CATALOGUE

Kopex-ex

Flexible conduit systems, cable glands & accessories for hazardous areas

At ABB, our focus is on improving your business performance by providing practical, reliable electrical products & services. To connect & protect for life.

To solve everyday problems in the area's of Wire & Cable Management, Cable Protection, Power Connection & Control and Safety.

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Introduction

Low voltage products for hazardous areas

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To solve everyday problems in the area's of Wire & Cable Management, Cable Protection, Power Connection & Control and Safety.

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01 Light fittings, boxes and enclosures. Customised control panels for explosive atmospheres. Ongoing R&D program for innovative and high performance products.

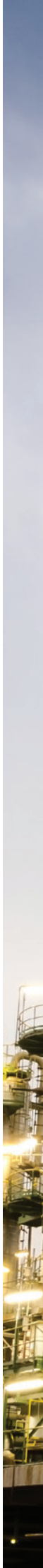
—
02 Enclosures

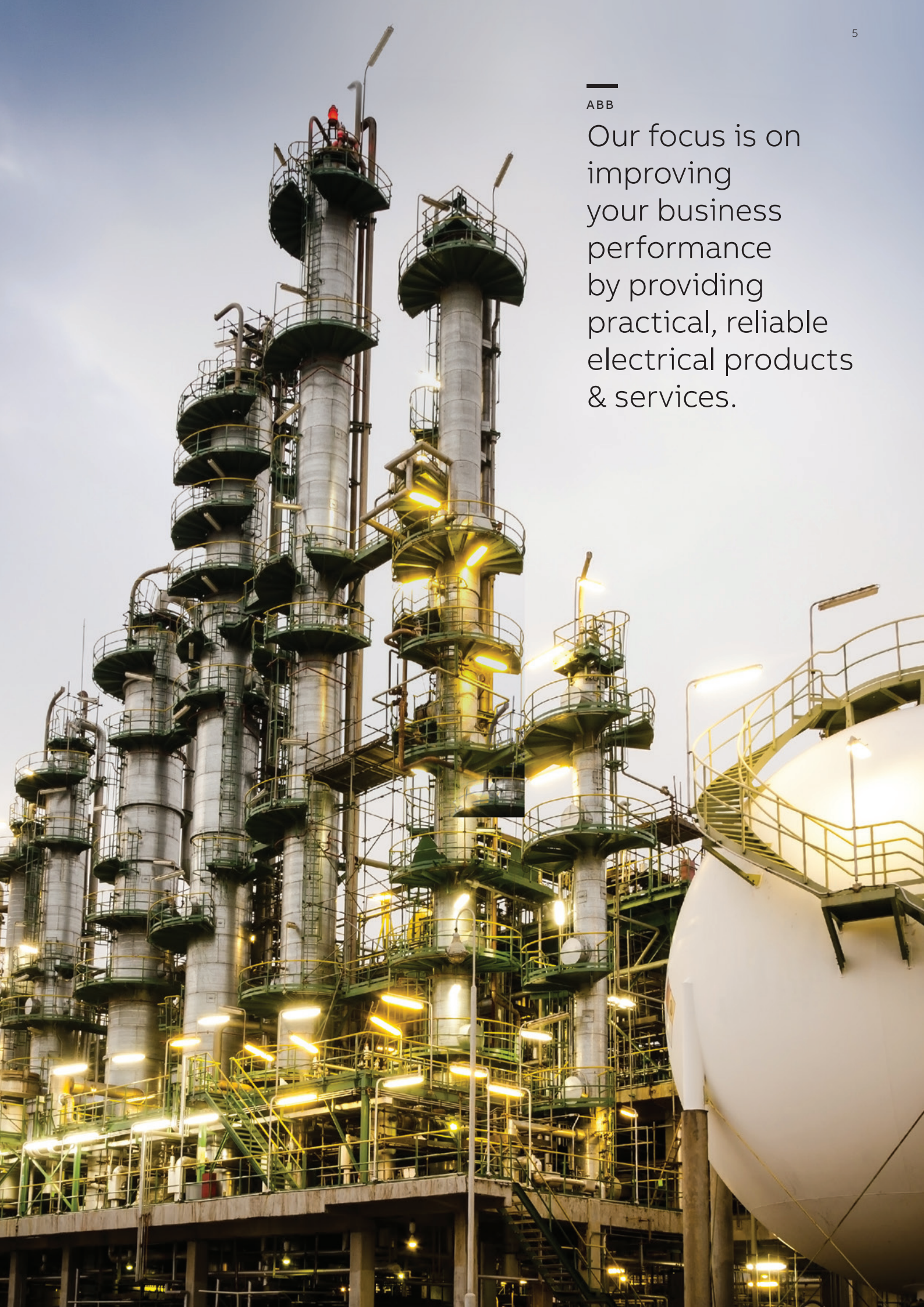
Our extensive engineering, supply chain management and technical sales support teams are committed to understanding everything that impacts your ability to accomplish your business objectives by reducing your total cost of ownership.

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, ABB engineered products fit and function in your application while providing superior performance, sustainability, and value throughout the project life cycle.

All our brands are built upon four product & service solution platforms. Platforms that address you or your customers' critical electrical & lighting needs covering the protection of data, energy, processes, assets and personal safety.

Beyond high performance application characteristics, ABB products, information and services facilitate and speed up your time critical assembly, installation or maintenance process.

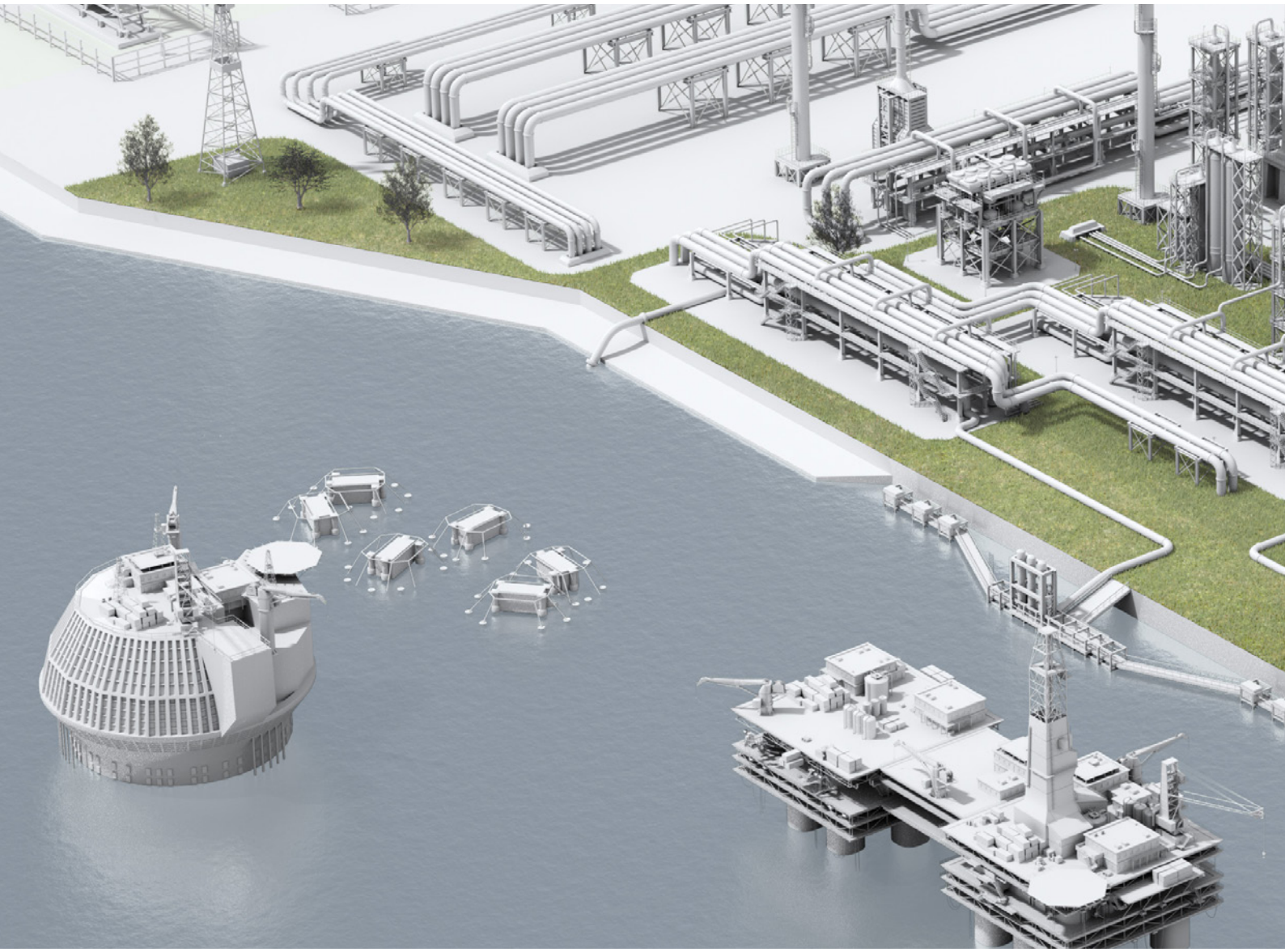




ABB

Our focus is on improving your business performance by providing practical, reliable electrical products & services.

Oil & Gas applications



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01 Application oil & gas

The oil and gas market is split into three sectors Upstream, Midstream and Downstream.

Upstream consists of Exploration and production. 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. The term downstream relates to the processing and delivery of finished carbon related product to the end-user.

Upstream applications
First there are offshore applications such as the drilling rigs and production platforms; these are always opened 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 DTS enclosures, or by ensuring that the product is coated or painted to withstand marine environments as in the DTS XFF light fittings.

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

Product Selection

- 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 specifications required: e.g ATEX, IECEx, EAC Ex, INMETRO, PCEC
- Where product will be positioned, e.g. Zone 1 or Zone 2

Approvals / Characteristics

- ATEX European directives
- IECEx (International certification system)
- Zones 1, 2, 21, 22
- Ingress protection IP

Oil & Gas applications
Upstream

DTS lighting offers easy maintenance with removable gear trays allowing maintenance to be carried out quickly and safely.

— 01 Onshore application

In fact the XFF Exd luminaries' components such as ballasts are standard so the storage and the sourcing of spare parts is made easily. Again this is essential to an offshore vessel.

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 millions 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.

Secondly with so many rigs in network there is a massive monitoring operation to be done to ensure that the flow of all the rigs is ongoing and consistent. This is where the DTS range of instrumentation boxes can offer great flexibility as they can be custom built to meet exact specifications.

The need to maintain flow also leads to the need for motors and controls on the well heads themselves often referred to as"christmas trees." These are under high pressure and must be able to withstand 1400 bar. This is a critical point which has to be monitored closely to ensure that the pressure does not fluctuate. This is done by the valves within the wellhead controlled by motors. DTS EJB panels can be custom built to control these valves and at the same time monitor the pressures and relay it back to the central control point.

Oil & Gas applications
Midstream

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

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01 Oil and gas plant

This all relates to the fact that what is pumped out of the well is not pure and often contains a mixture of oil, gas, water and often sand which firstly need to be separated off from each other before being shipped or piped to a storage facility. This can be done 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 readyfor piping or shipping. These processes require energy and this energy is often created from the commodity itself by the utilisation of the gas.

Once the separating has been completed, the commodity can then be moved to storage. 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 transferred to tankers at sea for delivery to storage depots.

Product Selection
- Salt water corrosion (tankers)
- Extreme ambient temperature
- Protection level
- Approval level required (Ex e, Ex d, etc.)
- Approval specifications required: e.g ATEX, IECEx, EAC Ex, INMETRO, PCEC

Approvals / Characteristics
- ATEX European directives
- IECEx (International certification system)
- Zones 1, 2, 21, 22
- Ingress protection IP

This is also the point when all metering needs to take place to calculate invoices and taxes today. The amount of oil produced is sharply measured, also the density, viscosity, pressure, temperature, and in the case of gas, the amount of water vapour is also measured.

Oil is often pumped directly to the oil refinery which is where the down stream operation starts but often needs to go through a series of pumps to get the required pressure.

With DTS range of products, ABB can offer a range of products and services to meet the demands of midstream oil and gas markets. The DTS range of light fittings is manufactured to meet ATEX and IECEx standards. They are designed to be robust and to meet the vigors of the environment whether it is on oil tankers where the XFF product is ideal.

The EVS range is often chosen for warehouses. Added to this all the lighting fittings has been developed with the installer and maintenance people. Thus, removable gear trays has been thought to ensure easy and safe installation and maintenance.

DTS also offers a wide range of standard and custom built instrumentation boxes. They are often used in the monitoring equipment to relay signals from the sensors back to the central control systems as well as a range of standard configuration for control stations including “Emergency Stop” and “On-Off” to control motors etc. All of these are available in GRP (Glass Reinforced Polyester), aluminum and Stainless steel 316L therefore meeting any environmental requirement.

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01

Oil & Gas applications
Downstream

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. Refined products include:

- 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).

Product Selection
- Continual Movement (CCTV)
- Extreme ambient temperature
- Protection level
- Consequence of down time
- Approval level required (Ex e, Ex d, etc.)
- Approval specifications required: e.g ATEX, IECEx, EAC Ex, INMETRO, PCEC
- Where product will be positioned, e.g. Zone 1 or Zone 2

Approvals / Characteristics
- ATEX European directives
- IECEx (International certification system)
- Zones 1, 2, 21, 22
- Ingress protection IP

The refining process is in four stages, firstly distillation which separates it into 5 product sectors LPG, Naphtha, Kerosine, Gas, Oil, and Atmospheric residue, this is done using high temperature. The higher the temperature the higher the quality of the product.

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

Stages three and four are about treating the product to remove impurities such as sulphur and blending 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 in the case of aviation fuel this can be shipped direct to airports by road or rail where it is stored, before transferring to tanker trunks for the refueling of aircraft.

All the stages in the downstream operation have different requirements to ensure safety of personnel and the quality of the end product. DTS products are used in this area whether it is the XF floodlight range or EVS fluorescent range. They are all designed for easy maintenance. There is also a range of instrumentation boxes either with standard configurations or custom built to meet the end-users' requirements, all of which are essential within a refinery where sensors play a key part on the process to ensure quality.

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01 Petrochemical refinery

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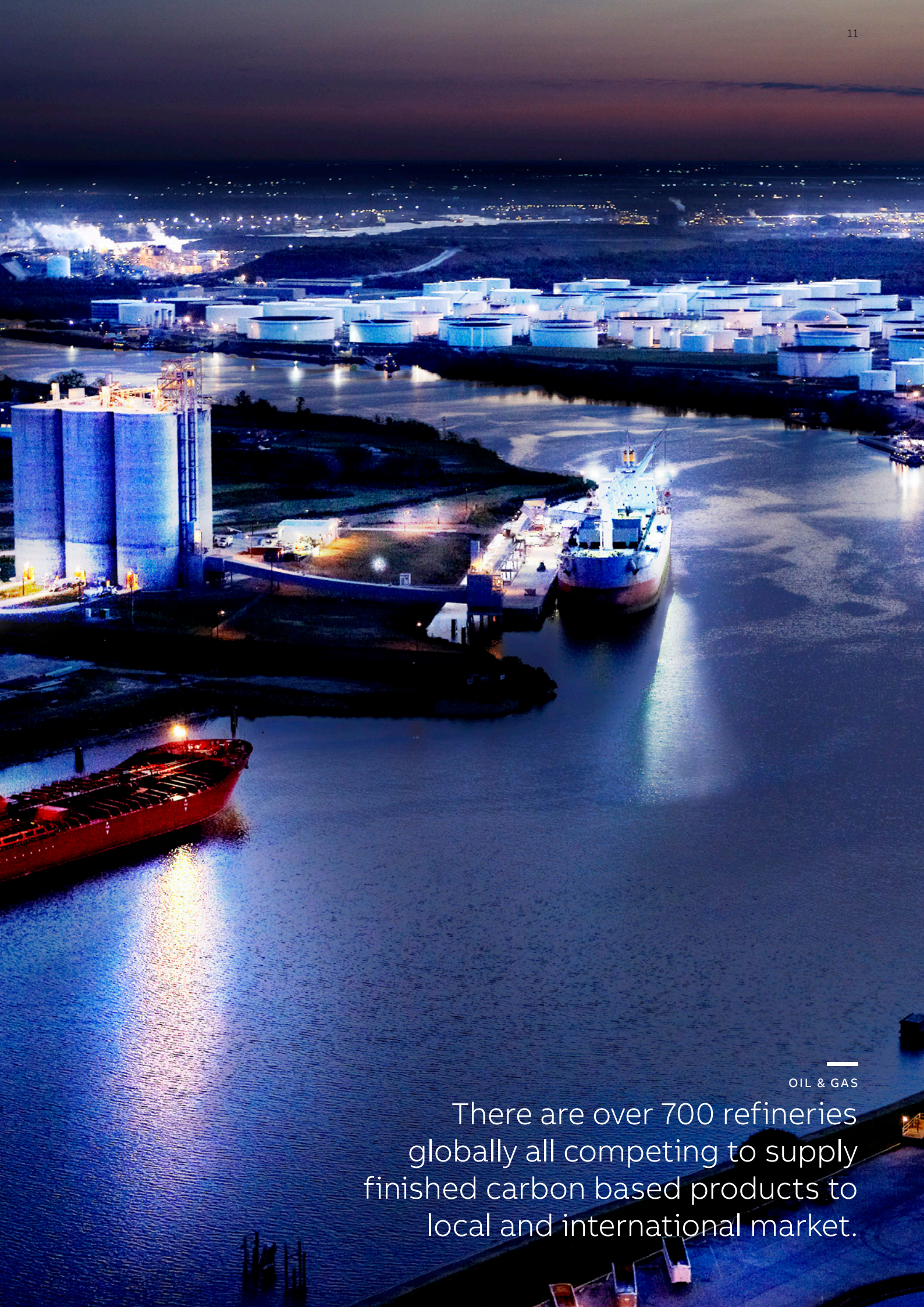

OIL & GAS

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

Food & Beverage applications

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01 Food manufacture - Explosion proof (Dust)
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02 Beverage manufacture - Explosion proof (Vapour)

Food Industry
ABB 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 classified as hazardous. ABB can offer stainless steel control stations for use on automated food processing and packaging machines as well as lighting specifically designed for use in dust filled atmospheres such as flour mills or other places where the risk of explosion is considered to be extremely high.

Beverage Industry
ABB has a range of products designed for being used in all beverage production sectors in the malting, brewing, wine, spirits or soft drink business. DTS can supply light fittings to reach the needs of explosive atmospheres where explosive gases may occur or in areas where cleanliness is required.

Chemical & Pharmaceutical applications

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03

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04

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03 Chemical engineering - Explosion proof
—
04 Pharmaceutical production - Explosion proof

Chemical Industry
The chemical industry produces very diverse products, everything from fertilizers to explosives such as nitroglycerin. The processes used in this industry mean that there are lots of applications for the DTS lighting and box ranges. DTS can offer standard or custom built products, whether it is for a process control station or for instrumentation boxes linking sensors back to central control panels.

Pharmaceutical Industry
The ABB 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. Many of the processes and applications used in these areas require approvals to explosive atmospheres standards making stainless steel junction and control boxes ideal.

Standards, zone definitions & product markings

World standards & what they mean

In this Section we will outline the different Standards used throughout the world and what it means for products specified for use in explosive atmospheres. The map of the world opposite, illustrates the Standards that are generally used in these regions.

— ATEX and IECEx

— UL (America) and IECEx

— UL (America)

— EAC EurAsian community

— CSA (Canada) & IECEx

— IECEx

— InMetro (Brazil)

— No standard

The ATEX European Directives 94/9/EC
ATEX requires employers 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.

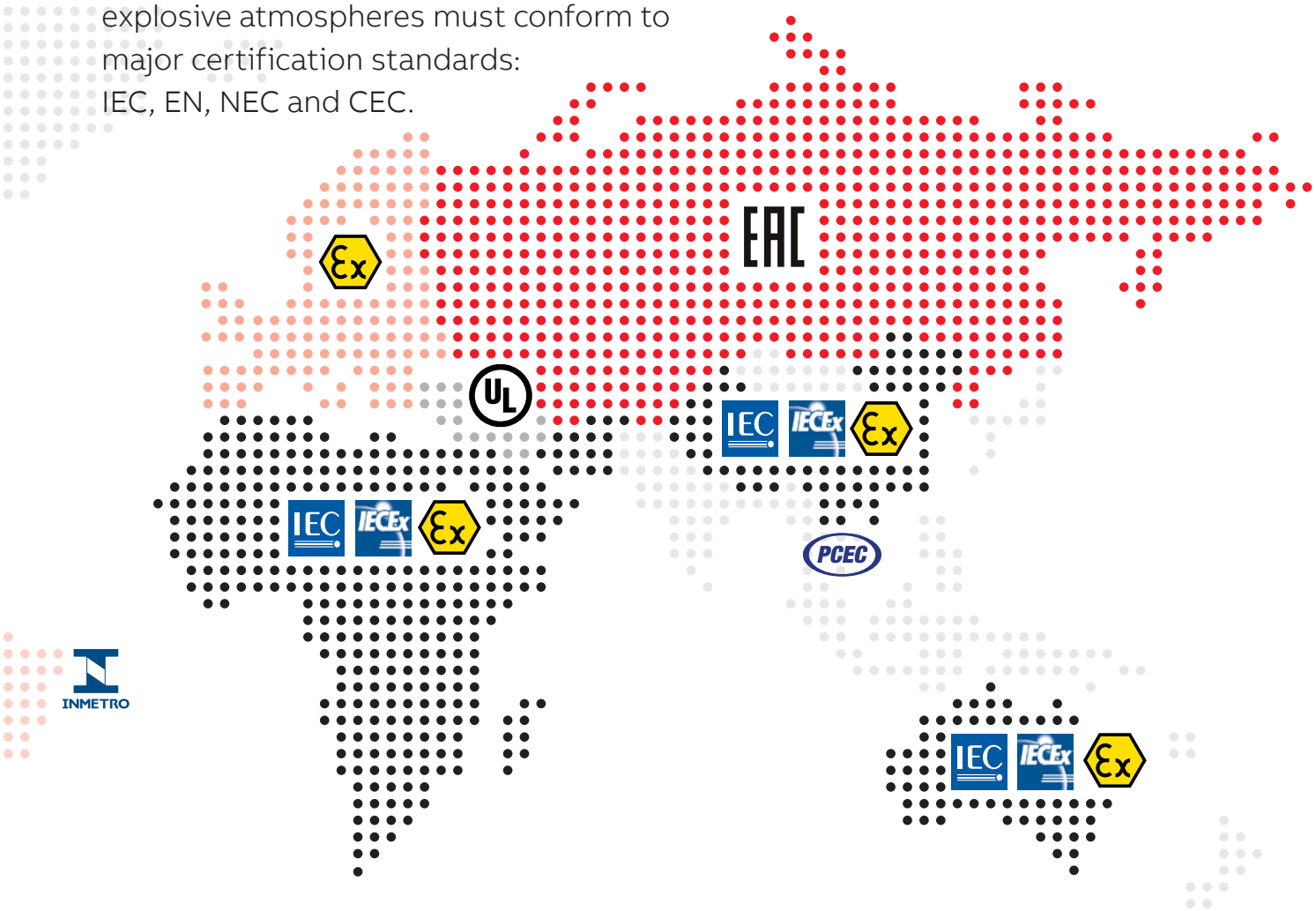
The ATEX directive 2014/34/UE applies to end users. These directives compliment each other, but have different purposes. ATEX100A covers both electrical and non-electrical products intended for use in hazardous areas, including mechanical equipment.

Any product sold within the European Union designed for use in explosive atmospheres must be ATEX certified and bear the ATEX marking in conjunction with CE marking. This obligation is placed upon the manufacturer of the product is aimed at facilitating movement of goods within the EU.

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

This scheme provides:
- A single certification of conformity for manufacturers to comply that includes:
  - Testing and assessment of products to a standard including a full test report.
  - Ongoing surveillance of manufacturers premises.
- A fast-track process for countries where regulations still require the issuing of national Ex certificates or approvals.

Electrical materials for use in potentially explosive atmospheres must conform to major certification standards: IEC, EN, NEC and CEC.



UL (America) & CSA (Canada)
The American and Canadian standards are the only ones to have different classifications and locations. ATEX & IECEx work to Groups and Zones whereas the NEC & CEC works to Classes and Divisions, there is no direct comparison between the two. This means that it is imperative that the two standards are not inter-changed within an area.

INMETRO (Brazil)
The National Institute of Metrology, Standardization and Industrial Quality (INMETRO) is the government body responsible for the implementation of measurement, safety and quality standards for electrical and electronic products. It guides the activities of accreditation, inspection, testing and certification bodies in Brazil which issue the products' certificates.

EurAsian Conformity Mark (Customs Union)
EurAsian Conformity Mark follows similar rules to that of IECEx as far as the breakdown of the zones and other criteria are concerned.

EurAsian Conformity Mark is the standard for the Customs Union which includes the Russian Federation, Kazakhstan and Belarus.

PCEC (China)
Products placed on the Chinese market shall be certified according to the national regulations in force.

PCEC is accredited by CNAS (China National Accreditation Service for Conformity Assessment) for product testing and issuance of certificates of conformity of products used in explosive atmospheres.

Standards, zone definitions & product markings

Zone definitions – Onshore gases & vapours

Zone 0

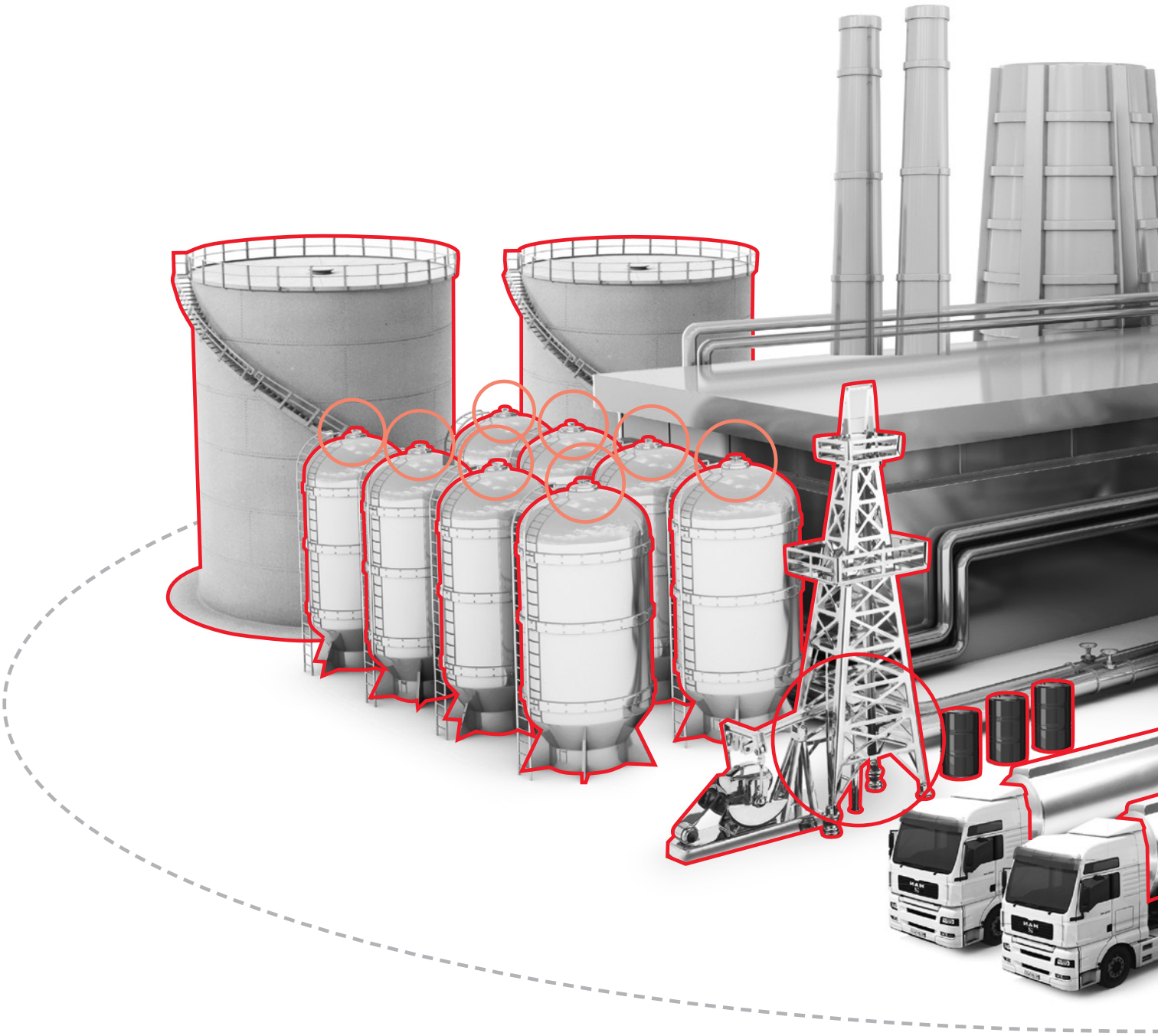
Permanent / Frequent

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

Ocassional

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.



