

USE AND MAINTENANCE INSTRUCTION MANUAL

Machine type:

7125/LI

Serial number:

Year of manufacture:

2020

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Dear customer,

Thanks for having chosen this product! This instruction manual has been prepared in order to fully appreciate the high quality of our product. Inside you will find all the necessary information and warnings for a safe and proper use. We want to advise you to read it before proceeding with the operations. We are sure that it will be easier for you to become familiar with the new device and to use it for a long time with great satisfaction.

Cordially

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LIMITED WARRANTY

The manufacturer warrants all its manufactured, sold and repaired products to be free from defects in materials and workmanship.

The manufacturer obligation under this warranty is limited to free reparation or free replacement at its factory, within 2 years after shipment, except for purchased items by third parties (e.g. electronic devices, pumps, switches, etc.), in which case manufacturer's warranty is applied.

Warranty applies when returned freight is prepaid and when it can be proved, upon examination, that the item is defective.

This warranty does not cover damages to products or components repaired or altered by anyone other than the manufacturer, damaged due to misuse, negligence or causality, or not operated or maintained according to the manufacturer printed instructions and warnings.

This warranty is expressly in lieu of all other expressed or implied warranties.

RETURNS OF GOODS

Buyer agrees not to return goods for any reason, except upon the written consent of the manufacturer., obtained in advance.

The consent, if given, shall specify the terms and conditions and charges upon which any such return may be made.

For assistance, all inquiries shall be directed to the manufacturer.

DISCLAIMER OF LIABILITY

The manufacturer accepts no liability for fusion joints.

We recommend to follow qualified welding procedures using the fusion equipment.

The manufacturer makes no other warranty of any kind, whatever expressed or implied. All implied warranties of merchantability and fitness for a particular purpose, which exceed the foreseen obligation, are hereby disclaimed by The manufacturer.

PRODUCT IMPROVEMENT

The manufacturer reserves the right to make any changes in or improvements on its products without incurring any liability or obligation to update or change previously sold machines and/or accessories thereto.

GENERAL DESCRIPTION OF WELDING MACHINE

The machine is mainly composed by:



1 - BASIC MACHINE

The carriage assembly consists of one fixed jaw and two mechanically operated movable jaws.

It is composed by an aluminium support frame, suitably treated to be resistant to atmospheric agents, which acts as a guide, on which runs a slide to which it is firmly anchored in the fitting (pipe).

There is a switch that regulates the correct welding depth.

A device helps the extraction of the polywelder.

The machine has a device suitable to house the closing clamps that are interchangeable to each other depending on the diameter and the kind of pipe and / or fitting to be welded. In this way, it is possible to weld the most of pipes, fittings, reductions and bends on the market.

The movement of the machine is guaranteed from a dedicated tools or by hands for precise welding.

2- POLYWELDER

The polywelder is mainly constituted by handle and heating plate.

The handle is made in order to assure a comfort, safe and effective grip, thanks to the material used. It is able to absorb heat produced by the heating plate and assure a perfect solidity to the whole polywelder.

The heating plate is composed by an aluminium casting with a buried electrical resistance inside. It is equipped with a thermostat to keep the adjusted temperature.

The plate has different holes in which can be mounted the bushes through the supplied service keys and screws.

3 - SET OF BUSHES

The set of bushes is manufactured fully complying with the DVS 2208 standard. They are supplied in a painted steel box with relevant screws and fastening keys.

It is of great importance to keep bushes in good conditions in order to assure a perfect welding. For this purpose, always store bushes properly in their box when not used and at the end of any job, fastened in their proper housing to not damage them during transportation. However they should be cleaned before storing from further welding residual by using a soft cloth or paper.

Make bushes cleaning wearing anti-warm safety gloves, paying great attention. It is **ABSOLUTELY FORBIDDEN** using water for cleaning and / or cooling operation.

GENERAL WELDING CRITERIA – OPTIMAL USE

This welding machine is intended to weld pipes and / or fittings in thermoplastic material; any other kind of use is to be considered not proper and dangerous and shall absolute exclude the manufacturing company from any kind of responsibility.

