KOPEX-Ex

T&B® Fittings

Star Teck®

Product Catalogue

Flexible Conduit Systems, Glands, Rigid Conduit Fittings and Accessories for Hazardous and Hostile Areas

Thomas&Betts
A Member of the ABB Group

Welcome to Thomas & Betts

At Thomas & Betts, our focus is on improving your business performance by providing practical, reliable electrical products and services. To connect and protect for life. To solve everyday problems in the areas of Wire and Cable Management, Cable Protection, Power Connection and Control and Safety. Our extensive engineering, supply chain management and technical sales support teams are committed to understanding everything that impacts your ability to accomplish your business objectives by reducing your total cost of ownership.

Whether you are designing, installing, operating, maintaining or owning an office building, off-shore platform, hospital, or a high speed train, power generating plant, machine equipment or a manufacturing facility, Thomas & Betts engineered products' fit and function in your application provide superior performance, sustainability, and value throughout the project life cycle.

All our brands are built upon four product and service solution platforms. Platforms that address your or your customers' critical electrical and lighting needs covering the protection of data, energy, processes, assets and personal safety. Beyond hi-performance application characteristics, Thomas & Betts products, information and services facilitate and speed up your time critical assembly, installation or maintenance processes.

Contents

Oil and gas - upstream applications

Industry overview

The oil and gas market is split into three sectors Upstream, Midstream and Downstream. Upstream consists of Exploration and production. Both these areas offer very distinct and unique challenges to people and equipment working within them.

Firstly, there are offshore applications such as the drilling rigs and production platforms. These are always open to extreme weather conditions so equipment used here needs to be able to withstand a salty environment. This is achieved through either manufacturing product from stainless steel, as is the case for Kopex-Ex conduit glands, or by ensuring that the product is coated or painted to withstand marine environments.

Equipment in offshore applications also needs to be hardwearing and easy to maintain as production downtime can be extremely costly. For example, a FPSO (Floating Production Storage and Offloading) vessel can produce up to 200,000 barrels of crude oil per day at approx $80 to $90 per barrel. A breakdown would result in a loss of revenue of over $700,000 per hour.

Approvals / Characteristics

Ex IEC IECEx

ZONE 1 ZONE 2 ZONE 21 ZONE 22

IP66

Product selection criteria

- **Salt water corrosion (offshore platforms)**
- **Oil and chemical resistance (Drilling rig MUD)**
- **Extreme ambient temperature**
- **Protection level**
- **Connectivity to other pieces of equipment**
- **Consequence of down time**
- **Approval level required (Ex e, Ex d, etc.)**
- **Approval specification required ATEX, IECEx, UL, GOST, CSA etc.**
- **Where product will be positioned, e.g. Zone 1 or Zone 2**

Oil and gas - upstream applications

This has led to Thomas & Betts products being used in many offshore applications to protect critical data and power cables across these massive vessels. Whether it is data cables from a gas detector or the cable protection on a power transmission unit, Thomas & Betts offers a whole range of products that are tested and approved to many of the world standards.

Onshore applications can also be split into exploration and production. Single onshore wells may produce as little as a few barrels per day but networking of onshore wells can result in production of milliions of barrels per day.

This brings with it a whole new series of challenges to be overcome. Firstly, the drilling rigs tend to be mobile with motors and pumps often mounted on skids for easy transportation. This can lead to issues of connectivity for which Thomas and Betts has a range of thread converters in a variety of materials, many meeting world standards, ready to resolve the problem.

Secondly, so many rigs in network requires a massive monitoring operation to ensure that the flow of all the rigs is ongoing and consistent. This makes the protection of data cable critical. With the broadest range of systems and approvals, Thomas & Betts leads the field in providing solutions.

Oil and gas - midstream applications

Industry overview

Midstream relates to the transportation, storage and partial processing of crude oil and gas from the wellheads to the refining plants. This brings another set of challenges to overcome.

One challenge relates to what is pumped out of the well. It is not pure and often contains a mixture of oil, gas, water and often sand which must be separated before being shipped or piped to a storage facility.

The separation can be accomplished in a variety of ways depending on the type of oil or gas that the well is pumping and can often take up to 4 processes before the commodity is separated out ready for piping or shipping. These processes require energy and this energy is often created by the utilization of the gas in the commodity itself.

In the case of an offshore rig, this separating is often done on shore away from the rig then pumped to the storage depots. In the case of the FPSO vessels, it is all done on board and the oil is transferred to tankers at sea for delivery to storage depots. Once the separating is complete, the commodity can then be moved to storage.

Approvals / Characteristics

Ex IEC IECEx

ZONE 1 ZONE 2 ZONE 21 ZONE 22

IP66

Product selection

- **Salt water corrosion (tankers)**
- **Extreme ambient temperature**
- **Protection level**
- **Consequence of down time**
- **Approval level required (Ex e, Ex d, etc.)**
- **Approval specification required ATEX, IECEx, UL, GOST, CSA etc**
- **Where product will be positioned, e.g. Zone 1 or Zone 2**

Oil and gas - midstream applications

At this point, metering needs to take place to calculate invoices and assess taxes. Accuracy is required to not only measure the amount of oil produced but also the density, viscosity, pressure and temperature, and in the case of gas, the amount of water vapour.

Oil is often pumped directly to the oil refinery where the down stream operation begins, often travelling through a series of pumps to get the required pressure.

Thomas & Betts offers a range of products and services to meet the demands of midstream oil and gas markets.

Oil and gas - downstream applications

Industry overview

The term downstream relates to the processing and delivery of finished carbon related product to the end-user. This covers a whole range of applications from refining to petrol stations.

There are over 700 refineries globally all competing to supply finished carbon based products to local and international markets.

The products refined are varied including:

- **Transportation fuels**
  LPG, gasoline, jet fuel, diesel, gas oil and bunker fuel
- **Petrochemical feedstocks**
  LPG, naphtha and aromatics
- **Energy sources**
  LPG, kerosene, heating oil and fuel oil
- **Specialities**
  Lubricants, bitumen, coke, solvents and waxes
- **Petrochemical feedstocks**
  Synthetic fibres (nylon), plastics (polyethylene, PVC)

Approvals / Characteristics

Ex IEC IECEx

ZONE 1 ZONE 2 ZONE 21 ZONE 22

IP66

Product Selection

- **Continual movement (CCTV)**
- **Extreme ambient temperature**
- **Protection level**
- **Consequence of down time**
- **Approval level required (Ex e, Ex d, etc.)**
- **Approval specification required ATEX, IECEx, CSA etc.**
- **Where product will be positioned, e.g. Zone 1 or Zone 2**

Oil and gas - downstream applications

Refining is a four stage process. It begins with distillation which separates the commodity into 5 product sectors: LPG, Naphtha, Kerosene, Gas, Oil, and Atmospheric residue. Distillation is accomplished using high temperatures. The higher the temperature, the higher the quality of the end product.

The second stage is upgrading or reforming. This stage is used to change the product at a molecular level; for example, changing low octane Naphtha to high octane which can then be blended into gasoline.

Stages three and four are treatment processes which remove impurities such as sulphur and blend the refined product into distinct products for the market.

The final stage of the downstream process is delivery to the market which involves storage and transportation. For example, aviation fuel can be shipped direct to airports by road or rail where it is stored, before being transferred directly to tanker trunks for refuelling of aircraft.

Food and beverage applications

Food processing - explosion proof (dust)

Food industry

Thomas & Betts offers a range of products for the food processing market, including products for use in areas where stainless steel is preferred as well as areas classed as hazardous.

Beverage manufacture - explosion proof (vapour)

Beverage industry

Thomas & Betts has a range of products designed for use in all beverage production sectors in the malting, brewing, wine, spirits or soft drink business.

Chemical and pharmaceutical applications

Chemical engineering - explosion proof

Chemical industry

The chemical industry produces very diverse products, including everything from fertilizers to explosives such as nitroglycerin.

Pharmaceutical production - explosion proof

Pharmaceutical industry

The Thomas & Betts range of products and solutions are ideal for use in the pharmaceutical Industry. Whether it is upstream in the primary production stage or downstream in the packing stage.

World standards and what they mean

Standards and what they mean

In this section we will outline the different standards used throughout the world and what they mean for products specified for use in hazardous areas. Below is a map of the world which illustrates the standards that are generally used in the different regions.

Product approvals

UL	CSA	IECEx	ATEX	GOST	INMETRO
CLASS & DIVISIONS	CLASS & ZONES	GROUPS & ZONES			

The ATEX Europe directives 94/9/EC

ATEX requires employers and manufacturers' to eliminate or control risks from dangerous substances and to classify areas where explosive atmospheres may occur into zones, as laid down in regulations. ATEX directives are designed to protect employees, the public and the environment from accidents owing to explosive atmospheres and since July 1st, 2006 all existing sites, as well as new sites, must be fully ATEX compliant.

Directive ATEX100a applies to equipment suppliers and manufacturers and ATEX137 applies to end users. These directives complement each other, but have different purposes. ATEX100A covers both electrical and non-electrical products intended for use in hazardous areas, including mechanical equipment. The directive came into existence in 2003 and products sold within the European Union designed for use in hazardous areas must have ATEX certification and bear the ATEX marking on the product or on a certificate plate. The obligation is placed upon the manufacturer or supplier of the product and the intention is to facilitate free movement of goods within the EU.

Declaration of conformance

The declaration must be issued by the supplier for every order which is to be installed in a hazardous area. The declaration must show that the equipment supplied complies with the latest harmonized standard.

IECEx (International scheme)

The IECEx scheme is an international certificate of conformance for products used in a hazardous area.

This scheme provides:

a) A single certification of conformity for manufacturers which certifies:
   i) Testing and assessment of products to a standard including a full test report.
   ii) Ongoing surveillance of manufacturers' premises.
b) A fast-track process for countries where regulations still require the issuing of national Ex certificates or approvals.

This scheme is in the process of being adopted by all the known standards across the world but all are working to various time scales.

UL (America) and CSA (Canada)

The American and Canadian standards are the only ones to have different classifications and locations. ATEX and IECEx work to Groups and Zones whereas the NEC and CEC works to Classes and Divisions. There is no direct comparison between the two. Therefore, they are not interchangeable.

GOST (Russia)

GOST follows similar rules to that of IECEx for breakdown of the zones and other criteria. However, the requirements for Russia mean that separate GOST markings are required on the product.

GOST is divided into GOST (R) which is the standard for the Russian Federation and GOST (K) which is the standard for Kazakhstan.

Electrical materials for use in potentially explosive atmospheres must conform to two major certification standards: IEC/CENELEC and NEC

The IEC (International Electrotechnical Commission) standards are accepted in practically all countries. They are identical to the European CENELEC standards.

The NEC (National Electrical Code) is mandatory in the United States. The 1996 version, art. 505, takes up the IEC designations for gas, temperature classes for materials and zone definition.

Gases and vapours classification

Gases are divided into four groups in the NEC (National Electrical Code) and three groups in the IEC/CENELEC. The groups display the same hierachy of classification of gases and vapour. (See table on page 20).

Temperature classification

The IEC and the NEC have also defined a temperature classificiation for material used in zones at risk of explosion. (See table on page 21).

Zone Definitions
Onshore gases and vapours (as per ATEX 60079-10)

Zones for onshore gases and vapours

FOR GASES & VAPOURS

ZONE 0

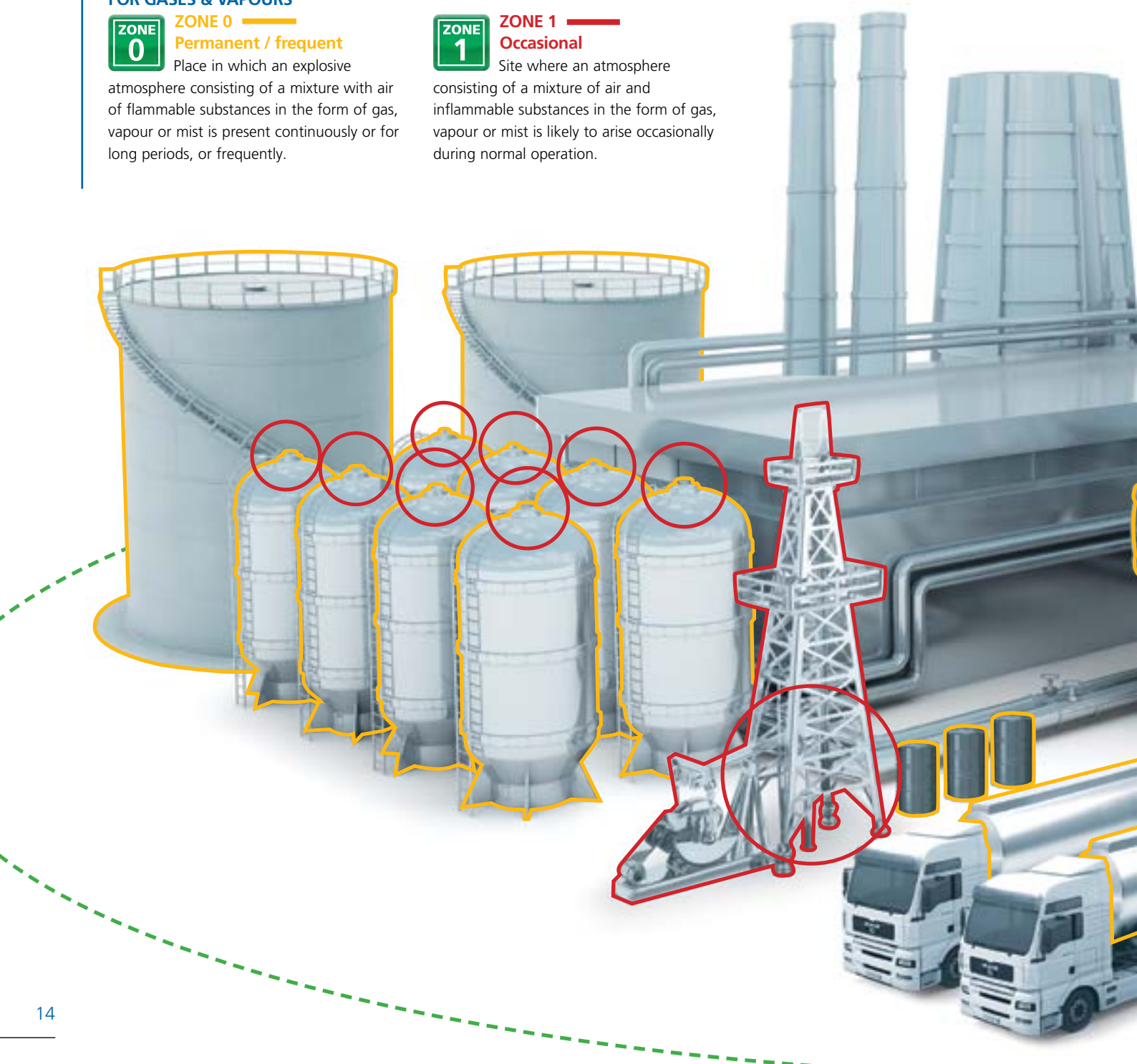
ZONE 0
Permanent / frequent

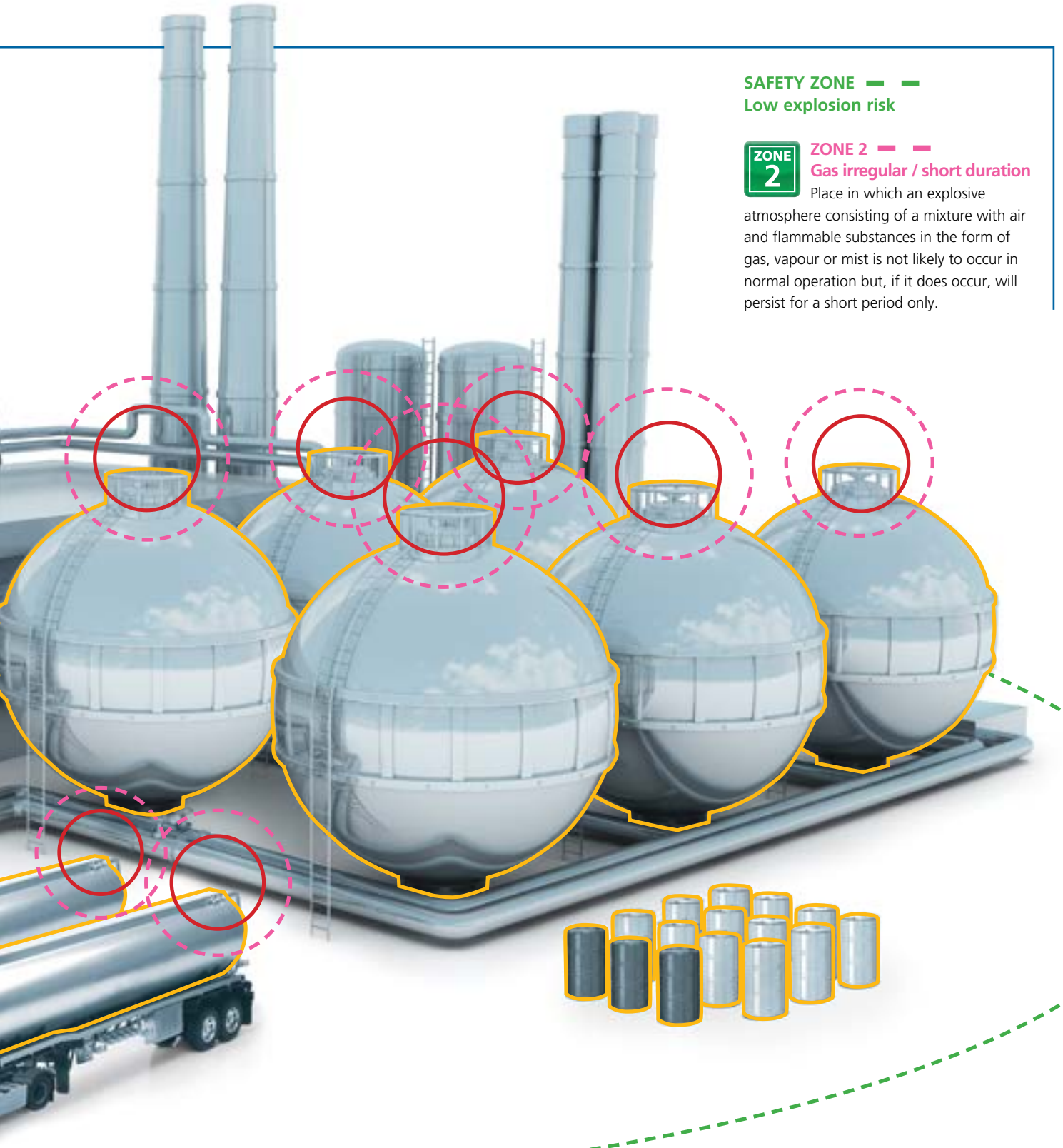
Place in which an explosive atmosphere consisting of a mixture with air of flammable substances in the form of gas, vapour or mist is present continuously or for long periods, or frequently.

ZONE 1

ZONE 1
Occasional

Site where an atmosphere consisting of a mixture of air and inflammable substances in the form of gas, vapour or mist is likely to arise occasionally during normal operation.





SAFETY ZONE
Low explosion risk

ZONE 2
Gas irregular / short duration

Place in which an explosive atmosphere consisting of a mixture with air and flammable substances in the form of gas, vapour or mist is not likely to occur in normal operation but, if it does occur, will persist for a short period only.

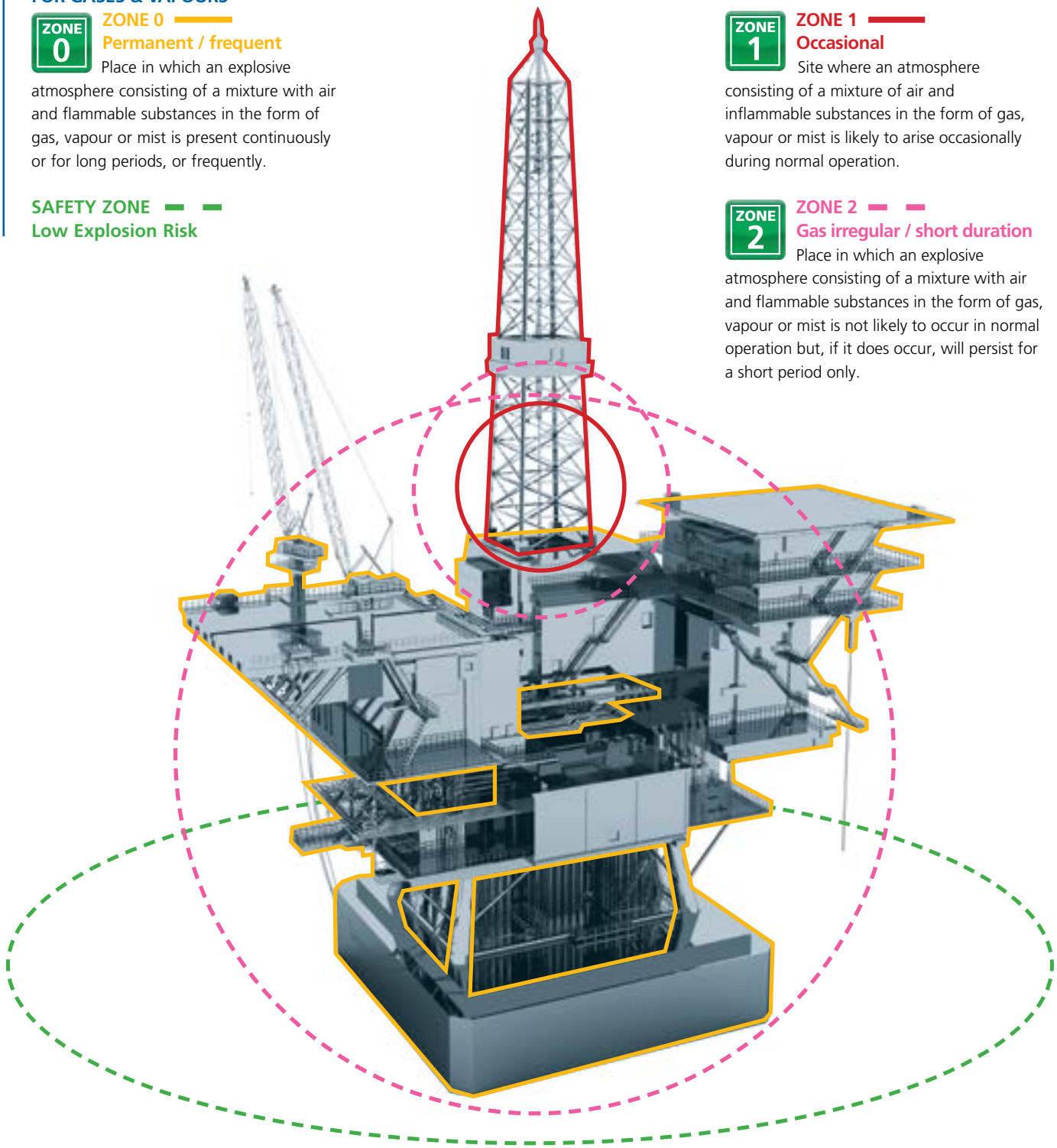
Zone Definitions
Offshore gases and vapours (as per ATEX 60079-10)

Zones for offshore gases and vapours

FOR GASES & VAPOURS

ZONE 0
Permanent / frequent
Place in which an explosive atmosphere consisting of a mixture with air and flammable substances in the form of gas, vapour or mist is present continuously or for long periods, or frequently.

SAFETY ZONE
Low Explosion Risk



ZONE 1
Occasional
Site where an atmosphere consisting of a mixture of air and inflammable substances in the form of gas, vapour or mist is likely to arise occasionally during normal operation.

ZONE 2
Gas irregular / short duration
Place in which an explosive atmosphere consisting of a mixture with air and flammable substances in the form of gas, vapour or mist is not likely to occur in normal operation but, if it does occur, will persist for a short period only.

Zone Definitions
Dust (as per ATEX 60079)

Zones for Dust

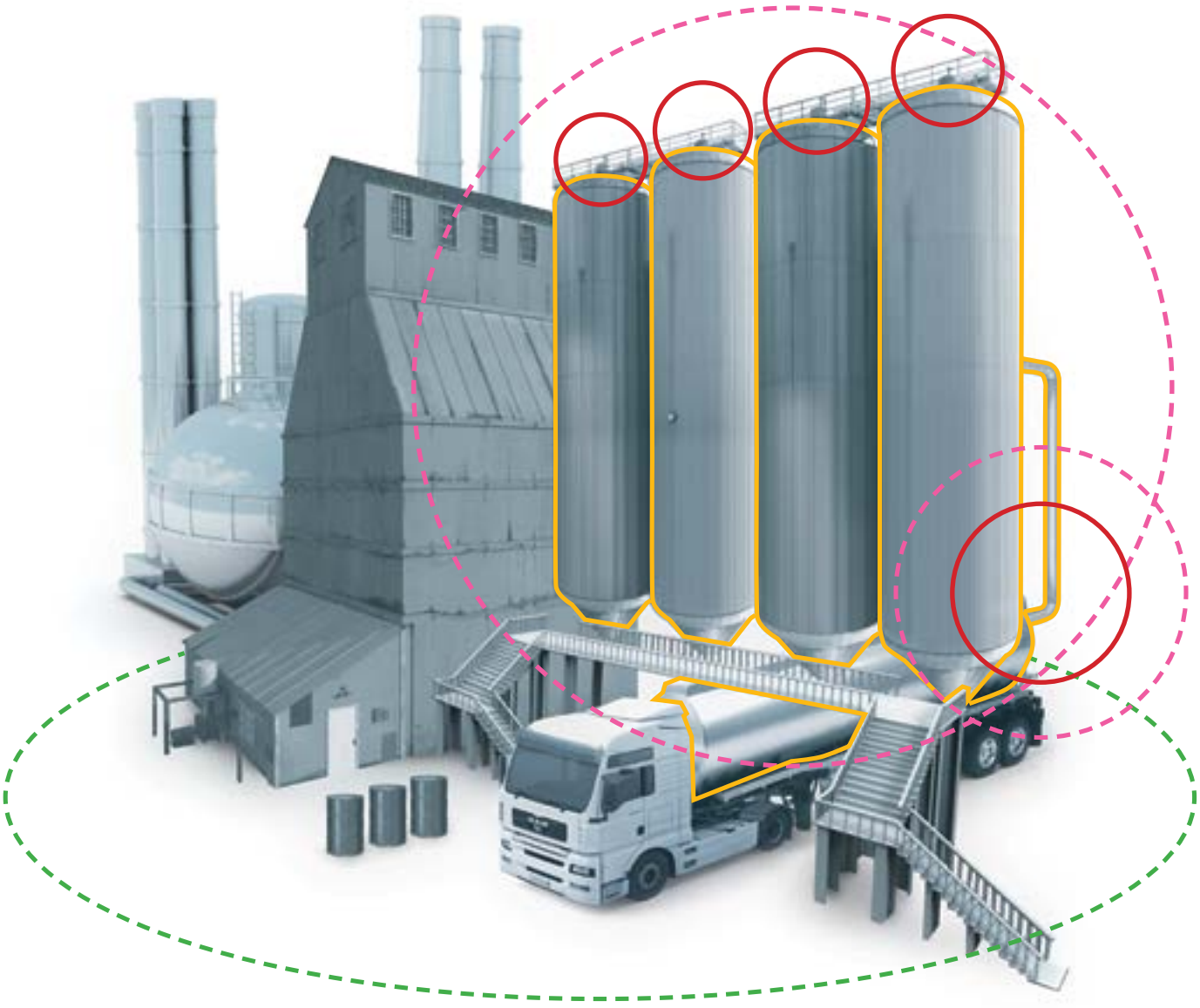
FOR DUST

ZONE 20
Permanent / frequent
Area in which an explosive atmosphere in the form of a cloud of combustible dust in air is present continuously, or for long periods, or frequently.

ZONE 21
Occasional
Area in which an explosive atmosphere, in the form of a cloud of combustible dust in air is likely to occur, occasionally, in normal operation.

ZONE 22
Dust irregular / short duration
Area in which an explosive atmosphere, in the form of a cloud of combustible dust in air is not likely to occur in normal operation but, if it does occur, will persist for a short period only.

SAFETY ZONE
No Explosion Risk



Kopex-Ex - Classification of equipment for use in potentially explosive atmospheres

Classification of hazardous areas		European/IEC or NEC classifications		
Flammable substances	Temporary behaviour of flammable substances in hazardous places	**Typical zones**	**Required marking** for installation	
			equipment group	equipment protection level
Gases Vapours	is present continuously or for long periods or frequently	zone 0	**II**	**Ga**
	is likely to occur in normal operation occasionally	zone 1	**II**	**Gb**
	is not likely to occur in normal operation but, if it does occur, will persist for a short period only	zone 2	**II**	**Gc**
Dusts	is present continuously or for long periods or frequently	zone 20	**III**	**Da**
	is likely to occur in normal operation occasionally	zone 21	**III**	**Db**
	is not likely to occur in normal operation but, if it does occur, will persist for a short period only	zone 22	**III**	**Dc**
Methane Dusts	-	mines	**I**	**Ma**
	-	mines	**I**	**Mb**

Subdivision of gases and vapours			
Apparatus may be used in group	**Gases or vapours**		
IIA	ammonia methane ethane propane	ethyl alcohol cyclohexane n-butane	galsoline n-hexane
IIB	town gas, acrylnitril	ethylene ethylene oxide	ethylene glycol
IIC	hydrogen	ethine (acetylene)	sulphide of carbon

Dust	
IIIA	Combustible flyings
IIIB	Non-conductive dust
IIIC	Conductive dust

Product stamp detail

(Product stamp detail)

(Class & Divisions)

CLI (Class I), Div 1
Where ignitable concentrations of flammable gases, vapours or liquids are present within the atmosphere under normal operation conditions.

CLI (Class I), Div 2
Where ignitable concentrations of flammable gases, vapours or liquids are present within the atmosphere under abnormal operation conditions.

Class I areas
Group A: Acetylene / Group B: Hydrogen /
Group C: Propane & Ethylene / Group D: Benzene, Butane & Propane.

CLII (Class II), Div 1
Where ignitable concentrations of combustible dusts are present within the atmosphere under normal operation conditions.

CLII (Class II), Div 2
Where ignitable concentrations of combustible dusts are present within the atmosphere under abnormal operation conditions.

Class II areas
Group E: Metal Dust / Group F: Carbon & Charcoal / Group G: Flour, Starch, Wood & Plastic.

Restriction for using apparatus	
Requirements	**Marking**
Equipment without restriction	-
Equipment with special condition may be noted	**X**
Ex component, which is not intended to be used alone and requires additional certification before being used in hazardous area	**U**

Protection technique

Application	Type of protection		Marking	EN/IEC standard
All applications	General requirements		-	60079-0
Control stations, motors, fuses, switchgear, power electronics	Flameproof enclosure		**Ex d**	60079-1
Installation materials, motors, luminaries	Increased safety		**Ex e**	60079-7
Measurement and control, automation technology, sensors, actuators	Intrinsic safety		**Ex i**	60079-11
Switch- and control cupboards, analyse-apparatus, computers	Pressurisation		**Ex p**	60079-2
Coils of motors or relays, solenoid valves	Encapsulation		**Ex m**	60079-18
Transformers, relays, control stations, magnetic contactors	Oil immersion		**Ex o**	60079-6
Capacitors, transformers	Powder filling		**Ex q**	60079-5
See at the top - only for zone 2	'Non sparking'		**Ex n**	60079-15
For use in zone 0, 1, 2 / for use in zone 1, 2	Dust atmospheres		**Ex t**	60079-31

IECEx SIRA09.0103 X

(Certification Number)

IIA **T1** Acetone 735°
IIA **T1** Ammonia 630°
IIB **T1** Carbon Monoxide 605°
IIA **T1** Bensene 560°
IIC **T1** Hydrogen 560°
IIA **T1** Methane 537°
IIA **T1** Toluene 535°
IIA **T1** Styrene 490°
IIA **T1** Propane 470°
IIA **T1** 1-Butene 455°
IIB **T1** Butadiene 430°

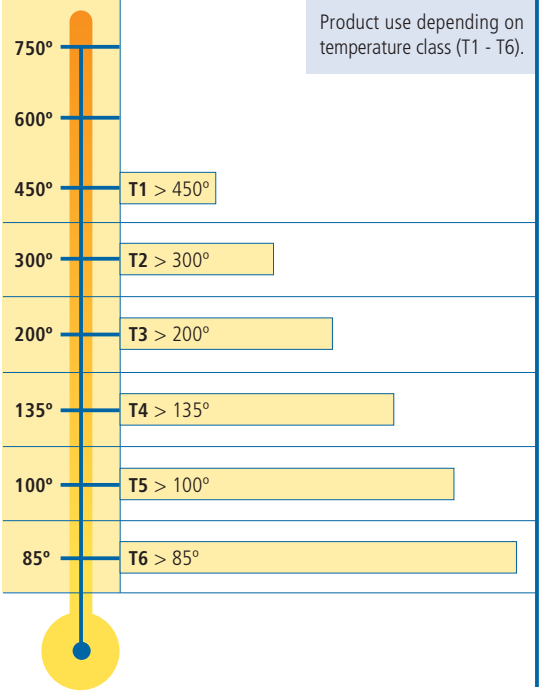
IIB **T2** Ethylene 425°
IIA **T2** Butane 372°
IIA **T2** Ethanol 363°
IIA **T2** Butylalcohol 359°
IIB **T2** Dimetylether 350°
IIC **T2** Acetylene 305°

IIA **T3** Nafta 290°
IIA **T3** Hydrogen Sulphide 270°
IIA **T3** Cyclohexane 259°
IIA **T3** Hexane 233°
IIA **T3** Heptane 215°
IIA **T3** Kerosene 210°
IIA **T3** Dekane 201°

IIB **T4** Diethyl Ether 160°

IIC **T6** Carbon Disulphide 95°

Temperature Class (T) / Ignition Temperature



New Marking - EPL's (Explosion Protection Levels)

The introduction of the EPL's and changes in the EN 60079 series standard has introduced new marking requirements.

