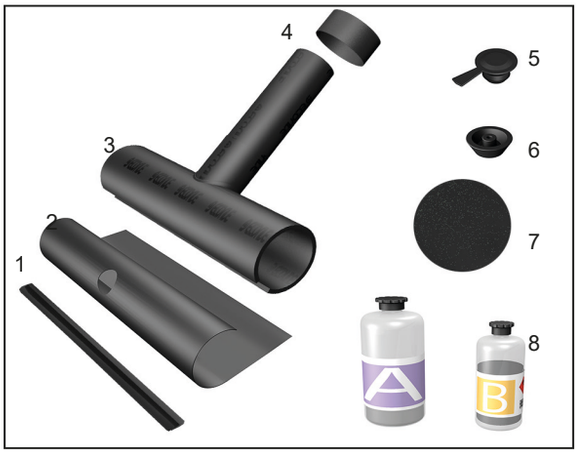
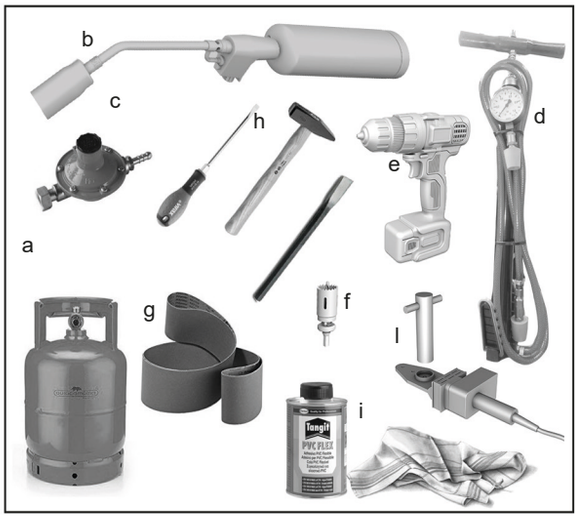
Restoring of insulation on tees
EQUIPMENT AND MATERIALS FOR INSULATION RESTORING

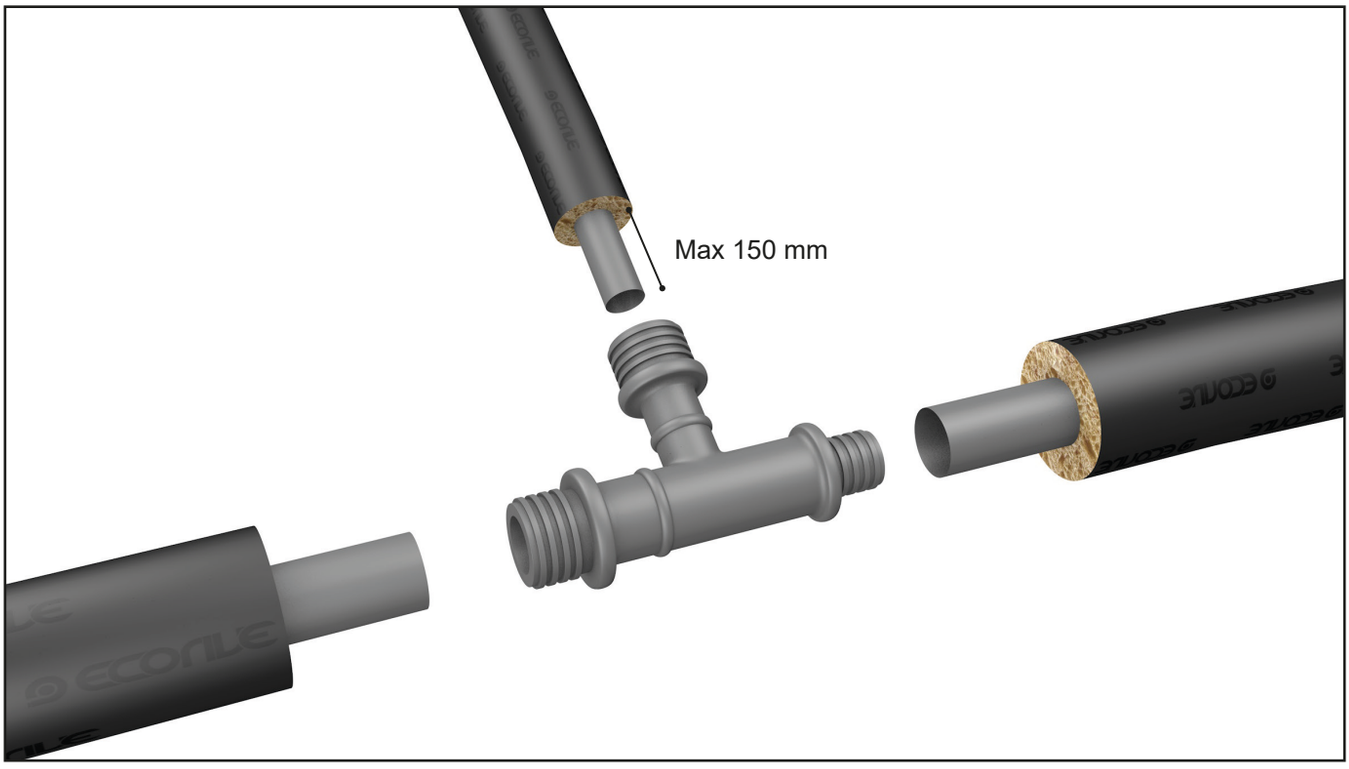
To perform this type of restoration, the following materials and tools must be available:

