

**ONLY PERSONNEL TRAINED AND CERTIFIED BY THERMACOR ARE ALLOWED TO PERFORM THIS INSTALLATION.** A Site foreman or inspector is required to inspect and log each joint on attached form. **Failure to provide this documentation will void Thermacor's warranty.**

**KIT MATERIALS:**

1. HDPE Electrofusion Sleeve
2. Socket Fusion Plug
3. (4ea) 6" Teflon Tubes
4. (2ea) 2" x 3" Teflon Sheet
5. (2ea) Tongue Depressors

**EQUIPMENT PROVIDED BY THERMACOR  
(To Be Returned)**

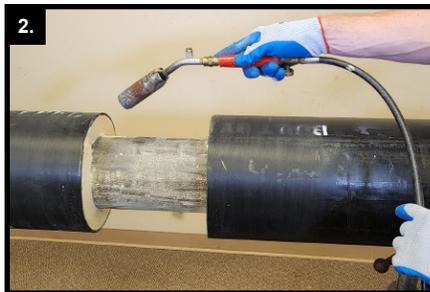
1. Therma-Fuse Welding Machine
2. SocketFuse Welding Machine
3. SocketFusion Plug Tool
4. (3ea) 4" Wide Rubber Bands
5. (2ea) 3" Wide x 12" Rubber Bands
6. (3ea) Metal Buckles
7. (2ea) Ratchet Straps
8. Air Test Gauge
9. 1" Bit with Stop

**EQUIPMENT PROVIDED BY CONTRACTOR:**

1. 110V Power Supply
2. 80 Grit Emery Cloth (or grinding disc)
3. 95% Isopropyl Alcohol
4. Lint-Free Rags
5. Tape Measure
6. Propane Torch with 2" Diameter, 15" Long, 150,000 BTU Torch Heat
7. Duct Tape
8. Hand Pump
9. Safety Equipment Per Local Regulations
10. Tent



1. Before installing the joint closure, verify all testing requirements on the welded joint have been performed.



2. Use the propane torch with a light billowy flame to dry out the joint area, regardless of whether the area appears dry. Residual Moisture may be present that is not readily seen.



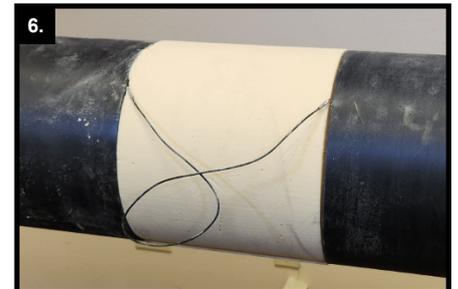
3. Test the ERM Leak Detection Wire on both sides of the joint per the supplemental instructions. Document the resistance readings on the log sheet.



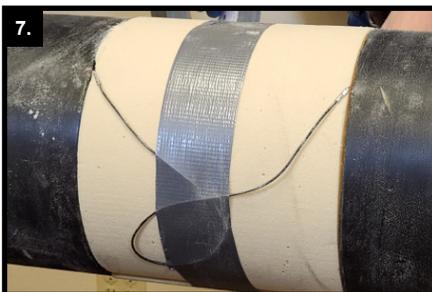
4. Insulate the joint using the sectional insulation. Measure the distance between the factory ends and cut the insulation to fit. Tape insulation in place.



5. Make sure the insulation fits without gaps. If gaps exist, cut small sections of insulation to fill the gaps.



6. Crimp the leak detection wires together and test through the joint per the ERM Instructions.



7. Secure excess ERM wire with tape. Route the wire to the side to prevent drill bit going through wire in later step.



8. Make a mark on both sides of the joint 9" back. Clean the 9" section of the HDPE jacket to remove any dust or debris.



9. Use 80 grain emery cloth (or grinding disc) to abrade the jacket over the entire 9" section.

**CONTINUE ON NEXT PAGE**

**IMPORTANT: THE JOINT AND JOINT MATERIALS MUST BE KEPT DRY!!**



10. Clean the 9" section with Isopropyl Alcohol and a lint free cloth.



11. Clean the electrofusion wires on the Electrofusion Sleeve with Isopropyl Alcohol.



12. Use the 9" marks to center the sleeve over the weld joint using a ratchet strap in the middle.



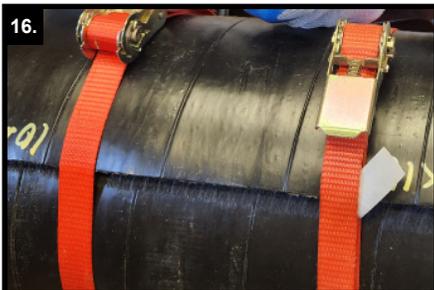
13. Locate the sleeve so that the electrofusion wire is oriented at the 12 o'clock position.