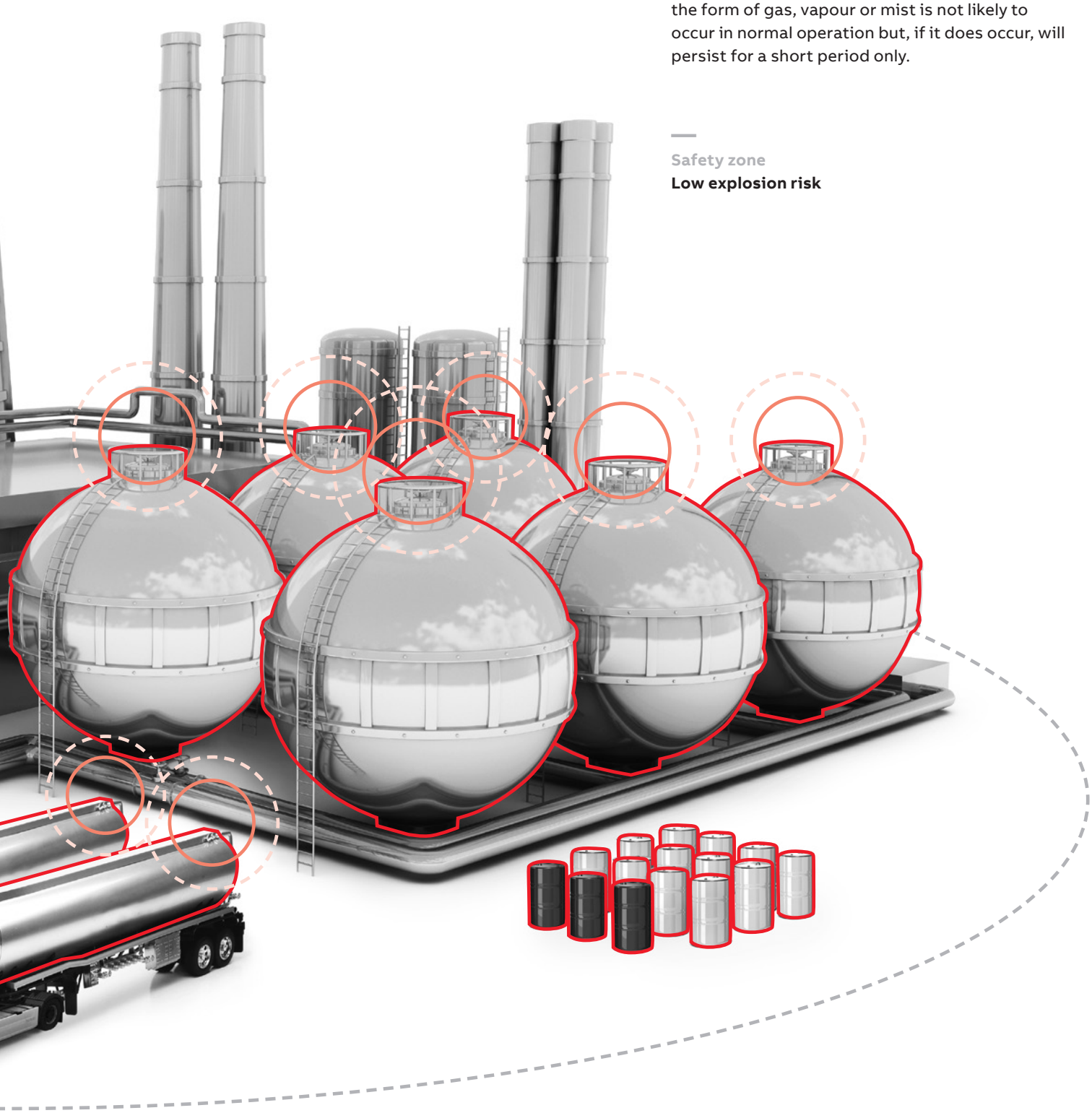
Zone 2

Gas irregular / Short duration

Place in which an explosive atmosphere consisting of a mixture with air of 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.

Safety zone

Low explosion risk



Standards, zone definitions & product markings

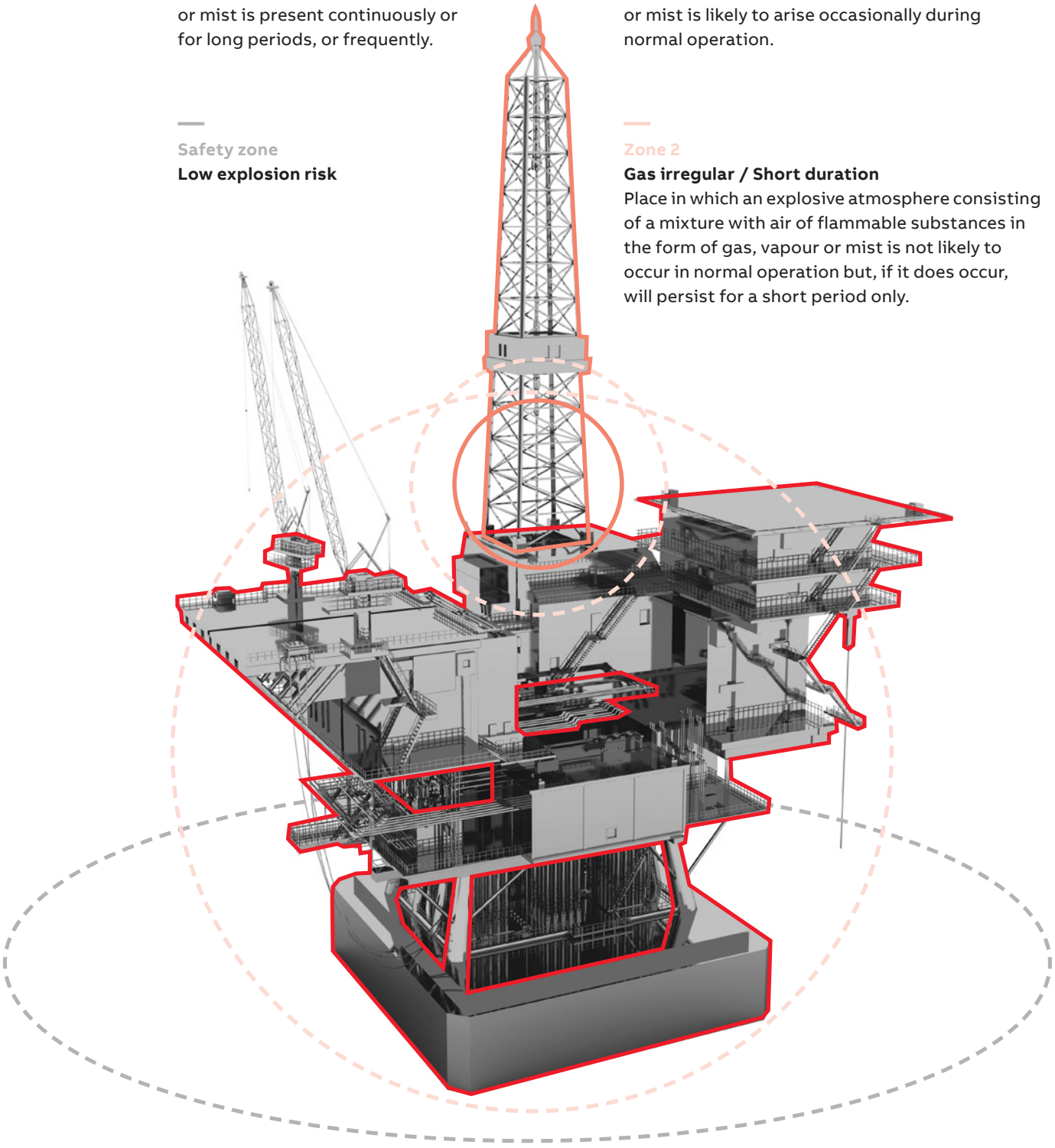
Zone definitions – Offshore gases & vapours

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
Ocassional
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 of 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.



Standards, zone definitions & product markings

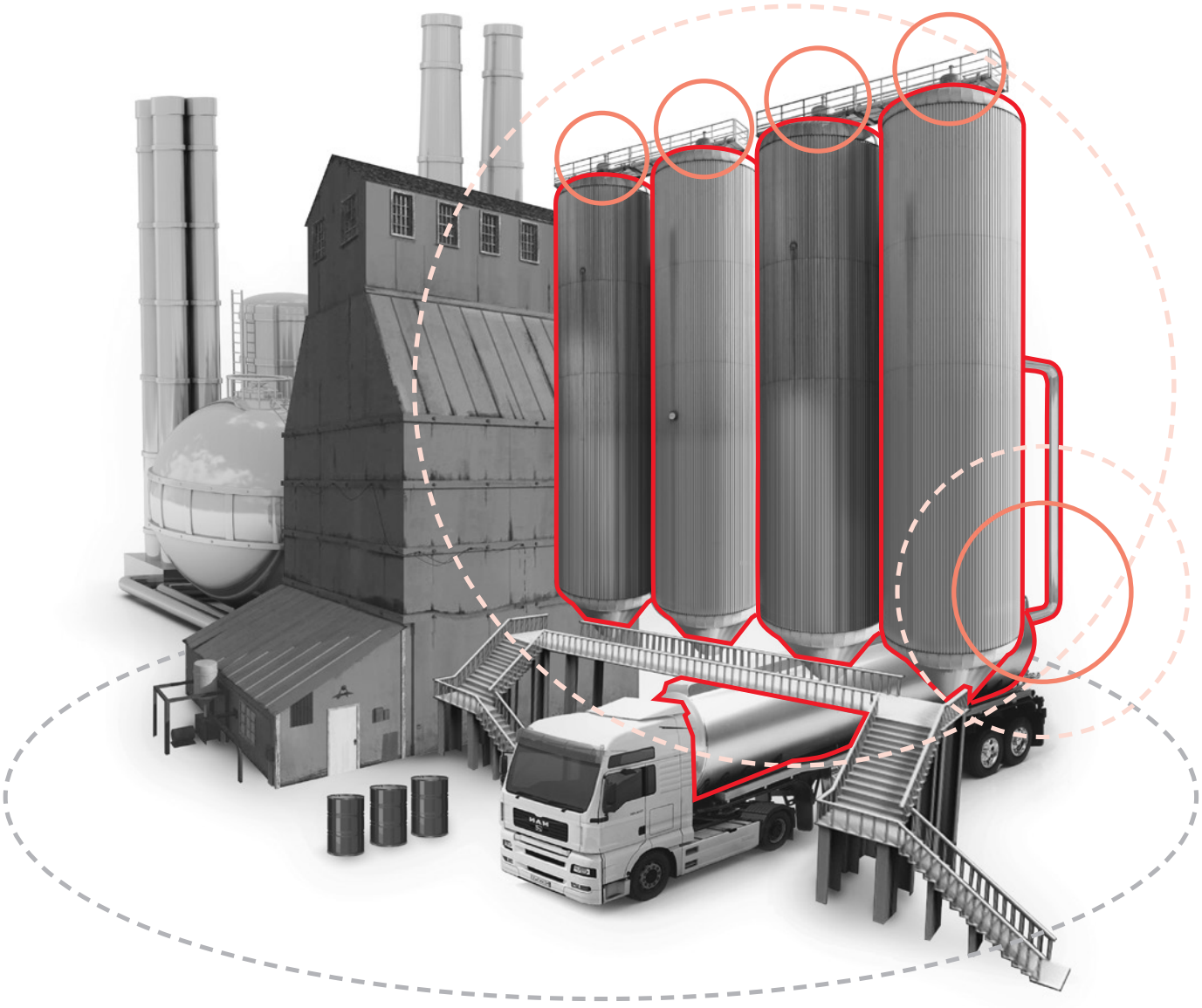
Zone definitions – Dust

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, ocassionally.

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



Standards, zone definitions & product markings

DTS - Product marking guide

Classifications of hazardous areas

Classifications of hazardous areas		Descriptions	ATEX Group	ATEX Category	EPL	Equipment usage
Mining	Energised	Persistant risk of methane gas and other dusts	**I**	**M1**	**Ma**	–
	De-energised		**I**	**M2**	**Mb**	–
Gas environments	**Zone 0**	Persistant and continuous presence of gas for frequent or long periods	**II**	**1G**	**Ga**	ATEX Equipment Category **1G**, Equipment Protection Level **Ga**
	Zone 1	Likely occurence of gas presence in normal operation	**II**	**2G**	**Gb**	ATEX Equipment Category **2G or higher**, Equipment Protection Level **Gb or higher**
	Zone 2	Unlikely occurence of gas presence in normal operation, short term persistence if any	**II**	**3G**	**Gc**	ATEX Equipment Category **3G**, Equipment Protection Level **Gc or higher**
Dust environments	**Zone 20**	Persistant and continuous presence of dust for frequent or long periods	**II**	**1D**	**Da**	ATEX Equipment Category **1D**, Equipment Protection Level **Da**
	Zone 21	Likely occurence of dust presence in normal operation	**II**	**2D**	**Db**	ATEX Equipment Category **2D or higher**, Equipment Protection Level **Db or higher**
	Zone 22	Unlikely occurence of dust presence in normal operation, short term persistence if any	**II**	**3D**	**Dc**	ATEX Equipment Category **3D or higher**, Equipment Protection Level **Dc or higher**

Gas & dust groups

Group		Typical	Examples
Mining	**I**	Methane (Mining only)	
Gases	**IIA**	Propane	Ammonia, Methane Gasoline, Butane
	IIB	Ethylene	Town gas, Acrylonitril
	IIB+H2	Ethylene	Town gas, Acrylonitril
	IIC	Hydrogen, Acetylene	Carbon disulphide
Dust environments	**IIIA**	Combustable flyings	Wood shaving
	IIIB	Non-conductive dust	Saw dust, flour
	IIIC	Conductive dust	Metal dust

Temperature classification

Class*	Surface temperature
T1	450°C
T2	300°C
T3	200°C
T4	135°C
T5	100°C
T6	85°C

* Temperature classification is based on the maximum surface temperature of the equipment in normal use.

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Protection concepts

Protection concepts	Primary	Type of protection	EN/IEC Standard	Sub concept	Gas zones	Dust zones
By enclosure	**Ex d**	Flameproof	60079-1	Ex db	**1**	–
				Ex dc	**2**	
	Ex t	Dust proof	60079-31	Ex ta	–	**20**
				Ex tb		**21**
				Ex tc		**22**
By exclusion	**Ex p**	Pressurisation	60079-2	Ex pxb	**1**	**21/22**
				Ex pyb	**1**	
				Ex pzc	**2**	
	Ex m	Encapsulation	60079-18	Ex ma	**0**	**20**
				Ex mb	**1**	**21**
				Ex mc	**2**	**22**
	Ex o	Oil immersion	60079-6	Exob	**1**	–
	Ex q	Powder filling	60079-5	Exqb	**1**	–
By equipment	**Ex i**	Intrinsically safe	60079-11	Ex ia	**0**	**20**
				Ex ib	**1**	**21**
				Ex ic	**2**	**22**
	Ex op	Optical radiation	60079-28	Ex op is	**0/1/2**	**20/21/22**
				Ex op pr	**1/2**	**21/22**
				Ex op sh	**0/1/2**	**20/21/22**
	Ex e	Increased safety	60079-7	Ex eb	**1**	–
				Ex ec	**2**	
	Ex n	Non sparking	60079-15	Ex nA	**2**	–
		Limited energy		Ex nL		
		Restricted breathing		Ex nR		
		Enclosed breaking		Ex nC		

Standards, zone definitions & product markings

Index of ingress protection

IP suitability ratings are a system for classifying the degree of protection provided by enclosures of electrical equipment.

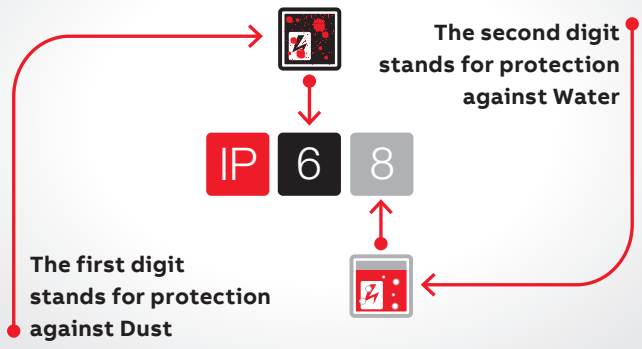
Protection against Solid Bodies
Degree of protection for persons against access to hazardous parts inside the enclosure and/or against the ingress of solid foreign objects.

0	No protection
1	Objects greater than 50 mm, accidental touch by hands
2	Objects greater than 12 mm, accidental touch by fingers
3	Objects greater than 2.5 mm, e.g. tools/wires
4	Objects greater than 1 mm, e.g. tools/wires/small wires
5	Protected against dust - limited ingress (no harmful deposits)
6	Totally protected against dust (Dust-tight)

Protection against Water
Degree of protection of equipment inside enclosures against damage from the ingress of water.

0	No protection
1	Protected against vertically falling drops of water
2	Protected against direct sprays of water 15° from vertical
3	Protected against sprays of water to 60° from vertical
4	Protected against water sprayed from all directions - limited ingress permitted
5	Protected against low pressure jets of water from all directions - limited ingress permitted
6	Protected against strong pressure jets of water, heavy seas - limited ingress permitted
7	Protection against the effects of immersion between 15cm - 1 m
8	Protection against long periods of immersion under a quoted pressure, e.g. 2 bar at 24 hours
9	IP69 Automotive standard DIN40050 and signifies resistance to high pressure jets of water (up to 80bar) from any angle

IP Ratings
The higher the number, the greater the degree of protection; they apply ONLY to properly installed equipment.



Flexible conduit systems for hazardous areas

Conduit fittings – Selection guide

Selection guide







	Non-metallic conduit			Nylon conduit fittings			
	EXB Nylon conduit	**EXBB Nylon conduit**	**XESX Nylon conduit**	**EXBQ & EXPQ Straight metallic & braided fittings**	**NENV Straight Nylon fittings**	**NEIR Nylon Straight conduit fitting**	**NENZ Straight Nylon 90° curved strain relie**
Approvals							
ATEX	•	•	•	•	•	•	•
IEC / IECEx	•	•	•	•	•	•	•
CSA / UL	–	–	–	–	–	–	–
UL	–	–	–	–	–	–	–
EAC Ex	•	•	•	•	–	–	–
INMETRO	•	•	•	•	–	–	–
CNEX	•	•	•	•	–	–	–
Protection Type							
Ex e	•	•	•	•	•	•	•
Ex d	–	–	–	–	–	–	–
Ex de	–	–	–	–	–	–	–
Ex tb	•	•	•	•	•	•	•
Class / Division							
Class I / Div 1	–	–	–	–	–	–	–
Class I / Div 2	–	–	–	–	–	–	–
Class II / Div 1	–	–	–		–	–	–
Class II / Div 2	–	–	–	–	–	–	–
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									Nylon conduit fittings
	NEAV Nylon 45˚ elbow fittings	**NEBV Nylon 90˚ curved elbow fitting**	**NEWV Nylon 90˚ elbow fitting**	**BENRRE Nylon corrugated conduit connector**	**BESGR Nylon Slice connector**	**BEYR Nylon 'Y' piece fitting**	**BETR Nylon 'T' piece fitting**	**BESGR conduit adapter**	**BEH Nylon conduit clip**
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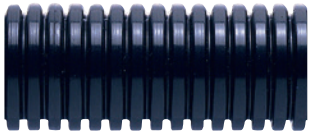
	32	**33**	**33**	**33**	**34**	**34**	**34**	**35**	**35**

Non-metallic nylon conduit system

EXB & EXBB Series – Anti-static nylon & overbraided conduit

EXB Series – Anti-static nylon conduit

Compatible with: EXPQM / EXPQA fittings **/ Materials:** Anti-static Nylon 12 **/ Colour:** Black



Part no.	Conduit Size Metric (mm)	Outside diameter (mm)	Coil length (m)
EXB03*	16	15.8	10/30/50
EXB04*	20	21.2	10/30/50
EXB05*	25	28.5	10/30/50
EXB06*	32	34.4	10/30/50
EXB07*	40	42.4	10/30/50
EXB08*	50	54.5	10/30/50
EXB09*	68	67.2	10/30/50
EXB010*	80	80.0	10/30/50

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

Approvals & certifications	Conformity Conforms to:
	ATEX: Baseefa 08 ATEX 0003X
	IECEx: IECEx BAS08.0001X
	EAC Ex: RU C-GB AA87.00198
	INMETRO: UL-BR 15.04.76X
	CNEX: CNEX 15.1693X
	Ex II 2 GD
	Ex e IIC Gb
	Ex tb IIIC Db

Temperature range
–20˚C to +80˚C
RTI 110˚C to EN60079-0

Special characteristics
Screening level 60dB at 1MHz

EXBB Series – Overbraided conduit

Compatible with: EXBQM / EXBQA fittings **/ Materials:** Anti-static Nylon 12 **/** Stainless Steel

Part no.	Conduit Size Metric (mm)	Outside diameter (mm)	Coil length (m)
EXBB03*	16	15.8	50
EXBB04*	20	23.6	50
EXBB05*	25	30	50
EXBB06*	32	36	50
EXBB07*	40	43.5	30
EXBB08*	50	56.5	50

* Add coil length to complete part number, e.g. 10 metres = EXBB0550

Approvals & certifications	Conformity Conforms to:
	ATEX: Baseefa 08 ATEX 0003X
	IECEx: IECEx BAS08.0001X
	EAC Ex: RU C-GB AA87.00198
	INMETRO: UL-BR 15.04.76X
	CNEX: CNEX 15.1693X
	Ex II 2 GD
	Ex e IIC Gb
	Ex tb IIIC Db

Temperature range
–20˚C to +80˚C
RTI 110˚C to EN60079-0

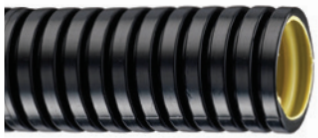
Special characteristics
Screening level 60dB at 1MHz

Non-metallic nylon conduit system

XESX Series – Anti-static nylon conduit

XESX Series – Anti-static nylon multi-layer conduit

Compatible with: EXPQ and nylon fittings **/ Materials:** Anti-static Nylon 12 **/ Colour:** Yellow (inside)



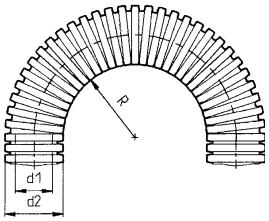
Part no.	Conduit Size Metric (mm)	Outside diameter (mm)	Coil length (m)
XESX0250	12	12.8	50
XESX0350	16	15.6	50
XESX0450	20	21.0	50
XESX0550	25	28.5	50
XESX0650	32	34.4	50
XESX0730	40	42.4	50
XESX0830	50	54.4	50

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

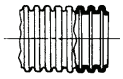
Approvals & certifications

Conformity
Conforms to:

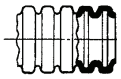
Metallic fittings:
ATEX: Baseefa 08 ATEX 0003X
IECEx: IECEx BAS08.0001X
EAC Ex: RU C-GB AA87.00198
INMETRO: UL-BR 15.04.76X
CNEX: CNEX 15.1693X
Ex II 2 GD
Ex e IIC Gb
Ex tb IIIC Db
Nylon fittings:
ATEX: SEV15ATEX0121
IECEx: IECEx SEV15.0009
Ex eb IIC
Ex tb IIIC



stat. R = lowest recommended bending radius for static (fixed) installation
dyn. R = lowest recommended bending radius for dynamic (flexible) installation



Fine profile T
Tight bending radius



Coarse profile G
High pull-out strength

Non-metallic nylon conduit system

EXBQ Series – Metallic fittings

Features and benefits:

- Manufactured in nickel plated brass
- Approved for use in Ex e applications for
- Zones 1, 2, 21 & 22
- Available in Metric & NPT thread
- EXPQ for use with unbraided nylon conduit
- EXBQ for use with over braided nylon conduit

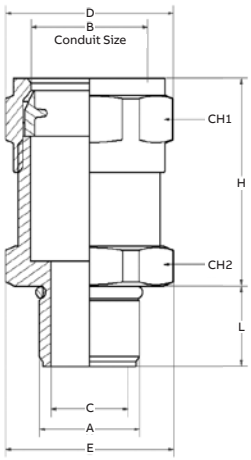
EXPQM / EXPQA Series - Nylon conduit fitting – for use with EXB and XESX conduits

Approvals & certifications	Conformity Conforms to:
	IEC EN 60079-0, 60079-7, 60079-31
	ATEX: Baseefa 08 ATEX 0003X
	IECEx: IECEx BAS08.0001X
	EAC Ex: RU C-GB AA87.00198
	INMETRO: UL-BR 15.04.76X
	CNEX: CNX 15.1693X
	Ex II 2 GD
	Ex e IIC Gb
	Ex tb IIIC Db

Temperature range
–40°C to +85°C

IP Rating	Material
IP66	Nickel plated brass

DImensions



Part no.	Thread Size A	Nominal Conduit Size B (mm)	C	Cable Gland Dimensions (mm) D	E	L	H	CH1	CH2
EXPQM0303	M16	16.0	11.4	27.4	25.9	16.0	33.3	25.4	24.0
EXPQM0304	M20	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
EXPQA0304	1/2" NPT	16.0	11.4	33.2	26.6	18.0	43.5	30.0	24.0
EXPQA0404	1/2" NPT	21.0	15.8	38.8	31.0	16.0	43.5	35.0	28.0
EXPQA0505	3/4" NPT	28.0	19.0	49.3	42.1	16.0	50.0	44.5	38.0
EXPQA0606	1" NPT	34.0	26.4	55.4	46.5	18.0	51.0	50.0	42.0
EXPQA0707	1 1/4" NPT	42.0	32.9	77.6	59.8	18.0	67.5	70.0	54.0
EXPQA0808	1 1/2" NPT	54.0	43.9	93.1	77.6	16.0	70.0	84.0	70.0
EXPQA0909	2" NPT	63.0	56.0	91.8	91.8	16.0	54.6	84.0	84.0
EXPQA1010	2 1/2" NPT	80.0	67.5	104.0	104.0	16.0	52.6	95.3	95.3

Non-metallic nylon conduit system

EXPQ Series – Metallic fittings

Features and benefits:

- Manufactured in nickel plated brass
- Approved for use in Ex e applications for
- Zones 1, 2, 21 & 22
- Available in Metric & NPT thread
- EXPQ for use with unbraided nylon conduit
- EXBQ for use with over braided nylon conduit

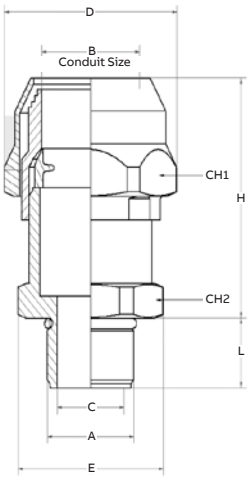
EXBQM / EXBQA Series - Nylon conduit fitting – for use with EXB and XESX conduits

Approvals & certifications	Conformity Conforms to:
	IEC EN 60079-0, 60079-7, 60079-31
	ATEX: Baseefa 08 ATEX 0003X
	IECEx: IECEx BAS08.0001X
	EAC Ex: RU C-GB AA87.00198
	INMETRO: UL-BR 15.04.76X
	CNEX: CNX 15.1693X
	Ex II 2 GD
	Ex e IIC Gb
	Ex tb IIIC Db

Temperature range
–40°C to +85°C

IP Rating	Material
IP66	Nickel plated brass

DImensions



Part no.	Thread Size A	Nominal Conduit Size B (mm)	C	Cable Gland Dimensions (mm) D	E	L	H	CH1	CH2
EXBQM0303	M16	16.0	11.4	27.4	25.9	16.0	33.3	25.4	24.0
EXBQM0304	M20	16.0	11.4	25.9	27.4	20.0	32.5	24.0	25.4
EXBQM0404	M20	21.0	15.8	30.2	30.2	20.0	31.5	28.0	28.0
EXBQM0505	M25	28.0	19.0	41.0	41.0	20.2	38.3	38.0	38.0
EXBQM0606	M32	34.0	26.4	45.4	48.1	24.2	40.0	42.0	44.5
EXBQM0707	M40	42.0	32.9	58.3	61.6	25.8	49.5	54.0	57.0
EXBQM0808	M50	54.0	40.7	75.6	75.6	26.1	48.0	70.0	70.0
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	1 1/4" NPT	42.0	32.9	77.6	59.8	25.8	70.0	70.0	54.0
EXBQA0808	1 1/2" NPT	54.0	40.7	93.1	77.6	26.1	70.0	84.0	70.0

Non-metallic nylon conduit system

Nylon fittings for XESX conduit

Features and benefits:

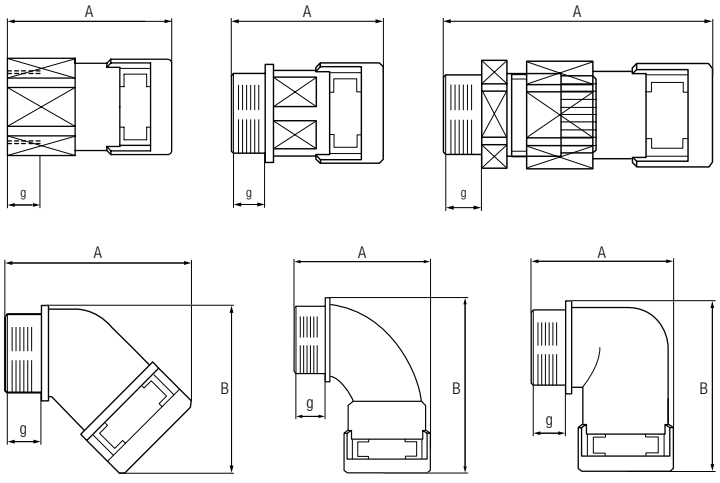
- For applications with high mechanical loads in explosion endangered areas classified as zones 1/2 and 21/22 (acc. to ATEX 137)
- For use at low temperatures
- Free from halogens, REACH + ROHS compliant
- No corrosion
- Excellent flexibility and high compression strength
- Multilayer material combination for improved product performance
- Vibration resistance

Approvals & certifications

Conformity
Conforms to:
EC Type examination certificate to: ATEX: SEV15ATEX0121 X
IECEx: IECEx BAS08.0001X/SEV 15.0009X
Ex eb IIC Gb
Ex tb IIIC Db

Safe operating temperature range
NW 10-12/12-16mm –5°C to +85°C
NW 17-48/21-54mm –20°C to + 85°C

IP test
IP68



g = Thread length A = Overall length A x B = External dimensions

Non-metallic nylon conduit system

Nylon fittings for XESX conduit

Type NENV Straight male fitting

Material: Anti-static Nylon 12 with nickel plated brass thread

Part no.	Metric Thread Size (mm)	Fits to Conduit Size (mm) NW	Fits to Conduit Size (mm) Metric	Thread Length (mm)	Overall Length (mm)
NENV0202	M12x1.5	10	12	10.0	40.0
NENV0203	M16x1.5	10	12	10.0	40.0
NENV0303	M16x1.5	12	16	10.0	43.0
NENV0304	M20x1.5	12	16	10.0	43.0
NENV0404	M20x1.5	17	20	10.0	51.0
NENV0405	M25x1.5	17	20	11.0	51.0
NENV0505	M25x1.5	23	25	11.0	52.0
NENV0506	M32x1.5	23	25	13.0	54.0
NENV0606	M32x1.5	29	32	13.0	56.0
NENV0607	M40x1.5	29	32	13.0	57.3
NENV0707	M40x1.5	36	40	13.0	71.4
NENV0708	M50x1.5	36	40	14.0	72.4
NENV0808	M50x1.5	48	50	14.0	72.4
NENV0809	M63x1.5	48	50	14.0	72.4

Type NEIR Straight female fitting

Material: Anti-static Nylon 12 with nickel plated brass thread

Part no.	Metric Thread Size (mm)	Fits to Conduit Size (mm) NW	Fits to Conduit Size (mm) Metric	Thread Length (mm)	Overall Length (mm)
NEIR0303	M16x1.5	12	16	9.0	41.0
NEIR0404	M20x1.5	17	20	10.0	50.0
NEIR0505	M25x1.5	23	25	10.0	56.0
NEIR0606	M32x1.5	29	32	11.0	55.5
NEIR0707	M40x1.5	36	40	13.0	71.0
NEIR0808	M50x1.5	48	50	15.0	73.0

Non-metallic nylon conduit system

Nylon fittings for XESX conduit

Type NENZ Straight male fitting with strain relief

Material: Anti-static Nylon 12 with nickel plated brass thread

Part no.	Metric Thread Size (mm)	Fits to Conduit Size (mm) NW	Metric	Terminal Range	Thread Length (mm)	Overall Length (mm)
NENZ0202S/P1	M16x1.5	10	12	4.0 – 6.5	5.0	48.5
NENZ0203S/P1	M16x1.5	10	12	4.0 – 6.5	6.0	49.5
NENZ0203S/P2	M16x1.5	10	12	5.0 – 8.0	6.0	49.5
NENZ0203S/P3	M16x1.5	10	12	6.5 – 9.5	6.0	49.5
NENZ0304S/P1	M20x1.5	12	16	4.0 – 6.5	6.5	54.0
NENZ0304S/P3	M20x1.5	12	16	6.5 – 9.5	6.5	54.0
NENZ0304S/P4	M20x1.5	12	16	7.0 – 10.5	6.5	54.0
NENZ0404S/P3	M20x1.5	17	20	6.5 – 9.5	6.5	60.0
NENZ0404S/P4	M20x1.5	17	20	7.0 – 10.5	6.5	60.0
NENZ0404S/P5	M20x1.5	17	20	9.0 – 13.0	6.5	60.0
NENZ0405S/P5	M25x1.5	17	20	9.0 – 13.0	7.5	61.5
NENZ0405S/P6	M25x1.5	17	20	11.5 – 15.5	7.5	61.5
NENZ0505S/P6	M25x1.5	23	25	11.5 – 15.5	7.5	72.5
NENZ0606S/P3	M32x1.5	29	32	17.0 – 20.5	8.0	73.0
NENZ0606S/P4	M32x1.5	29	32	20.0 – 25.0	8.0	73.0
NENZ0607S/P5	M40x1.5	29	32	24.0 – 28.0	8.0	73.0
NENZ0707S/P1	M40x1.5	36	40	20.0 – 25.0	9.0	87.0
NENZ0707S/P2	M40x1.5	36	40	24.0 – 28.0	9.0	87.0
NENZ0708S/P3	M50x1.5	36	40	32.0 – 36.0	10.0	89.5
NENZ0808S/P2	M50x1.5	48	50	32.0 – 36.0	10.0	92.0
NENZ0808S/P3	M50x1.5	48	50	36.0 – 40.0	10.0	92.0

*Other clamping ranges and multiple hole sealing inserts available on request.