KIT CONTENT:
1) Closure patch
2) Heat-shrink pre-forated sleeve
3) Overcasing heat shrink derivation PE
4) Shrinkable ring
5) Ventilation plug
6) Welding plug
7) Thermoadhesive closure piece or “FOPS”
8) Pre-dosed polyurethane components POLYOL(A), ISOCIANATE(B)

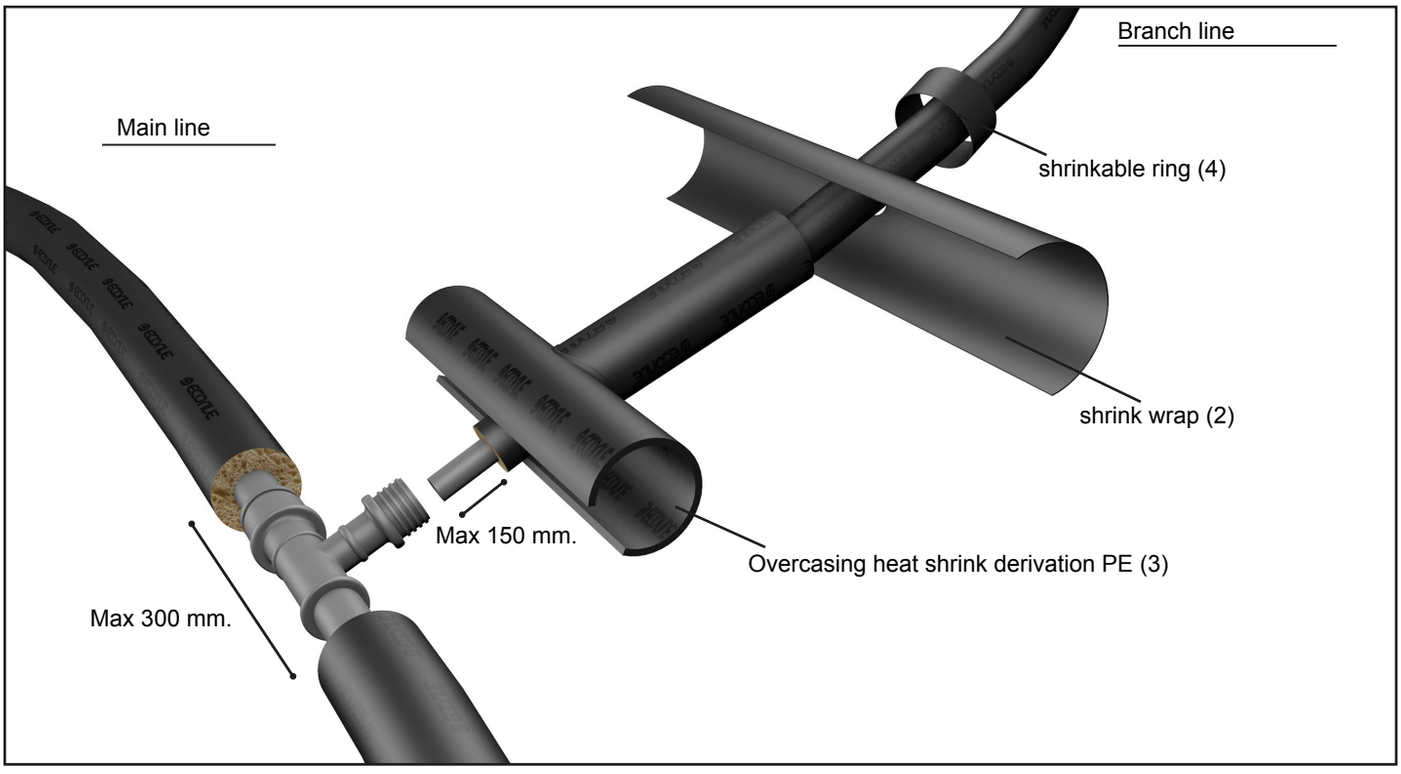


EQUIPMENT REQUIRED (Functional and in possession of the legal requirements for safety)
a) Gas cylinder
b) Propane torch with Ø 30-50 mm.
c) Pressure controller
d) Pressure test equipment (0,2 bar)
e) Electric drill
f) Milling cutter 024 mm.
g) 60-80 grit glazed canvas in 50 mm. wide rolls
h) Various hand tools (hammer, screwdriver, chisel, etc.)
i) Solvent ("Tangit” type) and rags
l) Tapping tool for the socket fusion of welding PE plugs (if provided)

