

EF GEOTHERMAL COUPLER INSTALLATION INSTRUCTION



Necessary elements and tools;

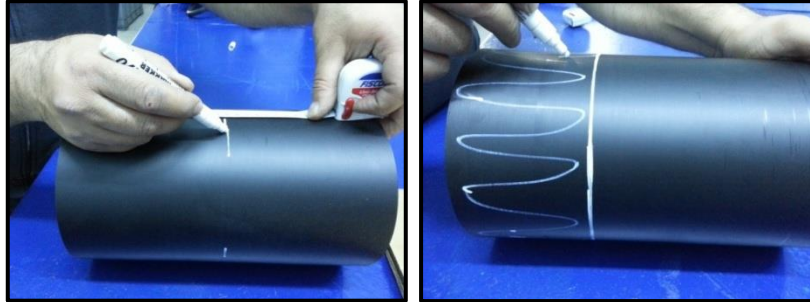
- Squeezing clamp
- O-ring**
- Drive ratchet
- Hand scraper
- Cleaning agent and cloth
- Marker
- Tape meter

** Couplers are delivered with 2 different sizes of o-rings. Depending on the gap between pipe and coupler proper o-ring should be chosen. The o-ring diameter should be 2 and 4 mm for bigger than d200 size also 1 and 2 mm for smaller than 200 size.

1. **Pipe cutting:** For the pipe cutting, a suitable cutter for plastics must be used. The pipes are to be cut square with this cutting tool.

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2. **Marking the fusion zone:** The pipe length which will be inserted into coupler should be measured and marked on pipe end. Use a marker for this purpose.



3. **Scraping The Pipe Surface:** In order to remove the oxide layer of the pipe, scrape carefully the marked area.

Attention



In order to remove the oxide layer completely, the pipe must be scraped so that shavings are formed and marking lines are removed.

The prepared surface must be protected against unfavorable weather conditions.

The internal edge must be deburred and the outer edge rounded off as illustrated in below.



4. **Degreasing of the Fusion Zone:** Remove coupler from its packaging without touching the fusion surface. Make a visual check to ensure coupler is undamaged.

The prepared pipe end and internal face of coupler must be degreased with a suitable cleaning agent and a white absorbent and nonfibrous cloth/paper.

As a cleaning agent; isopropyl alcohol can be used (The alcohol content mustn't be less than 96% by volume).

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Attention



Degreased surfaces must be protected against dirt or unfavorable weather conditions.

Attention

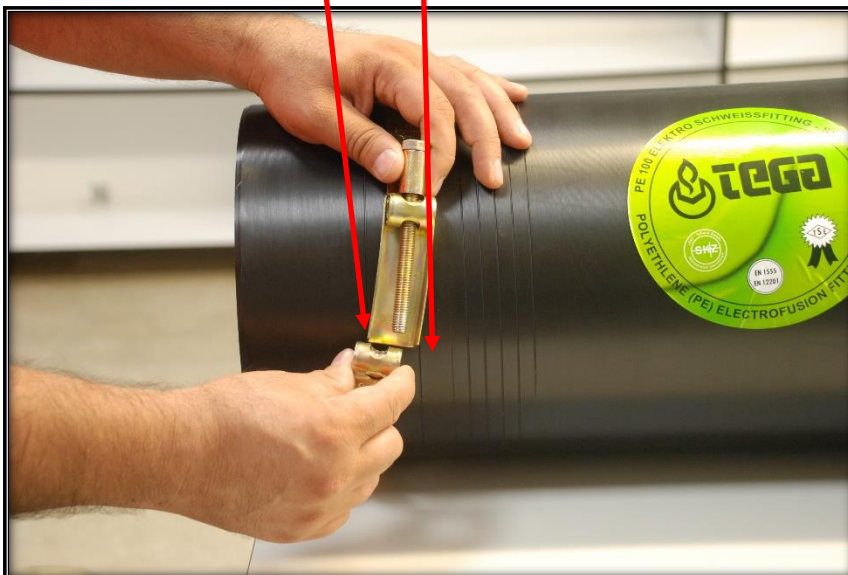


It is necessary to use re-rounding clamps to eliminate pipe ovality.

5. **Placing the squeezing clamp onto coupler:** Before placing the clamp, it should be unscrewed as shown below.



