# INSTRUCTIONS MANUAL FOR USE AND MAINTENANCE

**MOBILE PRESS**
**PM 305**

**INDEX**

# 0 INTRODUCTION

This manual contains instructions for the use and maintenance of the machine:

Habasit Italiana spa

## Mobile press PM 305

Strict observance of the instructions in this manual ensure operation of the machine in safe conditions.


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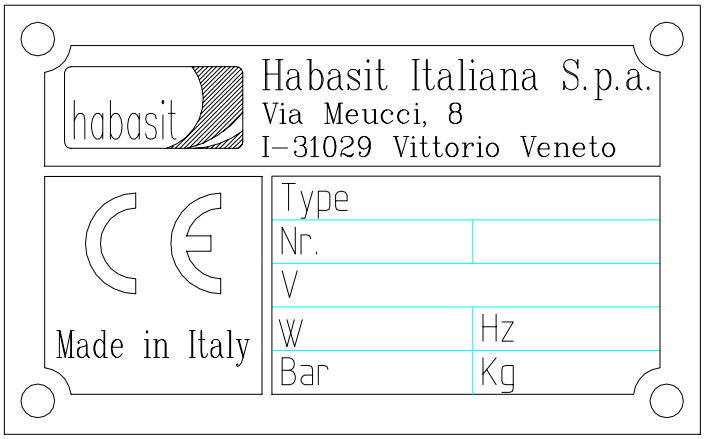
HABASIT Italiana S.p.A. declines all responsibility for damage resulting from negligence or failure to observe the instructions.

# 1 MACHINE IDENTIFICATION

| | |
|---|---|
| **Type/Model** | MOBILE PRESS |
| **Series** | PM 305 |

## 1.1 ID AND CE MARK PLATE

The data plate shown below is attached to the machine:




The plate MUST NEVER BE REMOVED for any reason whatsoever. The machine can not be sold without its data plate.

## 1.2 CE CONFORMITY DECLARATION

In order to fulfil European Directive 98/37/CE HABASIT Italiana S.p.A. provides with the machine a declaration that:

- the machine is the one described (model, series, year of manufacture);
- the machine complies with the directives and relevant standards;
- the machine carries the obligatory **CE** mark plate.

# 2 SAFETY AND ACCIDENT PREVENTION

## 2.1 MANUAL

This instructions manual is consigned together with the machine, of which it forms an integral part. It must be kept and made available to personnel who must install, use and maintain the machine. This machine cannot be sold without the manual.

For the safety of those operating the machine, the following signs are included in the text. The operator is obliged to know their meaning.

**Before using the machine, carefully read the instructions in this manual.**


**This sign warns that the operator must carry out the operations Described properly, otherwise s/he will run the risk of damage or injuries which could have serious consequences on his/her safety.**


**This sign warns that the machine could be damaged if the operator does not take care to carry out the operations described properly.**

## 2.2 WARNING SIGNS

The following signs are attached to the machine to indicate the situations described:

**THE USE OF PROTECTIVE GLOVES IS COMPULSORY**.

**BURN HAZARD**

**CRUSH HAZARD FOR HANDS**

**ELECTRIC SHOCK HAZARD**

# 3 PURPOSE OF THE MACHINE

## 3.1 USE FORESEEN

The mobile press is designed and built to carry out hot welding of Habasit belts and strips, using the Thermofix and Flexproof systems.

The instructions in this manual cannot contemplate all the possible uses of the machine or mainte nance and repair operations.


**The PM 305 mobile press has been designed, dimensioned and built exclusively for the purpose described above. The manufacturer cannot be held responsible for damage to people and/or things due to improper use.**

If you are in doubt or require further details, contact the manufacturer.

THE MACHINE IS NOT SUITABLE FOR USE WHERE THERE IS DANGER OF EXPLOSIONS.

## 3.2 GUARANTEE

The PM 305 press is guaranteed against manufacturing faults for a period of 12 months from date of purchase. All components have undergone strict final tests. If handled properly they are guaranteed for one year against faulty materials


The guarantee is no longer valid if the machine is used wrongly or differently from the way described in this manual.