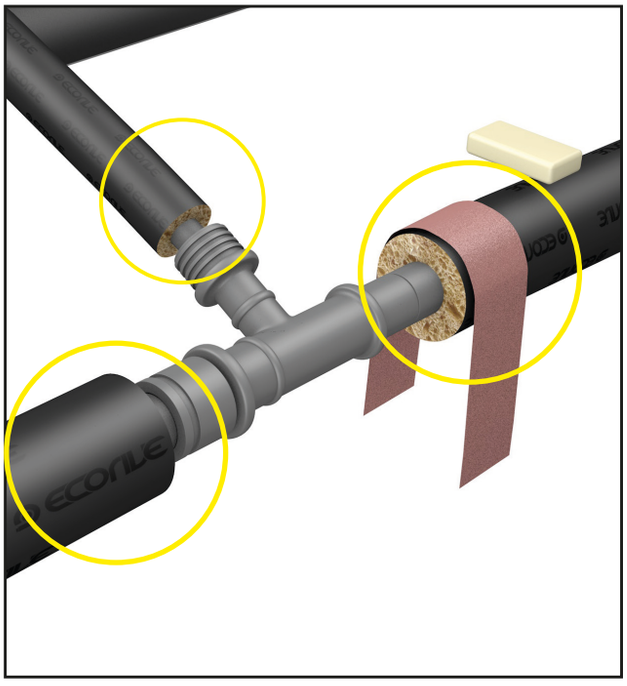


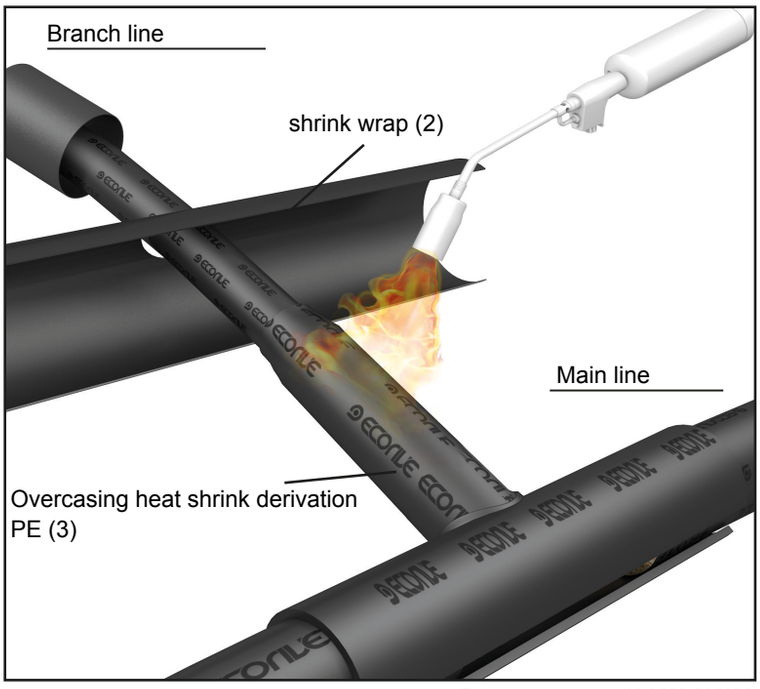


1) On each pipe ends to be connected, remove the insulation by the length indicated in the figure. Before the connection of the branch pipe, in succession must be inserted on the branch pipe the following: the shrinkable ring (4), the pre-forated shrink sleeve (2) and the overecasing derivation in in PE to be cut on building site along opposite side (3).

