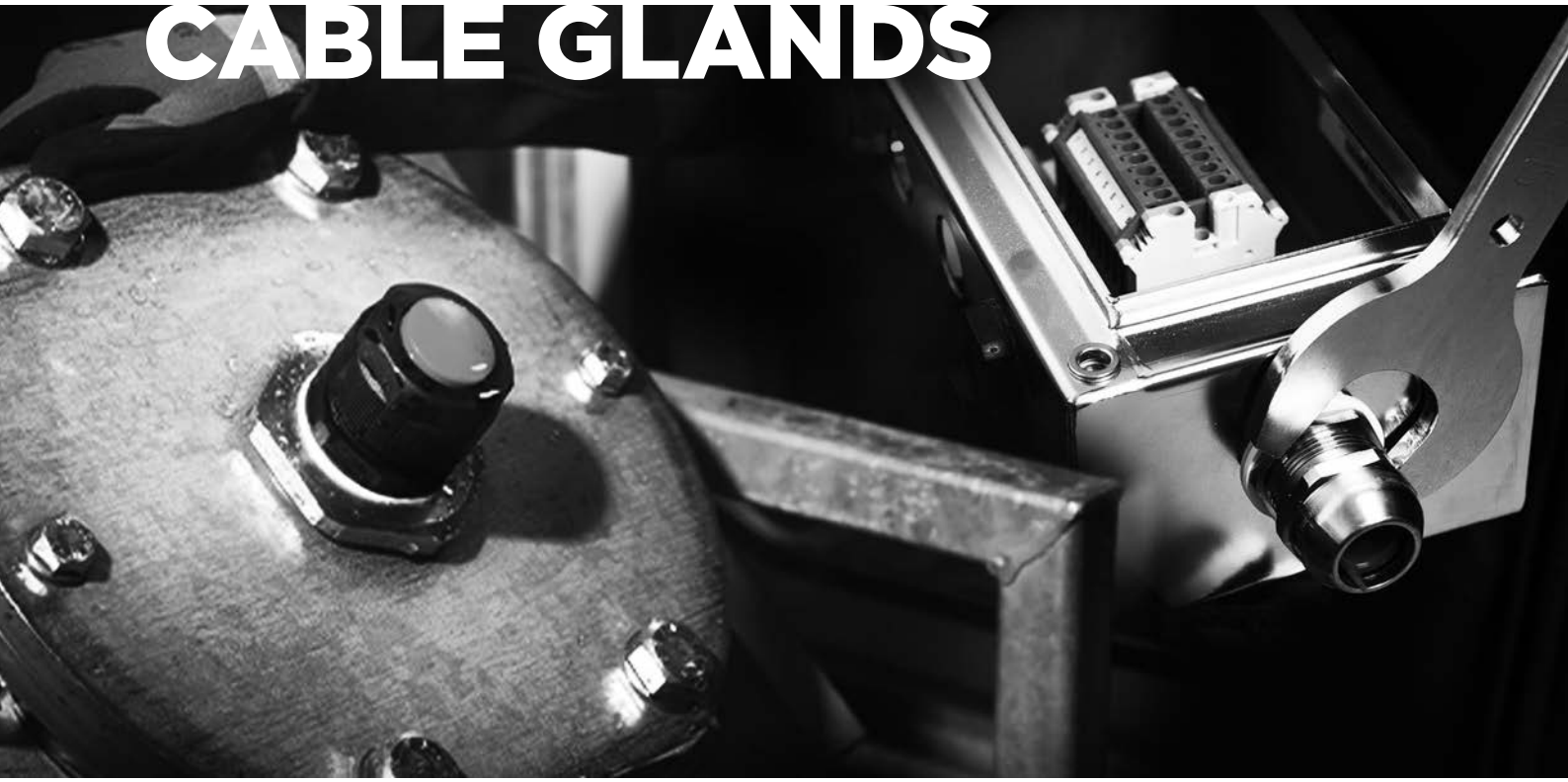
SECURING CABLES WORLDWIDE

TRUSEAL

CABLE GLANDS



GLOBAL

WHAT WE PROMISE FOR YOUR BUSINESS

CMP PRODUCTS IS A LEADING DESIGNER, MANUFACTURER, AND SUPPLIER OF CABLE GLANDS, CABLE CLEATS AND CABLE ACCESSORIES FOR CUSTOMERS AROUND THE GLOBE.

EXPERIENCE AND HERITAGE

With over 60 years' experience across a wide range of industries, CMP Products is widely acknowledged as the leading choice for industrial and hazardous area cable glands, cable cleats and accessories.

Occupying three sites in the north of England, CMP designs, manufactures and distributes products via a major global distribution network; providing customers with ease of access to products and training.

Additional strength and security lies in CMP being part of the distinguished British Engines group of companies which has been engineering products since 1922, bringing with it heritage and experience of global markets for almost a century.

QUALITY AND SAFETY

Along with operating a safe working environment, quality is a fundamental driver of our business and we continually invest in new processes and new machinery, equipped with efficiency monitoring tools, helping us to operate competitively and within some of the tightest tolerances on the market.

To ensure products remain of the highest quality, as part of an integrated management system, CMP operates an accredited quality management system, which is overseen by a specialist team, involved in every step of the manufacturing process.

High service standards ensure short lead times for customers and provide the ability to fast-track delivery when required. Project documentation is available in a range of languages and dedicated support is available for complex projects spanning multiple countries.

Customers are at the heart of our business and we are constantly striving to ensure that they have access to the very latest innovations and highest quality products.

5 REASONS TO CHOOSE CMP:

1. OFFICES AND WAREHOUSE FACILITIES THROUGHOUT THE WORLD
2. RECOGNISED MARKET LEADER WITH 60+ YEARS' EXPERIENCE
3. MULTILINGUAL TRAINING SERVICE
4. ISO-CERTIFIED QUALITY, ENVIRONMENT AND HEALTH & SAFETY INTEGRATED MANAGEMENT SYSTEM
5. SIGNIFICANT WORLDWIDE PROJECT PORTFOLIO

TRUSEAL
POWERED BY QUALITY

CONTENTS

INTRODUCING TRUSEAL

TRUSEAL POLYMER

TRUSEAL METALLIC

TRUSEAL EMC

TruSeal is CMP's very latest innovation in polymer and metallic strain relief cable glands for use in a variety of industrial and explosive atmosphere applications.

Available with a unique 'modular' sealing system, the gland allows customers to control inventory more easily, with fewer gland sizes required, whilst a range of colours is available to suit customer requirements.

Designed by CMP's in-house Research & Development Team. TruSeal encompasses some of the most advanced features for this type of cable gland product, providing a safe and robust cable gland with the assurance of third-party testing and certification.

The product is manufactured in the UK under a robust internationally-recognised accreditation system, assessed and approved by external auditors.

This results in a reliable cable gland range provided by one of the most experienced cable gland manufacturers in the world.

ISO 9001
ISO 14001
ISO 45001
BUREAU VERITAS
Certification

Marine Classification Society approvals from ABS, BV, DNV-GL, and Lloyds are available on request. NATO stock numbers can also be provided for products in the TruSeal range.

TRUSEAL SEALING

THROUGH CMP'S UNIQUE DESIGN APPROACH, TRUSEAL PROVIDES CUSTOMERS WITH THE WIDEST SEALING RANGE ON THE MARKET FOR AN EQUIVALENT CABLE GLAND.

Through CMP's unique design approach, TruSeal provides customers with the widest sealing range on the market for an equivalent cable gland.

The sealing system consists of three circular seals, as well as additional options for non-round cables. It includes a modular two-piece seal that allows customers to seal against two different cable ranges using the same cable gland size.

As the gland is tightened, nylon fingers close in around the seal itself, applying even pressure around the circumference of the cable and making an effective seal against external elements. This method also allows installers to easily control the pressure applied to the cable by the sealing ring.

CMP's unique design approach means that customers are able to purchase fewer sizes of cable gland, therefore reducing inventory costs and the range of cable glands required.

This reduced direct or indirect cost is not always evident but reducing the number of different line items helps to minimise the risk of material shortages or stock outages which ultimately affects efficiency, productivity and profitability.

An additional benefit of a wide sealing range is that often, for a specified cable, CMP will be able to offer a smaller size of cable gland than the general market.

COMPLIANCE WITH CURRENT STANDARDS

A dedicated, in-house certification team ensures that CMP leads the way in compliance to the very latest standards.

The team is at the forefront of these standards including representation on the British Standards (BSI) committee for cable gland installation (IEC 60079-14), and on the IEC committee for cable cleats (IEC 61914).

This assures customers of an in-depth understanding, including application of the standards to the very latest product innovations arising from CMP. Accordingly, TruSeal is fully tested and 3rd party certified to the most onerous cable gland market standards, IEC/EN 62444 (formerly EN 50262).

The range also satisfies the conditions and requirements of IEC 62262; 'Degrees of Protection provided by Enclosures for Electrical Equipment against Mechanical Impacts (IK Code)'.

This standard states that for a safe installation, electrical enclosures used for industrial applications must be selected according to their 'rated duty of service'. They should be designed and tested to ensure that they are able to perform effectively from a mechanical perspective.

SUMMARY OF THE BASIC REQUIREMENTS OF IEC/EN 62444

In order to meet the requirements of IEC/EN 62444, the TruSeal range has been subjected to a range of intensive assessments, including resistance to impact; and cable anchorage (shown in the tables below).

Prior to these tests, products are conditioned in an accelerated ageing programme, ensuring that the product will remain functional for the entirety of its lifespan.

As well as these tests, unarmoured cable glands must perform in twist tests, corrosion tests and meet certain material requirements, before they can be certified to IEC/EN 62444.

The TruSeal range meets, and in some categories even surpasses the requirements of these standards.

IMPACT RESISTANCE LEVEL – VALUES TAKEN FROM IEC/EN 62444								
Category	1	2	3	4	5	6	7	8
Energy (J)	0.2 ±10%	0.5 ±10%	1.0 ±10%	2.0 ±5%	4.0 ±5%	7.0 ±5%	10.0 ±5%	20.0 ±5%
Mass (kg)	0.2	0.2	0.2	0.2	1.0	1.0	1.0	2.0
Height (m)	0.1	0.25	0.5	1.0	0.4	0.7	1.0	1.0
Mass and height may vary in degrees necessary to achieve the required energy								

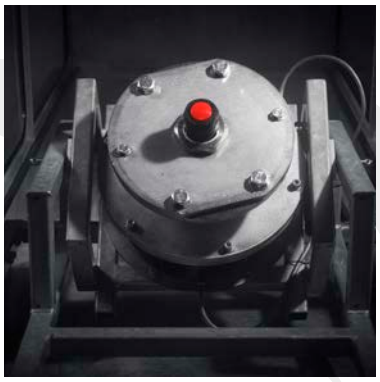
CABLE RETENTION & CABLE ANCHORAGE TEST TYPE A OR B - FOR CABLES WITHOUT ARMOUR			
Values taken from IEC/EN 62444			
Cable Diameter	Cable Retention (N)	Cable Anchorage	
		Type A (N)	Type B (N)
Up to 4	5	-	-
> 4 to 8	10	30	75
> 8 to 11	15	42	120
> 11 to 16	20	55	130
> 16 to 23	25	70	140
> 23 to 31	30	80	250
> 31 to 43	45	90	350
> 43 to 55	55	100	400
> 55	70	115	450

INGRESS PROTECTION

Ingress protection (IP) ratings show the level at which a product is protected from the environment e.g. whether outdoor equipment is adequately protected from adverse weather conditions, or if it is suitable to be submersed or pressure cleaned.

The level of protection is signified by a recognised IP code, e.g. IP68 where the first digit [6] indicates the ingress protection against solid bodies such as dust; and the second digit [8] indicates the level of protection against liquids.

Ingress protection tests are conducted in accordance with IEC 60529 (or other equivalent national standards) and ensure that the cable gland is effective at sealing against the cable, therefore preventing dust or liquid entering the equipment enclosure.



ON-SITE TEST FACILITIES

CMP Products houses an on-site test facility, including a wide range of ingress testing conditions, to ensure that all cable glands are fully tested before they are subjected to 3rd party certification. This investment in research & development means that products can be rigorously tested beyond the normal limits; leading to the design of products that are capable of outperforming even the safest of international standards.

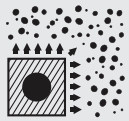
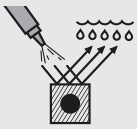
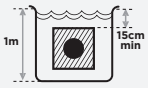
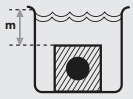
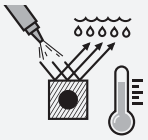
PRODUCTS APPROVED TO IP66, 67, 68, 69, 69K

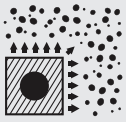
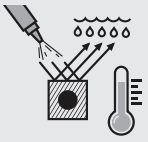
All products within the TruSeal range are tested to IP66, IP67, IP68, IP69 and IP69K (as defined in the tables opposite). To ensure that these ratings are achieved, CMP products provides O-ring interface seals for metallic products and entry thread polymer sealing washers for the polymer cable glands as standard. These features ensure that the required environmental protection will be achieved irrespective of the enclosure material or surface finish.

IP68 TESTED FOR 16 HOURS AT 300 kPa

The TruSeal range has endured the most onerous of tests, including a 300 kPa (3 bar) 16-hour pressure test, achieving an IP68 rating equivalent to 30 metres' depth of water. Often competitors will test their products to a lower pressure or a shorter exposure time making the test easier test to pass.

