

The Do's and Don'ts of Electrofusion Jointing

Pre Jointing Checks

- Always use equipment that is in good condition, regularly maintained and within its calibration/service period if appropriate.
- Mechanical scraping tools should be used whenever possible, the cutting tips should be regularly inspected and swapped when worn.
- Check that you have the correct positioning clamps, they are complete and in good condition.
- Ensure that all tools and equipment are appropriate for the complete range of pipe sizes being joined.
- Check that you have somewhere clean and dry to place tools and equipment during the jointing process.
- When taking power from a portable generator, ensure that it is running correctly and has sufficient fuel to complete the fusion and cooling cycle.

Do's

- Fully understand the process of electrofusion (refer to pipe and fitting/equipment manufacturers' guidelines if in doubt).
- Use weather shelter and groundsheet to protect components being joined from contamination.
- Use pipe end covers where possible.
- Always enter your details into the fusion welder if the box requests this, your operator code and job reference will allow full traceability.
- Always use positioning clamps and pipe end re-rounding tools to correctly prepare and assemble the joint.
- Ensure the welder output voltage is compatible with fitting.
- Ensure pipe and fittings to be joined are compatible with each other.
- Before assembling socket joints, cut pipe ends as square as possible, preferably using a mechanical pipe cutting device, ensure both pipe ends are "stabbed" fully into the socket and make contact with the fitting centre register.
- Fully scrape the pipe or spigot ends to be joined using a mechanical scraping tool, the scraped length must exceed the insertion depth of the pipe, hatching the pipe surface to be removed with a marker pen helps to ensure complete removal.

- Keep scraped surfaces clean and where possible assemble the joint immediately after scraping.
- When using Fusamatic fittings in the automatic mode, ensure that the fusion welder is Fusamatic capable, and the polarity of the output lead connector plugs are correctly connected, i.e. Red plug to Red pin.
- Ensure that the fusion weld time shown on the welder display matches the fusion time shown on the fitting or packaging, if they are different discontinue the weld, replace fitting with new bagged fitting or input fusion time manually.
- It is permissible for the time shown on the fusion welder display to be slightly different from the time shown on the fitting or packaging.
- Ensure that the correct fusion time and cooling time are adhered to.
- Ensure that the fusion indicators have risen by completion of the weld cooling time, if not cut out the weld and repeat. Drilling or cutting through a fitting or pipe should only be carried out following required quality inspection and pressure testing.

Don'ts

- When using a portable generator, never start the engine with the fusion welder power lead connected to the power output sockets.
- Do not commence an electrofusion joint unless it can be completed without interruption.
- Do not attempt to use a fusion welder within an excavation.
- When working within U.K. specification WIS 4-32-07 under no circumstances should a second fusion cycle be attempted on any fitting.
- Incomplete, interrupted, failed or aborted fittings should always be cut out, bagged and recorded for submission to a supervisor for inspection.
- Do not use dirty, contaminated or fittings from split or torn bags, or touch previously prepared surfaces.
- Do not leave fittings out of their protective bags or remove them from their bags until immediately prior to use.
- Avoid previously prepared surfaces from becoming wet or damp
- Do not remove clamps from fittings until the cooling time has elapsed.
- Do not remove integral cutters from self-tapping saddles once the connection has been drilled