The welding machine 7125/LI is adjusted to be used EXCLUSIVELY with the extractable polywelder 10125/TF with the bushes supplied as standard equipment; the use of any other kind of polywelder and / or bushes do NOT assure a correct welding; and shall absolute exclude the manufacturing company from any kind of responsibility.

The welding operation with the machine ART. 7125/LI is done inserting the pipe inside the fitting, after heating the outside part of pipe and the inner part of fitting for a stated period of time, by using the extractable polywelder 10125/TF with bushes.

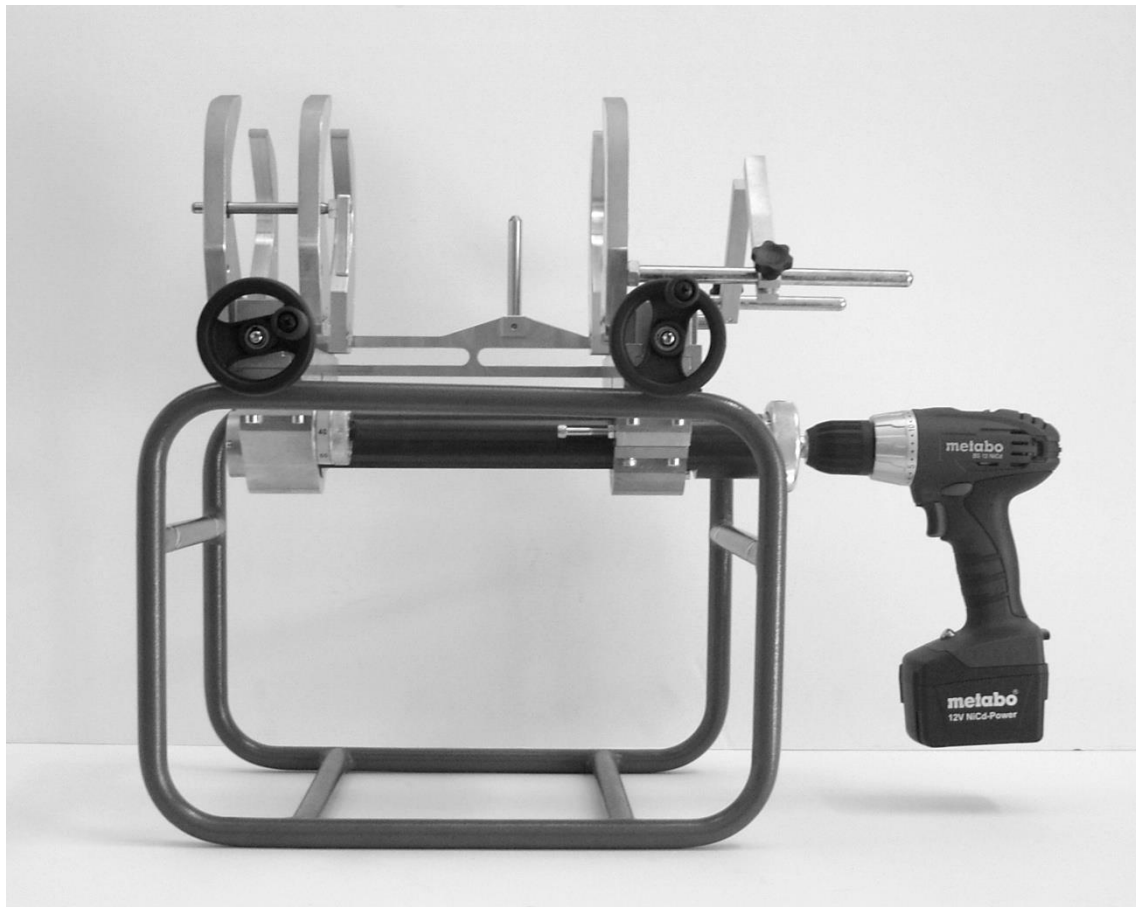
It would be good rule, before doing all welding operations, to check some matters:

- Carefully check the efficiency and the perfect running of safety device.
- Check the operation of the mobile parts, make sure they are not locked.
- Check that all parts of the machine are mounted correctly.
- Make sure that all conditions that could affect the normal operation of the machine and the welding are acceptable.


It is recommended to place the equipment to be able to operate freely and into the required time, in order to avoid wrong operations that could compromise the good welding result. It would be good rule to make some trial tests before proceeding.

