



The Split Pipe Repair E- Coupler operation manual is provided for installation operation and welding.







The Split Pipe Repair E- Coupler has longitudinal force lock properties as well as complete tightness properties.




The installation tools consist of cable lifting devices, circular saw with adjusting height, manual pipe scraper, lashing straps, steel clamps, electro fusion welding equipment, coloured welding rod, hot gas welding equipment and standard tool box.

Remark: PESTEC unfortunately can not provide a nice picture of the coupler. The coupler colour used for this repair due to availability was white for a grey cable only. In addition the wide black welding rings on both top and bottom pipe come from a special test device temporary fixing on the cable strands. The old welding rings have not been completely removed during this repair due to cable height not visible from the bridge deck.

Remark: The electro fusion welding equipment needs exhaustive Power Supply of 220 Volts from 6 KVA or full 16 Ampere directly at equipment.

Required 220 Volt extension power cable wire cross section for L < 50 m is 3 x 2,5 mm² and for L > 50 m 3 x 4 mm².

<p>1. Cut off damaged pipe using a circular saw with adjustable height. Adjust height to the pipe wall thickness -1 mm to avoid cutting into the PE coated strands. Pull off the damaged pipes using a flat screwdriver. Remove the oxidation layer in both welding zones all around the pipes using manual pipe scraper. Free pipe end length to Welding Zones need to be 30 mm minimum.</p>	
<p>2. Either push up the lower pipe section or pull up the upper pipe section of the existing cable into welding position. Check best pipe alignment.</p>	
<p>3. Clamp both split repair coupler halves in position and fix temporarily using a lashing strap.</p>	
<p>4. Check position of split coupler to be completely closed on bottom section. In case of a remaining gap between the halves, the gap should remain in coupler top.</p>	
<p>5. Clamp steel clamp middle on the coupler halves and pull real tight. In case not enough force can be applied to the coupler halves, use a distance holder e.g. lashing strap between coupler and steel clamp to apply more force.</p>	
<p>6. Connect electrical cables to the coupler connectors electrically in a row. Follow connection drawing attached with the welding equipment.</p>	

<p>7. Start welding operation using Bar Code Reader to read individual provided bar codes for repair couplers. Remove cables from coupler. Keep steel clamp fixed during 30 minutes cooling time. Keep cable unreleased for another 60 minutes.</p>	
<p>8. Bend up the electrical connectors using a gripper or remove the connector using a saw. Grip off the flexible welding connectors in both coupler gaps.</p>	
<p>9. Weld colored welding rod by hot gas welding method all around face surface for optical perfection.</p>	
<p>10. Weld colored welding rod by hot gas welding method all along the bottom and top closing gap for perfect tightness and optical perfection. In case of top gap between the coupler halves repeat operation several times until the gap is completely closed. Operation is finalized.</p>	