<th>Entry Thread (D)</th>
<th>Thread Length (E)</th>
<th>Protrusion Length (F)</th>
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<th>A/C (H)</th>
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Sizes 32mm and above shall only be used for fixed installations.
In addition the user / installer should ensure that the cables are adequately clamped.
A2EX(NPT) Ex d IIC / Ex e II
Cable Gland
(494NE Series)

SUITABLE FOR USE WITH CIRCULAR UN-ARMOURED & BRAIDED CABLES

Features and benefits:
• Brass indoor and outdoor cable gland for use in hazardous areas
• Suitable for circular unarmoured cables with extruded oversheath
• Fitted with silicone rubber low smoke, zero halogen seal
• Achieves IP66, IP68 (1 bar) and deluge proof (DTS01:1991) seal onto
cable and to enclosure with suitable sealing washer or thread sealant
• Suitable for most climatic conditions – weatherproof, waterproof and
deluge proof
• Standard and Nickel plated versions available
• Full Installation Instructions supplied

Technical Information:
Certified II 2GD, Ex e II & Ex d IIC under ATEX directive 94/9/EC
Atex Compliance Standards: EN 60079-0, EN 60079-1, EN 60079-7,
EN 61241-0, EN 61241-1
Certificate number Sira99ATEX1086X
IECEx Compliance Standards: IEC 60079-0, IEC 60079-1, IEC 60079-7,
IEC 61241-0, IEC 61241-1
Certificate number IECEx SIR 10.0069X
Service temperature range –50°C to +200°C

UL Classified in accordance with IEC 60079-0, 60079-1 and 60079-7 for use
in hazardous locations
UL Listed for use in Class 1, Zone 0, 1 and 2 hazardous locations for Canada

Where the cable is effectively filled,
may also be used in:
• Zones 1 & 2 with Ex d IIC equipment not containing a
  source of ignition & with a volume less than 2000 cm³
• Zones 1 & 2 with Ex d IIA & Ex d IIB equipment not
  containing a source of ignition & with any volume
• Zone 1 with Ex d IIA & Ex d IIB equipment containing a
  source of ignition & with a volume less than 2000 cm³
• Zone 2 with Ex d IIA & Ex d IIB equipment containing a
  source of ignition & with any volume
• Zone 2 with Ex nR II equipment

Specifications

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<th>Gland Reference</th>
<th>Cable Dimensions mm</th>
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*NPT Threaded glands are supplied as glands only.
**Other NPT sizes available upon request.
Sizes 32 and above shall only be used for fixed installations.
In addition the user / installer should ensure that the cables are adequately clamped.
A2EX Ex d IIC / Ex e II
Cable Gland kit (KM494 Series)

Features and benefits:
• Brass indoor and outdoor cable gland for use in hazardous areas
• Suitable for circular unarmoured cables with extruded oversheath
• Fitted with silicone rubber low smoke, zero halogen seal
• Achieves IP66, IP68 (1 bar) and deluge proof (DTS01:1991) seal onto cable and to enclosure with suitable sealing washer or thread sealant
• Suitable for most climatic conditions – weatherproof, waterproof and deluge proof
• Standard and Nickel plated versions available
• Full Installation Instructions supplied

Technical Information:
Certified II 2GD, Ex e II & Ex d IIC under ATEX directive 94/9/EC
ATEX Compliance Standards: EN 60079-0, EN 60079-1, EN 60079-7, EN 61241-0, EN 61241-1
Certificate number Sira99ATEX1086X
IECEx Compliance Standards: IEC 60079-0, IEC 60079-1, IEC 60079-7, IEC 61241-0, IEC 61241-1
Certificate number IECEx SIR 10.0069X
Service temperature range -50°C to +200°C
UL Classified in accordance with IEC 60079-0, 60079-1 and 60079-7 for use in hazardous locations
UL Listed for use in Class 1, Zone 0, 1 and 2 hazardous locations for Canada

May be used in:
• Zones 0, 1 & 2 with Ex ia IIA, B & C equipment
• Zones 1 & 2 with Ex ib IIA, B & C equipment
• Zones 1 & 2 with Ex e II equipment
• Zones 1 & 2 with Ex p II equipment
• Zone 2 with Ex na II equipment
• Zones 21 & 22 with Ex tD II equipment

Where the cable is effectively filled, may also be used in:
• Zones 1 & 2 with Ex d IIC equipment not containing a source of ignition & with a volume less than 2000 cm³
• Zones 1 & 2 with Ex d IIA & Ex d IIB equipment not containing a source of ignition & with any volume
• Zone 1 with Ex d IIA & Ex d IIB equipment containing a source of ignition & with a volume less than 2000 cm³
• Zone 2 with Ex d IIA & Ex d IIB equipment containing a source of ignition & with any volume
• Zone 2 with Ex nR II equipment

Specifications

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<tr>
<th>Gland Kit Reference</th>
<th>Cable Dimensions mm</th>
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Sizes 32 and above shall only be used for fixed installations.
In addition the user / installer should ensure that the cables are adequately clamped.

Kit comprises:
A2EX Gland
Brass Locknut
Nylon Sealing Washer
PVC Shroud
(2 per kit up to and including 25mm size)
A2EXP Ex d IIC / Ex e II
Dual Seal Cable Gland
(495AB Series)

SUITABLE FOR USE WITH CIRCULAR UN-ARMOURED & BRAIDED CABLES

Features and benefits:
• Brass indoor and outdoor cable gland for use in hazardous areas
• Suitable for circular unarmoured cables with extruded oversheath
• Fitted with silicone rubber low smoke, zero halogen seal
• Achieves IP66, IP68 (1 bar) and deluge proof (DTS01:1991) seal onto cable and to enclosure with suitable sealing washer or thread sealant
• Suitable for most climatic conditions – weatherproof, waterproof and deluge proof
• Standard and Nickel plated versions available
• Full Installation Instructions supplied

Technical Information:
Certified II 2GD, Ex e II & Ex d IIC under ATEX directive 94/9/EC
Atex Compliance Standards: EN 60079-0, EN 60079-1, EN 60079-7, EN 61241-0, EN 61241-1
Certificate number Sira99ATEX1086X
IECEx Compliance Standards: IEC 60079-0, IEC 60079-1, IEC 60079-7, IEC 61241-0, IEC 61241-1
Certificate number IECEx SIR.10.0069X
Service temperature range –50°C to +200°C

UL Classified in accordance with IEC 60079-0, 60079-1 and 60079-7 for use in hazardous locations
UL Listed for use in Class 1, Zone 0, 1 and 2 hazardous locations for Canada

Specifications

<table>
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<tr>
<th>Gland Reference</th>
<th>Cable Diameter Ø (B) mm</th>
<th>Entry Thread (D)</th>
<th>Thread Length (E)</th>
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</table>

Sizes 75S and 75 shall only be used for fixed installations.
In addition the user / installer should ensure that the cables are adequately clamped.