Star Teck® - Classification of equipment for use in potentially explosive atmospheres

Classification of hazardous areas		European/IEC or NEC classifications		
Flammable substances	Temporary behaviour of flammable substances in hazardous places	**Typical zones**	**Required marking** for installation	
			equipment group	equipment protection level
Gases Vapours	is present continuously or for long periods or frequently	zone 0	**II**	**Ga**
	is likely to occur in normal operation occasionally	zone 1	**II**	**Gb**
	is not likely to occur in normal operation but, if it does occur, will persist for a short period only	zone	**II**	**Gc**
Dusts	is present continuously or for long periods or frequently	zone 20	**III**	**Da**
	is likely to occur in normal operation occasionally	zone 21	**III**	**Db**
	is not likely to occur in normal operation but, if it does occur, will persist for a short period only	zone 22	**III**	**Dc**
Methane Dusts	-	mines	**I**	**Ma**
	-	mines	**I**	**Mb**

Subdivision of gases and vapours

Apparatus may be used in group	Gases or vapours			
IIA	ammonia methane ethane propane	ethyl alcohol cyclohexane n-butane	gasoline n-hexane	acetaldehyde
IIB	town gas, acrylnitril	ethylene ethylene oxide	ethylene glycol	ethyl-ether
IIC	hydrogen	ethine (acetylene)	sulphide of carbon	

Dust	
IIIA	Combustible flyings
IIIB	Non-conductive dust
IIIC	Conductive dust

Class I IEC Zone System - CEC Division (pre-1998) System

	Watertight 10464 Series	Star Teck ST050 to ST400	Star Teck XP STX050 to STX400	Star Teck Extreme STE050 to STE200	Star Teck Extreme STE250 to STE400	Star Teck Extreme XP STEX050 to STEX400
With SC4-KIT, SC65 Integral Sealing Compound						
Zone 1 Group IIC, IIB, IIA / **Division 1 Group A, B, C, D**	Not Certified	Not Certified	Certified	Not Certified	Not Certified	Certified
Zone 2 Group IIC, IIB, IIA / **Division 2 Group A, B, C, D**	Not Certified	Not Certified	Certified	Not Certified	Not Certified	Certified
With Class 1 HLA Sealing Fitting						
Zone 1 Group IIC, IIB, IIA / **Division 1 Group A, B, C, D**	Certified	Certified	Not required - certified with integral seal	Certified	Certified	Not required - certified with integral seal
Zone 2 Group IIC, IIB, IIA / **Division 2 Group A, B, C, D**	Certified	Certified	Not required - certified with integral seal	Certified	Certified	Not required - certified with integral seal
Classes II and III, Divisions 1 and 2						
Class II / **Division 1, 2** / **Groups E, F, G**	Certified	Certified	Certified	Certified	Certified	Certified
Class III / **Division 1, 2**	Certified	Certified	Certified	Certified	Certified	Certified
Enclosure Type 6P / **(immersion)**	Not Certified	Not Certified	Not Certified	Certified	Not Certified	Not Certified
Enclosure Type 4 / **(immersion)**	Certified	Certified	Certified	Certified	Certified	Certified

Star Teck®

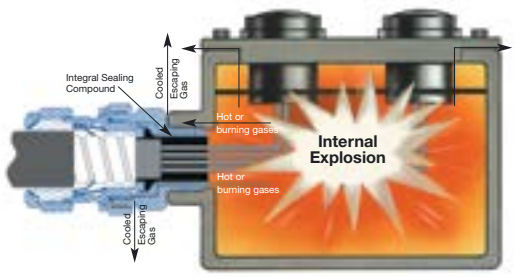
Restriction for using apparatus	
Requirements	Marking
Equipment without restriction	-
Equipment with special condition may be noted	X
Ex component, which is not intended to be used alone and requires additional certification before being used in hazardous area	U

Protection technique

Application	Type of protection		Marking	EN/IEC standard
All applications	General requirements		-	60079-0
Control stations, motors, fuses, switchgear, power electronics	Flameproof enclosure		Ex d	60079-1
Installation materials, motors, luminaires	Increased safety		Ex e	60079-7
Measurement and control, automation technology, sensors, actuators	Intrinsic safety		Ex i	60079-11
Switch- and control cupboards, analyse-apparatus, computers	Pressurisation		Ex p	60079-2
Coils of motors or relays, solenoid valves	Encapsulation		Ex m	60079-18
Transformers, relays, control stations, magnetic contactors	Oil immersion		Ex o	60079-6
Capacitors, transformers	Powder filling		Ex q	60079-5
See at the top - only for zone 2	'Non sparking'		Ex n	60079-15
For use in zone 0, 1, 2 / for use in zone 1, 2	Dust atmospheres		Ex t	60079-31

Temperature Class (T) / Ignition Temperature

This diagram illustrates the escape paths of gases generated by an explosion within an electrical enclosure. When an explosion occurs, hot or burning gases pass through the threaded joint or Star Teck XP flame path and must make a number of changes in direction. These changes in direction cool the hot gases to the point that they are too cool to ignite the surrounding atmosphere once they escape. Other escape paths for the hot gases include the enclosure cover flange and the interstices between the strands of wires entering the enclosure.



IIA **T1** Acetone 735°
IIA **T1** Ammonia 630°
IIB **T1** Carbon Monoxide 605°
IIA **T1** Bensene 560°
IIC **T1** Hydrogen 560°
IIA **T1** Methane 537°
IIA **T1** Toluene 535°
IIA **T1** Styrene 490°
IIA **T1** Propane 470°
IIA **T1** 1-Butene 455°
IIB **T1** Butadiene 430°

IIB **T2** Ethylene 425°
IIA **T2** Butane 372°
IIA **T2** Ethanol 363°
IIA **T2** Butylalcohol 359°
IIB **T2** Dimetylether 350°
IIC **T2** Acetylene 305°

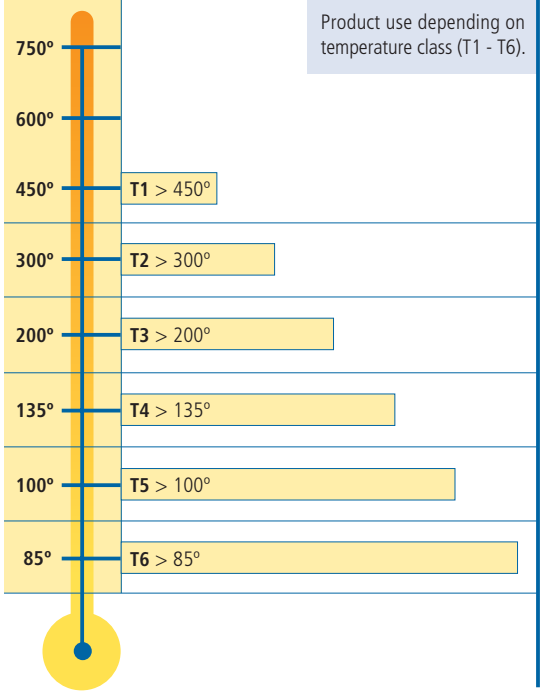
IIA **T3** Nafta 290°
IIA **T3** Hydrogen Sulphide 270°
IIA **T3** Cyclohexane 259°
IIA **T3** Hexane 233°
IIA **T3** Heptane 215°
IIA **T3** Kerosene 210°
IIA **T3** Dekane 201°

IIB **T4** Diethyl Ether 160°

IIC **T6** Carbon Disulphide 95°

Temperature Class (T) / Ignition Temperature

Product use depending on temperature class (T1 - T6).



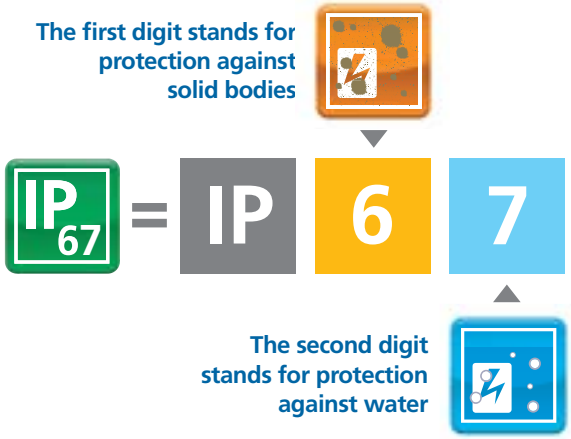
Index of ingress protection

IPxx suitability ratings are a system for classifying the degree of protection provided by enclosures of electrical equipment. The higher the number, the greater the degree of protection, in accordance with standards IEC 60529 and EN 60529.

Protection standrards

- Protection against solid bodies
- Protection against liquids
- Protection against impact as per EN 50102 standard

IP Classification



Protection against solid bodies

0	No protection
1	Protected against solid bodies of 50mm and greater, (e.g. accidental contact with the hand)
2	Protected against solid bodies of 12.5mm and greater, (e.g. accidental touch by fingers)
3	Protected against solid bodies of 2.5mm and greater, (e.g. tools and wires)
4	Protected against solid bodies of 1mm or greater, (e.g. thin tools and fine wires)
5	Protected against dust - limited ingress (no harmfull deposits)
6	Totally protected against dust (dust-tight)

Protection against liquids

0	No protection
1	Protected against vertically falling drops of water (condensation)
2	Protected against drops of water falling up to 15° from the vertical
3	Protected against drops of water falling up to 60° from the vertical
4	Protected against splashing water from all directions
5	Protection against jets of water from all directions
6	Protection against powerful jets of water from all directions
7	Protected against the effects of temporary immersion in water
8	Protected against the continuous effects of immersion in water having regard to specific conditions
9	IP69k automotive standard DIN40050 signifies resistance to high pressure jets (up to 80bar) from any angle

Hazlux®

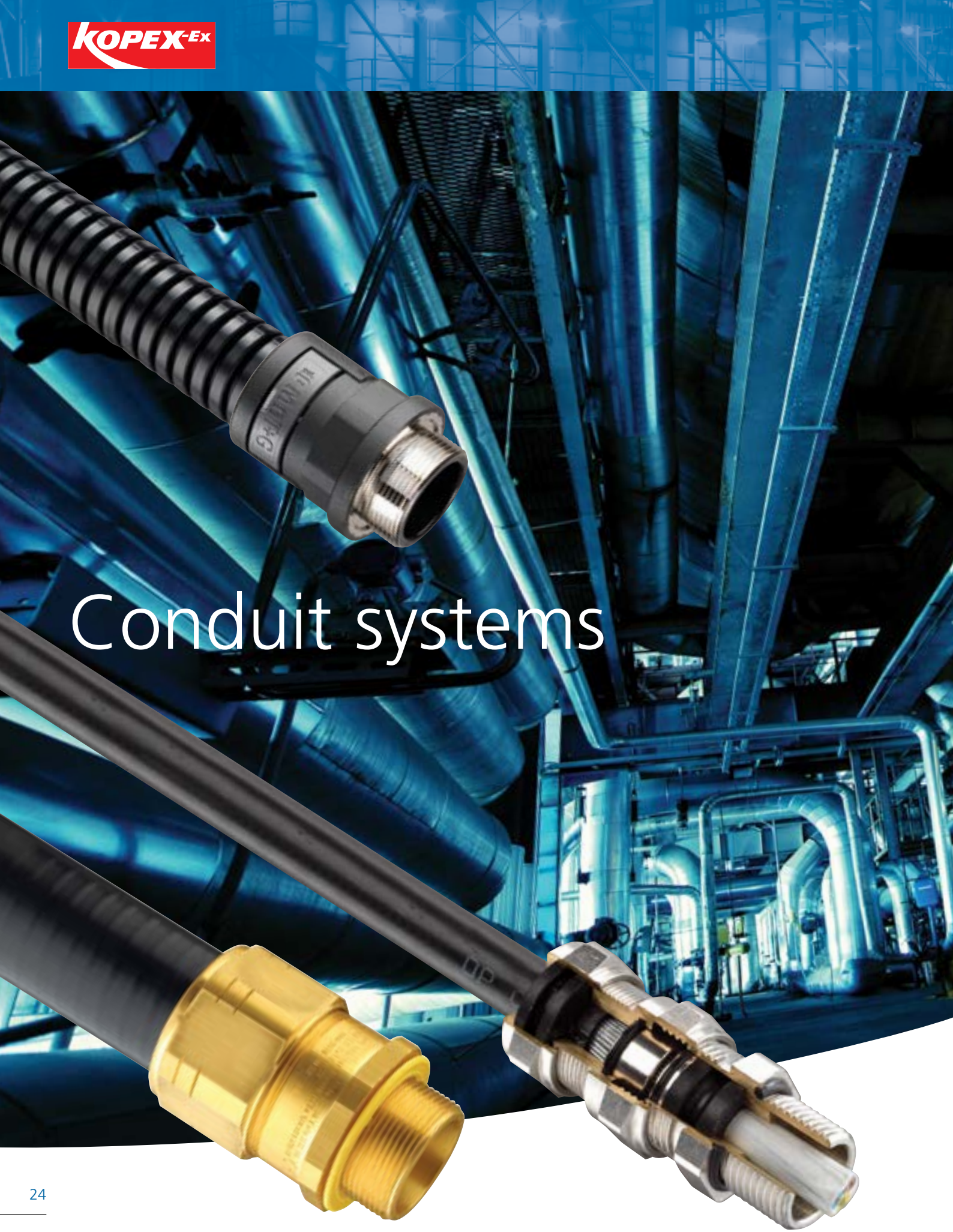
Introducing the *NEW* Hazlux® industrial and hazardous location lighting catalogue

Thomas & Betts is committed to delivering high quality industrial lighting fixtures designed, tested and certified for use in hazardous locations and adverse environment conditions.

You can rely on **Hazlux®** to safely provide light where you need it - even under the harshest indoor and outdoor conditions. If safety, labour reduction, quality and reliability are your priorities, consider **Hazlux®** lighting products to reduce maintenance and prevent downtimes. Specifically designed and approved to UL and CSA for the North American market.

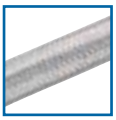
Call now to order!

our *NEW* industrial and hazardous location lighting product catalogue on tel +44 (0) 1675 468 213 or visit our website at www.tnb-hazardous.com

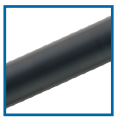
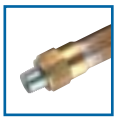


Conduit systems

Conduit fittings - selection guide

	Nylon Conduits				Nylon Conduit Fittings			
	 **Nylon conduits EXB** Page 28	 **Overbraided conduits EXBB** Page 28	 **Nylon conduits XESX** Page 29	 **Metallic fittings** Page 30	 **Nylon fittings NENV** Page 33	 **Nylon fittings** Page 34	 **Nylon fittings** Page 35	 **Nylon fittings** Page 36
Ex	●	●	●	●	●	●	●	●
IEC / IECEx	●	●	●	●				
CSA								
UL								
PG	●	●		●				
INMETRO	●	●		●				
Protection Type – Exe	●	●	●	●	●	●	●	●
Protection Type – Exd								
Protection Type – Exde								
Protection Type – Extb	●	●	●	●	●	●	●	●
Gas Group IIC	●	●	●	●	●	●	●	●
Dust Group IIIC	●	●	●	●	●	●	●	●
Zones 1	●	●	●	●	●	●	●	●
Zones 2	●	●	●	●	●	●	●	●
Zones 21	●	●	●	●	●	●	●	●
Zones 22	●	●	●	●	●	●	●	●
CLASS I DIV 1								
CLASS I DIV 2								
CLASS II DIV 1								
CLASS II DIV 2								

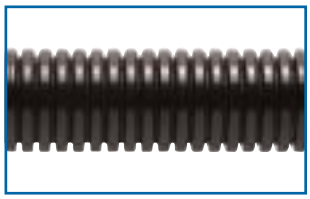
For use with liquid tight conduits

 **Liquid tight conduits** Page 38	 **Group 1 glands** Page 42	 **Group 1 90° elbow glands** Page 44	 **Group 1 univeral fittings** Page 45	 **Group 1 universal swivel fttings** Page 47	 **XP flex** Page 48
	●	●	●	●	
	●	●	●	●	
	●	●	●	●	●
					●
	●	●	●	●	
	●	●	●	●	
	●	●	●	●	
	●	●	●	●	
	●	●	●	●	
	●	●	●	●	
	●	●	●	●	
	●	●	●	●	
	●	●	●	●	
	●	●	●	●	
			●	●	●
	●	●	●	●	●
	●	●	●	●	●

Non-metallic nylon conduit

Technical specifications

EXB anti-static conduit compatible with EXPQM / EXPQA fittings



Anti-Static Nylon 12 (Black) Type	Conduit Size (mm) Metric	NW	Outside Diameter (mm)	Coil Lengths (m)
EXB03*	16	12	15.8	10/30/50
EXB04*	20	17	21.2	10/30/50
EXB05*	25	23	28.5	10/30/50
EXB06*	32	29	34.4	10/30/50
EXB07*	40	36	42.4	10/30/50
EXB08*	50	48	54.5	10/30/50
EXB09*	68	56	67.2	10/30/50
EXB010*	80	70	80	10/30/50

**Add coil length to complete part number, e.g. 10 metres = EXB0510*

EC TYPE Examination Certificate:
ATEX: Baseefa 08 ATEX 0003X
IECEx: IECEx BAS08.0001X
GOST R: РОСС GB.ГБ05.B03850
INMETRO: TÜV 11.0091

Ex e IIC Gb
Ex tb IIIC Db
Temperature: -20°C to 80°C
RTI 110°C to EN60079-0

Special characteristics
EXB: Surface resistivity <$10^6\Omega$

EXBB overbraided conduit compatible with EXBQM / EXBQA fittings

Anti-Static Nylon 12 (Stainless Steel) Type	Conduit Size (mm) Metric	NW	Outside Diameter (mm)	Coil Lengths (m)
EXBB03*	16	12	17.2	50
EXBB04*	20	17	23.6	50
EXBB05*	25	23	30	50
EXBB06*	32	29	36	50
EXBB07*	40	36	43.5	30
EXBB08*	50	48	56.5	30

**Add coil length to complete part number, e.g. 10 metres = EXBB0510*

EC TYPE Examination Certificate:
ATEX: Baseefa 08 ATEX 0003X
IECEx: IECEx BAS08.0001X
GOST R: РОСС GB.ГБ05.B03850
INMETRO: TÜV 11.0091

Ex e IIC Gb
Ex tb IIIC Db
Temperature: -20°C to 80°C
RTI 110°C to EN60079-0

Special characteristics
EXBB: Screening level 60dB at 1MHz

Related products

EXPQM fitting 30

EXBQM fitting 30

Technical specifications

XESX anti-static nylon multi-layer conduit compatible with EXPQM / EXBQA fittings

Anti-Static Nylon 12 (Black) Type	Conduit Size (mm) Metric	NW	Outside Diameter (mm)	Coil Lengths (m)
XESX0250	12	10	12.8	50
XESX0350	16	12	15.6	50
XESX0450	20	17	21	50
XESX0550	25	23	28.5	50
XESX0650	32	29	34.4	50
XESX0730	40	36	42.4	30
XESX0830	50	48	54.4	30

EC TYPE Examination Certificate:
ATEX: Baseefa 08 ATEX 0003X
IECEx: IECEx BAS08.0001X

Ex e IIC Gb
Ex tb IIIC Db
Temperature: -40°C to 85°C

RTI 110°C to EN60079-0
Special characteristics
XESX: Surface resistivity <$10^6\Omega$

Related products

EXPQM fitting 30

EXBQM fitting 30

XESX anti-static conduit compatible with all nylon fittings

Anti-Static Nylon 12 (Black) Type	Conduit Size (mm) Metric	NW	Outside Diameter (mm)	Coil Lengths (m)
XESXT-10BY.50	12	10	12.8	50
XESXT-12BY.50	16	12	15.6	50
XESXG-17BY.50	20	17	21	50
XESXG-23BY.50	25	23	28.5	50
XESXG-29BY.50	32	29	34.4	50
XESXG-36BY.30	40	36	42.4	30
XESXG-48BY.30	50	48	54.4	30

EC TYPE Examination Certificate:
ATEX SEV 05 ATEX0105

Ex eb IIC Gb
Ex tb IIIC Db

Temperature: -40°C to 85°C

Special characteristics:
XESX: Surface resistivity <$10^6\Omega$

Related products

NENV fitting 33

NENZ fitting 33

NEBV fitting 34

NEWV fitting 34

NEAV fitting 34

EXBQM / EXPQA range
Nylon conduit fittings

Approvals / Characteristics

Features

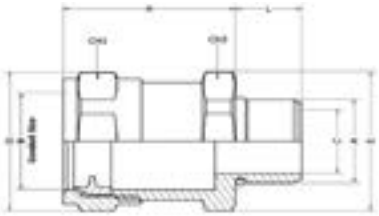
- Manufactured in nickel plated brass
- Approved for use in Ex e applications for Zones 1, 2, 21 & 22

Certification and standards

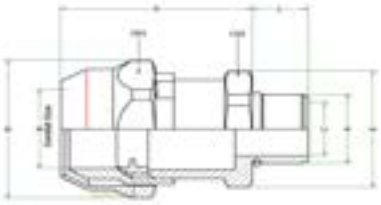
EC TYPE Examination Certificate:
ATEX: Baseefa 08 ATEX 0003X
IECEx: IECEx BAS08.0001X
GOST R: РОСС GB.ГБ05.B03850
INMETRO: TÜV 11.0091
Ex e IIC Gb
Ex tb IIIC Db
Temperature: -40°C to 85°C

Dimensions

Technical specifications



EXPQM for unbraided nylon



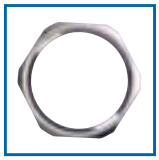
EXBQA for braided nylon

Nickel Plated Brass Metric				Cable Gland Dimensions					
Type	Thread Size A	Conduit Size B	C	D	E	L	H	CH1	CH2
EXPQM0303	M16	16.0	11.4	27.4	25.9	16.0	33.3	25.4	24.0
EXPQM0404	M20	21.0	15.8	30.2	30.2	16.0	32.0	28.0	28.0
EXPQM0505	M25	28.0	19.0	41.0	41.0	16.0	39.0	38.0	38.0
EXPQM0606	M32	34.0	26.4	48.1	45.4	17.0	40.0	44.5	42.0
EXPQM0707	M40	42.0	32.9	61.6	58.3	17.0	49.5	57.0	54.0
EXPQM0808	M50	54.0	43.9	75.6	75.6	16.0	48.0	70.0	70.0
EXPQM0909	M63	63.0	56.0	91.8	91.8	16.0	54.6	84.0	84.0
EXPQM1010	M75	80.0	67.5	104.0	104.0	16.0	52.6	95.3	95.3
EXBQM0303	M16	16.0	11.4	33.2	26.6	18.0	43.5	30.0	24.0
EXBQM0404	M20	21.0	15.8	38.8	31.0	16.0	43.5	35.0	28.0
EXBQM0505	M25	28.0	19.0	49.3	42.1	16.0	50.0	44.5	38.0
EXBQM0606	M32	34.0	26.4	55.4	46.5	18.0	51.0	50.0	42.0
EXBQM0707	M40	42.0	32.9	77.6	59.8	18.0	67.5	70.0	54.0
EXBQM0808	M50	54.0	43.9	93.1	77.6	16.0	70.0	84.0	70.0

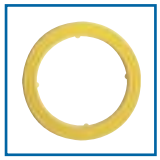
Nickel Plated Brass NPT				Cable Gland Dimensions					
Type	Thread Size A	Conduit Size B	C	D	E	L	H	CH1	CH2
EXPQA0304	1/2" NPT	16.0	11.4	25.9	27.4	20.0	32.5	24.0	25.4
EXPQA0404	1/2" NPT	21.0	15.8	30.2	30.2	20.0	31.5	28.0	28.0
EXPQA0505	3/4" NPT	28.0	19.0	41.0	41.0	20.2	38.3	38.0	38.0
EXPQA0606	1" NPT	34.0	26.4	45.4	48.1	24.2	40.0	42.0	44.5
EXPQA0707	1 1/4" NPT	42.0	32.9	58.3	61.6	25.8	49.5	54.0	57.0
EXPQA0808	1 1/2" NPT	54.0	40.7	75.6	75.6	26.1	48.0	70.0	70.0
EXPQA0909	2" NPT	63.0	56.0	91.8	91.8	19.7	54.6	84.0	84.0
EXPQA1010	2 1/2" NPT	80.0	67.5	104.0	104.0	28.9	52.6	95.3	95.3
EXBQA0304	1/2" NPT	16.0	11.4	33.2	26.6	20.0	44.5	30.0	24.0
EXBQA0404	1/2" NPT	21.0	15.8	38.8	31.0	20.0	45.0	35.0	28.0
EXBQA0505	3/4" NPT	28.0	19.0	49.3	42.1	20.2	54.0	44.5	38.0
EXBQA0606	1" NPT	34.0	26.4	55.4	46.5	24.2	57.5	50.0	42.0
EXBQA0707	2" NPT	42.0	32.9	77.6	59.8	25.8	70.0	70.0	54.0
EXBQA0808	2 1/2" NPT	54.0	40.7	93.1	77.6	26.1	70.0	84.0	70.0

For accessories see pages 134-35

Related products

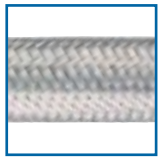


Locknuts 134



Sealing Washers 135

EXB Range 28



EXBB Range 28

XESX Multi-Layer 29

Nylon conduit fittings

Nylon conduit fittings for XESX conduit (Ex only)

Approvals / Characteristics

Ex

Exe | Extb

G IIC | D IIIC

ZONE 1 | ZONE 2 | ZONE 21 | ZONE 22

IP66

Features

- **Manufactured in modified nylon 12 with nickel plated brass threads**
- **Approved for use in Ex e applications for Zones 1, 2, 21 & 22**

Certification and standards

EC TYPE Examination Certificate:
ATEX: SEV 05 ATEX 0105
Ex eb IIC
Ex tb IIIC
Temperature: -20°C to 85°C

NENV straight male conduit fitting

Technical specifications

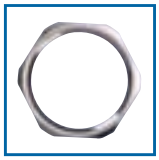
Type - Metric	Conduit Size (mm) Metric	NW	Metric Thread Size (mm)
NENV-M120-10	12	10	12
NENV-M160-10	12	10	16
NENV-M162-10	16	12	16
NENV-M202-10	16	12	20
NENV-M207-10	20	17	20
NENV-M257-11	20	17	25
NENV-M253-11	25	23	25
NENV-M323-13	25	23	32
NENV-M329-13	32	29	32
NENV-M409-13	32	29	40
NENV-M406-13	40	36	40
NENV-M506-14	40	36	50
NENV-M508-14	50	48	50
NENV-M638-14	50	48	63

NENZ straight male conduit fitting with strain relief

Type - Metric	Conduit Size (mm) Metric	NW	Metric Thread Size (mm)
NENZ-M120S/P*	12	10	12
NENZ-M160S/P*	12	10	16
NENZ-M202S/P*	16	12	20
NENZ-M207S/P*	20	17	20
NENZ-M257S/P*	20	17	25
NENZ-M323S/P*	25	23	32
NENZ-M409S/P*	32	29	40
NENZ-M506S/P*	40	36	50
NENZ-M508S/P*	50	48	50
NENZ-M638S/P*	50	48	63

**Available with various clamping ranges*

Related products



Locknuts 134

XESX range 29

Nylon conduit fittings for XESX conduit (Ex only)

Technical specifications

NEBV 90° curved elbow

Type - Metric	Conduit Size (mm) Metric	NW	Metric Thread Size (mm)
NEBV-M207-10	20	17	20
NEBV-M257-11	20	17	25
NEBV-M253-11	25	23	25
NEBV-M323-13	25	23	32
NEBV-M329-13	32	29	32
NEBV-M409-13	32	29	40
NEBV-M406-13	40	36	40
NEBV-M506-14	40	36	50
NEBV-M508-14	50	48	50
NEBV-M638-14	50	48	63

NEWV 90° elbow

Type - Metric	Conduit Size (mm) Metric	NW	Metric Thread Size (mm)
NEWV-M120-10	12	10	12
NEWV-M160-10	12	10	16
NEWV-M162-10	16	12	16
NEWV-M202-10	16	12	20

NEAV 45° elbow

Type - Metric	Conduit Size (mm) Metric	NW	Metric Thread Size (mm)
NEAV-M120-10	12	10	12
NEAV-M162-10	16	12	16
NEAV-M207-10	20	17	20
NEAV-M257-11	20	17	25
NEAV-M253-11	25	23	25
NEAV-M323-13	25	23	32
NEAV-M329-13	32	29	32
NEAV-M409-13	32	29	40
NEAV-M406-13	40	36	40
NEAV-M506-14	40	36	50
NEAV-M508-14	50	48	50
NEAV-M638-14	50	48	63

Technical specifications

BESGR splice connector

Type - Metric	Conduit Size (mm) Metric	NW
BESGR-1212	16	12
BESGR-1717	20	17
BESGR-2323	25	23
BESGR-2929	32	29
BESGR-3636	40	36
BESGR-4848	50	48

BEYR Y piece

Type - Metric	Conduit Size (mm) Metric	NW	2 x Conduit Size (mm) Metric	NW
BEYR-121010	16	12	12	10
BEYR-171212	20	17	16	12
BEYR-231717	25	23	20	17
BEYR-292323	32	29	25	23
BEYR-362929	40	36	32	29
BEYR-483636	50	48	40	36

BETR T piece

Type - Metric	Conduit Size (mm) Metric	NW
BETR-101010	12	10
BETR-121212	16	12
BETR-171717	20	17
BETR-232323	25	23
BETR-292929	32	29
BETR-363636	40	36
BETR-484848	50	48

For accessories see pages 134-35

Related products

Locknuts 134

XESX range 29

Nylon conduit fittings for XESX conduit (Ex only)

Technical specifications

BEAVR conduit adapter

Type - Metric	Fits into Fitting for Conduit Size (mm) Metric	NW	Fits to Conduit Size (mm) Metric	NW
BEAVR-12/10	16	12	12	10
BEAVR-17/12	20	17	16	12
BEAVR-23/17	25	23	20	17
BEAVR-29/23	32	29	25	23
BEAVR-36/29	40	36	32	29
BEAVR-48/36	50	48	40	36

NEIR straight female conduit fitting

Type - Metric	Conduit Size (mm) Metric	NW	Metric Female Thread Size
NEIR-M120	12	10	M12
NEIR-M160	12	10	M16
NEIR-M162	16	12	M16
NEIR-M207	20	17	M20
NEIR-M253	25	23	M25
NEIR-M329	32	29	M32
NEIR-M406	40	36	M40
NEIR-M508	50	48	M50
NEIR-M638	50	48	M63

BENR-REM corrugated conduit to rigid metal pipe connection

Type - Metric	Conduit Size (mm) Metric	NW	Steel Tube Thread Size
BENR-REM162-24	16	12	M16
BENR-REM207-28	20	17	M20
BENR-REM253-32	25	23	M25
BENR-REM329-44	32	29	M32
BENR-REM406-50	40	36	M40
BENR-REM508-65	50	48	M50

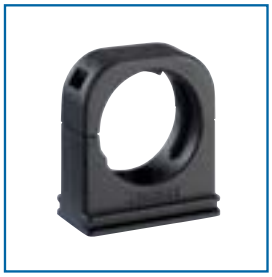
Technical specifications

HEAK EMC adapter with conical shielding braid clamp compatible with NENV / NENZ / NEBV / NEWV / NEAV

Nickel Plated Brass Type - Metric	Male Thread Size (mm)	Female Thread Size (mm)
HEAK-M32/25-13	32	25
HEAK-M40/32-13	40	32
HEAK-M50/40-14	50	40
HEAK-M63/63-14	63	63

Accessories

BEH conduit clip



Type - Metric	Conduit Size (mm) Metric	NW
BEH-10-0	12	10
BEH-12-0	16	12
BEH-17-0	20	17
BEH-23-0	25	23
BEH-29-0	32	29
BEH-36-0	40	36
BEH-48-0	50	48

For accessories see pages 134-35

Related products

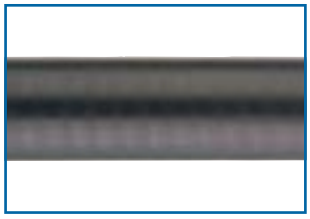
Locknuts 134

XESX range 29

Liquid tight conduit - galvanised steel core

Technical specifications

General oil resistant - galzanised steel core with a general purpose oil resistant coating



General Oil Resistant (Black) Type	Conduit Size Metric (mm)	US Trade Size (inch)	Inside Diameter (mm)	Coil Lengths (m)
EXLB03*	16	3/8	12.5	10/30
EXLB04*	20	1/2	16.0	10/30
EXLB05*	25	3/4	21.0	10/30
EXLB06*	32	1	26.4	10/20
EXLB07*	40	1 1/4	35.3	10/20
EXLB08*	50	1 1/2	40.4	10/20
EXLB09*	63	2	51.6	10/20

**Add coil length to complete part number, e.g. 10 metres = EXLB0510*

Certification standard: IEC 61386
Static temp: -25°C to +105°C
Flexing temp: -5°C to +105°C

Special characteristics
Flame retardant PVC covering

Flame propogation
Flame dies in less than 30 seconds after ignition source is removed

Low fire hazard - galzanised steel core with a LFH coating

Low Fire Hazard (Black) Type	Conduit Size Metric (mm)	US Trade Size (inch)	Inside Diameter (mm)	Coil Lengths (m)
EXLT03*	16	3/8	12.5	10/30
EXLT04*	20	1/2	16.0	10/30
EXLT05*	25	3/4	21.0	10/30
EXLT06*	32	1	26.4	10/20
EXLT07*	40	1 1/4	35.3	10/20
EXLT08*	50	1 1/2	40.4	10/20
EXLT09*	63	2	51.6	10/20

**Add coil length to complete part number, e.g. 10 metres = EXLT0510*

Certification standard: IEC 61386
LUL fully compliant (E1042A6)
MOD to NES 518: Issue 3 DEF STAN 61-12 (Part 31) Issue 1

Static temp: -25°C to +90°C
Flexing temp: -5°C to +90°C
Special characteristics
Limited fire hazard, zero halogen (BS6425 Pt 1)

Flame propogation
Flame dies in less than 30 seconds after ignition source is removed

Low fire hazard with EMC protection - galvanised steel core with a galvanised steel EMC shield and LFH covering