Type NEAV 45° Elbow fitting

Material: Anti-static Nylon 12 with nickel plated brass thread

Part no.	Metric Thread Size (mm)	Fits to Conduit Size (mm) NW	Metric	Thread Length (mm)	External Dimensions (mm)
NEAV0303	M16x1.5	12	16	10.0	53.0 x 40.5
NEAV0404	M20x1.5	17	20	10.0	60.5 x 51.5
NEAV0505	M25x1.5	23	25	11.0	70.0 x 60.5
NEAV0606	M32x1.5	29	32	13.0	77.0 x 68.0
NEAV0707	M40x1.5	36	40	13.0	94.0 x 87.5
NEAV0808	M50x1.5	48	50	14.0	102.0 x 101.0
NEAV0809	M63x1.5	48	50	14.0	102.0 x 104.0

Non-metallic nylon conduit system

Nylon fittings for XESX conduit

Type NEBV 90° Curved elbow fitting

Material: Anti-static Nylon 12 with nickel plated brass thread

Part no.	Metric Thread Size (mm)	Fits to Conduit Size (mm) NW	Metric	Thread Length (mm)	External Dimensions (mm)
NEBV0404	M20x1.5	17	20	10.0	51.0 x 73.0
NEBV0505	M25x1.5	23	25	11.0	62.5 x 85.0
NEBV0606	M32x1.5	29	32	13.0	74.0 x 94.5
NEBV0707	M40x1.5	36	40	13.0	86.5 x 123.0
NEBV0808	M50x1.5	48	50	14.0	100.5 x 135.0
NEBV0809	M63x1.5	48	50	14.0	100.5 x 138.0

Type NEWV 90° elbow fitting

Material: Anti-static Nylon 12 with nickel plated brass thread

Part no.	Metric Thread Size (mm)	Fits to Conduit Size (mm) NW	Metric	Thread Length (mm)	External Dimensions (mm)
NEWV0303	M16x1.5	12	16	10.0	42.0 x 46.5

Type BENRRE Corrugated conduit to rigid metal pipe connection

Material: Anti-static Nylon 12, stainless steel jubilee clip

Part no.	Fits to Conduit Size (mm) NW	Metric	Steel Tube Metric (mm)	Inside Diameter (mm)	Overall Length (mm)
BENRRE030324	12	16	M16	16.0	54.0
BENRRE040428	17	20	M20	20.0	65.0
BENRRE050532	23	25	M25	25.0	71.0
BENRRE060644	29	32	M32	32.0	71.0
BENRRE070750	36	40	M40	40.0	90.0
BENRRE080865	48	50	M50	50.0	90.0

Non-metallic nylon conduit system

Nylon fittings for XESX conduit

Type BESGR Splice connector

Material: Anti-static Nylon 12

Part no.	Fits to Conduit Size (mm) NW	Metric	Inside Diameter (mm)	Overall Length (mm)
BESGR0303	12	16	23.5	66.0
BESGR0404	17	20	29.5	87.0
BESGR0505	23	25	37.0	103.0
BESGR0606	29	32	44.0	100.0
BESGR0707	36	40	53.5	130.0
BESGR0808	48	50	66.0	133.0

Type BEYR 'Y' Piece

Material: Anti-static Nylon 12

Part no.	1 x Conduit Size (mm) NW	Metric	2 x Conduit Size (mm) NW	Metric
BEYR030202	12	16	10	12
BEYR040303	17	20	12	16
BEYR050404	23	25	17	20
BEYR060505	29	32	23	25
BEYR070606	36	40	29	32
BEYR080707	48	50	36	40

*Sizes can be adapted with EAVR conduit adapters to fit smaller conduit dimensions.

Type BETR 'T' Piece

Material: Anti-static Nylon 12

Part no.	2 x Conduit Size (mm) NW	Metric
BETR020202	10	12
BETR030303	12	16
BETR040404	17	20
BETR050505	23	25
BETR060606	29	32
BETR070707	36	40
BETR080808	48	50

*Sizes can be adapted with EAVR conduit adapters to fit smaller conduit dimensions.

Non-metallic nylon conduit system

Nylon fittings for XESX conduit

Type BESGR Conduit adapter

Material: Anti-static Nylon 12

	Fits into Fitting for Conduit Size (mm)		Fits to Conduit Size (mm)		
Part no.	NW	Metric	NW	Metric	Overall Length (mm)
BEAVR03/02	12	16	10	12	46.0
BEAVR04/03	17	20	12	16	54.0
BEAVR05/04	23	25	17	20	62.0
BEAVR06/05	29	32	23	25	64.0
BEAVR07/06	36	40	29	32	81.0
BEAVR08/07	48	50	36	40	88.5

Type BEH Conduit clip

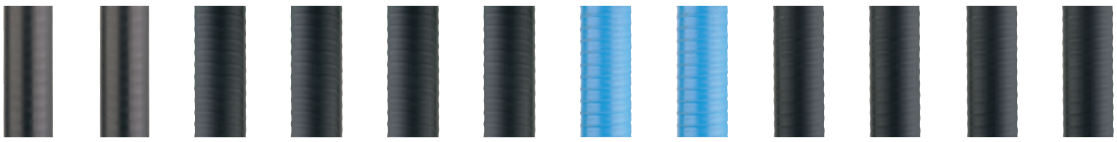
Material: Anti-static Nylon 12

	Fits to Conduit Size (mm)			
Part no.	NW	Metric	Width x Height x Depth (mm)	Fixing Screw
BEH02	10	12	20.5 x 24.5 x 20.0	1 x M5
BEH03	12	16	24.0 x 27.0 x 20.0	1 x M5
BEH04	17	20	30.0 x 34.0 x 20.0	1 x M6
BEH05	23	25	38.5 x 42.0 x 20.0	1 x M6
BEH06	29	32	45.5 x 48.0 x 20.0	1 x M6
BEH07	36	40	55.5 x 56.0 x 20.0	1 x M6
BEH08	48	50	67.5 x 68.0 x 20.0	1 x M6

Flexible Liquid tight conduit systems for hazardous areas

Conduit fittings - Selection guide

Selection guide



											Liquid tight conduit	
Type	**EXLB**	**EXSB**	**EXLT**	**EXST**	**EXLH**	**EXSH**	**EXLLH**	**EXSLH**	**EXBBT**	**EXLUB**	**EXLHC**	**EXSHC**
Approvals												
ATEX	•	•	•	•	•	•	•	•	•	•	•	•
IEC / IECEx	•	•	•	•	•	•	•	•	•	•	•	•
CSA	–	–	–	–	–	–	–	–	–	–	–	–
UL	–	–	–	–	–	–	–	–	–	–	–	–
EAC Ex	–	–	–	–	–	–	–	–	–	–	–	–
INMETRO	–	–	–	–	–	–	–	–	–	–	–	–
CNEX	–	–	–	–	–	–	–	–	–	–	–	–
Protection Type												
Ex e	–	–	–	–	–	–	–	–	–	–	–	–
Ex d	–	–	–	–	–	–	–	–	–	–	–	–
Ex de	–	–	–	–	–	–	–	–	–	–	–	–
Ex tb	•	•	•	•	–	–	–	–	–	•	–	–
Class / Division												
Class I / Div 1	–	–	–	–	–	–	–	–	–	–	–	–
Class I / Div 2	–	–	–	–	–	–	–	–	–	–	–	–
Class II / Div 1	–	–	–	–	–	–	–	–	–	–	–	–
Class II / Div 2	–	–	–	–	–	–	–	–	–	–	–	–
Page No.	**38**	**38**	**39**	**39**	**40**	**40**	**41**	**41**	**42**	**42**	**43**	**43**







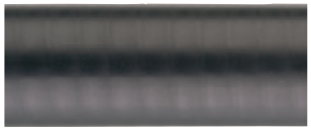
	Liquid tight conduit fittings & glands						
	G1 straight	G1 90˚ elbow	Universal	EXQ	EXS 90˚ elbow	EXR 45˚ elbow	XP Flex™ range
	•	•	•	•	•	•	–
	•	•	•	•	•	•	–
	•	•	•	•	•	•	•
	–	–	–	–	–	–	•
	•	•	•	•	•	•	–
	•	•	•	•	•	•	–
	•	•	•	•	•	•	–
	–	–	–	–	–	–	–
	–	–	–	–	–	–	–
	•	•	•	–	–	–	–
	•	•	•	•	•	•	–
	–	–	•	–	–	–	–
	•	•	•	–	–	–	–
	–	–	•	–	–	–	–
	•	•	–	–	–	–	–
	44	46	47	48	49	50	51

Liquid tight conduit

EXLB & EXSB Series

EXLB Series – General oil resistant liquid tight conduit - Galvanised steel core

Materials: Galvanised steel core with a general purpose oil resistant coating **/ Colour:** Black



Part no.	Conduit Size Metric (mm)	US Trade Size (in.)	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

Approvals & certifications	Conformity Conforms to:
	Certification standard: IEC 61386
	ATEX: Baseefa 15 ATEX 0175X
	IECEx: IECEx BAS15.0130X
	Ex II 2 GD
	Ex eb IIC Gb
	Ex tb IIIC Db

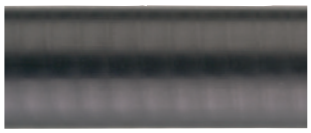
Temperature range
Static temp: -25°C to +105°C
Flexing temp: -5°C to +105°C
Certified temp: -20°C to +70°C

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

Special characteristics
Flame retardant PVC covering

EXSB Series – General oil resistant liquid tight conduit - Stainless steel core

Materials: Stainless steel 316 core with a general purpose oil resistant coating **/ Colour:** Black



Part no.	Conduit Size Metric (mm)	US Trade Size (in.)	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

Approvals & certifications	Conformity Conforms to:
	Certification standard: IEC 61386
	ATEX: Baseefa 15 ATEX 0175X
	IECEx: IECEx BAS15.0130X
	Ex II 2 GD
	Ex eb IIC Gb
	Ex tb IIIC Db

Temperature range
Static temp: -25°C to +105°C
Flexing temp: -5°C to +105°C
Certified temp: -20°C to +70°C

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

Special characteristics
Flame retardant PVC covering

Liquid tight conduit

EXLT & EXST Series

EXLT Series – Low fire hazard liquid tight conduit - Galvanised steel core

Materials: Galvanised steel core with a LFH coating **/ Colour:** Black

Part no.	Conduit Size Metric (mm)	US Trade Size (in.)	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

Approvals & certifications	Conformity Conforms to:
	Certification standard: IEC 61386
	LUL fully compliant (E1042A6)
	MOD to NES 518: Issue 3 DEF STAN 61-12 (Part 31) Issue 1
	ATEX: Baseefa 15 ATEX 0175X
	IECEx: IECEx BAS15.0130X
	Ex II 2 GD
	Ex eb IIC Gb
	Ex tb IIIC Db

Temperature range
Static temp: -25°C to +90°C
Flexing temp: -5°C to +90°C
Certified temp: -20°C to +70°C

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

Special characteristics
Limited fire hazard, zero halogen (BS6425 Pt 1)

EXST Series – Low fire hazard liquid tight conduit - Galvanised steel core

Materials: Galvanised steel core with a LFH coating **/ Colour:** Black

Part no.	Conduit Size Metric (mm)	US Trade Size (in.)	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

Approvals & certifications	Conformity Conforms to:
	Certification standard: IEC 61386
	LUL fully compliant (E1042A6)
	MOD to NES 518: Issue 3 DEF STAN 61-12 (Part 31) Issue 1
	ATEX: Baseefa 15 ATEX 0175X
	IECEx: IECEx BAS15.0130X
	Ex II 2 GD
	Ex eb IIC Gb
	Ex tb IIIC Db

Temperature range
Static temp: -25°C to +90°C
Flexing temp: -5°C to +90°C
Certified temp: -20°C to +70°C

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

Special characteristics
Limited fire hazard, zero halogen (BS6425 Pt 1)

Liquid tight conduit

EXLH & EXSH Series

EXLH Series – High temperature liquid tight conduit - Galvanised steel core

Materials: Galvanised steel core with a high temperature resistant coating **/ Colour:** Black

Part no.	Conduit Size Metric (mm)	US Trade Size (in.)	Inside diameter (mm)	Coil lengths (m)
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

Approvals & certifications

Conformity
Conforms to:
Certification standard: IEC 61386

Temperature range
Static temp: -50°C to +130°C
Flexing temp: -5°C to +90°C

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

Special characteristics
Flame resistance: UL94 V2
Chemical and oil resistant

EXSH Series – High temperature liquid tight conduit - Stainless steel core

Materials: Stainless steel 316 core with a high temperature resistant coating **/ Colour:** Black

Part no.	Conduit Size Metric (mm)	US Trade Size (in.)	Inside diameter (mm)	Coil lengths (m)
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

Approvals & certifications

Conformity
Conforms to:
Certification standard: IEC 61386

Temperature range
Static temp: -50°C to +130°C
Flexing temp: -5°C to +90°C

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

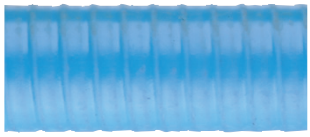
Special characteristics
Flame resistance: UL94 V2
Chemical and oil resistant

Liquid tight conduit

EXLLH & EXSLH Series

EXLLH Series – High temperature liquid tight conduit - Galvanised steel core

Materials: Galvanised steel core with a high temperature resistant coating **/ Colour:** Blue



Part no.	Conduit Size Metric (mm)	US Trade Size (in.)	Inside diameter (mm)	Coil lengths (m)
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

Approvals & certifications

Conformity
Conforms to:
Certification standard: IEC 61386

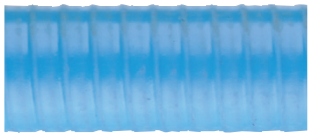
Temperature range
Static temp: -50°C to +130°C
Flexing temp: -5°C to +90°C

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

Special characteristics
Flame resistance: UL94 V2
Chemical and oil resistant

EXSLH Series – High temperature liquid tight conduit - Stainless steel core

Materials: Stainless steel 316 core with a high temperature resistant coating **/ Colour:** Blue



Part no.	Conduit Size Metric (mm)	US Trade Size (in.)	Inside diameter (mm)	Coil lengths (m)
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

Approvals & certifications

Conformity
Conforms to:
Certification standard: IEC 61386

Temperature range
Static temp: -50°C to +130°C
Flexing temp: -5°C to +90°C

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

Special characteristics
Flame resistance: UL94 V2
Chemical and oil resistant

Liquid tight conduit

EXBBT & EXSBBT Series

EXBBT Series – Low fire hazard with EMC protection liquid tight conduit - Galvanised steel core

Materials: Galvanised steel core with a galvanised steel EMC shield and LFH covering **/ Colour:** Black

Part no.	Conduit Size Metric (mm)	US Trade Size (in.)	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

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

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

Temperature range
Static temp: -50°C to +90°C
Flexing temp: -5°C to +90°C

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

EXLUB Series – General oil resistant liquid tight conduit - Galvanised steel core

Materials: Galvanised steel core with a general purpose oil resistant coating **/ Colour:** Black

Part no.	Conduit Size Metric (mm)	US Trade Size (in.)	Inside diameter (mm)	Coil lengths (m)
EXLUB03*	16	3/8	12.5	10/30
EXLUB04*	20	1/2	16.0	10/30
EXLUB05*	25	3/4	21.0	10/30
EXLUB06*	32	1	26.4	10/20
EXLUB07*	40	1 1/4	35.3	10/20
EXLUB08*	50	1 1/2	40.4	10/20
EXLUB09*	63	2	51.6	10/20

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

Approvals & certifications	Conformity Conforms to:
	Certification standard: IEC 61386
	ATEX: Baseefa 15 ATEX 0175X
	IECEx: IECEx UL-E76358
	Ex II 2 GD
	Ex eb IIC Gb
	tb IIIC Db

Temperature range
Static temp: -25°C to +105°C
Flexing temp: -5°C to +105°C
Certified temp: -20°C to +70°C

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

Special characteristics
Flame retardant PVC covering

Liquid tight conduit

EXLHC & EXSHC Series

EXLHC Series – High temperature, highly flexible liquid tight conduit - Galvanised steel core

Materials: Galvanised steel core with a high temperature, highly flexible coating **/ Colour:** Black

Part no.	Conduit Size Metric (mm)	US Trade Size (in.)	Inside diameter (mm)	Coil lengths (m)
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

Approvals & certifications	Conformity Conforms to:
	Certification standard: IEC 61386
	ATEX / IECEx: RU-135398

Temperature range
Static temp: -65°C to +150°C
Flexing temp: -45°C to +135°C
Certified temp: -35°C to +105°C

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

Special characteristics
High flexibility
High temperature

EXSHC Series – High temperature, highly flexible liquid tight conduit - Stainless steel core

Materials: Stainless steel core with a high temperature, highly flexible coating **/ Colour:** Black

Part no.	Conduit Size Metric (mm)	US Trade Size (in.)	Inside diameter (mm)	Coil lengths (m)
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

Approvals & certifications	Conformity Conforms to:
	Certification standard: IEC 61386
	ATEX / IECEx: RU-135398

Temperature range
Static temp: -65°C to +150°C
Flexing temp: -45°C to +135°C
Certified temp: -35°C to +105°C

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

Special characteristics
High flexibility
High temperature

Liquid tight hazardous area flameproof glands

G1 Series – Conduit fitting

Features and benefits:

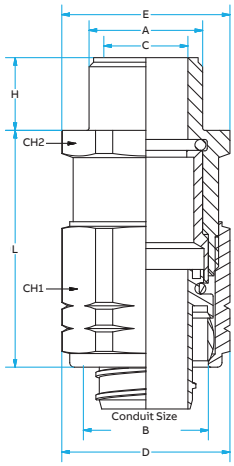
- Constructed from either brass or stainless steel with an epoxy resin barrier the Group I flame-proof gland is a high specification product, ideal for all hazardous area applications

HAM G1 conduit fitting – Liquid tight hazardous area flameproof gland

Approvals & certifications	Conformity Conforms to:
	IEC EN 60079-0, 60079-1, 60079-7,
	ATEX: Sira 09 ATEX 1231X
	IECEx: IECEx SIR09.0103X
	CSA: CSA File No: 060582
	INMETRO: UL-BR 15.0330X
	CNEX: CNEX 15.1648X
	EAC Ex: RU C-GB.AA87.00198
	Ex I M2/II 2 GD
	Ex de I Mb
	Ex de IIC Gb
	Ex tb IIIC Db
	Class I Div 2 ABCD
	Class II Div 1 EFG

Temperature range	IP Rating	Material
–60ºC to +130ºC	IP66	Nickel plated brass, Brass or Stainless steel 316

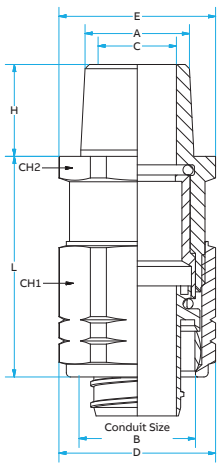
DImensions - Metric thread



Part no. Nickel plated brass	Metric Thread Size A (mm)	Conduit Size B (mm)	Cable Gland Dimensions (mm) C	D	E	L	H	CH1	CH2
HAMM0304G1	M16	16.0	10.0	34.0	31.0	15.0	50.0	32.0	28.6
HAMM0404G1	M20	20.0	12.5	34.0	31.0	15.0	50.0	32.0	28.6
HAMM0505G1	M25	25.0	18.4	37.0	37.0	15.0	50.0	34.0 (34.9 in SS)	34.0
HAMM0606G1	M32	32.0	24.7	45.0	45.0	15.0	50.0	42.0 (42.5 in SS)	42.0
HAMM0707G1	M40	40.0	29.7	57.0	54.0	15.0	57.0	52.0	50.0
HAMM0808G1	M50	50.0	41.7	64.0	64.0	15.0	58.0	60.0	60.0
HAMM0909G1	M63	63.0	51.7	78.0	76.2	15.0	70.6	69.7	70.0

*For Brass version, remove last M from the reference, e.g. HAM0304G1 for Metric / HAA0304G1 for NPTplete part number, e.g. 10 metres = EXBBT0510
** For Stainless Steel version, replace last M from the reference with an S, e.g. HAMS0304G1 for Metric / HAAS0304G1 for NPT

DImensions - NPT thread



Part no. Nickel plated brass	NPT Thread Size A (in.)	Conduit Size B (mm)	Cable Gland Dimensions (mm)						
			C	D	E	L	H	CH1	CH2
HAAM0304G1	1/2	16.0	10.0	34.0	31.0	20.2	50.0	32.0	28.6
HAAM0404G1	1/2	20.0	12.5	34.0	31.0	20.2	50.0	32.0	28.6
HAAM0505G1	3/4	25.0	18.4	37.0	37.0	20.2	50.0	34.0 (34.9 in SS)	34.0
HAAM0606G1	1	32.0	24.7	45.0	45.0	25.0	50.0	42.0 (42.5 in SS)	42.0
HAAM0707G1	1 1/4	40.0	29.7	57.0	54.0	25.6	57.0	52.0	50.0
HAAM0808G1	1 1/2	50.0	41.7	64.0	64.0	26.0	58.0	60.0	60.0
HAAM0909G1	2	63.0	51.7	78.0	76.2	27.0	70.6	69.7	70.0

*For Brass version, remove last M from the reference, e.g. HAM0304G1 for Metric / HAA0304G1 for NPTplete part number, e.g. 10 metres = EXBBT0510
** For Stainless Steel version, replace last M from the reference with an S, e.g. HAMS0304G1 for Metric / HAAS0304G1 for NPT

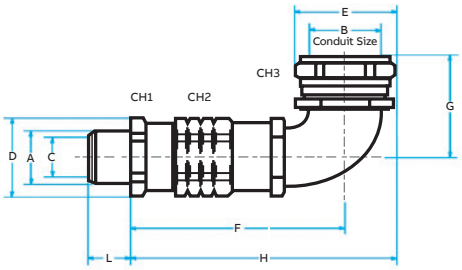
Sealing compounds

Part No.	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)

Liquid tight hazardous area flameproof glands

G1 Series – 90˚ elbow conduit fitting



HAM G1 90˚ Elbow conduit fitting – Metric thread dimensions

Materials: Nickel plated brass or stainless steel 316

Part no. Nickel plated brass	Metric Thread Size A (mm)	Conduit Size B (mm)	Cable Gland Dimensions (mm)									
			C	D	E	F	G	H	L	CH1	CH2	CH3
HAMM0304E	M16	16.0	10.0	31.7	35.5	94.0	35.0	90.0	15.0	28.6	32.0	32.0
HAMM0404E	M20	21.0	12.5	31.7	35.5	95.0	335.0	90.0	15.0	28.6	32.0	32.0
HAMM0505E	M25	28.0	18.4	37.7	38.7	101.0	36.0	104.0	15.0	34.0	34.0 (34.9 in SS)	34.0 (34.9 in SS)
HAMM0606E	M32	34.0	24.7	46.5	46.5	109.0	40.0	114.0	15.0	42.0	42.0 (42.5 in SS)	42.0 (42.5 in SS)
HAMM0707E	M40	42.0	29.7	55.4	57.6	115.0	48.0	180.0	15.0	50.0	52.0	52.0
HAMM0808E	M50	54.0	41.7	66.5	66.5	123.0	56.0	146.0	15.0	60.0	69.7	60.0

*For Brass version, remove last M from the reference, e.g. HAM0304E for Metric / HAA0304E for NP
** For Stainless Steel version, replace last M from the reference with an S, e.g. HAMS0304E for Metric / HAAS0304E for NPT

HAA G1 90˚ Elbow conduit fitting – NPT thread dimensions

Materials: Nickel plated brass or stainless steel 316

Part no. Nickel plated brass	NPT Thread Size A (mm)	Conduit Size B (mm)	Cable Gland Dimensions (mm)									
			C	D	E	F	G	H	L	CH1	CH2	CH3
HAAM0304E	1/2	16.0	10.0	31.7	35.5	98.0	35.0	90.0	20.2	28.6	32.0	32.0
HAAM0404E	1/2	21.0	12.5	31.7	35.5	98.0	335.0	90.0	20.2	28.6	32.0	32.0
HAAM0505E	3/4	28.0	18.4	37.7	38.7	103.4	36.0	104.0	20.2	34.0	34.0 (34.9 in SS)	34.0 (34.9 in SS)
HAAM0606E	1	34.0	24.7	46.5	46.5	103.4	40.0	114.0	25.0	42.0	42.0 (42.5 in SS)	42.0 (42.5 in SS)
HAAM0707E	1 1/4	42.0	29.7	55.4	57.6	120.0	48.0	180.0	25.6	50.0	52.0	52.0
HAAM0808E	1 1/2	54.0	41.7	66.5	66.5	123.0	56.0	146.0	26.0	60.0	69.7	60.0

*For Brass version, remove last M from the reference, e.g. HAM0304E for Metric / HAA0304E for NP
** For Stainless Steel version, replace last M from the reference with an S, e.g. HAMS0304E for Metric / HAAS0304E for NPT

Sealing compounds

Part No.	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)

Liquid tight hazardous area flameproof glands

Universal fitting

HAM G1 conduit fitting – Liquid tight hazardous area flameproof gland

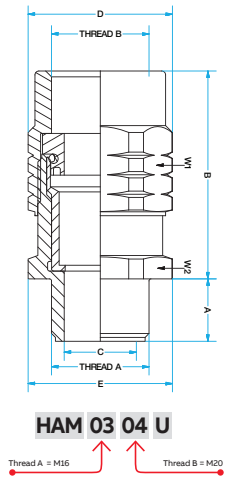
Features and benefits:

- 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

Approvals & certifications	Conformity Conforms to:
	IEC EN 60079-0, 60079-1, 60079-7, 60079-31
	ATEX: Sira 09 ATEX 1231X
	IECEx: IECEx SIR09.0103X
	CSA: CSA File No: 060582
	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 range
–60ºC to +130˚C

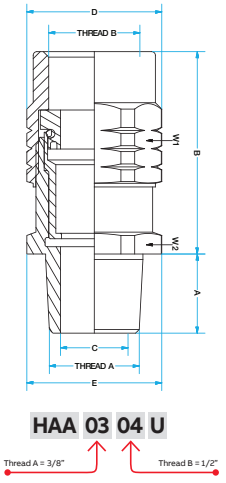
IP Rating	Material
IP66	Nickel plated brass, Brass or Stainless steel

