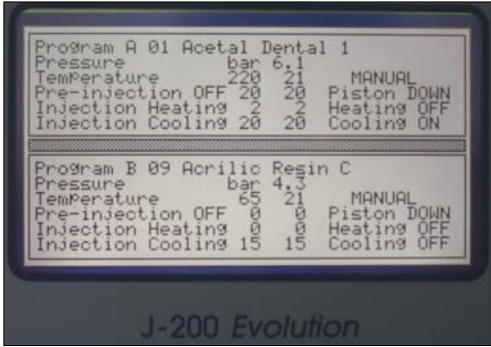




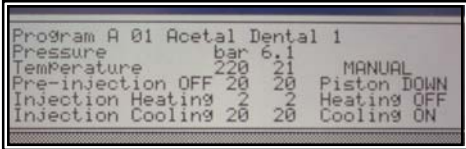
Pressing model	<i>J-100 Evolution</i>	<i>Use and Maintenance Manual</i>
	<i>J-200 Evolution</i>	



J-200 Evolution version 2002-1



(Mod J-200 Evolution Display)



(Mod J-100 Evolution Display)

Pressing Dental Srl

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Thank you for choosing our product

GENERAL FEATURES

This electronic component of “J-100 Evolution” and “J-200 Evolution” results from a ten-year experience with the basic J-100 automatic machine.

This new version differs from the former in that it has a brand new electronic control system.

All programmed data and the machine working process can be controlled from one single liquid crystal display.

The new microprocessor offers:

- 1) A selection of 30 different pre-set programs which are modifiable by the operator.
- 2) The display of the programmed and actual temperature.
- 3) The digital display of the pressure indicated in bar tenths.
- 4) A pre-injection alarm to enable the operator to intervene a few minutes before the end of the “timer pre-injection” countdown.
- 5) A cooling fan located at the back of the machine.
- 6) A modified heating chamber to enable the operator to reduce the processing time.
- 7) Seven different types of alarms to inform the operator about the state of the processing cycle, both for “pre-injection” and for possible irregularities in the process.

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1 FORWARD

The machines J100 and J200 Evolution are designed for the pressure-injection of thermoplastic small size materials which were already processed and moulded into tablets by our company.

These materials are then supplied to dental laboratories where they are inserted into special aluminium containers (J-100 Tubes) which get sealed before entering the machine melting chamber.

The sale of machine is conditioned to the future user's attendance of a special training course.

In Italy, these courses are held by our company's staff or other authorised experts and abroad they are organised and run by the importer. The machine must only be used by skilled personnel.

1.1 GENERAL PRECAUTIONS

Before putting the machine into operation, it is essential to follow the technical instructions in this manual carefully and strictly comply with all the indications given.

This manual must be kept in a place easily accessible to operators and maintenance staff.

INTRODUCTION

This machine is designed for safe use, provided it is installed, commissioned and maintained in accordance with the instructions given in this manual.

The machine operates as follows: the injection product is heated inside sealed aluminium tubes (J-100 Tubes); these tubes are then placed inside a heated cylinder (oven) and compressed into a plaster mould inserted in an aluminium container (flask).

This injection procedure is carried out by a compression mechanism (i.e. the rod of a piston travelling inside the oven). The machine operates both in manual and automatic mode. Before starting to use it, read the instructions carefully.

2 GENERAL INFORMATION

FORWARD

This manual contains the directions for use and the pictures of the machines Pressing J-100 and J-200 Evolution produced by PRESSING DENTAL Srl. It provides all the information needed for correct installation and a description of the machine operation. It also contains all the information needed for control procedures and routine maintenance.

CAUTION

- All transport, installation, use and routine maintenance operations must be carried out only by qualified and skilled operators.
- An "OPERATOR" is any person responsible for installing, operating, programming, maintaining, cleaning or transporting the machine.

IMPORTANT

- All extraordinary maintenance and other repairs must be carried out only by PRESSING DENTAL staff or people authorised by them.

2.1 INTENDED USE OF THE MACHINE

The Pressing J-100 and J-200 Evolution are designed for melting and injecting plastic materials produced or recommended exclusively by PRESSING DENTAL, in accordance with the technical information sheets which provide processing instructions for each product.

2.2 WARRANTY

The product is guaranteed against production defects for a period of 12 months after the delivery date.

The warranty does not cover electrical components.

Damage caused by improper use of the equipment is also excluded from the warranty.

The warranty, therefore, does not cover damage due to falls, tampering or improper use of the machine, failure to follow the maintenance instructions provided in the manual, or incorrect procedures by operator.

No compensation will be paid for the periods of machine inactivity.

The warranty is not valid if payment terms have not been complied with.

The warranty becomes null and void automatically if the enclosed guarantee coupon, filled in with all the data requested, is not sent back to PRESSING DENTAL within 10 days after installation or delivery of the equipment.

CAUTION

Read the enclosed "Warranty Certificate" carefully.

2.3 TABLE OF NOISE EMISSIONS

Noise values according to ISO 3746

Level of acoustic pressure in the atmosphere	dB (A): 67,5
Level of acoustic power	dB (A): 80,7
Level of acoustic pressure at the control panel	dB (A): 70,4

3 GENERAL HEALTH AND SAFETY REGULATIONS

FOREWORD

The operator or operators should be perfectly familiar with the location and operation of all controls and of the features of the machine; it is, therefore, essential that they read this manual in full.

Tampering with or unauthorised replacement of machine components, and the use of consumption materials other than those recommended by the manufacturer may cause accidents and will relieve the manufacturer from all liability under criminal or civil law.

3.1 SAFETY WARNINGS

- An "OPERATOR" is any person responsible for installing, operating, programming, maintaining, cleaning or transporting the machine.
- The machine contains electrical components operating at mains voltage, and pneumatically-operated moving parts. It must be disconnected from the electricity and air supply before being opened.
- Any maintenance procedure requiring the machine to be opened must be carried out by PRESSING DENTAL staff or authorised people, who have adequate skills and expertise. They must also be perfectly familiar with the safety procedures.
- The machine must be used only by skilled staff.
- To prevent damage, fire or electric shock never leave the machine exposed to rain or damp, since it operates at high voltage.
- - In case of danger stop the machine immediately (Press "Reset"). Identify and remove the causes before resuming the process. Make sure that all controls are set on zero before restarting the machine.

3.2 RISK ZONES AND RESIDUAL RISKS



In spite of the devices installed on the machine, there is a zone of "RESIDUAL RISK" if the machine is used incorrectly by the staff responsible for its operation.

The figure shows the zone where hands must never be put during machine operation, since the heat generated inside heats the various components by induction and may cause severe burns. (Fig. 03.01 n.1)

CAUTION

Operators must never put their hands near this zone while the machine is working in automatic or manual mode, since the piston movement could be dangerous.

Fig. 04-01 shows the nameplate placed at the back of the machine

Note: The type, the code and the serial number punched on the plate must be indicated in any communication addressed to the manufacturer to request information or to order spare parts.

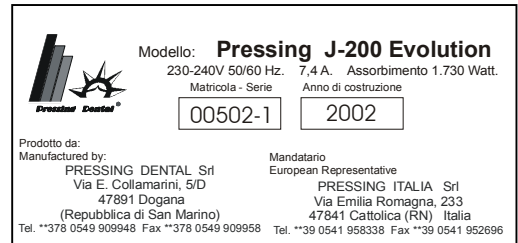


Fig. 04.01

4.1 WARNING PLATES ON THE MACHINE

- Plate 1 - Caution: Don't put your hands inside the machine (risk of burns). It is placed at the front of the machine near the oven. (Fig. 03-01n.2)
- Plate 2 – Wear protective clothing (high temperatures). It is placed at the front of the machine near the oven.
- Plate 3 - Danger : High Voltage. It is placed at the back of the machine near the electric outlet

5 MANUFACTURING FEATURES

Housing: it is made in steel plate and painted with white epoxy resin. The front of the control panel can easily be removed for total access to the electric and electronic components. (This must only be done by authorised personnel).