Low Fire Hazard with EMC (Black) Type	Conduit Size Metric (mm)	US Trade Size (inch)	Inside Diameter (mm)	Coil Lengths (m)
EXBBT03*	16	3/8	12.5	10/30
EXBBT04*	20	1/2	16.0	10/30
EXBBT05*	25	3/4	21.0	10/30
EXBBT06*	32	1	26.4	10/20
EXBBT07*	40	1 1/4	35.3	10/20
EXBBT08*	50	1 1/2	40.4	10/20
EXBBT09*	63	2	51.6	10/20

**Add coil length to complete part number, e.g. 10 metres = EXBBT0510*

Certification standard: IEC 61386
MOD to NES 518: Issue 3 DEF STAN 61-12 (Part 31) Issue 1

Static temp: -25°C to +90°C
Flexing temp: -5°C to +90°C

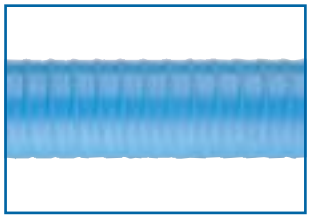
Special characteristics
Limited Fire Hazard covering
EMC Screening level: 60db at 1MHz Braided

Technical specifications

High temperature - galvanised steel core with a high temperature resistant coating

High Temperature (Black) Type	Conduit Size Metric (mm)	US Trade Size (inch)	Inside Diameter (mm)	Coil Lengths (inch)
EXLH03*	16	3/8	12.5	10/30
EXLH04*	20	1/2	16.0	10/30
EXLH05*	25	3/4	21.0	10/30
EXLH06*	32	1	26.4	10/20
EXLH07*	40	1 1/4	35.3	10/20
EXLH08*	50	1 1/2	40.4	10/20
EXLH09*	63	2	51.6	10/20

**Add coil length to complete part number, e.g. 10 metres = EXLH0510*



High Temperature (Blue) Type	Conduit Size Metric (mm)	US Trade Size (inch)	Inside Diameter (mm)	Coil Lengths (inch)
EXLLH03*	16	3/8	12.5	10/30
EXLLH04*	20	1/2	16.0	10/30
EXLLH05*	25	3/4	21.0	10/30
EXLLH06*	32	1	26.4	10/20
EXLLH07*	40	1 1/4	35.3	10/20
EXLLH08*	50	1 1/2	40.4	10/20
EXLLH09*	63	2	51.6	10/20

**Add coil length to complete part number, e.g. 10 metres = EXLLH0510*

Certification Standard: IEC 61386
Static Temp: -50°C to +130°C
Flexing Temp: -5°C to +90°C

Special Characteristics
Flame resistance: UL94 V2
Chemical and oil resistant

Flame Propogation
Flame dies in less than 30 seconds after ignition source is removed

High temperature highly flexible - galvanised steel core with a high temperature, highly flexible coating

High Temperature, Highly Flexible (Blue) Type	Conduit Size Metric (mm)	US Trade Size (inch)	Inside Diameter (mm)	Coil Lengths (inch)
EXLHC03*	16	3/8	12.5	10/30
EXLHC04*	20	1/2	16.0	10/30
EXLHC05*	25	3/4	21.0	10/30
EXLHC06*	32	1	26.4	10/20
EXLHC07*	40	1 1/4	35.3	10/20
EXLHC08*	50	1 1/2	40.4	10/20
EXLHC09*	63	2	51.6	10/20

**Add coil length to complete part number, e.g. 10 metres = EXLHC0510*

Certification standard: IEC 61386
Static temp: -65°C to +150°C
Flexing temp: -45°C to +135°C

Special characteristics
High flexibility
High temperature

Flame propogation
Flame dies in less than 30 seconds after ignition source is removed

Related products

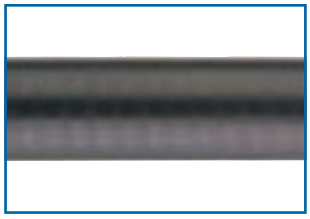
Group I gland 42

90° elbow gland 44

Liquid tight conduit - stainless steel core

Technical specifications

General oil resistant - stainless steel 316 core with a general purpose oil resistant coating



General Oil Resistant (Black) Type	Conduit Size Metric (mm)	US Trade Size (inch)	Inside Diameter (mm)	Coil Lengths (m)
EXSB03*	16	3/8	12.5	10/30
EXSB04*	20	1/2	16.0	10/30
EXSB05*	25	3/4	21.0	10/30
EXSB06*	32	1	26.4	10/20
EXSB07*	40	1 1/4	35.3	10/20
EXSB08*	50	1 1/2	40.4	10/20
EXSB09*	63	2	51.6	10/20

**Add coil length to complete part number, e.g. 10 metres = EXSB0510*

Certification standard: IEC 61386
Static temp: -25°C to +105°C
Flexing temp: -5°C to +105°C

Special characteristics
Flame retardant PVC covering

Flame propogation
Flame dies in less than 30 seconds after ignition source is removed

Low fire hazard - stainless steel core with a LFH coating

Low Fire Hazard (Black) Type	Conduit Size Metric (mm)	US Trade Size (inch)	Inside Diameter (mm)	Coil Lengths (m)
EXST03*	16	3/8	12.5	10/30
EXST04*	20	1/2	16.0	10/30
EXST05*	25	3/4	21.0	10/30
EXST06*	32	1	26.4	10/20
EXST07*	40	1 1/4	35.3	10/20
EXST08*	50	1 1/2	40.4	10/20
EXST09*	63	2	51.6	10/20

**Add coil length to complete part number, e.g. 10 metres = EXST0510*

Certification standard: IEC 61386
LUL fully compliant (E1042A6)
MOD to NES 518: Issue 3 DEF STAN 61-12 (Part 31) Issue 1

Static temp: -25°C to +90°C
Flexing temp: -5°C to +90°C
Special characteristics
Limited fire hazard, zero halogen (BS6425 Pt 1)

Flame propogation
Flame dies in less than 30 seconds after ignition source is removed

Low fire hazard with EMC protection - stainless steel core with a galvanised steel EMC shield and LFH covering

Low Fire Hazard with EMC (Black) Type	Conduit Size Metric (mm)	US Trade Size (inch)	Inside Diameter (mm)	Coil Lengths (m)
EXSBBT03*	16	3/8	12.5	10/30
EXSBBT04*	20	1/2	16.0	10/30
EXSBBT05*	25	3/4	21.0	10/30
EXSBBT06*	32	1	26.4	10/20
EXSBBT07*	40	1 1/4	35.3	10/20
EXSBBT08*	50	1 1/2	40.4	10/20
EXSBBT09*	63	2	51.6	10/20

**Add coil length to complete part number, e.g. 10 metres = EXSBBT0510*

Certification standard: IEC 61386
MOD to NES 518: Issue 3 DEF STAN 61-12 (Part 31) Issue 1

Static temp: -25°C to +90°C
Flexing temp: -5°C to +90°C

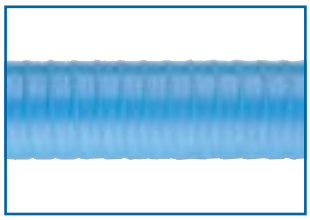
Special characteristics
Limited fire hazard covering
EMC Screening level: 60db at 1MHz braided

Technical specifications

High temperature - stainless steel core with a high temperature resistant coating

High Temperature (Black) Type	Conduit Size Metric (mm)	US Trade Size (inch)	Inside Diameter (mm)	Coil Lengths (inch)
EXSH03*	16	3/8	12.5	10/30
EXSH04*	20	1/2	16.0	10/30
EXSH05*	25	3/4	21.0	10/30
EXSH06*	32	1	26.4	10/20
EXSH07*	40	1 1/4	35.3	10/20
EXSH08*	50	1 1/2	40.4	10/20
EXSH09*	63	2	51.6	10/20

**Add coil length to complete part number, e.g. 10 metres = EXSH0510*



High Temperature (Blue) Type	Conduit Size Metric (mm)	US Trade Size (inch)	Inside Diameter (mm)	Coil Lengths (inch)
EXSLH03*	16	3/8	12.5	10/30
EXSLH04*	20	1/2	16.0	10/30
EXSLH05*	25	3/4	21.0	10/30
EXSLH06*	32	1	26.4	10/20
EXSLH07*	40	1 1/4	35.3	10/20
EXSLH08*	50	1 1/2	40.4	10/20
EXSLH09*	63	2	51.6	10/20

**Add coil length to complete part number, e.g. 10 metres = EXSLH0510*

Certification standard: IEC 61386
Static temp: -50°C to +130°C
Flexing temp: -5°C to +130°C

Special characteristics
Flame resistance: UL94 V2
Chemical and oil resistant

Flame propogation
Flame dies in less than 30 seconds after ignition source is removed

High temperature highly flexible - stainless steel core with a high temperature, highly flexible coating

High Temperature, Highly Flexible (Blue) Type	Conduit Size Metric (mm)	US Trade Size (inch)	Inside Diameter (mm)	Coil Lengths (inch)
EXSHC03*	16	3/8	12.5	10/30
EXSHC04*	20	1/2	16.0	10/30
EXSHC05*	25	3/4	21.0	10/30
EXSHC06*	32	1	26.4	10/20
EXSHC07*	40	1 1/4	35.3	10/20
EXSHC08*	50	1 1/2	40.4	10/20
EXSHC09*	63	2	51.6	10/20

**Add coil length to complete part number, e.g. 10 metres = EXSHC0510*

Certification standard: IEC 61386
Static temp: -65°C to +150°C
Flexing temp: -45°C to +135°C

Special characteristics
High flexibility
High temperature

Flame propogation
Flame dies in less than 30 seconds after ignition source is removed

Related products

Group I gland 42

90° elbow gland 44

G1 glands

Liquid tight hazardous area flameproof glands

Approvals / Characteristics

Ex IEC IECEx SIR PG INMETRO

Exde Extb

G IIC D IIIC

GROUP I GROUP II

CLASS I DIV 2 CLASS II DIV 1

ZONE 1 ZONE 2 ZONE 21 ZONE 22

IP 66

Features

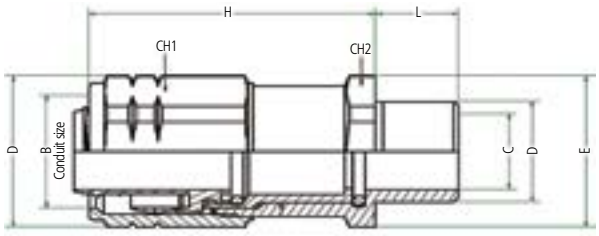
- **Constructed from either brass or stainless steel with an epoxy resin barrier the Group I flameproof gland is a high specification product, ideal for all hazardous area applications**

Certification and standards

EC TYPE Examination Certificate:
ATEX: Sira 09 ATEX 1231X
IECEx: IECEx SIR09.0103X
CSA: CSA File No: 060582
GOST R: РОСС GB.ГБ05.B03850
INMETRO: TÜV 11.0339X
Ex de I Mb
Ex de IIC Gb
Ex tb IIIC Db
Class I Div 2 ABCD
Class II Div 1 EFG
Temperature: -60°C to +130°C

Dimensions

Technical specifications



Metric Type	Thread Size	Conduit Size B	C	D	E	L	H	CH1	CH2
				Cable Gland Dimensions					
HAM*0304G1	M16	16.0	10.0	34.0	31.0	15.0	50.0	32.0	28.6
HAM*0404G1	M20	20.0	12.5	34.0	31.0	15.0	50.0	32.0	28.6
HAM*0505G1	M25	25.0	18.4	37.0	37.0	15.0	50.0	34.0 (34.9 in SS)	34.0
HAM*0606G1	M32	32.0	24.7	45.0	45.0	15.0	50.0	42.0 (42.5 in SS)	42.0
HAM*0707G1	M40	40.0	29.7	57.0	54.0	15.0	57.0	52.0	50.0
HAM*0808G1	M50	50.0	41.7	64.0	64.0	15.0	58.0	60.0	60.0
HAM*0909G1	M63	63.0	51.7	78.0	76.2	15.0	70.6	69.7	70.0

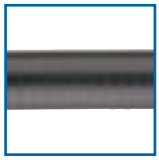
NPT Type	Thread Size	Conduit Size B	C	D	E	L	H	CH1	CH2
				Cable Gland Dimensions					
HAA*0304G1	1/2" NPT	16.0	10.0	34.0	31.0	20.2	50.0	32.0	28.6
HAA*0404G1	1/2" NPT	20.0	12.5	34.0	31.0	20.2	50.0	32.0	28.6
HAA*0505G1	3/4" NPT	25.0	18.4	37.0	37.0	20.2	50.0	34.0 (34.9 in SS)	34.0
HAA*0606G1	1" NPT	32.0	24.7	45.0	45.0	25.0	50.0	42.0 (42.5 in SS)	42.0
HAA*0707G1	1 1/4" NPT	40.0	29.7	57.0	54.0	25.6	57.0	52.0	50.0
HAA*0808G1	1 1/2" NPT	50.0	41.7	64.0	64.0	26.0	58.0	60.0	60.0
HAA*0909G1	2" NPT	63.0	51.7	78.0	76.2	27.0	70.6	69.7	70.0

**For Nickel Plated add 'M', for Stainless Steel 316 add 'S'*

See page 38-39 for suitable conduits

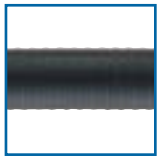
For accessories see pages 134-35

Related products

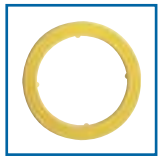


General oil resistant 38

High temperature conduit 39



Low fire flexible conduit 38

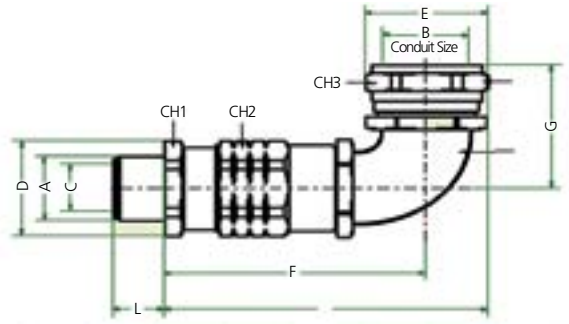


Sealing washers 135

Liquid tight hazardous area flameproof G1 glands

Technical specifications

Dimensions



Metric Type	Thread Size A	Conduit Size B	C	D	E	F	G	L	H	CH1	CH2	CH3
					Cable Gland Dimensions							
HAM*0304E	M16	16.0	10.0	31.7	35.5	94.0	35.0	15.0	90.0	28.6	32.0	32.0
HAM*0404E	M20	21.0	12.5	31.7	35.5	95.0	335.0	15.0	90.0	28.6	32.0	32.0
HAM*0505E	M25	28.0	18.4	37.7	38.7	101.0	36.0	15.0	104.0	34.0	34.0 (34.9 in SS)	34.0 (34.9 in SS)
HAM*0606E	M32	34.0	24.7	46.5	46.5	109.0	40.0	15.0	114.0	42.0	42.0 (42.5 in SS)	42.0 (42.5 in SS)
HAM*0707E	M40	42.0	29.7	55.4	57.6	115.0	48.0	15.0	180.0	50.0	52.0	52.0
HAM*0808E	M50	54.0	41.7	66.5	66.5	123.0	56.0	15.0	146.0	60.0	60.0	60.0

NPT Type	Thread Size A	Conduit Size B	C	D	E	F	G	L	H	CH1	CH2	CH3
					Cable Gland Dimensions							
HAA*0304E	1/2" NPT	16.0	10.0	31.7	35.5	98.0	35.0	20.2	90.0	28.6	32.0	32.0
HAA*0404E	1/2" NPT	21.0	12.5	31.7	35.5	98.0	335.0	20.2	90.0	28.6	32.0	32.0
HAA*0505E	3/4" NPT	28.0	18.4	37.7	38.7	103.4	36.0	20.2	104.0	34.0	34.0 (34.9 in SS)	34.0 (34.9 in SS)
HAA*0606E	1" NPT	34.0	24.7	46.5	46.5	103.4	40.0	25.0	114.0	42.0	42.0 (42.5 in SS)	42.0 (42.5 in SS)
HAA*0707E	1 1/4" NPT	42.0	29.7	55.4	57.6	120.0	48.0	25.6	180.0	50.0	52.0	52.0
HAA*0808E	1 1/2" NPT	54.0	41.7	66.5	66.5	126.0	56.0	26.0	146.0	60.0	60.0	60.0

**For Nickel Plated add 'M', for Stainless Steel 316 add 'S'*

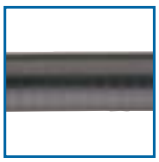
Stainless steel gland available but elbow is nickel plated

Elbow supplied is for liquid tight conduit only

See page 38-39 for suitable conduits

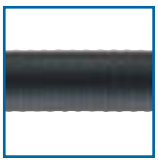
For accessories see pages 134-35

Related products

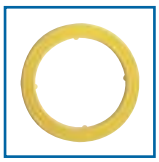


General Oil Resistant 38

High Temperature Conduit 39



Low Fire Flexible Conduit 38



Sealing Washers 135

Universal glands

Liquid tight hazardous area flameproof glands

Approvals / Characteristics

Exde
Extb
G IIC
D IIIC
GROUP I
GROUP II
CLASS I
DIV 1
DIV 2
CLASS II
DIV 1
ZONE 1
ZONE 2
ZONE 21
ZONE 22
IP 66

Features

- Constructed from either brass, nickel plated or stainless steel with an epoxy resin barrier
- The Group I universal flameproof gland is a high specification product, ideal for all hazardous area applications

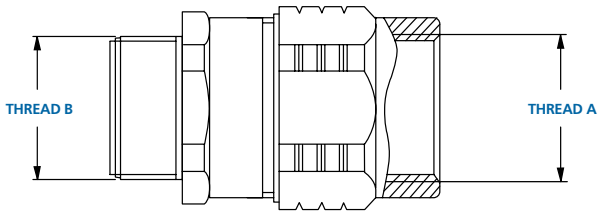
Certification and standards

EC TYPE Examination Certificate:
ATEX: Sira 09 ATEX 1231X
IECEx: IECEx SIR09.0103X
CSA: CSA File No: 060582
GOST R: РОСС GB.ГБ05.B03850
INMETRO: TÜV 11.0339X
Ex de I Mb
Ex de IIC Gb
Ex tb IIIC Db
Class I Div 1 BCD (Rigid conduit only)
Class I Div 2 ABCD
Class II Div 1 ABCD
Temperature: -60°C to +130°C

Liquid tight hazardous area flameproof universal glands

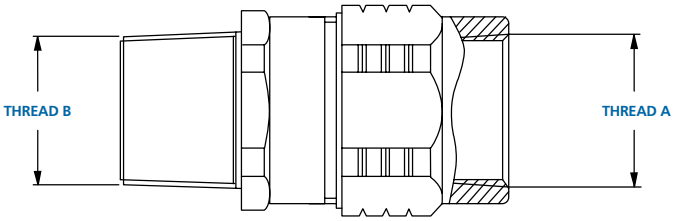
Technical specifications

Dimensions



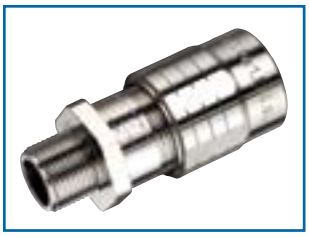
HAM 03 04 U

Thread A = M16 ------ Thread B = M20



HAA 03 04 U

Thread A = 3/8" NPT ------ Thread B = 1/2" NPT



Universal gland

Nickel Plated Type - Metric	Male Thread Size Metric (mm)	Female Thread Size Metric (mm)
HAMM0304U	20	16
HAMM0404U	20	20
HAMM0505U	25	25
HAMM0606U	32	32
HAMM0707U	40	40
HAMM0808U	50	50
HAMM0909U	63	63

Nickel Plated Type - NPT	Male Thread Size NPT (inch)	Female Thread Size NPT (inch)
HAAM0304U	1/2	3/8
HAAM0404U	1/2	1/2
HAAM0505U	3/4	3/4
HAAM0606U	1	1
HAAM0707U	1 1/4	1 1/4
HAAM0808U	1 1/2	1 1/2
HAAM0909U	2	2

Brass Type - Metric	Male Thread Size Metric (mm)	Female Thread Size Metric (mm)
HAM0304U	20	16
HAM0404U	20	20
HAM0505U	25	25
HAM0606U	32	32
HAM0707U	40	40
HAM0808U	50	50
HAM0909U	63	63

Brass Type - NPT	Male Thread Size NPT (inch)	Female Thread Size NPT (inch)
HAA0304U	1/2	3/8
HAA0404U	1/2	1/2
HAA0505U	3/4	3/4
HAA0606U	1	1
HAA0707U	1 1/4	1 1/4
HAA0808U	1 1/2	1 1/2
HAA0909U	2	2

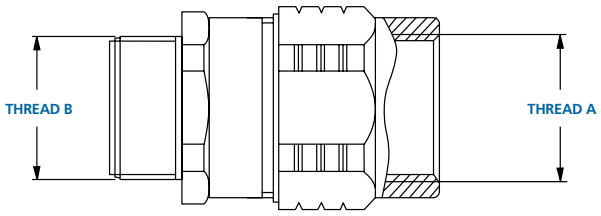
Stainless Steel Type - Metric	Male Thread Size Metric (mm)	Female Thread Size Metric (mm)
HAMS0304U	20	16
HAMS0404U	20	20
HAMS0505U	25	25
HAMS0606U	32	32
HAMS0707U	40	40
HAMS0808U	50	50
HAMS0909U	63	63

Stainless Steel Type - NPT	Male Thread Size NPT (inch)	Female Thread Size NPT (inch)
HAAS0304U	1/2	3/8
HAAS0404U	1/2	1/2
HAAS0505U	3/4	3/4
HAAS0606U	1	1
HAAS0707U	1 1/4	1 1/4
HAAS0808U	1 1/2	1 1/2
HAAS0909U	2	2

For use with rigid conduit or other fittings

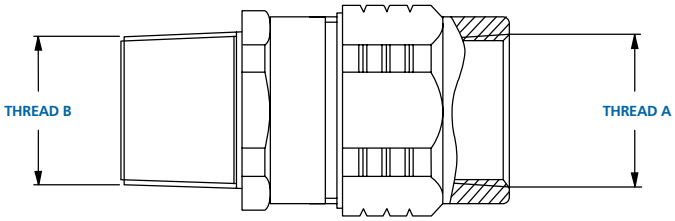
Dimensions

Technical specifications



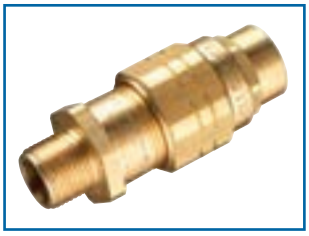
HAM 03 04 U/SW

Thread A = M16 — Thread B = M20



HAA 03 04 U/SW

Thread A = 3/8" NPT — Thread B = 1/2" NPT



Universal swivel gland

Nickel Plated Type - Metric	Male Thread Size Metric (mm)	Female Thread Size Metric (mm)
HAMM0304U/SW	20	16
HAMM0404U/SW	20	20
HAMM0505U/SW	25	25
HAMM0606U/SW	32	32
HAMM0707U/SW	40	40
HAMM0808U/SW	50	50
HAMM0909U/SW	63	63

Nickel Plated Type - NPT	Male Thread Size NPT (inch)	Female Thread Size NPT (inch)
HAAM0304U/SW	1/2	3/8
HAAM0404U/SW	1/2	1/2
HAAM0505U/SW	3/4	3/4
HAAM0606U/SW	1	1
HAAM0707U/SW	1 1/4	1 1/4
HAAM0808U/SW	1 1/2	1 1/2
HAAM0909U/SW	2	2

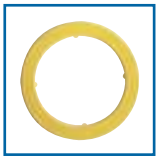
Brass Type - Metric	Male Thread Size Metric (mm)	Female Thread Size Metric (mm)
HAM0304U/SW	20	16
HAM0404U/SW	20	20
HAM0505U/SW	25	25
HAM0606U/SW	32	32
HAM0707U/SW	40	40
HAM0808U/SW	50	50
HAM0909U/SW	63	63

Brass Type - NPT	Male Thread Size NPT (inch)	Female Thread Size NPT (inch)
HAA0304U/SW	1/2	3/8
HAA0404U/SW	1/2	1/2
HAA0505U/SW	3/4	3/4
HAA0606U/SW	1	1
HAA0707U/SW	1 1/4	1 1/4
HAA0808U/SW	1 1/2	1 1/2
HAA0909U/SW	2	2

For use with rigid conduit or other fittings

For accessories see pages 134-35

Related products



Sealing washers 135

XP Flex™ range

Explosion-proof flexible couplings

Approvals / Characteristics

CLASS I DIV 1 DIV 2

CLASS II DIV 1

CLASS III

Features

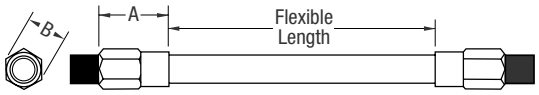
- UL listed for use in hazardous and wet locations
- Corrosion-resistant - ideal for washdown areas
- Flexible bronze construction with arc-resistant inner sleeve and brass fittings
- Terminated with two threaded female end fittings and male close nipples
- No bonding jumper required

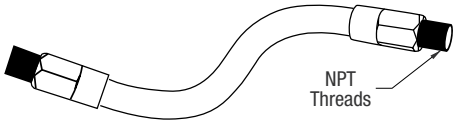
Certification and standards

UL listed:
0.5" and 0.75" hub sizes: Class I Div 1 & 2 ABCD; Class II Div 1 EFG, Class III
1" hub size: Class I Div 1 & 2 CD; Class II Div 1 EFG, Class III
UL listed 886

Dimensions

Technical specifications

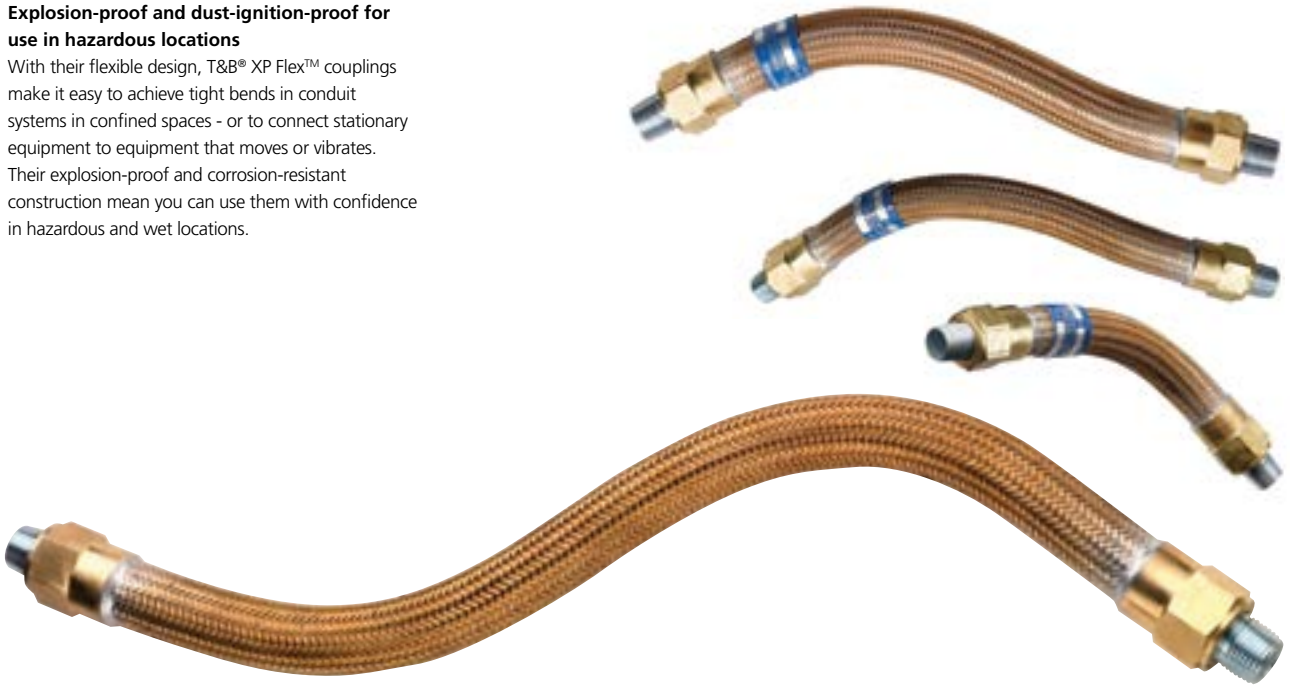




Type	Thread Type (inch)	Flexible Length (mm)	Dimensions (mm) A	B
XPLFL16	1/2" NPT	150	39.1	36.6
XPLFL18	1/2" NPT	200	39.1	36.6
XPLFL110	1/2" NPT	250	39.1	36.6
XPLFL112	1/2" NPT	300	39.1	36.6
XPLFL115	1/2" NPT	380	39.1	36.6
XPLFL118	1/2" NPT	460	39.1	36.6
XPLFL124	1/2" NPT	610	39.1	36.6
XPLFL212	3/4" NPT	300	40.6	47.5
XPLFL215	3/4" NPT	380	40.6	47.5
XPLFL218	3/4" NPT	460	40.6	47.5
XPLFL224	3/4" NPT	610	40.6	47.5
XPLFL236	3/4" NPT	915	40.6	47.5
XPLFL318	1" NPT	460	50.08	58.7

Explosion-proof and dust-ignition-proof for use in hazardous locations

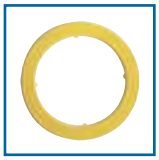
With their flexible design, T&B® XP Flex™ couplings make it easy to achieve tight bends in conduit systems in confined spaces - or to connect stationary equipment to equipment that moves or vibrates. Their explosion-proof and corrosion-resistant construction mean you can use them with confidence in hazardous and wet locations.