CMP can also conduct bespoke, customer-specific ingress protection tests for alternative depths and durations upon request. Ideally IP68 testing should be carried out using a specified cable, depth and time agreed with the customer.

EXPLANATION OF INGRESS PROTECTION CODES ACCORDING TO IEC 60529							
First Digit	PROTECTION AGAINST SOLID FOREIGN OBJECTS & ACCESS TO HAZARDOUS PARTS			Second Digit	PROTECTION AGAINST LIQUIDS		
	Illustration	Method	Explanation		Illustration	Method	Explanation
6		Dust-tight	Protected against access to hazardous parts with a wire	6		Protected against strong jets of water of similar force to heavy seas	Water that is sprayed as a strong jet from all directions must not cause damage through penetration of the enclosure or product.
				7		Protected against the effects of temporary immersion	Water must not penetrate in sufficient quantity that can cause damage if the enclosure or product is temporarily submerged in water under standard pressure and time conditions.
				8		Protected against prolonged effects of immersion under pressure to a specified depth	Water must not penetrate in sufficient quantity that can cause damage if the enclosure or product is submerged under water for prolonged periods at a specified depth agreed between the manufacturer and the end user. (The conditions shall be more stringent than those applied to IPX7).
				9		Protected against high temperature and water jets	Water projected at high pressure and high temperature against the enclosure from any direction shall not have harmful effects

EXPLANATION OF INGRESS PROTECTION CODES ACCORDING TO DIN 40050							
First Digit	PROTECTION AGAINST SOLID FOREIGN OBJECTS & ACCESS TO HAZARDOUS PARTS			Second Digit	PROTECTION AGAINST LIQUIDS		
	Illustration	Method	Explanation		Illustration	Method	Explanation
6		Dust-tight	Protected against access to hazardous parts with a wire	9K		Protected against close-range high pressure, steam, spray, high temperature wash down/steam cleaning	Water that is sprayed from all directions at very high pressure must not cause damage through penetration of the enclosure or product

TRANSIT DISCS AND IP PLUGS

CMP TruSeal transit discs are used as a means of protecting equipment and enclosures from dust and moisture in all CMP TruSeal cable glands whilst in transit. Transit discs provide a resilient, weatherproof, temporary seal and should be removed before equipment is commissioned.

CMP TruSeal Ingress Protection (IP) Plugs are used as a means of protecting equipment and enclosures from dust and moisture. These IP plugs are for use in explosive atmospheres or industrial environments and are rated IP66 - IP69K, equalling the ingress protection rating of the host TruSeal cable gland.

These sealing plugs provide enhanced protection, forming a resilient temporary or permanent seal. They are certified to equal the rating of the CMP TruSeal cable gland they are installed with; for example a plug used with a TSPe will be certified for Ex e and Ex ta equipment.

IP PLUG

TRANSIT DISC

EXPLOSIVE ATMOSPHERE CERTIFICATION

CMP Products remains in constant touch with the development of national and international technical standards and is therefore able to offer product solutions that are certified for multiple global applications.

CERTIFICATION TO IEC/EN 60079

Both polymer and metallic TruSeal cable glands have been extensively tested and certified in accordance with the latest IEC/EN 60079 standards for:

- Part 0: Equipment - General requirements,
- Part 7: Equipment protection by increased safety 'e',
- Part 31: Equipment dust ignition protection by enclosure 't'.

This means that TruSeal products are safe and certified for use in Zone 1, Zone 2, Zone 20, Zone 21 and Zone 22 where an explosive atmosphere may occur; and will maintain the integrity of the installation with appropriately certified equipment.

MINIMUM REQUIREMENTS FOR INCREASED SAFETY TYPE 'e' (Ex e) CABLE GLANDS

- Thermal endurance tests: Variable according to material selection. Determined by IEC 60079-0
- Cable pull out resistance: Variable according to cable type selection; cable diameter; and cable gland performance capabilities. Determined by IEC 60079-0
- Impact resistance (Group II): 4 Joules (low risk) or 7 Joules (high risk)
- Ingress protection rating: IP54 minimum
- Cable gland/equipment interface seal is required
- Single seal as a minimum

Earlier editions of IEC / EN 60079 part 0 did not require products to be age-conditioned during certification testing. CMP's TruSeal range has passed the more onerous tests in accordance with the very latest editions of the IEC 60079 standards, involving a thermal endurance process.

FORM OF PROTECTION Ex 'e' (Increased Safety Enclosure Type 'e') – IEC 60079-7:

Whilst explosive mixtures may enter the equipment, the enclosure is not designed to withstand an internal explosion. Instead, the likelihood of a fault condition, which could result in ignition of explosive mixtures, is significantly reduced by the following measures. The (non-incendive) components used in the equipment shall not produce arcs or sparks or dangerous temperatures in normal working conditions. The equipment or component usually has a maximum voltage rating of 11kV.

Electrical connections and insulation are selected for high reliability and effectiveness. The level of protection against the ingress of dirt and moisture ensures that the prospect of component contamination is substantially reduced. Two fundamental requirements of Ex 'e' protection are that the equipment shall be protected to IP54 minimum for gas / vapour, and have an impact strength of 7J for general use (20J for Group I Mining), or 4J in areas where the risk of mechanical danger (damage) is low (7J for Group I Mining).

As this form of protection can be used in both Zone 1 and Zone 2 Areas, it is often preferred to Ex 'd' due to the need for reduced levels of maintenance and inspection. Another major consideration is that Ex 'e' equipment is generally constructed from lighter weight materials, which often leads to lower cost and easier handling.

source: IEC 60079-7-2015

In the non-metallic TruSeal range, products suitable for Ex i (intrinsically safe) applications are available with a blue coloured outer seal nut for easy identification.

MATERIALS

We use the best quality materials to suit the arduous conditions that our products often face. For the TruSeal range, cable glands are manufactured from unique combinations of polyamide, superior grades of nickel-plated brass and high quality 316L stainless steel, whilst the seals are moulded from silicone for high performance.

POLYAMIDE

Polyamide is a hugely versatile polymer and one of the most widely used engineering thermoplastics. It is a tough, abrasion-resistant material which can be moulded at a low temperature, meaning less shrinkage; guaranteeing a better quality and consistency of cable gland.

CMP's unique formula of polyamide is a bespoke blend to ensure the product passes the stringent IEC/EN 60079 and 62444 tests, including the relevant tests for impact resistance (see page 7).

NICKEL-PLATED BRASS

Our brass cable glands are produced, using material grade CuZn39Pb3 (CW614N) to EN 12168 and EN 12164 which, according to IEC 62444 requirements, means that they do not need additional corrosion resistance testing. They are plated in a bespoke automated nickel-plating line which utilises an advanced autocatalytic process for greater accuracy and reliability.

STAINLESS STEEL

Our stainless steel cable glands are produced using material grade 316L to EN 10088-3 which, according to IEC 62444 requirements, means they do not need additional corrosion resistance testing.

SILICONE

CMP high grade silicone seals are weather and UV resistant with a good chemical resistance. Using silicone gives the added benefit of high temperature resistance and good compression set properties, meaning that if the cable gland has to be opened and reinstalled, the seal will still perform.

UL94:6 V-0 POLYAMIDE

TruSeal TSPV0 cable glands have a UL 94 Flame Retardant rating of V-0, meaning they are suitable for use in areas of high vulnerability, where the spread of flame must be minimised. The table below shows the test criteria for a V-0 material compared with the lesser rated V-1 and V-2

FLAMMABILITY CLASSES (UL94)

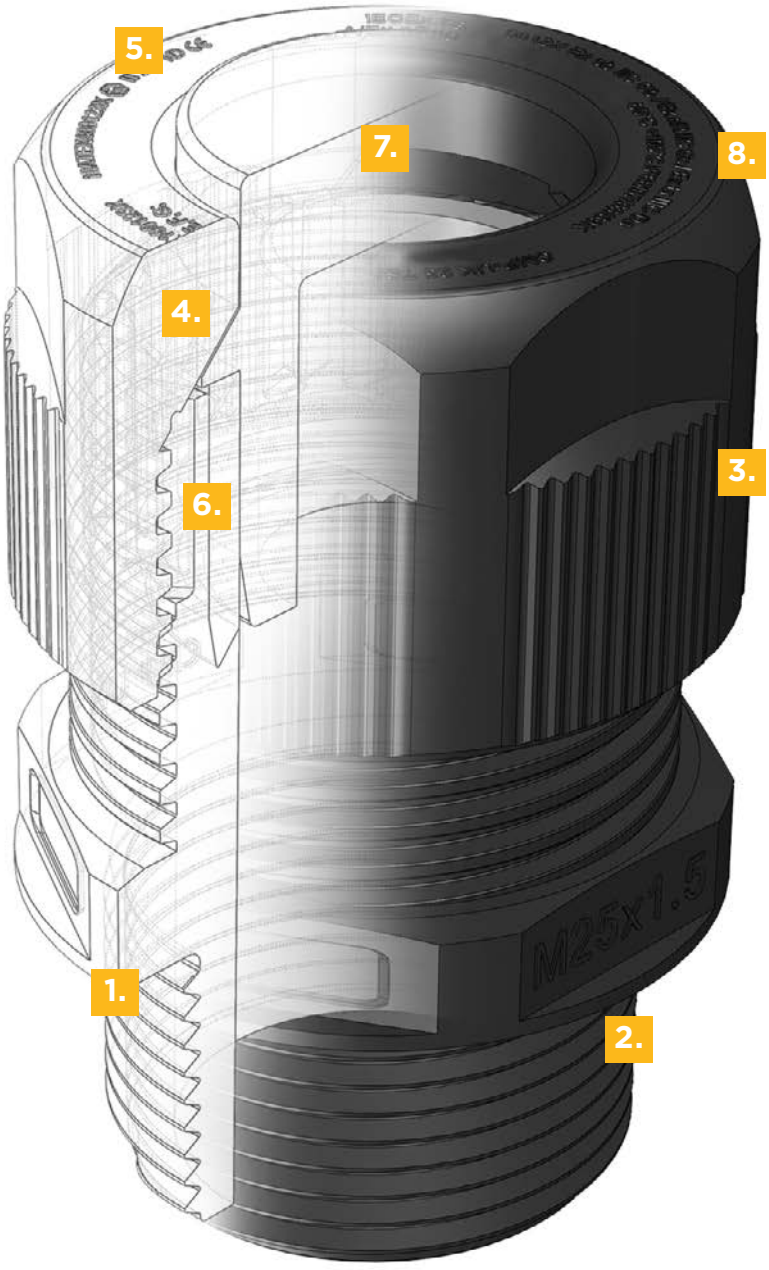
The classification of the ignition and burning resistance characteristics of materials other than metal or ceramic:

CLASSIFICATION	V-0	V-1	V-2
Number of flame applications per sample	2 x 10	2 x 10	2 x 10
Maximum burning time of one sample (seconds)	≤ 10	≤ 30	≤ 30
Maximum burning time of five samples (seconds)	≤ 50	≤ 250	≤ 250
Allowable dripping and subsequent ignition of cotton below	No	No	Yes
Allowable afterglow remaining for: (seconds)	≤ 30	≤ 60	≤ 60

In addition to TruSeal TSPV0 cable glands being flame retardant, they are produced using Low Smoke and Fume Zero Halogen (LSF0H) materials, making them suitable for a wide variety of applications.

POWERED BY QUALITY
AND DIFFERENT BY DESIGN

1. THREAD OPTIONS
2. ELIMINATES CORROSION
3. UV / WEATHER RESISTANT
4. ANTI-VIBRATION DEVICE
5. EASY IDENTIFICATION
6. FINGER LOCKING TYPE SEAL
7. IP66-69K PLUG
8. LOW WEIGHT/HIGH STRENGTH



TRUSEAL

1.

Offering multiple thread options for all applications, including metric, NPT and PG.

2.

Polymer design negates the risk of corrosion of dissimilar metals.

3.

UV, weather-resistant material, tested to the highest standards.

4.

Anti-vibration, non-loosening design for heavy industry.

5.

Easy to read product identification and certification.

6.

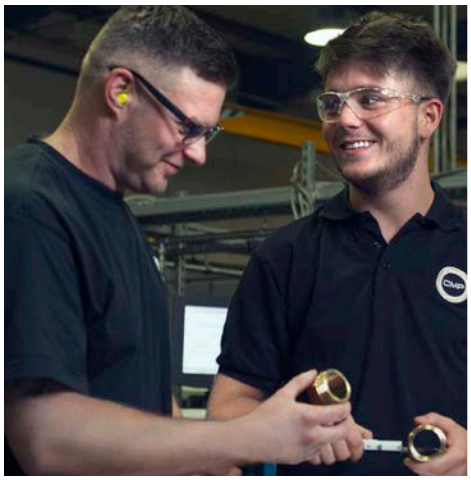
Finger-locked strain relief sealing system, rated IP66, IP67, IP68, IP69, IP69K.

7.

IP-rated ingress plug seals to protect the equipment prior to cable installation.

8.

Low-weight, high-strength, robust design, with high-impact rating.



EMC CONNECTIVITY

TruSeal EMC (Electromagnetic Compatibility) cable glands type TSZ provide optimum noise attenuation performance in terms of protecting the connected equipment from electromagnetic interference (EMI), by providing high integrity continuity of the cable shielding. This solution can be reliably used with shielded cables having either a metallic braid or a metallic tape screen.