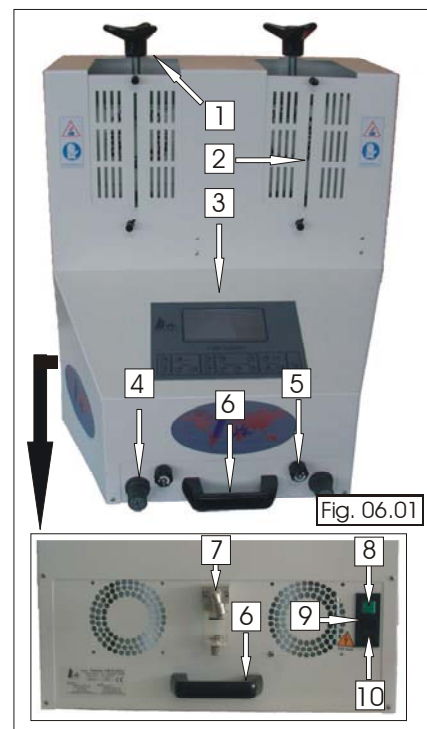
Sizes: (Fig. 03-01 A-B-C)	Mod. J-100 Evolution	Mod. J-200 Evolution
A: mm	275	545
B: mm.	640	610
C: mm.	570	570
Weight (without accessories):	35,5 Kg.	67,5 kg.
Absorption	870 Watt	1.730 Watt

- Mechanical components:** brackets for connection to the hand press in galvanized or chrome-plated steel.
- Electrical circuit:** power supply AC. 220/240V 50 Hz. **(60 Hz on request)**
- Fuses:** 6,3 A.
- Thermoregulation:** 65 – 300 °C.
- Operating temperature:** 5 - 35 °C.
- Pneumatic circuit:** aluminium cylinder and pistons
- Operating pressure:** from 2 to 6 bar

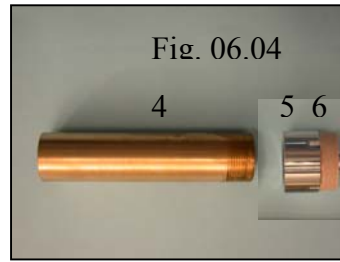
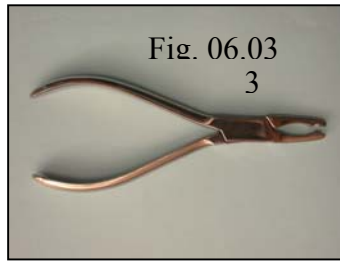
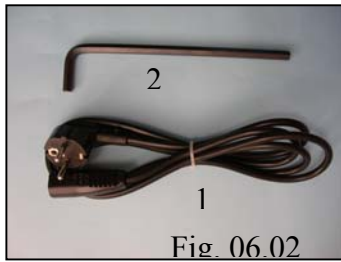
The customer is responsible for protecting the line. In case of installation in areas with operating temperatures higher than those indicated (in any case below 45°C) the use of the accessory “extra fan” is highly recommended.

6 MACHINE COMPONENTS (Fig. 06-01)

- 1) Hand press for clamping the flask (Fig. 06-01 n.1)
- 2) Safety door (Fig. 06-01 n.2)
- 3) Control panel (Fig. 06-01 n.3)
- 4) Pressure control (Fig. 06-01 n.4)
- 5) Injection speed control (Fig. 06-01 n.5)
- 6) Handles (Fig. 06-01 n.6)
- 7) Air filter (Fig. 06-01 n.7)
- 8) Master switch (Fig. 06-01 n.8)
- 9) Power supply socket (Fig. 06-01 n.9)
- 10) Fuse holder (Fig. 06-01 n.10)



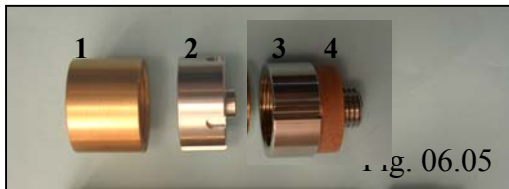
6.1 STANDARD ACCESSORIES



Line cord (Code 0016c2) (Fig. 06-02 n.1)

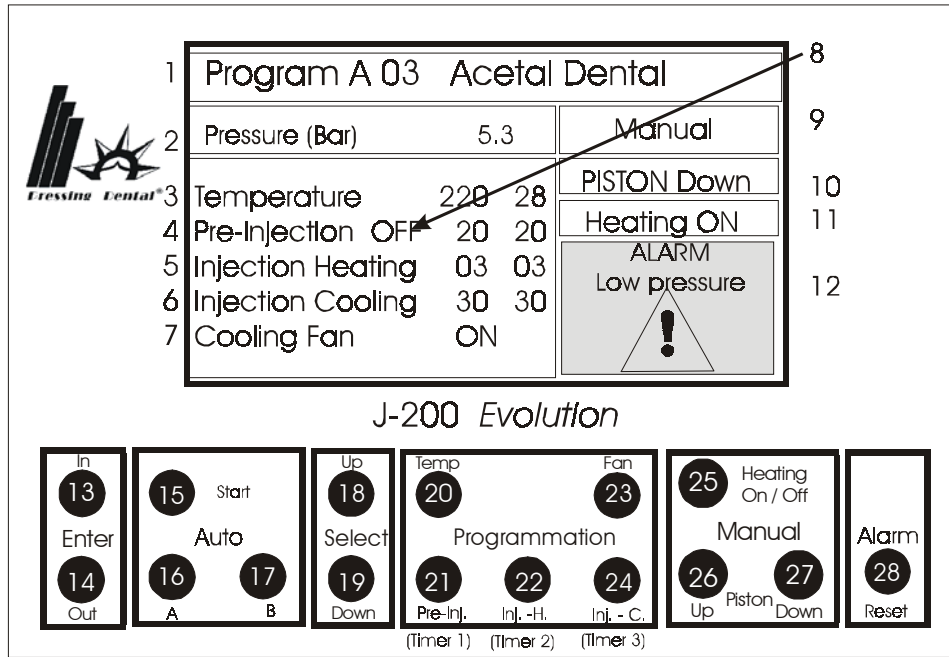
- 1) Flask key: mm. 8, long type, (Code 0018d) (Fig. 06-02 n.2)
- 2) Tube sealing clamp (Code "clamp ct") (Fig. 06-03 n.3)
- 3) Tube Mod. Actio 97, 30/22 wide (Code A-19) (Fig. 06-04 n.4) (Machine J-200: 2 pieces)
- 4) Centering device code A20/IC" (Fig. 06-04 n.5) (Machine J-200: 2 pieces)
- 5) Insulator for centering device A/20M, hole: Ø16 (Code A-20/II) (Fig. 06-04 n.6) (Machine J-200: 2 pieces)

6.2 OPTIONAL ACCESSORIES

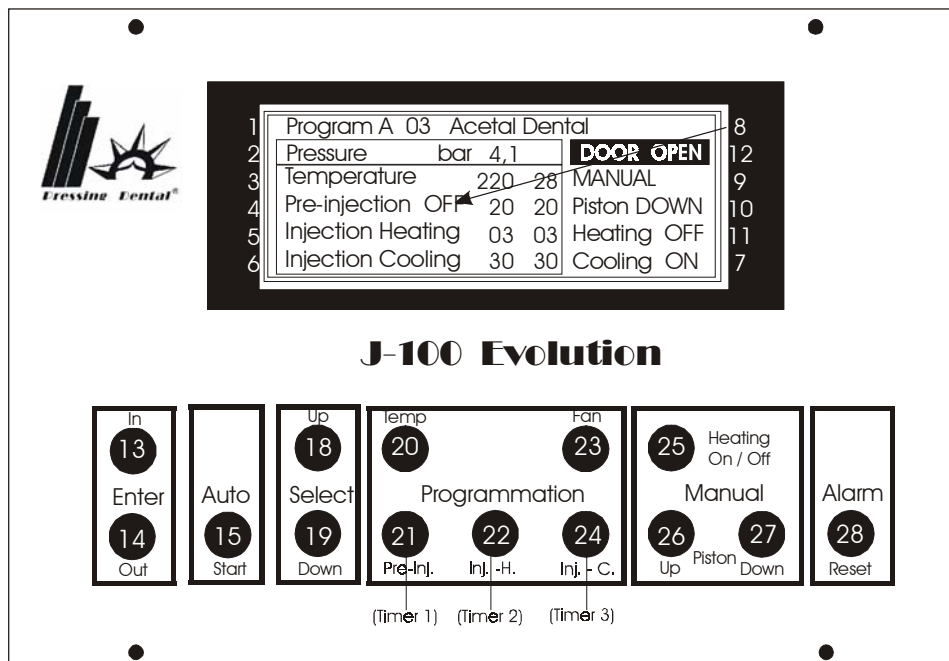


Legenda:

- 1) Adaptor for I.C.A.R. system (Fig. 06-05 n.1)
- 2) Centering device code "A-20" (Fig. 06-05 n.2)
- 3) Insulated and threaded centering device 30/22 M16 (Code A-20/IM) (Fig. 06-05 n.3)
- 4) Insulator code "A20/II" (Fig. 06-05 n.4)
- 5) "Airham" pneumatic hammer to remove flask (Fig. 06-06 n.5)
- 6) "AVV" pneumatic screwdriver to close and open flasks (Fig. 06-07 n.6)



**DISPLAY
Model J-200 Evolution
Program A**



**DISPLAY
Model J-100 Evolution**

Fig. 07-01

Description

1	Program (from 1 to 30)
2	Operating pressure
3	Temperature
4	Timer 1 "Pre-Injection."(Heating ON pre-injection)
5	Timer 2 "Injection Heating" (Heating ON during injection)
6	Timer 3 "Injection Cooling" (cooling under pressure)
7	Cooling fan (ON/OFF)
8	Pre-injection alarm (ON switched on/ OFF switched off)
9	Automatic / Manual
10	Piston UP (injecting piston - up) / DOWN (at rest- down)
11	Heating ON (switched on)/ OFF (switched off)
12	Alarms area with the description of alarm types
13	Push-button to access the programming area
14	Push-button to exit the programming area

15	Push-button to start the automatic mode
16	Push--button to select program A (mod. J-200)
17	Push-button to select program B (mod. J-200)
18	Step-up push-button (for programming)
19	Step-down push-button (for programming)
20	Push-button for temperature selection (for programming)
21	Push-button to select Timer 1 and "pre-injection" alarm (for programming)
22	Push-button to select Timer 2 "Injection Heating" (for programming)
23	Push-button to select cooling fan (for programming) On/Off in manual mode
24	Push-button to select Timer 3 "Injection Cooling (for programming)
25	Heating push-button On/Off (in manual mode)
26	Injection push-button (Piston UP in manual mode)
27	Injection return push-button (Piston Down in manual mode)
28	RESET push-button to cancel all operations

8 PACKAGING, TRANSPORT AND INSTALLATION

The machines J-100 Evolution and J-200 Evolution are generally shipped in polystyrene-protected cardboard packaging. On receipt, open the packaging and check that the contents have not been damaged.