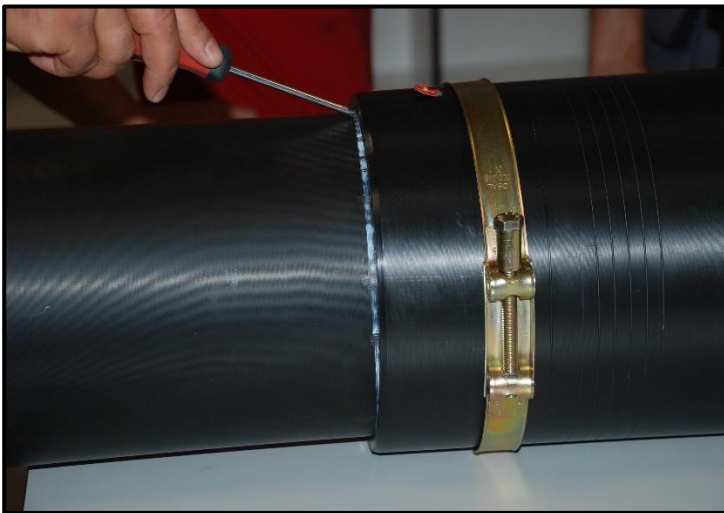
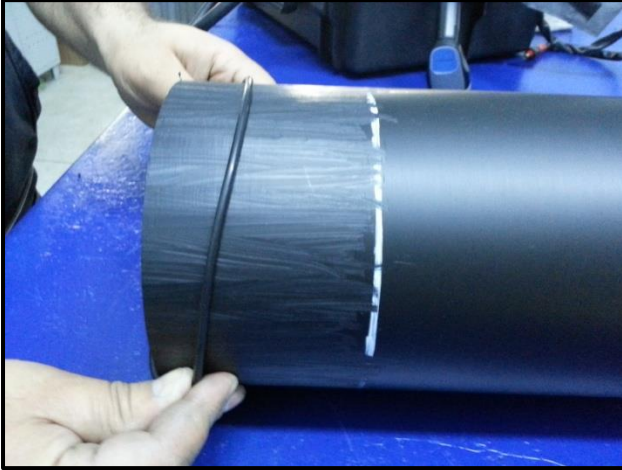
Clamp should be placed on first and second lines on coupler surface.



After placing the clamp in right position, it should be screwed and fixed on coupler.

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Placing and positioning of o-ring on pipe surface: Place and position the o-ring on pipe surface as shown below. (The o-ring diameter should be 2 and 4 mm for bigger than d200 size also 1 and 2 mm for smaller than 200 size.)



Use a screwdriver to position o-ring at the end of coupler.

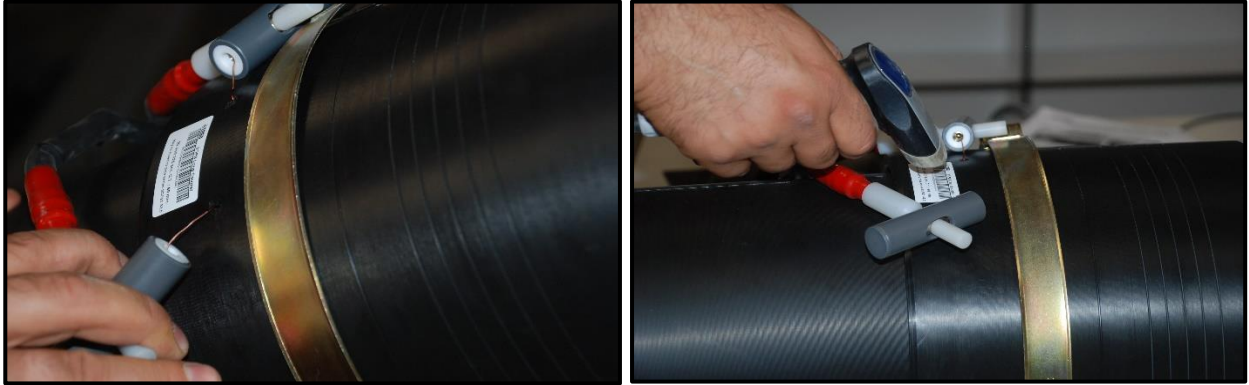


If it is not possible to insert pipe, change the o-ring with thinner one.

If it is not possible to insert pipe with thinner o-ring, this means local gap is acceptable. In this case, do not use o-ring.

- 6. Electrofusion:** Connect fusion cables to the wires of the first side of the coupler. Fusion parameters are contained in the barcode label. Fusion data can be transferred to machine by using barcode reader.

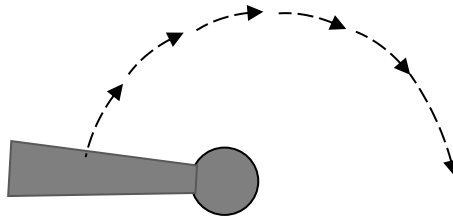
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Start fusion process.

Squeezing Operation: After 30th second of fusion cycle, the screws are squeezed one tour with 10 seconds periods until completing of fusion. Use driver ratchet to squeeze the clamp.

Clamp has screws on both sides. Each side should be screwed by driver ratchet. Each screwing is completed by half circle movement (180°)



Make half circle movement 6 times (= 1 squeezing operation) on each side. Then make the same on other side subsequently.



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If thicker o-ring is used, squeezing operation should be repeated 5 times on each side.

If thinner o-ring is used, squeezing operation should be repeated 3 times on each side.

If any of o-rings are not used, not necessary to make squeezing.

Wait during the cooling time and do not remove squeezing clamp during cooling. Do not disturb the joint during the cooling.