**WRONG USE, NEGLIGENCE, POWER SUPPLY WITH DIFFERENT VOLTAGE OR ATTEMPTS TO REPAIR OR ALTER THE MACHINE BY UNAUTHORIZED PERSONNEL WILL NULL THE TERMS OF THE GUARANTEE.**

## 3.3 AFTER-SALES SERVICE

To request after-sales service or order spare parts, communicate the codes given in Section 11, SPARE PARTS.
Address requests to:

**HABASIT Italiana S.p.A.**
**Via Meucci, 8**
**31029 VITTORIO VENETO (TV)**
**Tel. 0039 0438 9113 – Fax 0039 0438 912374**

# 4 SAFETY INFORMATION

## 4.1 INFORMATION

Special safety stickers are attached to the machine. All operators must study them and learn the meaning of the symbols on them (**Section 2.2 "Warning signs"**).


**The safety stickers must never be removed, defaced or destroyed.**

# 5 FURTHER RISKS

The following are the further risks for this machine:

## 5.1 CRUSH HAZARD

When tooling the machine and fitting or removing the belt, the operator may be exposed to the risk of crushing his/her hands between the two press plates.

**It is compulsory for the operator to wear the protective gloves provided when tool ing the machine, fitting or removing the belt.**

## 5.2 BURN HAZARD

When tooling or regulating the machine, the operator may be exposed to the risk of burning his/her hands on the hot press plates.

**It is compulsory for the operator to wear the protective gloves provided when regulating the machine.**

# 6 MACHINE DESCRIPTION

## 6.1 TECHNICAL DATA

| Technical data | PM-305 |
|---|---|
| Belt/tape width max. | 300 mm. / 12 in. |
| Belt/tape thickness max. | 15 mm. / 0.6 in. |
| Heating plate width | 140 mm. / 5.5 in. |
| Power installed | 2 x 1800 W |
| Voltage at the regulating unit | 120 V~ / 230V~ |
| Pressure max. | 2.5 bar / 36.5 psi |
| Temperature max. | 199°C / 390°F |
| Temperature profile | ±3°C / ±6°F |
| Max. deviation temperature from nominal value | ±5°C / ±9°F |
| Heating up time to 120°C | 4 min. |
| Heating up time to 180°C | 7 min. |
| Continuous water cooling | Yes |
| Cooling time 180°C to 80°C | 2.5 min. |
| Dimension (LxWxH) including equalizing plate and clamping | 500x260x260 mm. 20x10.2x10.2 in. |
| Upper plate weight | 13.9 kg. / 30.6 lb. |
| Lower plate weight | 17.1 kg. / 37.6 lb. |
| Total weight press | 31 kg. / 68.2 lb. |
| Regulating unit weight | 6 kg. / 13.2 lb. |
| Total weight | 37 kg. / 81.2 lb. |
| Minimum weldable length | 600 mm. |
| Noise (at 1 metre from working site) | < 70 dB(A) |

## 6.2 HOT PRESS

The press is formed by two heated plates: the top plate (1) and the bottom plate (6). Each plate is heated by two electric elements. In the centre of each plate there is a thermocouple in Fe-CuNi that transmits the temperature measurement from the plate (actual value) to the regulator (14). Between the plate and the regulator there is a special cable (22) (23) that includes the supply wire and the compensated wire for transmission of the temperature measured to the display (18).

When one of the plates has reached the temperature set on the regulator, the corresponding warning light (16) goes out. By successively going on and off the regulator keeps the plate temperature on the setting. The temperature of each plate can be checked on the digital display (18).

A rubber pressure bag ensures uniform pressure distribution over the surface of the heated plate.

A water coil is used for forced cooling. To ensure proper operation we recommend the use of demineralized water.

Apply to our after-sales service for detailed instructions, if required.

## 6.3 REGULATING DEVICE

Each heated plate is individually controlled by an electronic regulator (14).

**Regulation and use of the electronic temperature regulators** (14):

- enter the temperature set point required by keeping pressed the push button (13) and the push button (15) marked with arrow down or arrow up.


The regulating device must be connected to the mains supply according to the ***electrical diagram*** provided with the machine. The appropriate tension is given on the machine ID plate. Consult the manufacturer if you need to use other tensions.
Use a power wire of a section conforming to current local standards.

# 7 HANDLING

## 7.1 PACKING AND TRANSPORT

The hot press PM 305 is packed in wood box containing the hot press with its accessories.

Take the necessary care to prevent damage by knocks or bad weather during transport

# 8 SET-UP

## 8.1 MOBILE USE

The hot press PM 305 comes ready for use.

For its functioning a compress air source is required, an optional air compressor can be supplied.

For Flexproof welding a tap water connection is required. If the cooling unit provided is used, it must be connected to the machine with the quick couplings (5).

Connect the regulating device wire (21) to a CEE 17-2P + PE socket. The supply voltage for the device is given on the ID plate.

