

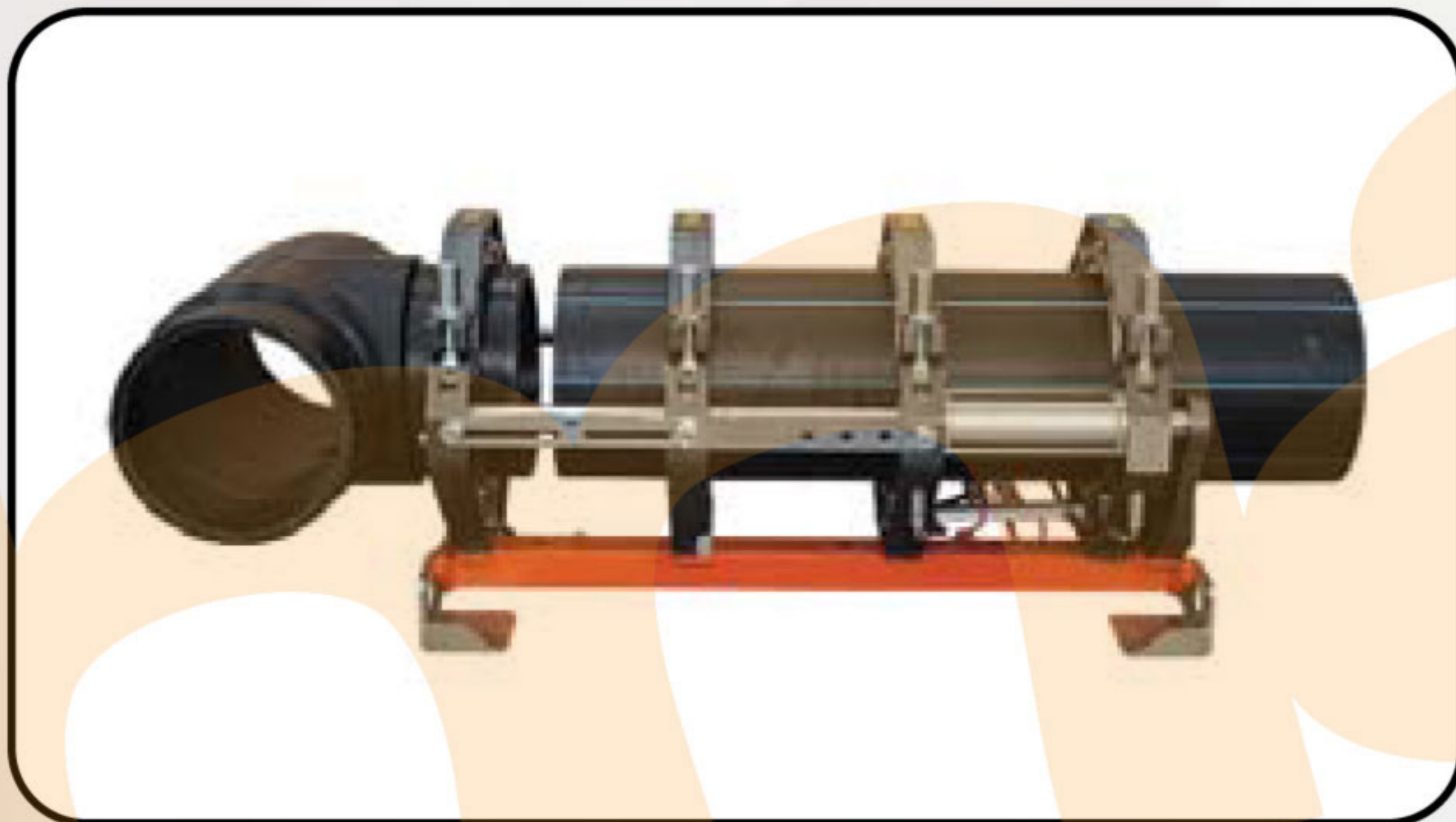
Different joining methods of PE pipes have been developed during the last recent years.

Butt fusion jointing

Fusion welded jointing is the most economically and more commonly used method for jointing pipes and fittings in the size range greater than 90 mm. however , only pipes and fittings of the same sizes, SDR rating and material may be jointed together using this technique.

That method requires an electrically heated plate to raise the temperature of the pipe ends to the required fusion temperature.

The mating surface of all heater plates must be kept clean to ensure good heat transfer.



Trimming tools are required to prepare the fusion faces of the pipe prior to heating and are usually an integrated part of the machine. The cutting edges should be maintained inclean and sharp conditions.

Heater plates should be replaced in clean muffs when not in use. Recent development of automatic butt fusion machines and fully retractable heater plates may reduce the risk of contaminating heater plate surface.

This is particularly essential when dual pressure welding machines are used.



Electrofusion jointing

Electrofusion jointing method may be preferred where butt fusion is impractical due to lack of space, for example.

Electrofusion fittings have sockets that contain electrical wires which, when connected to the appropriate power source, fuse the socket onto the pipe without the need for additional heating equipment. Electrofusion fittings are available in both PE80 and PE100 material.

The oxidised surface of the pipe over the socket depth is removed using a mechanical scraping tool. All the parts of the joint are kept clean and dry prior to assembly since any dirt can lead to failure.

Clamps are used correctly to ensure that nomovement of the joint can take place during the heating and cooling cycle.

One advantage of this type of jointing is the capability to weld pipes or fittings with different wall thickness (SDRs).



Compression jointing

This method applies mostly in irrigation and potable water system and its done by using PP compression fittings.



Flange connection jointing

PE pipes can be jointed to other pipes made of non PE materials wherever possible.

For transition from PE pipe to flanged metal fittings, either PE stub faced flanges with metal backing rings or mechanical flanged adaptors can be used.

The gasket and bolt length used should be appropriate to the particular adaptor and a care must be taken to ensure that the gasket is centered properly between the two flanges before tightening.