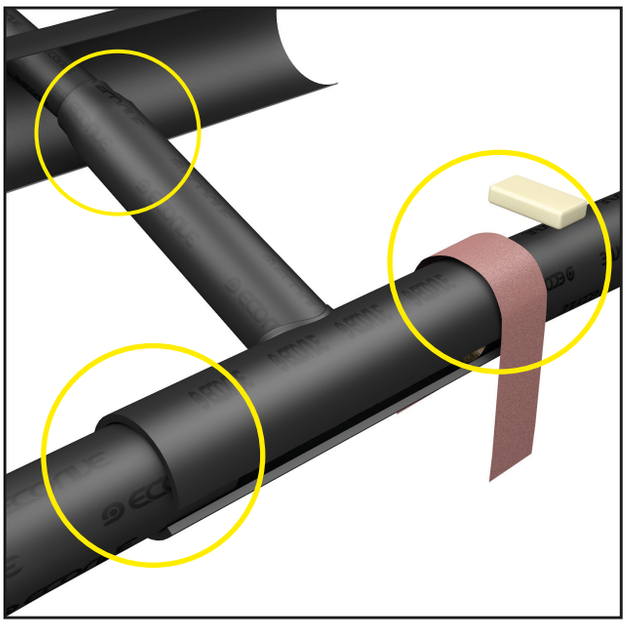


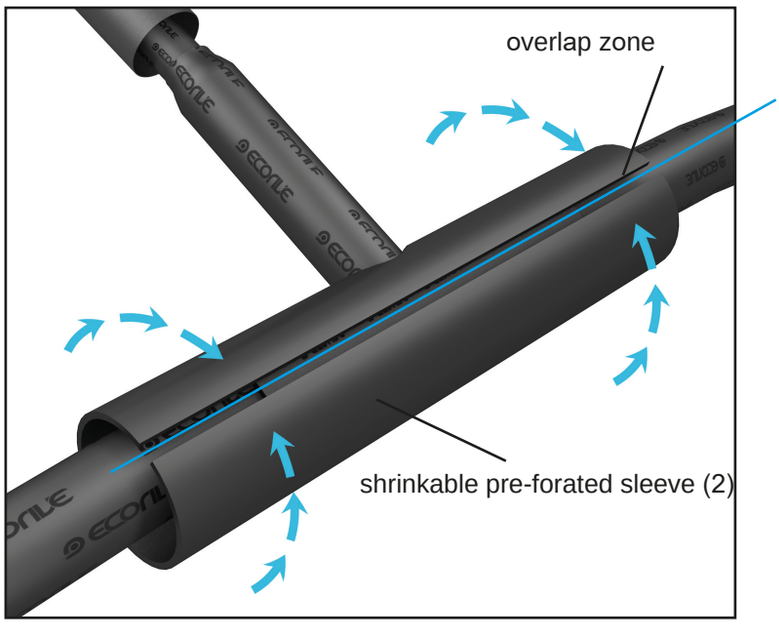
2) After making the connections of the pipes through the tee fitting, check that the overcasing PE derivation (3) must be CLEAN and DRY, inside and outside. Place the overcasing derivation PE (3) embracing the tube of the main line; clean and roughen with the sand paper the overlapping



