



**TECHNICAL DATA**  
**CABLE GLAND TYPE** : E\*\*\* Family of Glands  
**INGRESS PROTECTION** : IP66, (IP67, IP68 available upon request)  
**PROCESS CONTROL SYSTEM** : ISO 9001  
 : ISO / IEC 80079-34:2001

**INSTALLATION INSTRUCTIONS**  
 Installation should only be performed by a competent person using the correct tools. Read all instructions before beginning installation.

**EXPLOSIVE ATMOSPHERES CLASSIFICATION**

**ATEX CERTIFICATION No** : CML 18ATEX1324X, CML 18ATEX4316X  
**ATEX CERTIFICATION CODE** : II 2G, II 1D, Ex db IIC Gb, Ex eb IIC Gb, Ex ta IIC Da, II 3G Ex nR IIC Gc, I M2, Ex db I Mb, Ex eb I Mb  
**IECEx CERTIFICATION No** : IECEx CML 18.0181X  
**IECEx CERTIFICATION CODE** : Ex db IIC Gb, Ex eb IIC Gb, Ex nR IIC Gc, Ex ta IIC Da, Ex db I Mb, Ex eb I Mb  
**cCSAus CERTIFICATION No** : 1310517X  
**CSA us CERTIFICATION CODE\*** : Class II Div 2, Groups E,F and G, Class III, Class I Zone 1 AEx e II, Class I Zone 2 AEx nR II, Enclosure Type 4X  
**c CSA CERTIFICATION CODE** : Class I, Div 2, Groups A,B,C and D, Class II Div 2, Groups E,F and G, Class III, Ex d IIC, Ex e II, Ex nR II, Enclosure Type 4X

\*E\*\* can be used in Class 1, Division 2 Locations for non-explosionproof applications in accordance with Article 501 of the NEC Code

**CERTIFICATION CONDITIONS**

- ATEX & IECEx**
- The E\*\*\* Type cable glands shall not be used to terminate on braided cables in group I applications.
  - The glands, when used for terminating braided cables, are only suitable for fixed installations. Cables must be effectively clamped to prevent pulling or twisting.
  - 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 installers 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. Cable Glands are not intended to be repaired. If the product is damaged, the product is to be replaced.
  - 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 (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 M90 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 8.1 for external threads. For details of other thread types refer to IECEx certificate.
  - 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 will need to be sufficiently strong 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 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.
- CSA us**
- Cable gland connectors material may be of brass, aluminum or stainless steel.
  - Connectors with metric entry threads are only suitable for Areas Classified in ZONES unless fitted with an approved Metric to NPT thread conversion adaptor.
  - According to US (NEC) wiring method for the types of cables that can be used in Class I Zone 1 and 2 Classified Areas, should be in accordance of NFPA-70 installation wiring method restrictions.
- c CSA**
- Cable gland connectors' material may be of brass, aluminium or stainless steel.
  - These glands are not suitable for use with flameproof enclosures installed in Group IIC atmospheres, which have a volume greater than 2000 cc (2 Litre).
  - These Glands are for use with Certified Marine Shipboard metal braided cables constructed according to CSA Std. 245 and IEEE45/IEC60092-353 Standards, or Certified equivalent), for use on Shipboards and Offshore Rigs/platforms only.
  - "E\*\*\*" cable gland connectors when installed into Class I, Division 2 Classified Areas, are not suitable to be interfaced with an explosion proof enclosure containing arcing and sparking devices, unless installed in conjunction with an approved explosion proof sealing fitting.

**ACCESSORIES**

The following accessories are available from CMP Products, as optional extras, to assist with fixing, sealing and earthing: Locknut, Earth Tag, Serrated Washer, Entry Thread (I.P.) Sealing Washer, Shroud

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

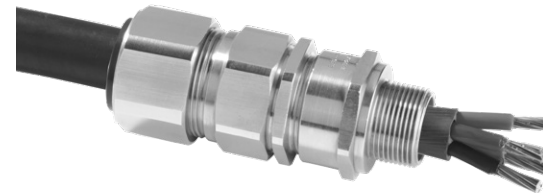
CMP Products Limited on its sole responsibility declares that the equipment referred to herein conforms to the requirements of the ATEX Directive 2014/34/EU and the following standards: - EN60079-0:2018, EN60079-1:2014, EN60079-7:2015, EN60079-15:2017, EN60079-31:2013, BS6121:1989, EN62444:2013