Electromagnetic interference, or radiated emissions can have a negative impact on the performance of the cable and equipment, and a point of vulnerability in any system is often the cable entry. CMP Truseal EMC cable glands help to protect the equipment from the possibility of malfunction caused by radiated emissions; this is sometimes achieved by securing the metallic braid screen between a metallic cone and clamping ring. The CMP type TSZ cable gland employs a simpler and quicker installation method, using a low impedance 360° circumferential metallic continuity component inside the cable gland, to reliably ground the cable shield / screen.

EMC 2004/108/EC

The EMC Directive requires that products must not generate unwanted electromagnetic pollution, or interference, and that products must be immune to a reasonable amount of noise pollution or interference. EMC testing is required to be carried out on all electrical products to ensure that they neither cause electromagnetic interference nor are susceptible to it. Using CMP cable glands that have been fully tested for EMC performance, will make a significant contribution to the overall EMC of the installation.

THREAD OPTIONS

TruSeal cable glands are available with standard or long metric threads as well as NPT or PG (PG for metallic products only). Long threads are often vital in an installation either because of the thickness of the enclosure wall or because of the build-up of accessories.

All NPT threads meet NPT thread specification ANSI/ ASME B1.20.1 and are available with specifically designed entry-thread sealing washers for use with non-threaded entries.

Threads are also available with slots for mechanical retention of wire braid for earth continuity.

PRODUCT RANGE

TSP

TRUSEAL POLYMER

TRUSEAL TSP POLYMER, INDUSTRIAL CABLE GLAND

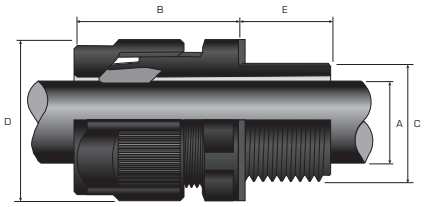
FOR ALL TYPES OF UNARMOURED & BRAIDED / SCREENED CABLES

- Halogen and phosphorus-free
- Finger-locking seal provides superior cable retention and strain relief
- 3rd party certified to IEC/EN 62444
- Flame retardant UL94 V-0 version available
- Low weight with high stiffness and strength
- Widest cable range take for any comparable cable gland
- Available in a variety of colours (black as standard, see table below)
- Anti-vibration technology prevents seal loosening in operation
- Transit disc or IP68, IP69 and IP69K rated IP plug options available
- Approved entry thread sealing washer included
- Polyamide locknut available (ordering suffix 2TN) - delivered assembled

shown in black with standard seal and locknut

IP66 IP67 IP68 IP 69K UV CE +100°C -40°C

COLOUR	SUFFIX	METRIC ORDERING EXAMPLE	NPT ORDERING EXAMPLE
BLACK - RAL9011	-	12TSP1TA	12TSP1TAT
GREY - RAL7035	1	12TSP1TA1	12TSP1TA1T
GREY - RAL7001	2	12TSP1TA2	12TSP1TA2T
WHITE	3	12TSP1TA3	12TSP1TA3T
BLUE - RAL5015	4	12TSP1TA4	12TSP1TA4T
RED - RAL3000	5	12TSP1TA5	12TSP1TA5T



TECHNICAL DATA	
DESIGN SPECIFICATION	IEC 62444, EN 62444 (EN Metric only)
MECHANICAL CLASSIFICATION*	12-16 Impact = Level 4, 20-63 Impact = Level 6, Cable Anchorage = Type A
ENCLOSURE PROTECTION	12-16 IK07 to IEC 62262 (contact CMP for specific impact) 20-63 IK08 to IEC 62262 (7 joules)
INGRESS PROTECTION RATING	IP66, IP67, IP68**, IP69 & IP69K
CABLE GLAND MATERIAL	Halogen-free Polyamide
SEAL MATERIAL	CMP SOLO LSF Halogen-free Thermoset Elastomer
CABLE TYPE	Unarmoured & Braided (when braid is terminated inside enclosure)
SEALING TECHNIQUE	CMP Unique finger-locking type seal
SEALING AREA(S)	Cable Outer Sheath

* Mechanical classifications applied as per IEC/EN 62444
** IP68 tested to 300 kPa for 16 hours (equivalent to 30 metres water depth)

PRODUCT SELECTION TABLE WITH DUAL SEALING RANGE

DUAL SEAL		AVAILABLE ENTRY THREADS 'C'					OVERALL CABLE DIAMETER 'A'		ACROSS FLATS 'D'	ACROSS CORNERS 'D'	PROTRUSION LENGTH 'B'	MINIMUM ORDER QUANTITY
		STANDARD		OPTION								
CABLE GLAND ONLY	CABLE GLAND WITH LOCKNUT	METRIC	THREAD LENGTH (METRIC) 'E'	LONG THREAD LENGTH (METRIC) 'E'	NPT	THREAD LENGTH (NPT) 'E'	MIN	MAX	MAX	MAX		
16DTSP1TA	16DTSP2TN	M16	9.0	15.0	⅜"	11.0	3.0	10.0	19.0	20.9	27.0	100
20DTSP1TA	20DTSP2TN	M20	10.0	15.0	½"	14.0	5.0	14.0	24.0	26.2	30.5	100
25DTSP1TA	25DTSP2TN	M25	10.0	15.0	¾"	15.0	9.0	18.0	30.0	32.7	36.0	50
32DTSP1TA	32DTSP2TN	M32	12.0	15.0	1"	18.0	12.5	25.0	40.0	43.6	41.0	10
40DTSP1TA	40DTSP2TN	M40	12.0	18.0	1 ¼"	18.0	19.0	32.0	50.0	54.5	49.0	10
50DTSP1TA	50DTSP2TN	M50	12.0	18.0	1 ½"	19.0	22.0	38.0	58.0	63.2	59.0	5
63DTSP1TA	63DTSP2TN	M63	15.0	18.0	2"	20.0	28.0	48.0	68.0	74.1	64.0	1

PRODUCT SELECTION TABLE WITH STANDARD SEALING RANGE

STANDARD SEAL		AVAILABLE ENTRY THREADS 'C'					OVERALL CABLE DIAMETER 'A'		ACROSS FLATS 'D'	ACROSS CORNERS 'D'	PROTRUSION LENGTH 'B'	MINIMUM ORDER QUANTITY
		STANDARD		OPTION								
CABLE GLAND ONLY	CABLE GLAND WITH LOCKNUT	METRIC	THREAD LENGTH (METRIC) 'E'	LONG THREAD LENGTH (METRIC) 'E'	NPT	THREAD LENGTH (NPT) 'E'	MIN	MAX	MAX	MAX		
12TSP1TA	12TSP2TN	M12	9.0	15.0	¼"	11.0	3.0	6.5	15.0	16.4	27.0	100
16STSP1TA	16STSP2TN	M16	9.0	15.0	⅜"	11.0	3.0	7.0	19.0	20.9	27.0	100
16TSP1TA	16TSP2TN	M16	9.0	15.0	⅜"	11.0	6.0	10.0	19.0	20.9	27.0	100
20STSP1TA	20STSP2TN	M20	10.0	15.0	½"	14.0	5.0	10.0	24.0	26.2	30.5	100
20TSP1TA	20TSP2TN	M20	10.0	15.0	½"	14.0	9.0	14.0	24.0	26.2	30.5	100
25STSP1TA	25STSP2TN	M25	10.0	15.0	¾"	15.0	9.0	15.5	30.0	32.7	36.0	50
25TSP1TA	25TSP2TN	M25	10.0	15.0	¾"	15.0	12.5	18.0	30.0	32.7	36.0	50
32STSP1TA	32STSP2TN	M32	12.0	15.0	1"	18.0	12.5	19.0	40.0	43.6	41.0	10
32TSP1TA	32TSP2TN	M32	12.0	15.0	1"	18.0	17.0	25.0	40.0	43.6	41.0	10
40STSP1TA	40STSP2TN	M40	12.0	18.0	1 ¼"	18.0	19.0	27.0	50.0	54.5	49.0	10
40TSP1TA	40TSP2TN	M40	12.0	18.0	1 ¼"	18.0	24.0	32.0	50.0	54.5	49.0	10
50STSP1TA	50STSP2TN	M50	12.0	18.0	1 ½"	19.0	22.0	32.0	58.0	63.2	59.0	5
50TSP1TA	50TSP2TN	M50	12.0	18.0	1 ½"	19.0	28.0	38.0	58.0	63.2	59.0	5
63STSP1TA	63STSP2TN	M63	15.0	18.0	2"	20.0	28.0	39.0	68.0	74.1	64.0	1
63TSP1TA	63TSP2TN	M63	15.0	18.0	2"	20.0	37.0	48.0	68.0	74.1	64.0	1

For NPT threads add a 'T' to the suffix e.g. 16DTSP1TAT (¼" NPT, black), 40DTSP1TAT1 (1 ¼" NPT, grey (silver))
For long metric threads add an 'L' to the suffix e.g. 16DTSP1TAL (M16, black with 15mm length of entry thread)

Dimensions are displayed in millimetres unless otherwise stated

TSPV0

TRUSEAL POLYMER SOLO

TSPV0 UL94 V-0 APPROVED, INDUSTRIAL CABLE GLAND

shown in grey ral7035 with dual seal

FOR ALL TYPES OF UNARMOURED & BRAIDED / SCREENED CABLES

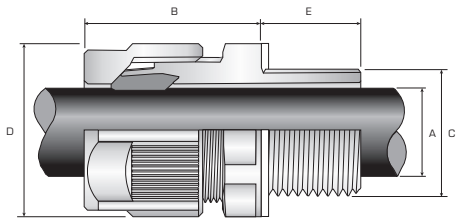
For use in the construction of public buildings including tower blocks, airports, hospitals, stadia, and for essential services including, fire safety systems, rail infrastructure, tunnels and ventilation systems, where halogen-free cables are required.

- Halogen and phosphorus-free
- Extremely flame retardant and self-extinguishing according to UL94 V-0
- Incorporates CMP's trusted SOLO technology
- 3rd party certified to IEC/EN 62444
- Finger-locking seal provides superior cable retention and strain relief
- Low weight with high stiffness and strength
- Widest cable range take for any comparable cable gland
- Available in a variety of colours (see table below)
- Approved entry thread sealing washer included
- Polyamide locknut available (ordering suffix 2TN) - delivered assembled

IP66 IP67 IP68 IP 69K

UV CE +100°C -40°C

COLOUR	SUFFIX	METRIC ORDERING EXAMPLE	NPT ORDERING EXAMPLE
BLACK - RAL9011	-	12TSPV01TA	12TSPV01TAT
GREY - RAL7035	1	12TSPV01TA1	12TSPV01TAT1
GREY - RAL7001	2	12TSPV01TA2	12TSPV01TAT2
WHITE	3	12TSPV01TA3	12TSPV01TAT3
RED - RAL3000	5	12TSPV01TA5	12TSPV01TAT5



TECHNICAL DATA	
DESIGN SPECIFICATION	IEC 62444, EN 62444 (EN Metric only)
MECHANICAL CLASSIFICATION*	High impact resistance, contact CMP
ENCLOSURE PROTECTION	High impact resistance, contact CMP
INGRESS PROTECTION RATING	IP66, IP67, IP68**, IP69 & IP69K
FLAME RETARDANCY	Glow Wire Test – EN/IEC 60695-2: 960°C
	Flammability Test – EN/IEC 60695-11-10 / UL94: V-0
CABLE GLAND MATERIAL	UL94 V-0 Halogen and phosphorus-free flame retardant polyamide
SEAL MATERIAL	CMP SOLO LSF Halogen-free Thermoset Elastomer
CABLE TYPE	Unarmoured & Braided (when braid is terminated inside enclosure)
SEALING TECHNIQUE	CMP Unique finger-locking type seal
SEALING AREA(S)	Cable Outer Sheath

* Mechanical classifications applied as per IEC/EN 62444
** IP68 tested to 300 kPa for 16 hours (equivalent to 30 metres water depth)

PRODUCT SELECTION TABLE WITH DUAL SEALING RANGE

DUAL SEAL		AVAILABLE ENTRY THREADS 'C'					OVERALL CABLE DIAMETER 'A'		ACROSS FLATS 'D'	ACROSS CORNERS 'D'	PROTRUSION LENGTH 'B'
		STANDARD		OPTION							
CABLE GLAND ONLY	CABLE GLAND WITH LOCKNUT	METRIC	THREAD LENGTH (METRIC) 'E'	LONG THREAD LENGTH (METRIC) 'E'	NPT	THREAD LENGTH (NPT) 'E'	MIN	MAX	MAX	MAX	
16DTSPV01TA	16DTSPV02TN	M16	9.0	15.0	⅜"	11.0	3.0	10.0	19.0	20.9	27.0
20DTSPV01TA	20DTSPV02TN	M20	10.0	15.0	½"	14.0	5.0	14.0	24.0	26.2	30.5
25DTSPV01TA	25DTSPV02TN	M25	10.0	15.0	¾"	15.0	9.0	18.0	30.0	32.7	36.0
32DTSPV01TA	32DTSPV02TN	M32	12.0	15.0	1"	18.0	12.5	24.8	40.0	43.6	41.0
40DTSPV01TA	40DTSPV02TN	M40	12.0	18.0	1 ¼"	18.0	19.0	32.0	50.0	54.5	49.0
50DTSPV01TA	50DTSPV02TN	M50	12.0	18.0	1 ½"	19.0	22.0	38.0	58.0	63.2	59.0
63DTSPV01TA	63DTSPV02TN	M63	15.0	18.0	2"	20.0	28.0	48.0	68.0	74.1	64.0

