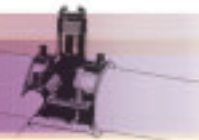


Installation Instructions

Joining **ELECTROFUSION** Fittings



 **PLASSON**®



Installation Instructions - ElectroFusion Fittings

Only authorized persons are to perform ElectroFusion welding. The following instructions are general and do not replace the required practice as given in the authorizing course.

The installation of the EF Fittings may have rules, regulations and requirements including those of the local installation company. It is the installer's sole responsibility to inquire as to the existence of such rules, regulations and requirements and to implement them fully.

IMPORTANT: Handling & Cleaning Pipe Fittings & General Points For Attention

- Prepare the pipe only immediately prior to installation
- Fittings are packaged in a protective plastic covering and should remain packaged until ready for use. This plastic covering can be used to hold fitting during installation to prevent contamination.
- Never store fittings in direct sunlight.

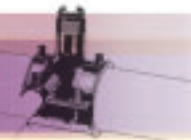


- Check that the pipe SDR is compatible with the Plasson fittings (If unsure, refer to Plasson literature or contact your local Plasson representative).
- Marking scraping length – Before scraping the pipe, measure the insertion depth of the fitting. Add 20mm to this measurement (in order to be able to check that the pipe has been scraped). This is the correct length to mark on the pipe, for scraping.
- To clean dirty pipes or fittings remove excess dirt with clean, non colored, dry and lint free cloth or paper towel. Thoroughly clean, non colored, dry and lint free cloth with authorized cleaner for ElectroFusion welding. Area must be dry before scraping.
- Avoid any possible recontamination of the prepared surfaces. Do not touch inside of fitting or scraped pipe surfaces with your hands. Use a shelter in wet/windy conditions.

- Cutting the pipe square and insertion pipe depth are extremely important. Failure to cut the pipe square or insert the pipe to the stops may leave the heating wire uncovered. This can lead to short circuit, overheating, uncontrolled melting and even sudden ignition.

Caution: The welding process should be performed in a gas-free environment only. Since the welding device is electronic, the possibility of ignition during the joining process does exist.





INSTALLATION STEPS

- 1 The pipe ends must have a square, even cut.
- 2 Remove any burrs or shavings from the pipe ends.
- 3 Clean pipe ends inside and out with authorized cleaner to remove any dirt or contaminants, and allow to dry.
- 4 Measure the insertion depth of the fitting. Add 20mm to this and mark this length on the pipe end.

- 5 Scrape pipe up to measurement mark to remove all oxidation and contaminants. Use preferably a Plasson Rotational Scraper. One pass (or approx. as shown in table) of pipe surface is to be removed. Do not use metal files or emery paper.



Clean with authorized cleaner and allow to fully dry before proceeding. Do not touch the prepared surfaces.



Note: Fittings spigot ends can be scraped and must be cleaned.

d	Scraping Depth
20 - 25	0.2 mm
32 - 75	0.25 mm
≥ 90	0.3 mm

- 6 Remove fitting from plastic bag. Slide fitting onto pipe until it reaches the center stops of the fitting. Check measurement mark for proper insertion depth. If the fitting cannot be correctly inserted on to the pipe due to ovality, the pipe will need to be re-rounded using rerounding clamps. Use a Plasson Rotational Scraper to reduce oversize pipe.
- 7 Repeat steps 1 through 6 for the opposite end of the fitting.

Installation Instructions

8 Maintaining correct insertion depth, place into the proper clamping tool to stop pipe movement and avoid stresses on the connection during the fusion cycle.



9 Block pipe ends to stop wind from blowing through the pipe

10 When fitting is properly clamped, follow the operating instructions supplied with the Control Box to complete the welding process. Plasson Fittings can be welded in the temperature range of -10°C to +45°C.



11 Ensure that the welding time shown on the Control Box (Fusamatic®, Barcode or Manual) is the same as that marked on the fitting. Plasson fittings have melt indicators. These will rise to indicate that fusion has taken place. They do not indicate the weld quality.



12 Remove the clamping device only after cooling time (as shown on the fitting) has elapsed.

13 Do not pressurize the system before the following times have elapsed:

d	minutes
20-63	20
75-110	30
125-140	45
160-180	70
200-250	80
280-355	90
400-560	150



Installation Instructions - ElectroFusion Saddles

The Plasson Tapping Saddles have a patented under-pressure leak tight tapping system.

