

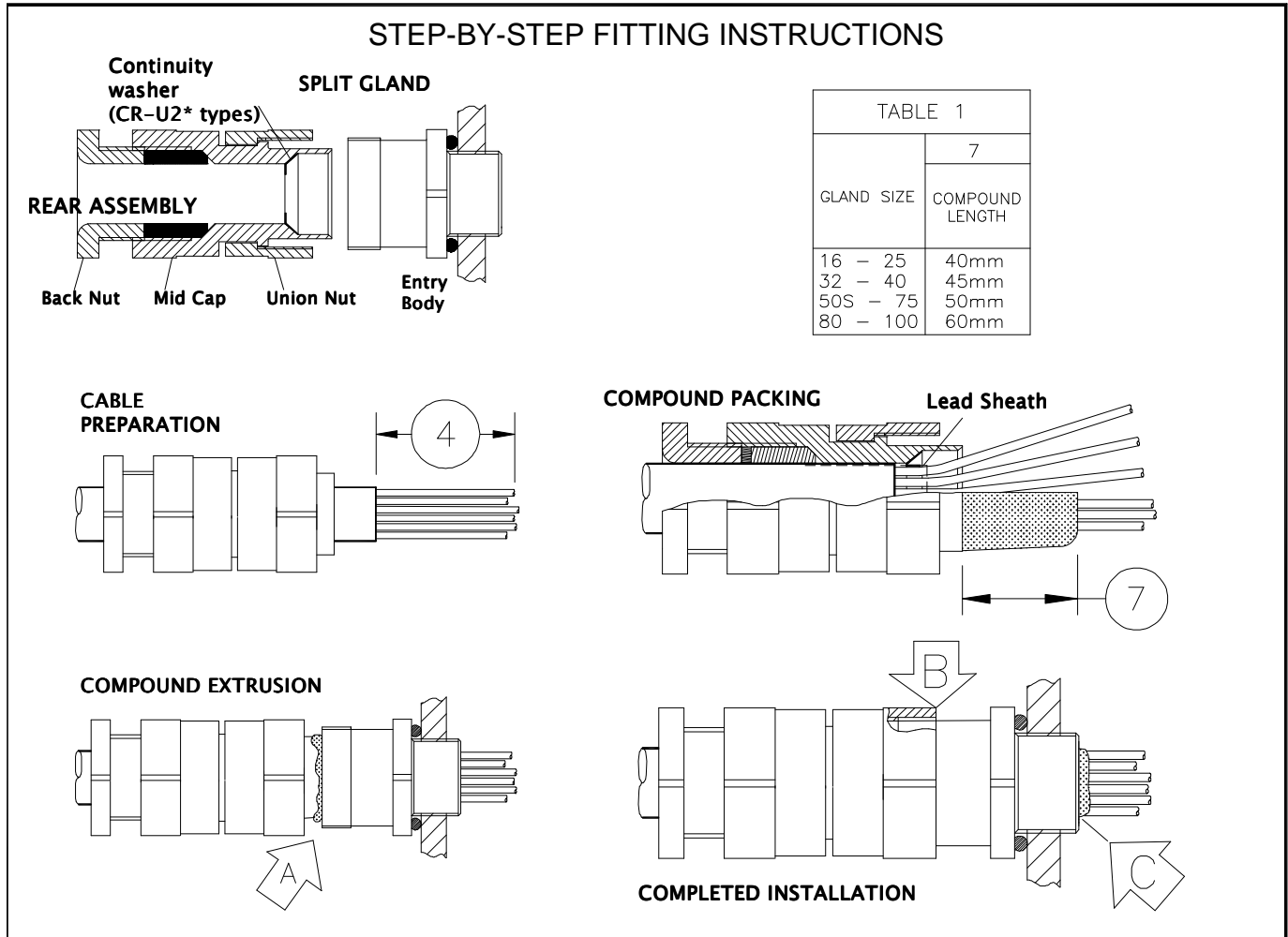
CR-U Compound-Filled Cable Gland – ASSEMBLY INSTRUCTIONS**

Brief Description

The Peppers CR-U** type Compound-filled cable gland is for outdoor use in the appropriate Hazardous Areas with unarmoured cable of any construction, with or without braids or screens, where the braids or screens pass through the compound. A variant giving electrical continuity to a lead sheath is available. It gives environmental protection to IP66, IP68 (100 metres for 7 days) and Deluge.

Warning

PLEASE STUDY CAREFULLY BOTH PAGES OF THESE INSTRUCTIONS BEFORE INSTALLATION. These glands should not be used in any application other than those mentioned here or in our Data Sheets, unless Peppers states in writing that the product is suitable for such application. Peppers can take no responsibility for any damage, injury or other consequential loss caused where the glands are not installed or used according to these instructions. This leaflet is not intended to give advice on the selection of cable glands. Further guidance can be found in the standards listed overleaf.