PRODUCT SELECTION TABLE WITH STANDARD SEALING RANGE

STANDARD SEAL		AVAILABLE ENTRY THREADS 'C'					OVERALL CABLE DIAMETER 'A'		ACROSS FLATS 'D'	ACROSS CORNERS 'D'	PROTRUSION LENGTH 'B'
		STANDARD		OPTION							
CABLE GLAND ONLY	CABLE GLAND WITH LOCKNUT	METRIC	THREAD LENGTH (METRIC) 'E'	LONG THREAD LENGTH (METRIC) 'E'	NPT	THREAD LENGTH (NPT) 'E'	MIN	MAX	MAX	MAX	
12TSPV01TA	12TSPV02TN	M12	9.0	15.0	¼"	11.0	3.0	6.5	15.0	16.4	27.0
16STSPV01TA	16STSPV02TN	M16	9.0	15.0	⅜"	11.0	3.0	7.0	19.0	20.9	27.0
16TSPV01TA	16TSPV02TN	M16	9.0	15.0	⅜"	11.0	6.0	10.0	19.0	20.9	27.0
20STSPV01TA	20STSPV02TN	M20	10.0	15.0	½"	14.0	5.0	10.0	24.0	26.2	30.5
20TSPV01TA	20TSPV02TN	M20	10.0	15.0	½"	14.0	9.0	14.0	24.0	26.2	30.5
25STSPV01TA	25STSPV02TN	M25	10.0	15.0	¾"	15.0	9.0	15.5	30.0	32.7	36.0
25TSPV01TA	25TSPV02TN	M25	10.0	15.0	¾"	15.0	12.5	18.0	30.0	32.7	36.0
32STSPV01TA	32STSPV02TN	M32	12.0	15.0	1"	18.0	12.5	19.0	40.0	43.6	41.0
32TSPV01TA	32TSPV02TN	M32	12.0	15.0	1"	18.0	17.0	24.8	40.0	43.6	41.0
40STSPV01TA	40STSPV02TN	M40	12.0	18.0	1 ¼"	18.0	19.0	27.0	50.0	54.5	49.0
40TSPV01TA	40TSPV02TN	M40	12.0	18.0	1 ¼"	18.0	24.0	32.0	50.0	54.5	49.0
50STSPV01TA	50STSPV02TN	M50	12.0	18.0	1 ½"	19.0	22.0	32.0	58.0	63.2	59.0
50TSPV01TA	50TSPV02TN	M50	12.0	18.0	1 ½"	19.0	28.0	38.0	58.0	63.2	59.0
63STSPV01TA	63STSPV02TN	M63	15.0	18.0	2"	20.0	28.0	39.0	68.0	74.1	64.0
63TSPV01TA	63TSPV02TN	M63	15.0	18.0	2"	20.0	37.0	48.0	68.0	74.1	64.0

For NPT threads add a 'T' to the suffix e.g. 16DTSPV01TAT (⅜" NPT, black), 40DTSPV01TAT1 (1 ¼" NPT, grey (silver))
For long metric threads add an 'L' to the suffix e.g. 16DTSPV01TAL (M16, black with 15mm length of entry thread)

Dimensions are displayed in millimetres unless otherwise stated

TSPe Ex

TRUSEAL POLYMER

TRUSEAL TSPe Ex eb & Ex ta
POLYMER, EXPLOSIVE ATMOSPHERE CABLE GLAND

shown in black with standard seal

FOR ALL TYPES OF UNARMOURED & BRAIDED / SCREENED CABLES

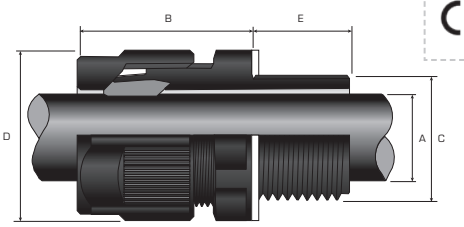
- Halogen and phosphorus-free
- Finger-locking seal provides superior cable retention and strain relief
- Approved to the latest editions of IEC/EN 60079
- Internationally marked IECEx and ATEX
- Intrinsically safe (Ex i) blue nut version available
- 3rd party certified to IEC/EN 62444
- Widest cable range take for any comparable cable gland
- Low weight with high stiffness and strength
- Anti-vibration technology prevents seal loosening in operation
- Transit disc or IP68, IP69 and IP69K rated IP plug options available
- Approved entry thread sealing washer included
- For clearance holes the TSPe must be installed using a CMP metallic locknut (available with the cable gland using ordering suffix 2TN)

IP66 IP67 IP68 IP69K
Ex eb Ex ta UV +95°C -60°C

TECHNICAL DATA	
DESIGN SPECIFICATION	IEC 62444, EN 62444 (EN Metric only)
MECHANICAL CLASSIFICATION*	12-16 Impact = Level 5, 20-63 Impact = Level 6, Cable Anchorage = Type A
ENCLOSURE PROTECTION	12-16 IK07 to IEC 62262 (4 joules), 20-63 IK08 to IEC 62262 (7 joules)
INGRESS PROTECTION RATING	IP66, IP67, IP68**, IP69 & IP69K
CABLE GLAND MATERIAL	Halogen-free Polyamide
SEAL MATERIAL	CMP SOLO LSF Halogen-free Thermoset Elastomer
CABLE TYPE	Unarmoured & Braided when terminated inside enclosure
SEALING TECHNIQUE	CMP Unique finger-locking type seal
SEALING AREA(S)	Cable Outer Sheath

* Mechanical classifications applied as per IEC/EN 62444
** IP68 tested to 300 kPa for 16 hours (equivalent to 30 metres water depth)

GLOBAL PRODUCT CERTIFICATION			
ATEX CERTIFICATE	CML 19ATEX3185X	IECEx CERTIFICATE	IECEx CML 19.0062X
ATEX COMPLIANCE STANDARDS	EN 60079-0,7,31	IECEx COMPLIANCE STANDARDS	IEC 60079-0,7,31
CODE OF PROTECTION	Ⓔx II 2G 1D, Ex eb IIC Gb, Ex ta IIIC Da,	CODE OF PROTECTION	Ex eb IIC Gb, Ex ta IIIC Da
DNV CERTIFICATE	TAE000000Y		



CE Ex IEC IECEx DNV·GL

PRODUCT SELECTION TABLE WITH DUAL SEALING RANGE

DUAL SEAL		AVAILABLE ENTRY THREADS 'C'					OVERALL CABLE DIAMETER 'A'		ACROSS FLATS 'D'	ACROSS CORNERS 'D'	PROTRUSION LENGTH 'B'
		STANDARD		OPTION							
CABLE GLAND ONLY	CABLE GLAND WITH LOCKNUT	METRIC	THREAD LENGTH (METRIC) 'E'	LONG THREAD LENGTH (METRIC) 'E'	NPT	THREAD LENGTH (NPT) 'E'	MIN	MAX	MAX	MAX	
16DTSPE1TA	16DTSPE2TN	M16	9.0	15.0	⅜"	11.0	3.2	10.0	19.0	20.9	27.0
20DTSPE1TA	20DTSPE2TN	M20	10.0	15.0	½"	14.0	5.5	14.0	24.0	26.2	30.5
25DTSPE1TA	25DTSPE2TN	M25	10.0	15.0	¾"	15.0	9.0	18.0	30.0	32.7	36.0
32DTSPE1TA	32DTSPE2TN	M32	12.0	15.0	1"	18.0	12.5	25.0	40.0	43.6	41.0
40DTSPE1TA	40DTSPE2TN	M40	12.0	18.0	1 ¼"	18.0	19.0	32.0	50.0	54.5	49.0
50DTSPE1TA	50DTSPE2TN	M50	12.0	18.0	1 ½"	19.0	22.0	38.0	58.0	63.2	59.0
63DTSPE1TA	63DTSPE2TN	M63	15.0	18.0	2"	20.0	28.0	48.0	68.0	74.1	64.0

PRODUCT SELECTION TABLE WITH STANDARD SEALING RANGE

STANDARD SEAL		AVAILABLE ENTRY THREADS 'C'					OVERALL CABLE DIAMETER 'A'		ACROSS FLATS 'D'	ACROSS CORNERS 'D'	PROTRUSION LENGTH 'B'
		STANDARD		OPTION							
CABLE GLAND ONLY	CABLE GLAND WITH LOCKNUT	METRIC	THREAD LENGTH (METRIC) 'E'	LONG THREAD LENGTH (METRIC) 'E'	NPT	THREAD LENGTH (NPT) 'E'	MIN	MAX	MAX	MAX	
12TSPE1TA	12TSPE2TN	M12	9.0	15.0	¼"	11.0	3.0	6.5	15.0	16.4	27.0
16STSPE1TA	16STSPE2TN	M16	9.0	15.0	⅜"	11.0	3.0	7.0	19.0	20.9	27.0
16TSPE1TA	16TSPE2TN	M16	9.0	15.0	⅜"	11.0	6.0	10.0	19.0	20.9	27.0
20STSPE1TA	20STSPE2TN	M20	10.0	15.0	½"	14.0	5.0	10.0	24.0	26.2	30.5
20TSPE1TA	20TSPE2TN	M20	10.0	15.0	½"	14.0	9.0	14.0	24.0	26.2	30.5
25STSPE1TA	25STSPE2TN	M25	10.0	15.0	¾"	15.0	9.0	15.5	30.0	32.7	36.0
25TSPE1TA	25TSPE2TN	M25	10.0	15.0	¾"	15.0	12.5	18.0	30.0	32.7	36.0
32STSPE1TA	32STSPE2TN	M32	12.0	15.0	1"	18.0	12.5	19.0	40.0	43.6	41.0
32TSPE1TA	32TSPE2TN	M32	12.0	15.0	1"	18.0	17.0	25.0	40.0	43.6	41.0
40STSPE1TA	40STSPE2TN	M40	12.0	18.0	1 ¼"	18.0	19.0	27.0	50.0	54.5	49.0
40TSPE1TA	40TSPE2TN	M40	12.0	18.0	1 ¼"	18.0	24.0	32.0	50.0	54.5	49.0
50STSPE1TA	50STSPE2TN	M50	12.0	18.0	1 ½"	19.0	22.0	32.0	58.0	63.2	59.0
50TSPE1TA	50TSPE2TN	M50	12.0	18.0	1 ½"	19.0	28.0	38.0	58.0	63.2	59.0
63STSPE1TA	63STSPE2TN	M63	15.0	18.0	2"	20.0	28.0	39.0	68.0	74.1	64.0
63TSPE1TA	63TSPE2TN	M63	15.0	18.0	2"	20.0	37.0	48.0	68.0	74.1	64.0

For NPT threads add a 'T' to the suffix e.g. 16DTSPE1TAT (⅜" NPT, black), 40DTSPE1TAT1 (1 ¼" NPT, grey (silver))
For long metric threads add an 'L' to the suffix e.g. 16DTSPE1TAL (M16, black with 15mm length of entry thread)

Dimensions are displayed in millimetres unless otherwise stated

TSPe Ex i

TRUSEAL POLYMER

TRUSEAL TSPe Ex eb & Ex ta (TO BE USED WITH Ex i APPLICATIONS) POLYMER, EXPLOSIVE ATMOSPHERE CABLE GLAND

shown with transit disc

FOR ALL TYPES OF UNARMOURED & BRAIDED / SCREENED CABLES

- Blue nut for Intrinsically safe (Ex i) identification
- Halogen and phosphorus-free
- Finger-locking seal provides superior cable retention and strain relief
- Approved to the latest editions of IEC/EN 60079
- Internationally marked IECEx and ATEX
- 3rd party certified to IEC/EN 62444
- Widest cable range take for any comparable cable gland
- Low weight with high stiffness and strength
- Anti-vibration technology prevents seal loosening in operation
- Transit disc or IP68, IP69 and IP69K rated IP plug options available
- Approved entry thread sealing washer included
- For clearance holes the TSPe must be installed using a CMP metallic locknut (available with the cable gland using ordering suffix 2TN)

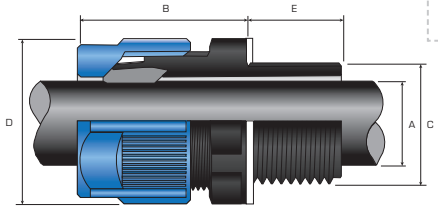
IP66 IP67 IP68 IP69K

Ex eb Ex ta UV +95°C -60°C

TECHNICAL DATA	
DESIGN SPECIFICATION	IEC 62444, EN 62444 (EN Metric only)
MECHANICAL CLASSIFICATION*	12-16 Impact = Level 5, 20-63 Impact = Level 6, Cable Anchorage = Type A
ENCLOSURE PROTECTION	12-16 IK07 to IEC 62262 (4 joules), 20-63 IK08 to IEC 62262 (7 joules)
INGRESS PROTECTION RATING	IP66, IP67, IP68**, IP69 & IP69K
CABLE GLAND MATERIAL	Halogen-free Polyamide
SEAL MATERIAL	CMP SOLO LSF Halogen-free Thermoset Elastomer
CABLE TYPE	Unarmoured & Braided when terminated inside enclosure
SEALING TECHNIQUE	CMP Unique finger-locking type seal
SEALING AREA(S)	Cable Outer Sheath

* Mechanical classifications applied as per IEC/EN 62444
** IP68 tested to 300 kPa for 16 hours (equivalent to 30 metres water depth)