TECHNICAL FEATURES:

Welding capacity:	Ø32 – Ø125
Weight with battery and yokes:	approx. 12.5kg
Weight complete set:	approx. 17.5kg
Outer dimension:	approx 455 x 390 x 265 mm
Length of machine:	approx 450 mm
Height of machine with yokes:	approx. 265 mm
Width of the machine with yokes:	approx 390 mm.
Max torque:	44Nm
Battery voltage:	12V/2 Ah
Battery loading time:	approx. 1h
Idle speed:	1200 min ⁻¹
Compression speed Ø125 mm:	< 9 sec.
Tool machine:	Makita or equivalent rotary hammer



SAFETY ALERTS

This hazard alert signal  appears in this instruction manual. When you see this signal, carefully read its meaning. YOUR SAFETY IS AT STAKE. The hazard alert signal is usually accompanied by these words: DANGER, WARNING and CAUTION.

DANGER Indicates a hazardous situation that, if not avoided, will result in death or seriously injury.

WARNING Indicates a hazardous situation that, if not avoided, could result in death or serious injury.

CAUTION Indicates a hazardous situation that, if not avoided, may result in minor or moderate injury.

In this manual you should pay attention to another word:

NOTICE Can keep you from doing something that might damage the machine or someone's property. It may also be used to alert against unsafe practices.



READ AND UNDERSTAND

Do not operate this equipment until you have carefully read and understand all sections of this manual, and all other equipment manuals which will be used with it. This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.



Children shall not play with the appliance.

Cleaning and user maintenance shall not be made by children without supervision.

Your safety and safety of other depends on care and judgment in the operation of this equipment.

Follow all applicable federal, state, local and industry specific regulations.

The manufacturer cannot anticipate every possible circumstance that might involve a potential hazard.

Warnings in this manual and in the machine are therefore not all inclusive.

You must satisfy yourself that a procedure, tool, work method, or operating technique is safe for you and others.

You should also ensure that the machine will not be damaged or made unsafe by the method of operation or maintenance you choose.

GENERAL SAFETY

Safety is important.

Report anything unusual that you notice during set up operation.

- LISTEN** for bumps, rattles, air leaks, or unusual sounds.
- SMELL** odors like burning insulation, hot metal, burning rubber, hot oil, or natural gas.
- FEEL** any changes in the way the equipment operates.
- SEE** problems with wiring and cables, hydraulic connections, or other equipment.
- REPORT** anything you see, feel, smell, listen that is different from your expectations, or that you think it could be unsafe.

WEAR SAFETY EQUIPMENT

Wear a hard hat, safety shoes, safety glasses and other applicable personal protective equipment.

Remove jewellery and rings and do not wear loose-fitting clothing or long hair that could catch on controls or moving machinery.



HEATER IS NOT EXPLOSION PROOF

⚠ DANGER

This heater is not explosion proof. Operation of heater in hazardous environment, without necessary precautions, will result in explosion and death.

If operating in hazardous environment, the heater should be brought up to a temperature in a safe environment, then **unplugged before entering** the hazardous atmosphere for fusion.



ELECTRICAL SAFETY

⚠ WARNING

Always ensure that power cords are properly grounded. It is important to remember that you are working in a wet environment with electrical devices. Proper ground connections help to minimize the chances of an electric shock.

Frequently inspect electrical cords and unit for damage. Replacement and service to damaged components have to be performed by a qualified electrician.

Do not carry electrical devices by the cord.

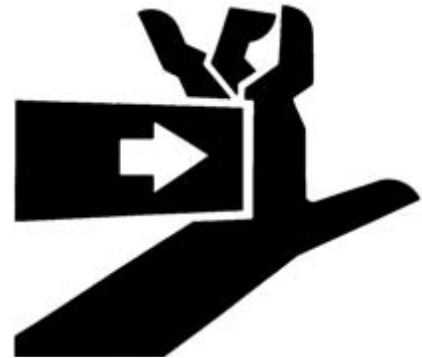
NOTICE: Disconnect the machine from the power source before attempting any maintenance or adjustment.



CRUSH POINTS

⚠ WARNING

Mechanical operated equipment generate very high force. Anything caught in the machine will be crushed. Keep fingers, feet, arms, legs, and head out of the machine while operating.