The machines J-100 and J-200 Evolution come in very compact sizes and equipped with handles to make transport easier. (Fig. 06-01 n.6)

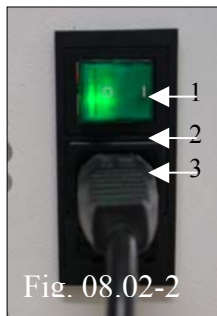
Caution: As the machine J100 Evolution weighs about 40 kg and the machine J-200 Evolution weighs about 70 kg., two people are required to move them. To move the machine always use handles and, for greater safety, keep always a hand underneath the machine base.

8.1 INSTALLATION

Installing the machine is easy and can normally be carried out by the customer (or operator) provided the following rules are complied with:

- Do not use Pressing J-100 and J-200 Evolution in places which are too hot, too cold or too damp
- Avoid dusty places
- Avoid proximity to machines which generate strong magnetic fields (microwaves oven);
- Avoid places subject to vibrations;
- Avoid poorly ventilated areas (The machine should be installed under an extractor hood).
- Avoid violent shocks during packaging and transport.
- Handle the machine with care
- Do not obstruct the ventilation intake, leave at least 10/15 cm. between the machine and the rear wall to ensure that adequate ventilation by the cooling fan is provided
- Do not place anything on it from which liquid might leak.
- The machine must be kept vertical during use.

8.2 CONNECTIONS



To connect compressed air from the compressor to the machine, use a tube with a minimum 8 mm. width and a pressure of 7 bar, then connect the tube to the filter of the air intake (Fig. 08.02-1).

Connect a stop cock to the air feeder (to avoid air pressure in the machine during maintenance without having to disconnect it).

Insert the line cord provided and connect the machine to the electrical mains (Fig. 08.02-2) making sure that a protective device has been installed, that the power supply voltage is correct and that an earth connection has been provided.

9 START-UP PROCEDURES

Before starting the machine check that:

- the compressed air and power connections have been made correctly (See technical information sheet supplied with the machine);
- the injection speed regulation screw is on **“Slow”** (see **Injection Speed Section**). Supply power to the control panel using the master switch.



Information on the machine **“J-200 Evolution”**

When the master switch is turned on the Pressing Dental logo will appear on the display and a few seconds later also the two programs: to select and use one of them push the **“Auto A”** or the **“Auto B”** buttons.

If the **“Auto A”** button is pushed, the display will show information relative to machine **“A”**, whereas by pushing the **“Auto B”** button the display will show information relative to machine **“B”**. If the **“Auto A”** or **“Auto B”** buttons are pushed twice, the initial display of the positions of both A and B programs will appear. In this position, nothing can be either modified or started since it is just a general control view.

Information on the machine **“J-100 Evolution”**

The machine J-100 Evolution has no **“Auto A”** or **“Auto B”** buttons, so when starting the machine the Pressing Dental logo will appear on the display for a few seconds followed by program A directly.

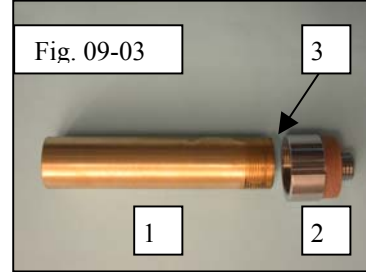
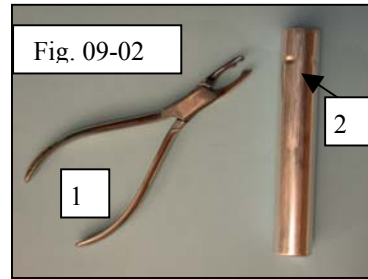
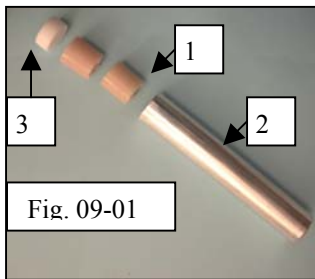
When the machine is started the manual mode in on.

Note: Make sure that the pressure inside the machine does not exceed 6 bar (The air pressure inside the piston can be controlled on the display as soon as the machine is started).

9.1 PRODUCT PREPARATION

Place the product to be pressure-injected (Fig. 09-01 n.1) in the cartridge (J-100 Tube) (Fig. 09.01 n.2)..

Note: The operator must decide on the quantity of product to be used, depending on the type of process.



Use only PRESSING DENTAL products and read the technical information sheets and the directions for use carefully, using the recommended processing times for each product. For any other product, contact PRESSING DENTAL.

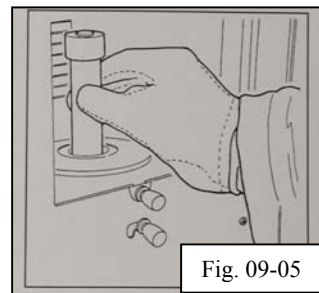
Then place the teflon cap at the end of the cartridge (this will act as a plunger during injection) (Fig. 09.01 n. 3).

Subsequently seal the cartridge with the clamp provided (Fig. 09-02 n.1). See the detail of the seal type in fig. 09-02 n.2. When the process is over, make sure that the teflon cap does not come out.

When the cartridge is ready, it is necessary to grease it with the recommended lubricant (“Tube lubricant red”). Then insert the cartridge (the open end, that is the teflon cap side, must be inserted in the brass tube from the threaded side) (Fig. 09-03 n.3) and insert the aluminium cartridge completely till the end of the container.



Be careful not to insert the cartridge beyond the above-mentioned border, as during the pressure-injection phase the material might leak between the tube and the centering cap.

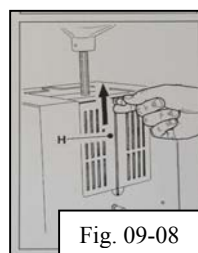
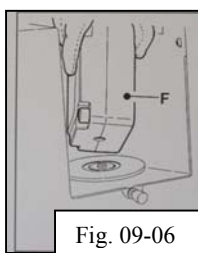


At the end of the above-mentioned stage, remove the lubricant residues from the upper cartridge J-100, grease the threaded part of the tube (not excessively, though) (Fig. 09-03 n.1) and screw the centering device tightly (Fig. 09-03 n.2).

When this stage is over, place everything into the oven. (Fig. 09-04, Fig. 09-05).

Note: The tube must be placed into the oven when it is at room temperature.

With this Evolution version it is possible to insert the material containing tube even when the oven is hot, provided protection glove against high temperature are worn.



After removing the grease, place the flask on the oven and then on the centering device which was fitted previously. (Fig. 09-06). The use of the screwing device “Pressing mod. AVV” is recommended to ensure a correct and even tightening of the flask screws.

Clamp the flask to the centering device using the hand press placed on the machine (Fig. 09-07, G) and close the safety door (Fig. 09-08, H).

Caution: A wrong flask tightening procedure might cause a material leakage from the tube and smear both the oven base and the injector. In this case an operator authorised for maintenance and rehabilitation has to be called.

Note: The temperature indicated on the display is not necessarily the room temperature. This might happen because FE/CO waves are used. These correspond to real temperatures only in the range 60-400 °C (For the same reason, it might also happen that the temperatures indicated for machines A and B differ).

Note: The machine is supplied with technical processing sheets for each product containing specific information about the prostheses which can be produced using this system. These information sheets carry all the data necessary for correct processing.

Consult these sheets and directions for use in order to set the data suitable for the pressure-injection procedures planned: melting temperature; Timer 1 (product pre-injection and heating time); Timer 2 (product pre-injection and heating); Timer 3 (maintenance of pressure during cooling); pressure and injection speed.

10 PROGRAMMING AND PARAMETERS SETTING PROCEDURE

In the machine J-100 Evolution only program A is always indicated.

In the model J-200 Evolution, select the desired area by pressing the “AUTO A” or “Auto B” buttons.

a) To program the machine enter the “programming area” by pressing the “Enter IN” button (Fig. 07-01 n.13), whereupon “Program ON” appears on the display (in the alarms area) and the area “Program” is stressed in black.

(for example:)

Program A 01 Acetal Dental

The different pre-set programs are displayed by pressing the “Select UP” or “Select Down” buttons (Fig. 07-01 n. 18 and 19). After choosing the desired program, confirm the selection and exit by pressing “Enter Out” (Fig. 07-01 n.14). This will automatically suspend the programming mode and the notice “Program ON “ will disappear from the display.