GLOBAL PRODUCT CERTIFICATION			
ATEX CERTIFICATE	CML 19ATEX3185X	IECEx CERTIFICATE	IECEx CML 19.0062X
ATEX COMPLIANCE STANDARDS	EN 60079-0,7,31	IECEx COMPLIANCE STANDARDS	IEC 60079-0,7,31
CODE OF PROTECTION	Ⓔx II 2G 1D, Ex eb IIC Gb, Ex ta IIIC Da,	CODE OF PROTECTION	Ex eb IIC Gb, Ex ta IIIC Da
DNV CERTIFICATE	TAE000000Y		



CE Ex IEC IECEx DNV·GL

PRODUCT SELECTION TABLE WITH DUAL SEALING RANGE

DUAL SEAL	AVAILABLE ENTRY THREADS 'C'					OVERALL CABLE DIAMETER 'A'		ACROSS FLATS 'D'	ACROSS CORNERS 'D'	PROTRUSION LENGTH 'B'
	STANDARD		OPTION							
CABLE GLAND ORDERING REF	METRIC	THREAD LENGTH (METRIC) 'E'	LONG THREAD LENGTH (METRIC) 'E'	NPT	THREAD LENGTH (NPT) 'E'	MIN	MAX	MAX	MAX	
16DTSPE1TA4	M16	9.0	15.0	⅜"	11.0	3.2	10.0	19.0	20.9	27.0
420DTSPE1TA4	M20	10.0	15.0	½"	14.0	5.5	14.0	24.0	26.2	30.5
425DTSPE1TA4	M25	10.0	15.0	¾"	15.0	9.0	18.0	30.0	32.7	36.0
32DTSPE1TA4	M32	12.0	15.0	1"	18.0	12.5	25.0	40.0	43.6	41.0
40DTSPE1TA4	M40	12.0	18.0	1 ¼"	18.0	19.0	32.0	50.0	54.5	49.0
50DTSPE1TA4	M50	12.0	18.0	1 ½"	19.0	22.0	38.0	58.0	63.2	59.0
63DTSPE1TA4	M63	15.0	18.0	2"	20.0	28.0	48.0	68.0	74.1	64.0

PRODUCT SELECTION TABLE WITH STANDARD SEALING RANGE

STANDARD SEAL	AVAILABLE ENTRY THREADS 'C'					OVERALL CABLE DIAMETER 'A'		ACROSS FLATS 'D'	ACROSS CORNERS 'D'	PROTRUSION LENGTH 'B'
	STANDARD		OPTION							
CABLE GLAND ORDERING REF	METRIC	THREAD LENGTH (METRIC) 'E'	LONG THREAD LENGTH (METRIC) 'E'	NPT	THREAD LENGTH (NPT) 'E'	MIN	MAX	MAX	MAX	
12TSPE1TA4	M12	9.0	15.0	¼"	11.0	3.0	6.5	15.0	16.4	27.0
16STSPE1TA4	M16	9.0	15.0	⅜"	11.0	3.0	7.0	19.0	20.9	27.0
16TSPE1TA4	M16	9.0	15.0	⅜"	11.0	6.0	10.0	19.0	20.9	27.0
20STSPE1TA4	M20	10.0	15.0	½"	14.0	5.0	10.0	24.0	26.2	30.5
20TSPE1TA4	M20	10.0	15.0	½"	14.0	9.0	14.0	24.0	26.2	30.5
25STSPE1TA4	M25	10.0	15.0	¾"	15.0	9.0	15.5	30.0	32.7	36.0
25TSPE1TA4	M25	10.0	15.0	¾"	15.0	12.5	18.0	30.0	32.7	36.0
32STSPE1TA4	M32	12.0	15.0	1"	18.0	12.5	19.0	40.0	43.6	41.0
32TSPE1TA4	M32	12.0	15.0	1"	18.0	17.0	25.0	40.0	43.6	41.0
40STSPE1TA4	M40	12.0	18.0	1 ¼"	18.0	19.0	27.0	50.0	54.5	49.0
40TSPE1TA4	M40	12.0	18.0	1 ¼"	18.0	24.0	32.0	50.0	54.5	49.0
50STSPE1TA4	M50	12.0	18.0	1 ½"	19.0	22.0	32.0	58.0	63.2	59.0
50TSPE1TA4	M50	12.0	18.0	1 ½"	19.0	28.0	38.0	58.0	63.2	59.0
63STSPE1TA4	M63	15.0	18.0	2"	20.0	28.0	39.0	68.0	74.1	64.0
63TSPE1TA4	M63	15.0	18.0	2"	20.0	37.0	48.0	68.0	74.1	64.0

For NPT threads add a 'T' to the suffix e.g. 16DTSPE1TA4T (¼" NPT)
For long metric threads add an 'L' to the suffix e.g. 16DTSPE1TA4L (M16, with 15mm length of entry thread)

Dimensions are displayed in millimetres unless otherwise stated

TSM

TRUSEAL METALLIC

TRUSEAL TSM INDUSTRIAL, METALLIC CABLE GLAND

shown with standard seal

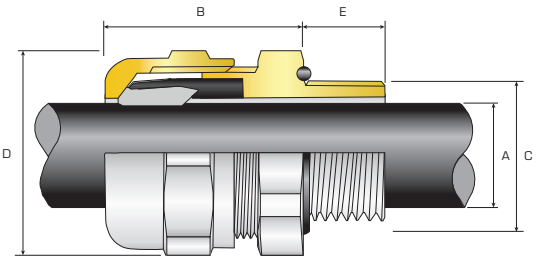
FOR ALL TYPES OF UNARMOURED & BRAIDED / SCREENED CABLES

- Finger-locking seal provides superior cable retention and strain relief
- 3rd party certified to IEC/EN 62444
- Widest cable range take on the market
- Easy to install
- Robust design, high quality materials
- O-ring interface seal included as standard
- Transit disc or IP68, IP69 and IP69K rated IP plug options available
- Product supplied in nickel-plated brass, or stainless steel on request
- Nickel-plated brass locknut available (ordering suffix 2TN)

IP66 IP67 IP68 IP69K

CE

+105°C ↑ -60°C



TECHNICAL DATA	
DESIGN SPECIFICATION	IEC 62444, EN 62444 (EN Metric only)
MECHANICAL CLASSIFICATION*	Impact = Level 6, Cable Anchorage = Type A
ENCLOSURE PROTECTION	IK08 to IEC 62262 (7 joules)
INGRESS PROTECTION RATING	IP66, IP67, IP68**, IP69 & IP69K

CABLE GLAND MATERIAL	Nickel-plated brass, Stainless Steel (option)
SEAL MATERIAL	CMP SOLO LSF Halogen-free Thermoset Elastomer
CABLE TYPE	Unarmoured & Braided (when braid is terminate inside enclosure)
SEALING TECHNIQUE	CMP Unique finger-locking type seal
SEALING AREA(S)	Cable Outer Sheath

* Mechanical classifications applied as per IEC/EN 62444
** IP68 tested to 300 kPa for 16 hours (equivalent to 30 metres water depth)

PRODUCT SELECTION TABLE WITH DUAL SEALING RANGE

DUAL SEAL		AVAILABLE ENTRY THREADS 'C'					OVERALL CABLE DIAMETER 'A'		ACROSS FLATS 'D'	ACROSS CORNERS 'D'	PROTRUSION LENGTH 'B'
		STANDARD		OPTION							
CABLE GLAND ONLY	CABLE GLAND WITH LOCKNUT	METRIC	THREAD LENGTH (METRIC) 'E'	LONG THREAD LENGTH (METRIC) 'E'	NPT	THREAD LENGTH (NPT) 'E'	MIN	MAX	MAX	MAX	
16DTSM1TA5	16DTSM2TN5	M16	6.0	12.0	⅜"	11.0	3.0	10.0	20.0	22.0	23.6
20DTSM1TA5	20DTSM2TN5	M20	6.5	12.0	½"	14.0	5.0	14.0	24.0	26.4	26.7
25DTSM1TA5	25DTSM2TN5	M25	7.0	12.0	¾"	15.0	9.0	18.0	30.0	33.0	32.0
32DTSM1TA5	32DTSM2TN5	M32	8.0	12.0	1"	18.0	12.5	25.0	39.0	42.9	37.8
40DTSM1TA5	40DTSM2TN5	M40	8.0	15.0	1 ¼"	18.0	19.0	32.0	50.0	55.0	44.7
50DTSM1TA5	50DTSM2TN5	M50	9.0	15.0	1 ½"	19.0	22.0	38.0	57.0	62.7	48.7
63DTSM1TA5	63DTSM2TN5	M63	10.0	15.0	2"	20.0	28.0	48.0	68.0	74.8	52.2

PRODUCT SELECTION TABLE WITH STANDARD SEALING RANGE

STANDARD SEAL		AVAILABLE ENTRY THREADS 'C'					OVERALL CABLE DIAMETER 'A'		ACROSS FLATS 'D'	ACROSS CORNERS 'D'	PROTRUSION LENGTH 'B'
		STANDARD		OPTION							
CABLE GLAND ONLY	CABLE GLAND WITH LOCKNUT	METRIC	THREAD LENGTH (METRIC) 'E'	LONG THREAD LENGTH (METRIC) 'E'	NPT	THREAD LENGTH (NPT) 'E'	MIN	MAX	MAX	MAX	
12TSM1TA5	12TSM2TN5	M12	6.0	12.0	¼"	11.0	3.0	6.5	16.0	17.6	22.3
16STSM1TA5	16STSM2TN5	M16	6.0	12.0	⅜"	11.0	3.0	7.0	20.0	22.0	23.6
16TSM1TA5	16TSM2TN5	M16	6.0	12.0	⅜"	11.0	6.0	10.0	20.0	22.0	23.6
20STSM1TA5	20STSM2TN5	M20	6.5	12.0	½"	14.0	5.0	10.0	24.0	26.4	26.7
20TSM1TA5	20TSM2TN5	M20	6.5	12.0	½"	14.0	9.0	14.0	24.0	26.4	26.7
25STSM1TA5	25STSM2TN5	M25	7.0	12.0	¾"	15.0	9.0	15.5	30.0	33.0	32.0
25TSM1TA5	25TSM2TN5	M25	7.0	12.0	¾"	15.0	12.5	18.0	30.0	33.0	32.0
32STSM1TA5	32STSM2TN5	M32	8.0	12.0	1"	18.0	12.5	19.0	39.0	42.9	37.8
32TSM1TA5	32TSM2TN5	M32	8.0	12.0	1"	18.0	17.0	25.0	39.0	42.9	37.8
40STSM1TA5	40STSM2TN5	M40	8.0	15.0	1 ¼"	18.0	19.0	27.0	50.0	55.0	44.7
40TSM1TA5	40TSM2TN5	M40	8.0	15.0	1 ¼"	18.0	24.0	32.0	50.0	55.0	44.7
50STSM1TA5	50STSM2TN5	M50	9.0	15.0	1 ½"	19.0	22.0	32.0	57.0	62.7	48.7
50TSM1TA5	50TSM2TN5	M50	9.0	15.0	1 ½"	19.0	28.0	38.0	57.0	62.7	48.7
63STSM1TA5	63STSM2TN5	M63	10.0	15.0	2"	20.0	28.0	39.0	68.0	74.8	52.2
63TSM1TA5	63TSM2TN5	M63	10.0	15.0	2"	20.0	37.0	48.0	68.0	74.8	52.2

For NPT threads add a 'T' to the suffix e.g. 16DTSM1TA5T (⅜" NPT)
For long metric threads add an 'L' to the suffix e.g. 16DTSM1TA5L (M16, with 12mm length of entry thread)

Dimensions are displayed in millimetres unless otherwise stated

TSMe Ex

TRUSEAL METALLIC

TRUSEAL TSMe Ex eb & Ex ta
METALLIC, EXPLOSIVE ATMOSPHERE CABLE GLAND

shown with standard seal

FOR ALL TYPES OF UNARMOURED & BRAIDED / SCREENED CABLES

- Finger-locking seal provides superior cable retention and strain relief
- Approved to the latest editions of IEC/EN 60079
- Internationally marked IECEx and ATEX
- Suitable for intrinsically safe (Ex i) circuits
- 3rd party certified to IEC/EN 62444
- Widest cable range take on the market
- Easy to install
- Robust design, high quality materials
- O-ring interface seal included as standard
- Transit disc or IP68, IP69 and IP69K rated IP plug options available
- Product supplied in nickel-plated brass, or stainless steel on request
- Nickel-plated brass locknut available (ordering suffix 2TN)

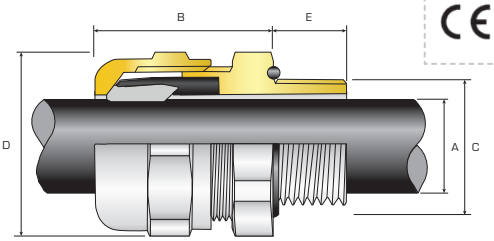
IP66 IP67 IP68 IP69K

Ex eb Ex ta +105°C ↑ -60°C

TECHNICAL DATA	
DESIGN SPECIFICATION	IEC 62444, EN 62444 (EN Metric only)
MECHANICAL CLASSIFICATION*	Impact = Level 6, Cable Anchorage = Type A
ENCLOSURE PROTECTION	IK08 to IEC 62262 (7 joules)
INGRESS PROTECTION RATING	IP66, IP67, IP68**, IP69 & IP69K
CABLE GLAND MATERIAL	Nickel-plated brass, Stainless Steel (option)
SEAL MATERIAL	CMP SOLO LSF Halogen-free Thermoset Elastomer
CABLE TYPE	Unarmoured & Braided (when braid is terminated inside enclosure)
SEALING TECHNIQUE	CMP Unique finger-locking type seal
SEALING AREA(S)	Cable Outer Sheath

