



# INSTALLATION INSTRUCTIONS FOR CMP CABLE GLAND TYPE "E" WITH CAST INTEGRAL EARTH LUG

FOR TERMINATION OF CABLES WITH WIRE BRAID, TAPE ARMOUR (STA/DSTA), STRIP ARMOUR & SINGLE WIRE ARMOUR (SWA) (WITH LEAD INNER SHEATH ON "E2" VARIANT). INCORPORATING A CAST INTEGRAL EARTH LUG.

## CABLE GLAND TYPES E1WC, E2WC, E1XC, E2XC, E1UC & E2UC



- E1WC -** SWA Armour
- E2WC -** SWA Armour for lead sheathed cable
- E1XC -** Braid, Tape, etc Armour
- E2XC -** Braid, Tape, etc Armour for lead sheathed cable
- E1UC -** Universal Gland for all Armour Types
- E2UC -** Universal Gland for all Armour Types with lead sheathed cable



CMP Document No. F1421 Issue 7

**TECHNICAL DATA**

CABLE GLAND TYPE	: E** Family of CIEL Cable Glands
INGRESS PROTECTION	: IP66
PROCESS CONTROL SYSTEM	: BS EN ISO 9001

**INSTALLATION INSTRUCTIONS**

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

**ACCESSORIES**

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

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	Radius Dimension		CIEL Earth Bolt Size	Earth Fault Current Rating (kA)	Combined Ordering Reference (*Brass Metric)			Cable Gland Weight (Kgs)	
	Metric	Standard		Option		Min	Max	Min	Max	Min	Max	Max	Max		"H"	"G"			Size	Type	Ordering Suffix		
		Thread Length (Metric)	NPT	Thread Length (NPT)	NPT																Ordering Suffix		Ordering Suffix
20S	M20	10.0	1/2"	19.9	3/4"	6.1	11.6	9.5	15.9	0.8	1.25	24.0	26.4	70.0	28.6	38.6	M8	26.0	20S	E1WC	1RA	0.195	
20	M20	10.0	1/2"	19.9	3/4"	6.5	13.9	12.5	20.9	0.8	1.25	30.5	33.6	73.0	31.8	41.8	M8	26.0	20	E1WC	1RA	0.276	
25S	M25	10.0	3/4"	20.2	1"	11.1	19.9	14.0	22.0	1.25	1.6	37.5	41.3	89.0	38.1	50.8	M8	26.0	25S	E1WC	1RA	0.438	
25	M25	10.0	3/4"	20.2	1"	11.1	19.9	18.2	26.2	1.25	1.6	37.5	41.3	89.0	38.1	50.8	M8	26.0	25	E1WC	1RA	0.435	
32	M32	10.0	1"	25.0	1 1/4"	17.0	26.2	23.7	33.9	1.6	2.0	46.0	50.6	86.0	41.3	54.0	M10	26.0	32	E1WC	1RA	0.506	
40	M40	15.0	1 1/4"	25.6	1 1/2"	22.0	32.1	27.9	40.4	1.6	2.0	55.0	60.5	90.0	50.8	68.3	M12	26.0	40	E1WC	1RA	0.802	
50S	M50	15.0	1 1/2"	26.1	2"	29.5	38.1	35.2	46.7	2.0	2.5	60.0	66.0	91.0	57.2	74.6	M12	43.0	50S	E1WC	1RA	0.883	
50	M50	15.0	2"	26.9	2 1/2"	35.6	44.0	40.4	53.0	2.0	2.5	70.1	77.1	95.0	60.3	79.4	M12	43.0	50	E1WC	1RA	1.038	
63S	M63	15.0	2"	26.9	2 1/2"	40.1	49.9	45.6	59.4	2.0	2.5	75.0	82.5	102.0	70.0	90.5	M12	43.0	63S	E1WC	1RA	1.636	
63	M63	15.0	2 1/2"	39.9	3"	47.2	55.9	54.6	65.8	2.0	2.5	80.0	88.0	104.0	70.0	90.5	M12	43.0	63	E1WC	1RA	1.597	
75S	M75	15.0	2 1/2"	39.9	3"	52.8	61.9	59.0	72.0	2.0	2.5	90.0	99.0	115.0	76.2	98.5	M12	43.0	75S	E1WC	1RA	2.310	
75	M75	15.0	3"	41.5	3 1/2"	59.1	67.9	66.7	78.4	2.5	3.0	100.0	110.0	117.0	82.6	108.0	M12	43.0	75	E1WC	1RA	2.717	
90	M90	24.0	3 1/2"	42.8	4"	66.6	78.6	76.2	90.3	3.15	4.0	114.3	125.7	147.0	95.3	127.1	M12	43.0	90	E1WC	1RA	4.417	
100	M100	24.0	4"	44.0	5"	76.0	90.9	86.1	101.4	3.15	4.0	123.0	135.3	140.0	102.0	133.8	M12	43.0	100	E1WC	1RA	4.820	
115	M115	24.0	4"	44.0	5"	86.0	97.9	101.5	110.2	3.15	4.0	133.4	146.7	162.0	95.3	127.1	M12	43.0	115	E1WC	1RA	6.191	
130	M130	24.0	5"	46.8	6"	97.0	114.9	110.2	123.2	3.15	4.0	152.4	167.6	177.0	102.0	133.8	M12	43.0	130	E1WC	1RA	8.539	