Related products

Enlargers, reducers and thread convertors 128

Locknuts 134



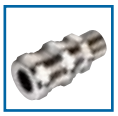
Sealing washers 135

Kopex-Ex cable glands

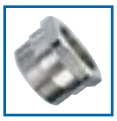
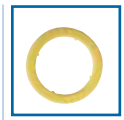
Kopex-Ex cable glands

Cable glands, thread convertors, stopping plugs and

Ex d, Ex e Cable glands

	 Armoured cable blands Page 54	 Ex d cable glands Page 56	 Unarmoured cable glands Page 58	 Flameproof unarmoured cable glands Page 60	 Flameproof armoured cable glands Page 62	 Nylon cable glands Page 64
Ex	●	●	●	●	●	●
IEC / IECEx	●	●	●	●	●	●
Intertek						
UL						
PG						
INMETRO						
Gas Group Protection Type — Exe	●	●	●	●	●	●
Gas Group Protection Type — Exd	●	●	●	●	●	
Gas Group Protection Type — Exde						
Gas Group Protection Type — Extb	●	●	●	●	●	●
Gas Group — IIC	●	●	●	●	●	●
Dust Group — IIIC	●	●	●	●	●	●
Zones — Zone 1	●	●	●	●	●	●
Zones — Zone 2	●	●	●	●	●	●
Zones — Zone 21	●	●	●	●	●	●
Zones — Zone 22	●	●	●	●	●	●
Class I — Div 1						
Class I — Div 2						
Class II — Div 1						
Class II — Div 2						

accessories - selection guide

Thread convertors and stopping plugs						Accessories				
 **Thread convertors** Page 128	 **Standard stopping plugs** Page 130	 **Tamperproof stopping plugs** Page 130	 **Hex head stopping plugs** Page 132	 **Dome head stopping plugs** Page 132	 **Nylon stopping plugs** Page 132	 **Nickel plated coupler** Page 134	 **Hex locknut** Page 134	 **Sealing joint washer** Page 135	 **Earth tag** Page 135	 **Serrated washer** Page 135
●	●	●	●	●	●	●				
●	●	●	●	●	●	●				
●	●	●								
●	●	●	●	●		●				
●	●	●	●	●		●				
●	●	●	●	●	●					
●	●	●								
	●	●	●	●	●					
●	●	●	●	●	●					
			●	●	●					
●	●	●	●	●	●					
●	●	●	●	●	●					
●	●	●	●	●	●					
●	●	●	●	●	●					
●	●	●								
●	●	●								

NEW

C1 Series
Ex d double compression cable gland
4 function double compression cable gland

Approvals / Characteristics

Features

- Suitable for use with
  - SWA (Steel wired Armoured)
  - AWB (Aluminium wired Braid)
  - AWA (Aluminium wired Armoured)
- Flameproof Ex d and increased safety Ex e
- Available in brass, nickel plated brass and stainless steel 316
- Deluge proof
- Wide range of cable sizes

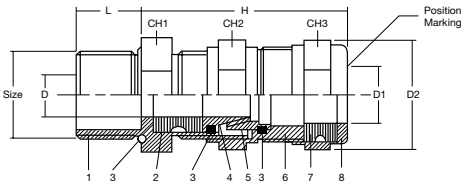
Certification and standards

Approved to: EN60079-0, 60079-1, 60079-7, 60079-31
EC TYPE Examination Certificate:
CESI 13 ATEX 041X, IECEx CES 13.0014X
Ex d IIC Gb
Ex e IIC Gb
Ex tb IIIC Db
IP66-68 - 5-Bar 30 mins
Temperature:
-40°C to +100°C

Dimensions

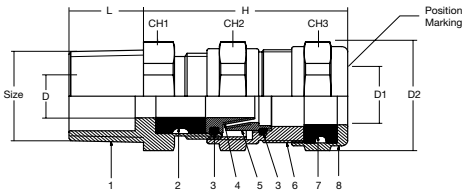
Technical specifications

1. Lower Body
2. Lower Sealing Ring
3. O-Ring
4. Grounding Cone
5. Swivel Braid Retainer
6. Middle Body
7. Upper Sealing Ring
8. Pressure Cap



Brass Metric

1. Lower Body
2. Lower Sealing Ring
3. O-Ring
4. Grounding Cone
5. Swivel Braid Retainer
6. Middle Body
7. Upper Sealing Ring
8. Pressure Cap



Brass NPT

Brass Part No.	Metric Thread	Sealing Range D (min-max)	Sealing Range D1 (min-max)	Cable Gland Dimensions H Min	L Min	CH1	CH2	CH3	D2 Min	Torque (Nm) CH2	Torque (Nm) CH3
EX03MSC1	M16	3 - 8.5	6 - 12	47	16	22	26	26	29	27.0	25.0
EX03MMC1	M16	6 - 12	8.5 - 16	48	16	25	29	29	31.5	49.0	28.0
EX04MSC1	M20	3 - 8.5	6 - 12	47	16	24	26	26	29	27.0	25.0
EX04MMC1	M20	6 - 12	8.5 - 16	47	16	25	29	29	31.5	49.0	28.0
EX04MLC1	M20	12 - 14.5	16 - 20	50	16	28	30	32	35	33.0	33.0
EX05MSC1	M25	6 - 12	8.5 - 16	48	18	29	29	29	31.5	49.0	28.0
EX05MMC1	M25	12 - 16	16 - 21	53	18	32	34	34	37	30.0	27.0
EX05MLC1	M25	12 - 20	16 - 26	60	18	36	40	40	44	61.0	32.0
EX06MSC1	M32	12 - 20	16 - 26	62	18	40	40	40	44	61.0	32.0
EX06MMC1	M32	15 - 26	20 - 33	78	18	48	52	52	57	86.0	40.0
EX07MSC1	M40	15 - 26	20 - 33	78	18	48	52	52	57	86.0	40.0
EX07MMC1	M40	20 - 32	29 - 41	89	18	55	60	60	66	110.0	75.0
EX08MSC1	M50	22 - 35	33 - 48	97	18	60	70	75	82	110.0	75.0
EX08MMC1	M50	27 - 41	36 - 52	100	18	70	70	74	83	125.0	75.0
EX09MSC1	M63	35 - 45	43 - 57	106	20	75	80	80	89.5	160.0	140.0
EX09MMC1	M63	40 - 52	47 - 60	107	20	85	85	85	94	250.0	100.0
EX10MSC1	M75	40 - 52	47 - 60	107	20	85	85	85	94	250.0	100.0
EX10MMC1	M75	45 - 60	54 - 70	125	20	90	95	100	110.5	250.0	150.0
EX11MSC1	M90	45 - 60	54 - 70	125	20	95	95	100	110.5	250.0	150.0
EX11MMC1	M90	60 - 72	63 - 80	154	20	110	115	115	127	320.0	210.0

Brass Part No.	NPT Thread	Sealing Range D (min-max)	Sealing Range D1 (min-max)	Cable Gland Dimensions H Min	L Min	CH1	CH2	CH3	D2 Min	Torque (Nm) CH2	Torque (Nm) CH3
EX03ASC1	3/8"	3 - 8,5	6 - 12	47	16	22	26	26	29	27.0	25.0
EX03AMC1	3/8"	6 - 12	8.5 - 16	48	16	25	29	29	31.5	49.0	28.0
EX04ASC1	1/2"	3 - 8.5	6 - 12	47	21	24	26	26	29	27.0	25.0
EX04AMC1	1/2"	6 - 12	8.5 - 16	47	21	25	29	29	31.5	49.0	28.0
EX04ALC1	1/2"	12 - 14.5	16 - 20	50	21	28	30	32	35	33.0	33.0
EX05ASC1	3/4"	6 - 12	8.5 - 16	48	21	29	29	29	31.5	49.0	28.0
EX05AMC1	3/4"	12 - 16	16 - 21	53	21	32	34	34	37	30.0	27.0
EX05ALC1	3/4"	12 - 20	16 - 26	60	21	36	40	40	44	61.0	32.0
EX06ASC1	1"	12 - 20	16 - 26	62	26	40	40	40	44	61.0	32.0
EX06AMC1	1"	15 - 26	20 - 33	78	26	48	52	52	57	86.0	40.0
EX07ASC1	1 1/4"	15 - 26	20 - 33	78	28	48	52	52	57	86.0	40.0
EX07AMC1	1 1/4"	20 - 32	29 - 41	89	28	55	60	60	66	110.0	75.0
EX08ASC1	1 1/2"	22 - 35	33 - 48	97	28	60	70	75	82	110.0	75.0
EX08AMC1	1 1/2"	27 - 41	36 - 52	100	28	70	70	74	83	125.0	75.0
EX09ASC1	2"	35 - 45	43 - 57	106	28	75	80	80	89.5	160.0	140.0
EX09AMC1	2"	40 - 52	47 - 60	107	28	85	85	85	94	250.0	100.0
EX10ASC1	2 1/2"	40 - 52	47 - 60	107	41	85	85	85	94	250.0	100.0
EX10AMC1	2 1/2"	45 - 60	54 - 70	125	41	90	95	100	110.5	250.0	150.0
EX11ASC1	3"	45 - 60	54 - 70	125	43	95	95	100	110.5	250.0	150.0
EX11AMC1	3"	60 - 72	63 - 80	154	43	110	115	115	127	320.0	210.0

**For nickel plated brass version, add N to the reference, e.g. EXN03MSC1 for Metric / EXN03ASC1 for NPT*
***For stainless steel 316 version, add S to the reference, e.g. EXS03MSC1 for Metric / EXS03ASC1 for NPT*
******To purchase cable glands with locknuts, shrouds, earth tags, and washers where appropriate add a K to the end of the part number e.g EX04MMC1K***

NEW

C2 Series
Ex e / Ex d cable gland
Single compression cable gland

Approvals / Characteristics

Features

- Suitable for use with unarmoured cable
- Flameproof Ex e and Ex d
- Available in brass, nickel plated brass and stainless steel 316
- Large cable range within one product with removeable seals

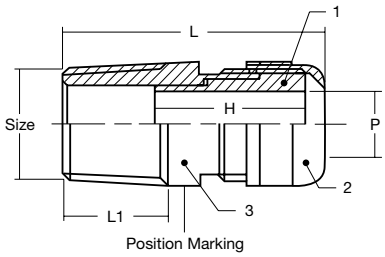
Certification and standards

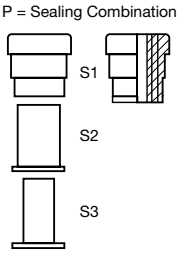
Approved to: EN/IEC 60079-0, EN 60079-1, EN 60079-7, EN 60079-11, EN 60079-31
EC TYPE Examination Certificate:
IMQ 13 ATEX 015X
II 2GD / Exe IIC Gb
Ex tb IIIC Db
IP66-68 - 5-Bar 30 mins
Temperature:
-40°C to +100°C

Dimensions

Technical specifications

1. Sealing Ring
2. Cap
3. Body





Brass Part No.	Metric Thread	Cable Gland Dimensions L	L Min	CH	H Min	Sealing Ring Dimensions Min-Max	S3	S2	S1	Torque (Nm)
EX03MMC2	M16	40	16	22	20	3 - 12	3 - 6	6 - 9	9 - 12	19
EX04MMC2	M20	40	16	22	20	3 - 12	3 - 6	6 - 9	9 - 12	19
EX04MLC2	M20	45	16	28	20	10 - 16	–	10 - 14	14 - 16	28
EX05MMC2	M25	40	16	28	20	10 - 18	–	10 - 14	14 - 18	28
EX05MLC2	M25	50	16	35	25	14 - 20	–	14 - 17	17 - 20	31
EX06MMC2	M32	43	16	35	25	14 - 24	14 - 17	17 - 20	20 - 24	31
EX06MLC2	M32	53	16	45	39	22 - 28	–	22 - 26	26 - 28	26
EX07MMC2	M40	45	18	45	39	22 - 32	–	22 - 26	26 - 32	26
EX07MLC2	M40	55	18	50	32	26 - 34	–	26 - 32	32 - 34	58
EX08MMC2	M50	46	18	55 / 50	32	26 -35	–	26 - 30	30 - 35	58
EX08MLC2	M50	63	18	55 / 58	38	35 - 42	–	35 - 38	38 - 42	60
EX09MMC2	M63	53	18	68 / 58	38	35 - 45	–	35 - 38	38 - 45	60
EX09MLC2	M63	62	18	75 / 80	25	46 - 56	–	46 - 51	51 - 56	75
EX10MMC2	M75	64	20	80	25	46 - 62	46 - 51	51 - 57	57 - 62	75
EX10MLC2	M75	75	20	95	36	60 - 69	–	60 - 63	63 - 69	110
EX11MMC2	M90	75	20	95	36	60 - 75	60 - 63	63 - 69	69 - 75	110
EX11MLC2	M90	77	20	105	38	75 - 82	–	75 - 79	79 - 82	130
EX12MMC2	M100	77	20	115 / 105	38	75 - 85	75 - 79	79 - 82	82 - 85	130
EX12MMC2	M110	77	20	115	38	85 - 95	85 - 89	89 - 92	92 - 95	140

Brass Part No.	NPT Thread	Cable Gland Dimensions L	L Min	CH	H Min	Sealing Ring Dimensions Min-Max	S3	S2	S1	Torque (Nm)
EX03AMC2	3/8"	40	16	22	20	3 - 12	3 - 6	6 - 9	9 - 12	19
EX04AMC2	1/2"	40	16	22	20	3 - 12	3 - 6	6 - 9	9 - 12	19
EX04ALC2	1/2"	45	16	28	20	10 - 16	–	10 - 14	14 - 16	28
EX05AMC2	3/4"	40	16	28	20	10 - 18	–	10 - 14	14 - 18	28
EX05ALC2	3/4"	50	16	35	25	14 - 20	–	14 - 17	17 - 20	31
EX06AMC2	1"	47	20	35	25	14 - 24	14 - 17	17 - 20	20 - 24	31
EX06ALC2	1"	57	20	45	39	22 - 28	–	22 - 26	26 - 28	26
EX07AMC2	1 1/4"	47	20	45	39	22 - 32	–	22 - 26	26 - 32	26
EX07ALC2	1 1/4"	57	20	50	32	26 - 34	–	26 - 32	32 - 34	58
EX08AMC2	1 1/2"	48	20	55 / 50	32	26 -35	–	26 - 30	30 - 35	58
EX08ALC2	1 1/2"	65	20	55 / 58	38	35 - 42	–	35 - 38	38 - 42	60
EX09AMC2	2"	55	20	68 / 58	38	35 - 45	–	35 - 38	38 - 45	60
EX09ALC2	2"	64	20	75 / 80	25	46 - 56	–	46 - 51	51 - 56	75
EX10AMC2	2 1/2"	70	26	80	25	46 - 62	46 - 51	51 - 57	57 - 62	75
EX10ALC2	2 1/2"	81	26	95	36	60 - 69	–	60 - 63	63 - 69	110
EX11AMC2	3"	81	26	95	36	60 - 75	60 - 63	63 - 69	69 - 75	110
EX11ALC2	3"	83	26	105	38	75 - 82	–	75 - 79	79 - 82	130
EX12AMC2	4"	83	26	115 / 105	38	75 - 85	75 - 79	79 - 82	82 - 85	130
EX12AMC2	4"	83	26	115	38	85 - 95	85 - 89	89 - 92	92 - 95	140

**For nickel plated brass version, add N to the reference, e.g. EXN03MMC2 for Metric / EXN03AMC2 for NPT*

******To purchase cable glands with locknuts, shrouds, earth tags, and washers where appropriate add a K to the end of the part number e.g EX04MMC1K***

NEW

C3 Series
Ex d single compression cable gland
Single compression cable gland

Approvals / Characteristics

Ex IEC IECEx

Exd Exe Extb

G IIC D IIIC

ZONE 1 ZONE 2 ZONE 21 ZONE 22

IP66 IP68

Features

- Flameproof Ex d and increased safety Ex e
- Available in brass, nickel plated brass and stainless steel 316
- Deluge proof
- Wide range of cable sizes
- Kits available

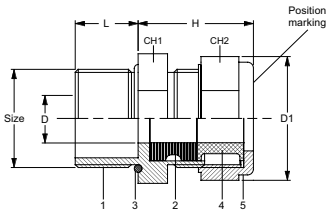
Certification and standards

Approved to: EN/IEC 60079-0, 60079-1, 60079-7, 60079-31
EC TYPE Examination Certificate:
CESI 13 ATEX 041X, IECEx CES 13.0014X
Ex d IIC Gb
Ex e IIC Gb
Ex tb IIIC Db
IP66-68 - 5-Bar 30 mins
Temperature:
-40°C to +100°C

Dimensions

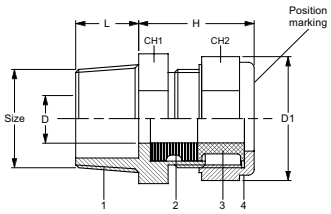
Technical specifications

1. Lower Body
2. Lower Sealing Ring
3. O-Ring
4. Pressure Ring
5. Cap



Brass Metric

Lower Body
Lower Sealing Ring
O-Ring
Pressure Ring
Cap



Brass NPT

Brass Part No.	Metric Thread	Sealing Range D (min-max)	Sealing Range D1 Min	Cable Gland Dimensions H Min	Cable Gland Dimensions L Min	Cable Gland Dimensions CH1	Cable Gland Dimensions CH2	Torque (Nm) CH2
EX03MSC3	M16	3 - 8.5	29	25	16	22	26	31
EX03MMC3	M16	6 - 12	31.5	28.5	16	25	29	35
EX04MSC3	M20	6 - 12	31.5	27.5	16	25	29	35
EX04MMC3	M20	12 - 14.5	33.5	29	16	28	30	33
EX05MSC3	M25	6 - 12	31.5	28.5	18	29	29	35
EX05MMC3	M25	12 - 16	37	28.5	18	32	35	30
EX05MLC3	M25	12 - 20	44.5	32.5	18	36	40	61
EX06MSC3	M32	12 - 20	44.5	33.5	18	40	40	61
EX06MMC3	M32	15 - 26	57	41	18	48	52	86
EX07MSC3	M40	15 - 26	57	41	18	48	52	86
EX07MMC3	M40	20 - 32	66	50	18	55	60	110
EX08MSC3	M50	22 - 35	77	50.5	18	60	70	110
EX08MMC3	M50	27 - 41	77	54	18	70	70	125
EX09MSC3	M63	35 - 45	89.5	61.5	20	75	80	165
EX09MMC3	M63	40 - 52	94	61.5	20	85	85	250
EX10MSC3	M75	40 - 52	94	61.5	20	85	85	250
EX10MMC3	M75	45 - 60	105	72	20	90	95	250
EX11MSC3	M90	45 - 60	105	72	20	95	95	250
EX11MMC3	M90	60 - 72	127	84	20	110	115	300

Brass Part No.	NPT Thread	Sealing Range D (min-max)	Sealing Range D1 Min	Cable Gland Dimensions H Min	Cable Gland Dimensions L Min	Cable Gland Dimensions CH1	Cable Gland Dimensions CH2	Torque (Nm) CH2
EX03ASC3	3/8"	3 - 8.5	29	25	16	22	26	31
EX03AMC3	3/8"	6 - 12	31.5	28.5	16	25	29	35
EX04ASC3	1/2"	6 - 12	31.5	27.5	21	25	29	35
EX04AMC3	1/2"	12 - 14.5	33.5	29	21	28	30	33
EX05ASC3	3/4"	6 - 12	31.5	28.5	21	29	29	35
EX05AMC3	3/4"	12 - 16	37	28.5	21	32	35	30
EX05ALC3	3/4"	12 - 20	44.5	32.5	21	36	40	61
EX06ASC3	1"	12 - 20	44.5	33.5	26	40	40	61
EX06AMC3	1"	15 - 26	57	41	26	48	52	86
EX07ASC3	1 1/4"	15 - 26	57	41	28	48	52	86
EX07AMC3	1 1/4"	20 - 32	66	50	28	55	60	110
EX08ASC3	1 1/2"	22 - 35	77	50.5	28	60	70	110
EX08AMC3	1 1/2"	27 - 41	77	54	28	70	70	125
EX09ASC3	2"	35 - 45	89.5	61.5	28	75	80	165
EX09AMC3	2"	40 - 52	94	61.5	28	85	85	250
EX10ASC3	2 1/2"	40 - 52	94	61.5	41	85	85	250
EX10AMC3	2 1/2"	45 - 60	105	72	41	90	95	250
EX11ASC3	3"	45 - 60	105	72	43	95	95	250
EX11AMC3	3"	60 - 72	127	84	43	110	115	300

**For nickel plated brass version, add N to the reference, e.g. EXN03MMC3 for Metric / EXN03AMC3 for NPT*
***For stainless steel 316 version, add S to the reference, e.g. EXS03MMC3 for Metric / EXS03AMC3 for NPT*
******To purchase cable glands with locknuts, shrouds, earth tags, and washers where appropriate add a K to the end of the part number e.g EX04MMC1K***

NEW

C4 Series
Ex d flameproof cable gland
Unarmoured cable compound barrier gland

Approvals / Characteristics

Features

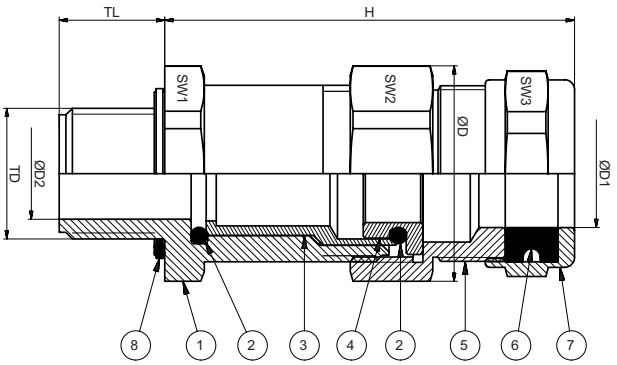
- A compound barrier cable gland for use with unarmoured cable
- Suitable for use in Zones 1, 2, 21, 22
- Flameproof Ex d and increased safety Ex e
- Available in brass, nickel plated brass and stainless steel 316
- Deluge proof
- Wide range of cable sizes

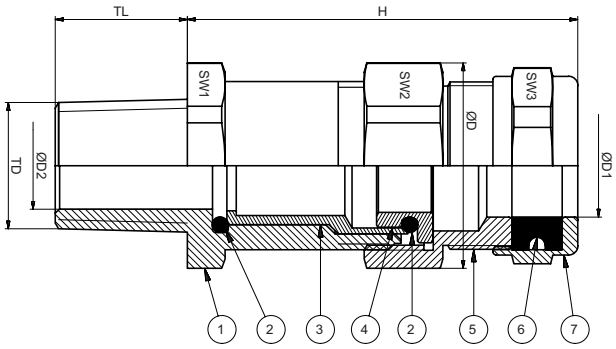
Certification and standards

Approved to: EN/IEC 60079-0, 60079-1, 60079-7, 60079-31
EC TYPE Examination Certificate:
CESI 13 ATEX 041X, IECEx CES 13.0014X
Ex d IIC Gb
Ex e IIC Gb
Ex tb IIIC Db
IP66
Temperature:
-40°C to +100°C

Dimensions

Technical specifications





Brass Metric

1. Body
2. O-Ring
3. Pot
4. Pressurising Bushing
5. Upper Body
6. Upper Sealing Ring
7. Cap
8. Washer

Brass NPT

1. Body
2. O-Ring
3. Pot
4. Pressurising Bushing
5. Upper Body
6. Upper Sealing Ring
7. Cap

Brass Part No.	Metric Thread	Cable Gland Dimensions (mm) H	TL	ØD	ØD1	ØD2	SW1	SW2	SW3	Cable diameter range min-max (mm)	Torque (Nm) SW2	SW3
EX04MC4	M20	62	16	33	16.5	14	30	30	30	8.5-16.0	30.0	28.0
EX05MC4	M25	62.8	16	37	21.5	18.5	34	34	34	16.0-21.0	45.0	27.0
EX06MC4	M32	68.5	16	45	26.5	25.6	42	42	40	16.0-26.0	65.0	32.0
EX07MC4	M40	75.1	16	66	41.5	33	50	60	60	29.0-41.0	75.0	75.0
EX08MC4	M50	82.7	16	77	48.5	43	60	70	75	33.0-48.0	90.0	75.0
EX09MC4	M63	96	16	77	52.5	52	70	70	74	36.0-52.0	100.0	75.0

Brass Part No.	NPT Thread	Cable Gland Dimensions (mm) H	TL	ØD	ØD1	ØD2	SW1	SW2	SW3	Cable diameter range min-max (mm)	Torque (Nm) SW2	SW3
EX04AC4	1/2"	62	21	33	16.5	14	30	30	30	8.5-16.0	30.0	28.0
EX05AC4	3/4"	62.8	21	37	21.5	18.5	34	34	34	16.0-21.0	45.0	27.0
EX06AC4	1"	68.5	26	45	26.5	25.6	42	42	40	16.0-26.0	65.0	32.0
EX07AC4	1 1/4"	75.1	28	66	41.5	33	50	60	60	29.0-41.0	75.0	75.0
EX08AC4	1 1/2"	82.7	28	77	48.5	43	60	70	75	33.0-48.0	90.0	75.0
EX09AC4	2"	96	28	77	52.5	52	70	70	74	36.0-52.0	100.0	75.0

**For nickel plated brass version, add N to the reference, e.g. EXN04MC4 for Metric / EXS04AC4 for NPT*
***For stainless steel 316 version, add S to the reference, e.g. EXS04MC4 for Metric / EXS04AC4 for NPT*

NEW

C5 Series
Ex d flameproof cable gland
Armoured cable compound barrier gland

Approvals / Characteristics

Features

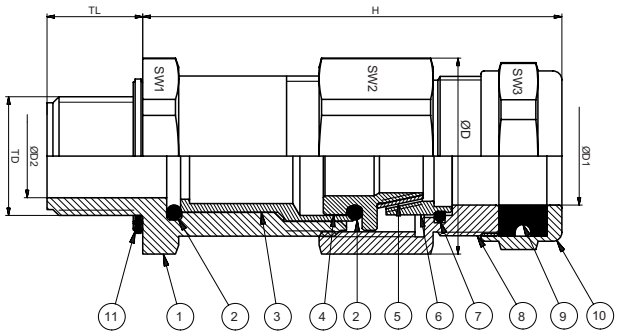
- A compound barrier cable gland for use with
  - SWA (Steel wired Armoured)
  - SWB (Steel wired Braid)
  - AWA (Aluminium wired Armoured)
- Suitable for use in Zones 1, 2, 21, 22
- Flameproof Ex d and increased safety Ex e
- Available in brass, nickel plated brass and stainless steel 316
- Deluge proof
- Wide range of cable sizes

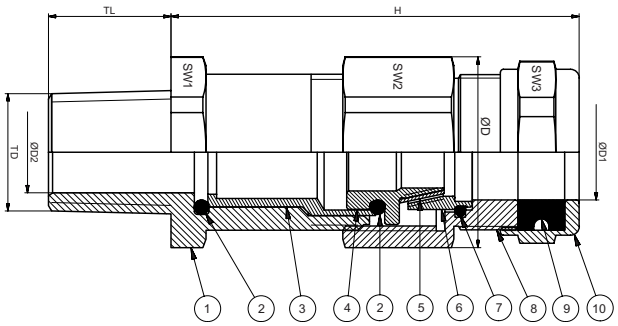
Certification and standards

Approved to: EN/IEC 60079-0, 60079-1, 60079-7, 60079-31
EC TYPE Examination Certificate:
CESI 13 ATEX 041X, IECEx CES 13.0014X
Ex d IIC Gb
Ex e IIC Gb
Ex tb IIIC Db
IP66
Temperature:
-40°C to +100°C

Dimensions

Technical specifications





Brass Metric

1. Body
2. O-Ring
3. Pot
4. Gounding Cone
5. Armour Reduction
6. Swivel Braid Ring
7. O-Ring
8. Upper Body
9. Upper Sealing Ring
10. Cap
11. Washer

Brass NPT

1. Body
2. O-Ring
3. Pot
4. Gounding Cone
5. Armour Reduction
6. Swivel Braid Ring
7. O-Ring
8. Upper Body
9. Upper Sealing Ring
10. Cap

Brass Part No.	Metric Thread	Cable Gland Dimensions (mm) H	TL	ØD	ØD1	ØD2	SW1	SW2	SW3	Cable diameter range min-max (mm)	Torque (Nm) SW2	SW3
EX04MC5	M20	70	16	33	16.5	14	30	30	29	8.5-16.0	30.0	28.0
EX05MC5	M25	72.1	16	37	21.5	15.5	34	34	34	16.0-21.0	45.0	27.0
EX06MC5	M32	76	16	45	26.5	25.6	42	42	40	16.0-26.0	65.0	32.0
EX07MC5	M40	83.4	16	66	41.5	33	50	60	60	29.0-41.0	75.0	75.0
EX08MC5	M50	96.6	16	77	48.5	43	60	70	75	33.0-48.0	90.0	75.0
EX09MC5	M63	109.5	16	77	52.5	52	70	70	74	36.0-52.0	100.0	75.0

Brass Part No.	NPT Thread	Cable Gland Dimensions (mm) H	TL	ØD	ØD1	ØD2	SW1	SW2	SW3	Cable diameter range min-max (mm)	Torque (Nm) SW2	SW3
EX04AC5	1/2"	70	21	33	16.5	14	30	30	30	8.5-16.0	30.0	28.0
EX05AC5	3/4"	72.1	21	37	21.5	15.5	34	34	34	16.0-21.0	45.0	27.0
EX06AC5	1"	76	26	45	26.5	25.6	42	42	40	16.0-26.0	65.0	32.0
EX07AC5	1 1/4"	83.4	28	66	41.5	33	50	60	60	29.0-41.0	75.0	75.0
EX08AC5	1 1/2"	96.6	28	77	48.5	43	60	70	75	33.0-48.0	90.0	75.0
EX09AC5	2"	109.5	28	77	52.5	52	70	70	74	36.0-52.0	100.0	75.0

**For nickel plated brass version, add N to the reference, e.g. EXN04MC5 for Metric / EXS04AC5 for NPT*
***For stainless steel 316 version, add S to the reference, e.g. EXS04MC5 for Metric / EXS04AC5 for NPT*

Nylon cable gland

Ex e nylon cable gland

Approvals / Characteristics

Features

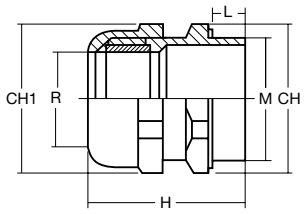
- Suitable for potentially explosive gas atmospheres
- Increased safety “e” and intrinsic safety “i”

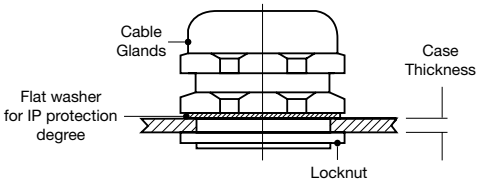
Certification and standards

Approved to: EN/IEC 60079-0, 60079-7, 60079-11, 60079-31
EC TYPE Examination Certificate:
IMQ 13 ATEX 016X, IECEx IMQ 13.0005X
Ex e IIC Gb
Ex tb IIIC Db
IP test: IP66-IP68
Temperature: -40°C to +80°C

Dimensions

Technical specifications



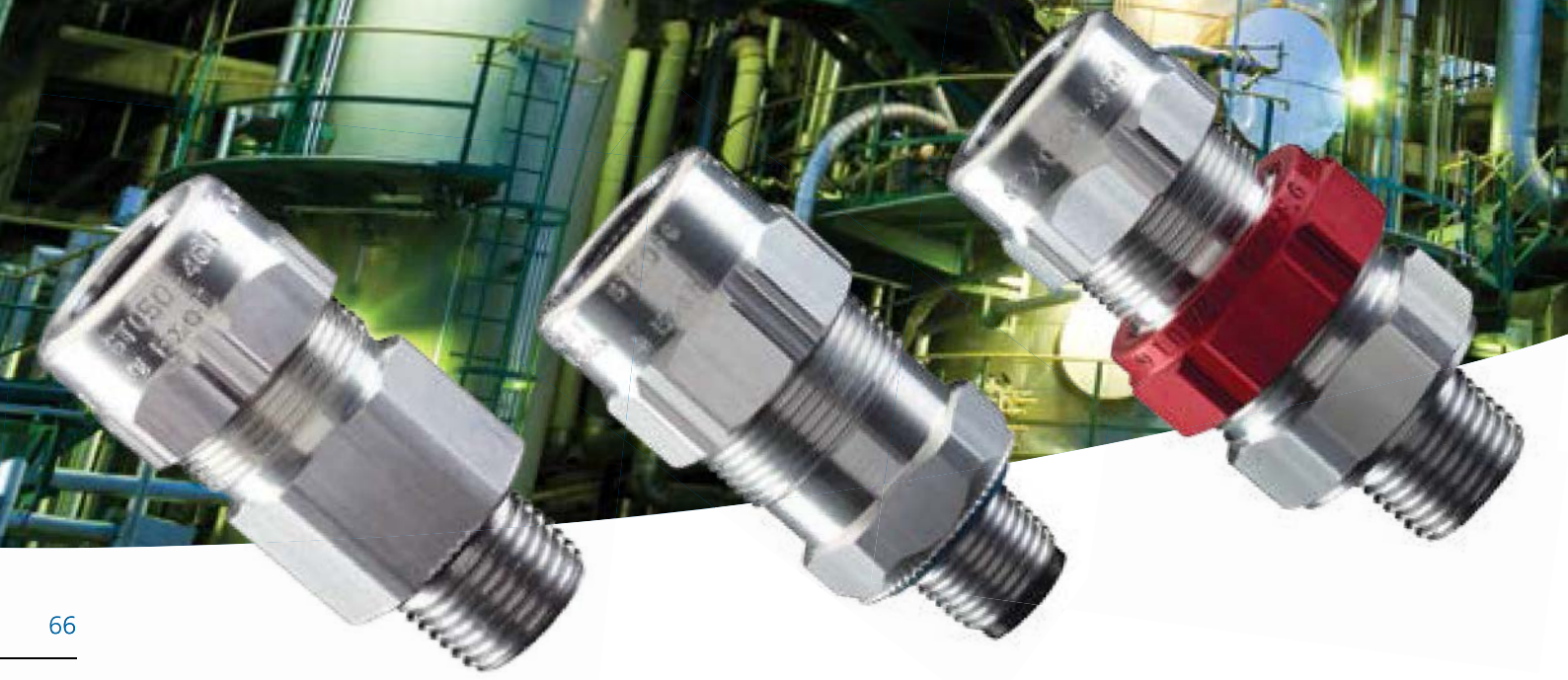


Type	Size	Min - Max	Dimensions L	H min	CH	CH1	Torque (Nm)
EXCGM20S	20	6,0 - 12,0	10	40	24	24	5
EXCGM20SL	20	6,0 - 12,0	15	45	24	24	5
EXCGM20M	20	10,0 - 14,0	10	42	27	27	5.5
EXCGM20ML	20	10,0 - 14,0	15	50	27	27	5.5
EXCGM25S	25	13,0 - 18,0	10	47	33	33	7
EXCGM25SL	25	13,0 - 18,0	15	50	33	33	7
EXCGM25M	25	11,0 - 17,0	8	42.5	29	29	5
EXCGM32S	32	15,0 - 21,0	10	50	36	36	6
EXCGM32M	32	18,0 - 25,0	15	68	42	42	9
EXCGM40S	40	19,0 - 28,0	10	55	46	46	5
EXCGM40M	40	22,0 - 32,0	18	68	53	53	17
EXCGM50S	50	30,0 - 38,0	18	73	60	60	22
EXCGM63S	63	34,0 - 44,0	18	74	65	65	23

Type	Size (inch)	Min - Max	Dimensions L	H min	CH	CH1	Torque (Nm)
EXCG050S	1/2"	6 - 12	15	45	24	24	5
EXCG050M	1/2"	10 - 14	15	47	27	27	5.5
EXCG075S	3/4"	13 - 18	15	50	33	33	7
EXCG100S	1"	18 - 25	18	58	42	42	9

For accessories see pages 134-35

Star Teck® cable glands



Star Teck® cable glands - selection guide

	 Star Teck® ST series Page 74	 Star Teck XP® (STX) series Page 76	 Star Teck Extreme® (STE) series Page 78	 Star Teck Extreme XP® (STEX) series Page 80	 Star Teck Extreme Director™ (STED) series Page 82	 Iberville® Tek Page 86	 Iberville® TCAX™ Page 88
CSA®	023086	023086	023086	023086	023086	051586	051586
CLASS I	E, F & G	A, B, C & D	E, F & G	A, B, C & D	E, F & G	A, B, C & D	A, B, C & D
CLASS II	E, F & G	E, F & G	E, F & G	E, F & G	E, F & G	E, F & G	E, F & G
CLASS III	Type 4, 4x	Type 4x, 6P	Type 6P	Type 4x, 6P	Type 6P	Type 4, 4x	Type 4, 4x
DIV 1		●		●			
	AEX		AEX		AEX		
	023086		023086		023086		
CLASS I	●		●		●		
ZONE 1	●		●		●		
	Exe II		Exe II				
UL		E82038		E82038			E82038
CLASS I		A, B, C & D		A, B, C & D			A, B, C & D
CLASS II		E, F & G		E, F & G			E, F & G
DIV 2		●		●			●