May be used in:
• Zones 0, 1 & 2 with Ex ia IIA, B & C equipment
• Zones 1 & 2 with Ex ib IIA, B & C equipment
• Zones 1 & 2 with Ex e IIC equipment
• Zones 1 & 2 with Ex p II equipment
• Zones 2 with Ex na II equipment
• Zones 21 & 22 with Ex td II equipment

Where the cable is effectively filled, may also be used in:
• Zones 1 & 2 with Ex d IIC equipment not containing a source of ignition & with a volume less than 2000 cm³
• Zones 1 & 2 with Ex d IIA & Ex d IIB equipment not containing a source of ignition & with any volume
• Zone 1 with Ex d IIA & Ex d IIB equipment containing a source of ignition & with a volume less than 2000 cm³
• Zone 2 with Ex d IIA & Ex d IIB equipment containing a source of ignition & with any volume
• Zone 2 with Ex na II equipment
Features and benefits:
• Brass indoor and outdoor cable gland for use in hazardous areas
• Suitable for circular unarmoured cables with extruded oversheath
• Fitted with silicone rubber low smoke, zero halogen seal
• Achieves IP66, IP68 (1 bar) and deluge proof (DTS01:1991) seal onto cable and to enclosure with suitable sealing washer or thread sealant
• Suitable for most climatic conditions – weatherproof, waterproof and deluge proof
• Standard and Nickel plated versions available
• Full Installation Instructions supplied

Technical Information:
Certified II 2GD, Ex e II & Ex d IIC under ATEX directive 94/9/EC
Atex Compliance Standards: EN 60079-0, EN 60079-1, EN 60079-7, EN 61241-0, EN 61241-1
Certificate number Sira99ATEX1086X
IECEx Compliance Standards: IEC 60079-0, IEC 60079-1, IEC 60079-7, IEC 61241-0, IEC 61241-1
Certificate number IECEx SIR 10.0069X
Service temperature range –50°C to +200°C

UL Classified in accordance with IEC 60079-0, 60079-1 and 60079-7 for use in hazardous locations
UL Listed for use in Class 1, Zone 0, 1 and 2 hazardous locations for Canada

Specifications

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<th>Cable Dimensions mm</th>
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*NPT Threaded glands are supplied as glands only.
**Other NPT sizes available upon request.
Sizes 75s and 75 shall only be used for fixed installations.
In addition the user / installer should ensure that the cables are adequately clamped.
A2EXP Ex d IIC / Ex e II
Dual Seal Cable Gland Kit
(KM495 Series)

SUITABLE FOR USE WITH CIRCULAR UN-ARMOURED & BRAIDED CABLES

Features and benefits:
• Brass indoor and outdoor cable gland for use in hazardous areas
• Suitable for circular unarmoured cables with extruded oversheath
• Fitted with silicone rubber low smoke, zero halogen seal
• Achieves IP66, IP68 (1 bar) and deluge proof (DTS01:1991) seal onto cable and to enclosure with suitable sealing washer or thread sealant
• Suitable for most climatic conditions – weatherproof, waterproof and deluge proof
• Standard and Nickel plated versions available
• Full Installation Instructions supplied

Technical Information:
Certified II 2GD, Ex e II & Ex d IIC under ATEX directive 94/9/EC
Atex Compliance Standards: EN 60079-0, EN 60079-1, EN 60079-7, EN 61241-0, EN 61241-1
Certificate number Sira99ATEX1086X
IECEx Compliance Standards: IEC 60079-0, IEC 60079-1, IEC 60079-7, IEC 61241-0, IEC 61241-1
Certificate number IECEx SIR 10.0069X
Service temperature range –50°C to +200°C

UL Classified in accordance with IEC 60079-0, 60079-1 and 60079-7 for use in hazardous locations
UL Listed for use in Class 1, Zone 0, 1 and 2 hazardous locations for Canada

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<th>Cable Dimensions mm</th>
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<td>KM495-63</td>
<td>KM495-63V</td>
<td>75             54.5 65.5</td>
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May be used in:
• Zones 0, 1 & 2 with Ex ia IIA, B & C equipment
• Zones 1 & 2 with Ex ib IIA, B & C equipment
• Zones 1 & 2 with Ex e II equipment
• Zones 1 & 2 with Ex p II equipment
• Zone 2 with Ex nA II equipment
• Zones 21 & 22 with Ex tD II equipment

Where the cable is effectively filled, may also be used in:
• Zones 1 & 2 with Ex d IIC equipment not containing a source of ignition & with a volume less than 2000 cm³
• Zones 1 & 2 with Ex d IIA & Ex d IIB equipment not containing a source of ignition & with any volume
• Zone 1 with Ex d IIA & Ex d IIB equipment containing a source of ignition & with any volume
• Zone 2 with Ex d IIA & Ex d IIB equipment containing a source of ignition & with any volume
• Zone 2 with Ex nR II equipment

Kit comprises:
A2EXP Gland
Brass Locknut
Nylon Sealing Washer
PVC Shroud
(2 per kit up to and including 25mm size)
E1WF Ex d IIC / Ex e II
Cable Gland
(472AA Series)
SUITABLE FOR USE WITH ALL STEEL WIRE ARMOURED CABLES

Features and benefits:
• Brass indoor and outdoor cable gland for use in hazardous areas
• Suitable for circular, galvanised steel wire armour cables with extruded polymeric bedding and oversheath
• Achieves IP66 seal onto cable and to enclosure with suitable sealing washer or thread sealant
• Three part armour lock provides mechanical cable retention and electrical continuity
• Inner PCP seal grips cable bedding and provides additional ingress protection
• Suitable for most climatic conditions - weatherproof and waterproof
• Standard and Nickel plated versions available
• Full Installation Instructions supplied

Technical Information:
Certified II 2GD, Ex e II & Ex d IIC under ATEX directive 94/9/EC
Atex Compliance Standards: EN 60079-0, EN 60079-1, EN 60079-7, EN 61241-0, EN 61241-1
Certificate number Sira 02ATEX3092X
IECEx Compliance Standards: IEC 60079-0, IEC 60079-1, IEC 60079-7, IEC 61241-0, IEC 61241-1
Certificate number IECEx SIR 10.0071X
Service temperature range -60°C to +90°C

May be used in:
• Zones 0, 1 & 2 with Ex ia IIA, B & C equipment
• Zones 1 & 2 with Ex ib IIA, B & C equipment
• Zones 1 & 2 with Ex e II equipment
• Zones 2 with Ex nA II equipment
• Zone 21 & 22 with Ex T A21

Where the cable is effectively filled, may also be used in:
• Zones 1 & 2 with Ex d IIC equipment not containing a source of ignition & with a volume less than 2000cm³
• Zones 1 & 2 with Ex d IIA & Ex d IIB equipment not containing a source of ignition & with any volume
• Zone 1 with Ex d IIA & Ex d IIB equipment containing a source of ignition & with a volume less than 2000cm³
• Zone 2 with Ex d IIA & Ex d IIB equipment containing a source of ignition & with any volume
• Zone 2 with Ex nR II equipment

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<th>Cable Dimensions mm</th>
<th>Gland Dimensions mm</th>
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Specifications

