35 kV 200A LOADBREAK FUSED LOADBREAK ELBOW
INSTALLATION & OPERATING INSTRUCTIONS

DESCRIPTION:

The CHARDON 35kV 200A Loadbreak Fused Elbow Connector is a fully-shielded, submersible, and insulated plug-in termination with full range current-limiting fuse protection. It is used for connecting underground cable to transformers, switching cabinets and junctions equipped with loadbreak bushings. The fused elbow connector and bushing insert comprise the essential components of all loadbreak connections. The elbow interface of the bushing insert meets the requirements of ANSI/IEEE 386.

The Elbow interface of the Fused Elbow Connector meets the requirements of ANSI/IEEE 386 as defined below:

- Class 35kV 200A (21.1kV and 21.1/36.6kV)

KIT CONTENT:

- Elbow Body (Top Half) with Cable Tie
- Straight Body (Lower Half)
- Compression Connector
- Probe Connector
- Probe Connector Wrench
- Fixed Plate & J-bolt Bail Hooks & Wing Nuts
- Loadbreak Probe
- Probe Wrench
- Silicone Grease
- Paper Towel
- Instruction Sheet

CAUTION:

• The installation of Chardon products must be carried out by qualified technical personnel.
• Contact with energized equipment can cause serious damage and even death.
• Wear appropriate protective equipment.
• Make sure Chardon Accessories are completely dry and in good condition at the time of installation.

DANGER:

• Do not touch or handle energized products without adequate protective equipment. Errors in the compliance of this instruction can result in damage to the product, serious injuries to people and even death.
• All associated equipment must be de-energized during installation and maintenance.
• The following instructions do not cover details or variables in the change / installation of the product, to prevent contingencies, please contact the team of Chardon technicians if required.

SAFETY INFORMATION

The instructions in this manual are not intended as a substitute for proper training or adequate experience in the safe operation of the equipment described. Only competent technicians, who are familiar with this equipment should install, operate and service it.

Warranty

Chardon products are guaranteed for a period of 2 years after their date of purchase, to make this guarantee effective you can come only by presenting a purchase invoice to your authorized Chardon distributor. The warranty will not be valid in the following cases:

1. When the product has been used under conditions other than normal.
2. When the product has not been operated according to the instructions for use.
3. When the product has been altered or repaired by persons not authorized by Chardon.
4. When using components that are no compatible with Chardon accessories.

Inasmuch as CHARDON GROUP, Inc. has no control over the use which others may put the material, it does not guarantee that the same results as those described herein will be obtained, each user of the material should make his own tests to determine the material's suitability for his own particular use. Statements concerning possible uses of the materials described herein are not to be construed as constituting a license under any CHARDON GROUP, inc. patent covering such use or as recommendations for use of such materials in the infringement of any patent.

