



COSMOIND USA



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**Electro Fusion
Joining Manual**

COUPLING

■ Electrofusion Joining Manual

– Coupling installation

A. Wash the end of the pipe to remove mud, dust or other debris. For more information, refer to the “Cleaning” of Pipe handling section of this manual. For this initial cleaning, the end of each pipe should be marked and cleaned with an area two to three times the length of the electrofusion coupling. Water and clean cloth are available for this step. Dry the pipe and remove any embedded material on the pipe surface by inspection.



B. Cut the end of the pipe into squares. Pipe cutters are preferred.

C. Mark the end of the pipe at least twice the length of the coupling. This mark indicates the length limit of the cleaned pipe surface that should not be exceeded during wiping with alcohol in later steps. The purpose of this mark is to prevent wipe from contacting the surface of the uncleaned pipe and contamination from spreading to the surface of the pipe that has already been cleaned. Clean this area with isopropyl alcohol and wipe in one direction only to avoid crossing the boundary of the marked area. Allow the pipe to dry. Discard the wipe and do not reuse.





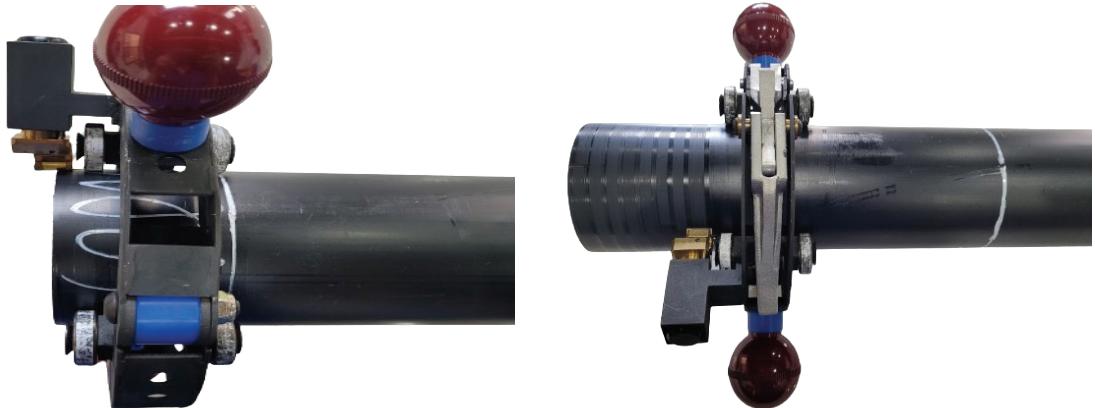
D. Make a second mark 1/2 inch longer than stab depth to be fused, based on the bagged fitting or using a tape measure. This mark indicates the length of the scrape or peel to ensure that only the peeled or scraped pipe touches the coupling inner surface. It is recommended to scrape or peel off slightly longer than required length as visual evidence of inspection.



E. Scribe witness marks on the pipe surface or mark the area to be scraped or peeled in a criss-cross pattern.



F. Remove the pipe surface layer by scraping or peeling to expose the clean virgin pipe material. Break shavings or remove them as needed to prevent them wrapping around the scraped or peeled pipe surface.



G. Thoroughly inspect the scraped or peeled pipe surface to ensure all marks are removed and only virgin pipe surface is exposed. Remark the stab depth onto the pipe end. This mark provides a visual indication that the end of pipe is fully inserted into the center of coupling.



H. Insert the end of pipe into the coupling, up to the stab depth mark. Secure the pipe and fitting assembly to the alignment clamp.



I. Connect the control box leads to the fitting, verify that the proper fusion time and voltage are displayed on the control box, and fuse the joint. Do not leave the fusion unattended.

J. Do not move or disturb the joint for the minimum cooling time indicated in the control box after the fusion cycle has been completed. The control box can be disconnected from the fitting at this time. Mark the amount of time the clamp can be removed. Mark the joint location with any other information required by the pipeline owner.

K. Pressure test and backfill only after the minimum cooling time required for the fittings has been reached.