Features and benefits:
- Brass indoor and outdoor cable gland for use in hazardous areas
- Suitable for circular, galvanised steel wire armour cables with extruded polymeric bedding and oversheath
- Achieves IP66 seal onto cable and to enclosure with suitable sealing washer or thread sealant
- Three part armour lock provides mechanical cable retention and electrical continuity
- Inner PCP seal grips cable bedding and provides additional ingress protection
- Suitable for most climatic conditions - weatherproof and waterproof
- Standard and Nickel plated versions available
- Full Installation Instructions supplied

Technical Information:
Certified II 2GD, Ex e II & Ex d IIC under ATEX directive 94/9/EC
Atex Compliance Standards: EN 60079-0, EN 60079-1, EN 60079-7, EN 61241-0, EN 61241-1
Certificate number Sira 02ATEX3092X
IECEx Compliance Standards: IEC 60079-0, IEC 60079-1, IEC 60079-7, IEC 61241-0, IEC 61241-1
Certificate number IECEx SIR 10.0071X
Service temperature range -60°C to +90°C

May be used in:
- Zones 0, 1 & 2 with Ex ia IIA, B & C equipment
- Zones 1 & 2 with Ex ib IIA, B & C equipment
- Zones 1 & 2 with Ex e II equipment
- Zones 2 with Ex na II equipment
- Zone 21 & 22 with Ex Td A21

Where the cable is effectively filled, may also be used in:
- Zones 1 & 2 with Ex d IIC equipment not containing a source of ignition & with a volume less than 2000cm³
- Zones 1 & 2 with Ex d IIA & Ex d IIB equipment not containing a source of ignition & any volume
- Zone 1 with Ex d IIA & Ex d IIB equipment containing a source of ignition & with any volume
- Zone 2 with Ex d IIA & Ex d IIB equipment containing a source of ignition & any volume
- Zone 2 with Ex nR II equipment

Specifications

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*NPT Threaded glands are supplied as glands only.
**Other NPT sizes available upon request.
E1WF Ex d IIC / Ex e II Cable Gland Kit (PVC)  
(KCA472 Series)

**Features and benefits:**
- Brass indoor and outdoor cable gland for use in hazardous areas
- Suitable for circular, galvanised steel wire armour cables with extruded polymeric bedding and oversheath
- Achieves IP66 seal onto cable and to enclosure with suitable sealing washer or thread sealant
- Three part armour lock provides mechanical cable retention and electrical continuity
- Inner PCP seal grips cable bedding and provides additional ingress protection
- Suitable for most climatic conditions - weatherproof and waterproof
- Standard and Nickel plated versions available
- Full Installation Instructions supplied

**Technical Information:**
Certified II 2GD, Ex e II & Ex d II under ATEX directive 94/9/EC
Atex Compliance Standards: EN 60079-0, EN 60079-1, EN 60079-7, EN 61241-0, EN 61241-1
Certificate number Sira 02ATEX3092X
IECEx Compliance Standards: IEC 60079-0, IEC 60079-1, IEC 60079-7, IEC 61241-0, IEC 61241-1
Certificate number IECEx SIR 10.0071X
Service temperature range -60°C to +90°C

**May be used in:**
- Zones 0, 1 & 2 with Ex ia IIA, B & C equipment
- Zones 1 & 2 with Ex ib IIA, B & C equipment
- Zones 1 & 2 with Ex e II equipment
- Zones 2 with Ex nA II equipment
- Zone 21 & 22 with Ex tD A21

**Where the cable is effectively filled, may also be used in:**
- Zones 1 & 2 with Ex d IIC equipment not containing a source of ignition & with a volume less than 2000cm³
- Zones 1 & 2 with Ex d IIA & Ex d IIB equipment not containing a source of ignition & with any volume
- Zone 1 with Ex d IIA & Ex d IIB equipment containing a source of ignition & with a volume less than 2000cm³
- Zone 2 with Ex d IIA & Ex d IIB equipment containing a source of ignition & with any volume
- Zone 2 with Ex nR II equipment

**Kit comprises:**
- E1WF Gland
- Brass Earth Tag
- Brass Locknut
- Nylon Sealing Washer
- PVC Shroud
(2 per kit up to and including 25mm size)

**Specifications**

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<th>Gland Kit Reference</th>
<th>Size</th>
<th>Qty per Kit</th>
<th>Under Armour Ø (A)</th>
<th>Overall Ø (B)</th>
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Features and benefits:
• Brass indoor and outdoor cable gland for use in hazardous areas
• Suitable for circular, galvanised steel wire armour cables with extruded polymeric bedding and oversheath
• Achieves IP66 seal onto cable and to enclosure with suitable sealing washer or thread sealant
• Three part armour lock provides mechanical cable retention and electrical continuity
• Inner PCP seal grips cable bedding and provides additional ingress protection
• Suitable for most climatic conditions – weatherproof and waterproof
• Standard and Nickel plated versions available
• Full Installation Instructions supplied

Technical Information:
Certified II 2GD, Ex e IIC under ATEX directive 94/9/EC
ATEX Compliance Standards: EN 60079-0, EN 60079-1, EN 60079-7,
EN 61241-0, EN 61241-1
Certificate number Sira 02ATEX3092X
IExCompliance Standards: IEC 60079-0, IEC 60079-1, IEC 60079-7,
IEC 61241-0, IEC 61241-1
Certificate number IECEx SIR 10.0071X
Service temperature range -60°C to +90°C

Where the cable is effectively filled, may also be used in:
• Zones 1 & 2 with Ex d IIC equipment containing a source of ignition & with any volume
• Zone 2 with Ex nA II equipment

May be used in:
• Zones 0, 1 & 2 with Ex ia IIA, B & C equipment
• Zones 1 & 2 with Ex ib IIA, B & C equipment
• Zones 1 & 2 with Ex e II equipment
• Zones 2 with Ex nA II equipment
• Zone 21 & 22 with Ex tD A21

Kit comprises:
E1WF Gland
Brass Earth Tag
Brass Locknut
Nylon Sealing Washer
PCP Shroud
(2 per kit up to and including 25mm size)

Specifications

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<th>Gland Kit Reference</th>
<th>Design Reference</th>
<th>Under Armour Ø (A)</th>
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### Technical Information:

Certified II 2GD, Ex e II & Ex d IIC under ATEX directive 94/9/EC

Atex Compliance Standards: EN 60079-0, EN 60079-1, EN 60079-7, EN 61241-0, EN 61241-1

Certificate number Sira 02ATEX3092X

IECEx Compliance Standards: IEC 60079-0, IEC 60079-1, IEC 60079-7, IEC 61241-0, IEC 61241-1

Certificate number IECEx SIR 10.0071X

Service temperature range -60°C to +90°C

### Where the cable is effectively filled, may also be used in:

- Zones 0, 1 & 2 with Ex ia IIA, B & C equipment
- Zones 1 & 2 with Ex ib IIA, B & C equipment
- Zones 1 & 2 with Ex e II equipment
- Zones 2 with Ex na II equipment
- Zone 21 & 22 with Ex TD A21