Star Teck® (ST) cable glands

Installation and technical overview

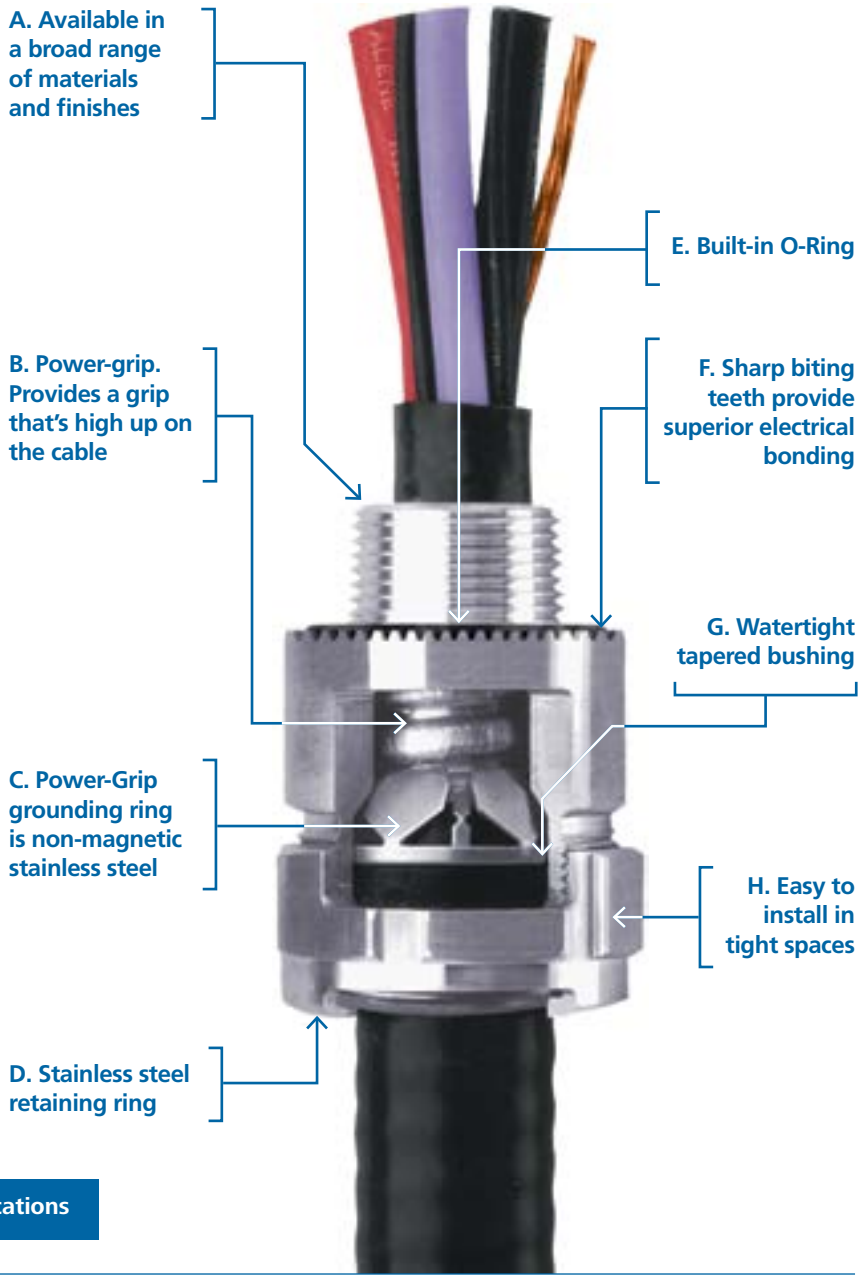
Installation steps

Caution: De-energise system

1. Prepare cable

2. Insert cable

3. Tighten gland nut



See pages 74-75 for technical specifications

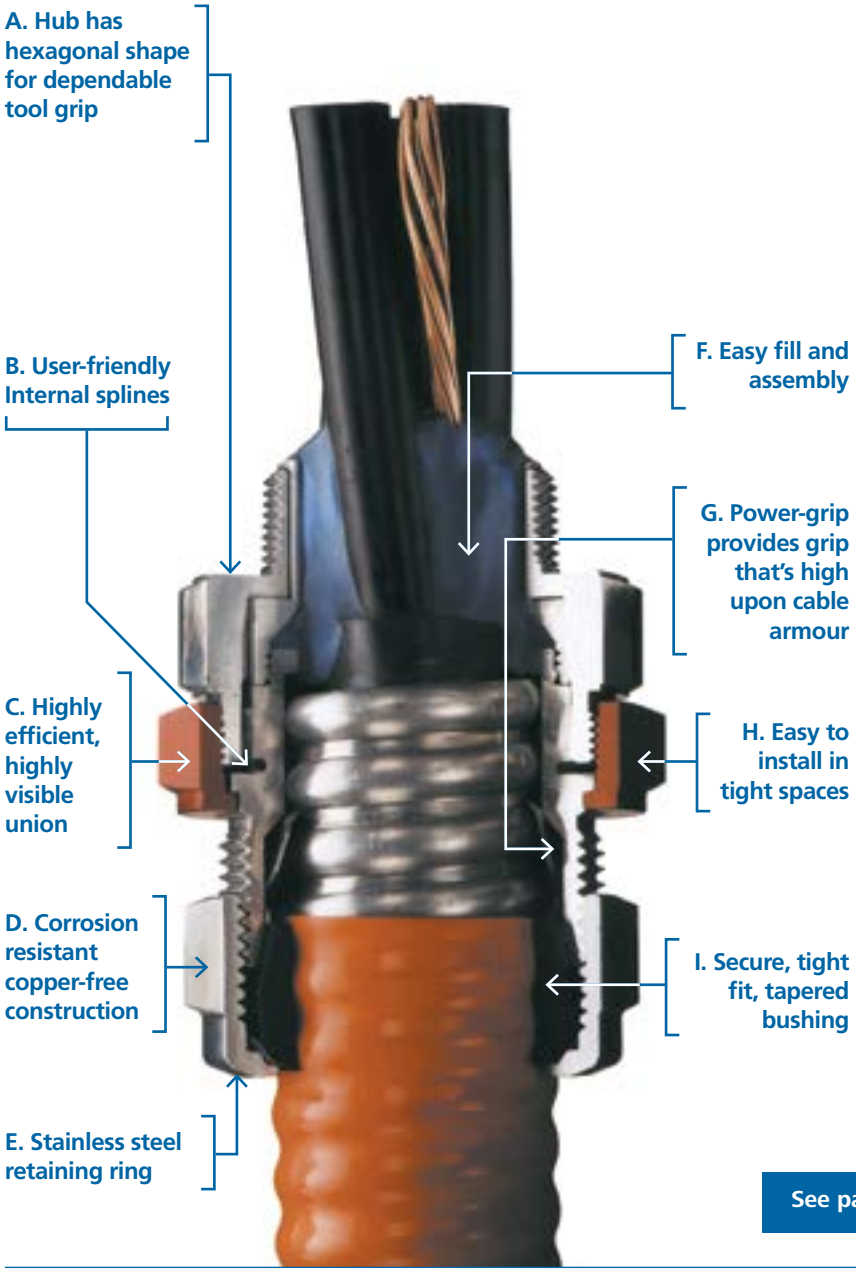
A. Available in a broad range of materials and finishes. Aluminium, steel, stainless steel and PVC coated.
B. Power-grip provides a grip that's high up on the cable - not on the first convolution - saves on installation time and provides dependable grounding.

C. Power-grip grounding ring is non-magnetic stainless steel. Provides 360° long-term dependable grounding. It makes immediate contact with the cable.
D. Stainless steel retaining ring. Withstands corrosive environments. Non-magnetic.
E. Built-in O-Ring provides 360° seal even when enclosure surface is rough or uneven.
F. Sharp biting teeth provide superior electrical bonding and allow corrosive liquids to drain away quickly.

G. Watertight tapered bushing. Cone shaped to provide a secure, tight fit while eliminating cupping or water in vertical installations.
H. Easy to install in tight spaces. Low profile gland nut fits tight spaces. Has grooves for screwdriver installation, and flats for a wrench. Durable and reusable with funnel entry for easy cable insertion.

Star Teck XP® (STX) cable glands

Installation and technical overview



Installation steps

Caution: De-energise system

1. Prepare cable

2. Install XP fitting onto cable

3. Tighten gland nut

4. Pot cable (using liquid or putty)

5. Install hub on enclosure

6. Insert cable and tighten red union

See pages 76-77 for technical specifications

A. Hub has hexagonal shape for dependable tool grip. Easy installation.
B. User-friendly internal splines allow installer to tighten gland nut either on or off enclosure.
C. Highly efficient, highly visible union features twist-on action for easy connection and disconnection; red color assures high visibility, easy recognition. Union also serves as a "puller" during disassembly.
D. Corrosion resistant copper-free construction. All-aluminium body and gland nut resist corrosion and oxydation.
E. Stainless steel retaining ring. Withstands corrosive environments. Non-magnetic.
F. Easy fill and assembly. Sealing chamber is easier to fill, requires less sealing compound - saves time, material. Flame path is optimally designed to allow for easy insertion into hub. Quick-turn lock unitises assembly during installation.
G. Power-grip provides grip that's high up on cable armour - not on first convolution - saves on installation time and provides dependable grounding. Non-magnetic stainless steel Power-grip grounding ring assures 360° long-term dependable grounding. Also provides phenomenal tensile pull out resistance.
H. Easy to install in tight spaces. Low profile gland nut fits tightest spaces. Has grooves for hammer / screwdriver installation and flats for wrench-gripping. Durable and reusable with funnel entry for easy cable insertion.
I. Secure, tight fit, tapered bushing. Cone-shaped to provide secure, tight fit while eliminating cupping of water in vertical installations.

Star Teck Extreme® (STE) cable glands

Installation and technical overview

Installation steps

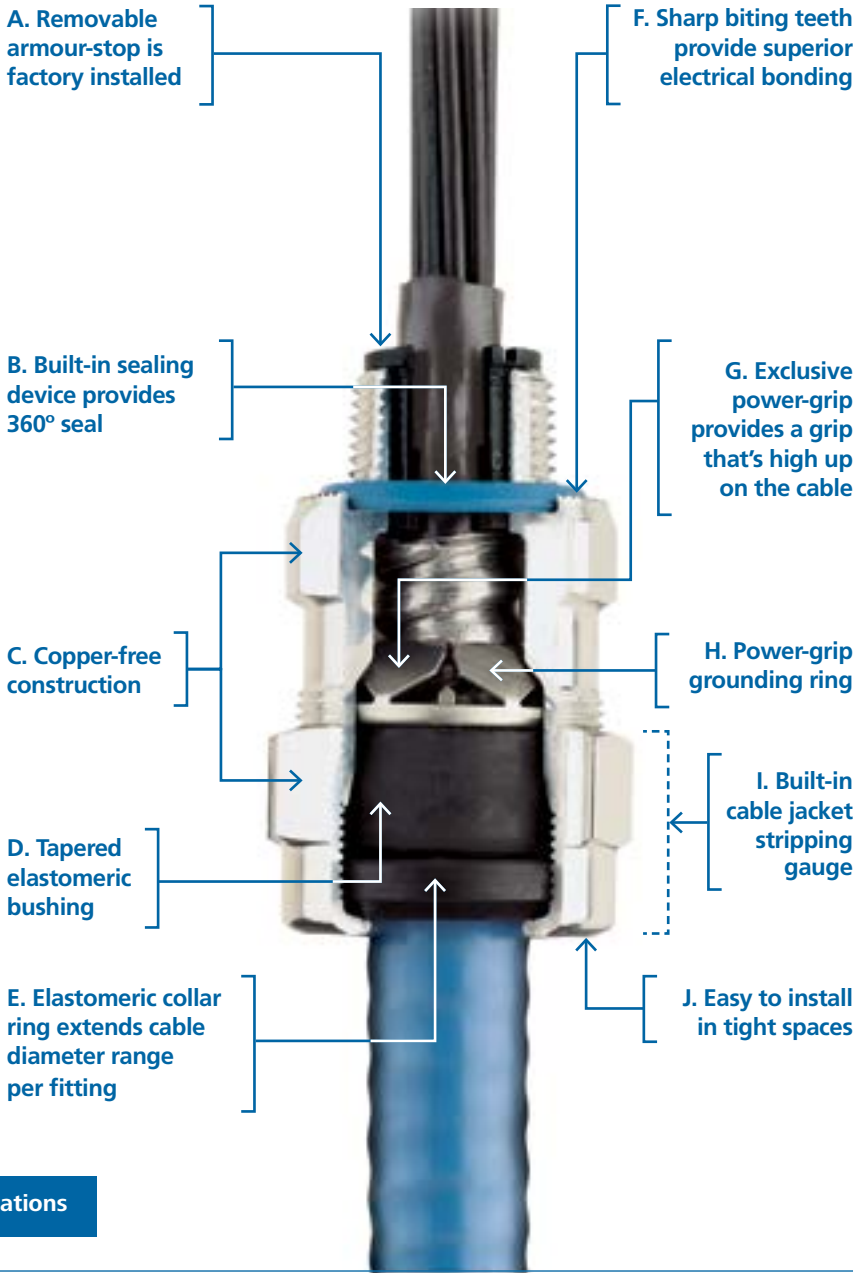
Caution: De-energise system

1. Prepare cable

2. Insert cable

3. For larger cables, unscrew and discard armour-stop.

4. Remove armour stop



See pages 78-79 for technical specifications

A. Removable armour-stop is factory installed. Fittings come ready to install on smallest cable in its range. For larger cables, simply unscrew armour-stop and discard. No fitting disassembly required.
B. Built-in sealing device provides 360° seal even when enclosure surface is rough or uneven
C. Copper-free construction. Non-corrosive all aluminium body and gland nut.
D. Tapered elastomeric bushing. Cone shaped to provide a secure, tight fit while elimin ating cupping of water in vertical installations.

E. Elastomeric collar ring extends cable diameter range per fitting. Matching cable to fitting hub size is made easy. (Note: The STE 050-DATA collar ring is made of stainless steel).
F. Sharp biting teeth provide superior electrical bonding and allow corrosive liquids to drain away quickly.
G. Exclusive power-grip provides a grip that's high up on the cable - not on the first convolution - saves on installation time and provides dependable grounding.

H. Power-grip grounding ring is non-magnetic stainless steel. Dual sets of grounding devices ensure 360° long-term dependable grounding. It makes immediate contact with the cable during insertion.
I. Built-in cable jacket stripping gauge on each fitting.
J. Easy to install in tight spaces. Has grooves for screwdriver installation, and flats for a wrench. Durable and reusable with funnel entry for easy cable insertion.

Star Teck XP® (STEX) cable glands

Installation and technical overview

Installation steps

Caution: De-energise system

1. Prepare cable

2. Install XP fitting onto cable

3. Tighten gland nut

4. Remove armour stop

5. Pot cable using liquid or putty

6. Insert hub on enclosure

7. Insert cable and tighten red union

See pages 80-81 for technical specifications

A. Removable armour-stop is factory installed. Fitting comes ready to install on smallest cable in its range. No disassembly required for larger cables - simply unscrew and discard armour-stop. This makes the fitting very range taking.

B. Built-in O-Ring to ensure liquidtight installation

C. Copper-free construction. Non-corrosive all aluminium body and gland nut.

D. Tapered elastomeric bushing - cone shaped to provide a secure tight fit while elimin ating cupping of water in vertical installations.

E. Low profile gland nut fits tight spaces. Has grooves for screwdriver installation, and flats for a wrench. Durable and reusable with funnel entry for easy cable insertion.

F. Elastomeric collar ring extends cable diameter range per fitting. Matching cable to fitting hub size is easy.

G. Easy to fill sealing chamber - requires less sealing compound - saves time and materials. Optimally designed flame path for easy insertion into hub. Quick-turn lock unitizes assembly during installation. Note: The red armour stop must be removed and discarded prior to potting the fitting.

H. High visibility, red union features twist-on action for easy connection and disconnection. Also serves as mechanical splitter to separate hub from fitting during disassembly.

I. Power-grip provides a grip that's high up on the cable - not on the first convolution - saves on installation time and provides dependable grounding. Dual sets of grounding devices ensure 360° long-term dependable grounding. Makes immediate contact with the cable during insertion.

J. Built-in cable jacket stripping gauge

Star Teck® ST series
Glands for Teck and ACWU cable

Approvals / Characteristics

Features

- Available in a broad range of materials and finishes; aluminium, steel, stainless steel & PVC coated
- Easy installation and dependable grounding
- Built in O-ring provides 360° seal
- Sharp biting teeth provide superior electrical bonding
- Watertight tapered bushing eliminates cupping in vertical installations
- Low profile gland nut for installation into tight spaces
- Designed to accommodate a broad range of cables

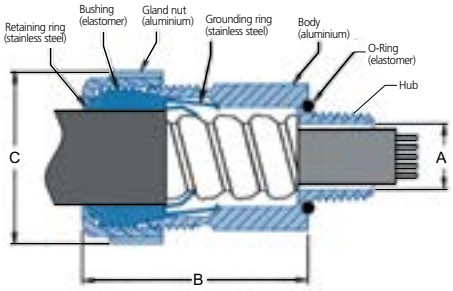
Certification and standards

UL Listed and CSA Certified for hazardous locations:
UL E38947
CSA 023086, AEX
Class I, Class II groups E, F & G
Class III Type 4, 4x; Exe II Zone 1

CSA certified for use in Hazardous location applications when used with a certified Class I sealing fitting.

Dimensions

Technical specifications



Aluminium Type	Hub Size	Range Over Jacket (Inches) Min.	Max.	Dimensions (Inches) A	B*	C
ST038-461S**	3/8"	0.344	0.535	0.344	2.020	0.995
ST050-462	1/2"	0.525	0.650	0.390	2.020	1.224
ST050-464	1/2"	0.600	0.760	0.480	2.020	1.363
ST050-465	1/2"	0.725	0.885	0.607	2.133	1.633
ST050-466	1/2"	0.825	0.985	0.607	2.133	1.633
ST075-467	3/4"	0.880	1.065	0.809	2.450	2.080
ST075-468	3/4"	1.025	1.205	0.809	2.450	2.080
ST100-469	1	1.187	1.375	1.034	2.601	2.230
ST125-470	1 1/4"	1.350	1.625	1.177	3.282	2.824
ST125-550	1 1/4"	1.500	1.625	1.365	3.282	2.824
ST125-471	1 1/4"	1.600	1.875	1.365	3.282	2.824
ST150-472	1 1/2"	1.700	1.965	1.552	3.620	3.260
ST150-473	1 1/2"	1.900	2.187	1.595	3.620	3.260
ST200-551	2	1.900	2.187	1.710	3.640	3.620
ST200-474	2	2.100	2.375	1.990	3.640	3.620
ST200-475	2	2.300	2.565	2.052	3.640	4.020
ST200-476	2	2.500	2.750	2.052	3.640	4.020
ST250-477	2 1/2"	2.380	2.640	2.255	4.700	4.750
ST250-478	2 1/2"	2.580	2.840	2.455	4.700	4.750
ST300-479	3	2.790	3.060	2.655	4.700	5.050
ST300-480	3	3.000	3.270	2.885	4.790	5.480
ST300-481	3	3.210	3.480	3.057	4.790	5.480
ST350-482	3 1/2"	3.420	3.690	3.285	4.790	5.980
ST350-483	3 1/2"	3.610	3.870	3.455	4.790	5.980
ST400-484	4	3.810	4.030	3.625	4.840	6.435
ST400-485	4	3.965	4.185	3.770	4.840	6.435
ST400-486	4	4.120	4.340	3.935	4.840	6.435

Note: When using fittings on single conductor cable, aluminium fittings and aluminium locknuts must be used
**Approximate dimension before installation, **Only available in steel*
****For Steel version, add S to the reference, e.g. ST050-464S, for Stainless Steel version, add SS to the reference, e.g. ST050-464SS, for PVC-Coated Aluminium and Steel version, add PVC to the reference, e.g. ST050-464PVC or ST050-464SPVC*

Star Teck® (ST) range
Star Teck® cable fittings are designed to accommodate a broad range of cables, thereby minimizing the possibility of mismatched cables and fittings in the field. They are available in hub sizes from 1/2 to 4 inches, and will handle outer jacket diameters from 0.525 to 4.34 inches

Star Teck XP® (STX) series

Hazardous location glands for Teck cable

Approvals / Characteristics

Features

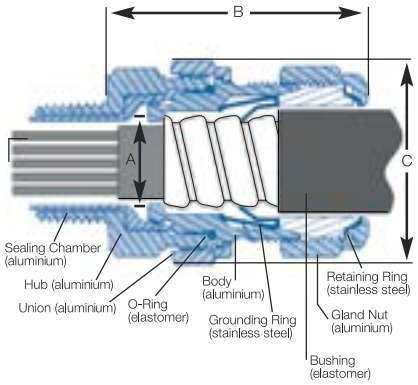
- Hub has hexagonal shape for dependable tool grip
- Internal splines allow installer to tighten gland nut either on or off enclosure
- Provides grip high up on cable armour, saves installation time and provides dependable grounding
- Tapered bushing to provide secure, tight fit while eliminating cupping in vertical installations
- Low profile gland nut for installation into tight spaces
- Designed to accommodate a broad range of cables

Certification and standards

UL Listed and CSA Certified for hazardous locations:
UL E82038
UL Class I groups A, B, C & D
UL Class II E, F & G, Div 1
CSA 023086
Class I Div 1 & 2, groups A, B, C & D
Class II Div 1 & 2, groups E, F & G
Class III Types 4x, 6P

Dimensions

Technical specifications



Aluminium Type	Hub Size	Max. Volume of Sealing Compound (cm³)	Range Over Jacket (Inches) Min.	Max.	Dimensions (Inches) A	B*	C
STX050-462	1/2"	5	0.525	0.650	0.395	2.50	1.63
STX050-464	1/2"	5	0.600	0.760	0.485	2.50	1.63
STX075-465	3/4"	8	0.725	0.885	0.607	2.62	1.82
STX075-466	3/4"	8	0.825	0.985	0.715	2.62	1.82
STX100-467	1	16	0.880	1.065	0.750	2.83	2.30
STX100-468	1	16	1.025	1.205	0.895	2.83	2.30
STX125-469	1 1/4"	23	1.187	1.375	1.057	3.05	2.51
STX150-470	1 1/2"	43	1.350	1.625	1.177	3.76	3.26
STX150-550	1 1/2"	43	1.500	1.625	1.365	3.76	3.26
STX150-471	1 1/2"	43	1.600	1.875	1.465	3.76	3.26
STX200-472	2	72	1.700	1.965	1.552	4.05	3.62
STX200-473	2	72	1.900	2.187	1.752	4.05	3.62
STX200-474	2	72	2.100	2.375	1.990	4.15	4.02
STX250-475	2 1/2"	147	2.300	2.565	2.180	4.31	4.58
STX250-476	2 1/2"	147	2.500	2.750	2.360	4.31	4.58
STX300-478	3	286	2.580	2.840	2.455	5.64	5.10
STX300-479	3	286	2.790	3.060	2.655	5.80	5.33
STX350-480	3 1/2"	366	3.000	3.270	2.859	6.32	5.79
STX350-481	3 1/2"	366	3.210	3.480	3.057	6.32	5.79
STX400-482	4	614	3.420	3.690	3.285	6.63	6.19
STX400-483	4	614	3.610	3.870	3.455	6.63	6.19
STX400-484	4	614	3.810	4.030	3.625	7.09	6.90
STX400-485	4	614	3.965	4.185	3.770	7.09	6.90

Note: Sealing compound not included. Order separately

**Approximate dimension before installation, **For steel version, add S to the reference, e.g. STX050-464S*

Sealing Compounds

Type	Description	Volume (cm³)
SC4-KIT-1*	Liquid type sealing compound (includes pouch of sealing compound with customizable nozzle and damming fiber)	50
SC65**	Putty type sealing compound (cut-to-length stick)	34

** Use SC4-KIT-1 liquid compound for shielded cables and all power cables with less than 4 conductors (including ground).*

***We do not recommend SC65 for use with shielded cables. Suitable for use on cables with a maximum of four conductors (including ground)*

Series Star Teck XP® (STX) range

Star Teck XP® (STX) cable glands are designed to accommodate a broad range of cables, thereby minimizing the possibility of mismatched cables and fittings in the field. They are available in hub sizes from 1/2 to 4 inches, and will handle outer jacket diameters from 0.525 to 4.185 inches

Star Teck Extreme® (STE) series

Range-taking glands for Teck and ACWU cable

Approvals / Characteristics

Features

- Removable armour stop is factory installed
- Built-in sealing device provides 360° seal even when enclosure surface is rough or uneven
- Tapered bushing to provide secure, tight fit while eliminating cupping in vertical installations
- Elastomeric collar ring extends cable diameter range
- Built-in jacket stripping gauge on each fitting
- Low profile gland nut for installation into tight spaces
- Designed to accommodate a broad range of cables

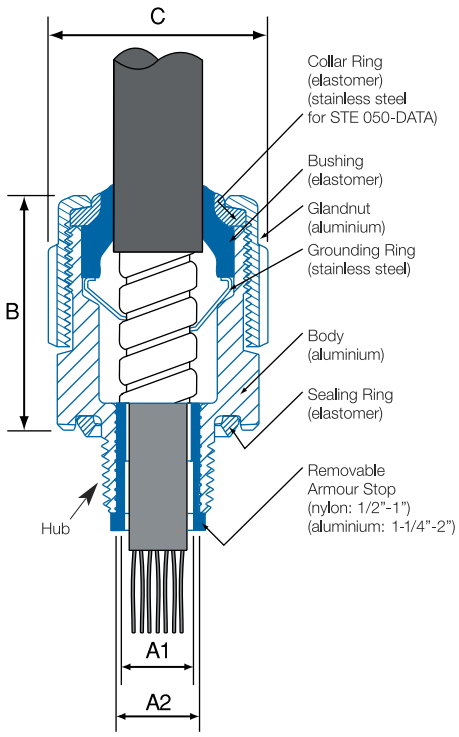
Certification and standards

UL Listed and CSA Certified for hazardous locations:
UL E38947
CSA 023086, AEX
Class I, Class II groups E, F & G
Class III Type 4, 4x or Type 6P
Exe II Zone 1

CSA certified for use in Hazardous location applications when used with a certified Class I sealing fitting.

Dimensions

Technical specifications



Aluminium Type	Hub Size	Strip Length	Gland Torque (lb - in)	Range Over Jacket (in) Min.	Range Over Jacket (in) Max.	Range Over Armour (in) Min.	Range Over Armour (in) Max.	A1 Throat Dia. Min (in) w/ Armour Stop	A2 Throat Dia. Min (in) w/o Armour Stop	B* Overall (in)	C Max. O.D. (in)
STE050-DATA	1/2"	7/8"	300	0.500	0.700	0.410	0.610	0.375	0.515	2.10	1.36
STE050	1/2"	1 1/4"	300	0.600	0.985	0.520	0.895	0.505	0.617	2.52	1.63
STE075	3/4"	1 1/4"	600	0.860	1.205	0.780	1.125	0.645	0.819	2.84	2.08
STE100	1	1 1/4"	700	0.950	1.375	0.870	1.295	0.785	1.044	3.02	2.30
STE125	1 1/4"	1 3/4"	1000	1.150	1.625	0.990	1.465	0.970	1.250	4.01	2.82
STE150	1 1/2"	1 3/4"	1200	1.440	1.965	1.280	1.805	1.260	1.562	4.29	3.25
STE200	2	1 3/4"	1600	1.825	2.375	1.665	2.215	1.645	1.995	4.12	3.60
STE250	2 1/2"	2 1/2"	1600	2.265	2.840	2.105	2.680	2.075	2.424	5.67	4.75
STE300	3	2 1/2"	1600	2.670	3.270	2.545	3.145	2.531	2.890	5.78	5.40
STE350	3 1/2"	2 1/2"	1600	3.220	3.870	3.090	3.640	3.065	3.414	5.74	5.90
STE400	4	2 1/2"	1600	3.665	4.340	3.550	4.225	3.525	3.914	5.79	6.40

Note: To order fittings complete with aluminium BondStar locknut and lug, add the suffix "GRL" to the catalogue number, e.g. STE050GRL
**Approximate dimension before installation, **For Steel version, add S to the reference, e.g. STE050S*

Star Teck Extreme® (STE)
Star Teck Extreme® (STE) cable glands are designed to accommodate a broad range of cables and each hub size overlaps the adjacent hub range, thereby minimizing the possibility of mismatched cables and fittings in the field. Available in hub sizes from 1/2 to 4 inches, Star Teck Extreme fittings will terminate outer jacket diameters from 0.5 to 4.34 inches

Star Teck Extreme XP® (STEX) series

Range-taking glands for Teck cable

Approvals / Characteristics

Features

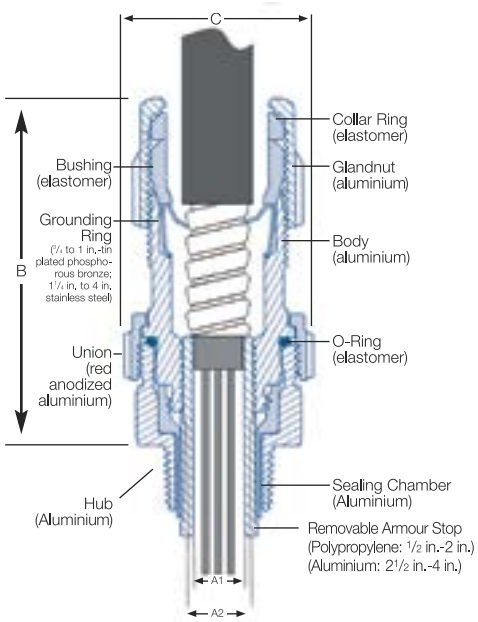
- Removable armour stop is factory installed
- Built-in sealing device provides 360° seal when enclosure surface is rough or uneven
- Tapered bushing to provide secure, tight fit while eliminating cupping in vertical installations
- Elastomeric collar ring extends cable diameter range
- Built-in jacket stripping gauge on each fitting
- Low profile gland nut for installation into tight spaces
- Designed to accommodate a broad range of cables

Certification and standards

UL Listed and CSA Certified for hazardous locations:
UL E82038
UL Class I groups A, B, C & D
UL Class II E, F & G, Div 2
CSA 023086
Class I Div 1 & 2, groups A, B, C & D
Class II Div 1 & 2, groups E, F & G
Class III Types 4x, 6P

Dimensions

Technical specifications



Aluminium Type	Hub Size	Range Over Jacket (in) Min.	Range Over Jacket (in) Max.	Range Over Armour (in) Min.	Range Over Armour (in) Max.	A1 Throat Dia. Min (in) w/ Armour Stop	A2 Throat Dia. Min (in) w/o Armour Stop	B* Length (in)	C Max. O.D. (in)	Compound Req'd (approx.) SC65/SC4KIT Liquid (CC)
STX050-462	1/2"	0.525	0.650	0.415	0.570	N/A***	0.400	2.500	1.630	5
STX050-464	1/2"	0.600	0.760	0.490	0.680	N/A***	0.480	2.530	1.630	5
STEX075	3/4"	0.600	0.985	0.520	0.895	0.500	0.670	3.400	1.820	8
STEX100	1	0.860	1.205	0.780	1.125	0.645	0.825	3.580	2.300	16
STEX125	1 1/4"	0.950	1.375	0.870	1.295	0.829	1.076	3.920	2.510	23
STEX150	1 1/2"	1.150	1.625	0.990	1.465	0.953	1.280	5.020	3.260	43
STEX200	2	1.440	1.965	1.280	1.805	1.245	1.565	5.120	3.620	72
STEX250	2 1/2"	1.825	2.375	1.665	2.215	1.630	2.000	5.170	4.580	147
STEX300	3	2.265	2.840	2.105	2.680	2.066	2.495	6.610	5.100	286
STEX350	3 1/2"	2.670	3.270	2.545	3.145	2.522	2.895	7.380	5.790	366
STEX400	4	3.220	3.870	3.090	3.640	3.060	3.520	7.650	6.190	614

Note: To order fittings complete with aluminium BondStar locknut and lug, add the suffix "GRL" to the catalogue number, e.g. STE050GRL
**Approximate dimension before installation, **For Steel version, add S to the reference, e.g. STE050S*

Sealing compounds

Type	Description	Volume (cm^3)
SC4-KIT-1*	Liquid type sealing compound (includes pouch of sealing compound with customizable nozzle and damming fiber).	50
SC65**	Putty type sealing compound (cut-to-length stick)	34

** Use SC4-KIT-1 liquid compound for shielded cables and all power cables with less than 4 conductors (including ground)*
***We do not recommend SC65 for use with shielded cables. Suitable for use on cables with a maximum of four conductors (including ground)*

Star Teck Extreme XP® (STEX)
Star Teck Extreme XP® (STEX) cable glands are designed to accommodate a broad range of cables and each hub range overlaps the adjacent hub range, thereby minimizing the possibility of mismatched cables and fittings in the field. They are available in hub sizes from 1/2 to 4 inches, and will handle outer jacket diameters from 0.525 to 3.870 inches

Star Teck Extreme Director™ (STED) series

Adjustable range-taking cable gland

Approvals / Characteristics

Features

- First truly adjustable, range-taking fitting
- Exclusive swash-plate design allows adjustments from 90 to 180 degrees
- Full circular bore for trouble-free cable insertion
- Alignment guides facilitate installation of fittings at same angle
- Requires no disassembly prior to installation; can also be easily disconnected
- For use with teck cable, jacketed metal-clad cable (ACWU) or metal clad cable (MC)

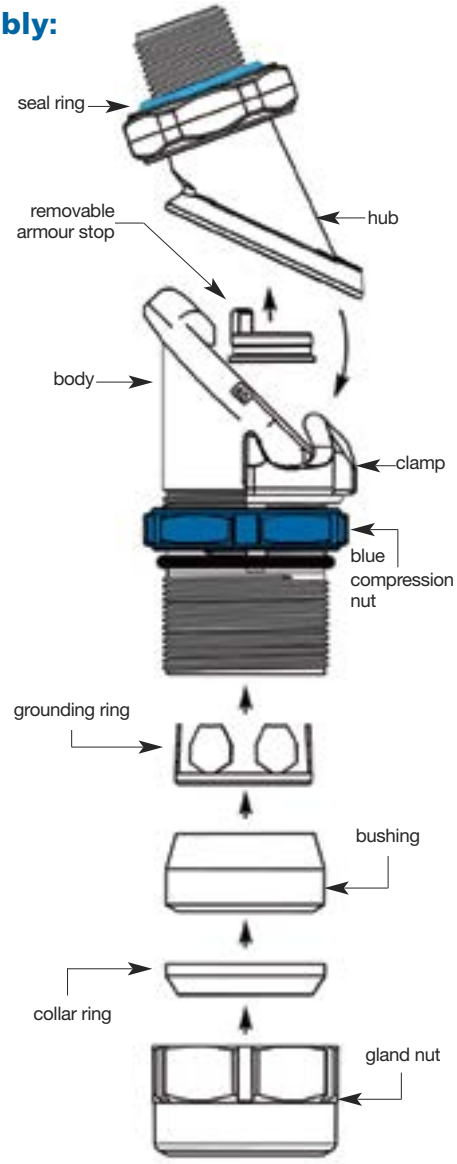
Certification and standards

UL Listed and CSA Certified for hazardous locations as outlined in the CEC:
UL E38947
CSA 023086, AEX
Class I, Class II groups E, F & G
Class III and enclosures Type 4, 4x and 6P
Exe II IP68

Dimensions

Technical specifications

Assembly:



Installation steps

Caution: De-energise system

Install fitting into enclosure

Insert cable and tighten (as usual)

Rotate fitting to desired angle

Type	Hub Size	Gland Torque (lb - in)	Range Over Jacket (in) Min.	Range Over Jacket (in) Max.	Range Over Armour (in) Min.	Range Over Armour (in) Max.	Throat Dia. Min (in) w/ Armour Stop	Throat Dia. Min (in) w/o Armour Stop	Overall (in)
STED050	1/2"	450	0.600	0.885	0.520	0.795	0.505	0.617	5.375
STED075	3/4"	600	0.860	1.205	0.780	1.125	0.645	0.819	5.875

