

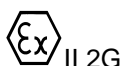
EU Type Examination Certificate CML 19ATEX3185X Issue 5

- 1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU
- 2 Equipment **TruSeal Range of Cable Glands & Plugs**
- 3 Manufacturer **CMP Products Ltd**
- 4 Address **Unit 36 Nelson Way,
Nelson Park East, Cramlington,
Northumberland,
NE23 1WH, United Kingdom**
- 5 The equipment is specified in the description of this certificate and the documents to which it refers.
- 6 Eurofins CML B.V., Chamber of Commerce No 67386717, Koopvaardijweg 32, 4906CV Oosterhout, The Netherlands, Notified Body Number 2776, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

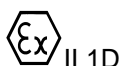
The examination and test results are recorded in the confidential reports listed in Section 12.
- 7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to conditions of safe use (affecting correct installation or safe use). These are specified in Section 14.
- 8 This EU Type Examination certificate relates only to the design and construction of the specified equipment or component. Further requirements of Directive 2014/34/EU Article 13 apply to the manufacture of the equipment or component and are separately certified.
- 9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

EN IEC 60079-0:2018 EN IEC 60079-7:2015+A1:2018 EN 60079-31:2014

- 10 The equipment shall be marked with the following:



Ex eb IIC Gb



Ex ta IIIC Da

IP66 IP67 IP68 (30 m for 16 hours)
IP69 IP69K

Ts -60°C ≤ Ta ≤ +105°C TSMe, TSXe, TSZe glands. TruSeal Plug, Multi-Seal elastomeric sealing ring, Flat-Form elastomeric sealing ring & Multi-Seal Blanking Plugs

Ts -60°C ≤ Ta ≤ +95°C TSPe & TSPI glands

11 Description

The TruSeal Range of Cable Glands comprises the TSM_e, TSP_e, TSP_i, TSX_e & TSZ_e models which allow circular & Flat-Form unarmoured cable or braided/screened cable to enter associated enclosures to which they are fitted (as defined by their coding) without compromising the explosion protection that it provides. Alternatively, a TruSeal Plug can be used within one of the TruSeal Gland models above to provide Ingress Protection where the cable gland is not required. They are manufactured from the following component parts:

TSM_e models

- Metallic entry item hexagonal in form which is threaded at both ends: one being a male metric or NPT thread used to secure the entry item to the associated enclosure; the other being for the fitting of the outer seal nut.
- Plastic finger insert which is located within the entry item which, when displaced by tightening the outer seal nut displaces the sealing ring(s).
- Elastomeric sealing rings which may be: single; dual inner; dual outer which, when displaced by the outer seal nut and finger insert secures the incoming cable, along with providing Sealing, ingress protection and cable retention.
- Outer seal nut, domed in form with a hexagonal shoulder towards its base and with a female thread which engages with the entry item and upon tightening displaces the finger insert and consequently sealing ring(s) onto the cable.

TSX_e models

As the TSM_e models with the following additional parts:

- Metallic EMC cone and ring which are located within the entry item to accommodate the screen or braid of the incoming cable.
- Elastomeric bore seal located between the EMC ring and finger insert.

TSZ_e models

As the TSM_e models with the following additional part:

- Metallic EMC spring insert located between the finger insert and entry item for the attenuation of electrical interference.

TSP_e & TSP_i models

- Plastic entry item hexagonal in form which is threaded at one end with a male metric or NPT thread used to secure the entry item to the associated enclosure; the other being partially threaded for the fitting of the outer seal nut and which has a moulded finger insert feature which, when displaced by the outer seal nut displaces the sealing ring(s).
- Elastomeric sealing rings which may be: single; dual inner; dual outer which, when displaced by the outer seal nut and finger insert secures the incoming cable, along with providing Sealing, ingress protection and cable retention.

- Outer seal nut, hexagonal in form with a female thread which engages with the entry item and upon tightening displaces the fingered feature and consequently sealing ring(s) onto the cable.

The cable gland and sealing ring sizes are determined by the entry thread and cable range take sizes:

Gland Size	Entry Thread		Cable outer sheath Ø					
	Standard (Metric)	Standard (NPT)	Single Seal (Min.)	Single Seal (Max.)	Dual Inner (Min.)	Dual Inner (Max.)	Dual Outer (Min.)	Dual Outer (Max.)
12	M12x1.5	1/4"	3.0	6.5	-	-	-	-
16	M16x1.5	3/8"	3.0	7.0	3.0*	7.0	6.0	10.0
20	M20x1.5	1/2"	5.0	10.0	5.0**	10.0	9.0	14.0
25	M25x1.5	3/4"	9.0	15.5	9.0	15.5	12.5	18.0
32	M32x1.5	1"	12.5	19.0	12.5	19.0	17.0	25.0
40	M40x1.5	1 1/4"	19.0	27.0	19.0	27.0	24.0	32.0
50	M50x1.5	1 1/2"	22.0	32.0	22.0	32.0	28.0	38.0
63	M63x1.5	2"	28.0	39.0	28.0	39.0	37.0	48.0