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 15 April 2019



# INSTALLATION INSTRUCTIONS FOR E TYPE CABLE GLANDS IN EX ATMOSPHERES

## INCORPORATING EU DECLARATION OF CONFORMITY TO DIRECTIVE [2014/34/EU]



- E1FW** - SWA AWA
- E2FW** - SWA AWA for lead sheathed cable
- E1FX** - Braid, Tape, etc Armour
- E2FX** - Braid, Tape, etc Armour for lead sheathed cable
- E1FU** - Universal Gland for all Armour Types
- E2FU** - Universal Gland for all Armour Types with lead sheathed cable

Number of turns to tighten	GLAND SIZE												
	20S16	20S	20	25S	25	32	40	50S	50	63S	63	75S	75
	CABLE DIAMETER												
0.5	13.2	15.9	20.9	22.0	26.2	33.9							
1	12.5	15.3	20.0	21.2	25.4	32.9	40.4	46.7	52.8	59.2	65.9	72.1	78.5
1.5	11.9	14.7	19.0	20.4	24.6	31.9	39.0	45.4	51.4	57.7	64.6	70.6	77.2
2	11.2	14.2	18.1	19.6	23.8	30.8	37.6	44.1	50.0	56.2	63.4	69.2	75.9
2.5	10.5	13.6	17.2	18.8	23.0	29.8	36.2	42.9	48.7	54.7	62.1	67.7	74.6
3	9.8	13.0	16.2	18.0	22.2	28.8	34.8	41.6	47.3	53.2	60.9	66.3	73.3
3.5	9.2	12.4	15.3	17.2	21.4	27.8	33.5	40.3	45.9	51.6	59.6	64.8	71.9
4	8.5	11.8	14.4	16.4	20.6	26.8	32.1	39.0	44.5	50.1	58.4	63.4	70.6
4.5	7.8	11.2	13.4	15.6	19.8	25.7	30.7	37.8	43.2	48.6	57.1	61.9	69.3
5	7.1	10.7	12.5	14.8	19.0	24.7	29.3	36.5	41.8	47.1	55.9	60.5	68.0
5.5	6.5	10.1	12.0	14.0	18.2	23.7	27.9	35.2	40.4	45.6	54.6	59.0	66.7
6	5.8	9.5											