Connect the wires (22) and (23) from the regulating device to each of the two heated plates, ensuring that the connections are made properly. Two labels show the symbols for the plates to which the wires must be connected


**Check that the wires are connected to the right plates.**

## 8.2 FIXED USE

The PM 305 hot press is not suitable for fixed use. Should it be necessary to use it in this way, proceed in the way described below:

- connect the cooling circuit to the water supply system. To tap the circuit and regulate output use a suitable pressure regulator, complete with valve.
- Use a pipe with a minimum section of ½" to connect the fixed circuit to the press cooling circuit.
- To prevent scaling on the joints in the cooling circuit, use demineralized water or circulate the cooling water through a demineralizing device.

# 9 USING THE MACHINE

## 9.1 HOT BELT WELDING

- ❑ Details of the procedure for hot welding are given in the Habasit manuals 3210, 3220, 3225 or in the instructions provided with the belt to be welded.
- ❑ Loosen both the closing knobs (3), open the closing brackets (4) and lift the top press plate (1).
- ❑ Carefully put together the ends of the belt to be welded, place them over the bottom press plate (6) and secure with the clamping bars (7).
- ❑ Place on the top of the joining area additional insets as instructed then re-position the top press plate (1).
- ❑ Close the press, tightening alternatively the closing knobs and pressurize the bag.


**ATTENTION!! To pressurize the bag at opened press can cause heavy mechanical demages.**

- ❑ Close and tighten the clamping bars (4).
- ❑ Turning the knob of the pressure regulator it is possible to change the pressure value as manuals 3210, 3220, 3225 and to check it on the manometer.
- ❑ Turn on the regulating device (17) master switch (20). Select the temperature on the regulators (14) for the top and bottom plates by simultaneously pressing the push buttons (13) **I** and (15) marked with arrows. ▲ ▼ (→ manuals 3210, 3220, 3225).
- ❑ Wait until the cycle is concluded (→ manuals 3210, 3220, 3225).
- ❑ Turn off the regulating device (17) master switch (20).
- ❑ For Flexproof welding only: connect the cooling unit to the press plates and turn on the electric pump or turn on the water tap.


**For safety reasons the water cooling quick couplings can be connected to the press only after the electricity supply wires have been disconnected.**

- ❑ When the cooling cycle is complete (→ manuals 3210, 3220, 3225), close air pressure, open the press and carefully remove the welded belt.
- ❑ Wait until all the water has run out of the press cooling pipes. If possible, blow air in the cooling circuit to facilitate the drain.

# 10 MAINTENANCE


**All maintenance operations and/or repairs on live parts of the machine must be carried out by authorized personnel**.

## 10.1 TROUBLE SHOOTING

- If the temperature shown on the display (18) for the heated plates (1) (6) differs from the setting by over 5°C, the cause is probably the regulator (14) rather than the heated plate (1) or (6).
- This can easily be checked by removing the back plug from the regulator and reading on the display if the variation remains the same.
- If so, the regulator (14) is the cause of the fault.
- However, if the value shown is different also for the other regulator, the fault is in the heated plate (1) or (6), or in the connecting wire to the relative regulator.
- In any case, if the value shown on the display (18) shows a variation, the temperature on the heated plate must be checked (**see Section 10.2**)
- Whenever these or other faults occur, please notify the manufacturer. Faulty heated plates (1) and (6) and regulators (14) must be repaired or replaced by the manufacturer.
- The manufacturer of the PM 305 press must be informed of faults of this type, and ot hers. Faulty heated plates (1) and (6) and regulators (14) must be repaired or replaced by the manufacturer.

## 10.2 MEASURING PLATE TEMPERATURE

- Measure the temperature of the heated plate every month, in the following way:
- Place a silicone foam rubber pad on bottom heating plate.
- Close the press as per standard instructions.
- Pressurize the bag to a maximum pressure of 1 bar, turn on the heating and set a value of 180°C.
- Heat for 40 minutes, then close air pressure, open the press, slightly lift the heated plate and place a precision thermometer probe on the silicone pad, exactly in the centre of the heated plate.
- Close the press without exerting pressure. Read the temperature after approximately 3 minutes.

- ❑ Place the probe under the silicone pad, exactly in the centre of the heated plate. Read the temperature after approximately 3 minutes.
- ❑ The temperature reading must be 180°C ± 5°C, including the instrument precision of maximum ± 1°C.