* Mechanical classifications applied as per IEC/EN 62444
** IP68 tested to 300 kPa for 16 hours (equivalent to 30 metres water depth)

GLOBAL PRODUCT CERTIFICATION			
ATEX CERTIFICATE	CML 19ATEX3185X	IECEx CERTIFICATE	IECEx CML 19.0062X
ATEX COMPLIANCE STANDARDS	EN 60079-0,7,31	IECEx COMPLIANCE STANDARDS	IEC 60079-0,7,31
CODE OF PROTECTION	Ⓔx II 2G 1D, Ex eb IIC Gb, Ex ta IIIC Da,	CODE OF PROTECTION	Ex eb IIC Gb, Ex ta IIIC Da
DNV CERTIFICATE	TAE000000Y		



PRODUCT SELECTION TABLE WITH DUAL SEALING RANGE

DUAL SEAL		AVAILABLE ENTRY THREADS 'C'					OVERALL CABLE DIAMETER 'A'		ACROSS FLATS 'D'	ACROSS CORNERS 'D'	PROTRUSION LENGTH 'B'
		STANDARD		OPTION							
CABLE GLAND ONLY	CABLE GLAND WITH LOCKNUT	METRIC	THREAD LENGTH (METRIC) 'E'	LONG THREAD LENGTH (METRIC) 'E'	NPT	THREAD LENGTH (NPT) 'E'	MIN	MAX	MAX	MAX	
16DTSME1TA5	16DTSME2TN5	M16	6.0	12.0	⅜"	11.0	3.0	10.0	20.0	22.0	23.6
20DTSME1TA5	20DTSME2TN5	M20	6.5	12.0	½"	14.0	5.0	14.0	24.0	26.4	26.7
25DTSME1TA5	25DTSME2TN5	M25	7.0	12.0	¾"	15.0	9.0	18.0	30.0	33.0	32.0
32DTSME1TA5	32DTSME2TN5	M32	8.0	12.0	1"	18.0	12.5	25.0	39.0	42.9	37.8
40DTSME1TA5	40DTSME2TN5	M40	8.0	15.0	1 ¼"	18.0	19.0	32.0	50.0	55.0	44.7
50DTSME1TA5	50DTSME2TN5	M50	9.0	15.0	1 ½"	19.0	22.0	38.0	57.0	62.7	48.7
63DTSME1TA5	63DTSME2TN5	M63	10.0	15.0	2"	20.0	28.0	48.0	68.0	74.8	52.2

PRODUCT SELECTION TABLE WITH STANDARD SEALING RANGE

STANDARD SEAL		AVAILABLE ENTRY THREADS 'C'					OVERALL CABLE DIAMETER 'A'		ACROSS FLATS 'D'	ACROSS CORNERS 'D'	PROTRUSION LENGTH 'B'
		STANDARD		OPTION							
CABLE GLAND ONLY	CABLE GLAND WITH LOCKNUT	METRIC	THREAD LENGTH (METRIC) 'E'	LONG THREAD LENGTH (METRIC) 'E'	NPT	THREAD LENGTH (NPT) 'E'	MIN	MAX	MAX	MAX	
12TSME1TA5	12TSME2TN5	M12	6.0	12.0	¼"	11.0	3.0	6.5	16.0	17.6	22.3
16STSME1TA5	16STSME2TN5	M16	6.0	12.0	⅜"	11.0	3.0	7.0	20.0	22.0	23.6
16TSME1TA5	16TSME2TN5	M16	6.0	12.0	⅜"	11.0	6.0	10.0	20.0	22.0	23.6
20STSME1TA5	20STSME2TN5	M20	6.5	12.0	½"	14.0	5.0	10.0	24.0	26.4	26.7
20TSME1TA5	20TSME2TN5	M20	6.5	12.0	½"	14.0	9.0	14.0	24.0	26.4	26.7
25STSME1TA5	25STSME2TN5	M25	7.0	12.0	¾"	15.0	9.0	15.5	30.0	33.0	32.0
25TSME1TA5	25TSME2TN5	M25	7.0	12.0	¾"	15.0	12.5	18.0	30.0	33.0	32.0
32STSME1TA5	32STSME2TN5	M32	8.0	12.0	1"	18.0	12.5	19.0	39.0	42.9	37.8
32TSME1TA5	32TSME2TN5	M32	8.0	12.0	1"	18.0	17.0	25.0	39.0	42.9	37.8
40STSME1TA5	40STSME2TN5	M40	8.0	15.0	1 ¼"	18.0	19.0	27.0	50.0	55.0	44.7
40TSME1TA5	40TSME2TN5	M40	8.0	15.0	1 ¼"	18.0	24.0	32.0	50.0	55.0	44.7
50STSME1TA5	50STSME2TN5	M50	9.0	15.0	1 ½"	19.0	22.0	32.0	57.0	62.7	48.7
50TSME1TA5	50TSME2TN5	M50	9.0	15.0	1 ½"	19.0	28.0	38.0	57.0	62.7	48.7
63STSME1TA5	63STSME2TN5	M63	10.0	15.0	2"	20.0	28.0	39.0	68.0	74.8	52.2
63TSME1TA5	63TSME2TN5	M63	10.0	15.0	2"	20.0	37.0	48.0	68.0	74.8	52.2

For NPT threads add a 'T' to the suffix e.g. 16DTSME1TA5T (⅜" NPT)
For long metric threads add an 'L' to the suffix e.g. 16DTSME1TA5L (M16, with 12mm length of entry thread)

Dimensions are displayed in millimetres unless otherwise stated

TSZ EMC

TRUSEAL EMC

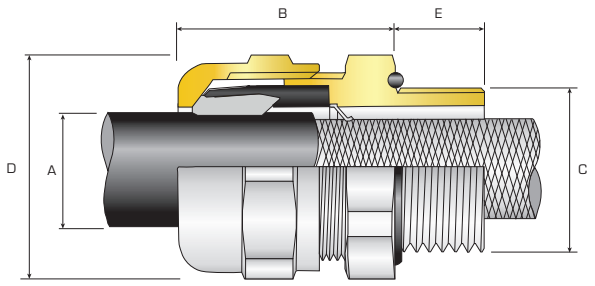
TRUSEAL TSZ, EMC, INDUSTRIAL CABLE GLAND

FOR ALL TYPES OF BRAIDED / SCREENED CABLES

- Designed for superior EMC performance
- 360° contact around screen circumference
- 3rd party EMC performance tested to EN 55032
- Finger-locking seal provides superior cable retention and strain relief
- 3rd party certified to IEC/EN 62444
- Widest cable range take on the market
- Robust design, high quality materials
- O-ring interface seal included as standard
- Transit disc or IP68, IP69 and IP69K rated IP plug options available
- Product supplied in nickel-plated brass, or stainless steel on request
- Ex eb certified product also available
- Nickel-plated brass locknut available (ordering suffix 2TN)

IP66 IP67 IP68 IP 69K

CE +105°C -60°C



TECHNICAL DATA	
DESIGN SPECIFICATION	IEC 62444, EN 62444 (EN Metric only)
MECHANICAL CLASSIFICATION*	Impact = Level 6, Cable Anchorage = Type A
ENCLOSURE PROTECTION	IK08 to IEC 62262 (7 joules)
INGRESS PROTECTION RATING	IP66, IP67, IP68**, IP69 & IP69K

CABLE GLAND MATERIAL	Nickel-plated brass, Stainless Steel (option)
SEAL MATERIAL	CMP SOLO LSF Halogen-free Thermoset Elastomer
CABLE TYPE	Screened or Braided
SEALING TECHNIQUE	CMP Unique finger-locking type seal
SEALING AREA(S)	Cable Outer Sheath

* Mechanical classifications applied as per IEC/EN 62444
** IP68 tested to 300 kPa for 16 hours (equivalent to 30 metres water depth)

PRODUCT SELECTION TABLE WITH DUAL SEALING RANGE

DUAL SEAL		AVAILABLE ENTRY THREADS 'C'					OVERALL CABLE DIAMETER 'A'		ACROSS FLATS 'D'	ACROSS CORNERS 'D'	PROTRUSION LENGTH 'B'
		STANDARD		OPTION							
CABLE GLAND ONLY	CABLE GLAND WITH LOCKNUT	METRIC	THREAD LENGTH (METRIC) 'E'	LONG THREAD LENGTH (METRIC) 'E'	NPT	THREAD LENGTH (NPT) 'E'	MIN	MAX	MAX	MAX	
16DTSZ1TA5	16DTSZ2TN5	M16	6.0	12.0	⅜"	11.0	3.0	10.0	20.0	22.0	23.6
20DTSZ1TA5	20DTSZ2TN5	M20	6.5	12.0	½"	14.0	5.0	14.0	24.0	26.4	26.7
25DTSZ1TA5	25DTSZ2TN5	M25	7.0	12.0	¾"	15.0	9.0	18.0	30.0	33.0	32.0
32DTSZ1TA5	32DTSZ2TN5	M32	8.0	12.0	1"	18.0	12.5	25.0	39.0	42.9	37.8
40DTSZ1TA5	40DTSZ2TN5	M40	8.0	15.0	1 ¼"	18.0	19.0	32.0	50.0	55.0	44.7
50DTSZ1TA5	50DTSZ2TN5	M50	9.0	15.0	1 ½"	19.0	22.0	38.0	57.0	62.7	48.7
63DTSZ1TA5	63DTSZ2TN5	M63	10.0	15.0	2"	20.0	28.0	48.0	68.0	74.8	52.2

PRODUCT SELECTION TABLE WITH STANDARD SEALING RANGE

STANDARD SEAL		AVAILABLE ENTRY THREADS 'C'					OVERALL CABLE DIAMETER 'A'		ACROSS FLATS 'D'	ACROSS CORNERS 'D'	PROTRUSION LENGTH 'B'
		STANDARD		OPTION							
CABLE GLAND ONLY	CABLE GLAND WITH LOCKNUT	METRIC	THREAD LENGTH (METRIC) 'E'	LONG THREAD LENGTH (METRIC) 'E'	NPT	THREAD LENGTH (NPT) 'E'	MIN	MAX	MAX	MAX	
12TSZ1TA5	12TSZ2TN5	M12	6.0	12.0	¼"	11.0	3.0	6.5	16.0	17.6	22.3
16STSZ1TA5	16STSZ2TN5	M16	6.0	12.0	⅜"	11.0	3.0	7.0	20.0	22.0	23.6
16TSZ1TA5	16TSZ2TN5	M16	6.0	12.0	⅜"	11.0	6.0	10.0	20.0	22.0	23.6
20STSZ1TA5	20STSZ2TN5	M20	6.5	12.0	½"	14.0	5.0	10.0	24.0	26.4	26.7
20TSZ1TA5	20TSZ2TN5	M20	6.5	12.0	½"	14.0	9.0	14.0	24.0	26.4	26.7
25STSZ1TA5	25STSZ2TN5	M25	7.0	12.0	¾"	15.0	9.0	15.5	30.0	33.0	32.0
25TSZ1TA5	25TSZ2TN5	M25	7.0	12.0	¾"	15.0	12.5	18.0	30.0	33.0	32.0
32STSZ1TA5	32STSZ2TN5	M32	8.0	12.0	1"	18.0	12.5	19.0	39.0	42.9	37.8
32TSZ1TA5	32TSZ2TN5	M32	8.0	12.0	1"	18.0	17.0	25.0	39.0	42.9	37.8
40STSZ1TA5	40STSZ2TN5	M40	8.0	15.0	1 ¼"	18.0	19.0	27.0	50.0	55.0	44.7
40TSZ1TA5	40TSZ2TN5	M40	8.0	15.0	1 ¼"	18.0	24.0	32.0	50.0	55.0	44.7
50STSZ1TA5	50STSZ2TN5	M50	9.0	15.0	1 ½"	19.0	22.0	32.0	57.0	62.7	48.7
50TSZ1TA5	50TSZ2TN5	M50	9.0	15.0	1 ½"	19.0	28.0	38.0	57.0	62.7	48.7
63STSZ1TA5	63STSZ2TN5	M63	10.0	15.0	2"	20.0	28.0	39.0	68.0	74.8	52.2
63TSZ1TA5	63TSZ2TN5	M63	10.0	15.0	2"	20.0	37.0	48.0	68.0	74.8	52.2

For NPT threads add a 'T' to the suffix e.g. 16DTSZ1TA52T (⅜" NPT)
For long metric threads add an 'L' to the suffix e.g. 16DTSZ1TA52L (M16, 12mm length of entry thread)

Dimensions are displayed in millimetres unless otherwise stated

TSZe EMC Ex

TRUSEAL EMC

TRUSEAL TSZe EMC Ex eb & Ex ta METALLIC, EXPLOSIVE ATMOSPHERE CABLE GLAND

FOR ALL TYPES OF BRAIDED / SCREENED CABLES

- Designed for superior EMC performance
- 360° contact around screen circumference
- 3rd party EMC performance tested to EN 55032
- Approved to the latest editions of IEC/EN 60079
- Internationally marked IECEx and ATEX
- Suitable for intrinsically safe (Ex i) circuits
- Finger-locking seal provides superior cable retention and strain relief
- 3rd party certified to IEC/EN 62444
- Widest cable range take on the market
- O-ring interface seal included as standard
- Transit disc or IP68, IP69 and IP69K rated IP plug options available
- Product supplied in nickel-plated brass, or stainless steel on request