Bond Star™
Grounding locknut

Approvals / Characteristics

Features

- For use in any data and control applications sensitive to floating voltage differences
- Open-sided lay-in grounding lug is CSA and UL approved and has a 4-14 AWG wire range
- Choice of three grounding locations on the circumference of the installed grounding locknut facilitates installation of grounding lug

Star Teck extreme fittings with Bond Star grounding locknut

Technical specifications

Type	Hub Sizes (in)	Obsoleted Items
STE050-DATAGRL	1/2"	STE050-DATAGR
STE050GRL	1/2"	STE050GR
STE075GRL	3/4"	STE075GR
STE100GRL	1"	STE100GR
STE125GRL	1 1/4"	STE125GR
STE150GRL	1 1/2"	STE150GR
STE200GRL	2"	STE200GR
STE250GRL	2 1/2"	STE250GR
STE300GRL	3"	STE300GR
STE350GRL	3 1/2"	STE350GR
STE400GRL	4"	STE400GR

Bond Star™ grounding locknut only

Type	Sizes (in)	Description
L050GRL	1/2"	Locknut with Lay-in Lug and Screw
L075GRL	3/4"	Locknut with Lay-in Lug and Screw
L100GRL	1"	Locknut with Lay-in Lug and Screw
L125GRL	1 1/4"	Locknut with Lay-in Lug and Screw
L150GRL	1 1/2"	Locknut with Lay-in Lug and Screw
L250GRL	2 1/2"	Locknut with Lay-in Lug and Screw
L300GRL	3"	Locknut with Lay-in Lug and Screw
L350GRL	3 1/2"	Locknut with Lay-in Lug and Screw
L400GRL	4"	Locknut with Lay-in Lug and Screw
L500GRL	5"	Locknut with Lay-in Lug and Screw

Lay-in lug

Type	Screw	For Hub Sizes (in)
GRL-LUG1032	#10, 32 TPI	1/2", 3/4", 1"
GRL-LUG1/4-20	1/4, 20 TPI	1 1/4" - 6"

IBERVILLE® TEK™
Cable glands

Approvals / Characteristics

Features

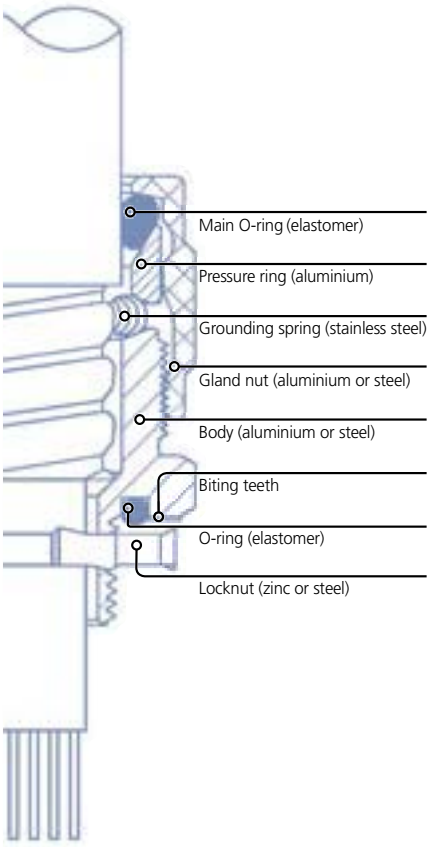
- Forms a watertight seal around the cable and at the enclosure entry
- Designed to accommodate a wide range of cables to provide a means to terminate at junction boxes, control centres, panel boards, and enclosures for motor control and electrical distribution equipment.
- Compact diameter eases installation in confined areas
- Available in 1/2 to 4-inch NPT trade sizes
- Ranges overlap from one fitting to another, thus simplifying the choice

Certification and standards

CSA Certified for hazardous locations as outlined in the CEC:
CSA 051586
Class I groups A, B, C & D
Class II groups E, F & G
Class III Types 4, 4x

Dimensions

Technical specifications



Installation steps

Caution: De-energise system

Install fitting on enclosure

Prepare cable

Slacken gland nut and insert prepared cable

Hand tighten gland nut to hold cable, then wrench tighten

Cat. No. Aluminium	Cat. No. Steel	Trade Size (Inches)	Dia. Over Cable Jacket (Inches) Min.	Dia. Over Cable Jacket (Inches) Max.	Gland Throat I.D (Inches)	Nut O.D (Inches)	Overall Length (Inches)	Exposed Length (tightened) (Inches)	Hex. Key Gland Nut (Inches)
CI-TEK-50-066	CI-TEK-50-066-S	1/2"	0.500	0.660	0.390	1.250	2-5/8	1-3/4	1-3/16
CI-TEK-50-079	CI-TEK-50-079-S	1/2"	0.620	0.790	0.500	1.375	2-5/8	1-3/4	1-5/16
CI-TEK-50-092	CI-TEK-50-092-S	1/2"	0.750	0.920	0.620	1.500	2-5/8	1-3/4	1-7/16
CI-TEK-75-105	CCI-TEK-75-105-S	3/4"	0.870	1.050	0.760	1.750	2-3/4	1-3/4	1-5/8
CI-TEK-75-120	CI-TEK-75-120-S	3/4"	1.020	1.200	0.830	1.937	2-3/4	1-3/4	1-13/16
CI-TEK-100-137	CI-TEK-100-137-S	1	1.180	1.370	1.030	2.375	2-7/8	2	2-1/4
CI-TEK-125-157	CI-TEK-125-157-S	1 1/4"	1.350	1.570	1.230	2.500	3-5/8	2-5/8	2-3/8
CI-TEK-125-176	CI-TEK-125-176-S	1 1/4"	1.540	1.760	1.400	2.625	3-5/8	2-5/8	2-1/2
CI-TEK-150-198	CI-TEK-150-198-S	1 1/2"	1.730	1.980	1.590	3.000	4	2-7/8	2-3/4
CI-TEK-200-220	CI-TEK-200-220-S	2	1.960	2.200	1.810	3.250	4-1/4	3-1/8	3
CI-TEK-200-241	CI-TEK-200-241-S	2	2.180	2.410	2.020	3.500	4-1/4	3-1/8	3-1/4
CI-TEK-200-262	CI-TEK-200-262-S	2	2.390	2.620	2.060	3.750	4-1/4	3-1/8	3-1/2
CI-TEK-250-284	CI-TEK-250-284-S	2 1/2"	2.600	2.840	2.400	5.000	6-7/16	5-1/4	4-1/2
CI-TEK-300-306	CI-TEK-300-306-S	3	2.820	3.060	2.620	5.625	6-3/4	5-1/2	5-1/4
CI-TEK-300-328	CI-TEK-300-328-S	3	3.040	3.280	2.843	5.625	6-3/4	5-1/2	5-1/4
CI-TEK-300-350	CI-TEK-300-350-S	3	3.260	3.500	3.030	5.625	6-3/4	5-1/2	5-1/4
CI-TEK-400-371	CI-TEK-400-371-S	4	3.480	3.710	3.230	6.500	7-1/8	5-3/4	6
CI-TEK-400-392	CI-TEK-400-392-S	4	3.690	3.920	3.450	6.500	7-1/8	5-3/4	6
CI-TEK-400-413	CI-TEK-400-413-S	4	3.900	4.130	3.680	6.500	7-1/8	5-3/4	6
CI-TEK-400-433	CI-TEK-400-433-S	4	4.110	4.330	3.860	6.500	7-1/8	5-3/4	6

IBERVILLE® TCAX™

Explosion-proof Teck cable glands

Approvals / Characteristics

Features

- Incorporates integral means for the sealing of conductors, together with a long and tight flame propagation path to prevent the escape of hot gases
- Suitable for either single or multi-conductor cables
- Available in 1/2 to 2-inch NPT trade sizes
- Designed for ease of installation and total reliability

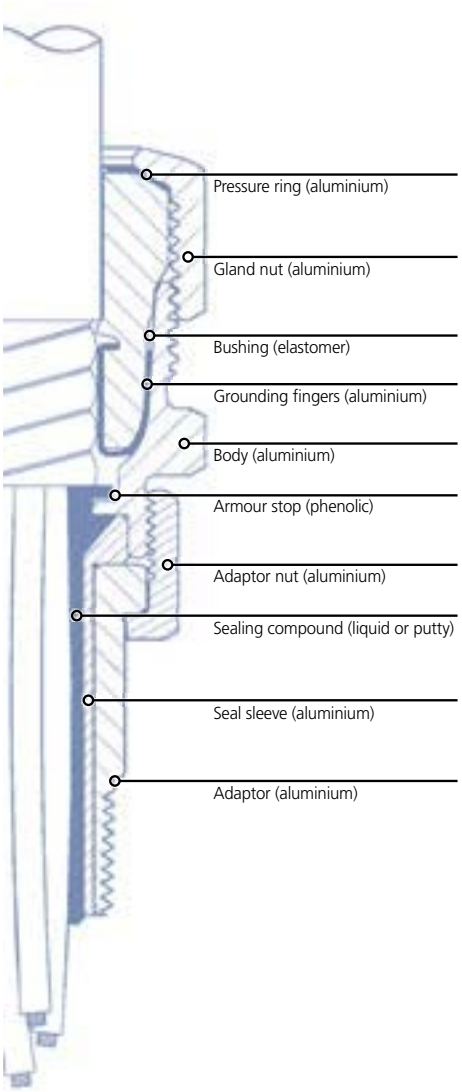
Certification and standards

UL Listed and CSA Certified for hazardous locations as outlined in the CEC:

UL E82038
UL Class I groups A, B, C & D
UL Class II E, F & G, Div 2
CSA 051586
Class I groups A, B, C & D
Class II groups E, F & G
Class III Types 4, 4x

Dimensions

Technical specifications



Installation steps

Caution: De-energise system

Prepare cable

Install TCAX fitting on cable

Tighten gland nut

Pot cable using liquid or putty

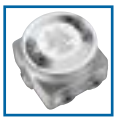
Insert adaptor on enclosure

Insert assembly and tighten adaptor nut

Cat. No. Aluminium	Trade Size (Inches)	Dia. Over Cable Jacket (Inches) Min.	Dia. Over Cable Jacket (Inches) Max.	Throat (Inches)	Fitting (Inches) Body/Gland Nut O.D	Fitting (Inches) Adaptor Nut O.D	Overall Length	Exposed Length
CI-TCAX-50-063-P	1/2"	0.500	0.630	0.380	1-5/8	1-3/8	3-1/2	2-7/8
CI-TCAX-50-078-P	1/2"	0.620	0.780	0.490	1-5/8	1-3/8	3-1/2	2-7/8
CI-TCAX-50-089-P	1/2"	0.760	0.890	0.530	1-5/8	1-3/8	3-1/2	2-7/8
CI-TCAX-50-098-P	1/2"	0.870	0.980	0.530	1-5/8	1-3/8	3-1/2	2-7/8
CI-TCAX-75-106-P	3/4"	0.900	1.060	0.740	1-7/8	1-5/8	3-3/4	3
CI-TCAX-75-118-P	3/4"	1.040	1.180	0.740	1-7/8	1-5/8	3-3/4	3
CI-TCAX-100-135-P	1	1.160	1.350	0.890	2-1/4	1-7/8	4-1/4	3-1/2
CI-TCAX-125-151-P	1 1/4"	1.330	1.510	1.180	2-3/4	2-1/2	4-1/4	3-1/2
CI-TCAX-125-167-P	1 1/4"	1.490	1.670	1.240	2-3/4	2-1/2	4-1/4	3-1/2
CI-TCAX-125-182-P	1 1/4	1.650	1.820	1.240	2-3/4	2-1/2	4-1/4	3-1/2
CI-TCAX-150-192-P	1 1/2"	1.730	1.920	1.480	3-1/4	3	4-1/2	3-3/4
CI-TCAX-150-208-P	1 1/2"	1.900	2.080	1.480	3-1/4	3	4-1/2	3-3/4
CI-TCAX-200-231-P	2	2.060	2.310	1.890	3-3/4	3-1/4	5-1/8	4-3/8
CI-TCAX-200-250-P	2	2.280	2.500	1.950	3-3/4	3-1/4	5-1/8	4-3/8

Rigid conduit fittings

Rigid conduit fittings and accessories - selection guide

	 **GUA series conduit outlet boxes** Pages 94-97	 **GA series aluminium external hubs** Pages 98-101	 **EXUN series aluminium internal hubs** Pages 102-103	 **GASS series aluminium internal hubs** Page 104	 **GUP explosion-proof enclosure** Page 105	 **LB and T style aluminium conduit body** Pages 106-107	 **OE series iron conduit outlet bodies** Pages 108-109	 **Capped elbows iron and aluminium** Pages 110-111	 **Reducers, plugs and adapters** Pages 112-113
CSA	●	●	●	●	●	●	●	●	●
UL	●	●	●	●	●	●	●	●	●
CLASS I DIV 1	●	●	●	●	●	●	●	●	●
CLASS I DIV 2	●	●	●	●	●	●	●	●	●
CLASS II DIV 1	●	●	●	●	●	●	●	●	●
CLASS II DIV 2									
CLASS III									
CLASS III DIV 1	●	●	●	●	●	●	●	●	●
CLASS III DIV 2	●	●	●	●	●	●	●	●	●

Rigid conduit fittings and accessories - selection guide

 **UN series three-piece unions** Pages 114-115	 **EX series aluminium three-piece unions** Pages 116-117	 **EYD & ECD series drain seals and breathers** Pages 118-119	 **EYS series sealing fittings** Pages 120-121	 **EYVF and EVHF series sealing fittings** Pages 122-123	 **Sealing cement and fiber** Pages 124-125
●	●	●	●	●	●
●	●	●	●	●	●
●	●	●	●	●	●
●	●	●	●	●	●
●	●	●	●	●	●
●					●
	●	●	●	●	
	●	●	●	●	

GUA series
Conduit outlet boxes

Approvals / Characteristics

CLASS I DIV 1 DIV 2
CLASS II DIV 1
CLAS III DIV 1 DIV 2

Features

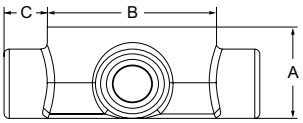
- Allows for mounting of fixture outlets (when used with appropriate covers)
- Provides for easy access to wiring
- Provides junction in conduit for wire pulling and splices
- Changes direction in rigid conduit systems
- Guards against damage to wires in rigid conduit
- All hubs have a minimum of five full threads and integral bushing
- All boxes are furnished with internal grounding screw
- Cover supplied with O-ring gasket

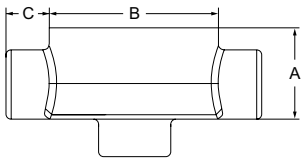
Certification and standards

UL Listed and CSA Certified for hazardous locations:
UL514A (wet locations when used with gasket covers)
UL886
CSA: C22.2 No. 30
Class I Div 1 & 2 CD
Class II Div 1 EFG
Class III Div 1 & 2
NEMA 3, 4, 7 CD, 9 EFG

Dimensions

Technical specifications





GUA Type	Hub Size	Dimensions (Inches) A	B	C	Throat Diameter Min	Max	Cubic Inch Capacity
GUA14-TB	1/2"	1.81	2.50	0.88	0.570	0.610	5.50
GUA16-TB	1/2"	2.00	3.50	0.88	0.570	0.610	13.5
GUA24-TB	3/4"	2.00	2.50	0.88	0.755	0.810	5.30
GUA26-TB	3/4"	2.00	3.50	0.88	0.755	0.810	13.3
GUA36-TB	1"	2.31	3.50	0.88	0.935	1.035	16.2
GUA47-TB	1 1/4"	2.69	4.38	1.00	1.260	1.360	29.0
GUA59-TB	1 1/2"	3.81	5.75	1.06	1.470	1.590	70.0

GUAB Type	Hub Size	Dimensions (Inches) A	B	C	Throat Diameter Min	Max	Cubic Inch Capacity
GUAB14-TB	1/2"	2.25	2.50	0.88	0.570	0.610	6.90
GUAB16-TB	1/2"	2.00	3.50	0.88	0.570	0.610	13.5
GUAB24-TB	3/4"	2.50	2.50	0.88	0.755	0.810	7.90
GUAB26-TB	3/4"	2.00	3.50	0.88	0.755	0.810	13.5
GUAB36-TB	1"	2.31	3.50	1.00	0.935	1.035	15.4
GUAB47-TB	1 1/4"	2.69	4.38	1.00	1.260	1.360	27.5
GUAB59-TB	1 1/2"	3.81	5.75	1.06	1.470	1.590	73.6
GUAB69-TB	2"	4.06	5.75	1.06	1.880	2.047	80.0
GUAB79-TB	2 1/2"	4.06	5.75	1.13	2.320	2.380	98.0

GUAC Type	Hub Size	Dimensions (Inches) A	B	C	Throat Diameter Min	Max	Cubic Inch Capacity
GUAC14-TB	1/2"	2.25	2.50	0.88	0.570	0.610	6.80
GUAC16-TB	1/2"	2.0	3.50	0.88	0.570	0.610	13.1
GUAC24-TB	3/4"	2.0	2.50	0.88	0.755	0.810	5.30
GUAC26-TB	3/4"	2.0	3.50	0.88	0.755	0.810	13.3
GUAC36-TB	1"	2.31	3.50	0.88	0.935	1.035	16.2
GUAC47-TB	1 1/4"	2.69	4.38	1.00	1.260	1.360	29.3
GUAC49-TB	1 1/4"	3.81	5.75	1.00	1.260	1.360	73.6
GUAC59-TB	1 1/2"	3.81	5.75	1.06	1.470	1.590	74.0
GUAC69-TB	2"	4.06	5.75	1.06	1.880	2.047	77.8

GUAD Type	Hub Size	Dimensions (Inches) A	B	C	Throat Diameter Min	Max	Cubic Inch Capacity
GUAD14-TB	1/2"	1.81	2.50	0.88	0.570	0.610	5.60
GUAD16-TB	1/2"	2.00	3.50	0.88	0.570	0.610	12.5
GUAD24-TB	3/4"	2.00	2.50	0.88	0.755	0.810	5.20
GUAD26-TB	3/4"	2.00	3.50	0.88	0.755	0.810	13.1
GUAD36-TB	1"	2.31	3.50	0.88	0.935	1.035	16.0
GUAD49-TB	1 1/4"	3.81	5.75	1.00	1.260	1.360	76.0

Size range
All sizes are listed in the tables on each page for each cat. no.

Materials
Bodies: Grade 60-45-10 Ductile Iron (complies with ASTM standard A536)
Covers: Die-cast aluminium

Finish
Boxes: Zinc plated with aluminium acrylic paint
Covers: Natural

GUA series
Conduit outlet boxes

For all approvals/characteristics and features
Please refer to page 88.

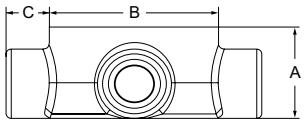
Technical specifications

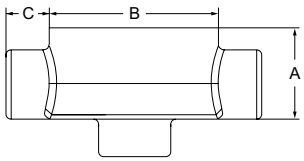
GUAL Type	Hub Size	Dimensions (Inches) A	B	C	Throat Diameter Min	Max	Cubic Inch Capacity
GUAL14-TB	1/2"	2.25	2.50	0.88	0.570	0.610	7.10
GUAL16-TB	1/2"	2.00	3.50	0.88	0.570	0.610	13.4
GUAL24-TB	3/4"	2.00	2.50	0.88	0.755	0.810	5.30
GUAL26-TB	3/4"	2.00	3.50	0.88	0.755	0.810	13.3
GUAL36-TB	1"	2.31	3.50	0.88	0.935	1.035	16.2
GUAL47-TB	1 1/4"	2.69	4.38	1.00	1.260	1.360	30.0
GUAL49-TB	1 1/4"	3.81	5.75	1.00	1.260	1.360	74.5
GUAL59-TB	1 1/2"	3.81	5.75	1.00	1.470	1.590	74.0
GUAL69-TB	2"	4.06	5.75	1.06	1.880	2.047	77.8

GUAM Type	Hub Size	Dimensions (Inches) A	B	C	Throat Diameter Min	Max	Cubic Inch Capacity
GUAM14-TB	1/2"	1.81	2.50	0.88	0.570	0.610	5.60
GUAM16-TB	1/2"	2.00	3.50	0.88	0.570	0.610	12.5
GUAM24-TB	3/4"	2.00	2.50	0.88	0.755	0.810	6.20
GUAM26-TB	3/4"	2.00					

Dimensions

Technical specifications





GUAN Type	Hub Size	Dimensions (Inches) A	B	C	Throat Diameter Min	Max	Cubic inch Capacity
GUAN14-TB	1/2"	2.13	2.50	0.88	0.570	0.610	6.80
GUAN16-TB	1/2"	2.00	3.50	0.88	0.570	0.610	13.5
GUAN24-TB	3/4"	2.31	2.50	0.88	0.755	0.810	7.70
GUAN26-TB	3/4"	2.00	3.50	0.88	0.755	0.810	14.0
GUAN36-TB	1"	2.31	3.50	0.88	0.935	1.035	16.9
GUAN47-TB	1 1/4"	2.69	4.38	1.00	1.260	1.360	31.5
GUAN59-TB	1 1/2"	4.06	5.75	1.06	1.470	1.590	84.0
GUAN69-TB	2"	4.06	5.75	1.06	1.880	2.047	84.0

GUAT Type	Hub Size	Dimensions (Inches) A	B	C	Throat Diameter Min	Max	Cubic inch Capacity
GUAT14-TB	1/2"	2.25	2.50	0.88	0.570	0.610	7.00
GUAT16-TB	1/2"	2.0	3.50	0.88	0.570	0.610	13.5
GUAT24-TB	3/4"	2.0	2.50	0.88	0.755	0.810	5.30
GUAT26-TB	3/4"	2.0	3.50	0.88	0.755	0.810	13.3
GUAT36-TB	1"	2.31	3.50	1.00	0.935	1.035	15.9
GUAT37-TB	1"	2.31	3.50	0.88	0.935	1.035	23.3
GUAT47-TB	1 1/4"	2.69	4.38	1.00	1.260	1.360	29.3
GUAT49-TB	1 1/4"	3.81	5.75	1.00	1.260	1.360	77.2
GUAT59-TB	1 1/2"	3.81	5.75	1.06	1.470	1.590	77.7
GUAT69-TB	2"	4.06	5.75	1.06	1.880	2.047	77.8
GUAT79-TB	2 1/2"	4.06	5.75	1.06	2.320	2.380	95.0

GUAW Type	Hub Size	Dimensions (Inches) A	B	C	Throat Diameter Min	Max	Cubic inch Capacity
GUAW14-TB	1/2"	1.81	2.50	0.88	0.570	0.61	5.20
GUAW16-TB	1/2"	2.0	3.50	0.88	0.570	0.61	13.0
GUAW24-TB	3/4"	2.0	2.50	0.88	0.755	0.81	6.50
GUAW26-TB	3/4"	2.0	3.50	0.88	0.755	0.81	13.0

GUAX Type	Hub Size	Dimensions (Inches) A	B	C	Throat Diameter Min	Max	Cubic inch Capacity
GUAX14-TB	1/2"	1.81	2.50	0.88	0.570	0.610	5.20
GUAX16-TB	1/2"	2.0	3.50	0.88	0.570	0.610	13.5
GUAX24-TB	3/4"	2.0	2.50	0.88	0.755	0.810	5.30
GUAX26-TB	3/4"	2.0	3.50	0.88	0.755	0.810	13.3
GUAX36-TB	1"	2.31	3.50	1.00	0.935	1.035	16.0
GUAX37-TB	1"	2.31	3.50	0.88	0.935	1.035	23.3
GUAX47-TB	1 1/4"	2.69	4.38	1.00	1.260	1.360	30.0
GUAX49-TB	1 1/4"	3.81	5.75	1.00	1.260	1.360	72.0
GUAX59-TB	1 1/2"	3.81	5.75	1.06	1.470	1.509	71.0
GUAX69-TB	2"	4.06	5.75	1.06	1.880	2.047	77.8

Size range
All sizes are listed in the tables on each page for each cat. no.

Materials
Bodies: Grade 60-45-10 Ductile Iron (complies with ASTM standard A536)
Covers: Die-cast aluminium

Finish
Boxes: Zinc Plated with aluminium acrylic paint
Covers: Natural

GA series
Aluminium external hubs

Approvals / Characteristics

CLASS I DIV 1 DIV 2
CLASS II DIV 1
CLASS III DIV 1 DIV 2

Features

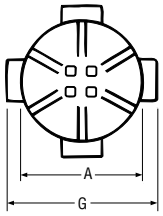
- Junction for branch conduits in hazardous locations
- Accessible wiring chamber provides a convenient location to maintain or change a system, pull conductors and make splices
- Unique mounting pads and external hub design ideal for installations of OEM devices or instruments
- Copper-free aluminium provides increased corrosion resistance
- Precision cast and machined surfaces permit safer wire pulling

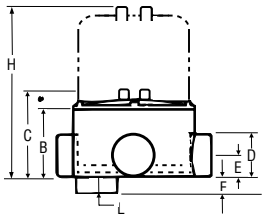
Certification and standards

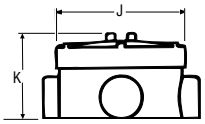
UL Listed and CSA Certified for hazardous locations:
Class I Div 1 & 2 CD
Class II Div 1 EFG
Class III Div 1 & 2
NEMA 4 (when ordered with O-ring installed)

Dimensions

Technical specifications







Dimensions of all styles when GAJ cover is used

GAC / GAE / GAL / GALB / GAT / GAX

GAC / GAE / GAL / GALB / GAT / GAX		Dimensions (inch)											
Cover Opening	Hub Size	A	B	C	D	E	F	G	H	J	K	L	CI
3 11/16	1/2"	4	2 1/4	2 15/16	1 3/8	11/16	11/16	5 3/16	5 9/16	4 3/16	3 5/16	9/16	18.8
3 11/16	3/4"	4	2 1/4	2 15/16	1 3/8	11/16	11/16	5 3/16	5 9/16	4 3/16	3 5/16	9/16	18.8
3 11/16	1"	4	2 1/4	2 15/16	1 5/8	13/16	27/32	5 1/2	5 9/16	4 3/16	3 5/16	9/16	18.8
3 29/32	1 1/4"	4 5/16	3	3 11/16	2 1/16	1 1/32	7/8	5 11/16	–	4 9/16	3 5/16	5/8	28.0
5 3/16	1 1/2"	5 3/4	4 1/4	5 1/16	2 7/8	1 7/16	7/8	6 5/8	–	6 7/16	5 15/32	13/16	69.3
5 3/16	2"	5 3/4	4 1/4	5 1/16	2 7/8	1 7/16	7/8	6 5/8	–	6 7/16	5 15/32	13/16	69.3

GAC - through feed with surface cover

Type	Hub Size	Unit Quantity	Standard Package	Weight per 100 (lbs)
GAC-1*	1/2"	1	5	115
GAC-2*	3/4"	1	5	115
GAC-3*	1"	1	5	115

**Made-to-order items. Contact sales for lead time and minimum quantities*

GAE - dead end with surface cover

Type	Hub Size	Unit Quantity	Standard Package	Weight per 100 (lbs)
GAE-2*	3/4"	1	5	110

**Made-to-order items. Contact sales for lead time and minimum quantities*

GAL - L style with surface cover

Type	Hub Size	Unit Quantity	Standard Package	Weight per 100 (lbs)
GAL-1	1/2"	1	5	115
GAL-2*	3/4"	1	5	115
GAL-3*	1"	1	5	115
GAL-4*	1 1/4"	1	5	175
GAL-5*	1 1/2"	1	4	247
GAL-6*	2"	1	4	253

**Made-to-order items. Contact sales for lead time and minimum quantities*

Aluminium external hubs

Technical specifications

GALB - LB style with surface cover

Type	Hub Size	Unit Quantity	Standard Package	Weight per 100 (lbs)
GALB-1*	1/2"	1	5	115
GALB-2	3/4"	1	5	115
GALB-3*	1"	1	5	115
GALB-4*	1 1/4"	1	2	175
GALB-6*	2"	1	4	253

**Made-to-order items. Contact sales for lead time and minimum quantities*

GAT - T style with surface cover

Type	Hub Size	Unit Quantity	Standard Package	Weight per 100 (lbs)
GAT-1*	1/2"	1	5	120
GAT-2	3/4"	1	5	120
GAT-3*	1"	1	5	120
GAT-4	1 1/4"	1	5	180
GAT-6*	2"	1	1	406

**Made-to-order items. Contact sales for lead time and minimum quantities*

GAX - X style with surface cover

Type	Hub Size	Unit Quantity	Standard Package	Weight per 100 (lbs)
GAX-1**	1/2"	1	5	125
GAX-2*	3/4"	1	5	125
GAX-3**	1"	1	5	125
GAX-5**	1 1/2"	1	1	257

**Made-to-order items. Contact sales for lead time and minimum quantities*
***O-ring available for NEMA 4 rating*

GAS - surface-style cover

Type	Cover Opening	Fit Boxes	Standard Package	Weight per 100 (lbs)
GAS-123*	3 11/16"	1/2", 3/4", 1"	1	36
GAS-4*	3 29/32"	1 1/4"	1	52
GAS-56*	5 3/16"	1 1/2", 2"	1	69

**Made-to-order items. Contact sales for lead time and minimum quantities*

GAD - dome-style cover (Class I, Group D only)

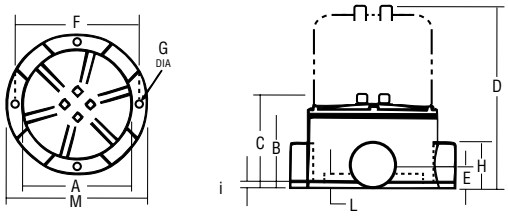
Type	Cover Opening	Fit Boxes	Inside Height	Cubic Inch Capacity	Standard Package	Weight per 100 (lbs)
GAD-123*	3 11/16"	1/2", 3/4", 1"	2 5/8"	23	1	71

**Made-to-order items. Contact sales for lead time and minimum quantities*

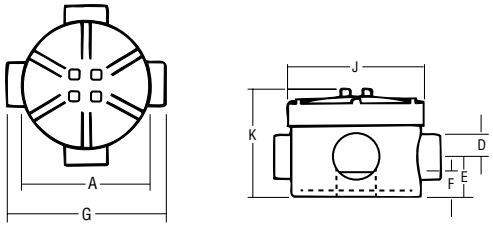
Dimensions

Technical specifications

GAFX



GAJU



GAFX - X style with flange and surface cover

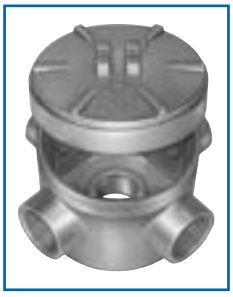
Type	Hub Size	Unit Quantity	Standard Package	Weight per 100 (lbs)
GAFX-1**	1/2"	1	4	135
GAFX-2**	3/4"	1	4	135

***O-ring available for NEMA 4 rating*

GAFX		Dimensions (inch)										
Cover Opening	Hub Size	A	B	C	D	E	F	G	H	L	M	CI
3 11/16	1/2"	4	2 1/4	2 15/16	5 9/16	11/16	4 1/2	1/4	1 3/8	9/16	5 3/16	20.0
3 11/16	3/4"	4	2 1/4	2 15/16	5 9/16	11/16	4 1/2	1/4	1 3/8	9/16	5 3/16	20.0
3 11/16	1"	4	2 1/4	2 15/16	5 9/16	13/16	4 3/4	5/16	1 5/8	9/16	5 1/2	19.0

**Note: All GAF units supplied as X configuration with proper number of explosion-proof close-up plugs to make C, T or L*

GAJU - style with canopy cover with cover and plugs



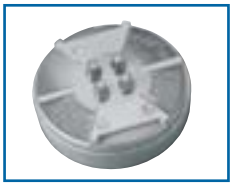
Type	Hub Size	Unit Quantity	Standard Package	Weight per 100 (lbs)
GAJU-2	3/4"	1	5	130
GAJU-3	1"	1	5	130
GAJU-6*	2"	1	1	273

**Made-to-order items. Contact sales for lead time and minimum quantities*

GAJU		Dimensions (inch)							
Cover Opening	Hub Size	A	B	E	F	G	J	K	CI
3 11/16	1/2"	4	13/16	1 1/2	31/32	5 3/16	4 3/16	4	23.8
3 11/16	3/4"	4	13/16	1 1/2	31/32	5 3/16	4 3/16	4	23.8
3 11/16	1"	4	13/16	1 1/2	31/32	5 3/16	4 3/16	4	23.8
3 29/32	1 1/4"	4 5/16	2 1/16	1 1/32	7/8	5 11/16	4 3/4	3 15/16	33.3
5 3/16	1 1/2"	5 3/4	1 7/16	2 1/16	1 1/2	6 5/8	6 7/16	6 3/16	82.8
5 3/16	2"	5 3/4	1 7/16	2 1/16	1 1/2	6 5/8	6 7/16	6 3/16	82.8

**All GA & GAF series boxes are supplied with GAS or GAJ style covers. To order these boxes with GAD dome cover, contact sales*

GAJ - canopy-style cover



Type	Cover Opening	Fit Boxes	Unit Quantity	Standard Package	Weight per 100 (lbs)
GAJ-123*	3 11/16"	1/2", 3/4", 1"	1	10	44
GAJ-4*	3 29/32"	1 1/4"	1	5	61
GAJ-56*	5 3/16"	1 1/2", 2"	1	5	78

**Made-to-order items. Contact sales for lead time and minimum quantities*

EXUN series
Aluminium internal hubs

Approvals / Characteristics

CLASS I DIV 1 DIV 2
CLASS II DIV 1
CLASS III DIV 1 DIV 2

Features

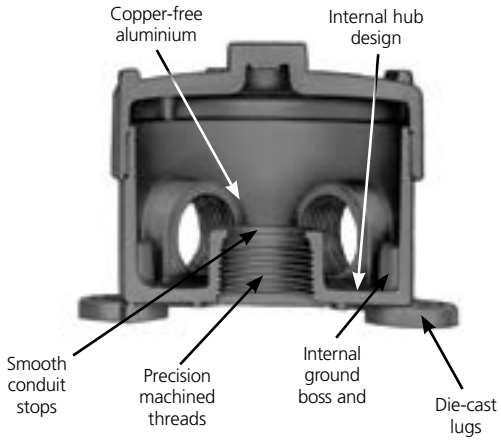
- Junction for branch conduits in hazardous locations
- Accessible wiring chamber provides a convenient location to maintain or change a system, pull conductors and make splices
- Internal hub design ideal for installation where space is limited
- Copper-free aluminium provides increased corrosion resistance
- Precision cast and machined surfaces permit safer wire pulling

Certification and standards

UL Listed and CSA Certified for hazardous locations:
Federal Spec W-C-586
Class I Div 1 & 2 CD
Class II Div 1 EFG
Class III Div 1 & 2
NEMA 3, 4, 7 CD, 9 EFG

Dimensions

Technical specifications



EXUN - 5-hole aluminium box

Type	Hub Size	Description	Unit Quantity	Standard Package	Weight per 100 (lbs)
EXUN-1	1/2"	(5) Outlets	1	5	140
EXUN-2	3/4"	with (3) Close-Up Plugs	1	5	140
EXUN-3	1"	with (3) Close-Up Plugs	1	5	140

EXUN - 4-hole aluminium box

Type	Hub Size	Description	Unit Quantity	Standard Package	Weight per 100 (lbs)
EXUN-11	1/2"	(4) Outlets	1	5	140
EXUN-22	3/4"	with (2) Close-Up Plugs	1	5	–

Size range
All sizes are listed in the tables on each page for each cat. no.