FOR FURTHER INFORMATION WRITE TO

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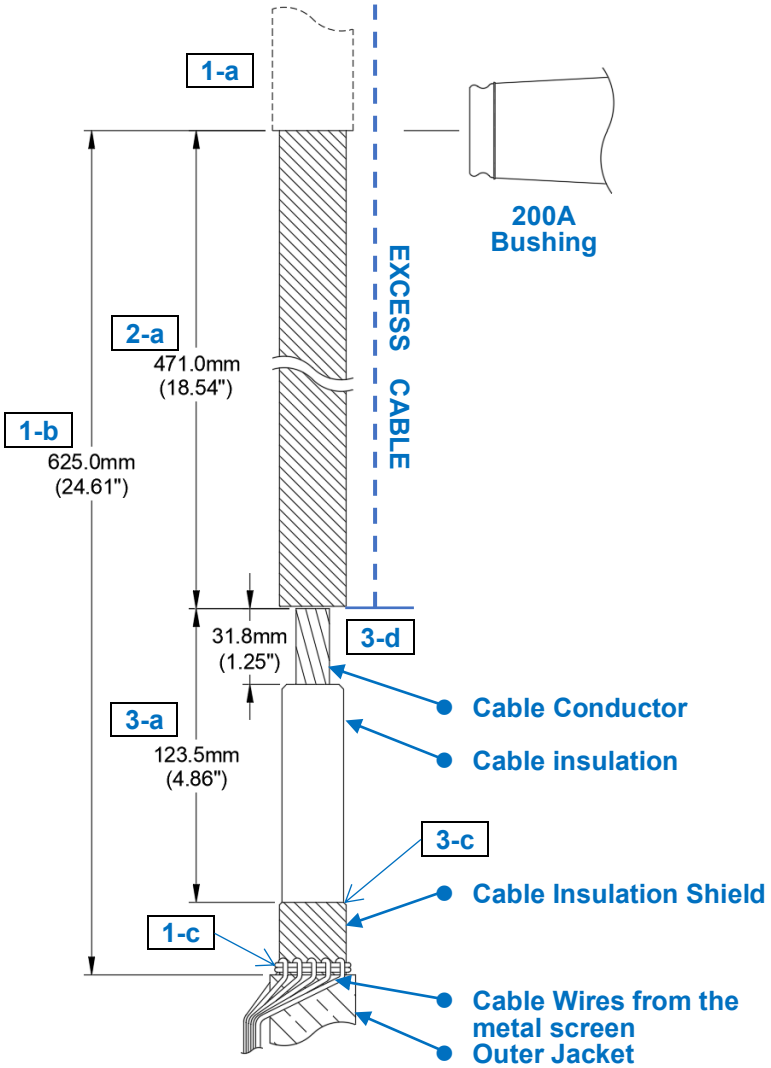
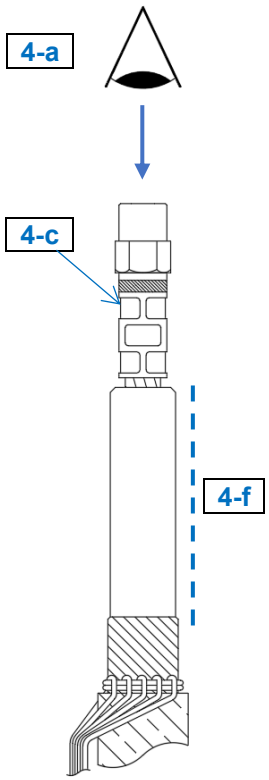
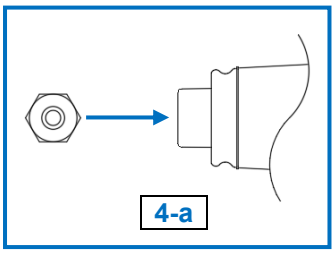
Chardon Mexico: chardonmx@chardongroup.com







Crimp Chart

NOTE:
Do not substitute other lubricants for those provided.

STEP 1:

a) Make a straight cut on the cable exactly where it coincides with the center of the insert.

b) Measure down from top of the cable 625mm(24.61”). Remove cable jacket to expose the metal screen. If present, remove the mylar tape.

c) Take 2 of the wires from the metal screen and turn the cable 2 times, each one in the opposite direction to the other to later braid them.

d) Take the other wires and braid them together with the first two.

STEP 2:

a) Measure down from top of the cable 471.0mm(18.54”) and cut the cable.

b) Clean the exposed Cable insulation shield.

STEP 3:

a) Measure down from the top of the cable 123.5mm(4.86”).

b) Remove the Cable insulation shield to expose the Cable insulation. Take care not to nick the insulation.

c) Place a bevel on the end of Cable insulation shield.

d) Measure down from the top of the cable 31.8mm(1.25”).

e) Remove the Cable insulation to expose the Cable conductor. Take care not to nick the conductor.

f) Place a 3mm(0.12”) maximum bevel on the Cable insulation to ease elbow installation.

STEP 4:

a) Clean the exposed Cable conductor using a wire brush. Place the compression connector on the conductor. Make sure the hex angle of compression connector front to nosepiece of apparatus bushing.

