ELECTROFUSION PROCEDURE GUIDELINES

1. Cut the pipe square and remove burrs. Check pipe end for damage, correct O.D. and ovality and wipe away loose dirt.
2. Without removing the protective wrap, place the centre of the electrofusion fitting alongside the pipe end and mark the pipe around the circumference, approximately 15mm past the end of the socket using a felt tip pen.
3. Using a pipe scraping tool, scrape the entire surface of the pipe over the marked area to a depth of approx 0.3mm, preferably as a continuous ribbon or strip.

   Note: The use of mechanical scraping tools is recommended as hand scraping requires great care and can be time-consuming especially on larger diameter pipes. It is essential that material is removed by scraping or peeling; scratching or abrading is not sufficient, and will affect joint integrity.
4. Using disposable isopropanol welding wipes, clean the scraped area of the pipes (and the inside of the fitting if required). Once scraped and wiped do not touch the cleaned ends of the pipe or the inside of the fitting with your hands or rags. Ensure that pipe and fitting are completely dry before assembling fitting. Do not use any other cleaning fluid, primer or solvent.
5. Good practice is to cut one side of the bag around the fitting, check that the inside of the fitting is clean and dry and insert the first scraped pipe end. Leave the bag over the fitting whilst you scrape the second pipe end to protect fitting from contamination. Then remove bag and insert second pipe into the fitting. If fitting is a very tight fit and has to be tapped on, take care to keep the fitting square as the windings can be damaged. Alternatively, scrape pipe again.
6. Ensure the pipe ends are in contact with the centre stop and then put a witness mark at both ends of the fitting.
7. For all socket electrofusion fittings, (couplers, reducers, elbows, and tees) clamps must be used. The clamps must be adjusted to suit the particular size and type of fitting being welded so the pipes cannot move during the fusion cycle. If possible, rotate the fitting to check that the pipe ends are correctly aligned. If pipe is out of shape, re-rounding clamps should also be used.
8. If using a generator, check that there is sufficient fuel in the generator to complete the joint. Start the generator and check for correct operation.
9. Turn on the welder and connect the ECU output leads to the fitting terminals.
10. Operate the ECU according to the instructions, which should be carefully read and understood prior to any welding operations. The ECU will either have some form of automatic operating system or require manual operation. Whichever system the ECU uses, all fittings are marked with fusion time and cool time in seconds plus the necessary input voltage.
11. Once the weld is complete and the machine has stopped, remove the leads to the fitting, taking care not to disturb the fitting. Visually check the fitting to make sure the two rising melt indicators have come out (usually min. of 3mm) and that the pipe has not moved during the weld. Allow the full cool time to elapse before removing clamps or moving pipe. The last join should have completely cooled down before the pipeline is pressurized.

NB: Electrofusion fittings should be left in the protective bag until needed and must not be left in direct sunlight.