

The **VARIABLE LENGTH REPAIR SLEEVE (EIVLRS)** is a modular system of electrofusion shells that can be installed contiguously and welded on pipes that have notches, scrapes or damage along the axis.

The standard assembly has 2 modules (identified as EIVLRS **I** and EIVLRS **T**): between them it's possible to add the necessary number of additional middle modules (identified as EIVLRS **M** - also separately available).

Use this instruction in case of 3 or more modules needed.

THE INSTALLATION OF THE EIVLRS NEEDS TO BE DONE UNDER THE FLOW OF GAS.

If this can not be guaranteed (end of line, branch to single users, etc.) the pressure must be reduced to a maximum of 7 PSI.

The maximum network pressure allowed to weld the fitting on the pipe depends of the polyethylene grade and SDR of the pipe.

⚠ Don't weld the fitting on a pipe with SDR higher than 11 .

POLYETHYLENE GRADE	PRESSURE*
PE4710 PE100 - SDR11/9/7	60 psi
PE3408 PE80 - SDR11/9/7	60 psi
PE2708/2406 - SDR 11/ 9/7	60 psi

* maximum pressure operating during the welding



1 Measure and mark the length of the damage of the pipe and calculate the appropriate number of sleeve modules to completely cover it.



2 Measure the total length of the sleeve modules and mark it on the pipe, near the damage. **Minimum distance required for the fitting to extend beyond the damaged area: 2.36" (60mm).**



3 Scrape the part of the pipe where the variable length repair sleeve will be welded, over and all along the damage to be repaired.

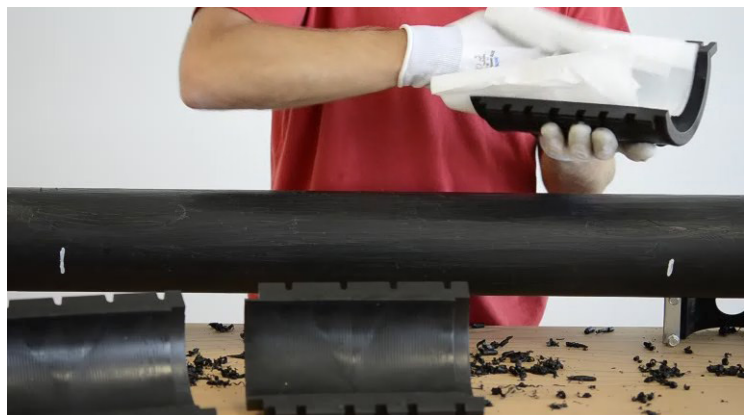
Use a hand scraper: scrape the pipe at 180° across the damage. Scrape 0.4" beyond the marked line. Mechanical scrapers can be used provided there is no risk to extend the damage further.

⚠ TAKE CARE NOT TO DAMAGE THE PIPE FURTHER.



4 Clean the scraped part of the pipe and the welding areas of the sleeve modules with isopropanol and a soft wiping cotton cloth with no printing; wait until the clean parts are completely dry.

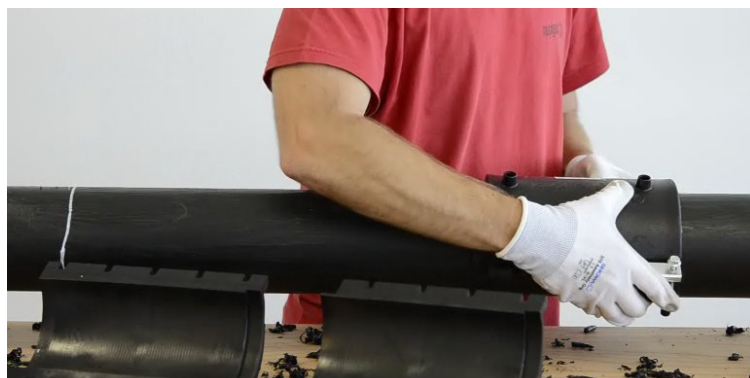
⚠ DO NOT USE ALCOHOL OR ACETONE.



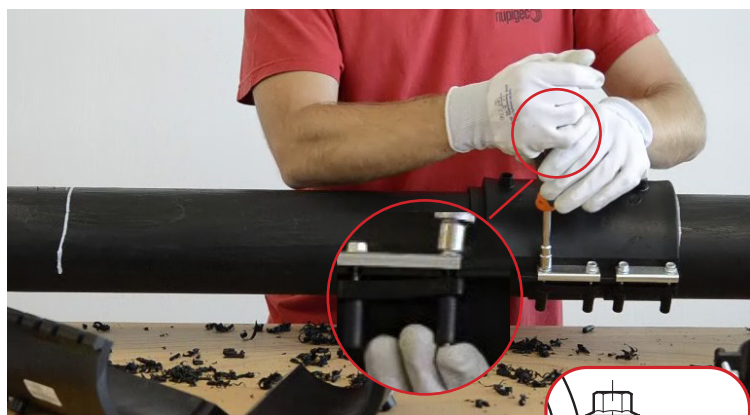
5 Mark on the scraped pipe a distance equal to the whole length of the assembled sleeves, so that the damage is well centered and surrounded. Take care not to contaminate the previously cleaned surfaces.



6 Install each single module separately on the pipe, starting from one end of the scraped area: place the EIVLRS **I** module on the pipe and align it to the marked line.



Place the first underclamp on the very end of the assembly: hook the square holes of the underclamp to the teeth on the side of the module; align the two screws to the corresponding holes, line up the metal spacer and use a wrench to tighten the two screws until they are in position **A** in the lower part (feel the screws sticking out of the bottom - see figure in the circles below). Repeat the operation with the second underclamp in the consecutive position.



