



# INSTALLATION INSTRUCTIONS FOR CMP CABLE GLAND TYPE TC

FOR TERMINATION OF TRAY CABLES, FLEXIBLE CORD, UNARMoured AND WIRE BRAID CABLES FOR USE IN HAZARDOUS LOCATIONS  
INCORPORATING EU DECLARATION OF CONFORMITY TO  
DIRECTIVE 2014/34/EU AND UK STATUTORY REQUIREMENTS SI  
2016 No. 1107 (AS AMENDED)



## TECHNICAL DATA

CABLE GLAND TYPE : TC  
INGRESS PROTECTION : IP66, IP67, IP68, NEMA 4X  
PROCESS CONTROL SYSTEM : ISO 9001  
 : ISO/IEC 80079-34:2011

## EXPLOSIVE ATMOSPHERES CLASSIFICATION

ATEX CERTIFICATION No : CML 18ATEX1334X  
ATEX CERTIFICATION CODE : ㉒ II 2G 1D, Ex db IIC Gb, Ex eb IIC Gb, Ex ta IIIC Da  
UKEX CERTIFICATION No : CML 21UKEX1260X  
UKEX CERTIFICATION CODE : ㉒ II 2G 1D, Ex db IIC Gb, Ex eb IIC Gb, Ex ta IIIC Da  
IECEX CERTIFICATION No : IECEx CML 18.0191X  
IECEX CERTIFICATION CODE : Ex db IIC Gb, Ex eb IIC Gb, Ex ta IIIC Da  
cCSAus CERTIFICATION No : 2220601  
CSAus CERTIFICATION CODE : Class II, Div 2 Groups E, F and G; Class III Div 2; Enclosure type 4X; Ex e; Class I, Zone 1, AEx e  
cCSA CERTIFICATION CODE : Class I, Div 2 Groups A, B, C and D; Class II, Div 2 Groups E, F and G; Class III Div 2; Enclosure type 4X; Ex e; Class I, Zone 1, AEx e

## INSTALLATION INSTRUCTIONS

Installation should only be performed by a competent person using the correct tools. Spanners should be used for tightening. Read all instructions before beginning installation.

## INSTALLATION GUIDANCE NOTES

- In accordance with NEC requirements, Glands with NPT and Metric entry threads are suitable for both Divisions and Zones.
- In accordance with CEC requirements, Glands with NPT threads are suitable for both Divisions and Zones. Glands with Metric threads are only suitable for Zones unless fitted with an approved Metric to NPT thread conversion adaptor.
- For NEC Class I Div 1 and Zone 1 see article 501.15 of the NEC.
- The interface between a cable entry device and its associated enclosure / cable entry will require additional sealing to achieve ingress protection (IP) ratings higher than IP54. The minimum protection level is IP54 for explosive gas atmospheres and IP6X for explosive dust atmospheres. Parallel threads (and tapered threads when using a non-threaded entry) require a CMP sealing washer or integral O-ring face seal (where available) to maintain IP66, 67 and 68 (when applicable). It is the installer's responsibility to ensure the IP rating is maintained at the interface.
- Note: When fitted to a threaded entry, all tapered threads will automatically provide an ingress protection rating of IP66.  
A CMP earth tag should be used when it is necessary to provide an earth bond connection. CMP earth tags have been independently tested to comply with Category B rating specified in IEC 62444 (there are no ratings stated in IEC 60079-0). Ratings are shown in the associated table. CMP earth tags slip over the cable gland or accessory entry thread from inside/outside the enclosure and must be secured with a locknut (if fitted internally).
- Metric entry threads comply with ISO 965-1 and ISO 965-3 with a 6g tolerance as required by IEC 60079-1:2014. The CMP standard metric thread pitch is 1.5mm for threads up to M75, and 2.0mm from M50 and above. Special thread pitches between 0.7 – 2.0mm are available on all products on request. See certificate for details of other thread types. NPT threads are in accordance with ASME B1.20.1-2013 gauging to CI 3.2 for external threads. For details of other thread types refer to IECEX certificate.
- Enclosures must be strong enough to support the cable and cable gland assembly. The enclosure surface finish must be smooth and flat to facilitate sealing with an O-ring or Entry Thread Sealing Washer for the required IP rating.
- Enclosure walls must be sufficiently strong enough to support the cable and cable gland assembly. Enclosure entries shall be perpendicular. Any draft angles from the casting/moulding process should have a perpendicular flat spot machined to facilitate sealing with an O-ring or Entry Thread Sealing Washer.
- CMP Products recommends that when using the cable gland with a through-hole, the hole must be circular, free of burrs and the diameter no larger than 0.7mm above the thread major diameter. A suitable CMP Products locknut shall be used to secure the product. See CMP Products catalogue for locknut options
- Cable glands do not have any serviceable parts and are therefore not intended to be repaired.

