

FI.061 INSTALLATION INSTRUCTIONS – AAC, AAAC & ACSR COMPRESSION UNI-DEADENDS

I. PREPARATION

The conductor along the full length of the joint should be in overall good condition. Cut away damaged / corroded sections before constructing the joint and ensure conductor ends are cut square and undeformed. To prevent interlayer slippage and birdcaging, the conductor should be secured at all times using a combination of electrical tape and hose clamps / twisted aluminium wire.

- i. Determine the preparation method along the compression length (Fig i):
 - a. **New, bright finish, fully greased conductors** – No unwinding of layers, cleaning and oxide removal required on the outermost surface of the conductor only.
 - b. **Partially greased / ungreased conductors** – All layers must be unwound and filled with Uni-Grip C jointing compound. Cleaning and oxide removal required down to layer in contact with the steel core or a maximum of two layers, whichever is less.
 - c. **Aged / dirty conductors** – Ensure that all aluminium and steel strands are not corroded, and prepare as per Case (b).

(For ACSR Conductors) – Preparation method (b) must be followed.

ii. **Tools needed for installation** (Fig ii) – Hacksaw, conductor trimming tool, tape measure, marker pen, zip ties, insulation tape, utility knife, stainless steel wire brush, Emery paper, Uni-Grip C jointing compound, compression dies, compression tool, vernier callipers, file.

II. CONSTRUCTING THE JOINT

1. Ensure that the work area is clean, dry and protected from dust and rain. Mark conductor end at a distance to the knurl mark of the Joint (Fig 1). Straighten the conductor end to a distance of 2.5 times the marked length. Secure firmly at this point before preparing the conductor end (refer Section I, i). For Case (a) proceed to Step 2, for Case (b) or (c) proceed to Step 3.
2. Clean the outermost layer of the conductor end using a stainless steel wire brush, scouring pad or Emery paper, and apply Uni-Grip C jointing compound immediately (Fig 2). Proceed to Step 4.
3. Secure the conductor end firmly at a distance 2.5 times the compression length. Unwind each layer in small groups, following the natural lay of the conductor, and allowing for access along the entire compression length (Fig 3a). Ensure that the strands are not deformed during this process. Starting at the innermost exposed layer, clean strands using a stainless steel wire brush, scouring pad or Emery paper, and apply Uni-Grip C jointing compound immediately. Wind the layers back on (Fig 3b).
4. Fully insert the conductor end into Joint up to the mark. Using the correct Aluminium Die, compress the Joint on to the conductor, starting at the knurl line and working out towards the conductor (Fig 4a). The die bites should be overlapped by a minimum of 12mm. Keep the joint as level as possible and rotate the fitting or die by one flat with each compression to avoid 'banana-ing' (Fig 4b).
5. Remove any die flash or sharp edges with a file or Emery paper. Wipe away any excess jointing compound.
6. Measure the AF (across flat) dimensions across all faces of the joint in several locations to ensure that the correct compression has been achieved.
7. Joints at risk of ice jacking due to the accumulation of water (e.g dead-end or jumper compressions with the mouth facing upwards) must have a 3mm drain hole drilled through the lowest point of the joint sleeve just in front of the compression zone (Fig 5).