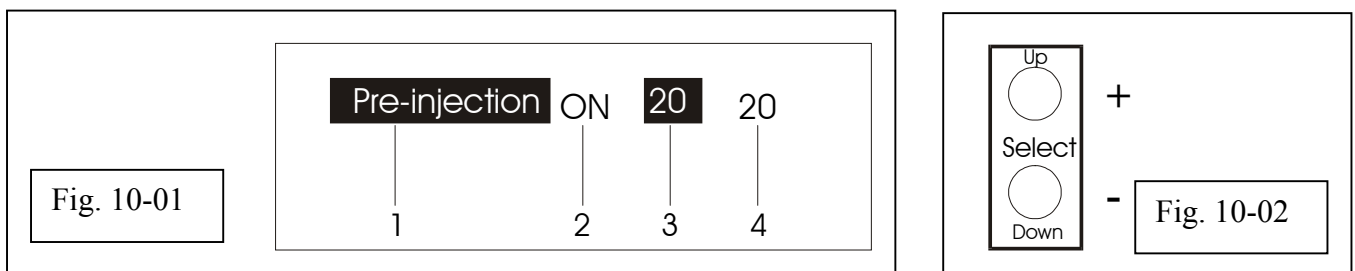
Programming push-buttons

Description

Temperature	=Temp. Programmation	Temperature programming
Pre-injection	= Pre-inj. (timer 1) Programm.	Timer for setting the melting time of the material before injection
Pre-injection “ON”	= Pre-injection alarm ON (active)	The alarm is active and starts signalling 4 minutes before injection
Pre-injection “OFF”	= Pre-injection alarm OFF (non active)	The alarm is not operational
Injection heating	= Inj.-H. (timer 2) programm.	Timer for the turned on oven after injection
Injection cooling	= Inj.-C (timer 3) programm.	Timer for the cooling under pressure phase
Cooling fan On/Off	= Fan programm.	Selector for fan-forced cooling

b) To modify the parameters of the pre-set programs select the desired program first (see point a). Before confirming the program by pressing Enter Out (Fig. 07-01 n. 14), push the button of the parameters to modify following the table above. Here is an example of a modified pre-injection parameter:

Press the “Pre-inj. Programm.” button and the program with the pre-set value will be stressed in black (see Fig.10-01, example. no. s 1 and 3). The pre-set value will be either increased (+) or decreased (-) by pressing the Select buttons (see Fig. 10-02).



c) To set the “Pre-inj.” Alarm, as this is a parameter subordinated to the pre-injection timer, press “Pre-Inj. Programm.” button **twice** (Fig.10-01 n. 2). The Select buttons will activate (ON) or deactivate (OFF) the pre-injection alarm.

Upon completing the programming phase, exit the program by pressing the “Enter Out” button (Fig.07-01 n. 14).

Description of the programs set by the manufacturer:

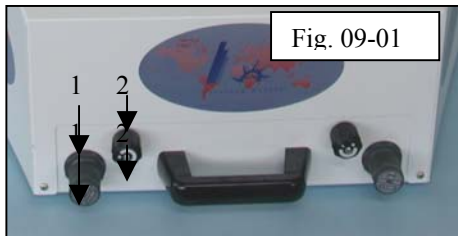
Program	Description	temperature	Pre-Inj. (Timer 1)	Pre-Inj. Alarm On / Off	Inj.-H (Timer 2)	Inj.-C (Timer 3)	Fan On/OFF	Pressure Bar	Injection Speed
01	Acetal Dental 1	220	20	OFF	02	20	ON	4.0	Slow
02	Acetal Dental 2	220	20	ON	03	30	ON	4.0	Slow
03	Acetal Dental 3	220	20	ON	03	40	ON	4.0	Slow
04	The.r.mo. free	220	13	ON	02	30	ON	5.0	Fast
05	The.r.mo. bridge	227	08	ON	02	30	ON	4.0	Slow
06	Corflex Orthodontic	165	20	ON	00	20	ON	4.0	Slow
07	Corflex Plastulene 40	165	20	ON	00	20	ON	4.0	Slow
08	Corflex Plastulene 80	165	20	ON	00	20	ON	4.0	Slow
09	Acrylic Resin C	65	00	OFF	00	15	OFF	2,5	Slow
10	Acrylic Resin H	150	00	OFF	15	15	OFF	3,5	Slow
11	Program 11	220	20	OFF	02	20	ON		
12	Program 12	220	20	OFF	02	20	ON		
13	Program 13	220	20	OFF	02	20	ON		
14	Program 14	220	20	OFF	02	20	ON		
15	Program 15	220	20	OFF	02	20	ON		
16	Program 16	220	20	OFF	02	20	ON		
17	Program 17	220	20	OFF	02	20	ON		
18	Program 18	220	20	OFF	02	20	ON		
19	Program 19	220	20	OFF	02	20	ON		
20	Program 20	220	20	OFF	02	20	ON		
21	Program 21	220	20	OFF	02	20	ON		
22	Program 22	220	20	OFF	02	20	ON		
23	Program 23	220	20	OFF	02	20	ON		
24	Program 24	220	20	OFF	02	20	ON		
25	Program 25	220	20	OFF	02	20	ON		
26	Program 26	220	20	OFF	02	20	ON		
27	Program 27	220	20	OFF	02	20	ON		
28	Program 28	220	20	OFF	02	20	ON		
29	Program 29	220	20	OFF	02	20	ON		
30	Program 30	220	20	OFF	02	20	ON		

Note: The parameters relative to Pressure and Injection Speed are not programmable and are listed here only as a memo for the relevant processing procedures.

In the machine mod. J-200 Evolution, programs A or B with the same number are always alike.

Caution: When the machine is already in automatic functioning mode, it is impossible to modify a program. The notice “program working” indicates that the program is already operational.

10.1 PRESSURE CONTROL



To control the displayed pressure (Fig. 09-01 n. 1), pull the pressure control knob placed on the side of the machine. To increase pressure turn clockwise. Once the desired pressure has been set, block the knob by pressing it. It is advisable to make the piston move after changing the pressure parameter, so that the accuracy of the pressure value set can be checked on the display.

Note: The pressure indicated is independent from the machine functioning therefore checking that the displayed pressure corresponds to the desired program/material is of paramount importance.

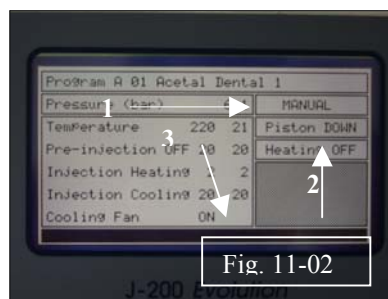
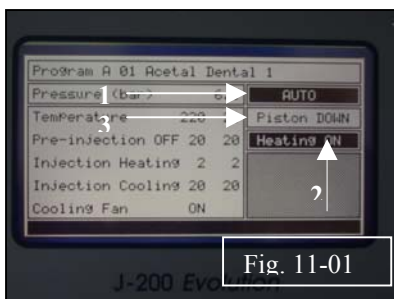
10.2 INJECTION SPEED CONTROL

The “Evolution” version can be equipped with two different types of injection speed controls (Fig. 09-01 n. 2):

- One version with a classic injection speed control (a brass-coloured, screw-like knob). In this case, depending on the material used the knob must remain either completely open (fast) or completely closed (slow).
- One version with a modified injection speed control (a new black plastic knob). This model allows for a slower injection speed. With this controlling device 4 complete revolutions (360°) + 3 / 4 of a rev. can be obtained.

Note: In this case the classic “SLOW” speed can be obtained by the complete shutting of the controlling device (-) followed by two complete anticlockwise revolutions (+). The fast speed is obtained by opening the controlling device completely (+).

11 SELECTION OF OPERATIONAL FUNCTIONS



Depending on whether the “Manual mode” or the “Automatic mode” is selected proceed as follows:

11.1 MANUAL MODE

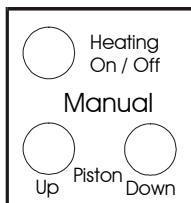
The machine operates in manual mode if the following word appears on the display (Fig. 10-2 no. 1)

Manual

To use the machine in manual mode proceed as follows:

After program A or B appear on the display

1)



Press the “Manual Heating On/Off” button to turn the oven either on or off. The starting (ON) or stopping (OFF) of the oven is indicated on the display by the notice “Heating ON” (Fig. 11-1 n. 2) or “Heating OFF” (Fig. 11-2 n. 2).

Heating ON

- 2) To inject the material (upwards movement of the piston \uparrow) press the “Manual Piston UP” button.
- 3) To lower the piston (downwards movement of the piston \downarrow) press the “Manual Piston Down” button.

The piston position appears on the display (Fig. 11-1 n. 3) indicated as Piston UP or Piston Down.

PISTON Down

COOLING FAN

As already indicated in Section 10, the cooling fan starts automatically when “ON” appears during programming and the automatic program reaches the injection cooling phase (Timer 3).

If required, the fan can be activated/deactivated also in manual mode by simply pressing the “Fan Programming” button (Fig. 07-01 n. 23).