### May be used in:

- Zones 0, 1 & 2 with Ex ia IIA, B & C equipment
- Zones 1 & 2 with Ex ib IIA, B & C equipment
- Zones 1 & 2 with Ex e II equipment
- Zones 2 with Ex na II equipment
- Zone 21 & 22 with Ex TD A21

### Features and benefits:

- Aluminium indoor and outdoor cable gland for use in hazardous areas
- Suitable for circular, aluminium wire armour cables with extruded polymeric bedding and oversheath
- Achieves IP66 seal onto cable and to enclosure with suitable sealing washer or thread sealant
- Three part armour lock provides mechanical cable retention and electrical continuity
- Inner PCP seal grips cable bedding and provides additional ingress protection
- Suitable for most climatic conditions - weatherproof and waterproof
- Full Installation Instructions supplied

### E1WF-Al Ex d IIC / Ex e II Cable Gland

(455AA Series)

SUITABLE FOR USE WITH ALL ALUMINIUM WIRE ARMOURED CABLES
Specifications

Features and benefits:

- Aluminium indoor and outdoor cable gland for use in hazardous areas
- Suitable for circular, aluminium wire armour cables with extruded polymeric bedding and oversheath
- Achieves IP66 seal onto cable and to enclosure with suitable sealing washer or thread sealant
- Three part armour lock provides mechanical cable retention and electrical continuity
- Inner PCP seal grips cable bedding and provides additional ingress protection
- Suitable for most climatic conditions - weatherproof and waterproof
- Full Installation Instructions supplied

Technical Information:

Certified II 2GD, Ex e II & Ex d IIC under ATEX directive 94/9/EC
Atex Compliance Standards: EN 60079-0, EN 60079-1, EN 60079-7, EN 61241-0, EN 61241-1
Certificate number Sira 02ATEX3092X
IECEx Compliance Standards: IEC 60079-0, IEC 60079-1, IEC 60079-7, IEC 61241-0, IEC 61241-1
Certificate number IECEx SIR 10.0071X
Service temperature range -60°C to +90°C

May be used in:

- Zones 0, 1 & 2 with Ex ia IIA, B & C equipment
- Zones 1 & 2 with Ex ib IIA, B & C equipment
- Zones 1 & 2 with Ex e II equipment
- Zones 2 with Ex nA II equipment
- Zones 21 & 22 with Ex tD A21

Where the cable is effectively filled, may also be used in:

- Zones 1 & 2 with Ex d IIC equipment not containing a source of ignition & with a volume less than 2000cm³
- Zones 1 & 2 with Ex d IIA & Ex d IIB equipment not containing a source of ignition & with any volume
- Zone 1 with Ex d IIA & Ex d IIB equipment containing a source of ignition & with a volume less than 2000cm³
- Zone 2 with Ex d IIA & Ex d IIB equipment containing a source of ignition & with any volume
- Zone 2 with Ex nR II equipment

Kit comprises:

E1WF-Al Gland
Aluminium Earth Tag
Aluminium Locknut
Nylon Sealing Washer
PVC Shroud
(2 per kit up to and including 25mm size)
**Specifications**

**E1XF Ex d IIC / Ex e II**

_Cable Gland (473AA Series)_

**Features and benefits:**
- Brass indoor and outdoor cable gland for use in hazardous areas
- Suitable for circular, Braid wire armour cables with extruded polymeric bedding and oversheath
- Achieves IP66 seal onto cable and to enclosure with suitable sealing washer or thread sealant
- Three part armour lock provides mechanical cable retention and electrical continuity
- Inner PCP seal grips cable bedding and provides additional ingress protection
- Suitable for most climatic conditions - weatherproof and waterproof
- Standard and Nickel plated versions available
- Full Installation Instructions supplied

**Technical Information:**
- Certified II 2GD, Ex e II & Ex d IIC under ATEX directive 94/9/EC
- Atex Compliance Standards: EN 60079-0, EN 60079-1, EN 60079-7, EN 61241-0, EN 61241-1
- Certificate number Sira 02ATEX3092X
- IECEx Compliance Standards: IEC 60079-0, IEC 60079-1, IEC 60079-7, IEC 61241-0, IEC 61241-1
- Certificate number IECEx SIR 10.0071X
- Service temperature range -60°C to +90°C

**May be used in:**
- Zones 0, 1 & 2 with Ex ia IIA, B & C equipment
- Zones 1 & 2 with Ex ib IIA, B & C equipment
- Zones 1 & 2 with Ex e II equipment
- Zones 2 with Ex nA II equipment
- Zone 21 & 22 with Ex d A21

**Where the cable is effectively filled, may also be used in:**
- Zones 1 & 2 with Ex d IIC equipment not containing a source of ignition & with a volume less than 2000cm³
- Zones 1 & 2 with Ex d IIA & Ex d IIB equipment not containing a source of ignition & with any volume
- Zone 1 with Ex d IIA & Ex d IIB equipment containing a source of ignition & with a volume
- Zone 2 with Ex d IIA & Ex d IIB equipment containing a source of ignition & with any volume
- Zone 2 with Ex nR II equipment

**Specifications**

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<th>Gland Reference</th>
<th>Cable Dimensions mm</th>
<th>Gland Dimensions mm</th>
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Features and benefits:
- Brass indoor and outdoor cable gland for use in hazardous areas
- Suitable for circular, Braid wire armour cables with extruded polymeric bedding and oversheath
- Achieves IP66 seal onto cable and to enclosure with suitable sealing washer or thread sealant
- Three part armour lock provides mechanical cable retention and electrical continuity
- Inner PCP seal grips cable bedding and provides additional ingress protection
- Suitable for most climatic conditions - weatherproof and waterproof
- Standard and Nickel plated versions available
- Full Installation Instructions supplied

Technical Information:
Certified II 2GD, Ex e II & Ex d II under ATEX directive 94/9/EC
Atex Compliance Standards: EN 60079-0, EN 60079-1, EN 60079-7, EN 61241-0, EN 61241-1
Certificate number Sira 02ATEX3092X
IECEx Compliance Standards: IEC 60079-0, IEC 60079-1, IEC 60079-7, IEC 61241-0, IEC 61241-1
Certificate number IECEx SIR 10.0071X
Service temperature range -60°C to +90°C

Specifications

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*NPT Threaded glands are supplied as glands only.
**Other NPT sizes available upon request.