Materials
Die-cast aluminium alloy A360 with less than .004 copper content (copper-free)

Finish
Aluminium lacquer finish

GASS series
Aluminium internal hubs

Features

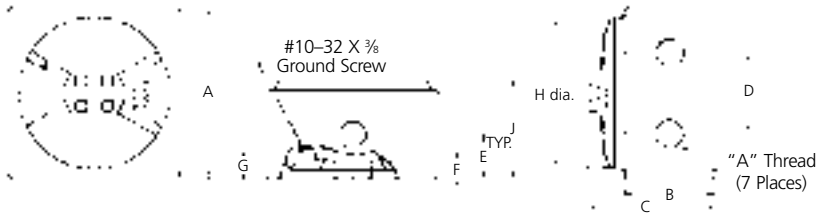
- Junction for branch conduits in hazardous locations
- Accessible wiring chamber provides a convenient location to maintain or change a system, pull conductors and make splices
- Copper-free aluminium provides increased corrosion resistance
- Extra-wide 33⁄4" opening provides more hand space for easy access to the wiring chamber
- Precision cast and machined surfaces permit safer wire pulling
- Large capacity 31-cu.-in. chamber provides more wiring space

Certification and standards

UL Listed and CSA Certified for hazardous locations:
NEC
Class I Div 1 & 2 CD
Class II Div 1 EFG
Class III Div 1 & 2
Raintight

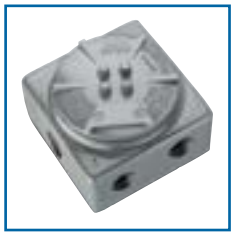
Technical specifications

Dimensions



Dimensions of all styles
when GASS cover is used

GASS - internal hubs with installed green ground screw, cover and plugs



Type	Hub Size	Unit Quantity	Standard Package	Weight per 100 (lbs)
GASS-1	1⁄2"	1	5	282
GASS-2	3⁄4"	1	5	278
GASS-3	2"	1	5	274

GASS		Dimensions (inch)									
Cover Opening	Hub Size	A	B	C	D	E	F	G	H	J	CI
4"	1⁄2"	4 5⁄8	2 3⁄8	3 3⁄8	2 3⁄16	2 3⁄16	1⁄2	3⁄4	4	2 5⁄8	31
4"	3⁄4"	4 5⁄8	2 3⁄8	3 3⁄8	2 3⁄16	2 3⁄16	1⁄2	3⁄4	4	2 5⁄8	31
4"	1"	4 5⁄8	2 3⁄8	3 3⁄8	2 3⁄16	2 3⁄16	1⁄2	3⁄4	4	2 5⁄8	31

GUP
Explosion-proof enclosure

Features

- Compact design
- O-ring gasket standard for raintight applications
- Supplied with conduit plugs
  - three plugs for GUP215-TB
  - seven plugs for GUP214-TB

Certification and standards

UL886 Listed and CSA Standard C22.2 Certified for hazardous locations:
Class I Div 1 & 2 CD
Class II Div 1 EFG
Class III Div 1 & 2
NEMA 3, 4, 7 CD, 9 EFG

Technical Specifications

Dimensions

GUP - explosion-proof enclosure

Type	Description	Standard Package qty
GUP214-TB	Junction box — 10 hubs (3/4" NPT): (2) in top, (2) in bottom, (1) in each side, (4) in the back	1
GUP215-TB	Junction box — (6) hubs (3/4" NPT): (2) in top, (2) in bottom, (1) in each side	1

LB and T style
Aluminium conduit body

Approvals / Characteristics

CLASS I DIV 1 DIV 2
CLASS II DIV 1
CLASS III DIV 1 DIV 2

Features

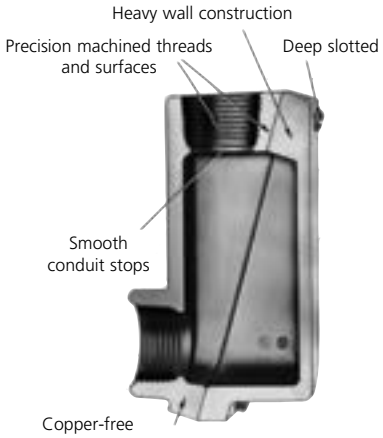
- Junction for branch conduits
- Accessible wiring chamber provides a convenient location to pull conductors and make splices
- 31 cu. in. capacity
- Copper-free* aluminium provides increased corrosion resistance
- Precision cast and machined surfaces permit safer wire pulling
- Precision NPT threaded hubs enable trouble-free field installation for rigid or IMC conduit

Certification and standards

UL Listed and CSA Certified for hazardous locations:
NEC
Class I Div 1 & 2 CD
Class II Div 1 EFG
Class III Div 1 & 2
NEMA 3, 4, 7 CD, 9 EFG

Dimensions

Technical specifications



LB style - aluminium conduit body

Type	Hub Size	Unit Quantity	Standard Package	Weight per 100 (lbs)
EXLB-1	1/2"	5	76	92
EXLB-2	3/4"	5	94	115
EXLB-3	1"	5	132	172

T style - aluminium conduit body

Type	Hub Size	Unit Quantity	Standard Package	Weight per 100 (lbs)
EXT-1	1/2"	5	25	92
EXT-2	3/4"	5	25	115
EXT-3	1"	5	5	172

Size range
All sizes are listed in the tables on each page for each cat. no.

Materials
Die-cast aluminium alloy A360 with less than .004% copper content (copper-free)

Finish
Aluminium lacquer finish

OE series
Iron conduit outlet bodies

Approvals / Characteristics

CLASS I DIV 1 DIV 2

CLASS II DIV 1

CLASS III DIV 1 DIV 2

Features

- Protect conductors in threaded rigid conduit
- Act as pulling and splice fittings
- Interconnect lengths of conduit
- Change direction of conduit
- Tapered threaded hubs for ground continuity
- Smooth integral hub bushings to protect conductor insulation when pulling
- Five different hub arrangements
- Accurately machined body with blind tapped screw holes

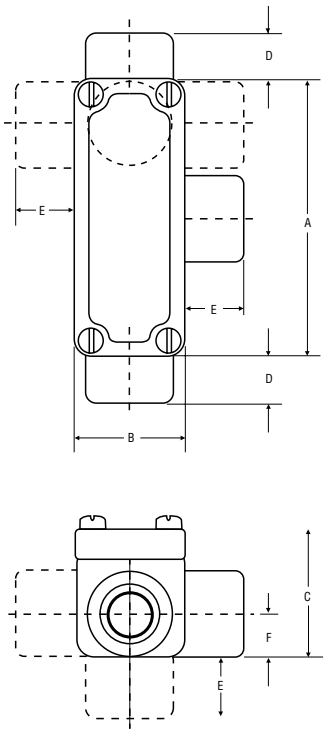
Certification and standards

UL Listed and CSA Certified for hazardous locations:

Class I Div 1 & 2 CD
Class II Div 1 EFG
Class III Div 1 & 2
NEMA 3, 4, 7 CD, 9 EFG

Dimensions

Technical specifications

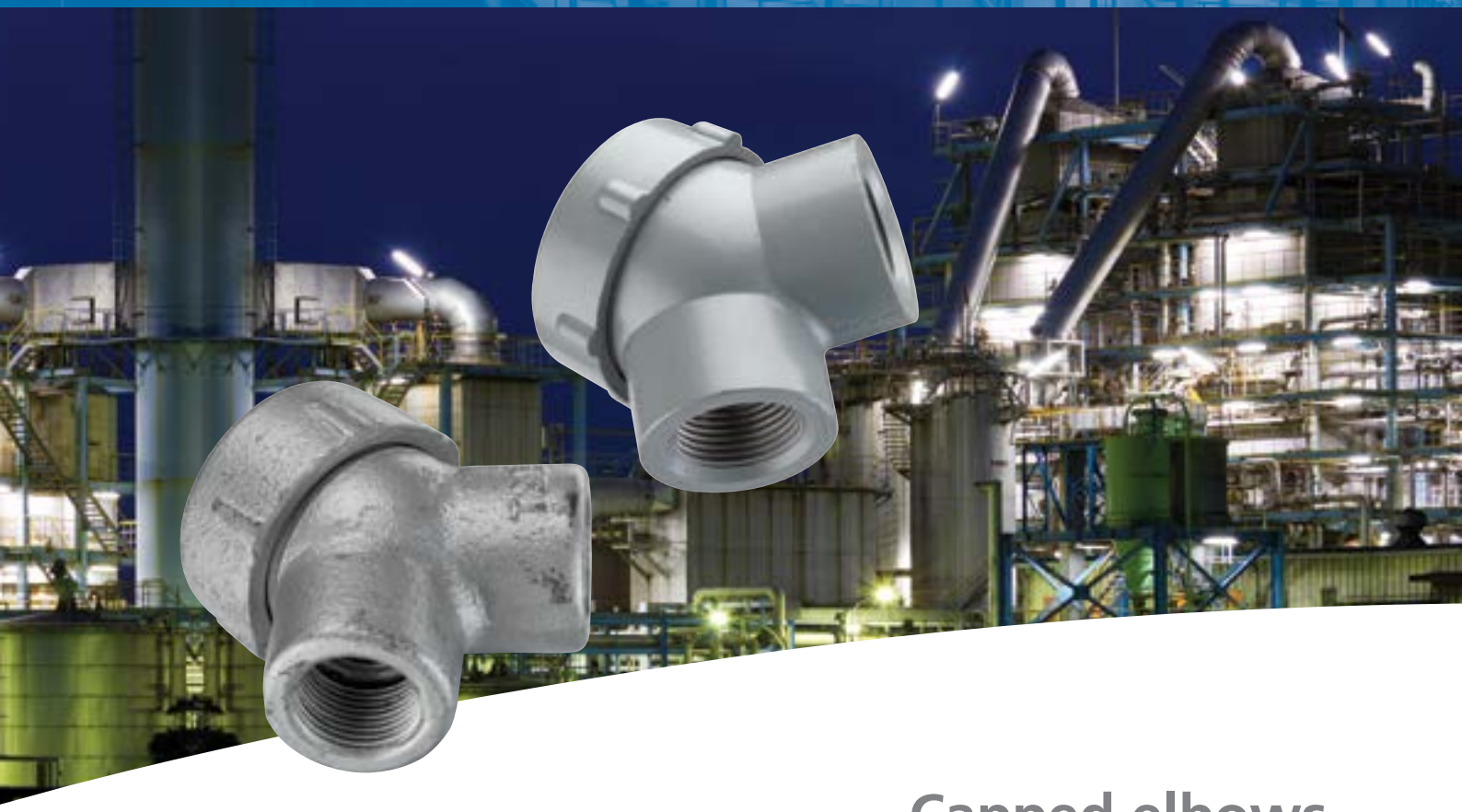


Type	Hub Size	Dimensions (Inches) A	B	C	D	E	F
OEC1-TB	1/2"	4.06	1.62	1.90	0.69	0.88	0.63
OEC2-TB	3/4"	4.35	1.88	2.19	0.69	0.88	0.76
OET1-TB	1/2"	4.06	1.62	1.90	0.69	0.88	0.63
OET2-TB	3/4"	4.35	1.88	2.19	0.69	0.88	0.76
OELL1-TB	1/2"	4.06	1.62	1.90	0.69	0.88	0.63
OELL2-TB	3/4"	4.35	1.88	2.19	0.69	0.88	0.76
OELR1-TB	1/2"	4.06	1.62	1.90	0.69	0.88	0.63
OELR2-TB	3/4"	4.35	1.88	2.19	0.69	0.88	0.76
OELB1-TB	1/2"	4.06	1.62	1.90	0.69	0.88	0.63
OELB2-TB	3/4"	4.35	1.88	2.19	0.69	0.88	0.76

Size range
All sizes are listed in the tables on each page for each cat. no.

Materials
Bodies: Grade 60-45-10 ductile iron (Complies with ASTM standard A536)

Finish
Electrogalvanized and aluminium acrylic paint



Capped elbows

Iron and aluminium - female to female

Approvals / Characteristics

CLASS I DIV 1 DIV 2

CLASS II DIV 1

CLASS III DIV 1 DIV 2

Features

- Make 90° bends in conduit systems where space is limited
- Act as pull outlets
- Provide access to conductors for maintenance and future system changes
- Maximum volume for bends within a compact overall size
- Screw on cover for ease of installation and removal
- Cover opening on an angle, permitting conductors to be pulled straight through either hub
- Tapered threaded hubs and integral bushing for rigid threaded conduit

Certification and standards

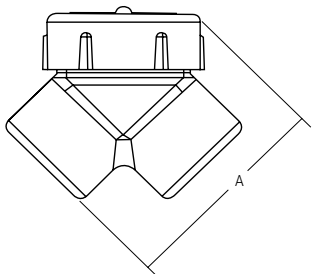
UL Listed and CSA Certified for hazardous locations:

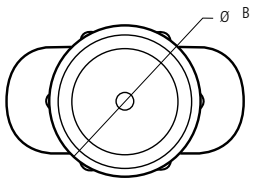
Class I Div 1 & 2 CD
Class II Div 1 EFG
Class III Div 1 & 2
NEMA 3, 4, 7 CD, 9 EFG

Iron and aluminium capped elbows - female to female

Dimensions

Technical specifications





LBY - capped iron elbow - female to female

		Dimensions (in)		Throat Dimensions (in)	
Type	Hub Size	A	B	min.	max.
LBY15-TB	1/2"	2 9/16	2	0.570	0.610
LBY25-TB	3/4"	2 13/16	2 1/4	0.755	0.810
LBY35-TB	1"	3 3/32	2 1/2	0.955	1.035
LBY45-TB	1 1/4"	3 3/4	2 15/16	1.260	1.360
LBY55-TB	1 1/2"	4 1/4	3 3/8	1.470	1.590
LBY65-TB	2"	5 1/2	4	1.880	2.047

GYF - capped aluminium elbow - female to female

Type	Hub Size	Unit Quantity	Standard Package	Weight per 100 (lbs)
GYF-1	1/2"	10	50	23
GYF-2	3/4"	5	25	40
GYF-3	1"	5	25	60
GYF-4 *	1 1/4"	2	10	95
GYF-5	1 1/2"	2	10	95

**Made-to-order items. Consult factory for lead time and minimum quantities.make C, T or L*

Size range
All sizes are listed in the tables on each page for each cat. no.

Materials
LBY ductile Iron
GYF copper free aluminium

Reducers, plugs and adapters

Approvals / Characteristics

CLASS I DIV 1 DIV 2

CLASS II DIV 1

CLASS III DIV 1 DIV 2

Features

- RE and REC reducers are used in threaded heavy wall conduit systems
- RE reduces conduit hubs to a smaller size
- REC connects two different sizes of conduit together or is used to replace a coupling and reducer in an installation
- PLG plugs are used for closing threaded conduit hubs
- All hubs have NPT threads with a minimum of five full threads and integral bushing for preventing damage to wires

Certification and standards

UL Listed and CSA Certified for hazardous locations:

UL: 886
CSA: C22.2 No.30
Class I, Div. 1 & 2, Groups A, B, C, D
Class II, Div. 1, Groups E, F, G
Class III, Div. 1 & 2

Technical specifications

Reducing bushings

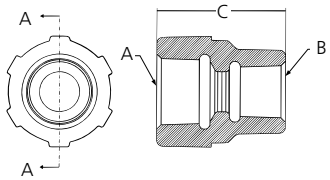
Type	A Male (NPT)	B Female (NPT)
RE21-TB	3/4"	1/2"
RE31-TB	1"	1/2"
RE32-TB	1"	3/4"
RE41-TB	1 1/4"	1/2"
RE42-TB	1 1/4"	3/4"
RE43-TB	1 1/4"	1"
RE51-TB	1 1/2"	1/2"
RE52-TB	1 1/2"	3/4"
RE53-TB	1 1/2"	1"
RE54-TB	1 1/2"	1 1/4"
RE61-TB	2"	1/2"
RE62-TB	2"	3/4"
RE63-TB	2"	1"
RE64-TB	2"	1 1/4"
RE65-TB	2"	1 1/2"

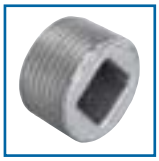
Type	A Male (NPT)	B Female (NPT)
RE73-TB	2 1/2"	1"
RE74-TB	2 1/2"	1 1/4"
RE75-TB	2 1/2"	1 1/2"
RE76-TB	2 1/2"	2"
RE83-TB	3"	1"
RE84-TB	3"	1 1/4"
RE85-TB	3"	1 1/2"
RE86-TB	3"	2"
RE87-TB	3"	2 1/2"
RE96-TB	3 1/2"	2"
RE97-TB	3 1/2"	2 1/2"
RE98-TB	3 1/2"	3"
RE106-TB	4"	2"
RE107-TB	4"	2 1/2"
RE108-TB	4"	3"

REC series reducers

Funnel-shaped reducers for hazardous and non-hazardous locations

Type	A (NPT)	B (NPT)	C
REC21-TB	3/4	1/2 -14	1 7/8
REC31-TB	1	1/2 -14	2
REC32-TB	1	1/2 -14	2





Recessed plugs

With flush head for hazardous and non-hazardous locations

Type	A Male (NPT)
PLG1-TB	1/2"
PLG2-TB	3/4"
PLG3-TB	1"
PLG4-TB	1 1/4"
PLG5-TB	1 1/2"
PLG6-TB	2"
PLG7-TB	2 1/2"
PLG8-TB	3"
PLG9-TB	3 1/2"
PLG10-TB	4"

Aluminium recessed plugs

With flush head for hazardous and non-hazardous locations

Type	A Male (NPT)
XPLG-1*	1/2"
XPLG-2*	3/4"
XPLG-3*	1"
XPLG-4**	1 1/4"
XPLG-5**	1 1/2"
XPLG-6**	2"

Made-to-order items. Consult factory for lead time and minimum quantities.
** Not UL Listed and not approved for use in hazardous locations.*
*** UL Listed E 34438.*

UN series
Three-piece unions

Approvals / Characteristics

CLASS I DIV 1 DIV 2
CLASS II DIV 1
CLASS III

Features

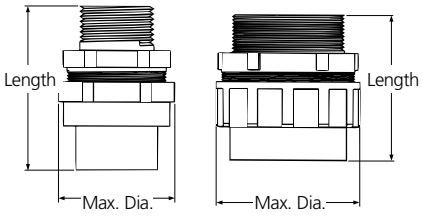
- **UNY - to connect conduit to a conduit fitting, junction box or device enclosure**
- **UNF - to connect conduit to conduit, or to provide a means for future modification of the conduit system**

Certification and standards

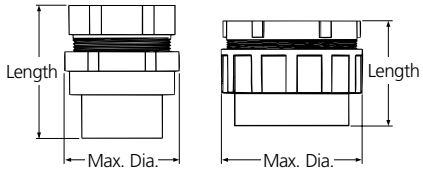
UL Listed and CSA Certified for hazardous locations:
NEC®/CEC
Class I, Division 1 & 2, Groups C, D
Class II, Division 1, Groups E, F, G
Class III

Dimensions

Technical specifications



UNY



UNF

UNY - male unions - for hazardous and non-hazardous locations

Type	Trade Size	Overall Length/inches	Overall Dia./inches
UNY105-TB	1/2"	2 25/64	1 1/2
UNY205-TB	3/4"	2 7/16	1 13/16
UNY305-TB	1"	2 3/4	2
UNY405-TB	1 1/4"	3 1/16	2 3/4
UNY505-TB	1 1/2"	3 5/8	3 1/16
UNY605-TB	2"	3 1/2	3 13/16
UNY705-TB	2 1/2"	4 13/16	4 5/16
UNY805-TB	3"	5 11/32	5 1/16
UNY905-TB	3 1/2"	5 1/2	5 11/16
UNY1005-TB	4"	5 5/8	6 3/16

UNF - female unions - for hazardous and non-hazardous locations

Type	Trade Size	Overall Length/inches	Overall Dia./inches
UNF105-TB†	1/2"	1 7/8	1 1/2
UNF205-TB†	3/4"	2 1/8	1 13/16
UNF305-TB†	1"	2 5/32	2
UNF405-TB††	1 1/4"	2 1/4	2 3/4
UNF505-TB††	1 1/2"	2 3/4	3 1/16
UNF605-TB†††	2"	2 1/2	3 13/16
UNF705-TB†††	2 1/2"	3 1/2	4 5/16
UNF805-TB†††	3"	4	5 1/16
UNF905-TB†††	3 1/2"	4 5/32	5 11/16
UNF1005-TB†††	4"	4 1/4	6 3/16

† *Steel*
†† *Forged steel*
††† *Malleable iron*

Size range
All sizes are listed in the tables on each page for each cat. no.

Materials
Steel, Iron alloy, malleable iron

Finish
Electrogalvanized with chromate treatment and aluminium acrylic paint

EX series
Aluminium three-piece unions

Approvals / Characteristics

CLASS I DIV 1 DIV 2
CLASS II DIV 1
CLASS III DIV 1 DIV 2

Features

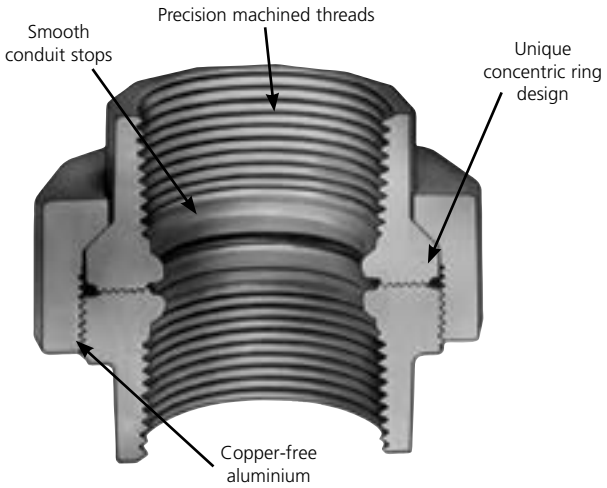
- Used as connecting elements between enclosures, fittings or boxes that permit future changes to the system in both hazardous and non-hazardous areas
- Copper-free* aluminium provides increased corrosion resistance
- Precision cast and machined surfaces permit safer wire pulling
- Precision NPT threaded hubs allow trouble-free field installation for rigid or IMC conduit
- Clear UL, CSA and cubic content markings speed approval by inspectors
- Unique concentric ring design ensures critical flame path control

Certification and standards

UL Listed and CSA Certified for hazardous locations:
Federal Spec W-C-586
Class I, Div. 1 & 2, Groups C, D
Class II, Div. 1, Groups E, F, G
Class III, Div. 1 & 2
NEMA 3, 4, 7 CD, 9 EFG

Dimensions

Technical specifications



EXFU - female-to-female unions

Type	Hub Size	Unit Quantity	Standard Package	Throat Dim. Weight per 100 (lbs)
EXFU-1	1/2"	5	25	24
EXFU-2	3/4"	5	25	33
EXFU-3	1"	5	25	42
EXFU-4	1 1/4"	5	25	53
EXFU-5	1 1/2"	5	25	68
EXFU-6*	2"	2	10	130
EXFU-8*	3"	1	5	310
EXFU-9*	3 1/2"	1	5	340
EXFU-10*	4"	1	1	374

**Made-to-order items. Consult factory for lead time and minimum quantities.make C, T or L*

EXMU - male-to-female unions

Type	Hub Size	Unit Quantity	Standard Package	Weight per 100 (lbs)
EXMU-1	1/2"	5	25	24
EXMU-2	3/4"	5	25	35
EXMU-3	1"	5	25	45

**Made-to-order items. Consult factory for lead time and minimum quantities.make C, T or L*

Size range
All sizes are listed in the tables on each page for each cat. no.

Materials
Die-cast aluminium alloy A360 with less than .004 copper content (copper-free)
EXMU nipples are galvanized steel

Finish
Aluminium lacquer finish

EYD and ECD series
Drain seals and breathers

Approvals / Characteristics

CLASS I DIV 1 DIV 2
CLASS II DIV 1
CLASS III DIV 1 DIV 2

Features

- Drain to provide continuous, automatic drainage of condensate
- Large openings with threaded closures to provide easy access to conduit hubs for making dams
- Integral bushings to protect conductor insulation from damage
- Tapered-tapped hubs to ensure ground continuity standard materials

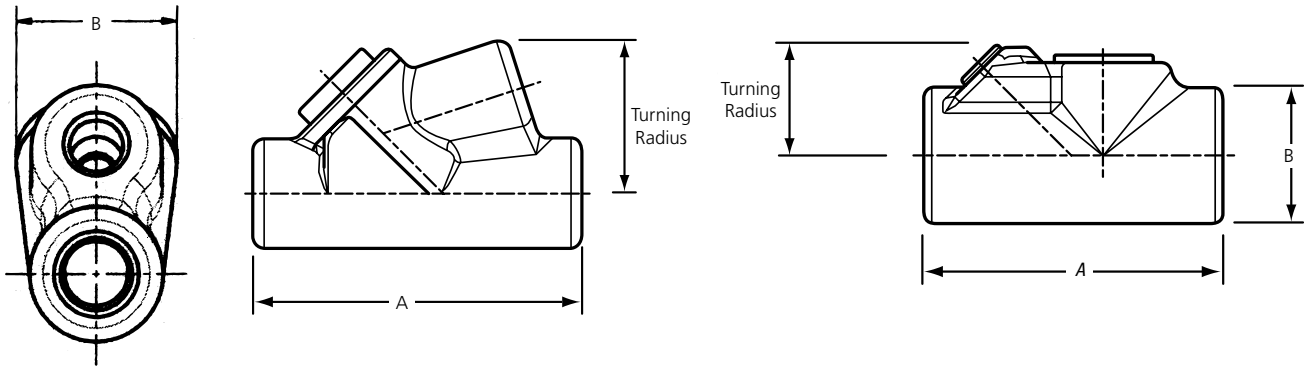
Certification and standards

UL Listed and CSA Certified for hazardous locations:

EYD11 — 31-TB
Class I, Division 1 & 2, Groups A, B, C, D; Class II, Division 1, Groups E, F, G; Class III
EYD41 — 101-TB
Class I, Division 1 & 2, Groups C, D; Class II, Division 1, Groups E, F, G
Class II, Division 2, Groups F, G
Class III
UL Standard: 886
CSA Standard: C22.2

Dimensions

Technical specifications



EYD ½" – 1"

EYD - drain seals

Type	Hub Size	Dimensions inches A	B	Turning Radius
EYD11-TB	1/2"	3.81	1.50	1.75
EYD21-TB	3/4"	4.08	1.75	1.98
EYD31-TB	1"	4.85	2.19	2.19
EYD41-TB	1 1/4"	5.00	2.25	1.80
EYD51-TB	1 1/2"	5.44	2.44	2.00
EYD61-TB	2"	6.25	3.00	2.32
EYD71-TB	2 1/2"	7.50	3.50	2.69
EYD81-TB	3"	8.50	4.25	3.15
EYD91-TB	3 1/2"	9.19	4.75	3.38
EYD101-TB	4"	9.75	5.25	3.64

ECD - drain breathers

Type	Hub Size	Dimensions inches B
ECD15	1/2"	.975
ECD384	3/8"	.407
ECD284	1/4"	.327

Size range
All sizes are listed in the tables on each page for each cat. no.

Materials
Bodies and drain covers - gray iron alloy and/or ductile iron
Closure for drain - copper-free aluminium or ductile iron
Small closure plug - gray iron alloy and/or steel
Drain — stainless steel
Removable nipples - steel

Finish
Gray iron alloy and ductile iron - electrogalvanized and aluminium acrylic paint
Copper-free aluminium - natural
Stainless steel - natural
Steel - electrogalvanized

EYS series
Sealing fittings

Approvals / Characteristics

CLASS I DIV 1 DIV 2
CLASS II DIV 1
CLASS III DIV 1 DIV 2

Features

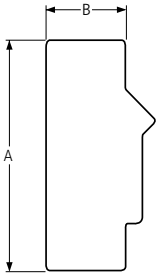
- All hubs have a minimum of five full threads, integral bushings to protect conductor insulation from damage and large access openings for easier packing of sealing medium
- Seals are approved to be used with Crouse-Hinds® sealing compound and fiber standard materials

Certification and standards

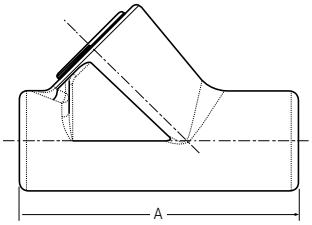
UL Listed and CSA Certified for hazardous locations:
UL886
CSA: C22.2 No. 30
EYS seals are approved to be used with
Crouse-Hinds® Chico® A compound and Chico® X fiber
EYS1-3TB: Cl. I, Div. 1 & 2, Groups A, B, C, D
EYS4-5TB: Cl. I, Div. 1 & 2, Groups C, D
EYS11-31TB: Cl. I, Div. 1 & 2, Groups A, B, C, D
Class II, Div. 1, Groups E, F, G
Class III
EYS41-101TB: Cl. I, Div. 1 & 2, Groups C, D
Class II, Div. 1, Groups E, F, G
Class III
NEMA 3, 4, 7 CD, 9 EFG

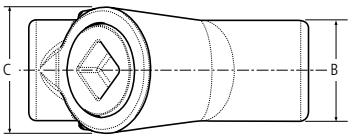
Dimensions

Technical specifications



EYS11-TB – EYS101-TB





EYS1-TB – EYS5-TB

Vertical only

		Dimensions inches			
Type	**Hub Size**	**A**	**B**	**C**	**Turning Radius**
EYS1-TB	1/2"	3.31	1.25	1.50	1.66"
EYS2-TB	3/4"	3.65	1.50	1.75	1.96"
EYS3-TB	1"	4.25	1.75	2.19	2.40"
EYS4-TB	1 1/4"	5.00	2.25	2.45	3.11"
EYS5-TB	1 1/2"	5.69	2.45	3.00	3.62"

Horizontal/vertical

		Dimensions inches			
Type	**Hub Size**	**A**	**B**	**C**	**Turning Radius**
EYS11-TB	1/2"	3 5/8	1 1/4	–	1 3/32"
EYS21-TB	3/4"	3 21/32	1 1/2	–	1 1/4"
EYS31-TB	1"	4 1/4	1 3/4	–	1 19/32"
EYS41-TB	1 1/4"	5	2 1/4	–	1 13/16"
EYS51-TB	1 1/2"	5 7/16	2 7/16	–	2"
EYS61-TB	2"	6 1/4	3	–	2 5/16"
EYS71-TB	2 1/2"	7 1/2	3 1/2	–	2 9/16"
EYS81-TB	3"	8 1/2	4 1/4	–	3 3/32"
EYS91-TB	3 1/2"	9 3/16	4 3/4	–	3 3/8"
EYS101-TB	4"	9 3/4	5 1/4	–	3 17/32"

Crouse-Hinds® and Chico® are trademarks of Cooper Industries, Inc.

Size range
All sizes are listed in the tables on each page for each cat. no.

Materials
Bodies: Ductile Iron
Plugs: Gray Iron
Nipples: Steel, supplied with EYS fittings

Finish
Bodies: Zinc-plated with aluminium acrylic paint
Plugs: Zinc-plated with aluminium acrylic paint
Nipples: Zinc-plated

EYVF and EVHF series
Sealing fittings

Approvals / Characteristics

CLASS I DIV 1 DIV 2
CLASS II DIV 1
CLASS III DIV 1 DIV 2

Features

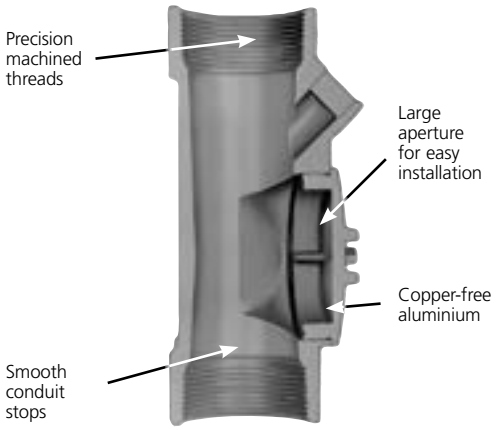
- Limits flames and/or explosions to area within electrical system where they originate
- Limits pressure piling
- Copper-free* aluminium provides increased corrosion resistance
- Precision cast and machined surfaces permit safer wire pulling
- Large opening provides maximum working room for creating dam and seal pouring to speed up installation
- Compact design permits close construction of parallel conduit runs

Certification and standards

UL Listed and CSA Certified for hazardous locations:
Federal Spec W-C-586
Class I, Div. 1 & 2, Groups C, D
Class II, Div. 1, Groups E, F, G
Class III, Div. 1 & 2
NEMA 3, 4, 7 CD, 9 EFG

Dimensions

Technical specifications



EYVF - vertical sealing fittings

Type	Hub Size	Unit Quantity	Standard Package	Throat Dim. Weight per 100 (lbs)
EYVF-1*	1/2"	5	25	25
EYVF-2*	3/4"	5	25	54
EYVF-3*	1"	5	25	100
EYVF-11	1/2"	10	50	35
EYVF-22	3/4"	10	50	40
EYVF-33	1"	4	20	60

**Packaged with an adequate amount of sealing compound and plugs installed.*

EVHF - vertical/horizontal sealing fittings

Type	Hub Size	Unit Quantity	Standard Package	Weight per 100 (lbs)
EVHF-1	1/2"	10	50	41
EVHF-2	3/4"	5	25	50
EVHF-3	1"	5	25	60
EVHF-4	1 1/4"	4	20	70
EVHF-5	1 1/2"	1	5	60
EVHF-6	2"	1	1	125
EVHF-7*	2 1/2"	1	1	150
EVHF-8*	3 1/2"	1	1	300

**Made-to-order items. Consult factory for lead time and minimum quantities*

Size range
All sizes are listed in the tables on each page for each cat. no.