When the fan is ON, the “Cooling Fan“ signal flashes (Fig. 11-2 n. 3)

11.2 AUTOMATIC MODE

Choose program A or B and check that all the parameters of the selected program are correct (see Section 10 for programming and parameters setting procedures), namely:

- 1 Pressure (Bar)
- 2 Temperature (°C)
- 3 Pre-injection Alarm ON (active) or OFF (non active)
- 4 Pre-injection Timer
- 5 Injection heating Timer
- 6 Injection cooling Timer
- 7 Cooling fan ON (active) or OFF (non active)
- 8 Injection speed control

Then start the automatic mode by pressing the “AUTO - START” button (Fig. 07-1 n.15).

The numbers next to the description (Fig. 11-3 n.3) indicate the programmed parameter. The number to the right of the latter refers to processing time (Fig. 11-3 n.4).

When the notice is stressed in **black** (Fig. 11-3 n.1), it indicates that the process is underway, whereas when the number flashes it means that the Timer is functioning (the countdown of the pre-injection timer starts flashing when the temperature reaches the programmed parameter).

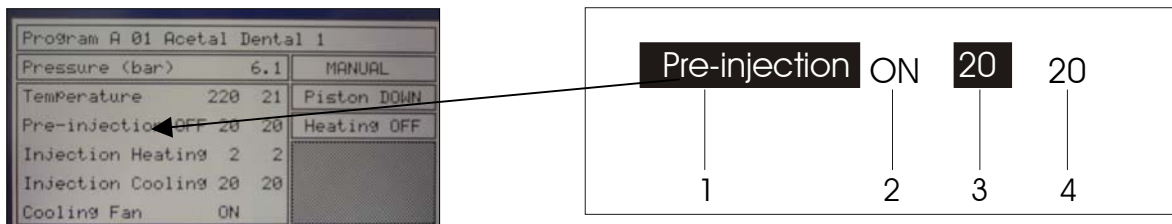


Fig. 11-03

When the automatic mode starts, the word “Manual” (Fig.11-02 n.1) is replaced by the word “Auto” (Fig.11-01 n.1). During the cycle, the oven heats up reaching the programmed temperature. At this stage, the pre-injection timer starts the countdown.

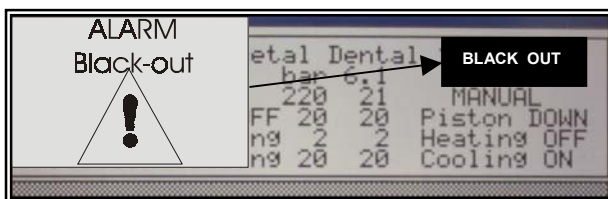
If the pre-injection alarm is in the “ON” position, 4 minutes before the end of the countdown the machine will activate the alarm mode, a function described in the section concerning alarms (“pre-injection alarm”).

Afterwards, the cycle starts again and when the Pre-injection Timer (timer 1) indicates zero the piston injects the material. The oven will remain ON for the minutes programmed in the Injection Heating Timer (timer 2). At the end of this phase the oven turns off and the cooling phase starts.

The cooling time is determined by the Injection Cooling Timer (timer 3). In this phase if the Cooling Fan indicates “ON”, the fan will function for the same number of minutes.

When the time programmed for Timer 3 (Injection Cooling) is up, the piston goes back to its resting phase (DOWN) and a warning signal beeps for a few seconds to indicate the end of cycle.

The word “Auto” will be replaced by “Manual“ (Fig.11-01 n.1 and Fig.11-02 n.1) and the programmed parameters set at the start of the automatic mode will appear on the display again.

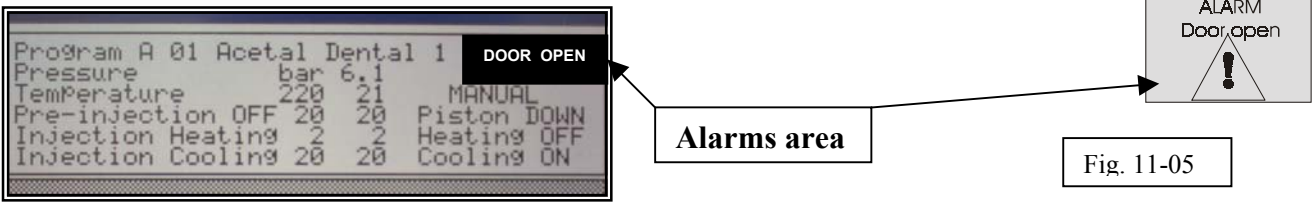


In case of a power black-out, if the machine was in automatic mode during the Pre-injection Timer (timer 1) countdown when the power supply was resumed, it will activate the relevant alarm and “Black-Out ALARM ” will appear on the display.

Fig. 11-04

Note: In this case, the operator must verify that the processing outcome is not jeopardised before continuing the cycle. If in doubt, he is advised to reset the cycle (§ 11.5), insert new material into the oven and start a new cycle.

If the door opens during the “AUTO” phase, a beep will start and a warning notice will appear (Fig. 11-05):



The alarm functions are described here follow : 11.3 “Alarms”.

11.3 ALARMS

The machine “EVOLUTION” is equipped with different types of alarms.



“Door Open Alarm”

This alarm goes off when the safety door is open. The warning signal “Door Open Alarm” appears on the display in the alarms area. When the door is shut the alarm stops immediately.

If the machine is in manual mode only the warning signal will appear, whereas if the machine is in automatic mode a continuous beep will start (bbbbbbb).

Note: Leave the door open as little as possible since in automatic mode, when the door is open the timer countdown stops and if the oven is in the “Heating ON” position it remains on anyway.

This period of time adds up to the time set in the “Heating ON” programming and this might adversely affect the quality of the finished product..



“Pre-injection Alarm”

This pre-alarm warns the operator by means of an intermittent beep (b-b-b-b) that the Heating Pre-Injection Timer 1 is 4 minutes before the injection phase.

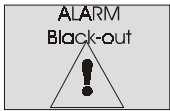
During this phase the warning “Pre-injection Alarm” will appear in the alarms area. If the operator does not press the “Auto Start” button (Fig. 1 n. 15), the countdown of the Heating Pre-Injection Timer 1 goes on reaching 01 minute. At this stage the “Standby pre-injection” alarm goes off and the countdown stops but the oven remains on.



“Stand-by Pre-injection”

This alarm may be set off only at the end of the above-described “Pre-injection Alarm” phase.

To go on with the program just press the “”AUTO Start” button (Fig. 1 n. 15). For safety reasons, if the “Standby pre-injection” time exceeds 5 minutes, the machine changes acoustic signal (a beep with a longer interval starts: b-b-b-b-b) and the warning “Over Time Alarm” (time-limit alarm) appears.



BLACK - OUT

“Black-out Alarm”

This alarm informs the operator that a power black-out occurred. This type of alarm rings only when the machine operates in automatic mode and the countdown refers to the Pre-Injection Timer 1 (Fig. 1 n. 4).

In this case the intermittent beep has a longer interval (b-b-b) and the warning “ Black-out Alarm” appears on the display.

To continue the program just press the “Auto Start” button (Fig. 1 n. 15).

If the operator prefers to stop the cycle, he can do so by pressing the “Reset” button (Fig. 07-01 n. 28).

If the alarm lasts more than 5 minutes, a safety alarm named “ Over Time Alarm” (time-limit alarm) sets in.

Note: If the machine is operating with the “Over Time Alarm” (time-limit alarm) activated and a power black-out occurs, when the power supply is resumed the “Black-out” signal is displayed. Then if the “Auto” button is pressed, “Stand-by” and not “Over Time” appears on the display.

This is not a problem since the operator has to intervene because of the black-out anyway, therefore he can assess the state of the cycle and reset it if necessary.



OVER TIME

“Over time Alarm” (Time-limit Alarm)

The “ Over Time Alarm” (time-limit alarm) is a safety alarm. This type of alarm has been developed for temperature-sensitive materials which must remain at melting temperature only for the time strictly required by the procedure.

This type of alarm goes off in two cases:

- 1) If the operator has not intervened in the 5 minutes since the start of the “Stand-by Pre-injection” alarm.
- 2) If the operator has not intervened in the 5 minutes since the start of the “Black-out Alarm” (the “Pre-Injection” Timer 1 is active in automatic mode).

The acoustic signal of this alarm is like that of the “Black-out Alarm” (b-b-b-b). In this case the operator can opt for:

- Continuing the cycle by pressing the “AUTO Start” button (Fig. 1 n. 15).
- 1) Interrupting the cycle by pressing “Reset” (Fig. 07-01 n. 28).



LOW PRESSURE

“Low pressure Alarm”

The “Low Pressure Alarm” appears when the pressure is too low (from 0 to 0.5 bar). This type of alarm is not acoustic and only the warning “Low Pressure Alarm” appears in the alarms area (Fig. 1 n. 12).



OVER PRESS.

“Over pressure Alarm” (Too High Pressure Alarm)

The “Over Pressure Alarm” (Too High Pressure Alarm) goes off when the pressure is too high (9.9 bar). The acoustic signal is a continuous beep (bbbb) and the warning “Over Pressure Alarm” (Too High Pressure Alarm) appears in the alarms area (Fig. 1 n. 12).