May be used in:
- Zones 0, 1 & 2 with Ex ia IIA, B & C equipment
- Zones 1 & 2 with Ex ib IIA, B & C equipment
- Zones 1 & 2 with Ex e II equipment
- Zones 2 with Ex na II equipment
- Zone 21 & 22 with Ex tD A21

Where the cable is effectively filled, may also be used in:
- Zones 1 & 2 with Ex d IIC equipment not containing a source of ignition & with a volume less than 2000cm³
- Zones 1 & 2 with Ex d IIA & Ex d IIB equipment not containing a source of ignition & with any volume
- Zone 1 with Ex d IIA & Ex d IIB equipment containing a source of ignition & with any volume
- Zone 2 with Ex na II equipment

E1XF(NPT) Ex d IIC / Ex e II
Cable Gland
(473NP Series)

SUITABLE FOR USE WITH ALL BRAID WIRE ARMOURED CABLES
E1XF Ex d IIC / Ex e II Cable Gland Kit (PVC) (KCA473 Series)

**Features and benefits:**
- Brass indoor and outdoor cable gland for use in hazardous areas
- Suitable for circular, Braid wire armour cables with extruded polymeric bedding and oversheath
- Achieves IP66 seal onto cable and to enclosure with suitable sealing washer or thread sealant
- Three part armour lock provides mechanical cable retention and electrical continuity
- Inner PCP seal grips cable bedding and provides additional ingress protection
- Suitable for most climatic conditions - weatherproof and waterproof
- Standard and Nickel plated versions available
- Full Installation Instructions supplied

**Technical Information:**
Certified II 2GD, Ex e II & Ex d IIC under ATEX directive 94/9/EC
ATEX Compliance Standards: EN 60079-0, EN 60079-1, EN 60079-7, EN 61241-0, EN 61241-1
Certificate number Sira 02ATEX3092X
IECEx Compliance Standards: IEC 60079-0, IEC 60079-1, IEC 60079-7, IEC 61241-0, IEC 61241-1
Certificate number IECEx SIR 10.0071X
Service temperature range -60°C to +90°C

**May be used in:**
- Zones 0, 1 & 2 with Ex ia IIA, B & C equipment
- Zones 1 & 2 with Ex ib IIA, B & C equipment
- Zones 1 & 2 with Ex e II equipment
- Zones 2 with Ex nA II equipment
- Zone 21 & 22 with Ex tD A21

**Where the cable is effectively filled, may also be used in:**
- Zones 1 & 2 with Ex d IIC equipment not containing a source of ignition & with a volume less than 2000cm³
- Zones 1 & 2 with Ex d IIA & Ex d IIB equipment not containing a source of ignition & with any volume
- Zone 1 with Ex d IIA & Ex d IIB equipment containing a source of ignition & with a volume less than 2000cm³
- Zone 2 with Ex d IIA & Ex d IIB equipment containing a source of ignition & with any volume
- Zone 2 with Ex nR II equipment

**Kit comprises:**
- E1XF Gland
- Brass Earth Tag
- Brass Locknut
- Nylon Sealing Washer
- PVC Shroud

**Specifications**

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<thead>
<tr>
<th>Gland Kit Reference</th>
<th>Design Reference</th>
<th>Size</th>
<th>Qty per Kit</th>
<th>Under Armour Ø (A)</th>
<th>Overall Ø (B)</th>
<th>Braid Armour Wire Ø</th>
<th>Entry Thread (D)</th>
<th>Thread Length (E)</th>
<th>Protrusion Length (F)</th>
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E1XF Ex d IIC / Ex e II
Cable Gland Kit (PCP)
(KA473 Series)

Specifications

Features and benefits:
• Brass indoor and outdoor cable gland for use in hazardous areas
• Suitable for circular, Braid wire armour cables with extruded polymeric bedding and oversheath
• Achieves IP66 seal onto cable and to enclosure with suitable sealing washer or thread sealant
• Three part armour lock provides mechanical cable retention and electrical continuity
• Inner PCP seal grips cable bedding and provides additional ingress protection
• Suitable for most climatic conditions – weatherproof and waterproof
• Standard and Nickel plated versions available
• Full Installation Instructions supplied

Technical Information:
Certified II 2GD, Ex e II & Ex d IIC under ATEX directive 94/9/EC
Atex Compliance Standards: EN 60079-0, EN 60079-1, EN 60079-7, EN 61241-0, EN 61241-1
Certificate number Sira 02ATEX3092X
IECEx Compliance Standards: IEC 60079-0, IEC 60079-1, IEC 60079-7, IEC 61241-0, IEC 61241-1
Certificate number IECEx SIR 10.0071X

Service temperature range -60°C to +90°C

May be used in:
• Zones 0, 1 & 2 with Ex ia IIA, B & C equipment
• Zones 1 & 2 with Ex ib IIA, B & C equipment
• Zones 1 & 2 with Ex e II equipment
• Zones 2 with Ex nA II equipment
• Zone 21 & 22 with Ex TD A21

Where the cable is effectively filled, may also be used in:
• Zones 1 & 2 with Ex d IIC equipment not containing a source of ignition & with a volume less than 2000cm³
• Zones 1 & 2 with Ex d IIA & Ex d IIB equipment not containing a source of ignition & with any volume
• Zone 1 with Ex d IIA & Ex d IIB equipment containing a source of ignition & with a volume less than 2000cm³
• Zone 2 with Ex d IIA & Ex d IIB equipment containing a source of ignition & with any volume
• Zone 2 with Ex nR II equipment

Kit comprises:
E1XF Gland
Brass Earth Tag
Brass Locknut
Nylon Sealing Washer
PCP Shroud
(2 per kit up to and including 25mm size)

Kit Gland Reference Cable Dimensions mm Gland Dimensions mm

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<tr>
<th>Gland Reference</th>
<th>Standard Nickel Plated</th>
<th>Size Qty per Kit</th>
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**E1W-XL Ex d IIC / Ex e II**

**Cable Gland (474SW Series)**

**UNIVERSAL GLAND SUITABLE FOR USE WITH STEEL WIRE ARMOUR, BRAID WIRE ARMoured AND LEAD SHEATHED CABLES**

**Features and benefits:**
- Brass indoor and outdoor cable gland for use in hazardous areas
- Suitable for circular, galvanised steel wire armour cables with extruded polymeric bedding and oversheath
- Suitable for circular, Braid wire armour cables with extruded polymeric bedding and oversheath
- Achieves IP67 seal onto cable and to enclosure with suitable sealing washer or thread sealant
- Three part armour lock provides mechanical cable retention and electrical continuity
- Continuity Connection for Lead Inner sheathed cables
- Inner PCP seal grips cable bedding and provides additional ingress protection
- Suitable for most climatic conditions - weatherproof and waterproof
- Standard and Nickel plated versions available
- Full Installation Instructions supplied

**Technical Information:**
Certified II 2GD, Ex e II & Ex d IIC under ATEX directive 94/9/EC
Atex Compliance Standards: EN 60079-0, EN 60079-1, EN 60079-7, EN 61241-0, EN 61241-1
Certificate number Sira 02ATEX3093X
IECEx Compliance Standards: IEC 60079-0, IEC 60079-1, IEC 60079-7, IEC 61241-0, IEC 61241-1
Certificate number IECEx SIR 10.0070X
Service temperature range -60°C to +90°C

**May be used in:**
- Zones 0, 1 & 2 with Ex ia IIA, B & C equipment
- Zones 1 & 2 with Ex ib IIA, B & C equipment
- Zones 1 & 2 with Ex e II equipment
- Zones 2 with Ex nA II equipment
- Zone 21 & 22 with Ex tD A21