Product code	Part no.	Male Thread Size Metric (mm)	Female Thread Size Metric (mm)
	Nickel Plated		
	HAMM0304U	20	16
	HAMM0404U	20	20
	HAMM0505U	25	25
	HAMM0606U	32	32
	HAMM0707U	40	40
	HAMM0808U	50	50
	HAMM0909U	63	63
	Stainless Steel		
	HAMS0304U	20	16
	HAMS0404U	20	20
	HAMS0505U	25	25
	HAMS0606U	32	32
	HAMS0707U	40	40
	HAMS0808U	50	50
	HAMS0909U	63	63

HAM 03 04 U

Thread A = M16 — Thread B = M20

Note. For use with rigid conduit or other fittings

Product code	Part no.	Male Thread Size NPT (mm)	Female Thread Size NPT (mm)
	Nickel Plated		
	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
	Stainless Steel		
	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

HAA 03 04 U

Thread A = 3/8" — Thread B = 1/2"

Note. For use with rigid conduit or other fittings

Sealing compounds

Part No.	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)

Liquid tight hazardous area flameproof glands

EXQ Series – Straight conduit fitting

Features and benefits:

- Nickel plated brass
- Brass conduit seal
- Silicone O'ring thread seal
- Nylon anti-abrasion cable protector
- Ex eb Ex tb approved
- Suitable for use in zones 1, 2, 21 and 22

EXQ Series – Straight conduit fitting

Approvals & certifications	Conformity Conforms to:
	IEC EN 60079-0, 60079-1, 60079-7, 60079-31, IEC 61386 Compliant
	For use with Ex LT Conduits
	Baseefa 15 ATEX 0175X, IECEx BAS
	RU E13598
	Ex II 2 GD
	Ex eb IIC Gb
	Ex tb IIIC Db

Temperature range
EX*HC -35°C to +105°C
EX*T -20°C to +70°C
EX*B -20°C to +70°C
EX*UB -20°C to +70°C

IP Rating	Material
IP66	Nickel plated brass, Brass or Stainless steel 316

DImensions - Metric thread

	Conduit Size				
Part no.	Metric (mm)	US Trade (in.)	Thread Metric	Length (mm)	Across Flats (mm)
EXQM0303	16	3/8	M16x1.5	21.0	25.4
EXQM0304	16	3/8	M20x1.5	21.0	25.4
EXQM0404	20	1/2	M20x1.5	22.0	28.5
EXQM0505	25	3/4	M25x1.5	25.0	35.0
EXQM0606	32	1	M32x1.5	30.0	42.0
EXQM0707	40	1-1/4	M40x1.5	38.0	52.0
EXQM0808	50	1-1/2	M50x1.5	41.0	60.0
EXQM0909	63	2	M63x1.5	46.0	70.0

*Fittings also available in Stainless Steel
**Compatible with: EX*B, EX*T, EX*HC, EX*UB Conduits

DImensions - NPT thread

	Conduit Size				
Part no.	Metric (mm)	US Trade (in.)	Thread Metric	Length (mm)	Across Flats (mm)
EXQA0304	16	1/2	1/2	21.0	25.4
EXQA0404	20	1/2	1/2	22.0	28.5
EXQA0505	25	3/4	3/4	25.0	35.0
EXQA0606	32	1	1	30.0	42.0
EXQA0707	40	1-1/4	1-1/4	38.0	52.0
EXQA0808	50	1-1/2	1-1/2	41.0	60.0
EXQA0909	63	2	2	46.0	70.0

*Fittings also available in Stainless Steel
**Compatible with: EX*B, EX*T, EX*HC, EX*UB Conduits

Liquid tight hazardous area flameproof glands

EXS Series – 90˚ elbow fitting

Features and benefits:

- Nickel plated brass
- Brass conduit seal
- Silicone O'ring thread seal
- Nylon anti-abrasion cable protector
- Ex eb Ex tb approved
- Suitable for use in zones 1, 2, 21 and 22

EXS Series – 90˚ elbow conduit fitting

Approvals & certifications	Conformity Conforms to:
	IEC EN 60079-0, 60079-7, 60079-31, IEC 61386 Compliant
	For use with Ex LT Conduits
	Baseefa 15 ATEX 0175X, IECEx BAS 15.0130X
	RU E13598
	Ex II 2 GD
	Ex eb IIC Gb
	Ex tb IIIC Db

Temperature range
EX*HC -35°C to +105°C
EX*T -20°C to +70°C
EX*B -20°C to +70°C
EX*UB -20°C to +70°C

IP Rating	Material
IP66	Nickel plated brass, Brass or Stainless steel 316

DImensions - Metric thread

	Conduit Size				
Part no.	Metric (mm)	US Trade (in.)	Thread Metric	Length (mm)	Across Flats (mm)
EXSM0303	16	3/8	M16x1.5	48.0	25.4
EXSM0304	16	3/8	M20x1.5	48.0	25.4
EXSM0404	20	1/2	M20x1.5	53.7	28.5
EXSM0505	25	3/4	M25x1.5	63.7	35.0
EXSM0606	32	1	M32x1.5	74.4	42.0
EXSM0707	40	1-1/4	M40x1.5	88.4	52.0
EXSM0808	50	1-1/2	M50x1.5	99.8	60.0
EXSM0909	63	2	M63x1.5	120.9	70.0

*Fittings also available in Stainless Steel
**Compatible with: EX*B, EX*T, EX*HC, EX*UB Conduits

DImensions - NPT thread

	Conduit Size				
Part no.	Metric (mm)	US Trade (in.)	Thread Metric	Length (mm)	Across Flats (mm)
EXSA0304	16	1/2	1/2	21.0	25.4
EXSA0404	20	1/2	1/2	22.0	28.5
EXSA0505	25	3/4	3/4	25.0	35.0
EXSA0606	32	1	1	30.0	42.0
EXSA0707	40	1-1/4	1-1/4	38.0	52.0
EXSA0808	50	1-1/2	1-1/2	41.0	60.0
EXSA0909	63	2	2	46.0	70.0

*Fittings also available in Stainless Steel
**Compatible with: EX*B, EX*T, EX*HC, EX*UB Conduits

Liquid tight hazardous area flameproof glands

EXR Series – 45˚ Elbow conduit fitting

Features and benefits:

- Nickel plated brass
- Brass conduit seal
- Silicone O'ring thread seal
- Nylon anti-abrasion cable protector
- Ex eb Ex tb approved
- Suitable for use in zones 1, 2, 21 and 22

EXR Series – 45˚ elbow conduit fitting

Approvals & certifications	Conformity Conforms to:
	IEC EN 60079-0, 60079-7, 60079-31, IEC 61386 Compliant
	For use with Ex LT Conduits
	Baseefa 15 ATEX 0175X, IECEx BAS 15.0130X
	RU E13598
	Ex II 2 GD
	Ex eb IIC Gb
	Ex tb IIIC Db

Temperature range
EX*HC -35°C to +105°C
EX*T -20°C to +70°C
EX*B -20°C to +70°C
EX*UB -20°C to +70°C

IP Rating	Material
IP66	Nickel plated brass, Brass or Stainless steel 316

DImensions - Metric thread

	Conduit Size				
Part no.	Metric (mm)	US Trade (in.)	Thread Metric	Length (mm)	Across Flats (mm)
EXRM0303	16	3/8	M16x1.5	54.0	25.4
EXRM0304	16	3/8	M20x1.5	55.0	25.4
EXRM0404	20	1/2	M20x1.5	58.0	28.5
EXRM0505	25	3/4	M25x1.5	65.6	35.0
EXRM0606	32	1	M32x1.5	75.0	42.0
EXRM0707	40	1-1/4	M40x1.5	93.8	52.0
EXRM0808	50	1-1/2	M50x1.5	106.5	60.0
EXRM0909	63	2	M63x1.5	125.0	70.0

*Fittings also available in Stainless Steel
**Compatible with: EX*B, EX*T, EX*HC, EX*UB Conduits

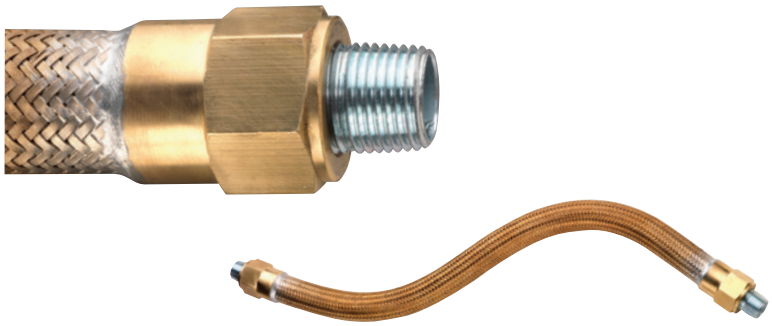
DImensions - NPT thread

	Conduit Size				
Part no.	Metric (mm)	US Trade (in.)	Thread Metric	Length (mm)	Across Flats (mm)
EXRA0304	16	1/2	1/2	55.0	25.4
EXRA0404	20	1/2	1/2	58.0	28.5
EXRA0505	25	3/4	3/4	65.6	35.0
EXRA0606	32	1	1	85.0	42.0
EXRA0707	40	1-1/4	1-1/4	93.8	52.0
EXRA0808	50	1-1/2	1-1/2	106.5	60.0
EXRA0909	63	2	2	125.0	70.0

*Fittings also available in Stainless Steel
**Compatible with: EX*B, EX*T, EX*HC, EX*UB Conduits

Explosion-proof flexible couplings

XP Flex™ Series



Features and benefits:

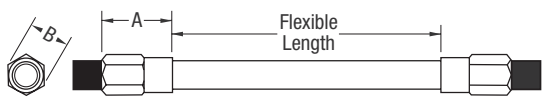
- UL listed for use in hazardous and wet locations
- Corrosion-resistant – ideal for washdown areas
- Flexible bronze construction with arc-resistant inner sleeve and brass fittings
- Terminated with two threaded female end fittings and male close nipples
- No bonding jumper required

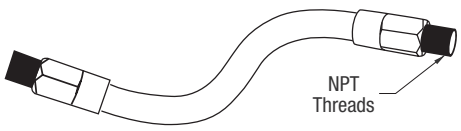
XP Flex™ Series

Approvals & certifications	Conformity Conforms to:	Material
c UL us CSA	0.5” and 0.75” hub sizes: Class I Div 1 & 2 ABCD	Bronze construction with brass fittings
	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 - Metric thread

Part no.	NPT Thread Size (in.)	Flexible Length (mm)	Dimensions (mm) A	Dimensions (mm) B	Bend Radius
XPLFL16	1/2	150	39.1	36.6	
XPLFL18	1/2	200	39.1	36.6	
XPLFL110	1/2	250	39.1	36.6	
XPLFL112	1/2	300	39.1	36.6	
XPLFL115	1/2	380	39.1	36.6	
XPLFL118	1/2	460	39.1	36.6	
XPLFL124	1/2	610	39.1	36.6	
XPLFL212	3/4	300	40.6	47.5	
XPLFL215	3/4	380	40.6	47.5	
XPLFL218	3/4	460	40.6	47.5	
XPLFL224	3/4	610	40.6	47.5	
XPLFL236	3/4	915	40.6	47.5	
XPLFL318	1	460	50.08	58.7	





Hazardous area
Cable glands

ABB products protect critical data and power cables in hazardous areas onshore and offshore.

—
01 C1 Series
—
02 ISR Series
—
03 STEX Series

Whether it is data cables from a gas detector or the cable protection on a power transmission unit, ABB hazardous area cable glands are designed and manufactured to meet the demands of rigorous and arduous operating environments in addition to ATEX and IECEx standards.

ABB's hazardous area cable glands are suitable for use with a range of cable types on applications such as:

- Skids
- Control boxes
- Motors
- Lighting

—
Product examples

Cable type	Standard gland	Barrier gland
Non armored	**EXCG** (Non-metallic)	**C4** Series
	C2 Series	
	ISR (Mechanical grip)	
	C3 Series	
Wire armored	**C1 Series** (Double compression)	**C5** Series
MC armored	**ST**	**STX**
	STE (High range)	
EMC	**C6 Series**	
Flat	**C2F Series** (Heat trace)	
	C6F Series (Heat trace)	

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01

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02

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03

HAZARDOUS AREA CABLE GLANDS

ABB hazardous area cable glands are designed and manufactured to meet the demands of rigorous and arduous operating environments.

Cable glands for hazardous areas

Selection guide

Selection guide

						Non-armored cable types		Armored cable types	
Type	**EXCG**	**C2/C2F**	**C3**	**C6/C6F**	**C4**	**ISR**	**TCF**	**C1**	**C5**
General									
Commercial Building	–	–	–	–	–	•	•	–	–
Residential Building	–	–	–	–	–	–	•	–	–
Industrial MRO	–	–	–	–	–	•	•	•	–
Low Ingress	–	–	–	–	–	–	–	–	–
OEM									
General Applications	•	–	–	–	–	–	•	–	–
Industrial Machinery	•	•	–	–	–	•	•	•	–
Commerical Machinery	–	–	–	–	–	•	–	–	–
Panel Building	•	•	–	–	–	–	•	–	–
Lighting	•	•	–	–	–	–	–	–	–
Rail									
Traction - Exterior	–	–	–	–	–	–	–	–	–
Traction - Interior	–	–	–	–	–	–	–	–	–
Infrastructure - Exterior	–	–	–	–	–	–	–	–	–
Infrastructure - Interior	–	–	–	–	–	–	–	–	–
Automation									
Robotics	–	•	–	•	–	–	–	–	–
Control systems	–	•	–	•	–	–	–	–	–
Enclosures and Motors	–	•	–	•	–	–	–	–	–
Marine									
General Applications	•	•	•	•	•	•	–	•	•
Outdoor Applications	•	•	•	•	•	•	–	•	•
Passenger/Crew Areas	•	•	•	•	•	•	–	•	•
Oil and Gas									
IEC standards	•	•	•	•	•	•	–	•	•
NEC Standards	–	•	–	•	–	•	•	•	–
Other									
Solar	–	–	–	–	–	–	–	–	–
Food and Beverage	–	•	–	–	–	–	–	•	–
Chemical Plants	–	•	•	•	–	•	–	•	–
Data Centres	–	–	–	•	–	•	•	–	–
Waste Water Management	–	•	•	•	•	•	–	•	•
Page No.	**56**	**57/58**	**62**	**65/67**	**69**	**71**	**73**	**75**	**78**


Metal clad cable types					Accessories				
ST	STE	STED	STX	STEX	Ex d Stopping Plugs	Ex d e Stopping Plugs	Thread Adaptors	Ex d e Coupler	Ex Drain Valves
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79	81	82	83	85	86	88	91	93	94

Ex e Nylon cable glands for hazardous areas

EXCG Series

Features and benefits:

- Increased safety Ex e
- Suitable for use in Zone 1, 2, 21 and 22
- For use with non-armored circular cable types
- Can be used for Ex ia intrinsically safe, with blue cap

EXCG Series - Nylon cable glands

Approvals & certifications	Conformity Conforms to:
	EN/IEC: 60079-0, 60079-7, 60079-34, 62444
	ATEX: IMQ13ATEX016X
	IECEx: IECEx IMQ 13.0005X
	⟨Ex⟩ II 2 GD, Ex e IIC Gb, Ex tb IIIC Db

Temperature range
Operating range: –40°C to +80°C

IP Rating	Material
IP66	Nylon
IP68	

Dimensions

Metric thread	Part no.	Metric thread	Cable range Min. (mm/in)	Cable range Max. (mm/in)	Nominal dimensions (mm/in) A Min	B Min	W1	W2
	EXCGM20S	M20	6.0	12.0	10.0	40.0	24.0	24.0
			0.236	0.472	0.393	1.574	0.944	0.944
	EXCGM20SL	M20	6.0	12.0	15.0	45.0	24.0	24.0
			0.236	0.472	0.590	1.771	0.944	0.944
	EXCGM20M	M20	10.0	14.0	10.0	42.0	27.0	27.0
			0.393	0.551	0.393	1.653	1.062	1.062
	EXCGM20ML	M20	10.0	14.0	15.0	50.0	27.0	27.0
			0.393	0.551	0.590	1.968	1.062	1.062
	EXCGM25S	M25	13.0	18.0	10.0	47.0	33.0	33.0
			0.511	0.708	0.393	1.850	1.299	1.299
	EXCGM25SL	M25	13.0	18.0	15.0	50.0	33.0	33.0
			0.511	0.708	0.590	1.968	1.299	1.299
	EXCGM25M	M25	11.0	17.0	8.0	42.5	29.0	29.0
			0.433	0.669	0.314	1.673	1.141	1.141
	EXCGM32S	M32	15.0	21.0	10.0	50.0	36.0	36.0
			0.590	0.826	0.393	1.968	1.417	1.417
	EXCGM32M	M32	18.0	25.0	15.0	68.0	42.0	42.0
			0.708	0.984	0.590	2.677	1.653	1.653
	EXCGM40S	M40	19.0	28.0	10.0	55.0	46.0	46.0
			0.748	1.102	0.393	2.165	1.811	1.811
	EXCGM40M	M40	22.0	32.0	18.0	68.0	53.0	53.0
			0.866	1.259	0.708	2.677	2.086	2.086
	EXCGM50S	M50	30.0	38.0	18.0	73.0	60.0	60.0
			1.181	1.496	0.708	2.874	2.362	2.362
	EXCGM63S	M63	34.0	44.0	18.0	74.0	65.0	65.0
			1.338	1.732	0.708	2.913	2.559	2.559

Ex d e Non-armored cable glands for hazardous areas

C2 Series

Features and benefits:

- Flameproof Ex d and Increased safety Ex e
- Suitable for use in Zone 1, 2, 21 and 22
- For use with non-armored circular cable types
- Wide cable range
- Deluge proof

Available in kit form with locknut, earth tag, sealing washer and dust shroud, add 'K' suffix.

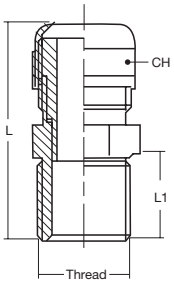
C2 Series - Ex d e single compression cable glands

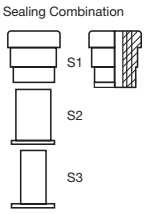
Approvals & certifications	Conformity Conforms to:
	EN/IECEx: 60079-0, 60079-1, 60079-7, 60079-34, 62444
	UL514B, UL2225
	ATEX: IMQ14ATEX013X
	IECEx: IECEx IMQ 14.0005X
	InMetro: UL-BR 15.0685X
	EACEx: RU C-GB.AA87.B.00198
	CNEx: CNEx15.1696X
	DNV: TAE00000Y3
	UL: E477121
	II 2 GD, Ex d e IIC Gb, Ex tb IIIC Db
	Class 1 Zone 1 AEx e IIC

Temperature range
Operating range: –40°C to +100°C (–40°F to +212°F)

IP Rating	Material
IP66	Nickel plated brass
IP68 (5-Bar 30 mins)	Stainless steel 316

DImensions





Metric thread	Part no.	Metric thread	Cable range Ø Min. (mm/in)	Cable range Ø Max. (mm/in)	Nominal dimensions (mm/in) A Min	B Min	C Min	W1	W2
	EXN03MMC2	M16x1.5	4.0	12.0	16.0	31.0	24.0	22.0	22.0
			0.157	0.472	0.63	1.22	0.945	0.866	0.866
	EXN04MSC2	M20x1.5	3.0	9.0	16.0	27.0	24.0	22.0	20.0
			0.118	0.354	0.63	1.063	0.945	0.866	0.787
	EXN04MMC2	M20x1.5	4.0	12.0	16.0	27.0	24.0	22.0	22.0
			0.157	0.472	0.63	1.063	0.945	0.866	0.866
	EXN04MLC2	M20x1.5	10.0	16.0	16.0	30.0	31.0	28.0	28.0
			0.394	0.63	0.63	1.181	1.22	1.102	1.102
	EXN05MMC2	M25x1.5	10.0	18.0	16.0	30.5	31.0	28.0	28.0
			0.394	0.709	0.63	1.201	1.22	1.102	1.102
	EXN05MLC2	M25x1.5	14.0	20.0	16.0	34.0	39.0	35.0	35.0
			0.551	0.787	0.63	1.339	1.535	1.378	1.378
	EXN06MMC2	M32x1.5	14.0	24.0	16.0	33.0	39.0	35.0	35.0
			0.551	0.945	0.63	1.299	1.535	1.378	1.378
	EXN06MLC2	M32x1.5	22.0	28.0	16.0	41.0	50.0	45.0	45.0
			0.866	1.102	0.63	1.614	1.969	1.772	1.772
	EXN07MMC2	M40x1.5	22.0	32.0	18.0	41.0	50.0	45.0	45.0
			0.866	1.26	0.709	1.614	1.969	1.772	1.772

Ex d e Non-armored cable glands for hazardous areas

C2 Series

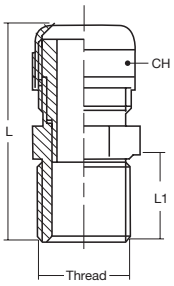
DImensions

Metric thread	Part no.	Metric thread	Cable range Ø Inner Min. (mm/in)	Cable range Ø Outer Max. (mm/in)	Nominal dimensions (mm/in) A Min	B Min	C Min	W1	W2
	EXN07MLC2	M40x1.5	26.0	34.0	18.0	44.0	55.5	50.0	50.0
			1.024	1.339	0.709	1.732	2.185	1.969	1.969
	EXN08MSC2	M50x1.5	26.0	35.0	18.0	44.0	61.0	55.0	50.0
			1.024	1.378	0.709	1.732	2.402	2.165	1.969
	EXN08MMC2	M50x1.5	35.0	44.0	18.0	43.0	70.0	64.0	64.0
			1.378	1.732	0.709	1.693	2.756	2.52	2.52
	EXN09MSC2	M63x1.5	35.0	45.0	18.0	43.0	75.0	68.0	64.0
			1.378	1.772	0.709	1.693	2.953	2.677	2.52
	EXN09MMC2	M63x1.5	46.0	56.0	18.0	52.5	89.0	75.0	80.0
			1.811	2.205	0.709	2.067	3.504	2.953	3.15
	EXN10MSC2	M75x1.5	46.0	62.0	20.0	52.0	89.0	80.0	80.0
			1.811	2.441	0.787	2.047	3.504	3.15	3.15
	EXN10MMC2	M75x1.5	60.0	69.0	20.0	55.0	105.0	95.0	95.0
			2.362	2.717	0.787	2.165	4.134	3.74	3.74
	EXN11MSC2	M90x1.5	60.0	75.0	20.0	55.0	105.0	95.0	95.0
			2.362	2.953	0.787	2.165	4.134	3.74	3.74
	EXN11MMC2	M90x1.5	75.0	82.0	20.0	55.0	117.0	105.0	105.0
			2.953	3.228	0.787	2.165	4.606	4.134	4.134

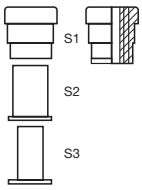
Ex d e Non-armored cable glands for hazardous areas

C2 Series

Dimensions



Sealing Combination



NPT thread	Part no.	NPT thread	Cable range Ø Min. (mm/in)	Cable range Ø Max. (mm/in)	Nominal dimensions (mm/in) A Min	B Min	C Min	W1	W2
	EXN03AMC2	3/8"	4.0	12.0	16.0	31.0	24.0	22.0	22.0
			0.157	0.472	0.63	1.22	0.945	0.866	0.866
	EXN04ASC2	1/2"	3.0	9.0	16.0	27.0	24.0	22.0	20.0
			0.118	0.354	0.63	1.063	0.945	0.866	0.787
	EXN04AMC2	1/2"	4.0	12.0	16.0	27.0	24.0	22.0	22.0
			0.157	0.472	0.63	1.063	0.945	0.866	0.866
	EXN04ALC2	1/2"	10.0	16.0	16.0	30.0	31.0	28.0	28.0
			0.394	0.63	0.63	1.181	1.22	1.102	1.102
	EXN05AMC2	3/4"	10.0	18.0	16.0	30.5	31.0	28.0	28.0
			0.394	0.709	0.63	1.201	1.22	1.102	1.102
	EXN05ALC2	3/4"	14.0	20.0	16.0	34.0	39.0	35.0	35.0
			0.551	0.787	0.63	1.339	1.535	1.378	1.378
	EXN06AMC2	1"	14.0	24.0	20.0	33.0	39.0	35.0	35.0
			0.551	0.945	0.787	1.299	1.535	1.378	1.378
	EXN06ALC2	1"	22.0	28.0	20.0	41.0	50.0	45.0	45.0
			0.866	1.102	0.787	1.614	1.969	1.772	1.772
	EXN07AMC2	1 1/4"	22.0	32.0	20.0	41.0	50.0	45.0	45.0
			0.866	1.26	0.787	1.614	1.969	1.772	1.772
	EXN07ALC2	1 1/4"	26.0	34.0	20.0	44.0	55.5	50.0	50.0
			1.0	1.3	0.8	1.7	2.2	2.0	2.0
	EXN08ASC2	1 1/2"	26.0	35.0	20.0	44.0	61.0	55.0	50.0
			1.0	1.4	0.8	1.7	2.4	2.2	2.0
	EXN08AMC2	1 1/2"	35.0	44.0	20.0	43.0	70.0	64.0	64.0
			1.4	1.7	0.8	1.7	2.8	2.5	2.5
	EXN09ASC2	2"	35.0	45.0	20.0	43.0	75.0	68.0	64.0
			1.4	1.8	0.8	1.7	3.0	2.7	2.5
	EXN09AMC2	2"	46.0	56.0	20.0	52.5	89.0	75.0	80.0
			1.8	2.2	0.8	2.1	3.5	3.0	3.2
	EXN10ASC2	2 1/2"	46.0	62.0	21.0	52.0	89.0	80.0	80.0
			1.8	2.4	0.8	2.0	3.5	3.2	3.2
	EXN10AMC2	2 1/2"	60.0	69.0	21.0	55.0	105.0	95.0	95.0
			2.4	2.7	0.8	2.2	4.1	3.7	3.7
	EXN11ASC2	3"	60.0	75.0	21.0	55.0	105.0	95.0	95.0
			2.4	3.0	0.8	2.2	4.1	3.7	3.7
	EXN11AMC2	3"	75.0	82.0	21.0	55.0	117.0	105.0	105.0
			3.0	3.2	0.8	2.2	4.6	4.1	4.1

Ex d e Flat cable glands for hazardous areas

C2F Series

Features and benefits:

- Flameproof Ex d and increased safety Ex e
- Suitable for use in Zone 1, 2, 21 and 22
- For use with non-armored flat cable types

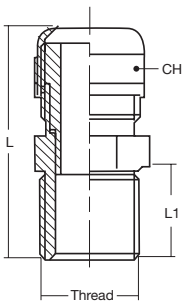
C2F Series - Ex e flat cable glands

Approvals & certifications	Conformity Conforms to:
	EN/IECEx: 60079-0, 60079-1, 60079-7, 60079-34, 62444
	ATEX: IMQ14ATEX013X
	IECEx: IECEx IMQ 14.0005X
	InMetro: UL-BR 15.0685X
	EACEx: RU C-GB.AA87.B.00198
	CNEx: CNEx15.1696X
	DNV: TAE00000Y3
	Ⓔ II 2 GD, Ex d e IIC Gb, Ex tb IIIC Db

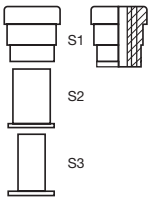
Temperature range	
Certified –60°C to +140°C	

IP Rating	Material
IP66	Nickel plated brass and
IP68 (5-Bar 30 mins)	Stainless steel

Dimensions



Sealing Combination



Metric thread	Part no.	Metric thread	Min. Length (mm)	Cable range Ø Min. (mm)	Cable range Ø Max. (mm)
	EXN04MMAC2F	M20x1.5	16.0	5.0 x 10.0	5.7 x 12.2
	EXN04MMBC2F	M20x1.5	16.0	5.75 x 8.5	6.0 x 10.0
	EXN04MMCC2F	M20x1.5	16.0	5.3 x 11.3	5.5 x 11.7
	EXN04MMDC2F	M20x1.5	16.0	5.3 x 11.3	6.5 x 14.5
	EXN04MMEC2F	M20x1.5	16.0	5.3 x 11.3	6.3 x 10.8
	EXN04MMFC2F	M20x1.5	16.0	5.3 x 11.3	6.7 x 12.7
	EXN05MMAC2F	M25x1.5	16.0	5.0 x 10.4	5.5 x 14.0
	EXN05MMBC2F	M25x1.5	16.0	5.7 x 8.5	6.0 x 10.0
	EXN05MMCC2F	M25x1.5	16.0	5.3 x 11.3	5.5 x 11.7
	EXN05MMDC2F	M25x1.5	16.0	5.5 x 12.0	6.5 x 14.5
	EXN05MMEC2F	M25x1.5	16.0	7.0 x 10.0	9.1 x 12.3
	EXN05MMFC2F	M25x1.5	16.0	5.6 x 10.0	9.0 x 14.0
	EXN05MMGC2F	M25x1.5	16.0	6.5 x 14.8	6.8 x 15.3
	EXN05MMHC2F	M25x1.5	16.0	5.2 x 10.0	7.0 x 12.0

Ex d e Flat cable glands for hazardous areas

C2F Series

DImensions

NPT thread	Part no.	NPT thread	Min. Length (mm)	Cable range Ø Min. (mm)	Cable range Ø Max. (mm)
	EXN04AMAC2F	1/2"	16.0	5.0 x 10.0	5.7 x 12.2
	EXN04AMBC2F	1/2"	16.0	5.75 x 8.5	6.0 x 10.0
	EXN04AMCC2F	1/2"	16.0	5.3 x 11.3	5.5 x 11.7
	EXN04AMDC2F	1/2"	16.0	5.3 x 11.3	6.5 x 14.5
	EXN04AMEC2F	1/2"	16.0	5.3 x 11.3	6.3 x 10.8
	EXN04AMFC2F	1/2"	16.0	5.3 x 11.3	6.7 x 12.7
	EXN05AMAC2F	3/4"	16.0	5.0 x 10.4	5.5 x 14.0
	EXN05AMBC2F	3/4"	16.0	5.7 x 8.5	6.0 x 10.0
	EXN05AMCC2F	3/4"	16.0	5.3 x 11.3	5.5 x 11.7
	EXN05AMDC2F	3/4"	16.0	5.5 x 12.0	6.5 x 14.5
	EXN05AMEC2F	3/4"	16.0	7.0 x 10.0	9.1 x 12.3
	EXN05AMFC2F	3/4"	16.0	5.6 x 10.0	9.0 x 14.0
	EXN05AMGC2F	3/4"	16.0	6.5 x 14.8	6.8 x 15.3
	EXN05AMHC2F	3/4"	16.0	5.2 x 10.0	7.0 x 12.0

Ex d e Non-armored cable glands for hazardous areas

C3 Series

Features and benefits:

- Flameproof Ex d and Increased safety Ex e
- Suitable for use in Zone 1, 2, 21 and 22
- For use with non-armored circular cable types
- Deluge proof

Available in kit form with locknut, earth tag, sealing washer and dust shroud, add 'K' suffix.