CMP Earth Tag Size	Short Circuit Ratings Symmetrical Fault Current (kA) for 1 second
20	3.06
25	4.06
32	5.40
40	7.20
50	10.40
63	10.40
75	10.40

## SPECIFIC CONDITIONS FOR SAFE USE

- The glands shall only be fitted to enclosures where temperatures, at the point of mounting, is below 110°C.
- The cable shall be effectively clamped as close as possible to the gland.
- When used for Ex e (IP54) or Ex ta (IP6X) applications, the user shall provide a suitable interface seal between the gland and associated enclosure to maintain the level of ingress protection.
- Under CEC Code Cable Glands with metric entry threads are only suitable for Areas Classified in ZONES unless fitted with an approved Metric to NPT thread conversion adaptor. Under NEC Code, cable glands with metric threads can be used in divisions with the following restrictions:
  - TC Cable Glands will be restricted to Hazardous Location Areas stated under the NEC/CEC Part I, Installation Code under WIRING METHOD.
  - Gland Size 205 is for use with UL approved tray cable only.

CMP Products Limited on its sole responsibility declares that the equipment referred to herein conforms to the requirements of the ATEX Directive 2014/34/EU and UK statutory requirements SI 2016 No. 1107 (as amended). This is shown in the following harmonised/designated standards;  
EN 60079-0:2018, EN 60079-1:2014, EN 60079-2:2015 + A1:2018, EN 60079-31:2014, BS 6121:1989, EN 62444:2013

*MW*  
Malcolm Webber - Product Engineering Manager - (Authorised Person)  
CMP Products Limited, Cramlington, NE23 1WH, UK

EU Economic Operator: CMP Products Germany GmbH. Address: Lukasstraße 25a, 52070 Aachen  
17th March 2020