All cable outer sheath dimensions in mm

* For the TSPe & TSPi size 16 gland, the minimum dual inner cable outer sheath dimension is 3.2 mm

** For the TSPe & TSPi size 20 gland, the minimum dual inner cable outer sheath dimension is 5.5 mm

TruSeal Alternative Seals

TSMs, TSZs, & TSPs, TSPi models

- Multi-Seal elastomeric sealing rings** designed for multi core cables, for use with both plastic & metallic TruSeal range. Suitable for types of unarmoured cable or braided/screened cable requiring sealing of individual cores.
- Flat-Form elastomeric sealing rings** for non-circular cables, for use with both plastic & metallic TruSeal range. Suitable for types of non-circular (flat-form) unarmoured cables or braided/screened cable.
- These solutions use the same cable gland sizes listed above with alternative sealing rings for cable installations. Unarmoured cable or braided/screened cable can enter associated enclosures to which they are fitted (as defined by their coding) without compromising the explosion protection that it provides.
- Multi-Seal Blanking Plugs** are available in sizes – 2mm – 4mm – 5mm – 6mm – 7mm – 8mm – 10mm – 12mm. Multi Seal-Blanking Plugs are for use in conjunction with Multi-Seal elastomeric sealing rings, designed to seal equipment when not in use and maintain IP integrity and the concept of protection.

Multi-Seal Elastomeric Sealing Rings

Part Number	Number of Holes	Cable Diameter (Max)	
16MS1	2	4.00	
16MS2	3	2.00	
20MS1	2	5.00	
20MS2	3	4.00	
20MS3	4	4.00	
20MS4	6	3.50	
25MS1	2	6.00	
25MS2	2	7.00	
25MS3	2	8.00	
25MS4	3	6.00	
25MS5	3	7.00	
25MS6	4	5.00	
25MS7	4	6.00	
25MS8	5	4.00	
25MS9	5	5.00	
25MS10	4	6.50	
32MS1	3	10.20	
32MS2	3	1x 6.80	2x 10.20
32MS3	3	1x 7.60	2x 11.70
32MS4	4	8.00	
32MS5	6	6.00	
32MS6	8	4.00	
32MS7	8	5.00	
40MS1	3	1x 10.20	2x 11.70
40MS2	4	10.00	

All Multi-Seal dimensions in mm

Flat-Form Elastomeric Sealing Rings

Part Number	Number of Holes	Cable Dimensions	
		Major (Max)	Minor (Max)
16FF1	1	8.20	5.00
16FF2	1	10.00	6.00
20FF1	1	8.20	5.00
20FF2	1	10.30	6.00
20FF3	1	11.90	6.25
20FF4	1	13.50	7.00
20FF5	1	11.30	8.30
25FF1	2	10.30	6.00
25FF2	1	12.40	6.50
25FF3	1	12.40	8.80
25FF4	1	13.20	5.20
25FF5	1	13.80	7.20
25FF6	1	15.00	5.00
25FF7	1	15.90	7.70
25FF8	1	10.00	4.00
32FF1	1	17.10	10.00
40FF1	1	19.40	10.00

Design Options

The front threaded entry item may be manufactured with a profiled groove to captivate an 'O' ring seal which locates on the mating face of the associated enclosure.

The front threaded entry item may be manufactured with any larger entry thread form size from the sizes certified.

The front threaded entry item may be manufactured with an alternative nearest equivalent recognized thread type and size to the metric thread sizes certified.

The TruSeal Range of Cable Glands may be supplied with a Transit Disc.

Materials of manufacture:

The TSMe, TSZe & TSXe Cable Gland ranges are manufactured in brass, stainless steel & mild steel. All brass manufactured component parts can be optionally nickel plated. All mild steel manufactured components can be optionally zinc plated.

The TSPe, TSPi Cable Gland ranges & Multi-Seal Blanking Plugs are manufactured in Polyamide.

The TruSeal Plug & all types of elastomeric sealing rings are manufactured in Silicone Rubber.

Examples of alternative entry component thread forms:

ET (Conduit)
PG
BSPP
BSPT
ISO
NPSM
NPT

TruSeal Plug Models

There are three model types (A, B and C), that are suitable for the different sealing arrangements within the cable gland range, shown in the table below.