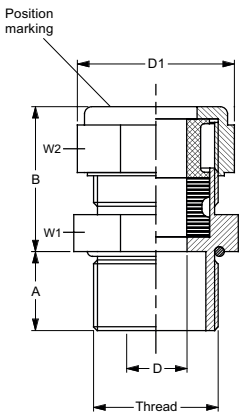
C3 Series - Ex d e single compression cable glands

Approvals & certifications	Conformity Conforms to:
	EN/IECEx: 60079-0, 60079-1, 60079-7, 60079-34, 62444
	ATEX: CESI13ATEX041X
	IECEx: IECEx CES 13.0014X
	InMetro: UL-BR 15.0684X
	EACEx: RU C-GB.AA87.B.00198
	CNEx: CNEx15.1692X
	DNV: TAE00000Y3
	II 2 GD, Ex d e IIC Gb, Ex tb IIIC Db

Temperature range
Operating range: –40°C to +100°C (–40°F to +212°F)

IP Rating	Material
IP66	Nickel plated brass
IP68 (5-Bar 30 mins)	Stainless steel 316

Dimensions



Metric thread	Part no.	Metric thread	Cable range Ø Min. (mm/in)	Cable range Ø Max. (mm/in)	Nominal dimensions (mm/in) A Min	B Min	C Min	W1	W2
	EXN03MSC3	M16x1.5	3.0	8.5	16.0	25.0	29.0	22.0	26.0
			0.118	0.335	0.63	0.984	1.142	0.866	1.024
	EXN03MMC3	M16x1.5	6.0	12.0	16.0	28.5	31.5	25.0	29.0
			0.236	0.472	0.63	1.122	1.24	0.984	1.142
	EXN04MSC3	M20x1.5	6.0	12.0	16.0	27.5	31.5	25.0	29.0
			0.236	0.472	0.63	1.083	1.24	0.984	1.142
	EXN04MMC3	M20x1.5	12.0	14.5	16.0	29.0	33.5	28.0	30.0
			0.472	0.571	0.63	1.142	1.319	1.102	1.181
	EXN05MSC3	M25x1.5	6.0	12.0	18.0	28.5	31.5	29.0	29.0
			0.236	0.472	0.709	1.122	1.24	1.142	1.142
	EXN05MMC3	M25x1.5	12.0	16.0	18.0	28.5	37.0	32.0	35.0
			0.472	0.63	0.709	1.122	1.457	1.26	1.378
	EXN05MLC3	M25x1.5	12.0	20.0	18.0	32.5	44.5	36.0	40.0
			0.472	0.787	0.709	1.28	1.752	1.417	1.575
	EXN06MSC3	M32x1.5	12.0	20.0	18.0	33.5	44.5	40.0	40.0
			0.472	0.787	0.709	1.319	1.752	1.575	1.575
	EXN06MMC3	M32x1.5	15.0	26.0	18.0	41.0	57.0	48.0	52.0
			0.591	1.024	0.709	1.614	2.244	1.89	2.047
	EXN07MSC3	M40x1.5	15.0	26.0	18.0	41.0	57.0	48.0	52.0
			0.591	1.024	0.709	1.614	2.244	1.89	2.047

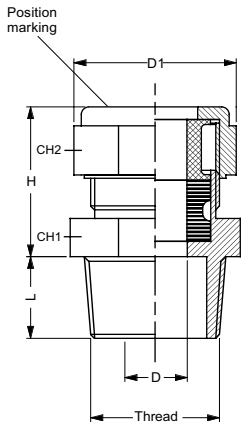
Ex d e Non-armored cable glands for hazardous areas

C3 Series

Dimensions

Metric thread	Part no.	Metric thread	Cable range Ø Inner Min. (mm/in)	Cable range Ø Outer Max. (mm/in)	Nominal dimensions (mm/in) A Min	B Min	C Min	W1	W2
	EXN07MMC3	M40x1.5	20.0	32.0	18.0	50.0	66.0	55.0	60.0
			0.787	1.26	0.709	1.969	2.598	2.165	2.362
	EXN08MSC3	M50x1.5	22.0	35.0	18.0	50.5	77.0	60.0	70.0
			0.866	1.378	0.709	1.988	3.031	2.362	2.756
	EXN08MMC3	M50x1.5	27.0	41.0	18.0	54.0	77.0	70.0	70.0
			1.063	1.614	0.709	2.126	3.031	2.756	2.756
	EXN09MSC3	M63x1.5	35.0	45.0	20.0	61.5	89.5	75.0	80.0
			1.378	1.772	0.787	2.421	3.524	2.953	3.15
	EXN09MMC3	M63x1.5	40.0	52.0	20.0	61.5	94.0	85.0	85.0
			1.575	2.047	0.787	2.421	3.701	3.346	3.346
	EXN10MSC3	M75x1.5	40.0	52.0	20.0	61.5	94.0	85.0	85.0
			1.575	2.047	0.787	2.421	3.701	3.346	3.346
	EXN10MMC3	M75x1.5	45.0	60.0	20.0	72.0	105.0	90.0	95.0
			1.772	2.362	0.787	2.835	4.134	3.543	3.74
	EXN11MSC3	M90x1.5	45.0	60.0	20.0	72.0	105.0	95.0	95.0
			1.772	2.362	0.787	2.835	4.134	3.74	3.74
	EXN11MMC3	M90x1.5	60.0	72.0	20.0	84.0	127.0	110.0	115.0
			2.362	2.835	0.787	3.307	5.000	4.331	4.528

Dimensions



NPT thread	Part no.	NPT thread	Cable range Ø Min. (mm/in)	Cable range Ø Max. (mm/in)	Nominal dimensions (mm/in) A Min	B Min	C Min	W1	W2
	EXN03ASC3	3/8"	3.0	8.5	16.0	25.0	29.0	22.0	26.0
			0.118	0.335	0.63	0.984	1.142	0.866	1.024
	EXN03AMC3	3/8"	6.0	12.0	16.0	28.5	31.5	25.0	29.0
			0.236	0.472	0.63	1.122	1.24	0.984	1.142
	EXN04ASC3	1/2"	6.0	12.0	16.0	27.5	31.5	25.0	29.0
			0.236	0.472	0.63	1.083	1.24	0.984	1.142
	EXN04AMC3	1/2"	12.0	14.5	16.0	29.0	33.5	28.0	30.0
			0.472	0.571	0.63	1.142	1.319	1.102	1.181
	EXN05ASC3	3/4"	6.0	12.0	18.0	28.5	31.5	29.0	29.0
			0.236	0.472	0.709	1.122	1.24	1.142	1.142
	EXN05AMC3	3/4"	12.0	16.0	18.0	28.5	37.0	32.0	35.0
			0.472	0.63	0.709	1.122	1.457	1.26	1.378
	EXN05ALC3	3/4"	12.0	20.0	18.0	32.5	44.5	36.0	40.0
			0.472	0.787	0.709	1.28	1.752	1.417	1.575
	EXN06ASC3	1"	12.0	20.0	18.0	33.5	44.5	40.0	40.0
			0.472	0.787	0.709	1.319	1.752	1.575	1.575
	EXN06AMC3	1"	15.0	26.0	18.0	41.0	57.0	48.0	52.0
			0.591	1.024	0.709	1.614	2.244	1.89	2.047
	EXN07ASC3	1 1/4"	15.0	26.0	28.0	41.0	57.0	48.0	52.0
			0.591	1.024	1.102	1.614	2.244	1.89	2.047

Ex d e Non-armored cable glands for hazardous areas

C3 Series

Dimensions

NPT thread	Part no.	NPT thread	Cable range Ø Inner Min. (mm/in)	Cable range Ø Outer Max. (mm/in)	Nominal dimensions (mm/in) A Min	B Min	C Min	W1	W2
	EXN07AMC3	1 1/4"	20.0	32.0	18.0	50.0	66.0	55.0	60.0
			0.787	1.26	0.709	1.969	2.598	2.165	2.362
	EXN08ASC3	1 1/2"	22.0	35.0	18.0	50.5	77.0	60.0	70.0
			0.866	1.378	0.709	1.988	3.031	2.362	2.756
	EXN08AMC3	1 1/2"	27.0	41.0	18.0	54.0	77.0	70.0	70.0
			1.063	1.614	0.709	2.126	3.031	2.756	2.756
	EXN09ASC3	2"	35.0	45.0	20.0	61.5	89.5	75.0	80.0
			1.378	1.772	0.787	2.421	3.524	2.953	3.15
	EXN09AMC3	2"	40.0	52.0	20.0	61.5	94.0	85.0	85.0
			1.575	2.047	0.787	2.421	3.701	3.346	3.346
	EXN10ASC3	2 1/2"	40.0	52.0	20.0	61.5	94.0	85.0	85.0
			1.575	2.047	0.787	2.421	3.701	3.346	3.346
	EXN10AMC3	2 1/2"	45.0	60.0	20.0	72.0	105.0	90.0	95.0
			1.772	2.362	0.787	2.835	4.134	3.543	3.74
	EXN11ASC3	M90x1.5	45.0	60.0	20.0	72.0	105.0	95.0	95.0
			1.772	2.362	0.787	2.835	4.134	3.74	3.74
	EXN11AMC3	M90x1.5	60.0	72.0	20.0	84.0	127.0	110.0	115.0
			2.362	2.835	0.787	3.307	5.000	4.331	4.528

Ex d e EMC cable glands for hazardous areas

C6 Series

Features and benefits:

- Flameproof Ex d and Increased safety Ex e
- Suitable for use in Zone 1, 2, 21 and 22
- For use with shielded circular cable types
- EMC contact to maintain shielding continuity
- Wide cable range
- Deluge proof

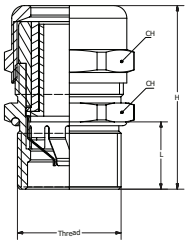
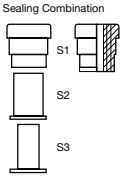
C6 Series - Ex d e single compression cable glands

Approvals & certifications	Conformity Conforms to:
	EN/IECEx: 60079-0, 60079-1, 60079-7, 60079-34, 62444
	ATEX: IMQ14ATEX013XIECEx CES
	IECEx: IECEx IMQ 14.0005X
	InMetro: UL-BR 15.0685X
	EACEx: RU C-GB.AA87.B.00198
	CNEx: CNEx15.1696X
	DNV: TAE00000Y3
	Ⓔ II 2 GD, Ex d e IIC Gb, Ex tb IIIC Db

Temperature range
Operating range: –60°C to +100°C (–76°C to +212°C)

IP Rating	Material
IP66	Nickel plated brass
	Stainless steel 316

DImensions

Metric thread	Part no.	Metric thread	Cable range Ø Min. (mm/in)	Cable range Ø Max. (mm/in)	Nominal dimensions (mm/in) A Min	B Min	C Min	W1	W2
	EXN03MSC6	M16x1.5	4.0	8.0	16.0	28.5	22.0	20.0	20.0
			0.157	0.315	0.63	1.122	0.866	0.787	0.787
	EXN03MMC6	M16x1.5	4.0	8.0	16.0	28.5	24.5	22.0	22.0
			0.157	0.315	0.63	1.122	0.965	0.866	0.866
	EXN04MMC6	M20x1.5	4.0	12.0	18.0	27.0	24.5	22.0	22.0
			0.157	0.472	0.709	1.063	0.965	0.866	0.866
	EXN05MMC6	M25x1.5	10.0	18.0	16.0	30.5	31.0	28.0	28.0
			0.394	0.709	0.63	1.201	1.22	1.102	1.102
	EXN06MMC6	M32x1.5	14.0	24.0	19.0	33.0	39.0	35.0	35.0
Sealing Combination			0.551	0.945	0.748	1.299	1.535	1.378	1.378
	EXN07MMC6	M40x1.5	22.0	32.0	20.0	40.5	49.5	45.0	45.0
			0.866	1.26	0.787	1.594	1.949	1.772	1.772
	EXN08MMC6	M50x1.5	26.0	35.0	20.0	43.5	61.0	55.0	50.0
			1.024	1.378	0.787	1.713	2.402	2.165	1.969
	EXN09MMC6	M63x1.5	35.0	45.0	20.0	43.5	70.0	68.0	64.0
			1.378	1.772	0.787	1.713	2.756	2.677	2.52

Ex d e EMC cable glands for hazardous areas

C6 Series

Dimensions

NPT thread	Part no.	NPT thread	Cable range Ø Min. (mm/in)	Cable range Ø Max. (mm/in)	Nominal dimensions (mm/in) A Min	B Min	C Min	W1	W2
	EXN03ASC6	3/8"	4.0	8.0	16.0	28.5	22.0	20.0	20.0
			0.157	0.315	0.63	1.122	0.866	0.787	0.787
	EXN03AMC6	3/8"	4.0	8.0	18.0	28.5	24.5	22.0	22.0
			0.157	0.315	0.709	1.122	0.965	0.866	0.866
	EXN04AMC6	1/2"	4.0	12.0	18.0	27.0	24.5	22.0	22.0
			0.157	0.472	0.709	1.063	0.965	0.866	0.866
	EXN05AMC6	3/4"	10.0	18.0	20.0	30.5	31.0	28.0	28.0
			0.394	0.709	0.787	1.201	1.22	1.102	1.102
	EXN06AMC6	3/4"	14.0	24.0	20.0	33.0	39.0	35.0	35.0
			0.551	0.945	0.787	1.299	1.535	1.378	1.378
	EXN07AMC6	1"	22.0	32.0	20.0	40.5	49.5	45.0	45.0
			0.866	1.26	0.787	1.594	1.949	1.772	1.772
	EXN08AMC6	1 1/4"	26.0	35.0	20.0	43.5	61.0	55.0	50.0
			1.024	1.378	0.787	1.713	2.402	2.165	1.969
	EXN09AMC6	1 1/2"	35.0	45.0	20.0	43.5	70.0	68.0	64.0
			1.378	1.772	0.787	1.713	2.756	2.677	2.52

Ex d e Flat EMC cable glands for hazardous areas

C6F Series

Features and benefits:

- Flameproof Ex d and Increased safety Ex e
- Suitable for use in Zone 1, 2, 21 and 22
- For use with flat and heat trace cable types
- EMC contact to maintain shielding continuity

C6F Series - Ex e flat cable glands

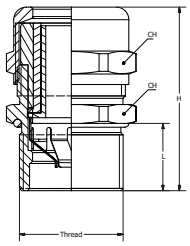
Approvals & certifications	Conformity Conforms to:
	EN/IECEx: 60079-0, 60079-1, 60079-7, 60079-34, 62444
	ATEX: IMQ14ATEX013X
	IECEx: IECEx IMQ 14.0005X
	InMetro: UL-BR 15.0685X
	EACEx: RU C-GB.AA87.B.00198
	CNEx: CNEx15.1696X
	DNV: TAE00000Y3
	II 2 GD, Ex d e IIC Gb, Ex tb IIIC Db

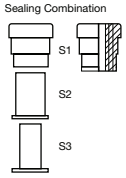
Temperature range
–60°C to +140°C (–76°F to +284°F)

IP Rating	Material
IP66	Nickel plated brass and
IP68 (5-Bar 30 mins)	stainless steel

Dimensions

Metric thread	Part no.	Metric thread	Min. Length (mm)	Cable range Ø Min. (mm)	Cable range Ø Max. (mm)
	EXN04MMAC6F	M20x1.5	16.0	5.0 x 10.0	5.7 x 12.2
	EXN04MMBC6F	M20x1.5	16.0	5.75 x 8.5	6.0 x 10.0
	EXN04MMCC6F	M20x1.5	16.0	5.3 x 11.3	5.5 x 11.7
	EXN04MMDC6F	M20x1.5	16.0	5.3 x 11.3	6.5 x 14.5
	EXN04MMEC6F	M20x1.5	16.0	5.3 x 11.3	6.3 x 10.8
	EXN04MMFC6F	M20x1.5	16.0	5.3 x 11.3	6.7 x 12.7
	EXN05MMAC6F	M25x1.5	16.0	5.0 x 10.4	5.5 x 14.0
	EXN05MMBC6F	M25x1.5	16.0	5.7 x 8.5	6.0 x 10.0
	EXN05MMCC6F	M25x1.5	16.0	5.3 x 11.3	5.5 x 11.7
	EXN05MMDC6F	M25x1.5	16.0	5.5 x 12.0	6.5 x 14.5
	EXN05MMEC6F	M25x1.5	16.0	7.0 x 10.0	9.1 x 12.3
	EXN05MMFC6F	M25x1.5	16.0	5.6 x 10.0	9.0 x 14.0
	EXN05MMGC6F	M25x1.5	16.0	6.5 x 14.8	6.8 x 15.3
	EXN05MMHC6F	M25x1.5	16.0	5.2 x 10.0	7.0 x 12.0





Ex d e Flat EMC cable glands for hazardous areas

C6F Series

Dimensions

NPT thread	Part no.	NPT thread	Min. Length (mm)	Cable range Ø Min. (mm)	Cable range Ø Max. (mm)
	EXN04AMAC6F	1/2"	16.0	5.0 x 10.0	5.7 x 12.2
	EXN04AMBC6F	1/2"	16.0	5.75 x 8.5	6.0 x 10.0
	EXN04AMCC6F	1/2"	16.0	5.3 x 11.3	5.5 x 11.7
	EXN04AMDC6F	1/2"	16.0	5.3 x 11.3	6.5 x 14.5
	EXN04AMEC6F	1/2"	16.0	5.3 x 11.3	6.3 x 10.8
	EXN04AMFC6F	1/2"	16.0	5.3 x 11.3	6.7 x 12.7
	EXN05AMAC6F	3/4"	16.0	5.0 x 10.4	5.5 x 14.0
	EXN05AMBC6F	3/4"	16.0	5.7 x 8.5	6.0 x 10.0
	EXN05AMCC6F	3/4"	16.0	5.3 x 11.3	5.5 x 11.7
	EXN05AMDC6F	3/4"	16.0	5.5 x 12.0	6.5 x 14.5
	EXN05AMEC6F	3/4"	16.0	7.0 x 10.0	9.1 x 12.3
	EXN05AMFC6F	3/4"	16.0	5.6 x 10.0	9.0 x 14.0
	EXN05AMGC6F	3/4"	16.0	6.5 x 14.8	6.8 x 15.3
	EXN05AMHC6F	3/4"	16.0	5.2 x 10.0	7.0 x 12.0

Ex d e Non-armored barrier cable glands for hazardous areas

C4 Series

Features and benefits:

- Flameproof Ex d and Increased safety Ex e
- Suitable for use in Zone 1, 2, 21 and 22
- For use with all non-armored cable types
- Epoxy compound barrier

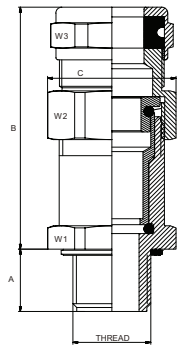
C4 Series - Ex d e armored cable glands

Approvals & certifications	Conformity Conforms to:
	EN/IECEx: 60079-0, 60079-1, 60079-7, 60079-34, 62444
	ATEX: CESI14ATEX032X
	IECEx: IECEx CES 14.0013X
	InMetro: UL-BR 15.0686X
	CNEx: CNEx15.1690X
	DNV: TAE00000Y3
	TAE00000Y3
	II 2 GD, Ex d e IIC Gb, Ex tb IIIC Db,

Temperature range
Operating range: –60°C to +100°C (–76°F to +212°F)

IP Rating	Material
IP66	Nickel plated brass
	Stainless steel 316

DImensions

Metric thread	Part no.	Metric thread	Cable range Ø Min. (mm/in)	Cable range Ø Max. (mm/in)	Nominal dimensions (mm/in) A Min	B Min	C Min	W1	W2	W3
	EXN04MC4	M20x1.5	8.5	16.0	16.0	62.0	33.0	30.0	30.0	29.0
			0.335	0.630	0.630	2.440	1.299	1.181	1.181	1.142
	EXN05MC4	M25x1.5	16.0	21.0	16.0	62.8	37.0	34.0	34.0	34.0
			0.630	0.827	0.630	2.472	1.456	1.338	1.338	1.338
	EXN06MC4	M32x1.5	16.0	26.0	16.0	68.5	45.0	42.0	42.0	40.0
			0.630	1.024	0.630	2.460	1.771	1.653	1.653	1.574
	EXN07MC4	M40x1.5	29.0	41.0	16.0	75.1	66.0	50.0	60.0	60.0
			1.142	1.614	0.630	2.956	2.598	1.968	2.362	2.362
	EXN08MC4	M50x1.5	33.0	48.0	16.0	82.7	77.0	60.0	70.0	75.0
			1.299	1.890	0.630	3.255	3.031	2.362	2.755	2.952
	EXN09MC4	M63x1.5	36.0	52.0	16.0	96.0	77.0	70.0	70.0	74.0
			1.417	2.047	0.630	3.779	3.031	2.755	2.755	2.913

EXN for nickel plated

Ex d e Non-armored barrier cable glands for hazardous areas

C4 Series

Dimensions

			Cable range Ø					Nominal dimensions (mm/in)		
NPT thread	Part no.	NPT thread	Min. (mm/in)	Max. (mm/in)	A Min	B Min	C Min	W1	W2	W3
	EXN04AC4	1/2"	8.5	16.0	21.0	62.0	33.0	30.0	30.0	30.0
			0.335	0.630	0.826	2.440	1.299	1.181	1.181	1.181
	EXN05AC4	3/4"	16.0	21.0	21.0	62.8	37.0	34.0	34.0	34.0
			0.630	0.827	0.826	2.472	1.456	1.338	1.338	1.338
	EXN06AC4	1"	16.0	26.0	26.0	68.5	45.0	42.0	42.0	40.0
			0.630	1.024	1.023	2.460	1.771	1.653	1.653	1.574
	EXN07AC4	1 1/4"	29.0	41.0	28.0	75.1	66.0	50.0	60.0	60.0
			1.142	1.614	1.102	2.956	2.598	1.968	2.362	2.362
	EXN08AC4	1 1/2"	33.0	48.0	28.0	82.7	77.0	60.0	70.0	75.0
			1.299	1.890	1.102	3.255	3.031	2.362	2.755	2.952
	EXN09AC4	2"	36.0	52.0	28.0	96.0	77.0	70.0	70.0	74.0
			1.417	2.047	1.102	3.779	3.031	2.755	2.755	2.913

EXN for nickel plated

Ex e Strain relief cable glands for ordinary and hazardous areas

ISR Series

Features and benefits:

- Increased safety Ex e
- Suitable for use in Zone 1, 2, 20, 21 and 22
- For use with non-armored cable types
- Mechanical grip for maximum cable retention
- Wide clamping range

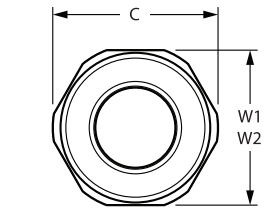
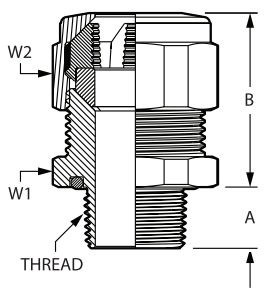
ISR Series - Industrial strain relief cable glands

Approvals & certifications	Conformity Conforms to:
Metric is not UL listed	CSA C22.2/IEC/EN 60079-0, 60079-7, 60079-31, C22.2 No.18.3, C22.2 No.25, C22.2 No.94, UL2225, UL514B
	CSA Certificate: 70009467 File 23086
	ABS Certificate: 16-HS1588269-PDA
	ATEX: SIRA 14ATEX3238X
	IECEx: CSA 14.0035X
	II 1D 2G, Ex e IIC Gb, Ex ta IIIC Da
	Class I Div2 ABCD Class II Div1 EFG Class III Div1
	UL Files: E311979, E328651, E13938, E307708
	Class I, Zone 1, AEx e IIC, Zone 20, AEx ta

Temperature range
Approved: –50°C to +110°C (–40°F to +230°F)

IP Rating	Material
IP66	Copper free aluminium
Type 4X	(stainless steel 316L options)
	Silicone seal bushing
	Glass filled nylon and TPE grip

DImensions

Metric thread	Part no.	Metric thread	Cable range Min. (mm/in)	Cable range Max. (mm/in)	Nominal dimensions (mm/in) A Min	B Min	C Min	W1	W2
	ISRM20-13	M20x1.5	8.25	13.34	16.00	41.91	34.29	31.75	31.75
			0.325	0.525	0.630	1.650	1.350	1.250	1.250
	ISRM20-15	M20x1.5	10.79	15.00	16.00	42.75	38.10	34.93	34.93
			0.425	0.591	0.630	1.683	1.500	1.375	1.375
	ISRM25-15	M25x1.5	10.79	15.75	18.00	42.75	41.28	38.10	38.10
			0.157	0.620	0.709	1.683	1.625	1.500	1.500
	ISRM25-20	M25x1.5	14.86	20.07	18.00	45.47	43.18	40.49	40.49
			0.585	0.790	0.709	1.790	1.700	1.594	1.594
	ISRM32-26	M32x1.5	19.94	26.04	18.00	46.18	48.26	44.45	44.45
			0.785	1.025	0.709	1.818	1.900	1.750	1.750
	ISRM40-31	M40x1.5	25.02	30.86	18.00	50.62	58.93	55.63	55.63
			0.985	1.215	0.709	1.993	2.320	2.190	2.190
	ISRM40-35	M40x1.5	30.10	34.80	18.00	48.72	58.93	55.63	55.63
			1.185	1.370	0.709	1.918	2.320	2.190	2.190
	ISRM50-39	M50x1.5	33.91	39.37	18.00	49.40	65.53	60.33	60.33
			1.335	1.550	0.709	1.945	2.580	2.375	2.375
	ISRM63-45	M63x1.5	38.73	45.34	20.00	51.23	81.28	76.20	72.85
			1.525	1.785	0.787	2.017	3.200	3.000	2.868
	ISRM63-52	M63x1.5	44.58	52.20	20.00	51.05	81.28	76.20	76.20
			1.755	2.055	0.787	2.010	3.200	3.000	3.000

Ex e strain relief cable glands for ordinary and hazardous areas

ISR Series

Dimensions

NPT thread	Part no.	NPT thread	Cable range Min. (mm/in)	Cable range Max. (mm/in)	Nominal dimensions (mm/in) A Min	B Min	C Min	W1	W2
	ISRM50-53	1/2"	8.26	13.34	15.75	41.91	34.29	31.75	31.75
			0.325	0.525	0.620	1.650	1.350	1.250	1.250
	ISR050-062	1/2"	10.80	15.75	15.75	42.75	38.10	34.93	34.93
			0.425	0.620	0.620	1.683	1.500	1.375	1.375
	ISR075-062	3/4"	10.80	15.75	16.00	42.75	41.28	38.10	38.10
			0.425	0.620	0.630	1.683	1.625	1.500	1.500
	ISR075-082	3/4"	14.86	20.70	16.00	45.47	43.18	40.49	40.49
			0.585	0.815	0.630	1.790	1.700	1.594	1.594
	ISR100-102	1"	19.94	26.04	19.94	46.18	48.26	44.70	44.70
			0.785	1.025	0.785	1.818	1.900	1.760	1.760
	ISR125-122	1 1/4"	25.02	30.86	20.57	50.62	58.93	55.63	55.63
			0.985	1.215	0.810	1.993	2.320	2.190	2.190
	ISR125-137	1 1/4"	30.10	34.80	20.57	48.72	58.93	55.63	55.63
			1.185	1.370	0.810	1.918	2.320	2.190	2.190
	ISR150-156	1 1/2"	33.91	39.37	20.96	49.40	65.53	60.33	60.33
			1.335	1.550	0.825	1.945	2.580	2.375	2.375
	ISR200-179	2"	38.74	45.34	21.84	51.23	76.50	72.85	72.85
			1.525	1.785	0.860	2.017	3.012	2.868	2.868
	ISR200-206	2"	44.58	52.20	21.84	51.05	81.28	76.20	76.20
			1.755	2.055	0.860	2.010	3.200	3.000	3.000

Tray – cord fitting

TCF Series

Features and benefits:

- High Mechanical pull out
- Wide clamping range
- Suitable for non-armored cable types

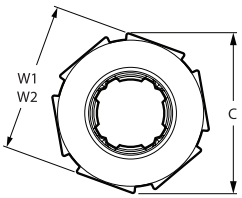
TCF Series - Brass cable glands

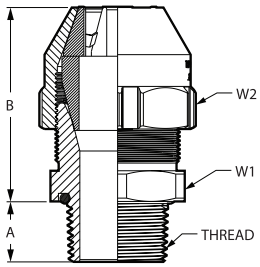
Approvals & certifications	Conformity Conforms to:
	CSA C22.2 60079-0, C22.2 60079-7, C22.2 No.18.3, C22.2 No.25, C22.2 No. 94, UL60079-0, UL60079-7, UL514B, UL50
	c-CSA-us Certificate: 1388229 File 4484
	Ex e II, IP66; Type 4/4X,6
	Class I, Zone 1, AEx e II, IP66; Type 4/4X,6

Temperature range
Normal use: -40°C to +90°C (–76°F to +194°F)

IP Rating	Material
IP66	Copper free aluminium (stainless steel 316 options)
Type 4/4X	Neoprene/Santoprene sealing bush body and cap
Type 6 (flexible cord only)	Nylon grip