## 10.3 MAINTENANCE

Preventive maintenance is described in the table.

| OPERATIONS | Daily | 1 Month | 6 Months |
|---|---|---|---|
| **1. CLEANING** | | | |
| 1.1 Clean the press after use. Remove residue | **A** | | |
| | | | |
| **2. CHECKING WATER CONNECTIONS** | | | |
| 2.1 Check tightness of connections. Leaks will leave a deposit | | **B** | |
| | | | |
| **3. CHECKING COMPRESSED AIR CONNECTIONS** | | | |
| 3.1 Check leaks on the compressed air conections | | **B** | |
| | | | |
| **4. WIRING CHECK** | | | |
| 4.1 Check for faults in the wiring or plugs | | **B** | |
| | | | |
| **5. MEASURING PLATE TEMPERATURE** | | | |
| 5.1 Use the procedure in section 10.2 | | **B** | |

Personnel in charge: **A** Machine operator
**B** Maintenance engineer

# 11 SPARE PARTS

## 11.1 ACCESSORIES PROVIDED

| Qt'y | DESCRIPTION | CODE |
|---|---|---|
| 1 | Temperature regulator complete with 2 x 2 m connecting wires to heated plates 1 x 120 V | 691301 |
| 1 | Temperature regulator complete with 2 x 2 m connecting wires to heated plates 1 x 230 V | 691302 |
| 1 | Set of water and air connector | 24001000 |
| 1 | Equalizing plate | 230B1110 |
| | | |
| | | |

## 11.2 ACCESSORIES OPTIONAL FOR MOBILE USE OF THE PRESS

- Cooling Unit, containing a water tank with electric pump and accessories for connection to the press.

  Supply voltage: 120 V 691015
  230 V 691016

- Mobile mini compressor.

  Supply voltage: 120 V 691018
  230 V 691017

# 12 DECOMMISSIONING AND DISPOSAL OF MACHINE

Offcuts can be disposed of according to current local law.

If the machine is dismantled in-house the different components must be grouped into categories and successively dealt with by authorized companies specialised in their disposal.

The most important materials used in the construction of the machine are as follows:

- Metal (steel, aluminium)
- Electrical wiring
- Plastics
- Rubber

If the machine is not demolished when it is decommissioned, it must be kept, together with all its parts, in an area sheltered from the weather, in order to avoid any environmental pollution.

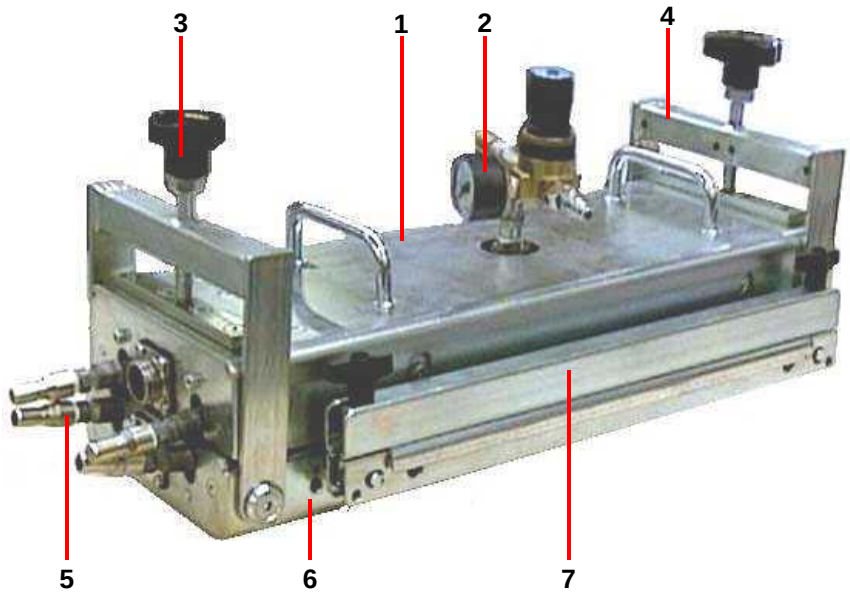



**Photo 1**

| | |
|---|---|
| 1 | Top press plate |
| 2 | Manometer and pressure regulator |
| 3 | Closing knob |
| 4 | Clamps |
| 5 | Water pipe connections |
| 6 | Bottom press plate |
| 7 | Locking brackets |