**CE 2776** Notified Body: CML B.V., Koopvaardijweg 32, 4906CV Oosterhout, The Netherlands

**UK CA 2503** Approved Body: Eurofins E&E CML Limited, Newport Business Park, New Port Road, Ellesmere Port, CH65 4LZ

Order Reference (NPT)			Entry Thread		Minimum Thread Length	Cable Range 'A'		Cable Range 'A' / No Insert		Across Flats 'D'	Across Corners 'D'	Nominal Assembly Length 'E'	Shroud	Approx Weight Aluminium (oz)
Aluminium	Nickel Plated Brass	Stainless Steel	NPT	NPT Option		Min	Max	Min	Max					
TC-050A0281RA131	TC-050NB0281RA531	TC-050SS0281RA431	1/2"	-	0.78	0.126	0.276	-	-	1.201	1.321	1.200	PVC05	1.94
TC-075A0281RA132	TC-075NB0281RA532	TC-075SS0281RA432	-	3/8"	0.80	-	-	-	-	1.476	1.594	1.240	PVC05	1.69
TC-050A0551RA131	TC-050NB0551RA531	TC-050SS0551RA431	1/2"	-	0.78	0.256	0.406	0.406	0.551	1.201	1.323	1.200	PVC06	1.94
TC-075A0551RA132	TC-075NB0551RA532	TC-075SS0551RA432	-	3/8"	0.80	-	-	-	-	1.476	1.626	1.240	PVC06	1.69
TC-075A0791RA133	TC-075NB0791RA533	TC-075SS0791RA433	3/8"	-	0.80	0.437	0.610	0.610	0.787	1.476	1.626	1.240	PVC09	3.69
TC-100A0791RA133	TC-100NB0791RA533	TC-100SS0791RA433	-	1"	0.98	-	-	-	-	1.811	1.957	1.650	PVC11	3.17
TC-100A1041RA133	TC-100NB1041RA533	TC-100SS1041RA433	1"	-	0.98	0.669	0.854	0.854	1.035	1.811	1.992	1.650	PVC11	3.88
TC-125A1041RA134	TC-125NB1041RA534	TC-125SS1041RA434	-	1 1/4"	1.01	-	-	-	-	2.047	2.213	1.650	PVC13	4.94
TC-125A1271RA134	TC-125NB1271RA534	TC-125SS1271RA434	1 1/4"	-	1.01	0.925	1.098	1.098	1.268	2.047	2.252	1.650	PVC13	4.94
TC-150A1271RA135	TC-150NB1271RA535	TC-150SS1271RA435	-	1 1/2"	1.03	-	-	-	-	2.362	2.551	1.650	PVC21	6.00
TC-150A1501RA135	TC-150NB1501RA535	TC-150SS1501RA435	1 1/2"	-	1.03	1.220	1.366	1.366	1.504	2.362	2.598	1.650	PVC21	6.00
TC-200A1501RA136	TC-200NB1501RA536	TC-200SS1501RA436	-	2"	1.06	-	-	-	-	2.953	3.189	1.630	PVC21	8.64
TC-200A1741RA136	TC-200NB1741RA536	TC-200SS1741RA436	2"	-	1.06	-	-	1.402	1.736	2.756	2.976	1.630	PVC21	8.64
TC-250A1741RA137	TC-250NB1741RA537	TC-250SS1741RA437	-	2 1/2"	1.57	-	-	-	-	3.543	3.827	1.740	PVC28	8.29
TC-250A1971RA136	TC-250NB1971RA536	TC-250SS1971RA436	2"	-	1.06	-	-	1.634	1.972	2.756	2.976	1.740	PVC28	8.29
TC-250A1971RA137	TC-250NB1971RA537	TC-250SS1971RA437	-	2 1/2"	1.57	-	-	-	-	3.543	3.827	1.740	PVC28	8.29
TC-250A2201RA137	TC-250NB2201RA537	TC-250SS2201RA437	2 1/2"	-	1.57	-	-	1.858	2.205	3.543	3.827	1.740	PVC28	13.58
TC-300A2201RA138	TC-300NB2201RA538	TC-300SS2201RA438	-	3"	1.63	-	-	-	-	4.331	4.677	1.790	PVC31	13.58
TC-250A2441RA137	TC-250NB2441RA537	TC-250SS2441RA437	2 1/2"	-	1.57	-	-	2.126	2.441	3.543	3.898	1.790	PVC31	13.58
TC-300A2441RA138	TC-300NB2441RA538	TC-300SS2441RA438	-	3"	1.63	-	-	-	-	4.331	4.677	1.790	PVC31	23.63
TC-300A2681RA138	TC-300NB2681RA538	TC-300SS2681RA438	3"	-	1.63	-	-	2.406	2.677	4.331	4.677	1.790	PVC31	23.63
TC-350A2681RA139	TC-350NB2681RA539	TC-350SS2681RA439	-	3 1/2"	1.69	-	-	-	-	4.843	5.228	2.500	LSF33	34.22
TC-350A3151RA139	TC-350NB3151RA539	TC-350SS3151RA439	3 1/2"	-	1.69	-	-	2.622	3.150	4.843	5.228	2.500	LSF33	34.22
TC-400A3151RA1310	TC-400NB3151RA5310	TC-400SS3151RA4310	-	4"	1.73	-	-	-	-	5.252	5.669	2.360	LSF34	38.80
TC-400A3541RA1310	TC-400NB3541RA5310	TC-400SS3541RA4310	4"	-	1.73	-	-	2.992	3.543	5.252	5.669	2.360	LSF34	38.80

Dimensions are displayed in inches unless otherwise stated

Order Reference (Metric)	Metric											KGs		
TC-M20A028	TC-M20NB028	TC-M20SS028	M20	15.0	3.2	7.0	-	-	30.5	33.5	30.5	PVC06	0.05	
TC-M20A055	TC-M20NB055	TC-M20SS055	M20	15.0	6.5	10.3	10.3	14.0	30.5	33.5	30.5	PVC06	0.05	
TC-M25A079	TC-M25NB079	TC-M25SS079	M25	15.0	11.1	15.5	15.5	20.0	37.6	41.4	31.5	PVC09	0.06	
TC-M32A104	TC-M32NB104	TC-M32SS104	M32	15.0	17.0	21.7	21.7	26.3	46.0	50.5	41.9	PVC11	0.11	
TC-M40A127	TC-M40NB127	TC-M40SS127	M40	15.0	23.5	27.9	27.9	32.2	52.0	57.2	41.9	PVC15	0.14	
TC-M50A150	TC-M50NB150	TC-M50SS150	M50	15.0	31.0	34.7	34.7	38.2	60.0	66.0	38.0	PVC18	0.16	
TC-M50A174	TC-M50NB174	TC-M50SS174	M50	15.0	-	-	-	35.6	44.1	60.0	66.0	41.4	PVC18	0.19
TC-M63A197	TC-M63NB197	TC-M63SS197	M63	15.0	-	-	-	41.5	50.1	75.0	81.0	43.0	PVC21	0.24
TC-M63A220	TC-M63NB220	TC-M63SS220	M63	15.0	-	-	-	47.2	56.0	75.0	82.5	44.2	PVC23	0.38
TC-M75A244	TC-M75NB244	TC-M75SS244	M75	15.0	-	-	-	54.0	62.0	90.0	99.1	45.5	PVC28	0.38
TC-M75A268	TC-M75NB268	TC-M75SS268	M75	15.0	-	-	-	61.0	68.0	90.0	99.1	45.5	PVC28	0.67
TC-M90A315	TC-M90NB315	TC-M90SS315	M90	24.0	-	-	-	66.6	80.0	110.0	121.0	66.0	PVC31	0.72
TC-M100A354	TC-M100NB354	TC-M100SS354	M100	24.0	-	-	-	76.0	90.0	133.4	144.0	61.0	LSF33	0.80