STEP-BY-STEP FITTING INSTRUCTIONS

- 1 Split gland as shown. Warning. The entry body of this cable gland is coated with a releasing agent to ensure the compound form can be inspected after curing. The entry body should not be treated with any lubricant or be exposed to any solvents. The internal bore of the entry body must not be damaged. Any handling during the course of normal installation will not effect the operation of the releasing agent.
- 2 Fit Entry Body. Hand-tighten, then suitably secure with a wrench.
- 3 Slide Rear Assembly (Back Nut, Mid Cap and Union Nut) onto cable as shown.
- 4 **CABLE PREPARATION**
Strip jacket so that cores are fully exposed in the compound chamber, length to suit installation. Lead sheath must be cut to push through the continuity washer. Remove protective foils, and any cords/fillers from around and between the cores. Take care not to cut the insulating sleeves of the cores. Pigtail and sleeve any screens to be passed through compound.

HEALTH AND SAFETY WARNING The resin used in the compound can cause eye and skin irritation. For your personal protection, wear the gloves supplied while mixing and applying. The uncured compound should not be allowed to come into contact with foodstuffs.

A COMPREHENSIVE SAFETY DATA SHEET PROVIDED BY THE COMPOUND MANUFACTURER IS AVAILABLE ON REQUEST

- 5 Check compound has not passed its "Use By" date. Installation at temperatures below 10° C should be avoided if possible.
- 6 Trim any hardened pieces from ends of stick. Mix the compound by rolling, folding and breaking. Ease mixing by cutting large sticks in half. Fully mixed compound has a uniform yellow colour with no streaks See Figure 1 for correctly mixed compound.
- 7 Support the cable and Rear Assembly, holding them roughly concentric. Any lead sheath should be pushed through the continuity washer - ensure that contact has been made. Splay out the cores. Starting at the middle, pack small amounts of rolled-out compound between the cores. Re-straighten each core and work outwards until all gaps are filled. Bundle the cores with cord or tape (see figure 2) so they are not disturbed. Pack around the outside of the outer cores to completely fill the Rear Assembly cup. Build up compound around the outside of the cores, with a slight taper & to approximate compound length shown in diagram & Table 1 column 7.
- 8 Pass cores through & push compound into Entry Body until Rear Assembly engages. Remove squeezed out compound at arrow A. Screw Union Nut 7 full turns onto Entry Body (arrow B). Ensure that compound emerges at entry thread (arrow C).
- 9 Clean off excess compound from Entry Body to allow withdrawal when cured (arrow C). Cores may be disturbed after 1 hour. Leave to cure for 4 hours when working at 21° C.
- 10 To release and pull back joint for inspection, unscrew the Union Nut. Using a wrench on the Mid Cap, rotate the Mid Cap no more than 1/16 of a turn. This will release the compound from the entry body. Do not over rotate as this may damage cable conductors. Pull the Mid Cap and compound out for inspection. The compound should appear as in Figure 3 with no gaps, holes or cracks.
- 11 Hand-tighten Union Nut to remake joint. Then refer to table below table and tighten Union Nut using wrench to the given amount.

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- 12 Hold Mid Cap with wrench and tighten Back Nut onto cable. Ensure seal makes full contact with cable sheath, then tighten 1 extra turn.
- 13 The equipment should not be energised until the compound has been left to cure for at least 4 hours when working at 21° C. See chart 'Energising Time vs. Temperature' for further guidance.

Figure 1



Figure 2

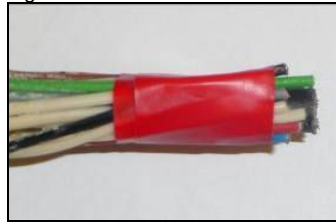
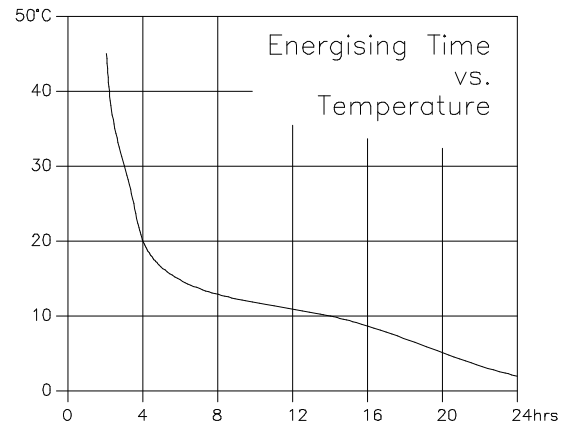