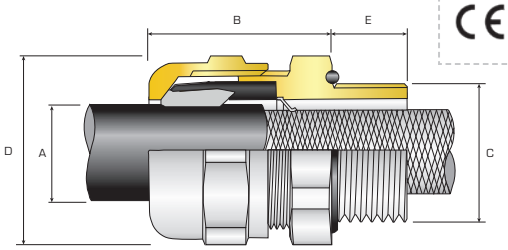
IP66 IP67 IP68 IP69K

Ex eb Ex ta +105°C ↑ -60°C

TECHNICAL DATA	
DESIGN SPECIFICATION	IEC 62444, EN 62444 (EN Metric only)
MECHANICAL CLASSIFICATION*	Impact = Level 6, Cable Anchorage = Type A
ENCLOSURE PROTECTION	IK08 to IEC 62262 (7 joules)
INGRESS PROTECTION RATING	IP66, IP67, IP68**, IP69 & IP69K
CABLE GLAND MATERIAL	Nickel-plated brass, Stainless Steel (option)
SEAL MATERIAL	CMP SOLO LSF Halogen-free Thermoset Elastomer
CABLE TYPE	Screened or Braided
SEALING TECHNIQUE	CMP Unique finger-locking type seal
SEALING AREA(S)	Cable Outer Sheath

* Mechanical classifications applied as per IEC/EN 62444
** IP68 tested to 300 kPa for 16 hours (equivalent to 30 metres water depth)

GLOBAL PRODUCT CERTIFICATION			
ATEX CERTIFICATE	CML 19ATEX3185X	IECEx CERTIFICATE	IECEx CML 19.0062X
ATEX COMPLIANCE STANDARDS	EN 60079-0,7,31	IECEx COMPLIANCE STANDARDS	IEC 60079-0,7,31
CODE OF PROTECTION	Ⓔx II 2G 1D, Ex eb IIC Gb, Ex ta IIIC Da,	CODE OF PROTECTION	Ex eb IIC Gb, Ex ta IIIC Da
DNV CERTIFICATE	TAE000000Y		



PRODUCT SELECTION TABLE WITH DUAL SEALING RANGE

DUAL SEAL		AVAILABLE ENTRY THREADS 'C'					OVERALL CABLE DIAMETER 'A'		ACROSS FLATS 'D'	ACROSS CORNERS 'D'	PROTRUSION LENGTH 'B'
		STANDARD		OPTION							
CABLE GLAND ONLY	CABLE GLAND WITH LOCKNUT	METRIC	THREAD LENGTH (METRIC) 'E'	LONG THREAD LENGTH (METRIC) 'E'	NPT	THREAD LENGTH (NPT) 'E'	MIN	MAX	MAX	MAX	
16DTSZE1TA5	16DTSZE2TN5	M16	6.0	12.0	⅜"	11.0	3.0	10.0	20.0	22.0	23.6
20DTSZE1TA5	20DTSZE2TN5	M20	6.5	12.0	½"	14.0	5.0	14.0	24.0	26.4	26.7
25DTSZE1TA5	25DTSZE2TN5	M25	7.0	12.0	¾"	15.0	9.0	18.0	30.0	33.0	32.0
32DTSZE1TA5	32DTSZE2TN5	M32	8.0	12.0	1"	18.0	12.5	25.0	39.0	42.9	37.8
40DTSZE1TA5	40DTSZE2TN5	M40	8.0	15.0	1 ¼"	18.0	19.0	32.0	50.0	55.0	44.7
50DTSZE1TA5	50DTSZE2TN5	M50	9.0	15.0	1 ½"	19.0	22.0	38.0	57.0	62.7	48.7
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PRODUCT SELECTION TABLE WITH STANDARD SEALING RANGE

STANDARD SEAL		AVAILABLE ENTRY THREADS 'C'					OVERALL CABLE DIAMETER 'A'		ACROSS FLATS 'D'	ACROSS CORNERS 'D'	PROTRUSION LENGTH 'B'
		STANDARD		OPTION							
CABLE GLAND ONLY	CABLE GLAND WITH LOCKNUT	METRIC	THREAD LENGTH (METRIC) 'E'	LONG THREAD LENGTH (METRIC) 'E'	NPT	THREAD LENGTH (NPT) 'E'	MIN	MAX	MAX	MAX	
12TSZE1TA5	12TSZE2TN5	M12	6.0	12.0	¼"	11.0	3.0	6.5	16.0	17.6	22.3
16STSZE1TA5	16STSZE2TN5	M16	6.0	12.0	⅜"	11.0	3.0	7.0	20.0	22.0	23.6
16TSZE1TA5	16TSZE2TN5	M16	6.0	12.0	⅜"	11.0	6.0	10.0	20.0	22.0	23.6
20STSZE1TA5	20STSZE2TN5	M20	6.5	12.0	½"	14.0	5.0	10.0	24.0	26.4	26.7
20TSZE1TA5	20TSZE2TN5	M20	6.5	12.0	½"	14.0	9.0	14.0	24.0	26.4	26.7
25STSZE1TA5	25STSZE2TN5	M25	7.0	12.0	¾"	15.0	9.0	15.5	30.0	33.0	32.0
25TSZE1TA5	25TSZE2TN5	M25	7.0	12.0	¾"	15.0	12.5	18.0	30.0	33.0	32.0
32STSZE1TA5	32STSZE2TN5	M32	8.0	12.0	1"	18.0	12.5	19.0	39.0	42.9	37.8
32TSZE1TA5	32TSZE2TN5	M32	8.0	12.0	1"	18.0	17.0	25.0	39.0	42.9	37.8
40STSZE1TA5	40STSZE2TN5	M40	8.0	15.0	1 ¼"	18.0	19.0	27.0	50.0	55.0	44.7
40TSZE1TA5	40TSZE2TN5	M40	8.0	15.0	1 ¼"	18.0	24.0	32.0	50.0	55.0	44.7
50STSZE1TA5	50STSZE2TN5	M50	9.0	15.0	1 ½"	19.0	22.0	32.0	57.0	62.7	48.7
50TSZE1TA5	50TSZE2TN5	M50	9.0	15.0	1 ½"	19.0	28.0	38.0	57.0	62.7	48.7
63STSZE1TA5	63STSZE2TN5	M63	10.0	15.0	2"	20.0	28.0	39.0	68.0	74.8	52.2
63TSZE1TA5	63TSZE2TN5	M63	10.0	15.0	2"	20.0	37.0	48.0	68.0	74.8	52.2

For NPT threads add a 'T' to the suffix e.g. 16DTSZE1TA52T (⅜" NPT)
For long metric threads add an 'L' to the suffix e.g. 16DTSZE1TA5L (M16, 12mm length of entry thread)

Dimensions are displayed in millimetres unless otherwise stated

TSX DIN 89345

TRUSEAL EMC

TRUSEAL TSX, EMC, INDUSTRIAL CABLE GLAND TO DIN 89345

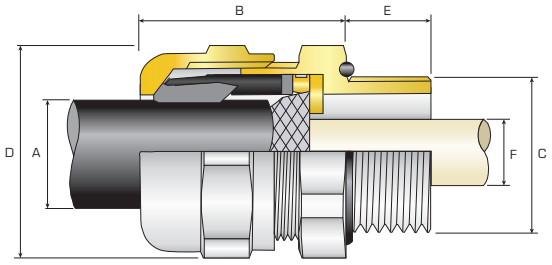
shown with standard seal

IP66 IP67 IP68 IP 69K

CE +105°C -60°C

FOR ALL TYPES OF BRAIDED / SCREENED CABLES

- Designed for superior EMC performance
- Clamping cone and ring design
- 360° contact around screen circumference
- 3rd party EMC performance tested to EN 55032
- Finger-locking seal provides superior cable retention and strain relief
- 3rd party certified to IEC/EN 62444
- Widest cable range take on the market
- Robust design, high quality materials
- O-ring interface seal included as standard
- Transit disc or IP68, IP69 and IP69K rated IP plug options available
- Product supplied in nickel-plated brass, or stainless steel on request
- Ex eb certified product also available
- Nickel-plated brass locknut available (ordering suffix 2TN)



TECHNICAL DATA	
DESIGN SPECIFICATION	IEC 62444, EN 62444, DIN 89345 (EN Metric only)
MECHANICAL CLASSIFICATION*	Impact = Level 6, Cable Anchorage = Type A
ENCLOSURE PROTECTION	IK08 to IEC 62262 (7 joules)
INGRESS PROTECTION RATING	IP66, IP67, IP68**, IP69 & IP69K

CABLE GLAND MATERIAL	Nickel-plated brass, Stainless Steel (option)
SEAL MATERIAL	CMP SOLO LSF Halogen-free Thermoset Elastomer
CABLE TYPE	Braided
SEALING TECHNIQUE	CMP Unique finger-locking type seal
SEALING AREA(S)	Cable Outer Sheath

* Mechanical classifications applied as per IEC/EN 62444
** IP68 tested to 300 kPa for 16 hours (equivalent to 30 metres water depth)

PRODUCT SELECTION TABLE WITH DUAL SEALING RANGE

DUAL SEAL		AVAILABLE ENTRY THREADS 'C'					OVERALL CABLE DIAMETER 'A'		CABLE BEDDING DIAMETER 'F'	ACROSS FLATS 'D'	ACROSS CORNERS 'D'	PROTRUSION LENGTH 'B'
		STANDARD		OPTION								
CABLE GLAND ONLY	CABLE GLAND WITH LOCKNUT	METRIC	THREAD LENGTH (METRIC) 'E'	LONG THREAD LENGTH (METRIC) 'E'	NPT	THREAD LENGTH (NPT) 'E'	MIN	MAX	MAX	MAX	MAX	
16DTSX1TA5	16DTSX2TN5	M16	6.0	12.0	⅜"	11.0	3.0	10.0	7.5	20.0	22.0	30.7
20DTSX1TA5	20DTSX2TN5	M20	6.5	12.0	½"	14.0	5.0	14.0	9.5	24.0	26.4	33.8
25DTSX1TA5	25DTSX2TN5	M25	7.0	12.0	¾"	15.0	9.0	18.0	16.0	30.0	33.0	39.0
32DTSX1TA5	32DTSX2TN5	M32	8.0	12.0	1"	18.0	12.5	25.0	20.0	39.0	42.9	45.0
40DTSX1TA5	40DTSX2TN5	M40	8.0	15.0	1 ¼"	18.0	19.0	32.0	25.9	50.0	55.0	52.4
50DTSX1TA5	50DTSX2TN5	M50	9.0	15.0	1 ½"	19.0	22.0	38.0	33.0	57.0	62.7	55.8
63DTSX1TA5	63DTSX2TN5	M63	10.0	15.0	2"	20.0	28.0	48.0	45.0	68.0	74.8	60.9

PRODUCT SELECTION TABLE WITH STANDARD SEALING RANGE

STANDARD SEAL		AVAILABLE ENTRY THREADS 'C'					OVERALL CABLE DIAMETER 'A'		CABLE BEDDING DIAMETER 'F'	ACROSS FLATS 'D'	ACROSS CORNERS 'D'	PROTRUSION LENGTH 'B'
		STANDARD		OPTION								
CABLE GLAND ONLY	CABLE GLAND WITH LOCKNUT	METRIC	THREAD LENGTH (METRIC) 'E'	LONG THREAD LENGTH (METRIC) 'E'	NPT	THREAD LENGTH (NPT) 'E'	MIN	MAX	MAX	MAX	MAX	
12TSX1TA5	12TSX2TN5	M12	6.0	12.0	¼"	11.0	3.0	6.5	5.0	16.0	17.6	30.7
16STSX1TA5	16STSX2TN5	M16	6.0	12.0	⅜"	11.0	3.0	7.0	7.0	20.0	22.0	30.7
16TSX1TA5	16TSX2TN5	M16	6.0	12.0	⅜"	11.0	6.0	10.0	7.5	20.0	22.0	30.7
20STSX1TA5	20STSX2TN5	M20	6.5	12.0	½"	14.0	5.0	10.0	9.5	24.0	26.4	33.8
20TSX1TA5	20TSX2TN5	M20	6.5	12.0	½"	14.0	9.0	14.0	9.5	24.0	26.4	33.8
25STSX1TA5	25STSX2TN5	M25	7.0	12.0	¾"	15.0	9.0	15.5	15.5	30.0	33.0	39.0
25TSX1TA5	25TSX2TN5	M25	7.0	12.0	¾"	15.0	12.5	18.0	16.0	30.0	33.0	39.0
32STSX1TA5	32STSX2TN5	M32	8.0	12.0	1"	18.0	12.5	19.0	19.0	39.0	42.9	45.0
32TSX1TA5	32TSX2TN5	M32	8.0	12.0	1"	18.0	17.0	25.0	20.0	39.0	42.9	45.0
40STSX1TA5	40STSX2TN5	M40	8.0	15.0	1 ¼"	18.0	19.0	27.0	25.9	50.0	55.0	52.4
40TSX1TA5	40TSX2TN5	M40	8.0	15.0	1 ¼"	18.0	24.0	32.0	25.9	50.0	55.0	52.4
50STSX1TA5	50STSX2TN5	M50	9.0	15.0	1 ½"	19.0	22.0	32.0	32.0	57.0	62.7	55.8
50TSX1TA5	50TSX2TN5	M50	9.0	15.0	1 ½"	19.0	28.0	38.0	33.0	57.0	62.7	55.8
63STSX1TA5	63STSX2TN5	M63	10.0	15.0	2"	20.0	28.0	39.0	39.0	68.0	74.8	60.9
63TSX1TA5	63TSX2TN5	M63	10.0	15.0	2"	20.0	37.0	48.0	45.0	68.0	74.8	60.9

For NPT threads add a 'T' to the suffix e.g. 16DTSX1TA5T (⅜" NPT)
For long metric threads add an 'L' to the suffix e.g. 16DTSX1TA5L (M16, with 12mm length of entry thread)

Dimensions are displayed in millimetres unless otherwise stated

HOW TO ORDER

The standard ordering references for CMP TruSeal products are stated below. If you have any queries regarding ordering please do not hesitate to contact CMP directly for additional help and support.