Cable Gland Size	Available Entry Threads (Alternate Metric Thread Lengths Available)										Cable Bedding Diameter		Overall Cable Diameter		Armour Range †				Across Flats	Across Corners	Protrusion Length	Combined Ordering Reference (*Brass Metric)			Shroud	Cable Gland Weight (Kgs)
	Standard					Option					Min	Max	Min	Max	Min	Max	Min	Max				Size	Type	Ordering Suffix		
	Metric	Thread Length (Metric)	NPT	Thread Length (NPT)	NPT	Min	Max	Min	Max	Min																
20S16	M20	15.0	1/2"	19.9	3/4"	3.1	8.6	6.1	13.1	0.3	1.0	0.8	1.25	24.0	26.4	72.5	20S16	E1FU	1RA	PVC04	0.16					
20S	M20	15.0	1/2"	19.9	3/4"	6.1	11.6	9.5	15.9	0.3	1.0	0.8	1.25	24.0	26.4	70.0	20S	E1FU	1RA	PVC04	0.15					
20	M20	15.0	1/2"	19.9	3/4"	6.5	13.9	12.5	20.9	0.4	1.0	0.8	1.25	30.5	33.6	73.0	20	E1FU	1RA	PVC06	0.21					
25S	M25	15.0	3/4"	20.2	1"	11.1	19.9	14.0	22.0	0.4	1.2	1.25	1.6	37.5	41.3	89.0	25S	E1FU	1RA	PVC09	0.33					
25	M25	15.0	3/4"	20.2	1"	11.1	19.9	18.2	26.2	0.4	1.2	1.25	1.6	37.5	41.3	89.0	25	E1FU	1RA	PVC09	0.33					
32	M32	15.0	1"	25.0	1 1/4"	17.0	26.2	23.7	33.9	0.4	1.2	1.6	2.0	46.0	50.6	86.0	32	E1FU	1RA	PVC11	0.43					
40	M40	15.0	1 1/4"	25.6	1 1/2"	22.0	32.1	27.9	40.4	0.4	1.6	1.6	2.0	55.0	60.5	90.0	40	E1FU	1RA	PVC15	0.62					
50S	M50	15.0	1 1/2"	26.1	2"	29.5	38.1	35.2	46.7	0.4	1.6	2.0	2.5	60.0	66.0	91.0	50S	E1FU	1RA	PVC18	0.75					
50	M50	15.0	2"	26.9	2 1/2"	35.6	44.0	40.4	53.0	0.6	1.6	2.0	2.5	70.1	77.1	95.0	50	E1FU	1RA	PVC21	0.95					
63S	M63	15.0	2"	26.9	2 1/2"	40.1	49.9	45.6	59.4	0.6	1.6	2.0	2.5	75.0	82.5	102.0	63S	E1FU	1RA	PVC23	1.34					
63	M63	15.0	2 1/2"	39.9	3"	47.2	55.9	54.6	65.8	0.6	1.6	2.0	2.5	80.0	88.0	104.0	63	E1FU	1RA	PVC25	1.34					
75S	M75	15.0	2 1/2"	39.9	3"	52.8	61.9	59.0	72.0	0.6	1.6	2.0	2.5	90.0	99.0	115.0	75S	E1FU	1RA	PVC28	2.11					
75	M75	15.0	3"	41.5	3 1/2"	59.1	67.9	66.7	78.4	0.6	1.6	2.5	3.0	100.0	110.0	117.0	75	E1FU	1RA	PVC30	2.42					
90	M90	24.0	3 1/2"	42.8	4"	66.6	78.6	76.2	90.3	0.8	1.6	3.15	4.0	114.3	125.4	147.0	90	E1FU	1RA	PVC32	4.21					
100	M100	24.0	3 1/2"	42.8	4"	76.0	90.9	86.1	101.4	0.8	1.6	3.15	4.0	123.0	135.3	140.0	100	E1FU	1RA	LSF33	4.45					
115	M115	24.0	4"	44.0	4"	86.0	97.9	101.5	110.2	0.8	1.6	3.15	4.0	133.4	146.7	162.0	115	E1FU	1RA	LSF34	6.19					
130	M130	24.0	5"	46.8	5"	97.0	114.9	110.2	123.2	0.8	1.6	3.15	4.0	152.4	167.6	174.0	130	E1FU	1RA	LSF35	8.34					

Order codes shown are for E1FU glands - For e.g. E1FWD glands substitute E1FWD for E1FU - e.g. 20E1FWD1RA  
 Stepped cone is for single wire armour and grooved cone is for all other armours



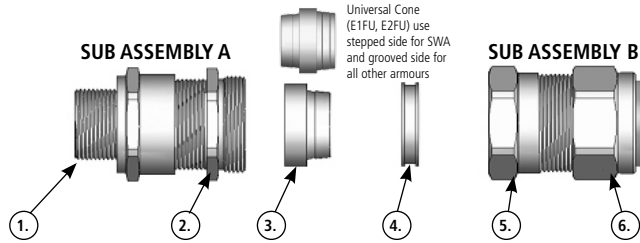
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F1407		
Certification	Revision	Date
IFS	23	05/19
ATEX / IECEx	12	04/19
CSA	11	-

# INSTALLATION INSTRUCTIONS FOR E TYPE CABLE GLANDS IN EX ATMOSPHERES

**CABLE GLAND COMPONENTS - It is not necessary to dismantle the cable gland any further than illustrated below**

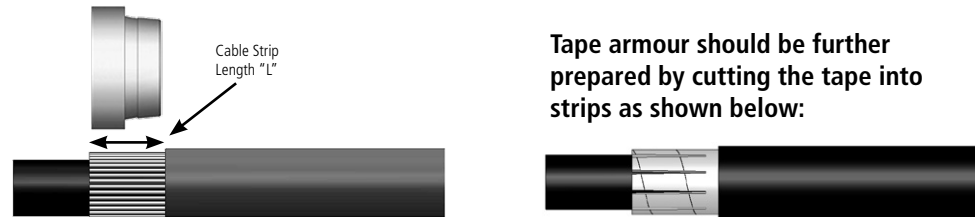
1. Entry Component
2. Main Item
3. Detachable Armour Cone
4. AnyWay Clamping Ring
5. Body
6. Outer Seal Nut