Note: This machine was designed to operate with a pressure ranging between 2 and 6 bar.

11.4 RESET

The “Reset Alarm” button (Fig.07-01 n.28) is used to interrupt the cycle in automatic mode.

By pressing this button the machine stops all the functions relative to the displayed program and places the piston in resting position (Piston down).

At the end of this phase the machine will be in manual mode and the most recent program will appear on the display.

12 FLASK REMOVAL

Once the pressure-injection and cooling procedures are over, make sure that:

The machine is in manual mode and the word “Manual” appears on the display (Fig. 10-02 n.1).

Manual

The piston is in resting position and the words “Piston Down” appear on the display (Fig. 10-01 n.3).

PISTON Down

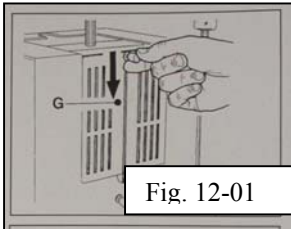


Fig. 12-01

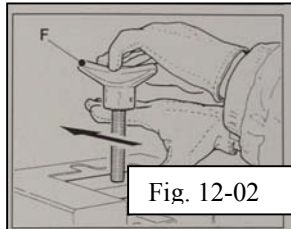


Fig. 12-02

Wear always protective insulated gloves.

Open the door (Fig. 12-01, G) and loosen the hand press (wheel) by turning it anticlockwise.

Slide the hand press along its seat to remove the flask more easily.

(Mind your hands) (Fig. 12-02, F).

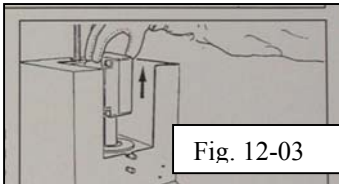


Fig. 12-03

The flask should be removed vertically since the cartridge (tube and centering device) and the J-100 Tube will be extracted in one single operation. (Fig. 12-03)

Should the cartridge (and the tube) remain in the oven, shut the door, bring the pressure down to 1.5/2 bar and press the manual injection “UP” button (Fig. 07-01 n.26). Then remove the centering device with insulating gloves on.

CAUTION

Always close the door after using the machine, so that nobody risks touching the heating chamber (oven), which might be hot (Beware of burns).

13 RECOVERY OF TEFLON CAPS

Always wait until the tube and the cylinder liner are at room temperature before removing the cartridge from the tube. If necessary, cool everything in cold water. Then unscrew the centering device and remove the cartridge from the cylinder liner (be careful not to scratch the cylinder liner). The use of a plastic tube provided by PRESSING is recommended to perform this operation.

Finally remove the teflon cap from the tube (J100 Tube).

Caution: if the tube has to be broken, always wear appropriate gloves (beware of injuries).

14 END OF PROCESS

Turn off the main switch placed at the back of the machine.

Note: Even when the oven is turned off, the operator must always be careful with high temperatures (the oven, the centering device, the cartridge container and the flask are risky areas even when the process is over).

PRESSING DENTAL and/or its representatives are not to be held responsible for any damage to objects or people, if they are caused by an improper use of the machine and of its accessories.

15 ROUTINE MAINTENANCE

- Before any maintenance procedure, always make sure that the oven is at room temperature, shut the air pressure supply and release the pressure from the machine by closing the pressure controlling devices.
- Disconnect the master line cord.

Check the air intake filter every 15/20 days (if a considerable amount of liquid is observed, put an extra safety filter and possibly an automatic oil dispenser upstream of the machine).

If condensation is detected proceed as follows:

Make sure that the air stop cock is closed and release air pressure, then turn the condensation discharge knob placed under the air filter clockwise. When the condensation has been discharged, turn it anticlockwise. Open the air stop cock again.

0. The machine does not require any other type of maintenance.

16 CLEANING OF THE MACHINE

Disconnect the master line cord.

Clean the machine only using a cloth dipped in a cleansing fluid or a non-corrosive detergent.

CAUTION

Never use alcohol or solvents.

17 LONG PERIODS OF MACHINE INACTIVITY

If the machine is not used for a long period of time the following steps are recommended:

- 1) Tighten the air stop cock and discharge the air inside the machine by closing the pressure controlling devices.
- 2) Disconnect the power supply plug.

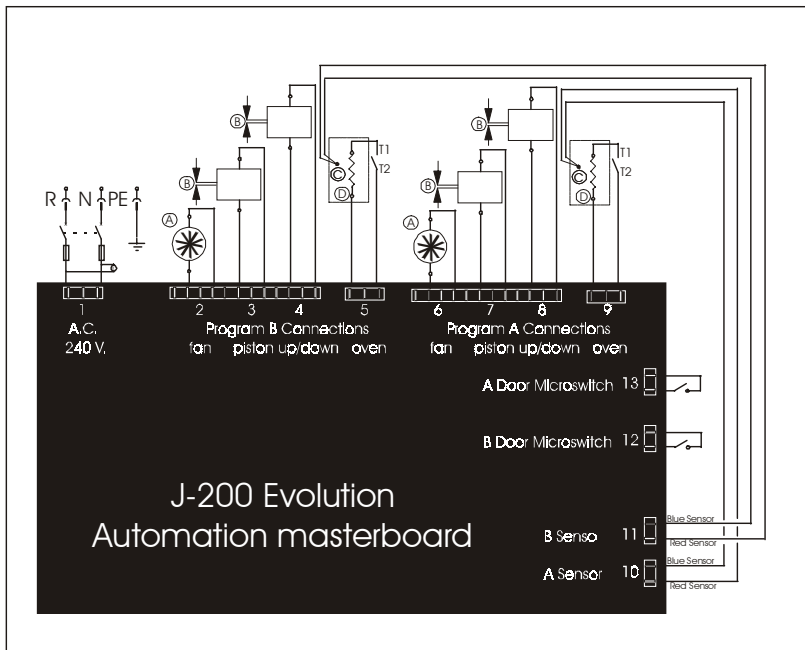
18 TROUBLESHOOTING

PROBLEMS	CAUSES	REMEDIES
The machine does not switch on	<ul style="list-style-type: none">- The main switch is turned off- The power supply socket is not properly inserted.- A fuse is burnt out	<ul style="list-style-type: none">- Put the master switch in the “on” position- Check the socket- Replace the fuse (V.220 - 6,15 A.)
The oven does not heat up	<ul style="list-style-type: none">- The heating switch is turned off- The thermoregulation is programmed at a lower temperature than room temperature- The thermoregulation sensor is broken- The thermoregulation system is faulty- The protection system against temperatures higher than the operational range is active or a resistance-coil is burnt out.	<ul style="list-style-type: none">- Put the heating switch in the “on” position- Set the thermoregulator at the required temperature- Replace the sensor- Replace the whole electronic unit (Extraordinary repairs)- Call in a technician to check the conditions of the resistance-coil and of the manually operated thermoregulator placed on the oven.
The thermoregulator does not work properly.	The microprocessor programs have probably been modified accidentally.	Call in a technician and check the thermoregulation programming parameters. (Extraordinary repairs)
The J-100 Tube breaks inside the oven (containing tube)	The hand press has not been tightened enough, or the tube has been removed before the cooling phase. The tube has not been properly lubricated with “Tube Lubricant Red”. A teflon cap has not been positioned after inserting the product.	Wait for the oven to cool down to room temperature, switch off the machine and use a spatula (any blunt device) to remove the tube, paying attention not to scratch the oven lining. If necessary disassemble the oven and remove residues. (Extraordinary repairs)
The material inside the tube does not melt properly	If a small quantity of material is introduced in the cartridge and it, therefore, remains in the lower part of the oven, the material might not melt completely.	Insert 2/3 teflon caps after introducing the material so that this is positioned more centrally and melts more easily.

If other problems should arise contact the manufacturer or the importer. Extraordinary repairs must be carried out only by skilled staff authorised by the manufacturer or by the importer.

Any tampering with the machine makes the warranty null and void and relieves the manufacturer of all responsibility.

In case of extraordinary repairs, give this manual to the technician.



