



# INSTALLATION INSTRUCTIONS FOR CMP CABLE GLAND TYPE "E"

FOR TERMINATION OF CABLES WITH WIRE BRAID, TAPE ARMOUR (STA/DSTA), STRIP ARMOUR & SINGLE WIRE ARMOUR (SWA) (WITH LEAD INNER SHEATH ON "E2" VARIANT). FOR USE IN EXPLOSIVE ATMOSPHERES.

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

## CABLE GLAND TYPES E1FW, E2FW, E1FX, E2FX, E1FU & E2FU



- 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

CMP Document No. F4407 Issue 15 CSA Issue 11, IEC Issue 11

### TECHNICAL DATA

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

### EXPLOSIVE ATMOSPHERES CLASSIFICATION

**ATEX CERTIFICATION No** : SIRA 13ATEX1071X, SIRA13ATEX4077X  
**ATEX CERTIFICATION CODE** : Ex II 2/3G 1D Ex d IIC Gb / Ex e IIC Gb / Ex nR IIC Gc / Ex ta IIC Da  
**IECEx CERTIFICATION No** : IECEx SIR 13.0026X  
**IECEx CERTIFICATION CODE** : Ex d IIC Gb / Ex e IIC Gb / Ex nR IIC Gc / Ex ta IIC Da  
**cCSAus CERTIFICATION No** : 1310517  
**cCSAus CERTIFICATION CODE** : Ex d IIC / Ex e II / Ex nR II; Class I Zone 1, AEx e II / AEx nR II  
 Class I Div 2 ABCD; Class II Div 2 EFG; Class III

### INSTALLATION INSTRUCTIONS

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

### SPECIAL CONDITIONS FOR SAFE USE

- For ATEX & IECEx certification:  
 1. E type glands used for terminating braided cables are only suitable for fixed installations. Cables must be clamped to prevent pulling or twisting.  
 For cCSAus Certification:  
 1. 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).  
 2. These glands are for use with Certified Marine Shipboard metal braided cables constructed in accordance to cCSAus Std. 245 and IEE45/IEEC60092-353 Standards, or Certified equivalent), for use on Shipboards and Offshore Rigs/Platforms only

### 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

Number of turns to tighten	Outer Seal Tightening Guide												
	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	Grooved Cone (X)		Stepped Cone (W)					Size	Type	Ordering Suffix		
	Metric	Thread Length (Metric)	NPT	Thread Length (NPT)	NPT	Min	Max	Min	Max	Min	Max	Min	Max								
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	4"	44.0	5"	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	5"	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	6"	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

\*Note: For material options please add the following suffix to change the Ordering Reference ; Brass (no suffix required), Nickel Plated Brass "5", Copper Free Aluminium "1"  
 For NPT options add the following digits to the material suffix; 1/2" = 31; 3/4" = 32; 1" = 33; 1 1/4" = 34; 1 1/2" = 35; 2" = 36; 2 1/2" = 37; 3" = 38; 3 1/2" = 39; 4" = 310 (Brass requires prefix '0')  
 Examples: 32E1FU1RA534 = Nickel Plated Brass 1-1/4" NPT, 50E1FU1RA035 = Brass 1-1/2" NPT, 20E1FU1RA5 = Nickel Plated Brass M20  
 Dimensions are displayed in millimetres unless otherwise stated

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  
 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: -

EN60079-0:2012, EN60079-1:2007, EN60079-7:2007, EN60079-15:2010, EN60079-31:2009, BS6121:1989, EN62444:2013

*David Willcock*  
 David Willcock – Certification Engineer (Authorised Person)  
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 24th June 2015