**Where the cable is effectively filled, may also be used in:**
- Zones 1 & 2 with Ex d IIC equipment not containing a source of ignition & with a volume less than 2000cm³
- Zones 1 & 2 with Ex d IIA & Ex d IIB equipment not containing a source of ignition & with any volume
- Zone 1 with Ex d IIA & Ex d IIB equipment containing a source of ignition & with a volume less than 2000cm³
- Zone 2 with Ex d IIA & Ex d IIB equipment containing a source of ignition & with any volume
- Zone 2 with Ex nR II equipment

### Specifications

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<th>Cable Dimensions mm</th>
<th>Gland Dimensions mm</th>
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Specifications

Features and benefits:

• Brass indoor and outdoor cable gland for use in hazardous areas
• Suitable for circular, galvanised steel wire armour cables with extruded polymeric bedding and oversheath
• Suitable for circular, Braid wire armour cables with extruded polymeric bedding and oversheath
• Achieves IP67 seal onto cable and to enclosure with suitable sealing washer or thread sealant
• Three part armour lock provides mechanical cable retention and electrical continuity
• Continuity Connection for Lead Inner sheathed cables
• Inner PCP seal grips cable bedding and provides additional ingress protection
• Suitable for most climatic conditions - weatherproof and waterproof
• Standard and Nickel plated versions available
• Full Installation Instructions supplied

Technical Information:

Certified II 2GD, Ex e II & Ex d IIc under ATEX directive 94/9/EC

Atex Compliance Standards: EN 60079-0, EN 60079-1, EN 60079-7, EN 61241-0, EN 61241-1

Certificate number Sira 02ATEX3093X

IECEx Compliance Standards: IEC 60079-0, IEC 60079-1, IEC 60079-7, IEC 61241-0, IEC 61241-1

Certificate number IECEx SIR 10.0070X

Service temperature range -60°C to +90°C

May be used in:

• Zones 1 & 2 with Ex e II equipment
• Zones 2 with Ex nA II equipment
• Zone 21 & 22 with Ex tD A21

Where the cable is effectively filled, may also be used in:

• Zones 1 & 2 with Ex d IIC equipment not containing a source of ignition & with a volume less than 2000cm³
• Zones 1 & 2 with Ex d IIA & Ex d IIB equipment not containing a source of ignition & with any volume
• Zone 1 with Ex d IIA & Ex d IIB equipment containing a source of ignition & with a volume less than 2000cm³
• Zone 2 with Ex d IIA & Ex d IIB equipment containing a source of ignition & with any volume
• Zone 2 with Ex nR II equipment

Cable Glands

(474NP Series)

E1W-XL (NPT) Ex d IIC / Ex e II

UNIVERSAL GLAND SUITABLE FOR USE WITH STEEL WIRE ARMOUR, Braid WIRE ARMOURED AND LEAD SHEATHED CABLES

Specifications

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*NPT Threaded glands are supplied as glands only.

**Other NPT sizes available upon request.
Specifications

Features and benefits:
• Brass indoor and outdoor cable gland for use in hazardous areas
• Suitable for circular, galvanised steel wire armour cables with extruded polymeric bedding and oversheath
• Suitable for circular, Braid wire armour cables with extruded polymeric bedding and oversheath
• Achieves IP67 seal onto cable and to enclosure with suitable sealing washer or thread sealant
• Three part armour lock provides mechanical cable retention and electrical continuity
• Continuity Connection for Lead Inner sheathed cables
• Inner PCP seal grips cable bedding and provides additional ingress protection
• Suitable for most climatic conditions - weatherproof and waterproof
• Standard and Nickel plated versions available
• Full Installation Instructions supplied

Technical Information:
Certified II 2GD, Ex e II & Ex d II under ATEX directive 94/9/EC
Atex Compliance Standards: EN 60079-0, EN 60079-1, EN 60079-7, EN 61241-0, EN 61241-1
Certificate number Sira 02ATEX3093X
IECEx Compliance Standards: IEC 60079-0, IEC 60079-1, IEC 60079-7, IEC 61241-0, IEC 61241-1
Certificate number IECEx SIR 10.0070X
Service temperature range -60°C to +90°C

Where the cable is effectively filled, may also be used in:
• Zones 1 & 2 with Ex d IIC equipment not containing a source of ignition & with any volume
• Zone 1 with Ex d IIA & Ex d IIB equipment containing a source of ignition & with any volume
• Zone 2 with Ex nR II equipment

Kit comprises:
E1W-XL Gland
Brass Earth Tag
Brass Locknut
Nylon Sealing Washer
PCP Shroud
(2 per kit up to and including 25mm size)

E1W-XL Ex d IIC / Ex e II
Cable Gland Kit
(KA474 Series)

Universal gland suitable for use with steel wire armoured, braid wire armoured and lead sheathed cables

May be used in:
• Zones 0, 1 & 2 with Ex ia IIA, B & C equipment
• Zones 1 & 2 with Ex ib IIA, B & C equipment
• Zones 1 & 2 with Ex e II equipment
• Zones 2 with Ex na II equipment
• Zone 21 & 22 with Ex tD A21

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Excel Plus Ex d IIC / Ex e II
Deluge Proof Cable Gland (493AB Series)

Features and benefits:
• Brass indoor and outdoor cable gland for use in hazardous areas
• Suitable for circular cables with braid, tape or wire armour and extruded polymeric bedding & oversheath
• Achieves IP67 and deluge proof (DTS01:1991) seal onto cable and to enclosure with sealing washer supplied or thread sealant
• Three part armour lock provides mechanical cable retention and electrical continuity
• Diaphragm inner seal compatible with soft bedding materials that may be subject to ‘cold-flow’
• Suitable for most climatic conditions – weatherproof, waterproof and deluge proof
• Nickel plated versions also available

Technical Information:
Certified II 2GD, Ex e II & Ex d IIC under ATEX directive 94/9/EC
Atex Compliance Standards: EN 60079-0, EN 60079-1, EN 60079-7, EN 61241-0, EN 61241-1
Certificate number Sira01ATEX1032X
Service temperature range –20°C to +90°C

CSA certified Ex d IIC & Ex e II, CSA Enclosure Type 4X, AEx d IIC & AEx e II, NEMA 4X

May be used in:
• Zones 0, 1 & 2 with Ex ia IIA, B & C equipment
• Zones 1 & 2 with Ex ib IIA, B & C equipment
• Zones 1 & 2 with Ex e II equipment
• Zones 1 & 2 with Ex p II equipment
• Zone 2 with Ex nA II equipment
• Zones 21 & 22 with Ex tD II equipment

Where the cable is effectively filled, may also be used in:
• Zones 1 & 2 with Ex d IIC equipment not containing a source of ignition & with a volume less than 2000 cm³
• Zones 1 & 2 with Ex d IIA & Ex d IIB equipment containing a source of ignition & with any volume
• Zone 1 with Ex d IIA & Ex d IIB equipment containing a source of ignition & with any volume
• Zone 2 with Ex d IIA & Ex d IIB equipment containing a source of ignition & with any volume
• Zone 2 with Ex nR II equipment

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Excel Plus Ex d IIC / Ex e II Deluge Proof Cable Gland (493AB Series)
UNIVERSAL GLAND SUITABLE FOR USE WITH BRAID, TAPE AND STEEL WIRE ARMOURED CABLES.
Excel Plus (NPT) Ex d IIC / Ex e II
Deluge Proof Cable Gland
(493NE Series)

UNIVERSAL GLAND SUITABLE FOR USE WITH BRAID, TAPE AND STEEL WIRE ARMOURED CABLES.