HEATER IS HOT

⚠ CAUTION

The heater is hot and will burn clothing and skin. Keep the heater in its insulated heater stand or blanket when not in use, and pay attention when heating the pipe.

NOTICE: Use only a clean non synthetic cloth such as a cotton cloth to clean the heater plates.



FUSION PROCEDURES

Obtain a copy of the pipe manufacturer's procedures or appropriate joining standard for the pipes welding. Follow the procedures carefully, and adhere to all specification parameters.

⚠ CAUTION

Failure to follow pipe manufacturer's procedures could result in a bad joint. Always follow pipe manufacturer's procedures.



OVERVIEW

WHAT IS HEAT FUSION

The principle of heat fusion is to heat two surfaces to a designated temperature and then fuse them together by application of force.

This pressure causes flow of the melted materials, which brings on mixing and so the fusion.

When the PP-R material is heated, the molecular structure is transformed from a crystalline state into an amorphous condition.

When fusion pressure is applied, the molecules from each PP-R part mix.

As the joint cools, the molecules return to their crystalline form, the original shapes are changed, and the fitting and pipe have become one homogeneous unit. The joint area becomes as strong as the pipe itself in both tensile and pressure conditions.

The principal operations for the optimal fusion include:

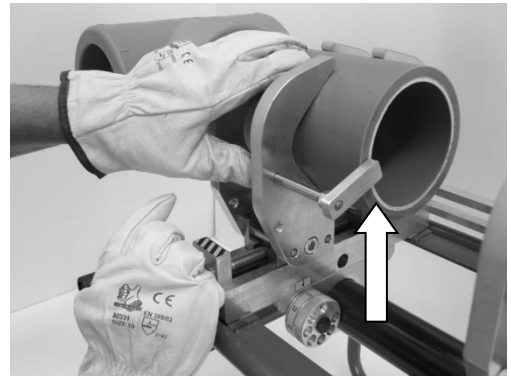
- | | |
|-------------------|---|
| Cleaning | The area of pipe that will come in contact with the fitting must be cleaned. |
| Aligning | The fitting must be properly seated on the pipe for correct alignment. |
| Heating | A rim of melted material must be formed both on the pipe and the fitting. |
| Joining | The pipe and the fitting must be joined and the pipe has to be fully seated within the fitting. |
| Holding | The molten joint must be kept immobile until it has cooled adequately. |
| Inspection | Visually examine the entire circumference of the joint for compliance with standards established by the company, customer, industry, federal, state or local regulations. |

OPERATION

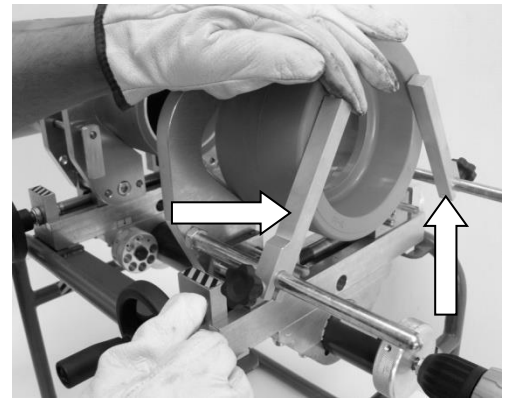
LOADING PIPE AND FITTING INTO MACHINE

Clean the inside and the outside of pipe ends and fitting that are to be fused.

Insert the pipe and adjust the position with appropriate tool.



Insert the fitting in the other side of the machine. Place the proper locks at the end of the fitting, to ensure stability.



HEATER IS NOT EXPLOSION PROOF

⚠ DANGER

This heater is not explosion proof. Operation of heater in hazardous environment, without necessary precautions, will result in explosion and death.

If operating in hazardous environment, the heater should be brought up to a temperature in a safe environment and then **unplugged before entering** the hazardous atmosphere for fusion.