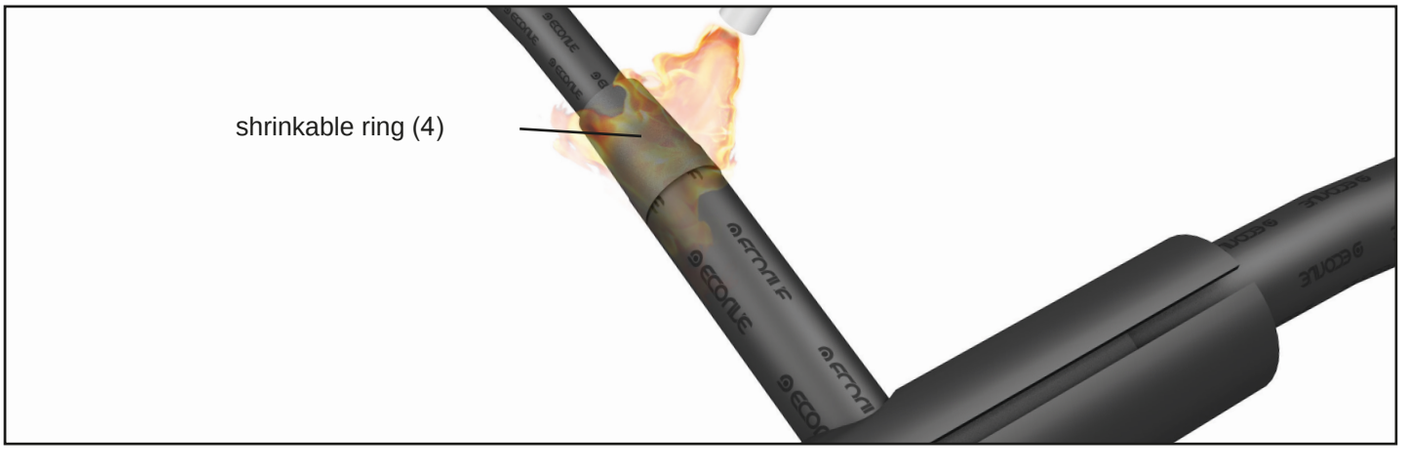


3) Clean and roughen the surfaces of the the shrinkable ring and the the perforated shrink sleeve with the cloth (use cloth and solvent specific for polyolefins to remove any trace or polyethylene and sand residue), then wrap the pre-forated shrink sleeve,positioning the overlap zone in the opposite zone to the closing zone of the overcasing and remove protection films.