Figure 3



Tightening information (Point 11), cable sizes (mm) and permitted cores

Gland Size	Tighten Union Nut using wrench up to	Max Ø over Cores	Max No of Cores	Outer Sheath	
				Min	Max
16	½-turn	10.4	15	3.4	8.4
20S	½-turn	10.4	35	4.8	11.7
20	½-turn	12.5	40	9.5	14.0
25	½-turn	17.8	60	11.7	20.0
32	½-turn	23.5	80	18.1	26.3
40	½-turn	28.8	130	22.6	32.2
50S	½-turn	34.2	200	28.2	38.2
50	½-turn	39.4	400	33.1	44.1
63S	½-turn	44.8	400	39.3	50.1
63	½-turn	50.0	425	46.7	56.0
75S	½-turn	55.4	425	52.3	62.0
75	½-turn	60.8	425	58.0	68.0
80	¾-turn	64.4	425	61.9	72.0
85	¾-turn	69.8	425	69.1	78.0
90	¾-turn	75.1	425	74.1	84.0
100	¾-turn	80.5	425	81.8	90.0



Interpretation of Markings. Markings on the outside of this gland carry the following meanings:

Cable Gland Type & Size CR-U-2-a-bbb-ccc-nn; where: -

2 =	Optional Continuity Washer option for lead sheathed cable	ccc =	Entry thread type and size
a =	Main component material B = brass S = stainless steel	nn =	Year of manufacture
bbb =	Gland size		

Approvals

Approval	Certificate Number	Protection Concept / Type
ATEX	SIRA 03ATEX1479X / SIR09ATEX4124X	Ex II 1D II 2/3G Ex d I Mb & IIC Gb / Ex e I Mb & IIC Gb/ Ex ta IIIC Da / Ex nR IIC Gc
IECEX	IECEX SIR 07.0098X	Ex d I Mb & IIC Gb / Ex e I Mb & IIC Gb/ Ex ta IIIC Da / Ex nR IIC Gc
CSA	1356011 2627370	Ex d IIC / Ex e II / CL I Div 2 Gr ABCD, CL II Gr EFG, CL III Type 4X Class I Zone 1 AEx d IIC / AEx e II IP66 IP68 Type 4X
GOST-R	POCC GB.ГБ06.В01316	Ex dIU / Ex dIICU / Ex eIU / Ex eIIU / Ex nRIIU
EurAsEC	RU C-GB. ГБ06.В.00098	Ex dIU / Ex dIICU / Ex eIU / Ex eIIU / Ex nRIIU
UKRAINE	UA.TR.047.C.0408-13	Ex d IIC X / Ex e II X
NEPSI	GYJ111309X	Ex d IIC / Ex e II

Installation Guidance

Point	Advice
1	<ul style="list-style-type: none"> ◆ EN/IEC 60079-10 Classification of Hazardous Areas ◆ EN/IEC 60079-14 Electrical Installations in Hazardous Areas ◆ EN/IEC 60079-31 Ignitable dust – Protection by enclosure ◆ BS 6121, Part 5 Selection, Installation & Maintenance of Cable Glands
2	Installation should only be carried out by a competent electrician, skilled in cable gland installation.
3	NO INSTALLATION SHOULD BE CARRIED OUT UNDER LIVE CONDITIONS.
4	Threaded entries: the product can be installed directly into threaded entries. Threaded entries should comply with clause 5.3 of IEC/EN 60079-1 and have a lead-in chamfer to allow for full engagement of the threads. For Ex d applications a minimum of 5 fully engaged parallel threads is required. Metric threads are supplied with an o-ring and will maintain IP66 and IP68. Parallel entry threads will maintain an IP rating of IP64. A sealing washer should be used to maintain all IP ratings greater than IP64.
5	To maintain the Ingress Protection rating of the product, the entry hole must be perpendicular to the surface of the enclosure. The surface should be sufficiently flat and rigid to make the IP joint. The surface must be clean and dry. It is the users/installers responsibility to ensure that the interface between the enclosure and cable gland is suitably sealed for the required application.
6	Whilst Peppers products with tapered threads, when installed into a threaded entry, have been tested to maintain IP66 without any additional sealant, due to the differing gauging tolerances associated with the use of tapered threads it is recommended to use a non-hardening thread sealant if an IP rating higher than IP64 is required.
7	Once installed do not dismantle except for routine inspection. An inspection should be conducted as per IEC/EN 60079-17. After inspection the gland should be re-assembled as detailed in points 12 and 13, ensuring the Union Nut is correctly tightened to ensure the installation is secure.

Special Conditions for Safe Use

1. The cable glands shall not be used in enclosures where the temperature, at the point of entry/mounting, is outside the range of -60°C to +135°C.
2. The interface seals comply with the requirements of the standards listed in this report when the cable glands are fitted to a representative enclosure having a smooth flat mounting surface. In practice the interface between the male thread of the glands and their associated enclosure cannot be defined, therefore it is the users' responsibility to ensure that the appropriate ingress protection level is maintained at these interfaces.
3. Where glands without sealing rings are installed in protection by enclosure (Ex t) equipment for use in explosive dust atmospheres, they shall only be fitted into enclosures offering a minimum of 5 full threads, in accordance with EN 60079-31:2009 clause 5.1.1.