DImensions





Metric thread	Part no.	NPT thread	Cable range Min. (mm/in)	Cable range Max. (mm/in)	Nominal dimensions (mm/in) A Min	B Min	C Min	W1	W2
	TCF050-27AL	1/2"	3.81	6.86	15.75	48.08	31.84	28.58	29.64
			0.150	0.270	0.620	1.893	1.253	1.125	1.167
	TCF050-40AL	1/2"	6.35	10.16	15.75	59.18	31.84	28.58	29.64
			0.250	0.400	0.620	2.330	1.253	1.125	1.167
	TCF050-54AL	1/2"	10.16	13.72	15.75	59.18	31.84	28.58	29.64
			0.400	0.540	0.620	2.330	1.253	1.125	1.167
	TCF050-67AL	1/2"	13.72	17.02	15.75	62.43	41.60	34.93	38.74
			0.540	0.670	0.620	2.458	1.638	1.375	1.525
	TCF050-78AL	1/2"	16.76	19.81	15.75	62.43	41.60	34.93	38.74
			0.660	0.780	0.620	2.458	1.638	1.375	1.525
	TCF075-40AL	3/4"	6.35	10.16	16.00	59.18	31.84	34.93	29.64
			0.250	0.400	0.630	2.330	1.253	1.375	1.167
	TCF075-54AL	3/4"	10.16	13.72	16.00	59.18	31.84	34.93	29.64
			0.400	0.540	0.630	2.330	1.253	1.375	1.167
	TCF075-67AL	3/4"	13.72	17.02	16.00	62.43	41.60	34.93	38.74
			0.540	0.670	0.630	2.458	1.638	1.375	1.525
	TCF075-78AL	3/4"	16.76	19.81	16.00	62.43	41.60	34.93	38.74
			0.660	0.780	0.630	2.458	1.638	1.375	1.525
	TCF075-88AL	3/4"	19.56	22.35	15.75	68.71	52.84	44.45	49.20
			0.770	0.880	0.620	2.705	2.080	1.750	1.937

Tray – cord fitting

TCF Series

Dimensions

NPT thread	Part no.	NPT thread	Cable range Min. (mm/in)	Cable range Max. (mm/in)	Nominal dimensions (mm/in) A Min	B Min	C Min	W1	W2
	TCF100-78AL	1"	16.76	19.81	19.94	69.98	52.84	44.45	49.20
			0.660	0.780	0.785	2.755	2.080	1.750	1.937
	TCF100-88AL	1"	19.56	22.35	19.94	69.98	52.84	44.45	49.20
			0.770	0.880	0.785	2.755	2.080	1.750	1.937
	TCF100-100AL	1"	22.10	25.40	19.94	69.98	52.84	44.45	49.20
			0.870	1.000	0.785	2.755	2.080	1.750	1.937
	TCF100-109AL	1"	23.88	27.69	19.94	69.72	52.84	44.45	49.20
			0.940	1.090	0.785	2.745	2.080	1.750	1.937
	TCF125-109AL	1 1/4"	22.61	27.69	20.57	98.15	68.12	61.72	63.42
			0.890	1.090	0.810	3.864	2.682	2.430	2.497
	TCF125-128AL	1 1/4"	27.43	32.51	20.57	98.15	68.12	61.72	63.42
			1.080	1.280	0.810	3.864	2.682	2.430	2.497
	TCF125-147AL	1 1/4"	32.26	37.34	20.57	98.15	68.12	61.72	63.42
			1.270	1.470	0.810	3.864	2.682	2.430	2.497
	TCF150-115AL	1 1/2"	22.61	29.21	20.96	96.42	78.62	66.47	73.20
			0.890	1.150	0.825	3.796	3.095	2.617	2.882
	TCF150-140AL	1 1/2"	28.96	35.56	20.96	96.42	78.62	66.47	73.20
			1.140	1.400	0.825	3.796	3.095	2.617	2.882
	TCF150-165AL	1 1/2"	35.31	41.91	20.96	96.42	78.62	66.47	73.20
			1.390	1.650	0.825	3.796	3.095	2.617	2.882
	TCF200-153AL	2"	30.23	38.86	21.84	106.88	92.59	82.42	86.21
			1.190	1.530	0.860	4.208	3.645	3.245	3.394
	TCF200-186AL	2"	38.61	47.24	21.84	106.88	92.59	82.42	86.21
			1.520	1.860	0.860	4.208	3.645	3.245	3.394
	TCF200-219AL	2"	46.99	55.63	21.84	106.88	92.59	82.42	86.21
			1.850	2.190	0.860	4.208	3.645	3.245	3.394
	TCF250-252AL	2 1/2"	53.85	64.01	32.51	141.73	113.67	99.77	105.31
			2.120	2.520	1.280	5.580	4.475	3.928	4.146
	TCF300-278AL	3"	60.45	70.61	33.76	142.27	122.81	111.20	114.10
			2.380	2.780	1.329	5.601	4.835	4.378	4.492
	TCF300-304AL	3"	67.06	77.22	34.04	146.30	130.58	119.46	121.69
			2.640	3.040	1.340	5.760	5.141	4.703	4.791
	TCF300-330AL	3"	73.66	83.82	34.04	147.83	137.67	118.11	128.17
			2.900	3.300	1.340	5.820	5.420	4.650	5.046

Ex d e Armored cable glands for hazardous areas

C1 Series

Features and benefits:

- Flameproof Ex d and Increased safety Ex e
- Suitable for use in Zone 1, 2, 21 and 22
- For use with Wire, braid or tape armored cable types

Available in kit form with locknut, earth tag, sealing washer and dust shroud, add 'K' suffix.

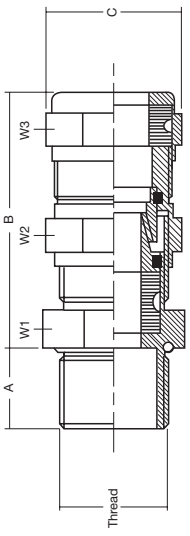
C1 Series - Ex d e single compression cable glands

Approvals & certifications	Conformity Conforms to:
	EN/IECEx: 60079-0, 60079-1, 60079-7, 60079-34, 62444
	UL514B, UL2225
	ATEX: CESI13ATEX041X
	IECEx: IECEx CES 13.0014X
	InMetro: UL-BR 15.0684X
	EACEx: RU C-GB.AA87.B.00198
	CNEx: CNEx15.1692X
	DNV: TAE00000Y3
	UL: E477121
	II 2 GD, Ex d e IIC Gb, Ex tb IIIC Db
	Class 1 Zone 1 AEx e IIC

Temperature range
Operating range: –40°C to +100°C (–40°F to +212°F)

IP Rating	Material
IP66	Nickel plated brass and
IP68 (5-Bar 30 mins)	Stainless steel 316

Dimensions



Metric thread	Part no.	Metric thread	Cable range Ø Inner Min. (mm/in)	Cable range Ø Outer Max. (mm/in)	Nominal dimensions (mm/in) A Min	 B Min	 C Min	 W1	 W2	 W3
	EXN03MSC1	M16x1.5	3.0 - 8.5	6.0 - 12.0	16.0	47.5	29.0	22.0	26.0	26.0
			0.118 - 0.335	0.236 - 0.472	0.63	1.87	1.142	0.866	1.024	1.024
	EXN03MMC1	M16x1.5	6.0 - 12.0	8.5 - 16.0	16.0	50.0	31.5	25.0	29.0	29.0
			0.236 - 0.472	0.335 - 0.630	0.63	1.969	1.24	0.984	1.142	1.142
	EXN04MSC1	M20x1.5	3.0 - 8.5	6.0 - 12.0	16.0	47.5	29.0	24.0	26.0	26.0
			0.118 - 0.335	0.236 - 0.472	0.63	1.87	1.142	0.945	1.024	1.024
	EXN04MMC1	M20x1.5	6.0 - 12.0	8.5 - 16.0	16.0	47.0	31.5	25.0	29.0	29.0
			0.236 - 0.472	0.335 - 0.630	0.63	1.929	1.24	0.984	1.142	1.142
	EXN04MLC1	M20x1.5	12.0 - 14.5	16.0 - 20.0	16.0	52.0	35.0	28.0	30.0	32.0
			0.472 - 0.571	0.630 - 0.787	0.63	2.047	1.378	1.102	1.181	1.26
	EXN05MSC1	M25x1.5	6.0 - 12.0	8.5 - 16.0	18.0	50.5	31.5	29.0	29.0	29.0
			0.236 - 0.472	0.335 - 0.630	0.709	1.988	1.24	1.142	1.142	1.142
	EXN05MMC1	M25x1.5	12.0 - 16.0	16.0 - 21.0	18.0	54.5	37.0	32.0	34.0	34.0
			0.472 - 0.630	0.630 - 0.827	0.709	2.146	1.457	1.26	1.339	1.339
	EXN05MLC1	M25x1.5	12.0 - 20.0	16.0 - 26.0	18.0	60.5	44.0	36.0	40.0	40.0
			0.472 - 0.787	0.630 - 1.024	0.709	2.382	1.732	1.417	1.575	1.575
	EXN06MSC1	M32x1.5	12.0 - 20.0	16.0 - 26.0	18.0	62.0	44.0	40.0	40.0	40.0
			0.472 - 0.787	0.630 - 1.024	0.709	2.441	1.732	1.575	1.575	1.575

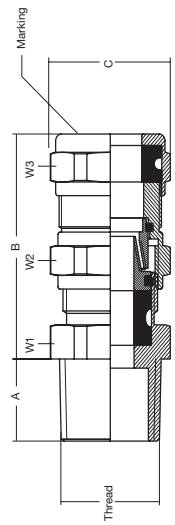
Ex d e Armored cable glands for hazardous areas

C1 Series

Dimensions

			Cable range Ø		Nominal dimensions (mm/in)					
Metric thread	Part no.	Metric thread	Inner Min. (mm/in)	Outer Max. (mm/in)	A Min	B Min	C Min	W1	W2	W3
	EXN06MMC1	M32x1.5	15.0 - 26.0	20.0 - 33.0	18.0	78.5	57.0	48.0	52.0	52.0
			0.591 - 1.024	0.787 - 1.299	0.709	3.091	2.244	1.89	2.047	2.047
	EXN07MSC1	M40x1.5	15.0 - 26.0	20.0 - 33.0	18.0	78.5	57.0	48.0	52.0	52.0
			0.591 - 1.024	0.787 - 1.299	0.709	3.091	2.244	1.89	2.047	2.047
	EXN07MMC1	M40x1.5	20.0 - 32.0	29.0 - 41.0	18.0	89.5	66.0	55.0	60.0	60.0
			0.787 - 1.260	1.142 - 1.614	0.709	3.524	2.598	2.165	2.362	2.362
	EXN08MSC1	M50x1.5	22.0 - 35.0	33.0 - 48.0	18.0	96.5	82.0	60.0	70.0	75.0
			0.866 - 1.378	1.299 - 1.890	0.709	3.799	3.228	2.362	2.756	2.953
	EXN08MMC1	M50x1.5	27.0 - 41.0	36.0 - 52.0	18.0	100.0	83.0	70.0	70.0	74.0
			1.063 - 1.614	1.417 - 2.047	0.709	3.937	3.268	2.756	2.756	2.913
	EXN09MSC1	M63x1.5	35.0 - 45.0	43.0 - 57.0	20.0	106.0	89.5	75.0	80.0	80.0
			1.378 - 1.772	1.693 - 2.244	0.787	4.173	3.524	2.953	3.15	3.15
	EXN09MMC1	M63x1.5	40.0 - 52.0	47.0 - 60.0	20.0	108.0	94.0	85.0	85.0	85.0
			1.575 - 2.047	1.850 - 2.362	0.787	4.252	3.701	3.346	3.346	3.346
	EXN10MSC1	M75x1.5	40.0 - 52.0	47.0 - 60.0	20.0	107.0	94.0	85.0	85.0	85.0
			1.575 - 2.047	1.850 - 2.362	0.787	4.252	3.701	3.346	3.346	3.346
	EXN10MMC1	M75x1.5	45.0 - 60.0	54.0 - 70.0	20.0	125.0	110.5	90.0	95.0	100.0
			1.772 - 2.362	2.126 - 2.756	0.787	4.921	4.35	3.543	3.74	3.937
	EXN11MSC1	M90x1.5	45.0 - 60.0	54.0 - 70.0	20.0	124.0	110.5	95.0	95.0	100.0
			1.772 - 2.362	2.126 - 2.756	0.787	4.882	4.35	3.74	3.74	3.937
	EXN11MMC1	M90x1.5	60.0 - 72.0	63.0 - 80.0	20.0	154.0	127.0	110.0	115.0	115.0
			2.362 - 2.835	2.480 - 3.150	0.787	6.063	5.000	4.331	4.528	4.528
	EXN12MSC1	M110x2.0	45.0 - 60.0	54.0 - 70.0	20.0	124.0	110.5	120.0	95.0	100.0
			1.772 - 2.362	2.126 - 2.756	0.787	4.882	4.35	4.724	3.74	3.937
	EXN12MMC1	M110x2.0	60.0 - 72.0	63.0 - 80.0	20.0	154.0	127.0	120.0	115.0	115.0
			2.362 - 2.835	2.480 - 3.150	0.787	6.063	5.000	4.724	4.528	4.528

Dimensions

			Cable range Ø		Nominal dimensions (mm/in)					
NPT thread	Part no.	NPT thread	Inner Min. (mm/in)	Outer Max. (mm/in)	A Min	B Min	C Min	W1	W2	W3
	EXN03ASC1	3/8"	3.0 - 8.5	6.0 - 12.0	16.0	47.5	29.0	22.0	26.0	26.0
			0.118 - 0.335	0.236 - 0.472	0.63	1.87	1.142	0.866	1.024	1.024
	EXN03AMC1	3/8"	6.0 - 12.0	8.5 - 16.0	16.0	50.0	31.5	25.0	29.0	29.0
			0.236 - 0.472	0.335 - 0.630	0.63	1.969	1.24	0.984	1.142	1.142
	EXN04ASC1	1/2"	3.0 - 8.5	6.0 - 12.0	16.0	47.5	29.0	24.0	26.0	26.0
			0.118 - 0.335	0.236 - 0.472	0.63	1.87	1.142	0.945	1.024	1.024
	EXN04AMC1	1/2"	6.0 - 12.0	8.5 - 16.0	16.0	49.0	31.5	25.0	29.0	29.0
			0.236 - 0.472	0.335 - 0.630	0.63	1.929	1.24	0.984	1.142	1.142
	EXN04ALC1	1/2"	12.0 - 14.5	16.0 - 20.0	16.0	52.0	35.0	28.0	30.0	32.0
			0.472 - 0.571	0.630 - 0.787	0.63	2.047	1.378	1.102	1.181	1.26
	EXN05ASC1	3/4"	6.0 - 12.0	8.5 - 16.0	18.0	50.5	31.5	29.0	29.0	29.0
			0.236 - 0.472	0.335 - 0.630	0.709	1.988	1.24	1.142	1.142	1.142
	EXN05AMC1	3/4"	12.0 - 16.0	16.0 - 21.0	18.0	54.5	37.0	32.0	34.0	34
			0.472 - 0.630	0.630 - 0.827	0.709	2.146	1.457	1.26	1.339	1.339
	EXN05ALC1	3/4"	12.0 - 20.0	16.0 - 26.0	18.0	60.5	44.0	36.0	40.0	40.0
			0.472 - 0.787	0.630 - 1.024	0.709	2.382	1.732	1.417	1.575	1.575
	EXN06ASC1	1"	12.0 - 20.0	16.0 - 26.0	18.0	62.0	44.0	40.0	40.0	40.0
			0.472 - 0.787	0.630 - 1.024	0.709	2.441	1.732	1.575	1.575	1.575

Ex d e Armored cable glands for hazardous areas

C1 Series

Dimensions

			Cable range Ø		Nominal dimensions (mm/in)					
NPT thread	Part no.	NPT thread	Inner Min. (mm/in)	Outer Max. (mm/in)	A Min	B Min	C Min	W1	W2	W3
	EXN06AMC1	1"	20.0 - 32.0	29.0 - 41.0	18.0	89.5	66.0	55.0	60.0	60.0
			0.787 - 1.260	1.142 - 1.614	0.709	3.524	2.598	2.165	2.362	2.362
	EXN07ASC1	1 1/4"	22.0 - 35.0	33.0 - 48.0	21.0	96.5	82.0	60.0	70.0	75.0
			0.866 - 1.378	1.299 - 1.890	0.827	3.799	3.228	2.362	2.756	2.953
	EXN07AMC1	1 1/4"	27.0 - 41.0	36.0 - 52.0	21.0	100.0	83.0	70.0	70.0	74.0
			1.063 - 1.614	1.417 - 2.047	0.827	3.937	3.268	2.756	2.756	2.913
	EXN08ASC1	1 1/2"	35.0 - 45.0	43.0 - 57.0	21.0	106.0	89.5	75.0	80.0	80.0
			1.378 - 1.772	1.693 - 2.244	0.827	4.173	3.524	2.953	3.15	3.15
	EXN08AMC1	1 1/2"	40.0 - 52.0	47.0 - 60.0	21.0	108.0	94.0	85.0	85.0	85.0
			1.575 - 2.047	1.850 - 2.362	0.827	4.252	3.701	3.346	3.346	3.346
	EXN09ASC1	2"	40.0 - 52.0	47.0 - 60.0	21.0	108.0	94.0	85.0	85.0	85.0
			1.575 - 2.047	1.850 - 2.362	0.827	4.252	3.701	3.346	3.346	3.346
	EXN09AMC1	2"	45.0 - 60.0	54.0 - 70.0	21.0	125.0	110.5	90.0	95.0	100.0
			1.772 - 2.362	2.126 - 2.756	0.827	4.921	4.35	3.543	3.74	3.937
	EXN10ASC1	2 1/2"	45.0 - 60.0	54.0 - 70.0	21.0	124.0	110.5	95.0	95.0	100.0
			1.772 - 2.362	2.126 - 2.756	0.827	4.882	4.35	3.74	3.74	3.937
	EXN10AMC1	2 1/2"	60.0 - 72.0	63.0 - 80.0	21.0	154.0	127.0	110.0	115.0	115.0
			2.362 - 2.835	2.480 - 3.150	0.827	6.063	5.000	4.331	4.528	4.528
	EXN11ASC1	3"	45.0 - 60.0	54.0 - 70.0	21.0	124.0	110.5	120.0	95.0	100.0
			1.772 - 2.362	2.126 - 2.756	0.827	4.882	4.350	4.724	3.74	3.937
	EXN11AMC1	3"	60.0 - 72.0	63.0 - 80.0	21.0	154.0	127.0	120.0	115.0	115.0
			2.362 - 2.835	2.480 - 3.150	0.8	6.1	5.0	4.7	4.5	4.528
	EXN12ASC1	3 1/2"	45.0 - 60.0	54.0 - 70.0	21.0	124.0	110.5	120.0	95	100.0
			1.772 - 2.362	2.126 - 2.756	0.787	4.882	4.35	4.724	3.74	3.937
	EXN12AMC1	3 1/2"	60.0 - 72.0	63.0 - 80.0	21.0	154.0	127.0	120.0	115.0	115.0
			2.362 - 2.835	2.480 - 3.150	0.787	6.063	5	4.724	4.528	4.528

Ex d e Armored barrier cable glands for hazardous areas

C5 Series

C5 Series - Ex d e armored cable glands

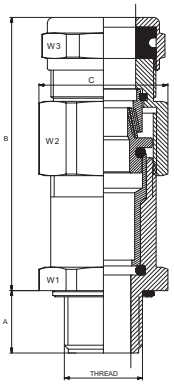
Features and benefits:

- Flameproof Ex d and Increased safety Ex e
- Suitable for use in Zone 1, 2, 21 and 22
- For use with Wire, braid or tape armored cable types
- Epoxy compound barrier

Approvals & certifications	Conformity Conforms to:
	EN/IECEx: 60079-0, 60079-1, 60079-7, 60079-34, 62444
	ATEX: CESI14ATEX032X
	IECEx: IECEx CES 14.0013X
	InMetro: UL-BR 15.0686X
	CNEx: CNEx15.1690X
	DNV: TAE00000Y3
	II 2 GD, Ex d e IIC Gb, Ex tb IIIC Db

Temperature range	
Operating range: –60°C to +100°C (–76°F to +212°F)	
IP Rating	**Material**
IP66	Brass, Nickel plated brass and Stainless steel 316

Dimensions

			Cable range Ø		Nominal dimensions (mm/in)					
Metric thread	Part no.	Metric thread	Min. (mm/in)	Max. (mm/in)	A Min	B Min	C Min	W1	W2	W3
	EXN04MC5	M20x1.5	8.5	16.0	16.0	70.0	33.0	30.0	30.0	29.0
			0.335	0.630	0.630	2.756	1.299	1.181	1.181	1.142
	EXN05MC5	M25x1.5	16.0	21.0	16.0	72.1	37.0	34.0	34.0	34.0
			0.630	0.827	0.630	2.838	1.456	1.338	1.338	1.338
	EXN06MC5	M32x1.5	16.0	26.0	16.0	76.0	45.0	42.0	42.0	40.0
			0.630	1.024	0.630	2.992	1.771	1.653	1.653	1.574
	EXN07MC5	M40x1.5	29.0	41.0	16.0	83.4	66.0	50.0	60.0	60.0
			1.142	1.614	0.630	3.283	2.598	1.968	2.362	2.362
	EXN08MC5	M50x1.5	33.0	48.0	16.0	96.6	77.0	60.0	70.0	75.0
			1.299	1.890	0.630	3.803	3.031	2.362	2.755	2.952
	EXN09MC5	M63x1.5	36.0	52.0	16.0	109.5	77.0	70.0	70.0	74.0
			1.417	2.047	0.630	4.311	3.031	2.755	2.755	2.913
	EXN04AC5	1/2"	8.5	16.0	16.0	70.0	33.0	30.0	30.0	30.0
			0.335	0.630	0.630	2.756	1.299	1.181	1.181	1.181
	EXN05AC5	3/4"	16.0	21.0	16.0	72.1	37.0	34.0	34.0	34.0
			0.630	0.827	0.630	2.838	1.456	1.338	1.338	1.338
	EXN06AC5	1"	16.0	26.0	16.0	76.0	45.0	42.0	42.0	40.0
			0.630	1.024	0.630	2.992	1.771	1.653	1.653	1.574
	EXN07AC5	1 1/4"	29.0	41.0	16.0	83.4	66.0	50.0	60.0	60.0
			1.142	1.614	0.630	3.283	2.598	1.968	2.362	2.362
	EXN08AC5	1 1/2"	33.0	48.0	16.0	96.6	77.0	60.0	70.0	75.0
			1.299	1.890	0.630	3.803	3.031	2.362	2.755	2.952
	EXN09AC5	2"	36.0	52.0	16.0	109.5	77.0	70.0	70.0	74.0
			1.417	2.047	0.630	4.311	3.031	2.755	2.755	2.913

EXN for nickel plated

Jacketed metal-clad cable fittings for hazardous locations

ST Series

ST Series - Jacketed metal-clad cable glands

Features and benefits:

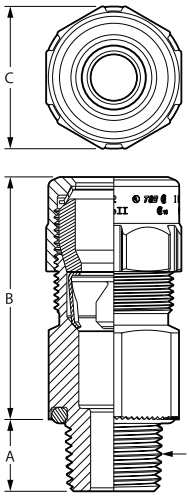
- Excellent pullout strength
- Robust metallic construction
- Quick and easy installation without disasembly
- “Pop-on” fitting (no disassembly) saves installer time.
- Provides grounding continuity of cable armor
- Splined gland and gripping features for ease of installation

Approvals & certifications	Conformity Conforms to:
	CSA C22.2 60079-0, C22.2 60079-7, C22.2 No.18.3, C22.2 No.25, C22.2 No.94, C22.2 No. 174, UL2279, UL514B, UL50
	c-CSA-us Certificate: 1105555 File 23086
	Class I Div1 ABCD Class II Div1 EFG Class III Div1 (Refer to CEC)
	Ex e II
	UL File: E38947
	Class I, Zone 1, AEx e II
	Suitable for Class I Div2, Class II Div2 and Class III Div2

Temperature range
– 40 to +90°C (–40°F to +194°F)

IP Rating	Material
Type 4X	Copper free aluminium
	Zinc plated steel
	Stainless steel

DImensions

NPT thread	Part no.	NPT thread	Cable range over jacket Min. (mm/in)	Cable range over jacket Max. (mm/in)	Cable range over armour Min. (mm/in)	Cable range over armour Max. (mm/in)	Nominal dimensions (mm/in) A Min	B Min	C Min
	ST038-461S*	3/8"	8.74	13.59	6.20	11.05	11.68	51.31	25.27
			0.344	0.535	0.244	0.435	0.460	2.020	0.995
	ST050-462	1/2"	13.34	16.51	10.54	14.48	15.75	51.31	34.13
			0.525	0.650	0.415	0.570	0.620	2.020	1.344
	ST050-464	1/2"	15.24	19.30	12.45	17.27	15.75	51.31	34.13
			0.600	0.760	0.490	0.680	0.620	2.020	1.344
	ST050-465	1/2"	18.42	22.48	15.62	20.45	15.75	54.10	42.07
			0.725	0.885	0.615	0.805	0.620	2.130	1.656
	ST050-466	1/2"	20.96	25.02	18.16	22.99	15.75	54.10	42.07
			0.825	0.985	0.715	0.905	0.620	2.130	1.656
	ST075-467	3/4"	22.35	27.05	19.56	25.02	16.00	62.23	53.18
			0.880	1.065	0.770	0.985	0.630	2.450	2.094
	ST075-468	3/4"	26.04	30.61	23.24	28.58	16.00	62.23	53.18
			1.025	1.205	0.915	1.125	0.630	2.450	2.094
	ST100-469	1"	30.15	34.93	27.36	32.89	19.94	66.04	61.91
			1.187	1.375	1.077	1.295	0.785	2.600	2.438
	ST125-470	1 1/4"	34.29	41.28	31.50	39.24	20.57	83.31	76.20
			1.350	1.625	1.240	1.545	0.810	3.280	3.000

Jacketed metal-clad cable fittings for hazardous locations

ST Series

Dimensions

NPT thread	Part no.	NPT thread	Cable range over jacket Min. (mm/in)	Cable range over jacket Max. (mm/in)	Cable range over armour Min. (mm/in)	Cable range over armour Max. (mm/in)	Nominal dimensions (mm/in) A Min	B Min	C Min
	ST125-550	1¼"	38.10	41.28	35.31	39.24	20.57	83.31	76.20
			1.500	1.625	1.390	1.545	0.810	3.280	3.000
	ST125-471	1/2"	40.64	47.63	37.85	45.59	20.57	83.31	76.20
			1.600	1.875	1.490	1.795	0.810	3.280	3.000
	ST150-472	1/2"	43.18	49.91	40.39	47.88	20.96	91.95	87.31
			1.700	1.965	1.590	1.885	0.825	3.620	3.438
	ST150-473	1/2"	48.26	55.55	45.47	53.52	20.96	91.95	87.31
			1.900	2.187	1.790	2.107	0.825	3.620	3.438
	ST200-551	1/2"	48.26	55.55	45.47	53.52	21.84	92.46	96.84
			1.900	2.187	1.790	2.107	0.860	3.640	3.813
	ST200-474	3/4"	53.34	60.33	50.55	57.91	21.84	92.46	96.84
			2.100	2.375	1.990	2.280	0.860	3.640	3.813
	ST200-475	3/4"	58.42	65.15	55.63	63.12	21.84	92.46	106.36
			2.300	2.565	2.190	2.485	0.860	3.640	4.188
	ST200-476	3/4"	63.50	69.85	60.71	67.46	21.84	92.46	106.36
			2.500	2.750	2.390	2.656	0.860	3.640	4.188
	ST250-477	3/4"	60.45	67.06	56.90	65.02	32.51	119.38	121.44
			2.380	2.640	2.240	2.560	1.280	4.700	4.781
	ST250-478	3/4"	65.53	72.14	61.98	69.85	32.51	119.38	121.44
			2.580	2.840	2.440	2.750	1.280	4.700	4.781
	ST300-479	3/4"	70.87	77.72	67.06	75.44	34.04	119.38	129.38
			2.790	3.060	2.640	2.970	1.340	4.700	5.094
	ST300-480	3/4"	76.20	83.06	72.90	81.03	34.04	121.67	139.70
			3.000	3.270	2.870	3.190	1.340	4.790	5.500
	ST300-481	3/4"	81.53	88.39	77.27	86.11	34.04	121.67	139.70
			3.210	3.480	3.042	3.390	1.340	4.790	5.500
	ST350-482	3/4"	86.87	93.73	83.06	91.19	35.31	121.67	153.19
			3.420	3.690	3.270	3.590	1.390	4.790	6.031
	ST350-483	3/4"	91.69	98.30	87.38	95.76	35.31	121.67	153.19
			3.610	3.870	3.440	3.770	1.390	4.790	6.031
	ST400-484	1"	96.77	102.36	91.44	99.82	36.58	122.94	166.69
			3.810	4.030	3.600	3.930	1.440	4.840	6.563
	ST400-485	1 1/4"	100.71	106.30	95.38	103.25	36.58	122.94	166.69
			3.965	4.185	3.755	4.065	1.440	4.840	6.563
	ST400-486	1 1/4"	104.65	110.24	99.31	107.19	36.58	122.94	166.69
			4.120	4.340	3.910	4.220	1.440	4.840	6.563

Jacketed metal-clad cable fittings for ordinary locations

STE Series

STE Series - Jacketed metal-clad cable glands

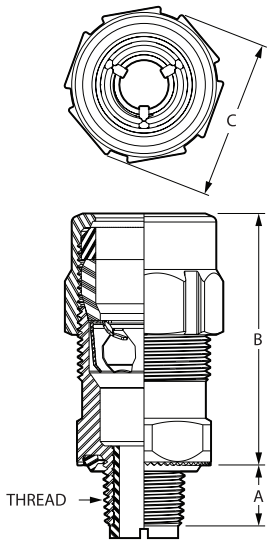
Features and benefits:

- Excellent pullout strength
- Robust metallic construction
- Quick and easy installation without disasembly
- Extended clamping range taking
- Provides grounding continuity of cable armor