Gland Size	TruSeal Plug Model
12	A
16S / 16DI	B
16	C
20S / 20DI	B
20	C
25S / 25DI	B
25	C
32S / 32DI	B
32	C
40S / 40DI	B
40	C
50S / 50DI	B
50	C
63S / 63DI	B
63	C

Variation 1

This variation introduced the following modification:

- i. The introduction of a slotted entry thread variant to the TSMe models to facilitate a braid termination using a locknut.

Variation 2

This variation introduces the following modifications:

- i. Introduction of the TruSeal Plug Models.
- ii. Approval of IPX9 and IPX9(K) rating of the TruSeal Range of Cable Glands
- iii. Minor Drawing Clarifications
- iv. Update of standard reference from EN 60079-15:2010 to EN 60079-15:2019.

Variation 3

Update to format

Variation 4

This variation introduces the following modifications:

- i. Introduction of 25 new Multi-seal arrangements.
- ii. Introduction of 17 new flat form seals.
- iii. Addition of 8 plugs for multi-seal range to plug holes when not in use.
- iv. Introduction of a blue entry item for the TSPE and TSPi cable gland ranges.

Variation 5

This variation introduces the following modifications:

- i. Correction of type errors in the product description tables.
- ii. Additional specific condition of use.
- iii. To recognise a change to the applicant's address.

12 Certificate history and evaluation reports

Issue	Date	Associated Report	Notes
0	02 Aug 2019	R12382A/00	Issue of Prime Certificate
1	14 Nov 2019	R12905A/00	Introduction of Variation 1
2	08 Jul 2020	R13115A/00	Introduction of Variation 2
3	21 Aug 2020	-	Update to format
4	25 Mar 2024	R16471A/00	Introduction of Variation 4
5	15 Oct 2024	R18031A/00	Introduction of Variation 5

Note: Drawings that describe the equipment or component are listed in the Annex.

13 Conditions of Manufacture

The following conditions are required of the manufacturing process for compliance with the certification.

- i. The conditions of manufacture have been updated as below: The M12 and 1/4" NPT cable glands (TSPe and TSPi) are not available with a blue entry item.

14 Specific Conditions of Use (Special Conditions)

The following conditions relate to safe installation and/or use of the equipment.

- i. The TruSeal TSPe & TSPi M12 & M16 Cable Glands have been tested to a mechanical impact of 4J and therefore shall only be installed where the risk of mechanical impact is low.
- ii. The TruSeal TSPe & TSPi M16, & M20 Cable Glands with a blue entry item have been tested to a mechanical impact of 4J and therefore shall only be installed where the risk of mechanical impact is low.
- iii. The TruSeal Range of Cable Glands are only suitable for fixed installations. The end user shall provide suitable additional clamping of the cable to ensure that pulling is not transmitted to the terminations.
- iv. When a TruSeal M12 TSPe Cable Gland is installed where its service temperature exceeds +75°C, it shall be mounted such that it is adequately protected against the risk of mechanical impact.
- v. For TSPe & TSPi sizes M40, M50 & M63 - Under certain extreme circumstances may be a potential electrostatic charging hazard, clean only with a damp cloth.

Certificate Annex

Certificate Number CML 19ATEX3185X
Equipment TruSeal Range of Cable Glands
Manufacturer CMP Products Ltd



The following documents describe the equipment or component defined in this certificate:

Issue 0

Drawing No	Sheets	Rev	Approved Date	Title
GA1658	1 of 1	00	02 Aug 2019	TSM _e /TMZ _e General Arrangement
GA1658-1	1 of 1	0	02 Aug 2019	TSM _e & TSZ _e - Data
GA1658-2	1 of 1	0	02 Aug 2019	TSM _e & TSZ _e - Compliance Notes
GA1658-3	1 of 1	0	02 Aug 2019	TSM _e & TSZ _e - Marking
SCH0499	1 of 1	0	02 Aug 2019	TSM _e /TMZ _e Entry Item
SCH0499-1	1 of 1	0	02 Aug 2019	TSM _e & TSZ _e Entry Item - Data
SCH0500	1 of 1	00	02 Aug 2019	TSM _e /TSZ _e Outer Seal Nut
SCH0500-1	1 of 1	0	02 Aug 2019	TSM _e & TSZ _e Outer Seal Nut - Data
SCH0501	1 of 1	00	02 Aug 2019	TSZ _e Spring Insert
SCH0501-1	1 of 1	0	02 Aug 2019	TSZ _e Spring Insert - Data
GA1659	1 of 1	00	02 Aug 2019	TSX _e General Arrangement
GA1659-1	1 of 1	0	02 Aug 2019	TSX _e - Data
GA1659-2	1 of 1	0	02 Aug 2019	TSX _e - Compliance Notes
GA1659-3	1 of 1	0	02 Aug 2019	TSX _e - Marking
SCH0502	1 of 1	00	02 Aug 2019	TSX _e Entry Item
SCH0502-1	1 of 1	0	02 Aug 2019	TSX _e Entry Item - Data
SCH0503	1 of 1	00	02 Aug 2019	TSX _e Outer Seal Nut
SCH0503-1	1 of 1	0	02 Aug 2019	TSX _e Outer Seal Nut - Data
SCH0504	1 of 1	00	02 Aug 2019	TSX _e EMC Cone & Ring
SCH0504-1	1 of 1	0	02 Aug 2019	TSX _e EMC Cone & Ring - Data
SCH0505	1 of 1	00	02 Aug 2019	TSX _e Bore Seal
SCH0505-1	1 of 1	0	02 Aug 2019	TSX _e Bore Seal - Data
GA1660	1 of 1	00	02 Aug 2019	TSP _e & TSP _i General Arrangement
GA1660-1	1 of 1	0	02 Aug 2019	TSP _e & TSP _i - Data
GA1660-2	1 of 1	0	02 Aug 2019	TSP _e & TSP _i - Compliance Notes
GA1660-3	1 of 1	0	02 Aug 2019	TSP _e & TSP _i - Marking
SCH0506	1 of 1	00	02 Aug 2019	TSP _e & TSP _i Entry Item
SCH0506-1	1 of 1	0	02 Aug 2019	TSP _e & TSP _i Entry Item - Data
SCH0507	1 of 1	00	02 Aug 2019	TSP _e & TSP _i Outer Seal Nut
SCH0507-1	1 of 1	0	02 Aug 2019	TSP _e & TSP _i Outer Seal Nut - Data

Certificate Annex

Certificate Number CML 19ATEX3185X
Equipment TruSeal Range of Cable Glands
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Drawing No	Sheets	Rev	Approved Date	Title
SCH0508	1 of 1	00	02 Aug 2019	TS Finger Insert
SCH0508-1	1 of 1	0	02 Aug 2019	TS Finger Insert - Data
SCH0509	1 to 2	00	02 Aug 2019	TS Dual & Standard Seal
SCH0509-1	1 of 1	0	02 Aug 2019	TS Dual & Standard Insert - Data
SCH0510	1 of 1	00	02 Aug 2019	TS EMC/Standard Locknut
SCH0510-1	1 of 1	0	02 Aug 2019	TS EMC & Standard Locknut - Data
SCH0511	1 of 1	00	02 Aug 2019	TS Entry Thread Seal
SCH0511-1	1 of 1	0	02 Aug 2019	TS Entry Thread Seal - Data

Issue 1

Drawing No	Sheets	Rev	Approved Date	Title
GA1658	1 of 1	01	14 Nov 2019	TSMe/TMZe General Arrangement
SCH0499	1 of 1	01	14 Nov 2019	TSMe/TMZe Entry Item
SCH0499-1	1 of 1	1	14 Nov 2019	TSMe & TSZe Entry Item - Data

Issue 2

Drawing No	Sheets	Rev	Approved Date	Title
SCH0537	1 of 1	00	08 Jul 2020	TruSeal Plug
SCH0537-1	1 of 1	0	08 Jul 2020	TruSeal Plug – Data
GA1658-2	1 of 1	1	08 Jul 2020	TSMe & TSZe - Compliance Notes
GA1659-2	1 of 1	1	08 Jul 2020	TSXe - Compliance Notes
GA1660-2	1 of 1	1	08 Jul 2020	TSPe & TSPi - Compliance Notes

Issue 3

None.

Certificate Annex

Certificate Number CML 19ATEX3185X
Equipment TruSeal Range of Cable Glands
Manufacturer CMP Products Ltd



Issue 4

Drawing No.	Sheets	Rev	Approved Date	Title
GA1658	1 of 1	02	22 Mar 2024	TSM _e / TMZ _e General Arrangement
GA1658-2	1 of 1	2	22 Mar 2024	TSM _e / TMZ _e Compliance notes
GA1659	1 of 1	01	22 Mar 2024	TSX _e General Arrangement
GA1659-2	1 of 1	2	22 Mar 2024	TSX _e compliance notes
GA1660	1 of 1	01	22 Mar 2024	TSP _e & TSP _i General Arrangement
GA1660-2	1 of 1	2	22 Mar 2024	TSP _e & TSP _i compliance notes
SCH0653	1 of 1	00	22 Mar 2024	TruSeal Flat Form Elastomeric Sealing Ring
SCH0654	1 of 1	00	22 Mar 2024	Tru Seal Multi Cable Seal
SCH0663	1 of 1	01	22 Mar 2024	TruSeal Multi-Seal Blanking Plug

Issue 5

None.