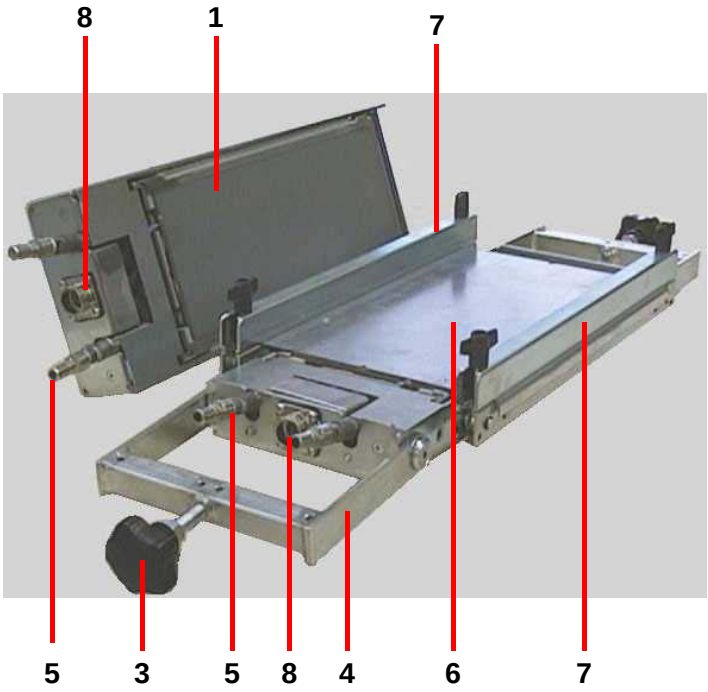
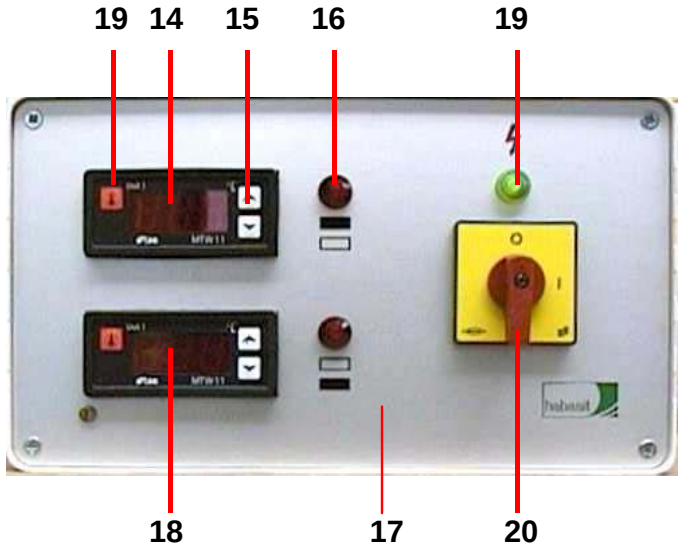



**Photo 2**

| | |
|---|---|
| 1 | Top press plate |
| 3 | Closing knob |
| 4 | Clamps |
| 5 | Water pipe connections |
| 6 | Bottom press plate |
| 7 | Locking brackets |
| 8 | Plate power inlets |



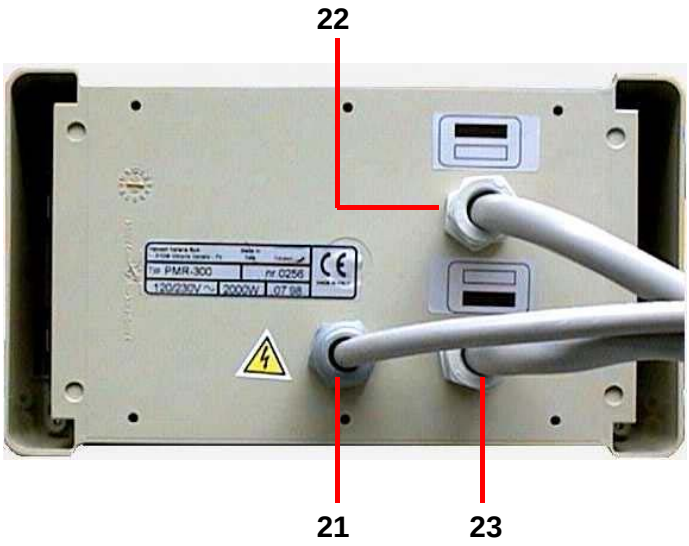




**Photo 3**

| | |
|---|---|
| 13 | Set point I push button |
| 14 | Temperature regulator |
| 15 | Set point arrow buttons ▲ ▼ |
| 16 | Plate 'on' warning light |
| 17 | Regulating device |
| 18 | Display |
| 19 | Signal lamp for regulator on/off |
| 20 | Main switch |
| 21 | Regulating device power wire |
| 22 | Top plate power wire |
| 23 | Bottom plate power wire |