J-200 Evolution

1 AC 230-240 volts Power Supply

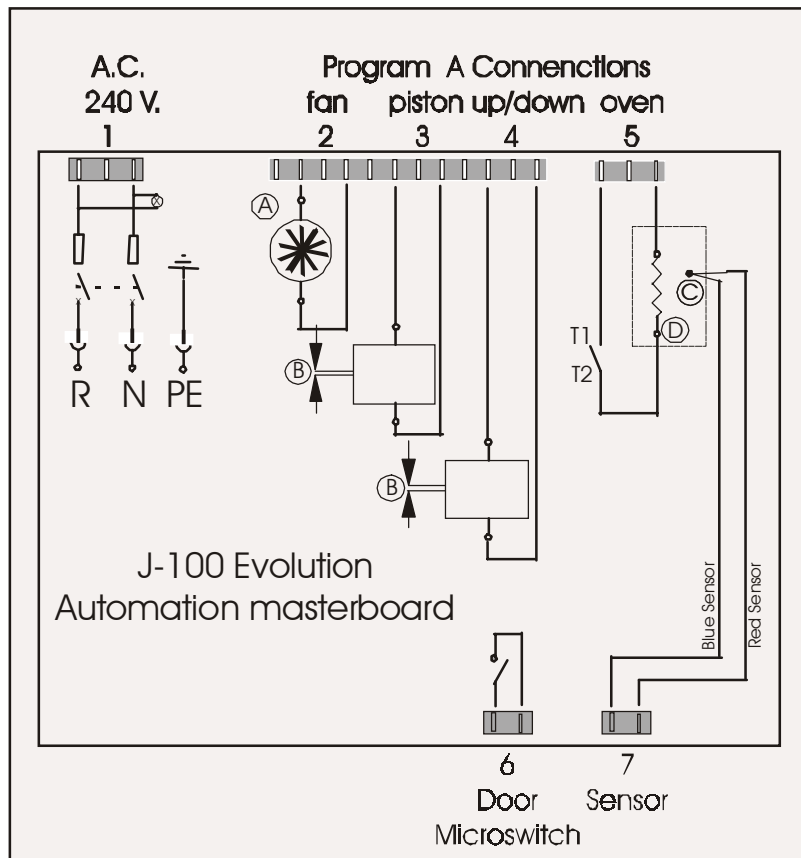
“Program B connections”

- 2 (A) Fan
- 3 (B) Solid electrovalve
- 4 (B) Solid electrovalve
- 5 (T1-T2) Oven resistance-coil

“Program A connections”

- 6 (A) Fan
- 7 (B) Solid electrovalve
- 8 (B) Solid electrovalve
- 9 (T1-T2) Oven resistance-coil

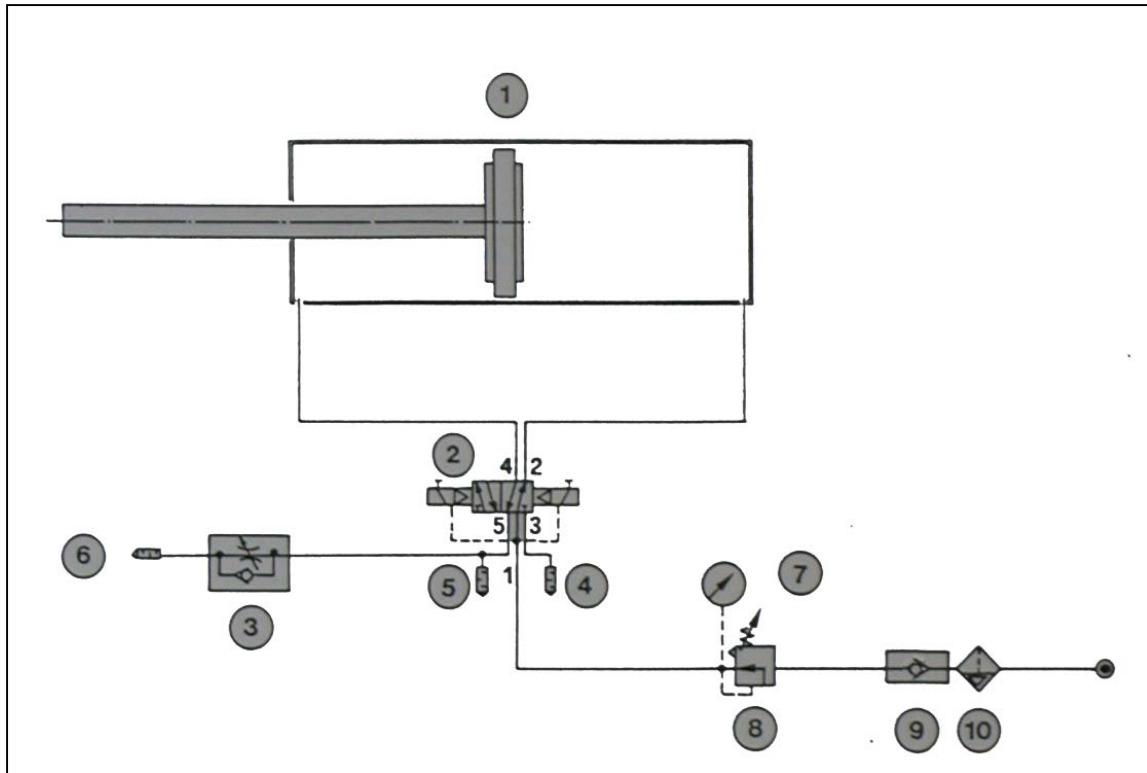
- 10 (C) Program A: Thermocouple
- 11 (C) Program B: Thermocouple
- 12 Program B Microswitch
- 13 Program A Microswitch