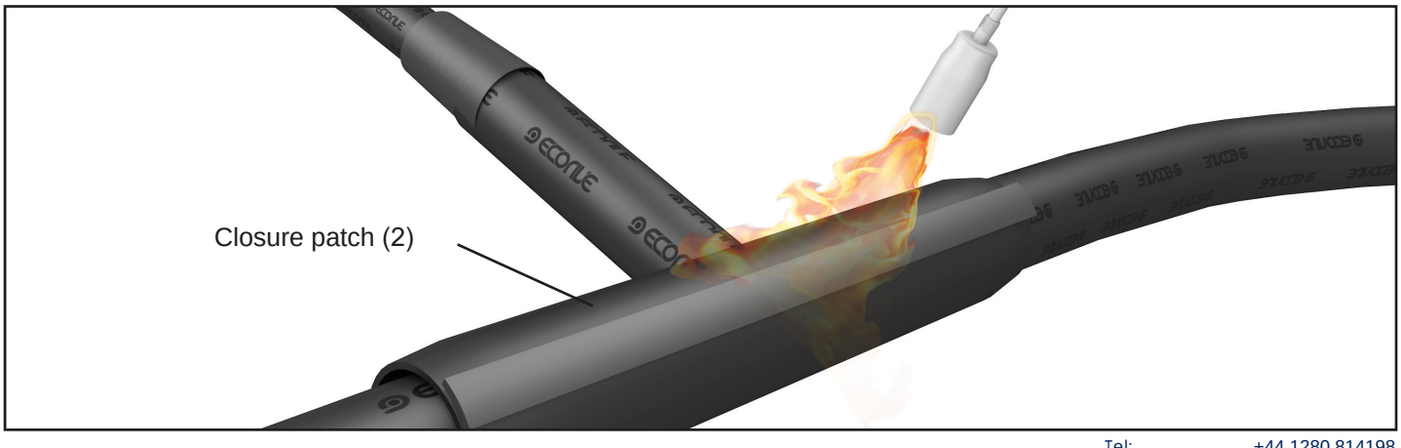




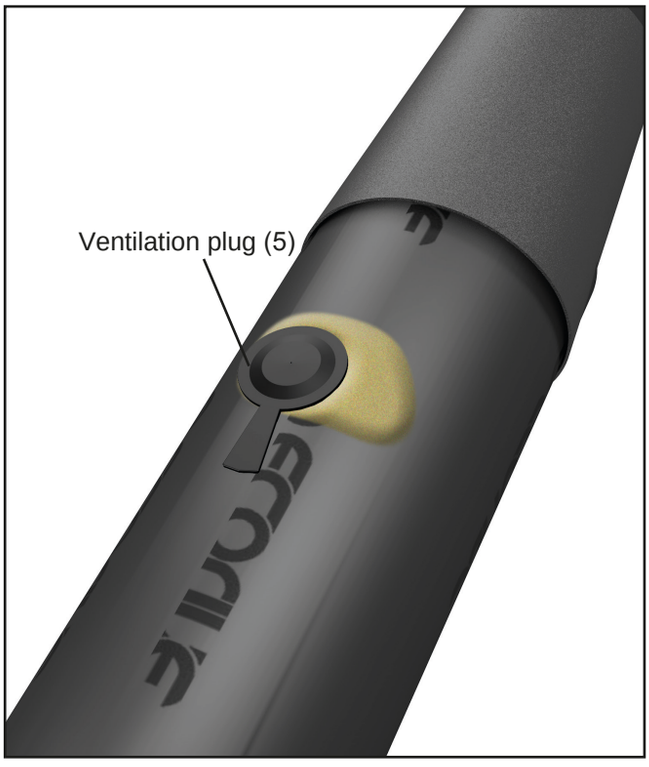
4) Check that the protective film is completely removed. Center the ring on the zone of seal the branch and check that the temperature of the application area is approx. 40-50°C and proceed with the heat shrinking, starting from the center towards the ends with rotary movement around the tube, until complete shrinkage (a light layer of mastic exiting the flaps).



5) Then, continue with the application of the closure patch on the band previously wrapped and start the heating phase up to complete heat-shrinking and sealing of the stretch on the line pipe.



6) After natural cooling (<30 ° C), proceed with the execution of the injection hole of the polyurethane foam with special Ø24 hole saw, in the highest possible area of the chamber to be filled; at this point, the pressure test can be performed, subjecting the junction at 0.2 bar for at least two minutes;



7) Foaming: before handling the polyurethane components, carefully read the instructions of safety indicated on the labels. After shaking the mixed components vigorously, pour the mixture into the open hole (a homogeneous color with no streaks is good indication mixing); then, close the injection hole with the appropriate vent plug, taking care of leave the air outlet channel free;

8) At the end of the expansion of the polyurethane foam and when the reaction is complete, clean carefully the area around the cap and seal the hole with the required modalities (sealing the vent plug with a specific closing piece FOPS, or replacing it with a PE cap to be welded with a special polyfusion unit).

9) At this point, the "T" joint set is finished