FLAMEPROOF BARRIER CABLE GLAND ASSEMBLY INSTRUCTIONS FOR GROUP I AND II BXN, BXC, BXA TYPES.

Certifications:
Approved for I2GD, IM2, Exd I Mb, Exd II Gb, Exe I Mb, Exe II Gb, Extb III Db;
CESI 14ATEX069X
IECEx CES15.0001X;
Ambient temperature range:
-60°C up to + 60°C
Service temperature range:
-60°C up to + 80°C
Ambient/service temperature ranges restricted up to -20°C for AVP steel made.

Insert the backnut (1) and the compression ring (2) in the cable or conductors.
Screw the backnut (1) to the conduit (8).

Bring the conductors to an “L” length as required by the equipment. Twist together to get the maximum flexibility.
Screw the backnut (1) to the conduit (8).

Bring the conductors to an “L” length as required by the equipment. Twist together to get the maximum flexibility.

A

B

BXN

1

2

BXC

1

2

Regione Torino, via Crevascure - CP 63 - 13011 BORGOSSESIA (VC) - Italy
Phone +39 0163 458028 - 458704 • Fax +39 0163 459693 • e-mail rcn@rcn.it
CABLE GLANDS & ACCESSORIES • www.rcn.it
Preparation of the Conduit (8)
Cut the conduit at 90° using a hacksaw. Bring the conductors to an “L” length as required by the equipment. Twist together to get the maximum flexibility.

Insert the backnut (1) and the compression ring (2) in the conduit. Insert the bushing (3) through the conductors and screw the conduit (8) until it stops.

Spread the conductors for applying the compound. Apply the compound (9) between the conductors as shown. (See notes at the back for the preparation of the compound)

After having filled in all of the spaces, bring the conductors back together and apply more resin around the outside of the conductors, as shown in Fig. D. Secure the conductors together with tape (10) to prevent the resin from separating them.

Cut the nylon ring (4) and insert it in the seat, as shown in Fig. E. Insert the container (6) making sure that the O-Ring is intact and in the correct position and push up until it has been inserted. Check the position of the nylon ring and bring the components in full contact. Push the excess resin inside the container and add if necessary.
**Important:** Make sure the resin completely fills the inside of the bushing (3).

Remove the excess resin. **Note:** It is important that all the resin residue, outside of the container, is removed.

Insert everything through the body (7), which may have been previously screwed to the equipment. Make sure that the resin does not overlap the side of the container (6). Hand tighten the backnut (1) to the body.

3 to 4 hours are necessary at a temperature of between 20°C to 30°C so that the compound solidifies. They have to spend 12 to 24 hours at a temperature of between 20°C and 30°C until the compound reaches an optimal state.

Allow the compound to harden. **Important:** The conductors must not be moved for at least four hours.

After the time required for consolidating the compound unscrew the backnut (1) from the body (7) and pull everything out.

Remove and discard the nylon ring (4) inserted previously.

Reassemble everything and close with a wrench to the value shown in the table on page 4.
Preparation of epoxy resin
To use the compound, wear gloves provided with the resin.
The epoxy resin is provided in a package with two separate parts. These must be mixed in a ratio of 1:1 until the compound is a single color and without streaks.
The best solution for mixing the two parts is by rolling and bending the components several times together. Once mixed, the resin must be used within 30 minutes. Over time it will begin to harden. The compound should not be stored at a temperature below 20°C before being mixed. At lower temperatures, it will become difficult to mix. If the compound comes in contact with one’s skin, it must be removed with a detergent and in no case allowed to harden.
Mix only enough compound to assemble one cable gland at a time.

The compound may be adversely affected by certain solvent fumes. If these fumes are present in the vicinity of the cable glands in service, specific precautions may be necessary. The compound polymerizes to a Shore hardness of 85. If used in the cable gland, as shown here, the compound, when completely set, is suitable to use at a range of service temperatures from -60°C to +80°C. Note: Consider that the setting time may be longer when the room temperature is below 20°C.

Equipment Series
Cable gland series: BXN, BXc, BXA; Certificate ATEX: CESI 14 ATEX 069X; Certificate IECEx: CES 15.0001X

- Cable glands for the above-mentioned series are suitable for unarmored cables and for all of the cable entries a part of the electrical equipments of groups I and II, category M2 or 2 G (ATEX Directive), with type of protection Ex d I Mb, Ex e I Mb, Ex d IIA/IIB/IIC Gb, Ex e I Mb, Ex IIC Gb and Ex tb IIIC Db (ATEX Directive and IEC of protection Ex d I Mb, Ex e I Mb, Ex d IIA/IIB/IIC Gb), suitable for unarmored cables and for all of the cable entries.

- The barrier cable glands with M16, 3/8” and Pg11 are admitted for Group II applications only.

- Aluminium alloy are admitted for Group II applications only.

- These products must be installed according to the requirements of IEC 60079-14, EN 60079-14 standards or other national/ex-traditional standards. The certificate does not cover uses different from what has been described in the requirements.

- Verify the suitability of the cable glands in respects to the installation zone, group, category (for ATEX), gas group and room ambient/service temperatures.