## PLEASE READ ALL INSTRUCTIONS CAREFULLY BEFORE BEGINNING THE INSTALLATION

1. If required fit shroud over the cable outer sheath;

Prepare the cable by stripping back the cable outer sheath and armour to suit the equipment geometry. Expose the armour by stripping back the outer sheath further using the table below as a guide. If applicable remove any tapes or wrappings to expose cable inner sheath.



**Tape armour should be further prepared by cutting the tape into strips as shown below:**

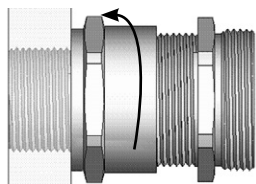
CABLE GLAND SIZE	20S/16, 20S, 20	25S, 25, 32, 40	50S, 50, 63S, 63	75S, 75, 90, 100, 115, 130
CABLE STRIP LENGTH "L"	12mm	15mm	18mm	20mm

2. Separate the gland into two sub-assemblies "A & B". Ensuring that the Outer Seal Nut (6) is relaxed, pass sub-assembly "B" over the cable outer sheath and armour followed by the "AnyWay" clamping ring (4).

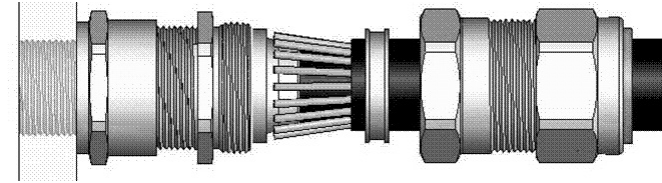


Note: On maximum size cables the clamping ring may only pass over the armour.

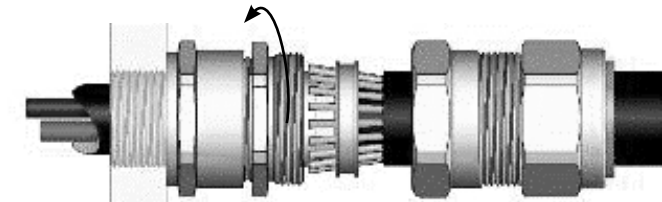
3. Ensure that the inner seal is relaxed by slackening the Main Item (2). Secure sub-assembly "A" into the equipment either by screwing the Entry Item (1) into a threaded hole or by securing it in a clearance hole using a locknut as applicable.



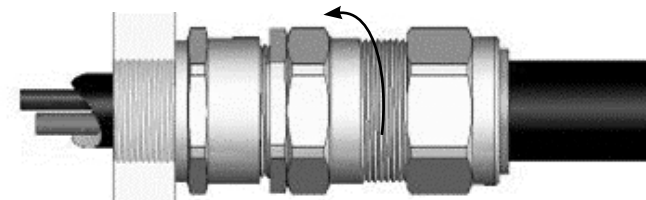
4. Locate the Armour Cone (3) into its recess in the Main Item (2). (For E1FU and E2FU variants, make sure the correct side of the cone is outermost - grooved for braid/tape armour and stepped for SWA). Pass the cable through sub-assembly "A" until the armour engaged with the cone. Spread the armour evenly around the cone.



5. While continuing to push the cable forward to maintain contact between the armour and the cone, tighten the Main Item (2) until the inner seal makes contact with the cable inner sheath (heavier resistance is felt at this point). Tighten a further full turn. NOTE: The earthing device on E2\* type glands will automatically engage the lead sheath.



6. Hold the Main Item (2) with a spanner and tighten sub-assembly "B" onto sub-assembly "A" using a spanner until all available threads are used.



7. Only using finger pressure, tighten the outer seal nut assembly (6) until light resistance to tightening is met.

Then either use the outer seal tightening guide tape or table on the rear of the page to determine how much further to tighten the seal using a spanner (using the outer seal tightening guide is recommended).

Wrap the outer seal tightening guide tape around the cable to show the amount of spanner turns needed (as shown here). Make sure the correct side of the outer seal tightening guide tape is used depending on the cable gland size.