Features and benefits:
• Brass indoor and outdoor cable gland for use in hazardous areas
• Suitable for circular cables with braid, tape or wire armour and extruded polymeric bedding & oversheath
• Achieves IP67 and deluge proof (DTS01:1991) seal onto cable and to enclosure with sealing washer supplied or thread sealant
• Three part armour lock provides mechanical cable retention and electrical continuity
• Diaphragm inner seal compatible with soft bedding materials that may be subject to ‘cold-flow’
• Suitable for most climatic conditions – weatherproof, waterproof and deluge proof
• Nickel plated versions also available

Technical Information:
Certified II 2GD, Ex e II & Ex d IIC under ATEX directive 94/9/EC
Atex Compliance Standards: EN 60079-0, EN 60079-1, EN 60079-7, EN 61241-0, EN 61241-1
Certificate number Sira01ATEX1032X
Service temperature range –20°C to +90°C

CSA certified Ex d IIC & Ex e II, CSA Enclosure Type 4X, AEx d IIC & AEx e II, NEMA 4X

May be used in:
• Zones 0, 1 & 2 with Ex ia IIA, B & C equipment
• Zones 1 & 2 with Ex ib IIA, B & C equipment
• Zones 1 & 2 with Ex e II equipment
• Zones 1 & 2 with Ex p II equipment
• Zone 2 with Ex nA II equipment
• Zones 21 & 22 with Ex TD II equipment

Where the cable is effectively filled, may also be used in:
• Zones 1 & 2 with Ex d IIC equipment not containing a source of ignition & with a volume less than 2000 cm³
• Zones 1 & 2 with Ex d IIA & Ex d IIB equipment not containing a source of ignition & with any volume
• Zone 1 with Ex d IIA & Ex d IIB equipment containing a source of ignition & with any volume
• Zone 2 with Ex d IIA & Ex d IIB equipment containing a source of ignition & with any volume
• Zone 2 with Ex nR II equipment

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*NPT Threaded glands are supplied as glands only.
**Other NPT sizes available upon request.
Excel Plus Ex d IIC / Ex e II
Deluge Proof Cable Gland Kit (KA493 Series)

UNIVERSAL GLAND SUITABLE FOR USE WITH BRAID, TAPE AND STEEL WIRE ARMOURED CABLES.

Features and benefits:
• Brass indoor and outdoor cable gland for use in hazardous areas
• Suitable for circular cables with braid, tape or wire armour and extruded polymeric bedding & oversheath
• Achieves IP67 and deluge proof (DTS01:1991) seal onto cable and to enclosure with sealing washer supplied or thread sealant
• Three part armour lock provides mechanical cable retention and electrical continuity
• Diaphragm inner seal compatible with soft bedding materials that may be subject to ‘cold-flow’
• Suitable for most climatic conditions – weatherproof, waterproof and deluge proof
• Nickel plated versions also available

Technical Information:
Certified II 2GD, Ex e II & Ex d IIC under ATEX directive 94/9/EC
Atex Compliance Standards: EN 60079-0, EN 60079-1, EN 60079-7, EN 61241-0, EN 61241-1
Certificate number Sira01ATEX1032X
Service temperature range –20°C to +90°C

CSA certified Ex d IIC & Ex e II, CSA Enclosure Type 4X, AEx d IIC & AEx e II, NEMA 4X

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May be used in:
• Zones 0, 1 & 2 with Ex ia IIA, B & C equipment
• Zones 1 & 2 with Ex ib IIA, B & C equipment
• Zones 1 & 2 with Ex e II equipment
• Zones 1 & 2 with Ex p II equipment
• Zone 2 with Ex na II equipment
• Zones 21 & 22 with Ex tD II equipment

Where the cable is effectively filled, may also be used in:
• Zones 1 & 2 with Ex d IIC equipment not containing a source of ignition & with a volume less than 2000 cm³
• Zones 1 & 2 with Ex d IIA & Ex d IIB equipment not containing a source of ignition & with any volume
• Zone 1 with Ex d IIA & Ex d IIB equipment containing a source of ignition & with a volume less than 2000 cm³
• Zone 2 with Ex d IIA & Ex d IIB equipment containing a source of ignition & with any volume
• Zone 2 with Ex nr II equipment

Kit comprises:
Excel Plus Gland
Brass Earth Tag
Brass Locknut
Nylon Sealing Washer
PVC Shroud
(2 per kit up to and including 25mm size)
Barr-A Ex d IIC
Cable Gland
(424TA Series)

Features and benefits:
• Brass indoor and outdoor cable gland for use in Zone 1 and Zone 2 hazardous areas
• Suitable for circular unarmoured cables with extruded oversheath
• Achieves IP66 seal onto cable and to enclosure with suitable sealing washer or thread sealant
• Provides mechanical cable retention
• Suitable for most climatic conditions - weatherproof and waterproof
• Standard and Nickel plated versions available
• Full Installation Instructions supplied

Technical Information:
Certified II 2GD, Ex e II & Ex d IIC under ATEX directive 94/9/EC
Atex Compliance Standards: EN 60079-0, EN 60079-1,
EN 60079-7, EN 61241-0, EN 61241-1
Certificate number Sira04ATEX1080X
IECEx Compliance Standards: IEC 60079-0, IEC 60079-1,
IEC 60079-7, IEC 61241-0, IEC 61241-1
Certificate number IECEx SIR 10.0072X
Service temperature range –60°C to +90°C

May be used in:
• Zones 0, 1 & 2 with Ex ia IIA, B & C equipment
• Zones 1 & 2 with Ex ib IIA, B & C equipment
• Zones 1 & 2 with Ex d IIA, B & C equipment with any volume
• Zones 1 & 2 with Ex e II equipment
• Zones 1 & 2 with Ex p II equipment
• Zone 2 with Ex nA II equipment
• Zone 2 with Ex nR II equipment
• Zones 21 & 22 with Ext d A21

Specifications

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*Other NPT sizes available upon request.
Barr-W Ex d IIC
Cable Gland
(424TW Series)
SUITABLE FOR USE WITH STEEL WIRE ARMOURED CABLES

Features and benefits:
• Brass indoor and outdoor cable gland for use in Zone 1 and Zone 2 hazardous areas
• Suitable for circular, galvanized steel single wire armour cables with extruded polymeric overshield and extruded or taped bedding
• Achieves IP66 seal onto cable and to enclosure with suitable sealing washer or thread sealant
• Provides mechanical cable retention and electrical continuity through the armour wire termination
• Suitable for most climatic conditions - weatherproof and waterproof
• Standard and Nickel plated versions available
• Full Installation Instructions supplied