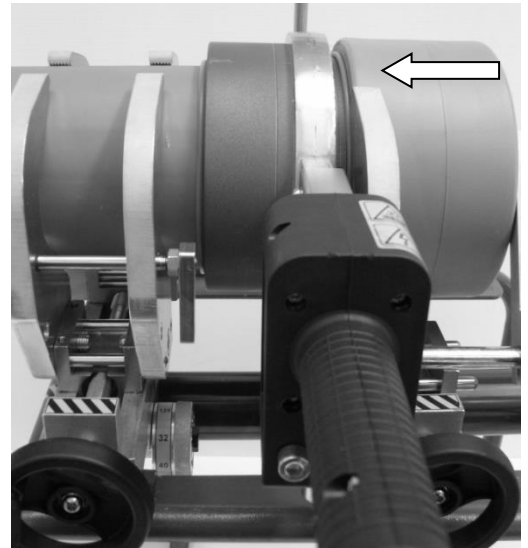
HEATING THE PIPE AND FITTING

Fit the polywelder between pipe and fitting and start to put towards the yokes acting on rotary hammer.

⚠WARNING

Mechanical operated equipment generates very high force. Everything caught in the machine will be crushed. Keep fingers, feet, arms, legs, and head out of the machine while operating.

The heating up time starts after that the required welding depth is reached. The heating up time changes against the diameters and it is indicated into the instructions manual of the pipe manufacturer.



REMOVE HEATER

After the heating time is reached, the welding machine has to be opened speedily and the polywelder has to be taken out quickly.

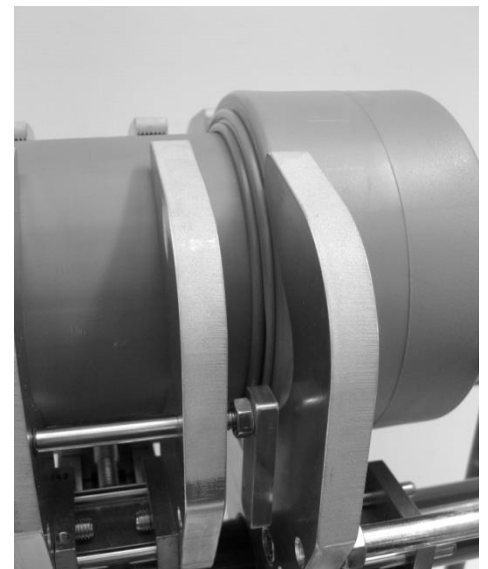


FUSION AND COOLING

Close the machine speedily up to heated up pipe end reaches the heated fitting socket. Then push slowly pipe and fitting together up to welding depth is reached. The welded connection can be taken out after the cooling downtime is reached, see pipes manufacturer instructions,.

After completing the pipe manufacturer's specified cooling time, inspect the joint. A good joint will have a uniform melt ring perfectly perpendicular to the pipe.

NOTICE: There should be no gaps or voids between the fitting and the pipe.



SCHEDULED MAINTENANCE

The scheduled maintenance operations are listed as follows:

- Completely clean the machine at the end of any job, especially if the welding is long.
- Check the PTFE covering of the bushes. The surface should be homogeneous without scratches, otherwise bushes should be replaced to assure a good welding.
- At the end of each job, (with the instrument still warm), clean the bushes using a cloth or soft paper; completely remove any further residual of effected welding. This operation should be done carefully wearing anti-warm protection gloves.
- IT IS ABSOLUTELY FORBBIDDEN TO use water for cleaning and/or cooling operation.

In order to make the maintenance operations is required:

- Properly insulation of the electrical plant of the polywelder; UNPLUG THE FEEDING CABLE FROM THE ELECTRICAL SUPPLY.

CONTRARY DIRECTION IN USING THE MACHINE

The welding machine 7125/LI was designed and manufactured for socket welding of pipes and / or fittings in thermoplastic material and for stated dimension of them. So, it should NOT be used for jointing other materials or for any other uses.

INCONVENIENCE AND SOLUTION

INCONVENIENCE

The polywelder does not work.

SOLUTION

Check that:

1. The electric plant is connected and comply to the technical features of the machine.
2. Switches at the beginning of the plug and on the machine are closed.
3. The electric plant is not averaged; if needed, make the plant checked by qualified personnel.

DISPOSAL

As the machine is manufactured by normal metal material, in case of scrapping, it will be needed only to deliver it to an authorized scrapping component separating centre.

Components that comes with the picture shown here at the right side, meaning waste of electric and electronic equipment, have to be disposed separately by authorized collection.