Dimensions are displayed in mm unless otherwise stated



Glasshouse Street • St. Peters • Newcastle upon Tyne • NE6 1BS  
Tel: +44 191 265 7411 • Fax: +44 1670 715 646  
E-Mail: customerservices@cmp-products.com • Web: www.cmp-products.com

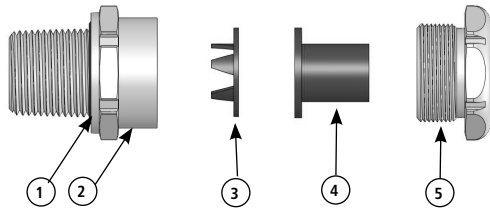
www.cmp-products.com

FI411		
Revision Reason	Revision Number	Revision Date
UKEX	0	04/21
IFS	16	03/25
ATEX / IECEX	8	11/20
CSA / CSAus	6	-

# INSTALLATION INSTRUCTIONS FOR CMP TC CABLE GLAND

## CABLE GLAND COMPONENTS

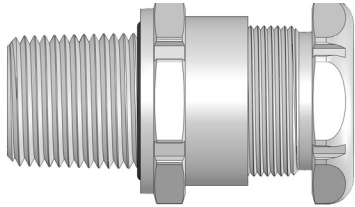
1. O-Ring
2. Entry Component
3. Seal Insert\*
4. Nut Insert\*
5. Seal Nut



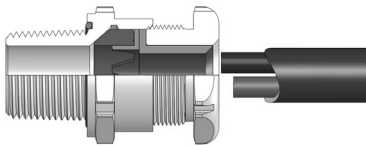
Note\*: The Seal and Nut inserts are only used in Gland sizes 40 (1 1/4") and below to give two cable size ranges.

## PLEASE READ ALL INSTRUCTIONS CAREFULLY BEFORE BEGINNING THE INSTALLATION

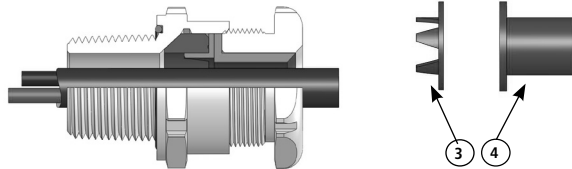
1. If using the smaller cable range there is no need to disassemble the Gland. (Size ranges are marked on the Gland).



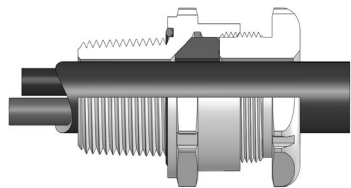
2. Slacken the seal nut (5) to relax the seal. Try to pass the cable through the Gland. If this is possible, move to stage 3.



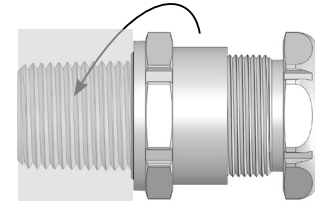
If not disassemble the Gland and remove the seal insert (3) and the nut insert (4).



This will allow the cable to pass through the Gland.



3. Secure the complete Gland into the equipment.



4. Determine the conductor length to suit the geometry of the equipment and prepare the cable accordingly, removing part of the outer sheath where required to reveal the insulated conductors.



5. Pass the cable through the gland to the desired position hold the entry component (2) with a spanner then tighten the seal nut until heavy resistance is felt. This will occur when:-

- A) The seal nut (5) has clearly engaged the cable and cannot be further tightened without the use of excessive force by the installer.
- B) The seal nut (5) is metal to metal with the entry component (2). (This should only happen on minimum cable sizes.)