Materials
Sealing fittings: Die-cast aluminium alloy A360 with less than .004 copper content (copper-free)
Sealing cement
Fiber: Flame-retardant Kaowool type A fiber

Finish
Aluminium lacquer finish

Sealing cement and fiber
for T&B® sealing fittings

Approvals / Characteristics

CLASS I DIV 1 DIV 2

CLASS II DIV 1

CLAS III

Features

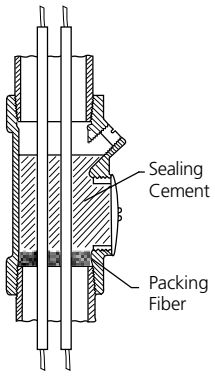
- Can be used on T&B EYV, EVH series fittings only
- T&B Red•Dot® sealing cement is used for making seals in sealing fittings. The insulation in the conductors sealed in the cement may be approved thermoplastic or rubber, with or without lead covering. The sealing cement should not be used for insulating
- T&B Red•Dot® sealing cement is not affected by gasoline, alcohol, acetone, ether, naptha, petroleum, benzol or lacquer solvent.

Certification and standards

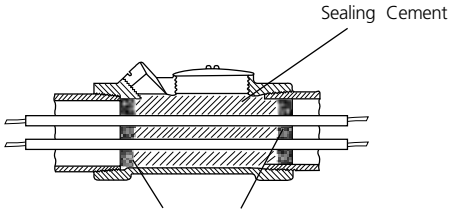
UL Listed and CSA Certified for hazardous locations:
Class I, Div. 1 & 2, Groups C, D
Class II, Div. 1, Groups E, F, G
Class III, Div. 1 & 2
NEMA 3, 4, 7 CD, 9 EFG

Dimensions

Technical specifications



Vertical Installation for EYVF or EVHF Fittings



Packing Fiber Horizontal EVF Installation

EXSC - sealing cement

Type	Quantity	Volume Cubic inches	Std. Pkg.	Weight per 100 (lbs
EXSC-2	3.2 oz	2.75	25	20
EXSC-8	13 oz	11.50	15	81
EXSC-16	1 lb	23.00	10	163

EXPF - packing fiber

Type	Quantity	Std. Pkg.	Weight per 100 (lbs
EXPF-16	1 lb	1	112

Approximate amount of cement and fiber required per hub

Type	Hub Size	Cement Quantity	Fiber Quantity
EYVF-11	1/2"	2 oz	1/32 oz
EYVF-22	3/4"	3 oz	1/16 oz
EYVF-33	1"	4 oz	1/8 oz
EVHF-1	1/2"	2 oz	1/32 oz
EVHF-2	3/4"	2 oz	1/32 oz
EVHF-3	1"	4 oz	1/4 oz
EVHF-4	1 1/4"	4 oz	1/4 oz
EVHF-5	1 1/2"	6 oz	1/2 oz
EVHF-6	2"	12 oz	1 oz
EVHF-7	2 1/2"	15 oz	1 1/2 oz
EVHF-8	3"	40 oz	2 oz
EVHF-9	3 1/2"	45 oz	3 oz
EVHF-10	4"	50 oz	4 oz

Thread convertors, stopping plugs and accessories

Thread convertors, stopping plugs and accessories

Thread convertors

Enlargers, reducers and convertors

Approvals / Characteristics

Exe Exd Extb

G IIC D IIIC

CLASS I DIV 1 CLASS II DIV 1

GROUP II

ZONE 1 ZONE 2 ZONE 21 ZONE 22

IP 66

Features

- **Thread Convertors provide a method of matching threadforms on hazardous location equipment whilst ensuring the integrity and approval of the installation is maintained**

Certification & Standards

Certification Standard:
ATEX: Baseefa07 ATEX 0247X,
IECEx: IECEx BAS07.0090X
GOST R: POCC GB.□□05.B03850
INMETRO: TÜV 11.0339X
Ex d IIC Gb
Ex e IIC Gb
Ex tb IIIC Db
Class I Div1 ABCD, Class II Div1 EFG
(does not include M16 & 3/8"NPT or unplated brass products)
Approved to UL 1203
Approved to CSA C22.2 No.60079-04
Approved to C22.2 No.60079-1

Technical Specification

Male External Thread	Metric Female Internal Thread							
	M16	M20	M25	M32	M40	M50	M63	M75
M16		EX/M16-M20/E	EX/M16-M25/E					
M20	EX/M20-M16/R		EX/M20-M25/E	EX/M20-M32/E				
M25	EX/M25-M16/R	EX/M25-M20/R		EX/M25-M32/E	EX/M25-M40/E			
M32	EX/M32-M16/R	EX/M32-M20/R	EX/M32-M25/R		EX/M32-M40/E	EX/M32-M50/E		
M40	EX/M40-M16/R	EX/M40-M20/R	EX/M40-M25/R	EX/M40-M32/R		EX/M40-M50/E	EX/M40-M63/E	
M50	EX/M50-M16/R	EX/M50-M20/R	EX/M50-M25/R	EX/M50-M32/R	EX/M50-M40/R		EX/M50-M63/E	EX/M50-M75/E
M63	EX/M63-M16/R	EX/M63-M20/R	EX/M63-M25/R	EX/M63-M32/R	EX/M63-M40/R	EX/M63-M50/R		EX/M63-M75/E
M75	EX/M75-M16/R	EX/M75-M20/R	EX/M75-M25/R	EX/M75-M32/R	EX/M75-M40/R	EX/M75-M50/R	EX/M75-M63/R	
NPT 3/8	EX/038-M16/TC							
NPT 1/2	EX/050-M16/TC	EX/050-M20/TC	EX/050-M25/TC					
NPT 3/4	EX/075-M16/TC	EX/075-M20/TC	EX/075-M25/TC	EX/075-M32/TC				
NPT 1	EX/100-M16/TC	EX/100-M20/TC	EX/100-M25/TC	EX/100-M32/TC	EX/100-M40/TC			
NPT 1 1/4	EX/125-M16/TC	EX/125-M20/TC	EX/125-M25/TC	EX/125-M32/TC	EX/125-M40/TC	EX/125-M50/TC		
NPT 1 1/2	EX/150-M16/TC	EX/150-M20/TC	EX/150-M25/TC	EX/150-M32/TC	EX/150-M40/TC	EX/150-M50/TC	EX/150-M63/TC	
NPT 2	EX/200-M16/TC	EX/200-M20/TC	EX/200-M25/TC	EX/200-M32/TC	EX/200-M40/TC	EX/200-M50/TC	EX/200-M63/TC	
NPT 2 1/2	EX/250-M16/TC	EX/250-M20/TC	EX/250-M25/TC	EX/250-M32/TC	EX/250-M40/TC	EX/250-M50/TC		
NPT 3	EX/300-M16/TC	EX/300-M20/TC	EX/300-M25/TC	EX/300-M32/TC	EX/300-M40/TC	EX/300-M50/TC		EX/300-M75/TC

** For nickel plated brass version, add N to the reference, e.g. EXN/M20-M16/R*
*** For stainless steel 316 version, add S to the reference, e.g. EXS/M20-M16/R*
N.B. PG thread convertors available upon request.

Male External Thread	NPT Female Internal Thread							
	NPT 1/2	NPT 3/4	NPT 1	NPT 1 1/4	NPT 1 1/2	NPT 2	NPT 2 1/2	NPT 3
M16	EX/M16-050/TC							
M20	EX/M20-050/TC	EX/M20-075/TC						
M25	EX/M25-050/TC	EX/M25-075/TC	EX/M25-100/TC					
M32	EX/M32-050/TC	EX/M32-075/TC	EX/M32-100/TC	EX/M32-125/TC				
M40	EX/M40-050/TC	EX/M40-075/TC	EX/M40-100/TC	EX/M40-125/TC	EX/M40-150/TC			
M50	EX/M50-050/TC	EX/M50-075/TC	EX/M50-100/TC	EX/M50-125/TC	EX/M50-150/TC	EX/M50-200/TC		
M63	EX/M63-050/TC	EX/M63-075/TC	EX/M63-100/TC	EX/M63-125/TC	EX/M63-150/TC	EX/M63-200/TC		
M75	EX/M75-050/TC	EX/M75-075/TC	EX/M75-100/TC	EX/M75-125/TC	EX/M75-150/TC	EX/M75-200/TC		
NPT 1/2		EX/050-075/E						
NPT 3/4	EX/075-050/R		EX/075-100/E					
NPT 1	EX/100-050/R	EX/100-075/R		EX/100-125/E				
NPT 1 1/4	EX/125-050/R	EX/125-075/R	EX/125-100/R		EX/125-150/E			
NPT 1 1/2	EX/150-050/R	EX/150-075/R	EX/150-100/R	EX/150-125/R		EX/150-200/E		
NPT 2	EX/200-050/R	EX/200-075/R	EX/200-100/R	EX/200-125/R	X/200-150/R			
NPT 2 1/2	EX/250-050/R	EX/250-075/R	EX/250-100/R	EX/250-125/R	EX/250-150/R	EX/250-200/R		EX/250-300/E
NPT 3	EX/300-050/R	EX/300-075/R	EX/300-100/R	EX/300-125/R	EX/300-150/R	EX/300-200/R	EX/300-250/R	

** For nickel plated brass version, add N to the reference, e.g. EXN/M20-M16/R*
*** For stainless steel 316 version, add S to the reference, e.g. EXS/M20-M16/R*
N.B. PG thread convertors available upon request.

Standard Ex d stopping plug and tamperproof Ex d stopping plug

Approvals / Characteristics

Ex IEC IECEx c ETL US LISTED Intertek PG INMETRO

Exd

G IIC

GROUP I | GROUP II

CLASS I | DIV 1 | CLASS II | DIV 1

ZONE 1 | ZONE 2

IP 66

Features

- For use in potentially explosive environments
- Manufactured from either brass, nickel plated brass or stainless steel

Certification & Standards

EC TYPE Examination Certificate:
ATEX: Baseefa 08 ATEX 6324
IECEx: IECEx BAS08.0109X
GOST R: РОСС GB.ГБ05.B03850
INMETRO: TÜV 11.0093
UL 1203 (Nickel Plated Brass and Stainless Steel only)
Ex d I Mb
Ex d IIC Gb
Class I Div 1 ABCD
Class II Div 1 EFG
Temperature: -60°C to +130°C

Standard Exd stopping plug

Technical Specifications

Nickel Plated Type - Metric	Thread Size Metric (mm)
EXN/M16/SP	16
EXN/M20/SP	20
EXN/M25/SP	25
EXN/M32/SP	32
EXN/M40/SP	40
EXN/M50/SP	50
EXN/M63/SP	63

Brass Type - Metric	Thread Size Metric (mm)
EX/M16/SP	16
EX/M20/SP	20
EX/M25/SP	25
EX/M32/SP	32
EX/M40/SP	40
EX/M50/SP	50
EX/M63/SP	63

Stainless Steel Type - Metric	Thread Size Metric (mm)
EXS/M16/SP	16
EXS/M20/SP	20
EXS/M25/SP	25
EXS/M32/SP	32
EXS/M40/SP	40
EXS/M50/SP	50
EXS/M63/SP	63

Nickel Plated Type - NPT	Thread Size NPT (inch)
EXN/038/SP	3/8
EXN/050/SP	1/2
EXN/075/SP	3/4
EXN/100/SP	1
EXN/125/SP	1 1/4
EXN/150/SP	1 1/2
EXN/200/SP	2

Brass Type - NPT	Thread Size NPT (inch)
EX/038/SP	3/8
EX/050/SP	1/2
EX/075/SP	3/4
EX/100/SP	1
EX/125/SP	1 1/4
EX/150/SP	1 1/2
EX/200/SP	2

Stainless Steel Type - NPT	Thread Size NPT (inch)
EXS/038/SP	3/8
EXS/050/SP	1/2
EXS/075/SP	3/4
EXS/100/SP	1
EXS/125/SP	1 1/4
EXS/150/SP	1 1/2
EXS/200/SP	2

Tamperproof Exd stopping plug

Nickel Plated Type - Metric	Thread Size Metric (mm)
EXN/M16/TSP	16
EXN/M20/TSP	20
EXN/M25/TSP	25
EXN/M32/TSP	32
EXN/M40/TSP	40
EXN/M50/TSP	50
EXN/M63/TSP	63

Brass Type - Metric	Thread Size Metric (mm)
EX/M16/TSP	16
EX/M20/TSP	20
EX/M25/TSP	25
EX/M32/TSP	32
EX/M40/TSP	40
EX/M50/TSP	50
EX/M63/TSP	63

Stainless Steel Type - Metric	Thread Size Metric (mm)
EXS/M16/TSP	16
EXS/M20/TSP	20
EXS/M25/TSP	25
EXS/M32/TSP	32
EXS/M40/TSP	40
EXS/M50/TSP	50
EXS/M63/TSP	63

Nickel Plated Type - NPT	Thread Size NPT (inch)
EXN/038/TSP	3/8
EXN/050/TSP	1/2
EXN/075/TSP	3/4
EXN/100/TSP	1
EXN/125/TSP	1 1/4
EXN/150/TSP	1 1/2
EXN/200/TSP	2

Brass Type - NPT	Thread Size NPT (inch)
EX/038/TSP	3/8
EX/050/TSP	1/2
EX/075/TSP	3/4
EX/100/TSP	1
EX/125/TSP	1 1/4
EX/150/TSP	1 1/2
EX/200/TSP	2

Stainless Steel Type - NPT	Thread Size NPT (inch)
EXS/038/TSP	3/8
EXS/050/TSP	1/2
EXS/075/TSP	3/4
EXS/100/TSP	1
EXS/125/TSP	1 1/4
EXS/150/TSP	1 1/2
EXS/200/TSP	2

Hex head Ex e stopping plug / dome head Ex e and nylon stopping plug

Approvals / Characteristics

Features

- For use in potentially explosive environments
- Hex head and dome head stopping plugs manufactured from either brass, nickel plated brass or stainless steel
- Nylon stopping plug manufactured in nylon only

Certification & Standards

Hex head Exe stopping plug and dome head stopping plug
EC TYPE Examination Certificate:
ATEX: Baseefa 08 ATEX 0325X
IECEx: IECEx BAS08.0108X
GOST R: РОСС GB.ГБ05.B03850
INMETRO: TÜV 11.0090
UL 1203 (Nickel plated brass and stainless steel only)
Ex e I Mb
Ex e IIC Gb
Ex tb IIIC Db
Temperature: -60°C to +80°C

Hex head Exe stopping plug

Technical Specifications

Nickel Plated Type - Metric	Thread Size Metric (mm)
EXN/M16/HSP	16
EXN/M20/HSP	20
EXN/M25/HSP	25
EXN/M32/HSP	32
EXN/M40/HSP	40
EXN/M50/HSP	50
EXN/M63/HSP	63

Brass Type - Metric	Thread Size Metric (mm)
EX/M16/HSP	16
EX/M20/HSP	20
EX/M25/HSP	25
EX/M32/HSP	32
EX/M40/HSP	40
EX/M50/HSP	50
EX/M63/HSP	63

Stainless Steel Type - Metric	Thread Size Metric (mm)
EXS/M16/HSP	16
EXS/M20/HSP	20
EXS/M25/HSP	25
EXS/M32/HSP	32
EXS/M40/HSP	40
EXS/M50/HSP	50
EXS/M63/HSP	63

N.B. PG stopping plugs available upon request

Dome head Exe stopping plug

Nickel Plated Type - Metric	Thread Size Metric (mm)
EXN/M16/DSP	16
EXN/M20/DSP	20
EXN/M25/DSP	25
EXN/M32/DSP	32
EXN/M40/DSP	40
EXN/M50/DSP	50
EXN/M63/DSP	63

Brass Type - Metric	Thread Size Metric (mm)
EX/M16/DSP	16
EX/M20/DSP	20
EX/M25/DSP	25
EX/M32/DSP	32
EX/M40/DSP	40
EX/M50/DSP	50
EX/M63/DSP	63

Stainless Steel Type - Metric	Thread Size Metric (mm)
EXS/M16/DSP	16
EXS/M20/DSP	20
EXS/M25/DSP	25
EXS/M32/DSP	32
EXS/M40/DSP	40
EXS/M50/DSP	50
EXS/M63/DSP	63

N.B. PG stopping plugs available upon request

Nylon stopping plug

Nylon Type - Metric	Thread Size Metric (mm)
EX-M16	16
EX-M20	20
EX-M25	25
EX-M32	32
EX-M40	40
EX-M50	50
EX-M63	63

Certification & Standards

Nylon Stopping Plug
EC TYPE Examination Certificate:
IMQ 13 ATEX 016X, IECEx IMQ 13.0005X
Exe IIC Gb
Ex tb IIIC Db
IP test: IP66-IP68

Accessories

Technical Specifications

Coupler - female to female thread couplers for use in both Exd and Exe applications

Nickel Plated Type - Metric	Thread Size Metric (mm)
EXN/M16/C	16
EXN/M20/C	20
EXN/M25/C	25
EXN/M32/C	32
EXN/M40/C	40
EXN/M50/C	50
EXN/M63/C	63
EXN/M75/C	75

Brass Type - Metric	Thread Size Metric (mm)
EX/M16/C	16
EX/M20/C	20
EX/M25/C	25
EX/M32/C	32
EX/M40/C	40
EX/M50/C	50
EX/M63/C	63
EX/M75/C	75

Stainless Steel Type - Metric	Thread Size Metric (mm)
EXS/M16/C	16
EXS/M20/C	20
EXS/M25/C	25
EXS/M32/C	32
EXS/M40/C	40
EXS/M50/C	50
EXS/M63/C	63
EXS/M75/C	75

Nickel Plated Type - NPT	Thread Size NPT (inch)
EXN/038/C	3/8
EXN/050/C	1/2
EXN/075/C	3/4
EXN/100/C	1
EXN/125/C	1 1/4
EXN/150/C	1 1/2
EXN/200/C	2
EXN/250/C	2 1/2

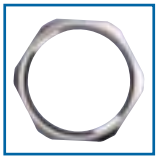
Brass Type - NPT	Thread Size NPT (inch)
EX/038/C	3/8
EX/050/C	1/2
EX/075/C	3/4
EX/100/C	1
EX/125/C	1 1/4
EX/150/C	1 1/2
EX/200/C	2
EX/250/C	2 1/2

Stainless Steel Type - NPT	Thread Size NPT (inch)
EXS/038/C	3/8
EXS/050/C	1/2
EXS/075/C	3/4
EXS/100/C	1
EXS/125/C	1 1/4
EXS/150/C	1 1/2
EXS/200/C	2
EXS/250/C	2 1/2

Certification Standard: Baseefa 08 ATEX 0359U
IECEx BAS08.0121U
TÜV11.0158U

Ex de IIC Gb
Ex tb IIIC Db

Temperature: -60°C to +200°C



Hex locknut

Nickel Plated Type - Metric	Thread Size Metric (mm)
WHMM03	16
WHMM04	20
WHMM05	25
WHMM06	32
WHMM07	40
WHMM08	50
WHMM09	63

Brass Type - Metric	Thread Size Metric (mm)
WHMB03	16
WHMB04	20
WHMB05	25
WHMB06	32
WHMB07	40
WHMB08	50
–	63

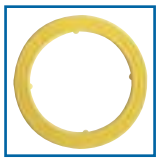
Stainless Steel Type - Metric	Thread Size Metric (mm)
–	16
MXWH04	20
MXWH05	25
MXWH06	32
MXWH07	40
MXWH08	50
–	63

Nickel Plated Type - NPT	Thread Size NPT (inch)
–	3/8
WHAM04	1/2
WHAM05	3/4
WHAM06	1
WHAM07	1 1/4
WHAM08	1 1/2
WHAM09	2

Brass Type - NPT	Thread Size NPT (inch)
–	3/8
WHAB04	1/2
WHAB05	3/4
WHAB06	1
WHAB07	1 1/4
WHAB08	1 1/2
–	2

Stainless Steel Type - NPT	Thread Size NPT (inch)
–	3/8
MXAH04	1/2
MXAH05	3/4
MXAH06	1
MXAH07	1 1/4
MXAH08	1 1/2
–	2

Technical Specifications



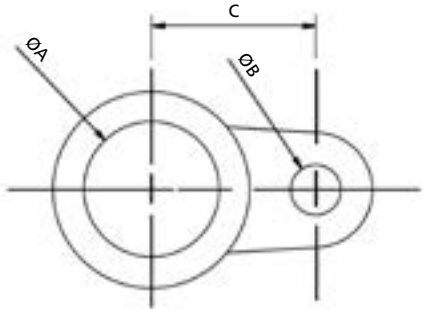
Sealing joint washer

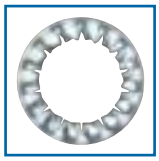
Nylon Type - Metric	Thread Size Metric (mm)	Outside Diameter (mm)	Thickness (mm)
EXFM03	16	22.0	1.6
EXFM04	20	26.0	1.6
EXFM05	25	34.3	1.7
EXFM06	32	41.5	1.7
EXFM07	40	52.0	2.0
EXFM08	50	66.5	2.0
EXFM09*	63	84.5	2.0

Fibre Type - Metric	Thread Size Metric (mm)	Outside Diameter (mm)	Thickness (mm)
EXFM03F	16	22.0	1.6
EXFM04F	20	26.0	1.6
EXFM05F	25	34.3	1.7
EXFM06F	32	41.5	1.7
EXFM07F	40	52.0	2.0
EXFM08F	50	66.5	2.0

Earth tag

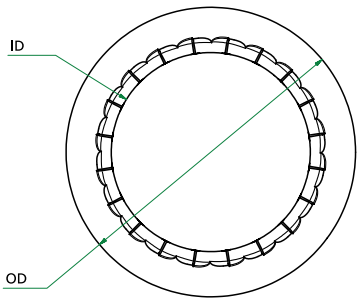
Brass Type - Metric	Diameter (mm) A	B	C
EX/M20/TAG	20.2 / 20.5	6.5 / 7.0	28.0 / 28.5
EX/M25/TAG	25.2 / 25.7	6.1 / 6.6	30.5 / 31.0
EX/M32/TAG	32.2 / 32.8	12.2 / 12.7	40.0 / 40.5
EX/M40/TAG	40.2 / 40.7	13.0 / 13.5	45.0 / 45.5
EX/M50/TAG	51.0 / 51.5	13.0 / 13.5	58.0 / 58.5
EX/M63/TAG	63.7 / 64.2	13.0 / 13.5	65.0 / 65.5
EX/M75/TAG	76.4 / 76.9	13.0 / 13.5	75.5 / 76.0





Serrated washer

Steel Type - Metric	Thread Size Metric (mm)	Diameter (mm) Inside	Outside
EX/M16/SER	16	17.5	28.0
EX/M20/SER	20	21.9	33.0
EX/M25/SER	25	26.2	40.0
EX/M32/SER	32	33.0	48.1
EX/M40/SER	40	41.5	60.2
EX/M53/SER	50	51.5	70.0
EX/M63/SER	63	64.6	86.8

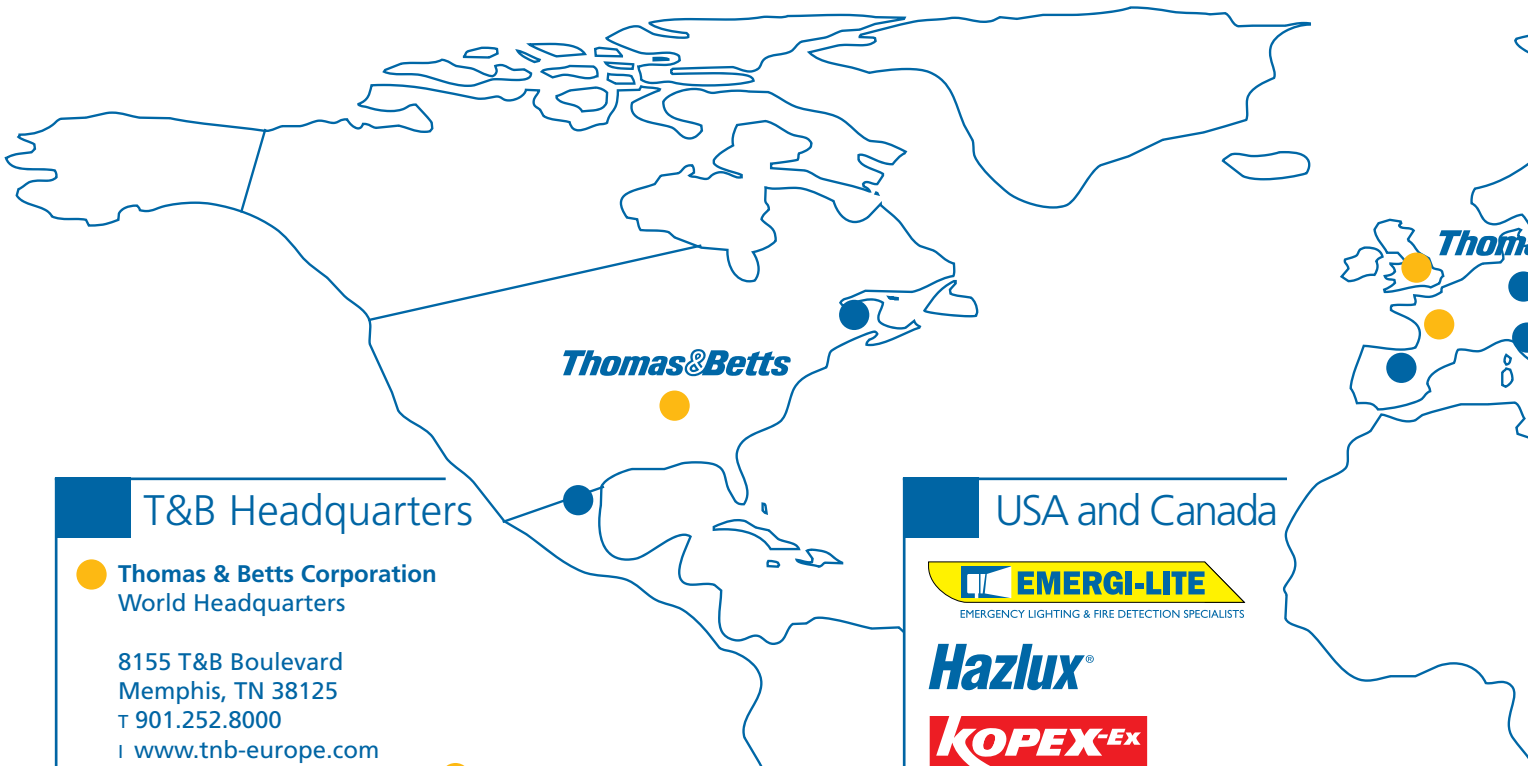


Index

Index

Index

Thomas & Betts worldwide industrial capabilities



T&B Headquarters

Thomas & Betts Corporation
World Headquarters

8155 T&B Boulevard
Memphis, TN 38125
T 901.252.8000
I www.tnb-europe.com

Kopex-Ex
UK Sales Office

Station Road, Coleshill,
Birmingham, B46 1HT
T +44 (0) 1675 468 213
F +44 (0) 1675 468 280
I www.kopex-ex.com

Thomas & Betts
EMEA European Centre

200 Chaussee de Waterloo
B-1640 Rhode-St-Genese
Belgium
T +32 (0) 2 359 82 00
F +44 (0) 2 359 82 01
E europe_inquiry@tnb.com

Thomas & Betts
Canada

700 Thomas Avenue
Saint-Jean-sur-Richelieu,
Quebec
J2X 2M9
T 450.347.5318
F 450.347.1976
E www.tnb.ca

Thomas & Betts
Asia (Singapore) Pte Ltd

10 Ang Mo kio
Street 65, #06-07 Techpoint
Singapore 569059
T +65 6720 8828
F +65 6720 8780
E asia.inquiry@tnb.com

DTS
International Call Centre

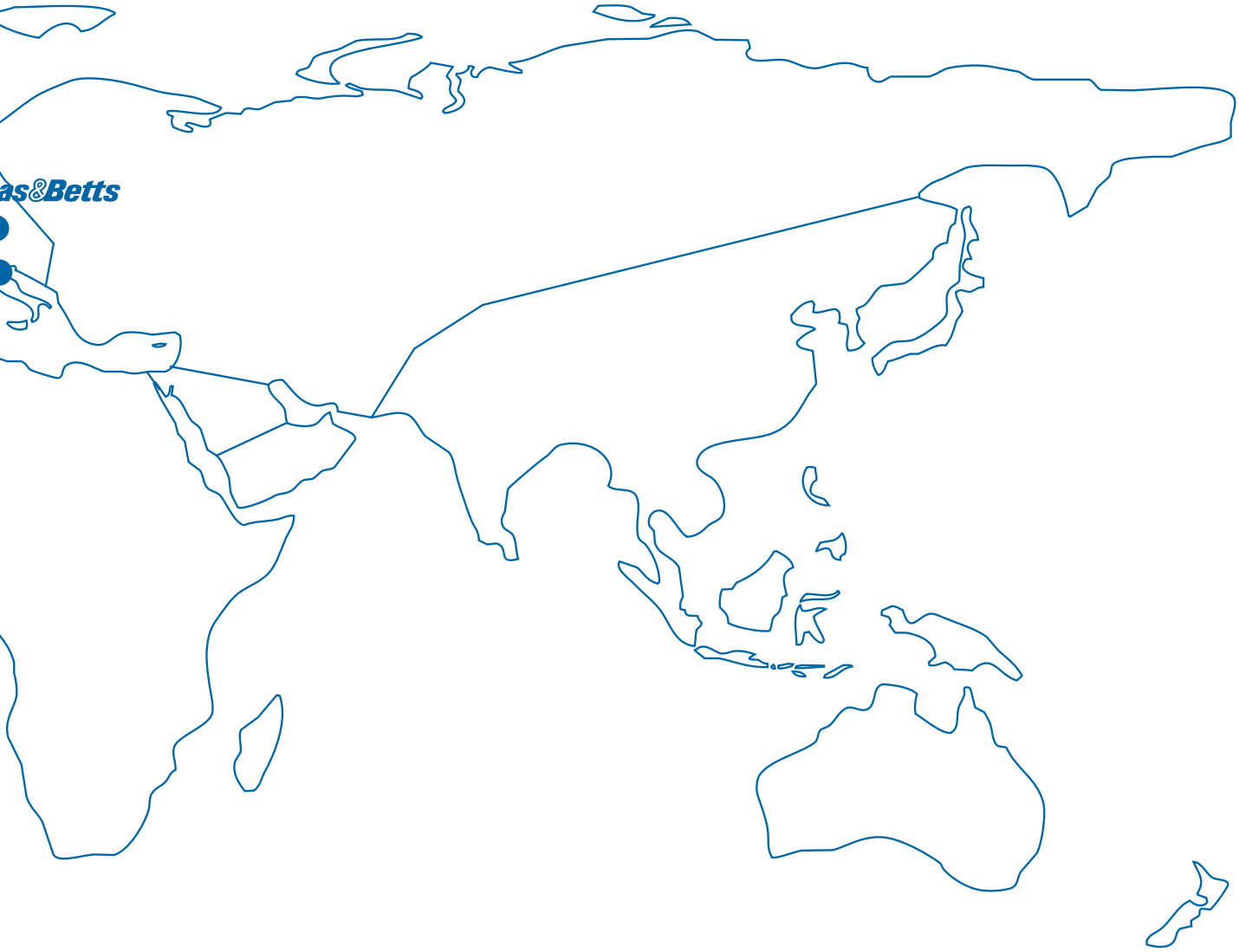
Z.I. Parc d'Activités de la Gare
19 à 21 avenue Henri Beaudelet
B.P. 27 - 77831 Ozoir Cedex
France
T +33 (0) 1 64 40 27 26
F +33 (0) 1 64 40 20 11
I www.tnb-hazardous.com

USA and Canada

EMERGI-LITE
EMERGENCY LIGHTING & FIRE DETECTION SPECIALISTS

Hazlux®
KOPEX-Ex
PMA
Ocal®
Russellstoll®
CYBEREX
JOSLYN
HOMAC
Blackburn®
Kindorf®
T&B® Cable Tray
Color-Keyed®

Thomas & Betts - Industrial Capabilities



Thomas&Betts
A Member of the ABB Group

KOPEX-Ex

T&B® Fittings

Star Teck®

Thomas & Betts manufactures and designs a wide range of electrical equipment for hazardous and hostile environments to ensure the safety of the personnel working in them. The extensive range covers Kopex-Ex metallic and non metallic conduit and fittings, Star Teck(r) teck cable fittings and T&B(r) rigid conduit fittings. These products are approved to a wide range of hazardous area standards including ATEX, IECEx, UL, CSA, GOST and Inmetro.

Thomas & Betts Sales Offices

Canada
T +1 450 347 5318
E mrkt.canada@tnb.com

France / Belgium
T +33 (0) 1 64 40 27 26

Germany / Austria
T +49 (0) 62 21 701-1800
E info.ik@de.abb.com

Italy
T +39 (0) 2 2415 3000

Netherlands
T +31 (0) 180 641 888
E info@vanlien.nl

Spain
T +34 938 45 4570
E info@pma-es.com

Switzerland (PMA)
T +41 44 905 61 11
E info@pma.ch

UK
T +44 (0) 1675 468 213
E sales@kopex-ex.com

LIT-152GBR 09/14 • Designed by www.uc4.co.uk

Thomas&Betts
A Member of the ABB Group