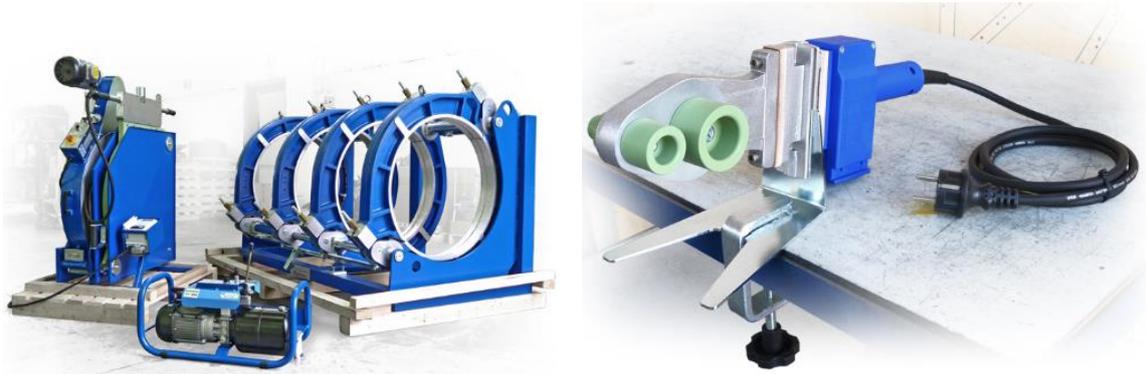


Butt fusion-welding vs Socket Fusion



The success of a pipeline is largely dependent on the jointing method used. Jointing methods used is selected based on a number of factors including the type of material used, the application of the pipe system as well as the specialised skills available.

Each jointing method has a range of advantages and disadvantages associated with it.

Understanding the details of these methods is important in making a decision and being able to weigh up the pros and cons.

In this article we will be unpacking the intricacies off butt-welding and socket fusion that should be taken into consideration when selecting jointing methods

What is butt fusion-welding?

Butt fusion welding is one of the more common methods used for the joining of pipes. Butt fusion welding is a thermo fusion process which involves the simultaneous heating of the ends of two components which are to be joined until a melt state is attained on each contact surface, thereby producing a permanent, economical and flow-efficient connection.



Weighing up the pros & cons of butt fusion welding



PROS	CONS
A weld can be made over the whole joint area in a range of section sizes and complex shapes	Butt weld is usually not self-aligning
Butt fusion welding can be used on thermoplastics materials	It is nearly impossible to butt weld very thin materials, due to the fact that aligning the faces properly is very difficult
The process is normally automatic or semi-automatic and process monitoring can provide an indication of weld quality	

What is socket fusion?

Socket fusion welding is a widely used technique for assembling plastics piping systems using injection moulded fittings. The process of socket fusion operates on two simple processes that is a heating phase and a cooling/welding phase.



Why socket fusion as opposed to butt-welding

Butt-welding	Socket Fusion
Uses a basic flat surface	Uses custom-shaped and sized heating plates

Joins pipe to pipe	Joins pipe and fittings together
Requires heavy equipment and bigger machinery	More portable and requires less machinery