



BROUGHTON PLANT HIRE & SALES

A division of Michael Broughton Ltd

Electrofusion Installation Procedures:

1. Wash pipe ends to remove mud, dirt and any foreign material.
For initial cleaning, ensure an area at least two times the Length of the electrofusion fitting is marked and cleaned on each pipe end.
Water and a clean cloth can be used for this purpose, or pre-weld wipes are also available.
Dry the pipe and inspect - remove any embedded material on the pipe surface
2. Ensure pipe ends are cut squarely (Pipe cutters are preferred) Where manual saws are used, ensure you refer to any cut angles from specific fitting manufacturers' that might be applicable to the make and size of pipe to be fused
3. Mark each end of the pipe at least two coupling lengths on each end. This mark is to Indicate the cleaned surface length that shouldn't be exceeded when cleaning – wiping in later steps. This step will help prevent the wipe from contacting unclean pipe surfaces, thus preventing the spread of contaminants onto the cleaned pipe surface (**Clean this area with suitable Isopropyl alcohol, wiping in one direction, without exceeding the boundary of the marked area. Allow the pipe to dry, discard the wipe and do not re-use**)
4. Using a measure or bagged fitting as a reference, make a second mark, slightly more than 50% of the coupling length that is being installed. This mark is to indicate the scrape or peel length needed to ensure that only peeled-Scraped pipe will contact the coupling internal surfaces when properly inserted (**it is good practice to scrape-peel a little more length than needed, as visual evidence of pipe preparation, for Inspection purposes after the pipe is inserted into the coupling**) where a coupling is to be pushed completely over the pipe on one pipe end, ensure the equivalent of the coupling length is peeled -scraped on the pipe end.
5. Scribe witness marks onto the pipe surfaces, or alternately, mark the area to be scraped – peeled in a criss-cross pattern
6. Scrap-peel the pipe to remove the surface layer to expose the clean pipe material. Break shavings or guide away as required, to prevent them wrapping around the scraped-peeled pipe surface
7. **Inspect the scraped-peeled pipe surfaces thoroughly** to ensure that all marks are removed and that only virgin pipe surface is exposed. **Re-mark the stab depth** at $\frac{1}{2}$ the coupling length onto the pipe end. This will serve as a visual indicator that the pipe has been fully inserted to the coupling centre.
8. **Insert the pipe ends into the coupling to the stab depth marks. Securing the pipe and fitting assembly in an alignment clamp.**
9. Ensure any open ends of pipe are capped to prevent excess air being sucked into the chamber during the weld cycle as heat builds, as any excess oxygen would fan any flames, if any failures in the welding process occur
10. **Connect the control box leads to the fitting, verify proper fusion time and voltage is displayed by the control box and fuse the joint.** Do not leave the fusion process unattended
11. After the fusion cycle is complete, do not move or disturb the joint, and allow the minimum cooling time displayed on the control box to elapse. Mark the joint with any other info' Required.
12. **Pressure test and back fill only after the required minimum cooling time has elapsed for the Fitting.**