- User must be aware of the risks related to electrical current and chemical/physical characteristics of the gases and/or vapors and of the dust present at the plant.

- Assembly and tightening of the cable glands should not compromise the degree of protection.

- The Barrier cable glands made of AVP steel or Aluminium alloy are admitted for Group II applications only.

- The Barrier cable glands with M16, 3/8” and Pg11 threads are not admitted for Group I (mines) applications.

- Verify the integrity and the continuity of the ground, protection and equipotential conductors.

- On Exd applications the cylindrical threaded joint should have at least 5 full threads engaged, while on conical threaded joints, the threads for each part must be ≥6, considering the maximum tolerance accepted, the real number of threads within may be less than 5.

- If cable glands are assembled on a wall with a not threaded holes on an Ex apparatus, the hole diameter must be equal to the nominal external diameter of the thread, increased by 0.5 mm with an H11 tolerance.

Special Conditions for Safe Use
- Cable glands must be suitable for installed cable diameters, sized according to the nominal current intensity allowed in the electrical circuits.

- The coupling of the Barrier cable glands with the enclosures shall be made as indicated by the manufacturer in order to respect the type of protection of the electrical apparatus on which Barrier cable glands are mounted.

- When the cores will be fitted inside the sealing pot by filling compound, the mounting should guarantee a sufficient quantity of compound around each single core to ensure the clamping of the cemented joint. This shall be done as indicated in the manufacturer instruction.

- The Barrier cable glands series BXA., BXc., and BXN., have to be protected from hydraulic fluids, oils and greases when applied for Group I (mines) use.

- When the Barrier cable glands type BXA and BXC are designed for use in Group I (mines) applications: The cables should be installed in compliance with the requirements of the local code of practice; conduits should provide additional mechanical protection only.

Accessories
Before proceeding with the installation of the cable glands, particular attention must be paid to any accessories which may be deemed necessary, such as:

- Locknuts for fixing the cable glands in position

- Seals for additional protection of the enclosure with the entry of the cable.

Earth tags providing additional grounding points for the armour or the screen.

**Equipment Series**
Cable gland series: BXN, BXc, BXA; Certificate ATEX: CESI 14 ATEX 069X; Certificate IECEx: CES 15.0001X

- Cable glands for the above-mentioned series are suitable for unarmored cables and for all of the cable entries a part of the electrical equipments of groups I and II, category M2 or 2 G (ATEX Directive), with type of protection Ex d I Mb, Ex e I Mb, Ex d IIA/IIB/IIC Gb, Ex e I Mb, Ex IIC Gb and Ex tb IIIC Db (ATEX Directive and IEC of protection Ex d I Mb, Ex e I Mb, Ex d IIA/IIB/IIC Gb), suitable for unarmored cables and for all of the cable entries.

- Aluminium alloy are admitted for Group II applications only.

- These products must be installed according to the requirements of IEC 60079-14, EN 60079-14 standards or other national/ex-traditional standards. The certificate does not cover uses different from what has been described in the requirements.

- Verify the suitability of the cable glands in respects to the installation zone, group, category (for ATEX), gas group and room ambient/service temperatures.

- User must be aware of the risks related to electrical current and chemical/physical characteristics of the gases and/or vapors and of the dust present at the plant.

- Assembly and tightening of the cable glands should not compromise the degree of protection.

- The Barrier cable glands made of AVP steel or Aluminium alloy are admitted for Group II applications only.

- The Barrier cable glands with M16, 3/8” and Pg11 threads are not admitted for Group I (mines) applications.

- Verify the integrity and the continuity of the ground, protection and equipotential conductors.

- On Exd applications the cylindrical threaded joint should have at least 5 full threads engaged, while on conical threaded joints, the threads for each part must be ≥6, considering the maximum tolerance accepted, the real number of threads within may be less than 5.

- If cable glands are assembled on a wall with a not threaded holes on an Ex apparatus, the hole diameter must be equal to the nominal external diameter of the thread, increased by 0.5 mm with an H11 tolerance.

**Special Conditions for Safe Use**
- Cable glands must be suitable for installed cable diameters, sized according to the nominal current intensity allowed in the electrical circuits.

- The coupling of the Barrier cable glands with the enclosures shall be made as indicated by the manufacturer in order to respect the type of protection of the electrical apparatus on which Barrier cable glands are mounted.

- When the cores will be fitted inside the sealing pot by filling compound, the mounting should guarantee a sufficient quantity of compound around each single core to ensure the clamping of the cemented joint. This shall be done as indicated in the manufacturer instruction.

- The Barrier cable glands series BXA., BXc., and BXN., have to be protected from hydraulic fluids, oils and greases when applied for Group I (mines) use.

- When the Barrier cable glands type BXA and BXC are designed for use in Group I (mines) applications: The cables should be installed in compliance with the requirements of the local code of practice; conduits should provide additional mechanical protection only.

**Accessories**
Before proceeding with the installation of the cable glands, particular attention must be paid to any accessories which may be deemed necessary, such as:

- Locknuts for fixing the cable glands in position

- Seals for additional protection of the enclosure with the entry of the cable.

Earth tags providing additional grounding points for the armour or the screen.