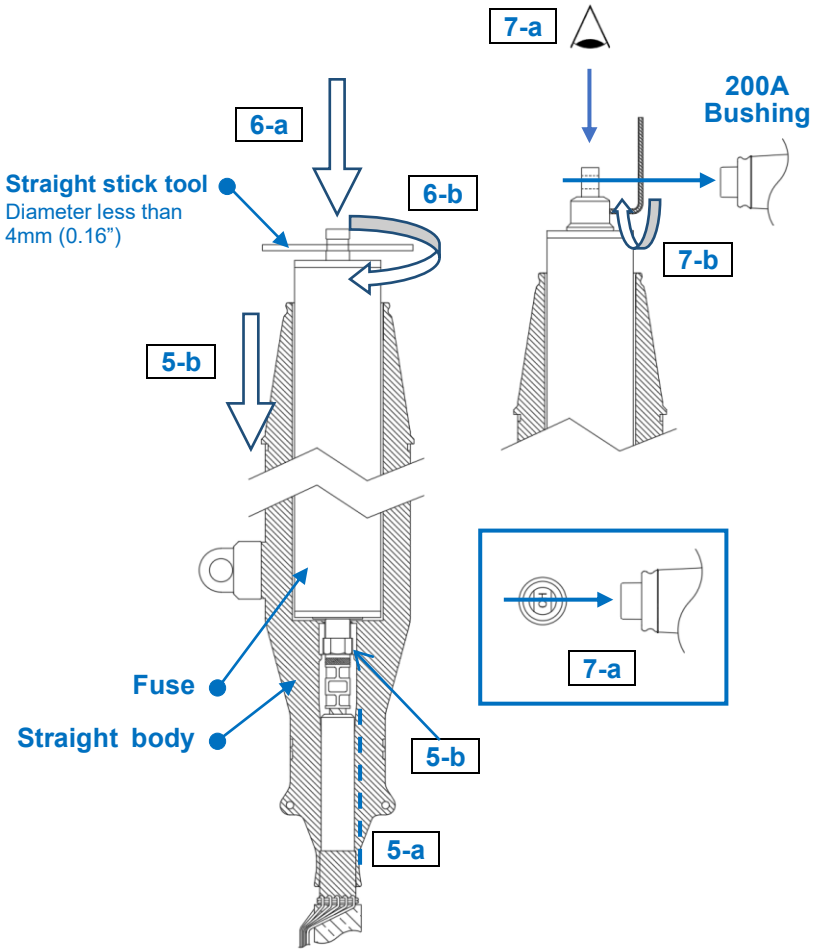
b) See Crimp Chart for recommended crimp tools and dies.

c) Rotate the tool between each successive crimp to prevent connector distortion.

d) Re-align the connector with the cable to eliminate any bends caused by crimping.

e) Clean excess grease from bi-metal connector.

f) Clean and lubricate by supplied lubricant to cable as show.



STEP 5:

a) Clean straight body as show.

b) Slide the straight body onto the cable, using a back and forth twisting motion, and final seating of the straight body should align the hexagonal metal of connector.

STEP 6:

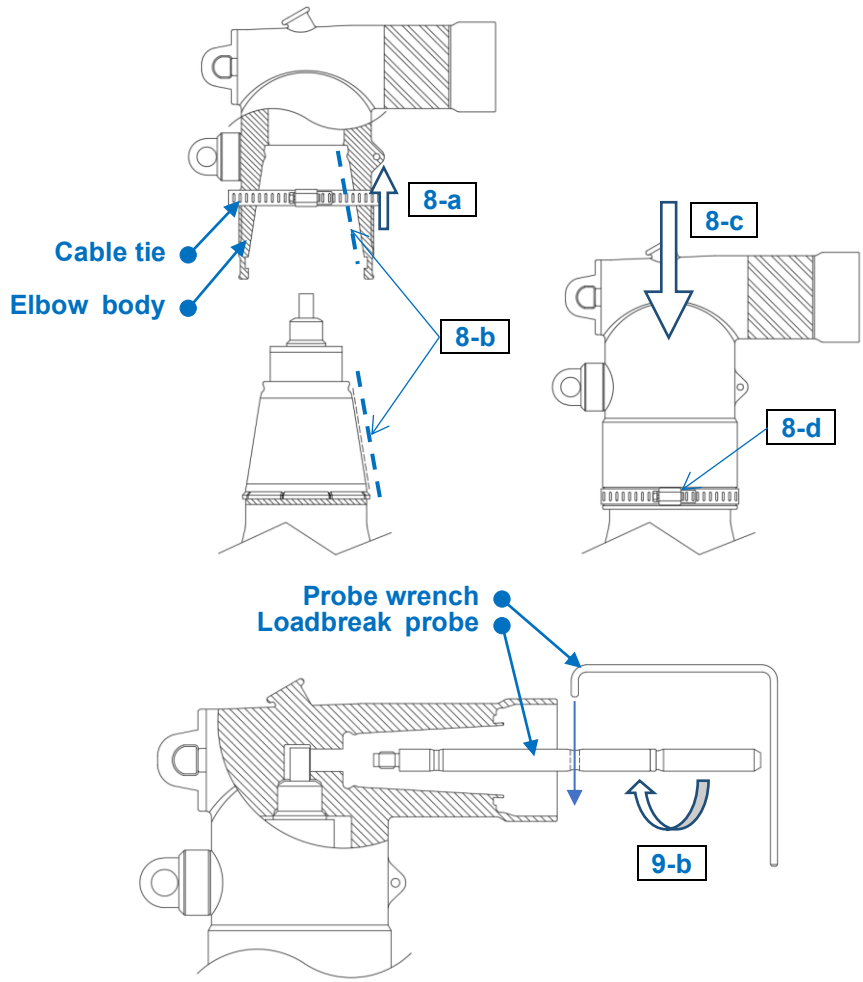
a) Slide the fuse into the straight body and insert fuse threaded end first.

b) Thread fuse clockwise by hand or straight stick tool until tight. Confirm check dimension as show.

STEP 7:

a) Slide the probe connector onto the fuse. Make sure the align the flats of probe connector parallel to nosepiece of apparatus bushing.

b) Using supplied probe connector wrench, thread the two set screws until they bottom out on the end post of the fuse, then tighten each set screw an additional 1/8-1/4 turn until tight.



STEP 8:

a) Put cable tie into the elbow body.

b) Clean and lubricate by supplied lubricant to elbow body and straight body as show.

c) Slide the elbow body onto the fuse, using a back and forth twisting motion until cover yellow ring.

d) Fix the cable tie in the groove of the elbow and use the tool to lock it tightly.

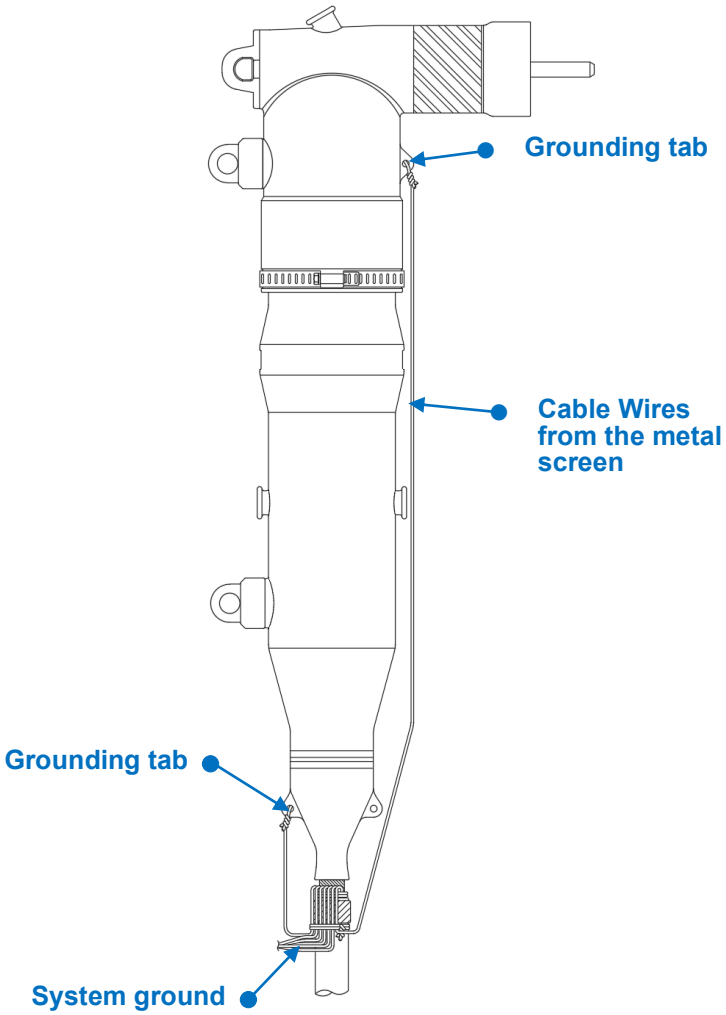
STEP 9:

a) Turn the elbow body until the loadbreak probe can be assembled into the probe connector.

b) Insert the loadbreak probe into the probe connector and hand tighten several turns to avoid cross threading; then tighten with probe wrench provided until the wrench permanently deforms. Then discard the wrench.

NOTE: If other tightening tools are used, they should produce a torque exceeding a minimum recommended 110 inch-pounds for the loadbreak probe to connector tightening.

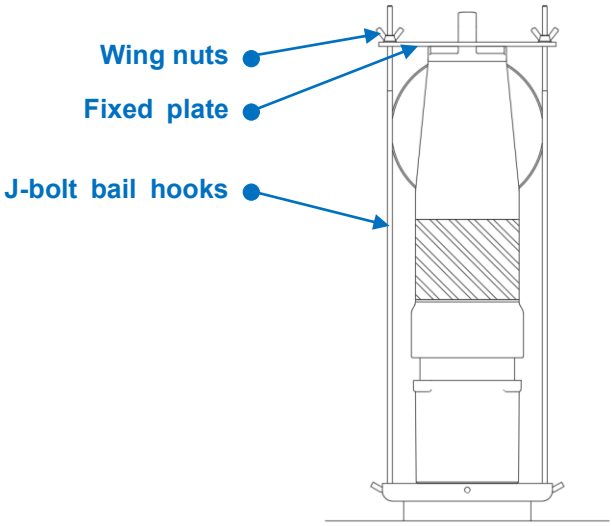
d) Keep the loadbreak probe free of dirt at all times.



STEP 10:

Using one or more cable wires, connect the concentric neutral to the elbow body and straight body grounding tab near the cable entrance. A tight connection will provide positive grounding for the elbow body and straight body shield.

Connect the grounding wire of the cable to the system ground.



STEP 11:

Assemble the fixed plate by inserting the threaded portion of the J-bolt bail hooks through the center set of holes of the stainless steel fixed plate and attach the wing nuts to hold them in place. Tighten the wing nuts until snug.

CAUTION:
A connector / bushing mated combination should not be allowed to carry the full weight of the cable. Therefore, it is necessary to clamp the cable as close as possible to the connector.

LOADBREAK OPERATION

- Securely fasten a suitable live-line tool to the pulling eye of the mating loadbreak elbow.
- Without exerting any pulling force, slightly rotate the elbow clockwise to break surface friction between the elbow and bushing.
- Withdraw the elbow from the bushing with a fast, firm, straight motion, being careful not to place the connector near a ground plane.
- Place the elbow on an appropriate accessory device, following the operating instructions for that accessory.
- Place an insulated protective cap with drain wire attached to system ground on any exposed energized bushing using a suitable live-line tool.

LOADMAKE OPERATION

- Area must be clear of obstructions or contaminants that would interfere with the operation of the loadbreak elbow.
- Securely fasten a suitable live-line tool to the pulling eye.
- Place the loadbreak elbow over the bushing, inserting the white arc follower of the probe into the bushing approximately 2 1/2" until a slight resistance is felt.
- Immediately thrust the elbow onto the bushing with a fast, firm, straight motion, with sufficient force to latch the elbow to the bushing.
- Push again on the elbow with the live-line tool, and then pull gently to make sure that it is secure.