Approvals & certifications	Conformity Conforms to:
	CSA C22.2 60079-0, C22.2 60079-7, C22.2 No.18.3, C22.2 No.25, C22.2 No.94, C22.2 No. 174, UL2279, UL514B, UL50
	c-CSA-us Certificate: 1105555 File 23086
	Class I Div1 ABCD Class II Div1 EFG Class III Div1 (Refer to CEC)
	Ex e II
	UL File: E38947
	Class I, Zone 1, AEx e II
	Suitable for Class I Div2, Class II Div2 and Class III Div2

IP Rating	Material	Temperature range
Type 4X	Copper free aluminium	– 40°C to +90°C (–40°F to +194°F)
	Zinc plated steel	
	Stainless steel	

DImensions

NPT thread	Part no.	NPT thread	Cable range over jacket Min. (mm/in)	Cable range over jacket Max. (mm/in)	Cable range over armour Min. (mm/in)	Cable range over armour Max. (mm/in)	Nominal dimensions (mm/in) A Min	B Min	C Min
	STE050 DATA	1/2"	12.70	17.78	10.41	15.49	15.75	53.34	34.54
			0.500	0.700	0.410	0.610	0.620	2.100	1.360
	STE050	1/2"	15.24	25.02	13.21	22.73	15.75	64.01	41.40
			0.600	0.985	0.520	0.895	0.620	2.520	1.630
	STE075	3/4"	21.84	30.61	19.81	28.58	16.00	72.14	52.83
			0.860	1.205	0.780	1.125	0.630	2.840	2.080
	STE100	1"	24.13	34.93	22.10	32.89	19.94	76.71	58.42
			0.950	1.375	0.870	1.295	0.785	3.020	2.300
	STE125	1 1/4"	29.21	41.28	25.15	37.21	20.57	101.85	71.63
			1.150	1.625	0.990	1.465	0.810	4.010	2.820
	STE150	1 1/2"	36.58	49.91	32.51	45.85	20.96	108.97	82.55
			1.440	1.965	1.280	1.805	0.825	4.290	3.250
	STE200	2"	46.36	60.33	42.29	56.26	21.84	104.65	91.44
			1.825	2.375	1.665	2.215	0.860	4.120	3.600
	STE250	2 1/2"	57.53	72.14	53.47	68.07	32.51	144.02	120.65
			2.265	2.840	2.105	2.680	1.280	5.670	4.750
	STE300	3"	67.82	83.06	64.64	79.88	33.66	146.81	137.16
			2.670	3.270	2.545	3.145	1.325	5.780	5.400
	STE350	3 1/2"	81.79	98.30	78.49	92.46	35.31	145.80	149.86
			3.220	3.870	3.090	3.640	1.390	5.740	5.900
	STE400	4"	93.09	110.24	90.17	107.32	35.31	147.07	162.56
			3.665	4.340	3.550	4.225	1.390	5.790	6.400

Star Teck Extreme® Director™ for ordinary applications

STED Series

Features and benefits:

- Excellent pullout strength
- Robust metallic construction
- Quick and easy installation without disasembly
- Extended clamping range taking
- Provides grounding continuity of cable armor

STED Series - Jacketed metal-clad cable glands

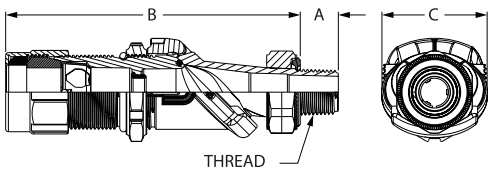
Approvals & certifications	Conformity Conforms to:
	CSA C22.2 60079-0, C22.2 60079-7, C22.2 No.18.3, C22.2 No.25, C22.2 No.94, C22.2 No. 174, UL2279, UL514B, UL50
	c-CSA-us Certificate: 1105555 File 23086
	Class I Div1 ABCD Class II Div1 EFG Class III Div1 (Refer to CEC)
	Ex e II
	UL File: E38947
	Class I, Zone 1, AEx e II
	Suitable for Class I Div 2, Class II Div 2 and Class III Div 2

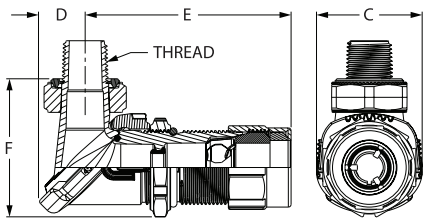
Temperature range
– 40°C to +90°C (–40°F to +194°F)

IP Rating	Material
Type 4X	Copper free aluminium
	Zinc plated steel
	Stainless steel

DImensions

NPT thread	Part no.	NPT thread	Cable range over jacket Min. (mm/in)	Cable range over jacket Max. (mm/in)	Cable range over armour Min. (mm/in)	Cable range over armour Max. (mm/in)	Nominal dimensions (mm/in) A Min	B Min	C Min	D Min	E Min	F Min
	STED050	1/2"	15.24	22.48	13.21	20.19	17.46	136.53	49.21	20.64	96.84	63.50
			0.600	0.885	0.520	0.795	0.688	5.375	1.938	0.813	3.813	2.500
	STED075	3/4"	21.84	30.61	19.81	28.58	17.46	168.40	63.50	26.99	101.60	76.20
			0.860	1.205	0.780	1.125	0.688	6.630	2.500	1.063	4.000	3.000





Star Teck XP® jacketed metal-clad cable fittings for hazardous locations

STX Series

Features and benefits:

- Excellent solution for hazardous location
- Excellent pullout strength
- Robust metallic construction
- Quick and easy installation without disasembly
- Provides grounding continuity of cable armor
- Splined gland and gripping features for ease of installation

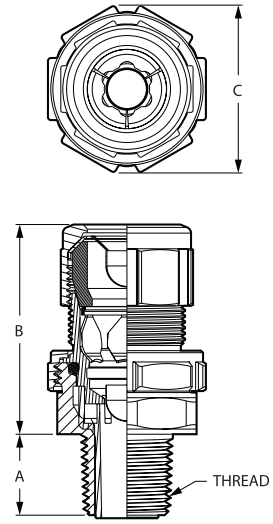
STX Series - Jacketed metal-clad cable glands

Approvals & certifications	Conformity Conforms to:
	CSA C22.2 No.18.3, C22.2 No.25, C22.2 No.30. C22.2 No. 174, UL2225, UL514B
	CSA Certificate: 1310604 File 23086
	Class I Div1 ABCD Class II Div1 EFG Class III Div1
	UL: E82038
	Class I Div1 ABCD Class II Div1 EFG Class III Div1

Temperature range
– 40°C to +90°C (–40°F to +194°F)

IP Rating	Material
Type 4 / 4X	Copper free aluminium
	Zinc plated steel
	PVC coating available for both

DImensions

NPT thread	Part no.	NPT thread	Cable range over jacket Min. (mm/in)	Cable range over jacket Max. (mm/in)	Cable range over armour Min. (mm/in)	Cable range over armour Max. (mm/in)	Nominal dimensions (mm/in) A Min	B Min	C Min
	STX050-462	1/2"	13.34	16.51	10.54	14.48	20.07	63.50	41.40
			0.525	0.650	0.415	0.570	0.790	2.500	1.630
	STX050-464	1/2"	15.24	19.30	12.45	17.27	20.07	63.50	41.40
			0.600	0.760	0.490	0.680	0.790)	2.500	1.630
	STX075-465	3/4"	18.42	22.48	15.62	20.45	20.07	66.55	46.23
			0.725	0.885	0.615	0.805	0.790	2.620	1.820
	STX075-466	3/4"	20.96	25.02	18.16	22.99	20.07	66.55	46.23
			0.825	0.985	0.715	0.905	0.790	2.620	1.820
	STX100-467	1"	22.35	27.05	19.56	25.02	25.02	71.88	61.98
			0.880	1.065	0.770	0.985	0.985	2.830	2.440
	STX100-468	1"	26.04	30.61	23.24	28.58	25.02	71.88	61.98
			1.025	1.205	0.915	1.125	0.985	2.830	2.440
	STX125-469	1 1/4"	30.15	34.93	27.36	32.89	25.65	77.47	64.01
			1.187	1.375	1.077	1.295	1.010	3.050	2.520
	STX150-470	1 1/2"	34.29	41.28	31.50	39.24	26.16	95.50	83.31
			1.350	1.625	1.240	1.545	1.030	3.760	3.280
	STX150-550	1 1/2"	38.10	41.28	35.31	39.24	26.16	95.50	83.31
			1.500	1.625	1.390	1.545	1.030	3.760	3.280
	STX150-471	1 1/2"	40.64	47.63	37.85	45.59	26.16	95.50	83.31
			1.600	1.875	1.490	1.795	1.030	3.760	3.280
	STX200-472	2"	43.18	49.91	40.39	47.88	26.92	102.87	92.46
			1.700	1.965	1.590	1.885	1.060	4.050	3.640
	STX200-473	2"	48.26	55.55	45.47	53.52	26.92	102.87	92.46
			1.900	2.187	1.790	2.107	1.060	4.050	3.640

Star Teck XP® for hazardous locations

STX Series

Dimensions

NPT thread	Part no.	NPT thread	Cable range over jacket Min. (mm/in)	Cable range over jacket Max. (mm/in)	Cable range over armour Min. (mm/in)	Cable range over armour Max. (mm/in)	Nominal dimensions (mm/in) A Min	B Min	C Min
	STX200-474	2"	53.34	60.33	50.55	57.91	26.92	105.41	102.87
			2.100	2.375	1.990	2.280	1.060	4.150	4.050
	STX250-475	2 1/2"	58.42	65.15	55.63	63.12	40.13	109.47	115.32
			2.300	2.565	2.190	2.485	1.580	4.310	4.540
	STX250-476	2 1/2"	63.50	69.85	60.71	67.46	40.13	109.47	115.32
			2.500	2.750	2.390	2.656	1.580	4.310	4.540
	STX300-478	3"	65.53	72.14	61.98	69.85	41.66	143.26	125.22
			2.580	2.840	2.440	2.750	1.640	5.640	4.930
	STX300-479	3"	70.87	77.72	67.06	75.44	41.66	147.32	133.35
			2.790	3.060	2.640	2.970	1.640	5.800	5.250
	STX350-480	3 1/2"	76.20	83.06	72.90	81.03	42.93	160.53	147.07
			3.000	3.270	2.870	3.190	1.690	6.320	5.790
	STX350-481	3 1/2"	81.53	88.39	77.27	86.11	42.93	160.53	147.07
			3.210	3.480	3.042	3.390	1.690	6.320	5.790
	STX400-482	4"	86.87	93.73	83.06	91.19	44.20	168.40	157.23
			3.420	3.690	3.270	3.590	1.740	6.630	6.190
	STX400-483	4"	91.69	98.30	87.38	95.76	44.20	168.40	157.23
			3.610	3.870	3.440	3.770	1.740	6.630	6.190
	STX400-484	4"	96.77	102.36	91.44	99.82	44.20	180.09	175.26
			3.810	4.030	3.600	3.930	1.740	7.090	6.900
	STX400-485	4"	100.71	106.30	95.38	103.25	44.20	180.09	175.26
			3.965	4.185	3.755	4.065	1.740	7.090	6.900

Star Teck XP® jacketed metal-clad cable fittings for hazardous locations

STEX Series

Features and benefits:

- Excellent solution for hazardous location
- Excellent pullout strength
- Robust metallic construction
- Quick and easy installation without disasembly
- Provides grounding continuity of cable armor
- Splined gland and gripping features for ease of installation

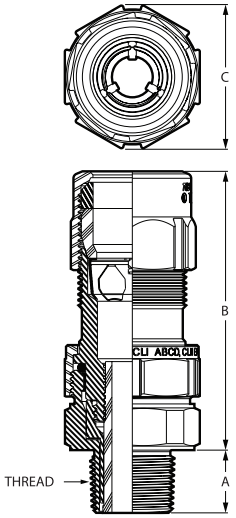
STEX Series - Jacketed metal-clad cable glands

Approvals & certifications	Conformity Conforms to:
	CSA C22.2 No.18.3, C22.2 No.25, C22.2 No.30. C22.2 No. 174, UL2225, UL514B
	CSA Certificate: 1310604 File 23086
	Class I Div1 ABCD Class II Div1 EFG Class III Div1
	UL File: E82038
	Class I Div1 ABCD Class II Div1 EFG Class III Div1

Temperature range
– 40°C to +90°C (–40°F to +194°F)

IP Rating	Material
Type 4 / 4X	Copper free aluminium
	Zinc plated steel
	PVC coating available for both

Dimensions

NPT thread	Part no.	NPT thread	Cable range over jacket Min. (mm/in)	Cable range over jacket Max. (mm/in)	Cable range over armour Min. (mm/in)	Cable range over armour Max. (mm/in)	Nominal dimensions (mm/in) A Min	B Min	C Min
	STEX075	3/4"	15.24	25.02	13.21	22.73	20.07	86.36	46.23
			0.600	0.985	0.520	0.895	0.790	3.400	1.820
	STEX100	1"	21.84	30.61	19.81	28.58	25.02	90.93	61.98
			0.860	1.205	0.780	1.125	0.985	3.580	2.440
	STEX125	1 1/4"	24.13	34.93	22.10	32.89	25.65	99.57	64.01
			0.950	1.375	0.870	1.295	1.010	3.920	2.520
	STEX150	1 1/2"	29.21	41.28	25.15	37.21	26.16	127.51	83.31
			1.150	1.625	0.990	1.465	1.030	5.020	3.280
	STEX200	2"	36.58	49.91	32.51	45.85	26.92	130.05	92.46
			1.440	1.965	1.280	1.805	1.060	5.120	3.640
	STEX250	2 1/2"	46.36	60.33	42.29	56.26	40.13	131.32	115.32
			1.825	2.375	1.665	2.215	1.580	5.170	4.540
	STEX300	3"	57.53	72.14	53.47	68.07	41.66	167.89	125.22
			2.265	2.840	2.105	2.680	1.640	6.610	4.930
	STEX350	3 1/2"	67.82	83.06	64.64	79.88	42.93	187.45	147.07
			2.670	3.270	2.545	3.145	1.690	7.380	5.790
	STEX400	4"	81.79	98.30	78.49	92.46	44.20	194.31	157.23
			3.220	3.870	3.090	3.640	1.740	7.650	6.190

Ex d Standard stopping plug

SP Series

SP Series - Stopping plugs - standard Ex d

Approvals & certifications	Conformity Conforms to:
	ATEX: Baseefa08ATEX0324
	IECEx: IECEx BAS08.0109X
	ETL: 3176087
	UL 1203 (Nickel Plated Brass and Stainless Steel only)
	EAC Ex: RU C-GB AA87.00198
	INMETRO: UL-BR 15.03.05
	CNEX 15.1691X
	Ⓔx I M2 / II 2 G, Ex d I Mb, Ex d IIC Gb
	Class I Div 1 ABCD
	Class II Div 1 EFG

Temperature range
–20°C to +200°C (–4°F to +392°F)

Material
Brass, nickel plated brass or stainless steel

Standard Ex d stopping plug – metric thread

Nickel plated Part no.	Metric Thread Size (mm)	Brass Part no.	Metric Thread Size (mm)	Stainless steel Part no.	Metric Thread Size (mm)
EXN/M16/SP	M16	EX/M16/SP	M16	EXS/M16/SP	M16
EXN/M20/SP	M20	EX/M20/SP	M20	EXS/M20/SP	M20
EXN/M25/SP	M25	EX/M25/SP	M25	EXS/M25/SP	M25
EXN/M32/SP	M32	EX/M32/SP	M32	EXS/M32/SP	M32
EXN/M40/SP	M40	EX/M40/SP	M40	EXS/M40/SP	M40
EXN/M50/SP	M50	EX/M50/SP	M50	EXS/M50/SP	M50
EXN/M63/SP	M63	EX/M63/SP	M63	EXS/M63/SP	M63

Standard Ex d stopping plug – NPT thread

Nickel plated Part no.	NPT Thread Size (in)	Brass Part no.	NPT Thread Size (in)	Stainless steel Part no.	NPT Thread Size (in)
EXN/038/SP	3/8	EX/038/SP	3/8	EXS/038/SP	3/8
EXN/050/SP	1/2	EX/050/SP	1/2	EXS/050/SP	1/2
EXN/075/SP	3/4	EX/075/SP	3/4	EXS/075/SP	3/4
EXN/100/SP	1	EX/100/SP	1	EXS/100/SP	1
EXN/125/SP	1 1/4	EX/125/SP	1 1/4	EXS/125/SP	1 1/4
EXN/150/SP	1 1/2	EX/150/SP	1 1/2	EXS/150/SP	1 1/2
EXN/200/SP	2	EX/200/SP	2	EXS/200/SP	2

* For unplated brass version, remove N from reference, e.g. EX/M16/SP ** For stainless steel 316 version, add S to the reference, e.g. EXS/M16/SP
N.B. PG thread convertors available upon request

Ex d Tamperproof stopping plug

TSP Series

SP Series - Stopping plugs - standard Ex d

Approvals & certifications	Conformity Conforms to:
	ATEX: Baseefa08ATEX0324
	IECEx: IECEx BAS08.0109X
	ETL: 3176087
	UL 1203 (Nickel Plated Brass and Stainless Steel only)
	EAC Ex: RU C-GB AA87.00198
	INMETRO: UL-BR 15.03.05
	CNEX 15.1691X
	Ⓔx I M2 / II 2 G, Ex d I Mb, Ex d IIC Gb
	Class I Div 1 ABCD
	Class II Div 1 EFG

Temperature range
–20°C to +200°C (–4°F to +392°F)

Material
Brass, nickel plated brass or stainless steel

Tamperproof Ex d stopping plug – metric thread

Nickel plated Part no. TSP	Metric Thread Size (mm)	Brass Part no.	Metric Thread Size (mm)	Stainless steel Part no.	Metric Thread Size (mm)
EXN/M16/TSP	M16	EX/M16/TSP	M16	EXS/M16/TSP	M16
EXN/M20/TSP	M20	EX/M20/TSP	M20	EXS/M20/TSP	M20
EXN/M25/TSP	M25	EX/M25/TSP	M25	EXS/M25/TSP	M25
EXN/M32/TSP	M32	EX/M32/TSP	M32	EXS/M32/TSP	M32
EXN/M40/TSP	M40	EX/M40/TSP	M40	EXS/M40/TSP	M40
EXN/M50/TSP	M50	EX/M50/TSP	M50	EXS/M50/TSP	M50
EXN/M63/TSP	M63	EX/M63/TSP	M63	EXS/M63/TSP	M63

Tamperproof Ex d stopping plug – NPT thread

Nickel plated Part no.	NPT Thread Size (in)	Brass Part no.	NPT Thread Size (in)	Stainless steel Part no.	NPT Thread Size (in)
EXN/038/TSP	3/8	EX/038/TSP	3/8	EXS/038/TSP	3/8
EXN/050/TSP	1/2	EX/050/TSP	1/2	EXS/050/TSP	1/2
EXN/075/TSP	3/4	EX/075/TSP	3/4	EXS/075/TSP	3/4
EXN/100/TSP	1	EX/100/TSP	1	EXS/100/TSP	1
EXN/125/TSP	1 1/4	EX/125/TSP	1 1/4	EXS/125/TSP	1 1/4
EXN/150/TSP	1 1/2	EX/150/TSP	1 1/2	EXS/150/TSP	1 1/2
EXN/200/TSP	2	EX/200/TSP	2	EXS/200/TSP	2

* For unplated brass version, remove N from reference, e.g. EX/M16/TSP ** For stainless steel 316 version, add S to the reference, e.g. EXS/M16/TSP
N.B. PG thread convertors available upon request

Ex d e Hex head stopping plug

HSP Series

HSP Series - Ex e hex head and dome head stopping plugs

Approvals & certifications	Conformity Conforms to:
	ATEX: Baseefa08ATEX0325X
	IECEx: IECEx BAS08.0108X
	EAC Ex: RU C-GB AA87.00198
	INMETRO: UL-BR 15.03.03X
	CNEX: CNEX 15.1656X
	Ⓔx I M2 / II 2 GD, Ex d e I Mb, Ex d e IIC Gb
	Ex tb IIIC Db

Temperature range
–60°C to +130°C (–76°F to +266°F)

IP Rating	Material
IP65/66	Brass, nickel plated brass or stainless steel

Hex head Ex e stopping plug – metric thread

Nickel plated Part no.	Metric Thread Size (mm)	Brass Part no.	Metric Thread Size (mm)	Stainless Steel Part no.	Metric Thread Size (mm)
EXN/M16/HSP	M16	EX/M16/HSP	M16	EXS/M16/HSP	M16
EXN/M20/HSP	M20	EX/M20/HSP	M20	EXS/M20/HSP	M20
EXN/M25/HSP	M25	EX/M25/HSP	M25	EXS/M25/HSP	M25
EXN/M32/HSP	M32	EX/M32/HSP	M32	EXS/M32/HSP	M32
EXN/M40/HSP	M40	EX/M40/HSP	M40	EXS/M40/HSP	M40
EXN/M50/HSP	M50	EX/M50/HSP	M50	EXS/M50/HSP	M50
EXN/M63/HSP	M63	EX/M63/HSP	M63	EXS/M63/HSP	M63

* For unplated brass version, remove N from reference, e.g. EX/M16/SP ** For stainless steel 316 version, add S to the reference, e.g. EXS/M16/HSP
N.B. PG thread convertors available upon request

Ex d e Dome head stopping plug

DSP Series

DSP Series - Ex e hex head and dome head stopping plugs

Approvals & certifications	Conformity Conforms to:
	ATEX: Baseefa08ATEX0325X
	IECEx: IECEx BAS08.0108X
	EAC Ex: RU C-GB AA87.00198
	INMETRO: UL-BR 15.03.03X
	CNEX: CNEX 15.1656X
	I M2 / II 2 GD, Ex d e I Mb, Ex d e IIC Gb
	Ex tb IIIC Db

Temperature range
–60°C to +130°C (–76°F to +266°F)

IP Rating	Material
IP65/66	Brass, nickel plated brass or stainless steel

Dome head Ex e stopping plug – metric thread

Nickel plated Part no.	Metric Thread Size (in)	Brass Part no.	Metric Thread Size (in)	Stainless Steel Part no.	Metric Thread Size (in)
EXN/M16/DSP	M16	EX/M16/DSP	M16	EXS/M16/DSP	M16
EXN/M20/DSP	M20	EX/M20/DSP	M20	EXS/M20/DSP	M20
EXN/M25/DSP	M25	EX/M25/DSP	M25	EXS/M25/DSP	M25
EXN/M32/DSP	M32	EX/M32/DSP	M32	EXS/M32/DSP	M32
EXN/M40/DSP	M40	EX/M40/DSP	M40	EXS/M40/DSP	M40
EXN/M50/DSP	M50	EX/M50/DSP	M50	EXS/M50/DSP	M50
EXN/M63/DSP	M63	EX/M63/DSP	M63	EXS/M63/DSP	M63

* For unplated brass version, remove N from reference, e.g. EX/M16/SP ** For stainless steel 316 version, add S to the reference, e.g. EXS/M16/DSP
N.B. PG thread convertors available upon request

Ex e Nylon stopping plug

Ex e Nylon stopping plugs

Approvals & certifications	Conformity Conforms to:
	IMQ 13 ATEX 016X, IECEx IMQ
	⟨Ex⟩ II 2 GD, Ex e IIC Gb, Ex tb IIIC Db

Temperature range
–60°C to +130°C (–76°F to +266°F)

IP Rating	Material
IP66-IP68 (5 Bar 30 Mins)	Nylon

Nylon stopping plug – metric thread

Nickel plated Part no.	Metric Thread Size (mm)
EX/M16/TSP	M16
EX/M20/TSP	M20
EX/M25/TSP	M25
EX/M32/TSP	M32
EX/M40/TSP	M40
EX/M50/TSP	M50
EX/M63/TSP	M63

Ex d e Thread adaptors

TC Series

TC Series - Ex d e thread adaptors

Approvals & certifications	Conformity Conforms to:
	ATEX: Baseefa07 ATEX 0247X
	IECEx: IECEx BAS07.0090X
	EAC Ex: RU C-GB AA87.00198
	INMETRO: UL-BR 15.03.49X
	CNEX: CNEX 15.1689X
	I M2 / II 2 GD, Ex d e I Mb, Ex d 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)
	UL 1203
	CSA C22.2 No.60079-04
	C22.2 No.60079-1

Temperature range
–60°C to + 100°C (–76°F to +212°F)

Material
Brass, nickel plated brass or stainless steel

Metallic thread adaptor – metric thread

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

* For unplated brass version, remove N from reference, e.g. EX/M16/SP ** For stainless steel 316 version, add S to the reference, e.g. EXS/M16/SP
N.B. PG thread convertors available upon request

Ex d e Thread adaptors

TC Series

Metallic thread adaptor – NPT thread

Male external thread								NPT Female Internal Thread
Nickel plated	**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	EXN/M16-050/TC							
M20	EXN/M20-050/TC	EXN/M20-075/TC						
M25	EXN/M25-050/TC	EXN/M25-075/TC	EXN/M25-100/TC					
M32	EXN/M32-050/TC	EXN/M32-075/TC	EXN/M32-100/TC	EXN/M32-125/TC				
M40	EXN/M40-050/TC	EXN/M40-075/TC	EXN/M40-100/TC	EXN/M40-125/TC	EXN/M40-150/TC			
M50	EXN/M50-050/TC	EXN/M50-075/TC	EXN/M50-100/TC	EXN/M50-125/TC	EXN/M50-150/TC	EXN/M50-200/TC		
M63	EXN/M63-050/TC	EXN/M63-075/TC	EXN/M63-100/TC	EXN/M63-125/TC	EXN/M63-150/TC	EXN/M63-200/TC		
M75	EXN/M75-050/TC	EXN/M75-075/TC	EXN/M75-100/TC	EXN/M75-125/TC	EXN/M75-150/TC	EXN/M75-200/TC		
NPT 1/2		EXN/050-075/E						
NPT 3/4	EXN/075-050/R		EXN/075-100/E					
NPT 1	EXN/100-050/R	EXN/100-075/R		EXN/100-125/E				
NPT 1 1/4	EXN/125-050/R	EXN/125-075/R	EXN/125-100/R		EXN/125-150/E			
NPT 1 1/2	EXN/150-050/R	EXN/150-075/R	EXN/150-100/R	EXN/150-125/R		EXN/150-200/E		
NPT 2	EXN/200-050/R	EXN/200-075/R	EXN/200-100/R	EXN/200-125/R	EXN/200-150/R			
NPT 2 1/2	EXN/250-050/R	EXN/250-075/R	EXN/250-100/R	EXN/250-125/R	EXN/250-150/R	EXN/250-200/R		EXN/250-300/E
NPT 3	EXN/300-050/R	EXN/300-075/R	EXN/300-100/R	EXN/300-125/R	EXN/300-150/R	EXN/300-200/R	EXN/300-250/R	

Ex d e Coupler

Ex d e Coupler

Approvals & certifications	Conformity Conforms to:
	ATEX: Baseefa 08 ATEX 0003X
	Ex de IIC Gb
	Ex tb IIIC Db

Temperature range
–60°C to +200°C (–76°F to +392°F)

Material
Brass, nickel plated brass or stainless steel

Ex d e Coupler - Metric thread

Nickel plated Part no.	Metric Thread Size (mm)
EXN/M16/C	M16
EXN/M20/C	M20
EXN/M25/C	M25
EXN/M32/C	M32
EXN/M40/C	M40
EXN/M50/C	M50
EXN/M63/C	M63
EXN/M75/C	M75

Brass Part no.	Metric Thread Size (mm)
EX/M16/C	M16
EX/M20/C	M20
EX/M25/C	M25
EX/M32/C	M32
EX/M40/C	M40
EX/M50/C	M50
EX/M63/C	M63
EX/M75/C	M75

Stainless Steel Part no.	Metric Thread Size (mm)
EXS/M16/C	M16
EXS/M20/C	M20
EXS/M25/C	M25
EXS/M32/C	M32
EXS/M40/C	M40
EXS/M50/C	M50
EXS/M63/C	M63
EXS/M75/C	M75

Ex d e Female to female coupler - NPT thread

Nickel plated Part no.	NPT Thread Size (in)
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 Part no.	NPT Thread Size (in)
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 Part no.	NPT Thread Size (in)
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

Ex e Drain valves

Ex e drainage device

DV Series - Ex e metallic drain valve

Features and benefits:

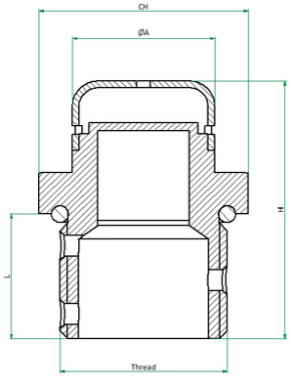
- Increased safety Ex e
- Suitable for use in Zone 1, 2, 21 and 22
- Allows Water/Condensation to drain from enclosure

Approvals & certifications	Conformity Conforms to:
	IMQ 15 ATEX 012U, IECEx IMQ
	Ex II 2 GD
	Ex e IIC Gb
	Ex tb IIIC Db

Temperature range
–60°C to +200°C (–76°F to +392°F)

IP Rating	Material
IP66	Nickel plated brass
	Stainless steel

DImensions

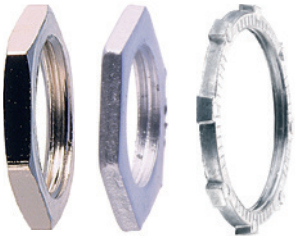


Metric thread	Part no.	Thread	Nominal dimensions (mm/in) Length	H Min	QA	CH
	EXN/M20/DV	M20	15.0	31.0	17.0	25.0
			0.590	1.220	0.669	0.984
	EXN/M25/DV	M25	15.0	31.0	17.0	32.0
			0.590	1.220	0.669	1.259
	EXN/050/DV	1/2" NPT	16.0	32.0	17.0	25.0
			0.629	1.259	0.669	0.984
	EXN/075/DV	3/4" NPT	16.0	32.0	17.0	32.0
			0.629	1.259	0.669	1.259
	EXS/M20/DV	M20	15.0	31.0	17.0	25.0
			0.590	1.220	0.669	0.984
	EXS/M25/DV	M25	15.0	31.0	17.0	32.0
			0.590	1.220	0.669	1.259
	EXS/050/DV	1/2" NPT	16.0	32.0	17.0	25.0
			0.629	1.259	0.669	0.984
	EXS/075/DV	3/4" NPT	16.0	32.0	17.0	32.0
			0.629	1.259	0.669	1.259