Technical Information:
Certified II 2GD, Ex e II & Ex d II under ATEX directive 94/9/EC
Atex Compliance Standards: EN 60079-0, EN 60079-1, EN 60079-7, EN 61241-0, EN 61241-1
Certificate number Sira04ATEX1080X
IECEx Compliance Standards: IEC 60079-0, IEC 60079-1, IEC 60079-7, IEC 61241-0, IEC 61241-1
Certificate number IECEx SIR 10.0072X
Service temperature range –60°C to +90°C

May be used in:
• Zones 0, 1 & 2 with Ex ia IIA, B & C equipment
• Zones 1 & 2 with Ex ib IIA, B & C equipment
• Zones 1 & 2 with Ex d IIA, B & C equipment with any volume
• Zones 1 & 2 with Ex e II equipment
• Zones 1 & 2 with Ex p II equipment
• Zone 2 with Ex nA II equipment
• Zone 2 with Ex nR II equipment
• Zones 21 & 22 with Extd A21

Specifications

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*Other NPT sizes available upon request.
**Barr-X Ex d IIC**

**Cable Gland**

(424TX Series)

SUITABLE FOR USE WITH BRAID ARMoured CABLES

**Features and benefits:**
- Brass indoor and outdoor cable gland for use in Zone 1 and Zone 2 hazardous areas
- Suitable for circular, wire braid armour cables with extruded polymeric oversheath and extruded or taped bedding
- Achieves IP66 seal onto cable and to enclosure with suitable sealing washer or thread sealant
- Provides mechanical cable retention and electrical continuity through the braid wire termination
- Suitable for most climatic conditions - weatherproof and waterproof
- Standard and Nickel plated versions available
- Full Installation Instructions supplied

**Technical Information:**
- Certificated II 2GD, Ex e IIA & Ex d IIC under ATEX directive 94/9/EC
- ATEX Compliance Standards: EN 60079-0, EN 60079-1, EN 60079-7, EN 61241-0, EN 61241-1
- Certificate number Sira04ATEX1080X
- IECEx Compliance Standards: IEC 60079-0, IEC 60079-1, IEC 60079-7, IEC 61241-0, IEC 61241-1
- Certificate number IECEx SIR 10.0072X

**Service temperature range**
- –60°C to +90°C

**Specifications**

<table>
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<th>Gland Reference</th>
<th>Cable Dimensions mm</th>
<th>Gland Dimensions mm</th>
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*Other NPT sizes available upon request.*
### Features and benefits:
- Brass indoor and outdoor cable gland for use in Zone 1 and Zone 2 hazardous areas
- Suitable for circular, galvanised steel single wire armour cables with extruded polymeric oversheath and Lead Inner sheath
- Achieves IP66 seal onto cable and to enclosure with suitable sealing washer or thread sealant
- Provides mechanical cable retention and electrical continuity through the armour wire termination
- Provides electrical continuity to the inner lead sheath
- Suitable for most climatic conditions - weatherproof and waterproof
- Standard and Nickel plated versions available
- Full Installation Instructions supplied

### Technical Information:
- Certified II 2GD, Ex e II & Ex d IIIC under ATEX directive 94/9/EC
- Atex Compliance Standards: EN 60079-0, EN 60079-1, EN 60079-7, EN 61241-0, EN 61241-1
- Certificate number Sira04ATEX1080X
- IECEx Compliance Standards: IEC 60079-0, IEC 60079-1, IEC 60079-7, IEC 61241-0, IEC 61241-1
- Certificate number IECEx SIR 10.0072X
- Service temperature range –60°C to +90°C

### May be used in:
- Zones 0, 1 & 2 with Ex ia IIA, B & C equipment
- Zones 1 & 2 with Ex ib IIA, B & C equipment
- Zones 1 & 2 with Ex d IIA, B & C equipment with any volume
- Zones 1 & 2 with Ex e II equipment
- Zones 1 & 2 with Ex p II equipment
- Zone 2 with Ex na II equipment
- Zone 2 with Ex nr II equipment
- Zones 21 & 22 with Extd A21

### Specifications

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* Sizes 85, 86, 89, 35, 36 & 39 are designated BARR-PBS and are designed to suit smaller diameter armour wires.
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<td>401AA</td>
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<td>LSOH Shrouds</td>
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# PVC Shrouds

**UV Resistant PVC shrouds**

**ROHS COMPLIANT**

## Specifications

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PCP Shrouds
Polychloroprene Shrouds

ROHS COMPLIANT

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LSOH Shrouds
Silicone LSOH Shrouds

COMPLY WITH LU STANDARD 1-085 FOR INSTALLATION IN ALL SUB-SURFACE LOCATIONS

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Locknuts
Brass, Nickel Plated Brass, Steel & Aluminium

FOR SECURING EXTERNAL THREADS INTO NON-THREADED EQUIPMENT

- Brass, Nickel Plated Brass, Galvanized Steel & Aluminium designs
- Nickel Plated Brass backnuts should be used with Nickel plated Glands
- Brass backnuts recommended for most corrosive environments
- Aluminium backnuts should be used with aluminium glands
- Steel locknuts are primarily for dry, low humidity environments

Specifications

Locknuts
Insulated Adaptors Ex d

Insulated adaptors provide a method of insulating cable glands from the equipment to which they are fixed. They are used where the enclosure is not relied upon for bonding the cable to the earth, for example:
- To prevent the heating effects of circulating currents.
- To segregate low voltage and high voltage earth fault paths.

Specifications

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Impact Resistance: 7 Joules
Ambient Temperature: -50°C to + 85°C
Thread Form: Metric
Material: Brass
Insulator: 30% glass filled nylon 12
Certified: Exd IIC for hazardous area applications

ELECTRICAL PROPERTIES OF INSULATING MATERIAL

Dielectric strength: 90 kV/mm
Volume resistivity: 8.6 x 10^14 ohms/cm
Min thickness of insulator: 5mm +/- 1mm
2kV ‘Wet withstand’ tested
Earthtags
Brass & Aluminium

EARTH TAGS PROVIDE AN EARTH BOND CONNECTION BETWEEN THE GLAND AND THE EQUIPMENT

- Brass, Nickel Plated Brass & Aluminium designs should be selected to match the gland materials.

### Specifications

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All Brass Earth Tags 1.5mm thick, Aluminium 2mm thick
## IP Washers
### Nylon & Fibre Sealing Washers

To improve the IP rating between the gland and the equipment to values greater than IP54.

### Specifications

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### Anti Vibration Washers
### Stainless Steel Serrated Washers

### Specifications

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**Adaptors & Reducers Ex d**

- FLAMEPROOF ADAPTORS AND REDUCERS - Reducers enable a gland with a smaller thread size to be installed in larger threaded opening - Adaptors enable a larger or equivalent gland to be installed in an opening with a smaller thread form
- Metric to NPT adaptors / reducers allow metric glands to be used with NPT equipment & vice versa
- Certified: Exd IIC for hazardous area applications

### Specifications

#### Gland Adaptors (Metric)

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Bicon® Cable Glands