Cleaning & Preparation Instructions

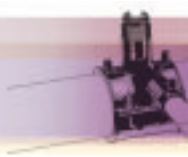
- 1 Clean with authorized cleaner to remove dirt and contaminants and allow to fully dry.
- 2 Mark area on the pipe where saddle is to fit – at least 150mm in length. Mark a center line. Mark lines on the pipe surface, perpendicular to scraping direction, 20mm beyond the saddle surface. Scrape pipe surface preferably with Plasson Rotational Scraper for one pass or to a depth of about 0.3mm.



Marking for rotational scraper



When using hand scraper - make long, even scrapes starting from outside the marked area to avoid "cratering" in the fusion zone, until all marks are removed. Approx. 0.3mm of pipe surface should be removed. Do not use metal files or emery paper. Clean with authorized cleaner and allow to dry.



Installation Instructions

- 3 Remove saddle from bag and fit to scraped clean pipe surface. Equally tighten nuts until saddle upper and lower parts abut (for saddles with straps, the metal bar should meet the upper part). Use a deep socket key to tighten nuts for dimensions 180 and smaller.
- 4 When saddle is properly clamped, follow the operating instructions supplied with the Control Box to complete the welding process. Plasson Saddles can be welded in the temperature range of -10°C to +45°C.
- 5 Ensure that the welding time shown on the Control Box (Fusamatic[®], Barcode or Manual) is the same as that marked on the saddle. Plasson Saddles have melt indicators. These will rise to indicate that fusion has taken place. They do not indicate the weld quality.

- 6 Do not pressurize the system with Branch Saddles or cut the hole in the pipe with Tapping Saddles before the following times have elapsed:

Tapping Saddle, Branch Transition, Balloon Saddle and Tapping Valve

d	minutes
40 -180	20
200-250	30

Branch Saddle Outlet $d \geq 90$

d	minutes
90 -160	25
180-250	30



Operation of Gas Tight Cutter in Plasson ElectroFusion Tapping Saddle

1 Assemble and fuse branch fitting according to socket fittings instructions (on page 3). Allow to cool for the time shown on the fitting label.



2 Ensure that the white sleeve is in position by pushing and twisting it. Insert the hex key into the white sleeve and turn it counter clockwise until the cutter reaches the upper stopper.



Remove the hex key and carry out the branch outlet pressure test (follow the installation company procedures). Ensure that the saddle or branch outlet fitting has cooled sufficiently (refer to the following table), or 20 minutes from the time the branch fitting was welded, the later of them:

d	minutes
40 -180	20
200-250	30

3 CUTTING THE HOLE – Insert the hex key into the white sleeve and turn it clockwise until the sleeve shoulder reaches the top of the barrel.



Installation Instructions

- 4 WITHDRAWING THE SLEEVE** – Turn the key counterclockwise until the cutter reaches the upper stopper. Remove the hex key and then the white sleeve, using a twisting motion.

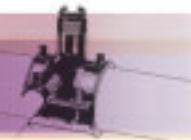


- 5** Tighten the cap until it is firmly locked.

NOTE: The cap can be opened only by using a pipe wrench



**THE BEST
NEVER REST**



Operation of Cutter in Plasson ElectroFusion Tapping Valve

- 1 Follow the Saddle Installation Instructions as shown on pages 6-7.
- 2 Carry out the branch outlet pressure test (follow the installation company procedures) after the following cooling time has elapsed:

d	minutes
40 -180	20
200-250	30

- 3 To perform the tapping, turn the spindle* clockwise until a resistance is felt and keep turning until the resistance drops significantly (the tapping through the pipe is now done), keep turning until a second resistance is felt, the valve is now closed.

*Spindle dimension is 14 mm square, use a suitable spanner.

- 4 To open the valve, turn the spindle counterclockwise to the valve top position (a significant resistance will be felt at this point) and turn back about 1/2 a turn.

NOTE: The number of turns between closed and fully open positions is approximately 32.





NOTE:

A large area for handwritten notes, featuring a white background on the left and a light orange background on the right, separated by a curved boundary. The area is filled with horizontal dotted lines for writing.



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