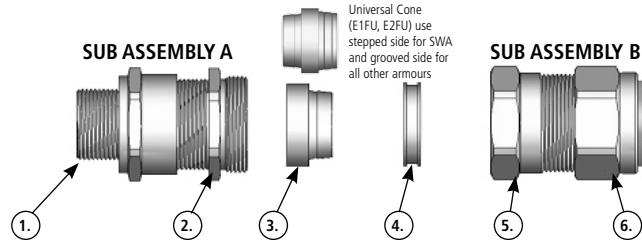
**CE 0518**  
 Notified Body: SIRA Certification Service, Unit 6 Hawarden Industrial Park, Hawarden, CH5 3US, UK  
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# INSTALLATION INSTRUCTIONS FOR CMP CABLE GLAND TYPES "E"

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

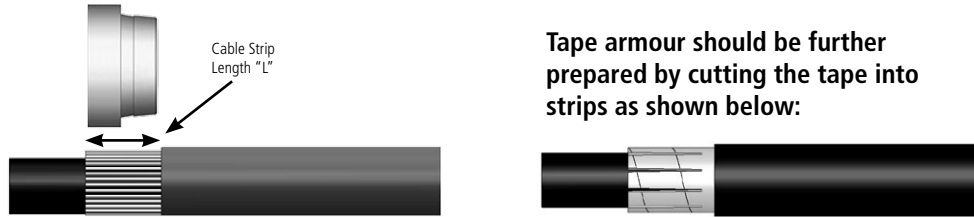
1. Entry Component
2. Main Item
3. Detachable Armour Cone
4. AnyWay Clamping Ring
5. Body
6. Outer Seal Nut



**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:**

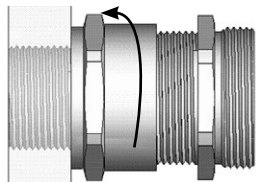
<b>CABLE GLAND SIZE</b>	20S/16, 20S, 20	25S, 25, 32, 40	50S, 50, 63S, 63	75S, 75, 90, 100, 115, 130
<b>CABLE STRIP LENGTH "L"</b>	12mm	15mm	18mm	20mm

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).

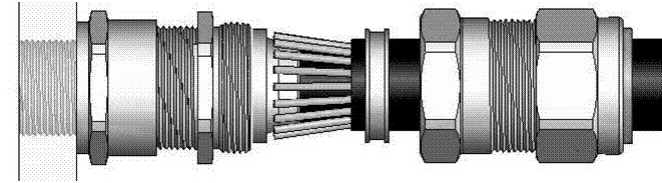


Note: On maximum size cables the clamping ring may only pass over the armour.

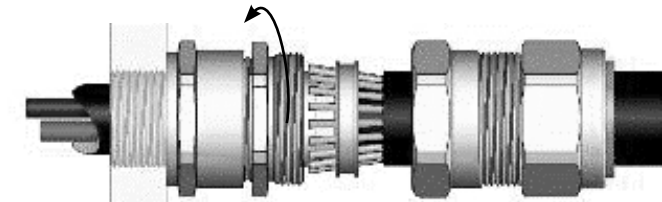
3. Ensure that the inner seal is relaxed by slackening the Main Item (2). Secure sub-assembly "A" into the equipment either by screwing the Entry Item (1) into a threaded hole or by securing it in a clearance hole using a locknut as applicable.



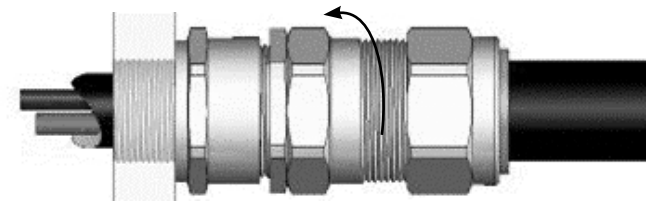
4. Locate the Armour Cone (3) into its recess in the Main Item (2). (For E1FU and E2FU variants, make sure the correct side of the cone is outermost - grooved for braid/tape armour and stepped for SWA). Pass the cable through sub-assembly "A" until the armour engaged with the cone. Spread the armour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