\*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: 32E1WC1RA534 = Nickel Plated Brass 1-1/4" NPT, 50SE1WC1RA035 = Brass 1-1/2" NPT, 20E1WC1RAS = Nickel Plated Brass M20

Dimensions are displayed in millimetres unless otherwise stated

\*Order codes shown are for E1WC glands  
For e.g. E1XC glands substitute E1WC for E1XC - e.g. 20E1XC1RA  
Please note that the overall maximum cable bedding diameter for "E2" variants should be reduced by 1mm to allow for the inner lead sheath.



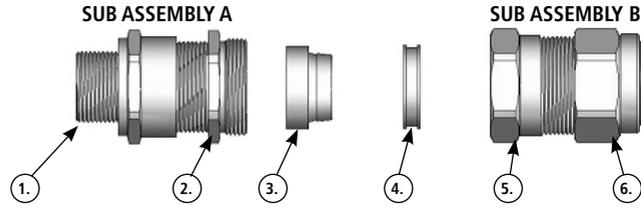
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# INSTALLATION INSTRUCTIONS FOR CMP CABLE GLAND TYPES "E"

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

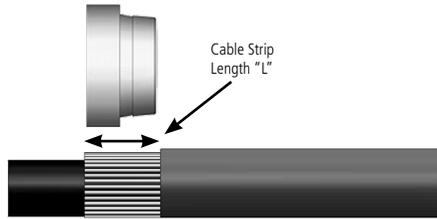
1. Entry Component
2. Main Item with CIEL
3. Detachable Armour Cone
4. AnyWay Clamping Way
5. Body
6. Outer Seal Nut
7. Earth Bolt



## 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).

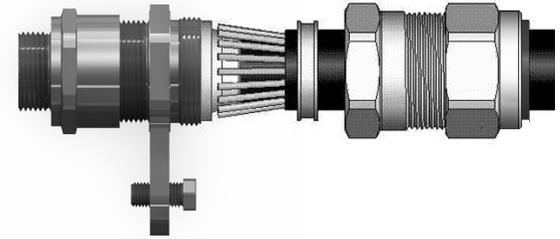
Note: On maximum size cables the clamping ring may only pass over the armour.



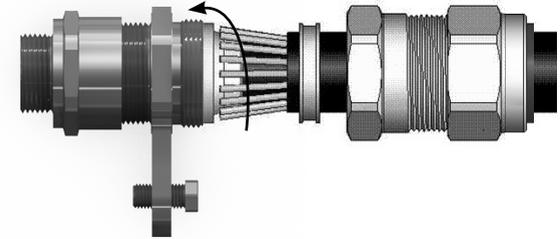
3. Ensure that the inner seal is relaxed by slackening the Main Item (2). Secure sub-assembly "A" into the equipment either by screwing the Entry Item (1) into a threaded hole or by securing it in a clearance hole using a locknut as applicable.



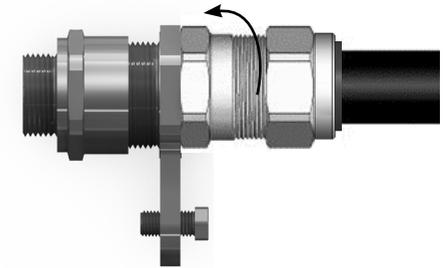
4. Locate the Armour Cone (3) into its recess in the Main Item (2). (N.B. For E1U and E2U variants, make sure the correct side of the cone is outermost - grooved for braid/tape armour and stepped for SWA). Pass the cable through sub-assembly "A" until the armour engaged with the cone. Spread the armour 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.



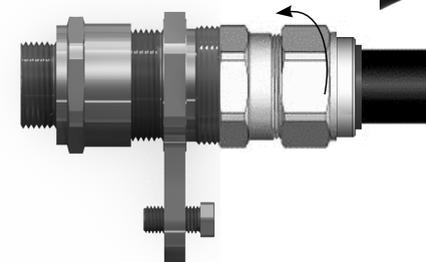
6. Hold the Main Item (2) with a spanner and tighten sub-assembly "B" onto sub-assembly "A" using a spanner until all available threads are used.



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.



8. Connect the earth cable to the earth bolt.