7 If the middle modules EIVLRS **M** aren't necessary, skip to Step 10, otherwise proceed to the following Step 8.

8 Place the middle module EIVLRS **M** on the scraped pipe, next to the previous one just installed: the lip at the end of the module must overlap the protruding edge of the previous one (see figure in the circles below). Install the first underclamp across the two adjacent modules (follow the instruction on Step 6). Then install the second underclamp in the consecutive position (follow the instruction on Step 6).

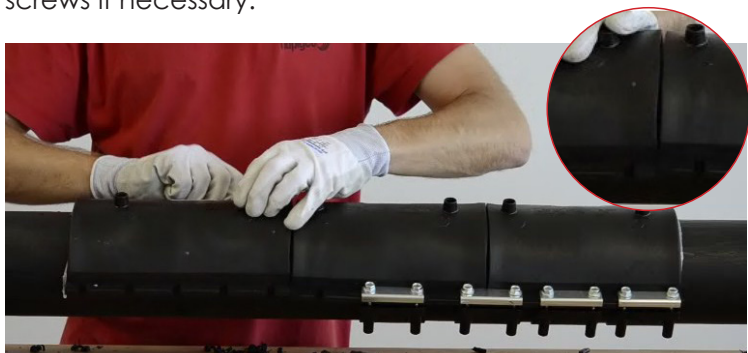


9 Repeat the instructions on Step 8 for all the necessary middle modules **EIVLRS M**.

⚠ IN CASE OF 4 OR MORE MODULES, PLEASE CONTACT THE SUPPLIER FOR WELDING ASSISTANCE.

10 Place the terminal module **EIVLRS T** on the scraped pipe, adjacent to the previous one just installed: the lip at the end of the module must overlap the protruding edge of the previous one. Install the first underclamp across the two adjacent modules (follow the instruction on Step 6). Then install the second and third underclamps in the consecutive positions (follow the instruction on Step 6). The terminal module **EIVLRS T** must always be the final module installed.

Before proceeding to Step 11 verify that all the underclamps are properly tightened (feel the screws sticking out of the bottom); eventually use a wrench to tighten the screws if necessary.



✓ BEFORE BEGINNING THE WELDING SEQUENCE, ALWAYS CHECK THE RELIABILITY OF THE POWER SUPPLY SYSTEM, TO MAKE SURE THERE ARE NO INTERRUPTIONS DUE TO LACK OF POWER.

✓ THE FITTINGS REQUIRE 4.0 mm CONNECTORS.

⚠ DON'T WELD IN CASE OF GAS OR WATER LEAKAGE

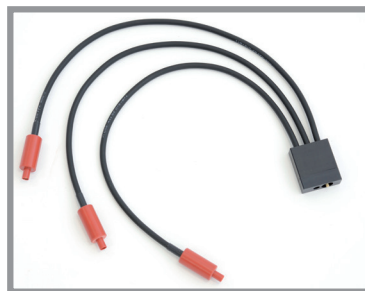
⚠ KEEP AT A SAFE DISTANCE DURING WELDING.

⚠ PERFORM WELDING ONLY IN AUTOMATIC MODE THROUGH BARCODE SCAN: DO NOT PERFORM WELDING IN MANUAL MODE.

⚠ ALWAYS CHECK THE WELDING PARAMETERS ON THE DISPLAY.

TOOLS (not included):

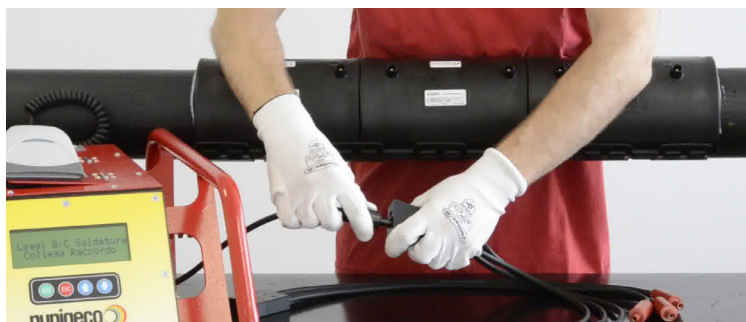
RED TRIPLE CABLE



BLACK TRIPLE CABLE



11 Connect one cable of the electrofusion machine to the connector slot of the black triple cable.



12 Connect each connector of the black triple cable to the first pin marked "A" of each module.



13 Connect the other cable of the electrofusion machine to the connector slot of the red triple cable.



14 Connect each connector of the red triple cable to the second pin marked "B" of each module.



15 Perform welding: scan with the optical pen the barcode on EIVLRS I module and proceed with welding.

⚠ IN CASE OF 4 OR MORE MODULES, PLEASE CONTACT THE SUPPLIER FOR WELDING ASSISTANCE.



16 After the welding cycle is positively completed, mark the actual time on the modules and disconnect all the cables.

⚠ IN CASE OF WELDING INTERRUPTION DUE TO LACK OF POWER, WAIT FOR THE FITTINGS TO COOL DOWN FOR NOT LESS THAN 1 HOUR, THEN RE-START THE WELDING CYCLE FROM THE BEGINNING.

17 Wait for the completion of the cooling time indicated on the barcode; then it's possible to move and bury the pipeline.

⚠ DON'T STRESS OR BURY THE PIPELINE BEFORE THE COMPLETION OF THE COOLING TIME INDICATED ON THE BARCODE.