14. Verify the sleeve is square and the edges are in line with each other.



15. Apply the second ratchet strap 4" from the edge of the sleeve and secure as tight as possible.



16. Move the ratchet strap from the middle to 4" from the other edge and secure as tight as possible.



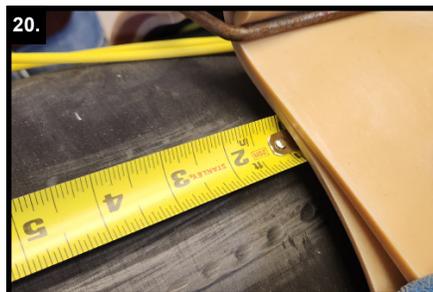
17. Visually confirm the yellow wire is in contact with the HDPE jacket. In areas that are hard to see, use the tongue depressor to ensure full contact of the electrofusion wire all around the jacket on both ends of the electrofusion sleeve.



18. Install 2 of the rubber bands on the circumferential seam using the supplied buckles.



19. The edge of the buckle where the steel is parallel must be located to the outside of the sleeve.



20. The edge of the rubber band should stick 1" over the edge of the sleeve. The buckle should be centered over the electrofusion wires.



21. Continue tightening the rubber band from each side until the 1" overlap of the buckle begins to pull down and touch the HDPE jacket. The yellow fusion wire must extend out of the middle of the buckle.

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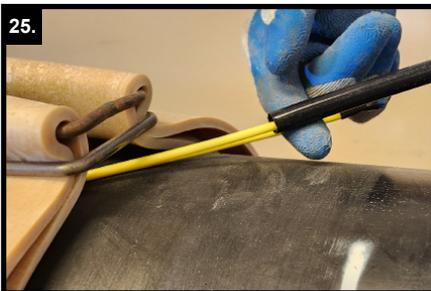
22. Install the remaining rubber band in the same fashion at the middle of the sleeve. The buckle at the middle should not be located near the overlap.



23. Install the Teflon Sheet under the buckle but do not extend past the edge of the sleeve.



24. Insert the 3" wide x 12" rubber band into the opening in the buckle and secure with the tongue depressor. Do not extend past the edge of the sleeve.



25. Insert the Teflon tubes over the electrofusion wires up to the edge of the sleeve.



26. Remove the ratchet straps.



27. Make a mark for the test hole about 3" (11 o'clock) from the top.



28. Use the supplied 1" bit to drill a test hole between the rubber bands at the 11 o'clock position.



29. (ERM Only) Check the leak detection wire to verify continuity. If continuity has been lost, it's likely the drill bit went through the ERM wire.



30. Follow the prompts on the screen of the Fusion Welder. Select the Temperature Adjusted Cook Profile when prompted on the machine.



31. Make sure the Fusion Wires remain located at the 12 o'clock position with slack during the entire fusion process.



32. Wait a minimum of 30 minutes after the cook cycle before removing the rubber bands.



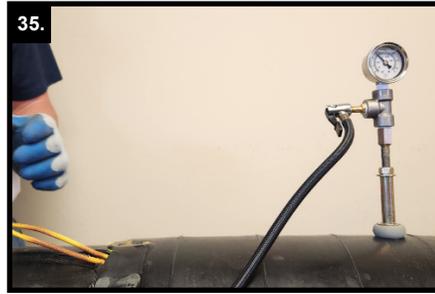
33. Insert the pressure test gauge into the 1" test hole. Use a hand pump to pressurize the joint to 5 PSI. Disconnect the hand pump and verify the joint holds 5 PSI for 5 minutes.

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34. Soap test the sleeve to verify there are no air leaks. Ensure that no bubbles appear on any seam. Contact your local representative if pressure test fails.



35. Document the results of the pressure test and have the on-site inspector witness and sign the documentation.



36. Cut off the fusion wire from the sleeve and grind the area flush with the sleeve/jacket. Remove the air test gauge.



37. Use 80 grain emery cloth to abrade the area around the test hole.



38. Use Isopropyl Alcohol to clean the test hole and the fusion plug.



39. Turn on the socket fusion welding machine and let the unit heat up. The unit is hot when the green "RDY" light is illuminated.



40. Thread the fusion plug into the plug tool.



41. Holding the fusion machine in one hand, insert the male end of the machine into the test hole and insert the fusion plug into the female end of the machine.



42. Apply downward pressure until an 1/8" bead of HDPE is seen around the edge of the plug and the test hole. Adjust the orientation of the fusion machine to ensure a bead around both items. This will be approximately 2 minutes.



43. Remove the fusion machine and press the fusion plug into the test hole with downward pressure until the plug is flush with the HDPE jacket. **DO NOT PRESS FURTHER THAN THE SURFACE OF THE JACKET.** Hold the plug in-place for 15 seconds while the HDPE fuses.



44. Leave the plug tool in place for 1 minute before unthreading from the plug.



45. (ERM Only) Check the leak detection wire for isolation and continuity per the supplemental instructions. Use a paint pen to initial and date the joint closure.

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