SIZE	SEAL TYPE		GLAND TYPE	ACCESSORY REFERENCE		MATERIAL		COLOUR		THREAD OPTION	
12	-	STANDARD	TSP	1TA	STANDARD	-	NYLON	-	BLACK	-	METRIC
16	S	SMALL	TSPE	2TN	LOCKNUT (LN)	5	NICKEL-PLATED BRASS	1	GREY (LIGHT)	L	METRIC LONG
20	D	DUAL	TSPV0	2TD	TRANSIT DISC	4	STAINLESS STEEL	2	GREY (MID)	S	METRIC SLOTTED
25			TSM	2TDN	TRANSIT DISC & LN			3	WHITE	T	NPT
32			TSME	2TP	IP PLUG			4	BLUE	P*	PG
50			TSZ	2TPN	IP PLUG & LN			5	RED		
63			TSX	2TE	EMC LOCKNUT						

16	D		TSPV0	2TN		-		1		L

Example 1

16DTSPV02TN - M16, DUAL SEAL, TRUSEAL UL94 V0 POLYMER, WITH LOCKNUT, IN LIGHT GREY, WITH LONG ENTRY THREAD

20	-		TSPE	1TA		-		-		T

Example 2

20TSPE1TAT - 20, STANDARD SEAL, TRUSEAL Ex e POLYMER, IN BLACK WITH 1/2" NPT ENTRY THREAD

32	S		TSM	2TD		5		-		P29

Example 3

32STSM2TD5P29 - 32, SMALL SEAL, TRUSEAL METALLIC, IN NICKEL-PLATED BRASS WITH PG 29 ENTRY THREAD & TRANSIT DISC

Ordering Notes

- See individual product pages for sealing ranges
- Basic list of available accessories shown, more available upon request
- See individual product pages for colour availability
- TSP product provided with blue nut and entry, TSPe provided with blue nut and black entry
- Thread lengths described on individual product pages
- Polymer products do not require a material code
- *PG thread option should be followed by the thread size number shown in the table (right)

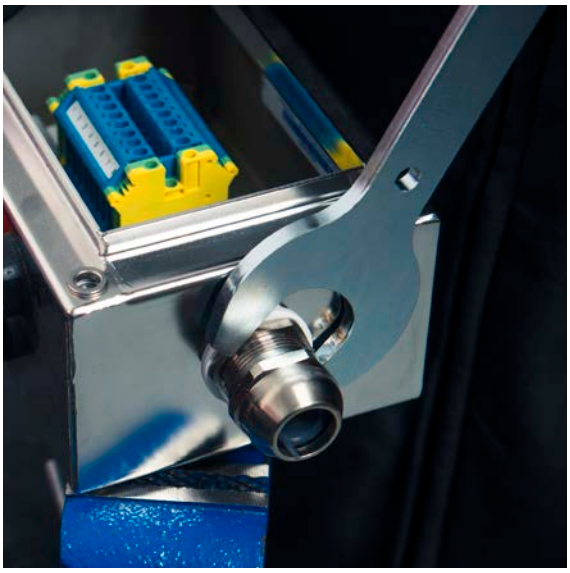
SIZE	PG*
12	7
16	9
20	11
	135
	16
25	21
32	29
50	36
63	48

BESPOKE TOOLS

SPANNERS

When installing Cable Glands and accessories it is important that the correct tools are used to carry out the installation.

This includes the use of the correct cable gland spanner, specifically designed to fit each individual product and minimise the potential for accidental injury caused by slippage, as can be the case with adjustable spanners or wrenches.



BOX SPANNERS

Box spanners are an essential tool for installing cable glands in locations which are hard to reach, or when there are several cable glands being installed in close proximity and it isn't practical to use a standard spanner due to space constraints.

METRIC PRODUCT	SPANNER	BOX SPANNER
12TSM/Z/X	TS02	12MBOXSP
16TSM/Z/X	TS02	16MBOXSP
20TSM/Z/X	TS03	20BOXSP
25TSM/Z/X	TS03	25BOXSP
32TSM/Z/X	TS06	32MBOXSP
40TSM/Z/X	TS04	40BOXSP
50TSM/Z/X	TS05	50MBOXSP
63TSM/Z/X	TS06	63BOXSP
12TSP/V0	TS01	12BOXSP
16TSP/V0	TS01	16BOXSP
20TSP/V0	TS03	20BOXSP
25TSP/V0	TS03	25BOXSP
32TSP/V0	TS04	32BOXSP
40TSP/V0	TS04	40BOXSP
50TSP/V0	TS06	50BOXSP
63TSP/V0	TS06	63BOXSP

ACCESSORIES

LOCKNUTS

CMP polyamide and nickel-plated brass locknuts have been specifically designed for the TruSeal range to secure the cable gland into non-threaded enclosures. Cable glands can be purchased with or without locknuts depending on specific needs and are available with metric or NPT threads.

ENTRY THREAD SEALS

To maintain the Ingress Protection rating between the equipment and the cable gland, it may be necessary to fit an approved entry thread sealing washer at the equipment-to-gland entry interface.

The need for a sealing washer will depend on the ingress protection rating, code of protection of the equipment and the type of entry holes available within that equipment. For example, when using Ex e equipment or terminal enclosures (which are permitted to have untapped through-clearance holes) it will be necessary to fit a sealing washer to ensure the minimum IP54 requirement is met. Other equipment with tapped entry holes may not require a sealing washer to maintain the IP54 minimum rating.

CMP recommends using TruSeal approved entry thread sealing washers for all installations where an IP rating of IP55-69K is required; these are provided as standard with all polymer TruSeal cable glands.

O-RING INTERFACE SEALS

For the TruSeal metallic range an O-ring interface seal is provided as standard negating the need for an entry thread sealing washer. O-rings are rated IP66-69K.

Other optional accessories are available from CMP. These can be ordered with the gland or separately if required using the order references in the table below.

METRIC PRODUCT	LOCKNUT	OPTIONAL LOCKNUT**	EMC LOCKNUT	TRANSIT DISC	PLUG***	EARTH TAG	SERRATED WASHER	SHROUD
12TSM/Z/X	12LN5		12EMCLN5	12TD	12TSPLUG	12ET5	12SW4	
16TSM/Z/X	16LN5		16EMCLN5	16TD	16TSPLUG	16ET5	16SW4	
20TSM/Z/X	20LN5		20EMCLN5	20TD	20TSPLUG	20ET5	20SW4	LSF04/PVC04
25TSM/Z/X	25LN5		25EMCLN5	25TD	25TSPLUG	25ET5	25SW4	LSF06/PVC06
32TSM/Z/X	32LN5		32EMCLN5	32TD	32TSPLUG	32ET5	32SW4	LSF10/PVC10
40TSM/Z/X	40LN5		40EMCLN5	40TD	40TSPLUG	40ET5	40SW4	LSF13/PVC13
50TSM/Z/X	50LN5		50EMCLN5	50TD	50TSPLUG	50ET5	50SW4	LSF16/PVC16
63TSM/Z/X	63LN5		63EMCLN5	63TD	63TSPLUG	63ET5	63EW4	LSF19/PVC19
12TSP	TSP12LN*	12LN5		12TD	12TSPLUG		12SW4	
16TSP	TSP16LN*	16LN5		16TD	16TSPLUG		16SW4	
20TSP	TSP20LN*	20LN5		20TD	20TSPLUG		20SW4	
25TSP	TSP25LN*	25LN5		25TD	25TSPLUG		25SW4	
32TSP	TSP32LN*	32LN5		32TD	32TSPLUG		32SW4	
40TSP	TSP40LN*	40LN5		40TD	40TSPLUG		40SW4	
50TSP	TSP50LN*	50LN5		50TD	50TSPLUG		50SW4	
63TSP	TSP63LN*	63LN5		63TD	63TSPLUG		63EW4	
12TSPV0	TSPV012LN*	12LN5		12TD			12SW4	
16TSPV0	TSPV016LN*	16LN5		16TD			16SW4	
20TSPV0	TSPV020LN*	20LN5		20TD			20SW4	
25TSPV0	TSPV025LN*	25LN5		25TD			25SW4	
32TSPV0	TSPV032LN*	32LN5		32TD			32SW4	
40TSPV0	TSPV040LN*	40LN5		40TD			40SW4	
50TSPV0	TSPV050LN*	50LN5		50TD			50SW4	
63TSPV0	TSPV063LN*	63LN5		63TD			63EW4	

* Add required colour code
** For the highest impact protection a metallic locknut is often required
*** S and D seal sizes require 'S' sized plugs e.g. 16DTSP1TA would require a 16STS plug

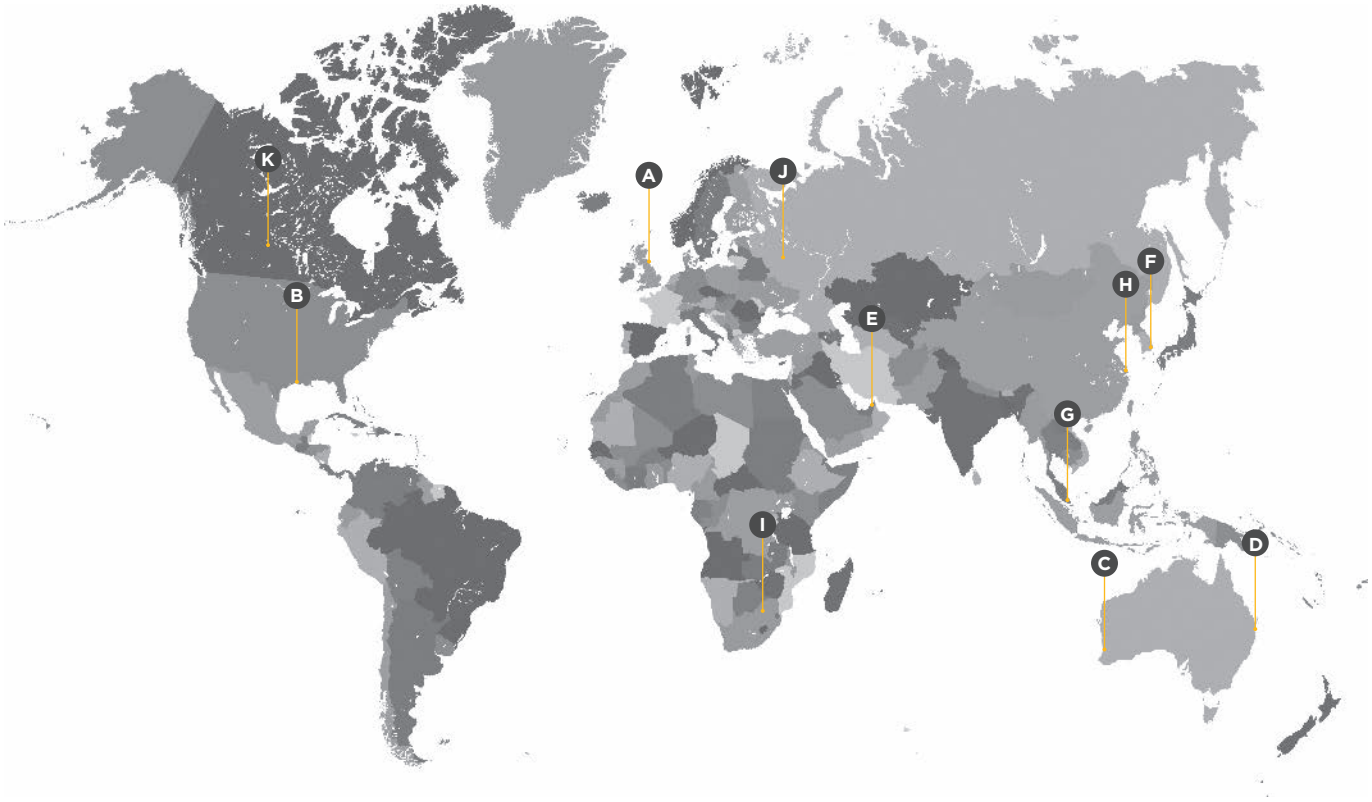
ABOUT CMP

SECURING CABLES WORLDWIDE

As a market-leading specialist designer and manufacturer of cable glands, cable cleats and accessories, CMP has been providing safe and innovative solutions to the global market for over 60 years; gaining an international reputation for quality and reliability.

Our products are developed to suit a wide range of hazardous and industrial applications; including industries such as mining, oil & gas, rail, pharmaceuticals and construction. They have been designed and rigorously tested to cover a variety of international codes, standards and approvals.

Our high-quality products are reinforced with exceptional customer service and innovative solutions; we offer on-hand technical support from our experts across the globe, from 10 different offices spread across 6 continents.



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