Accessories

Type LNB / LNS / LNP & SW

Type LNB / LNS - Metallic locknuts



	Part no.	
Metallic thread	Nickel plated Brass	Galvanised steel
M12 x 1.0	LNB/M12X1	
M12 x 1.5	LNB/M12	
M16	LNB/M16	LNS/M16
M20	LNB/M20	LNS/M20
M25	LNB/M25	LNS/M25
M32	LNB/M32	LNS/M32
M40	LNB/M40	
M50	LNB/M50	
M63	LNB/M63	
M75	LNB/M75	

	Part no.
PG thread	Nickel plated Brass
PG7	LNB/PG7
PG9	LNB/PG9
PG11	LNB/PG11
PG13.5	LNB/PG13
PG16	LNB/PG16
PG21	LNB/PG21
PG29	LNB/PG29
PG36	LNB/PG36
PG42	LNB/PG42
PG48	LNB/PG48

	Part no.
NPT thread (in)	Steel
3/8	LNS/038
1/2	LNS/050
3/4	LNS/075
1	LNS/100
1 1/4	LNS/125
1 1/2	LNS/150
2	LNS/200

Type LNP - Non metallic locknuts

	Part no.	
Metric thread	Black	Grey
M12	LNPB/M12	–
M16	LNPB/M16	LNPB/M16
M20	LNPB/M20	LNPG/M20
M25	LNPB/M25	LNPG/M25
M32	LNPB/M32	LNPG/M32
M40	LNPB/M40	LNPG/M40
M50	LNPB/M50	LNPG/M50
M63	LNPB/M63	LNPG/M63

	Part no.	
PG thread	Black	Grey
PG7	LNPB/PG7	LNPG/PG7
PG9	LNPB/PG9	LNPG/PG9
PG11	LNPB/PG11	LNPG/PG11
PG13	LNPB/PG13	LNPG/PG13
PG16	LNPB/PG16	LNPG/PG16
PG21	LNPB/PG21	LNPG/PG21
PG29	LNPB/PG29	LNPG/PG29
PG36	LNPB/PG36	LNPG/PG36
PG42	LNPB/PG42	LNPG/PG42
PG48	LNPB/PG48	LNPG/PG48

Type SW - Thread sealing washer

Metric thread	Part no.
M12	SWM12*
M16	SWM16
M20	SWM20
M25	SWM25
M32	SWM32
M40	SWM40
M50	SWM50
M63	SWM63

PG thread	Part no.
PG07	SWPG07
PG09	SWPG09
PG11	SWPG11
PG13	SWPG13
PG16	SWPG16
PG21	SWPG21
PG29	SWPG29
PG36	SWPG36
PG42	SWPG42
PG48	SWPG48

NPT & PF thread (in)	Part no.
3/8	SW038
1/2	SW050
3/4	SW075
1	SW100
1 1/4	SW125
1 1/2	SW150
2	SW200

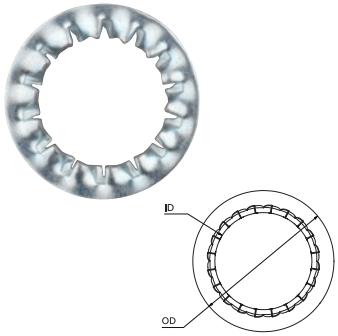
Accessories

Coupler, serrated washer & earth tag

Brass internal female coupler

Metric thread	Part no.
M16	B/M16/C
M20	B/M20/C
M25	B/M25/C
M32	B/M32/C
M40	B/M40/C
M50	B/M50/C
M63	B/M63/C
M75	B/M75/C

Serrated washer - metric



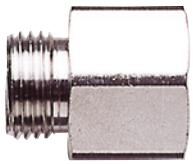
Part no.	Metric thread size (mm)	Diameter (mm)	
		Inside	Outside
EX/M16/SER	M16	17.5	28.0
EX/M20/SER	M20	21.9	33.0
EX/M25/SER	M25	26.2	40.0
EX/M32/SER	M32	33.0	48.1
EX/M40/SER	M40	41.5	60.2
EX/M53/SER	M50	51.5	70.0
EX/M63/SER	M63	64.6	86.8

Earth tag - metrtic

Part no.	A	B	Diameter (mm) C
EX/M16/TAG	16.2 / 16.5	6.5 / 7.0	28.0 / 28.5
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

Accessories

Type E, R & TC


Type E / Type R / Type C -Enlargers, reducers and converters

External thread	To PG7 Internal thread	To PG9 Internal thread	To PG11 Internal thread	To PG13.5 Internal thread	To PG16 Internal thread	To PG21 Internal thread
M16	B/M16-PG7/TC	B/M16-PG9/TC	B/M16-PG11/TC			
M20	B/M20-PG7/TC	B/M20-PG9/TC	B/M20-PG11/TC	B/M20-PG13/TC	B/M20-PG16/TC	B/M20-PG21/TC
M25						B/M25-PG21/TC
M32						
M40						
M50						
PG7		B/PG7-PG9/E				
PG9	B/PG9-PG7/R		B/PG9-PG11/E	B/PG9-PG13/E		
PG11	B/PG11-PG7/R	B/PG11-PG9/R		B/PG11-PG13/E	B/PG11-PG16/E	
PG13,5	B/PG13-PG7/R	B/PG13-PG9/R	B/PG13-PG11/R		B/PG13-PG16/E	B/PG13-PG21/E
PG16	B/PG16-PG7/R	B/PG16-PG9/R	B/PG16-PG11/R	B/PG16-PG13/R		B/PG16-PG21/E
PG21			B/PG21-PG11/R	B/PG21-PG13/R	B/PG21-PG16/R	
PG29					B/PG29-PG16/R	B/PG29-PG21/R
PG36						B/PG36-PG21/R
PG42						
PG48						

External thread	To M10 Internal thread	To M12 Internal thread	To M16 Internal thread	To M20 Internal thread	To M25 Internal thread	To M32 Internal thread
M16		B/M16-M12/R		B/M16-M20/E		
M20	B/M20-M10/R	B/M20-M12/R	B/M20-M16/R		B/M20-M25/E	
M25				B/M25-M20/R		B/M25-M32/E
M32					B/M32-M25/R	
M40						B/M40-M32/R
M50						
PG7			B/PG7-M16/TC	B/PG7-M20/TC		
PG9			B/PG9-M16/TC	B/PG9-M20/TC		
PG11			B/PG11-M16/TC	B/PG11-M20/TC		
PG13,5			B/PG13-M16/TC	B/PG13-M20/TC		
PG16			B/PG16-M16/TC	B/PG16-M20/TC	B/PG16-M25/TC	
PG21			B/PG21-M16/TC	B/PG21-M20/TC	B/PG21-M25/TC	B/PG21-M32/TC
PG29				B/PG29-M20/TC	B/PG29-M25/TC	B/PG29-M32/TC
PG36						B/PG36-M32/TC
PG42						
PG48						
			B/050-M16/TC	B/050-M20/TC		

To PG29 Internal thread	To PG36 Internal thread	To PG42 Internal thread	To PG48 Internal thread
B/M32-PG29/TC			
B/PG21-PG29/E			
	B/PG29-PG36/E		
B/PG36-PG29/R		B/PG36-PG42/E	B/PG36-PG48/E
B/PG42-PG29/R	B/PG42-PG36/R		B/PG42-PG48/E
	B/PG48-PG36/R	B/PG48-PG42/R	

To M40 Internal thread	To 1/2" NPT Internal thread
	B/M20-050/TC
B/M50-M40/R	
	B/PG11-050/TC
	B/PG16-050/TC
B/PG29-M40/TC	
B/PG36-M40/TC	

Accessories

Boots

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Long

Part no.	Diameter (mm)	Diameter (in)	Height (mm)	Height (in)
BT01	29.1	1.146	67.0	2.638
BT02	31.7	1.248	68.0	2.677
BT03	35.2	1.386	76.6	3.016
BT04	37.2	1.465	78.6	3.094
BT05	44.2	1.74	81.6	3.213
BT06	57.2	2.252	112.0	4.409
BT07	66.2	2.606	117.1	4.61
BT08	82.2	3.236	132.6	5.22
BT09	83.2	3.276	132.6	5.22
BT10	89.7	3.531	148.0	5.827
BT11	94.2	3.709	143.8	5.661
BT12	110.6	4.354	182.7	7.193

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Short

Part no.	Diameter (mm)	Diameter (in)	Height (mm)	Height (in)
BTS01	24.5	0.965	56.1	2.209
BTS02	31.0	1.22	67.5	2.657
BTS03	39.0	1.535	72.6	2.858
BTS04	49.5	1.949	91.7	3.61
BTS05	56.1	2.209	88.0	3.465
BTS06	61.0	2.402	88.0	3.465
BTS07	70.1	2.76	93.9	3.697
BTS08	74.9	2.949	95.5	3.76
BTS09	89.0	3.504	108.6	4.276
BTS10	105.0	4.134	126.3	4.972
BTS11	117.0	4.606	163.5	6.437

Thread data

Metric Thread Data
Standard thread conforming to EN60423 & BS3643

Thread Size	External Thread Outside Diameter (mm)	Internal Thread Inside Diameter (mm)	Pitch (mm)
M8	8	6.9	1
M10	10	8.9	1
M12	12	10.9	1
M12	12	10.4	1.5
M16	16	14.4	1.5
M18	18	16.9	1
M20	20	18.4	1.5
M25	25	23.4	1.5
M30	30	28.4	1.5
M32	32	30.4	1.5
M40	40	38.4	1.5
M50	50	48.4	1.5
M63	63	61.4	1.5
M75	75	73.4	1.5

NOTE: Dimensions are nominal

PG Thread Data
German Standard Thread Conforming to DIN40430

Thread Size	External Thread Outside Diameter (mm)	Internal Thread Inside Diameter (mm)	Pitch (mm)
PG7	12.5	11.3	1.27
PG9	15.2	13.9	1.41
PG11	18.6	17.3	1.41
PG13,5	20.4	19.1	1.41
PG16	22.5	21.2	1.41
PG21	28.3	26.8	1.59
PG29	37	35.5	1.59
PG36	47	45.5	1.59
PG42	54	52.5	1.59
PG48	59.3	57.8	1.59

NOTE: Dimensions are nominal

PF Thread Data
Japanese conduit thread conforming to JIS B 0202

Thread Size	External Thread Outside Diameter (mm)	Internal Thread Inside Diameter (mm)	Pitch (mm)
1/4”	13		1.34
3/8”	16.7	15.0	1.34
1/2”	21.0	18.6	1.81
3/4”	26.4	24.1	1.81
1”	33.3	30.3	2.31
1 1/4”	41.9	39.0	2.31
1 1/2”	47.8	44.8	2.31
2”	59.6	56.7	2.31

NOTE: Dimensions are nominal

NPT Thread Data
US Taper seal pipe thread conforming to ANSI/ASME B1.20.1 - 1983

Thread Size	External Thread Outside Diameter (mm)	Pitch (mm)
3/8”	16.7	
1/2”	21.0	1.81
3/4”	26.4	1.81
1”	33.3	2.21
1 1/4”	41.9	2.21
1 1/2”	47.8	2.21
2”	59.6	2.21

NOTE: Dimensions are nominal

UNEF / UNS Thread Data
American unified thread conforming to BS1580

Thread Size	External Thread Outside Diameter (mm)	Internal Thread Inside Diameter (mm)	Pitch (mm)
5/8”	15.9	14.7	1.06
3/4”	19.1	17.7	1.27
13/16”	20.6	19.3	1.27
7/8”	22.2	20.9	1.27
15/16”	23.8	22.4	1.27
1”	25.4	24.0	1.27
1 1/8”	28.6	27.0	1.41
1 3/16”	30.2	28.6	1.41
1 1/4”	31.8	30.2	1.41
1 5/16”	33.3	31.8	1.41
1 3/8”	34.9	33.4	1.41
1 7/16”	36.5	35.0	1.41
1 3/4”	44.5	42.9	1.41
2”	50.8	49.3	1.59
2 1/4”	57.2	55.4	1.59

NOTE: Dimensions are nominal

Conformity documents and compliance information

Rohs Statements
Reach Statements
SVHC Statements
Conflict Minerals declaration
Certificates of conformity
Declarations of Conformity

Can be provided on request please contact (details from back page)

Chemical resistance guide

This document serves as a guideline only and compatibility should be verified in the application environment to ensure suitability. Many factors can determine the exact suitability; such as temperature, duration of contact, nature of contact such as submersion and concentration of the chemicals involved.

Resistance guide															
Chemicals	**Metals**						**Plastics & Elastomers**								
3 = Excellent 2 = Good 1 = Fair to poor 0 = Not recommended - = No data	**Aluminum**	**Carbon Steel**	**Cast/Ductile Iron**	**Nickel Plated Brass**	**303/304 Stainless Steel 1.4301 (V2A)**	**316 Stainless Steel 1.4401 (V4A)**	**PA6 PA66 Polyamide**	**POM Polyacetal**	**PVC Polyvinylchloride**	**TPE-U/TPE-E Polyester**	**PP Polypropylene**	**EPR, EPDM**	**NBR Nitrile**	**CR Polychloroprene**	**TPU Polyurethane**
Acetate Solvents	2	0	0	3	0	3	3	3	0	0	0	2	0	0	0
Acetic Acid	2	0	0	3	0	2	0	0	3	0	2	3	1	1	1
Acetic Acid — 20%	2	0	0	3	2	3	0	1	3	0	2	3	1	2	-
Acetic Acid — 30%	0	-	3	3	3	3	0	2	-	0	2	3	1	2	-
Acetic Acid — 50%	0	-	3	3	3	2	0	2	-	1	2	3	0	1	-
Acetic Acid — 80%	2	0	0	3	0	2	0	0	-	1	3	3	0	1	-
Acetic Acid — Glacial	2	0	0	2	1	3	0	0	3	1	1	2	0	0	-
Acetone	2	3	3	3	3	3	2	2	0	1	0	3	0	0	0
Acetone Cyanohydrin	2	-	2	3	2	-	-	-	-	-	-	0	-	2	-
Acetonitrile (Methyl Cyanide)	3	3	3	3	3	3	3	3	0	-	0	3	0	0	2
Acetophenone	2	3	3	3	3	2	3	-	-	-	1	2	0	0	-
Acrylonitrile	2	3	3	3	3	3	2	-	3	0	2	0	0	0	0
Adipic Acid	2	3	2	3	2	2	3	2	3	0	2	3	3	0	-
Alcohol	3	3	3	3	3	3	0	2	3	2	2	2	-	-	-
Alcohol: Amyl	2	2	2	3	3	3	3	3	3	3	2	3	2	2	0
Alcohol: Benzyl	2	2	2	3	2	2	0	3	3	0	3	1	0	1	1
Alcohol: Butyl	2	2	2	3	3	3	0	3	3	0	2	3	3	3	0
Alcohol: Diacetone	2	3	2	3	3	3	3	3	2	0	2	2	0	0	2
Alcohol: Ethyl	2	2	2	3	3	3	2	3	3	3	3	3	3	3	0
Alcohol: Hexyl	3	3	3	3	3	3	3	3	3	0	3	1	3	2	0
Alcohol: Isobutyl	2	1	1	3	3	3	2	3	3	2	3	2	1	3	0
Alcohol: Isopropyl	2	3	1	3	2	2	0	3	3	3	3	2	1	2	0
Alcohol: Methyl	2	3	3	3	3	3	2	3	3	2	3	2	3	3	0
Alcohol: Octyl	3	3	3	3	3	3	3	3	3	0	-	3	2	2	0
Alcohol: Propyl	3	3	3	3	3	3	2	3	3	0	3	2	3	3	0
Aluminum Chloride	0	0	0	0	0	1	0	2	3	1	3	3	3	3	2
Ammonia 10%	3	3	3	3	3	3	3	0	3	-	3	3	-	3	-
Ammonia Anhydrous	3	3	3	3	3	3	2	0	3	0	3	3	-	2	-
Ammonia Liquids	0	-	3	3	3	-	-	0	0	-	3	3	2	3	2

Chemical resistance guide

Resistance guide

Chemicals	Metals						Plastics & Elastomers								
3 = Excellent **2 = Good** **1 = Fair to poor** **0 = Not recommended** **- = No data**	**Aluminum**	**Carbon Steel**	**Cast/Ductile Iron**	**Nickel Plated Brass**	**303/304 Stainless Steel 1.4301 (V2A)**	**316 Stainless Steel 1.4401 (V4A)**	**PA6 PA66 Polyamide**	**POM Polyacetal**	**PVC Polyvinylchloride**	**TPE-U/TPE-E Polyester**	**PP Polypropylene**	**EPR, EPDM**	**NBR Nitrile**	**CR Polychloroprene**	**TPU Polyurethane**
Ammonia Liquors	3	-	3	3	3	-	-	-	0	-	-	-	-	3	-
Aniline	1	1	1	3	3	2	1	2	2	0	1	0	0	0	0
ASTM no.1	3	-	3	3	3	-	-	3	3	3	-	0	3	2	2
ASTM no.2	3	-	3	3	3	-	-	3	2	3	-	0	3	2	0
ASTM no.3	3	-	3	3	3	-	-	3	-	3	-	0	3	1	0
ASTM no.4	3	-	3	3	3	-	-	3	-	0	-	0	2	0	0
ASTM no.5	3	-	3	3	3	-	-	-	-	3	-	0	3	2	0
ASTM no.6	3	-	3	3	3	-	-	-	-	3	-	0	0	0	0
ASTM no.7	3	-	3	3	3	-	-	-	-	3	-	0	2	0	0
Benzaldehyde	2	3	3	3	2	2	0	3	-	2	0	2	0	0	0
Benzene	2	3	2	3	2	2	3	3	2	1	0	0	0	0	0
Blood	-	-	-	3	3	3	-	-	3	-	3	-	-	-	-
Brake Fluid (Mineral)	3	3	3	3	3	3	2	3	0	0	0	3	1	2	3
Carbon Tetrachloride	0	0	0	3	2	2	0	2	0	0	0	0	1	0	3
Caustic	0	-	-	3	3	3	-	-	-	0	-	-	-	-	-
Chlorinated Water	0	-	-	3	2	2	0	0	0	0	1	0	1	1	0
Chlorine Water	0	-	-	3	1	1	1	0	0	-	0	1	-	0	-
Chloroform	0	2	0	3	3	3	0	2	0	0	0	0	0	0	0
Citric Acid	1	0	0	3	2	3	0	2	3	3	2	3	-	3	-
Copper Sulfate	-	-	-	3	3	3	1	3	3	2	3	3	-	3	-
Creosols	2	-	1	3	3	-	-	2	2	-	0	0	0	0	0
Cresols	2	1	1	3	3	3	0	0	3	0	0	0	-	0	-
Crude Oil	3	-	2	3	3	3	3	0	-	2	0	0	2	1	0
Diesel Fuel	3	3	3	3	3	3	3	3	2	2	2	0	-	0	-
Diethylamine	2	2	0	3	2	2	2	2	-	-	1	2	-	2	-
Dyes	2	-	2	3	3	3	3	1	-	-	-	-	-	1	-
Ethane	3	3	3	3	3	3	0	3		-	0	0	3	1	2
Ethanol (Ethyl Alcohol)	2	2	2	3	3	3	1	3		3	3	3	3	3	0
Ethanolamine	2	3	2	3	3	3	3	0	-	-	0	2	2	1	1
Ether	2	1	1	3	3	3	3	3		-	0	1	-	0	-
Ethyl Ether	1	1	1	2	2	2	2	2	0	-	0	0	0	0	0
Ethyl Formate	1	-	3	2	2	2	-	3	0	0	-	1	0	2	-
Ethylene Glycol	2	2	2	3	2	2	2	2	3	1	3	3	3	3	2
Freon 32	0	3	3	3	3	3	-	3		-	-	3	3	3	-
Gasoline	3	3	3	3	3	3	-	3	2	3	0	0	3	0	1
Gelatin	2	3	0	3	3	3	2	2		2	3	3	3	3	0
Glycol	2	-	2	2	2	2	1	2		-	3	3	-	3	-
Grapefruit Oil	-	0	0	3	3	3	-	-	3	-	-	-	3	0	-
Grease	3	3	3	3	3	3	-	0	3	-	-	0	-	0	-
Heavy Water	3	-	1	2	3	-	-	-		2	-	3	3	-	0
Hexane	3	3	3	3	3	3	2	1	2	3	1	0	3	0	2
Hexanol	3	-	3	3	3	-	-	3	-	0	3	3	3	2	0
Hexanol Tertiary	3	3	3	3	3	3	3	3	-	-	2	-	-	-	-
Hexyl Alchol	3	-	-	2	3	-	-	-	-	-	3	-	-	2	-
Hexyl Alcohol	3	-	3	2	3	-	-	-		0	-	1	2	2	0
Hexylene Glycol (Brake Fluid)	3	-	3	2	3	-	-	-	-	0	-	1	3	3	-
Hydraulic Oil (Petro)	3	3	3	3	3	3	3	2		-	0	0	-	3	-
Hydraulic Oil (Petroleum Base)	3	3	3	3	3	3	3	1		3	0	0	-	2	-
Hydraulic Oil (Petroleum)	3	-	3	3	3	3	3	2		3	0	0	3	2	-
Hydraulic Oil (Synthetic)	3	3	3	3	3	3	3	2		3	0	0	0	0	2

Chemical resistance guide

Resistance guide															
Chemicals	**Metals**						**Plastics & Elastomers**								
3 = Excellent 2 = Good 1 = Fair to poor 0 = Not recommended - = No data	**Aluminum**	**Carbon Steel**	**Cast/Ductile Iron**	**Nickel Plated Brass**	**303/304 Stainless Steel 1.4301 (V2A)**	**316 Stainless Steel 1.4401 (V4A)**	**PA6 PA66 Polyamide**	**POM Polyacetal**	**PVC Polyvinylchloride**	**TPE-U/TPE-E Polyester**	**PP Polypropylene**	**EPR, EPDM**	**NBR Nitrile**	**CR Polychloroprene**	**TPU Polyurethane**
Hydrazine	2	0	0	3	3	3	-	2	-	0	0	3	2	1	0
Hydrochloric Acid - 10%	0	0	0	3	0	0	0	0	3	0	3	3	-	0	-
Hydrochloric Acid - 37%	0	0	0	3	0	0	0	0	3	0	1	1	2	0	0
Hydrogen Peroxide - 30%	3	2	0	3	2	2	0	0	3	0	2	2	-	0	-
Hydrogen Peroxide - 90%	3	-	0	2	3	-	0	0	3	0	3	1	-	0	-
Isopropyl Alcohol	3	3	3	3	3	3	0	3	-	3	3	2	3	2	0
Isopropyl Amine	-	-	3	3	3	-	-	-	-	-	-	-	0	-	-
Isopropyl Chloride	0	-	3	3	3	3	-	3	-	-	0	0	0	0	0
Isopropyl Ether	2	3	3	3	3	3	3	0	-	-	0	0	2	0	2
Jet Fuel (JP1 to JP6)	3	3	3	3	3	3	1	3	-	-	0	0	-	0	-
Kerosene	3	3	3	3	3	3	3	3	3	1	0	0	3	0	2
Ketchup	-	-	-	3	3	3	3	3	3	-	-	3	-	3	-
Ketones	2	3	3	3	3	3	3	0	0	0	0	3	0	0	0
Lacquers	3	1	1	2	3	3	3	0	0	0	0	0	0	0	0
Lactic Acid	0	0	0	3	2	2	0	1	-	0	2	3	-	1	-
Lactic Acid - 5% Solution	1	-	0	3	3	-	-	3	-	0	3	3	3	3	2
Lard	3	3	3	3	2	3	3	2	-	2	2	0	-	0	-
Lard Oil (Cold)	3	3	3	3	3	3	-	3	-	-	-	0	-	2	-
Lard Oil (Hot)	3	3	3	3	3	3	-	3	-	2	2	0	3	2	1
Latex	3	-	-	3	3	3	3	1	-	-	3	3	3	2	0
Lubricants	3	3	3	3	3	3	3	3	3	3	2	0	-	0	-
Lubricants (Petroleum)	1	-	3	3	3	3	3	3	3	3	0	0	3	2	2
Lubricating Oil	3	3	3	3	3	3	3	3	3	3	3	0	-	2	-
Methanol	2	3	3	3	3	3	2	3		2	3	3	3	3	0
Methyl Acetate	2	2	2	2	3	2	3	2	0	1	0	1	0	0	0
Methyl Acetone	3	3	3	2	3	3	3	0		-	0	3	1	0	-
Methyl Bromide	0	3	3	3	3	3	0	0	0	0	0	0	2	0	0
Methyl Ethyl Ketone (MEK)	2	3	3	3	3	3	1	1	0	2	0	3	0	0	0
Methyl Formate	3	-	2	2	2	2	-	3	-	-	-	1	0	2	0
Nitric Acid - 10%	0	0	0	1	3	3	0	0	3	0	0	2	-	2	-
Nitric Acid - 70%	3	-	0	1	3	3	0	0	0	0	0	0	-	0	-
Olive Oil	3	3	3	3	2	3	3	3		-	3	0	3	0	3
Ozone	2	0	1	3	2	2	0	0		1	0	3	0	1	3
Paint Thinner, Duco	0	2	2	3	2	3	3	3	0	-	0	0	0	0	0
Paraffin	3	3	3	3	3	3	3	3	3	-	3	0	3	2	3
Petroleum	0	-	1	3	3	3	3	2	2	2	2	0	-	2	-
Petroleum Ether	2	-	2	3	3	3	3	3	2	-	3	0	3	0	2
Phenol	2	-	0	3	3	-	-	3	2	0	1	-	0	0	0
Phenol (10%)	3	0	0	3	2	2	0	2	2	-	2	2	-	0	-
Phosphoric Acid - 10%	0	-	0	3	3	-	0	-	3	-	3	3	-	2	-
Phosphoric Acid - 20%	0	-	0	3	3	2	0	0	3	-	3	3	2	2	1
Salt Brine	1	0	0	1	2	0	3	2	2	3	3	3	-	3	-
Salt Water	0	0	0	1	1	2	3	3	2	3	3	3	3	2	0
Sea Water	0	0	0	1	1	1	3	3	3	3	3	3	3	2	3
Sea Water (Brine)	3	-	1	1	3	-	3	3	3	-	3	3	-	2	-
Sewage	0	0	0	2	3	3	-	3		2	3	1	3	2	0
Silicone	2	3	3	3	3	3	3	3		3	3	3	-	3	-
Silicone Grease	-	-	-	3	-	-	-	3		3	-	3	3	3	3
Silicone Oil	2	3	2	3	3	3	3	3		2	3	3	3	0	3
Silver Nitrate	0	1	0	3	2	2	3	3		0	2	3	2	3	3

Chemical resistance guide

Resistance guide

Chemicals	**Metals**						**Plastics & Elastomers**								
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Skydol 7000	-	-	-	3	3	-	-	3		0	-	3	0	0	0
Skydrol	-	-	-	3	-	-	1	-		2	-	3	-	0	-
Skydrol 500	-	-	-	3	3	-	1	3		1	-	3	0	0	0
Skydrol Hydraulic Fluid	-	-	-	3	3	-	1	-		-	-	3	-	0	-
Sodium Chloride	1	0	0	1	1	1	3	2		3	3	3	3	3	3
Sodium Hydroxide	0	-	2	3	3	-	1	0	2	-	3	3	-	2	-
Sodium Hydroxide (< 10%) (Caustic Soda)	-	-	-	3	-	-	-	-	3	-	-	-	-	-	-
Sodium Hydroxide (< 50%) (Caustic Soda)	-	-	-	3	-	-	-	-	3	-	-	-	-	-	-
Sodium Hydroxide (20%)	0	3	2	3	2	2	3	3	3	2	3	2	3	2	2
Sodium Hydroxide (50%)	0	0	0	3	2	2	3	3	3	1	3	2	0	1	2
Sulfur Dioxide	0	-	0	0	0	3	1	0	0	0	3	2	0	2	1
Sulfur Dioxide (dry)	2	3	3	0	0	3	2	2	3	1	3	3	-	0	-
Sulfur Dioxide Gas Dry	0	-	2	0	3	3	2	2	3	0	1	3	-	0	-
Sulfuric Acid - Concentrated	-	-	-	0	-	-	0	0	0	0	2	0	-	0	-
Sulfuric Acid (<10%)	0	1	0	0	0	1	1	0	2	3	3	3	0	0	0
Sulfuric Acid (10-75%)	0	0	0	0	0	0	0	0	1	-	3	2	-	0	-
Sulfuric Acid (75-100%)	0	0	0	0	1	0	0	-	0	1	1	2	-	0	-
Sulfuric Acid (hot concentrated)	0	0	0	0	0	1	0	-	0	-	0	0	-	0	-
Syrup	3	-	-	3	3	3	-	3	3	-	3	3	3	2	-
Toluene	3	-	3	3	-	3	3	-	0	-	0	-	-	0	-
Transformer Oil	3	-	2	3	3	3	3	1	-	-	0	0	3	1	3
Trichlorethylene	0	-	1	3	-	3	3	-	0	-	2	-	-	0	-
Turbine Oil	3	3	3	3	3	3	3	3	-	-	2	0	2	0	3
Turpentine	3	-	2	3	3	3	2	3	2	2	0	0	3	0	0
Unleaded Gasoline	3	-	3	3	-	3	3	-	-	-	0	-	-	0	-
Urea	2	-	2	2	2	2	1	3	3	2	3	3	2	2	2
Urine	2	3	2	3	3	3	2	1	-	-	3	3	3	0	-
Vegetable Oil	2	2	2	3	3	3	3	3	-	-	0	0	3	0	3
Vinyl Acetate	2	2	1	3	2	2	-	-	0	-	0	2	0	0	0
Water	3	0	0	3	3	3	-	3	3	3	2	3	-	3	-
White Spirit	-	-	-	3	-	3	3	3		3	3	-	-	-	-
Zinc Chloride	0	0	0	3	0	0	1	0	3	2	3	3	3	2	3

Notes

Additional information
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