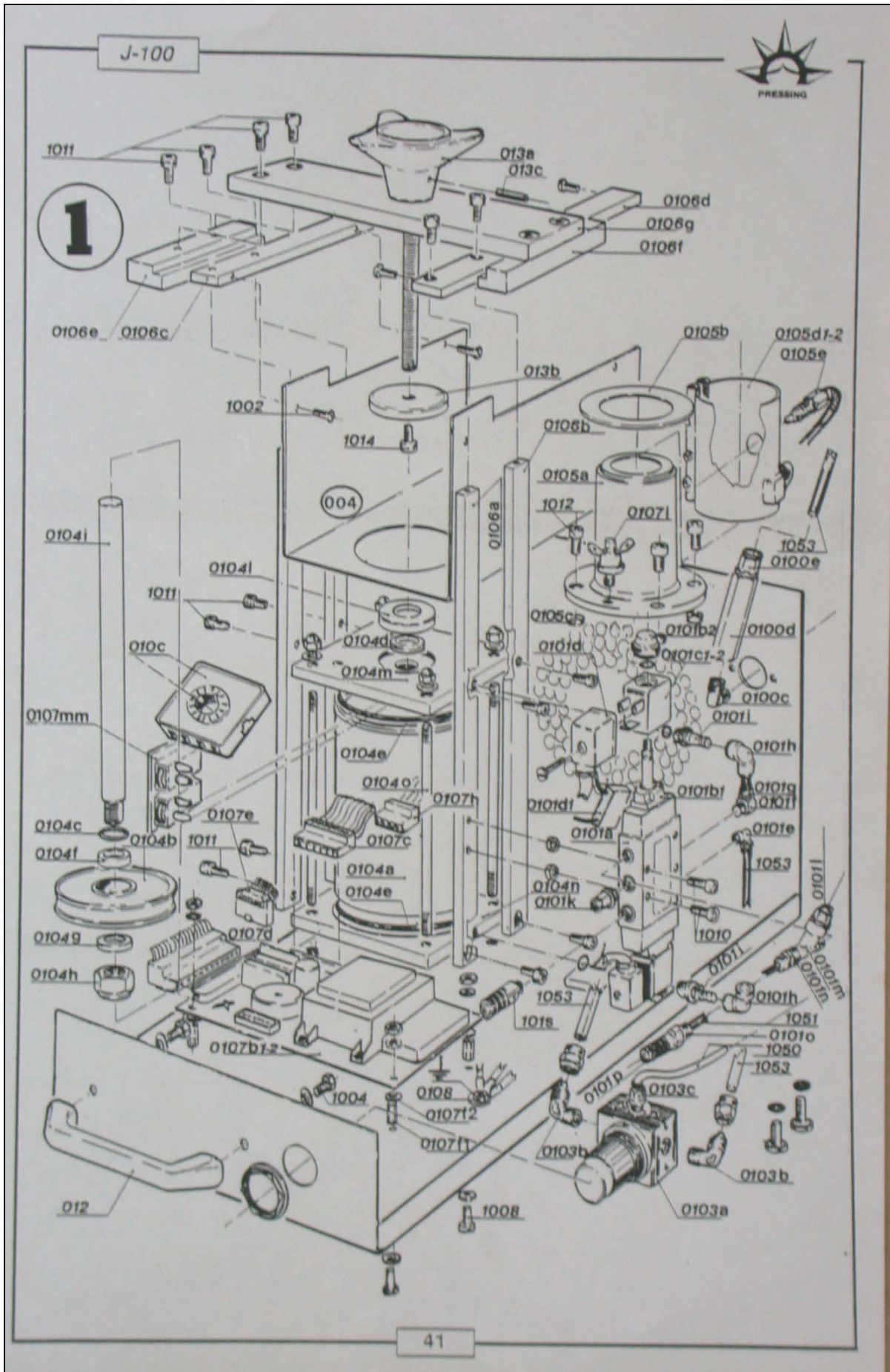
J-100 Evolution

1 AC 230-240 volts Power Supply

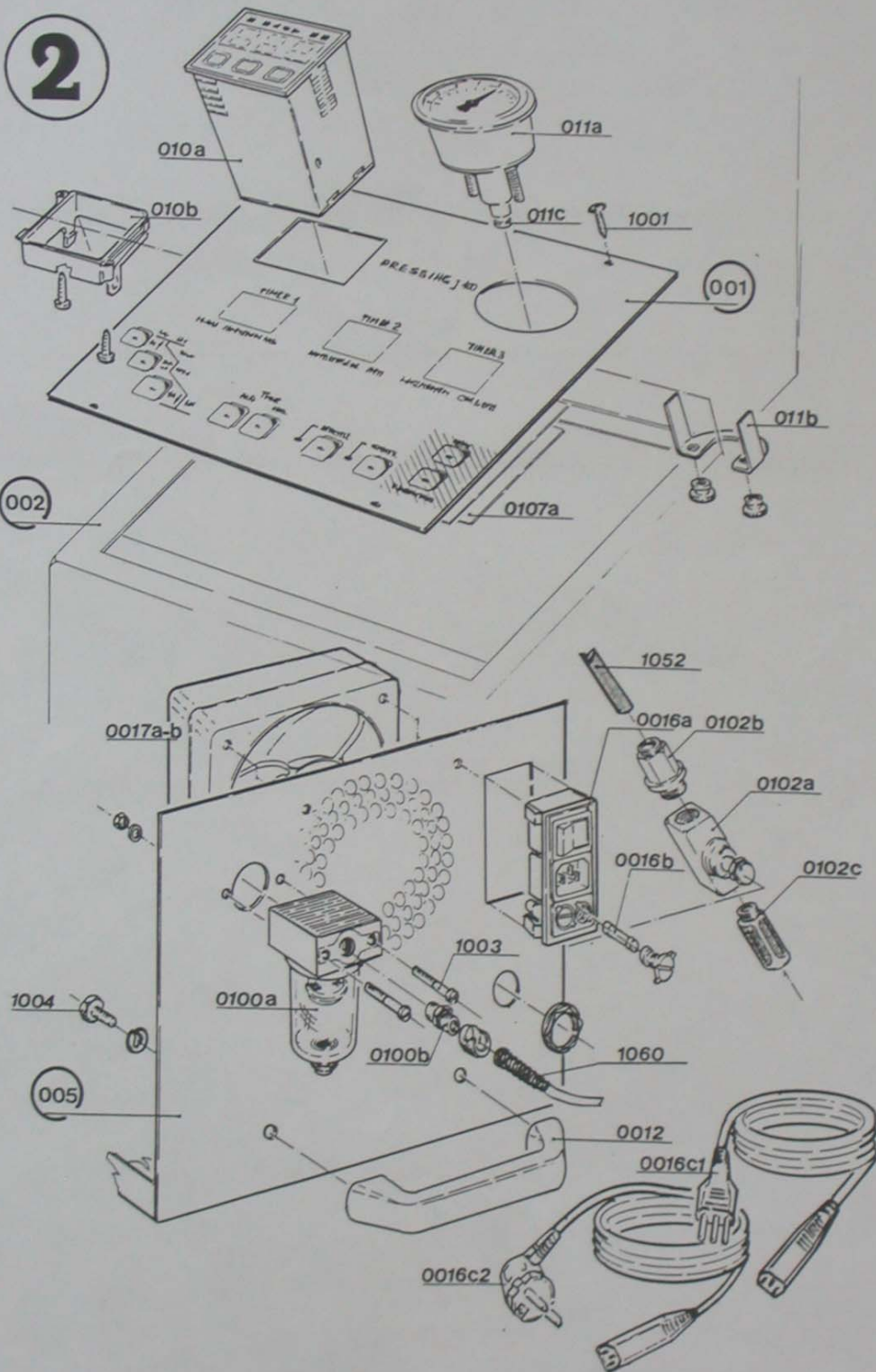
- 2 (A) Fan
- 3 (B) Solid electrovalve
- 4 (B) Solid electrovalve
- 5 (T1-T2) Oven resistance-coil
- 6 Microswitch
- 7 (C) Thermocouple



<ol style="list-style-type: none"> 1. Cilindro – Pistone 2. Elettrovalvola 3. Regolatore velocità d'iniezione 4. Filtro di scarico elettrovalvola 5. Filtro di scarico elettrovalvola 6. Filtro scarico regolatore di velocità 7. Manometro pressione 8. Regolatore di pressione 9. Valvola unidirezionale 10. Filtro aria 	<p>Cylinder-Piston Electrovalve</p>
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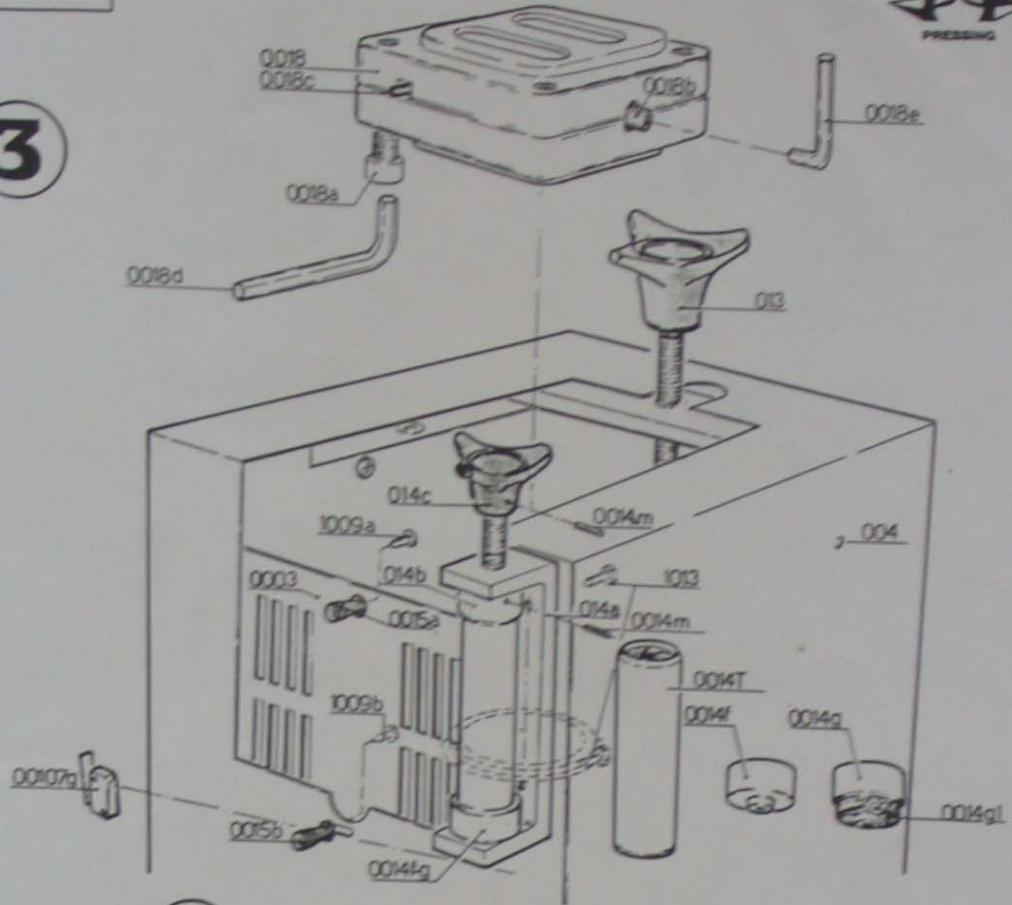


2

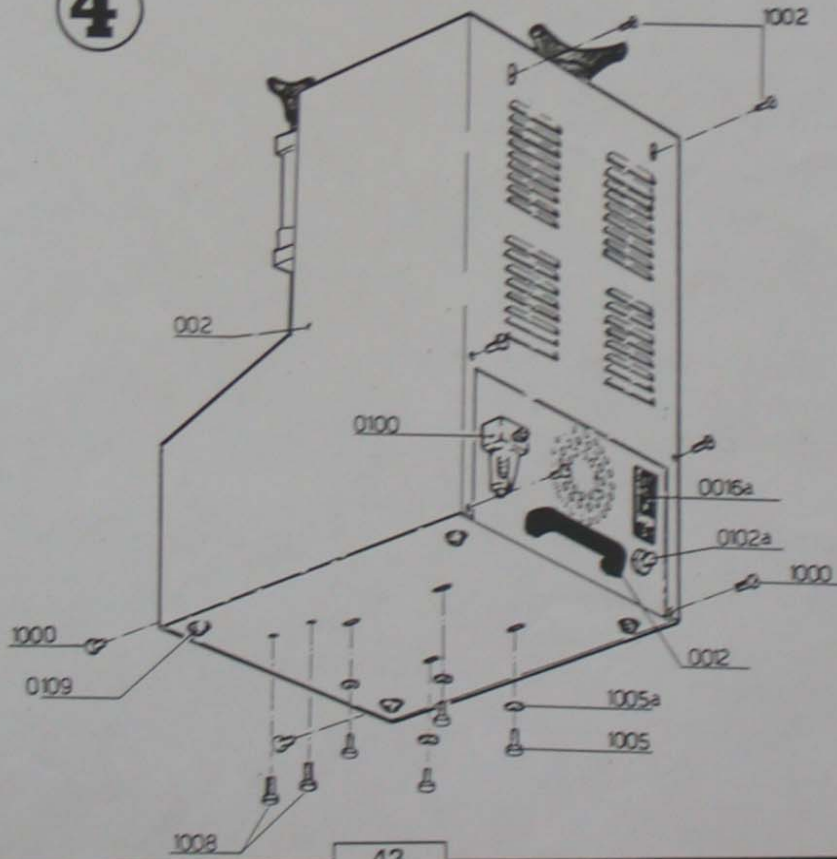




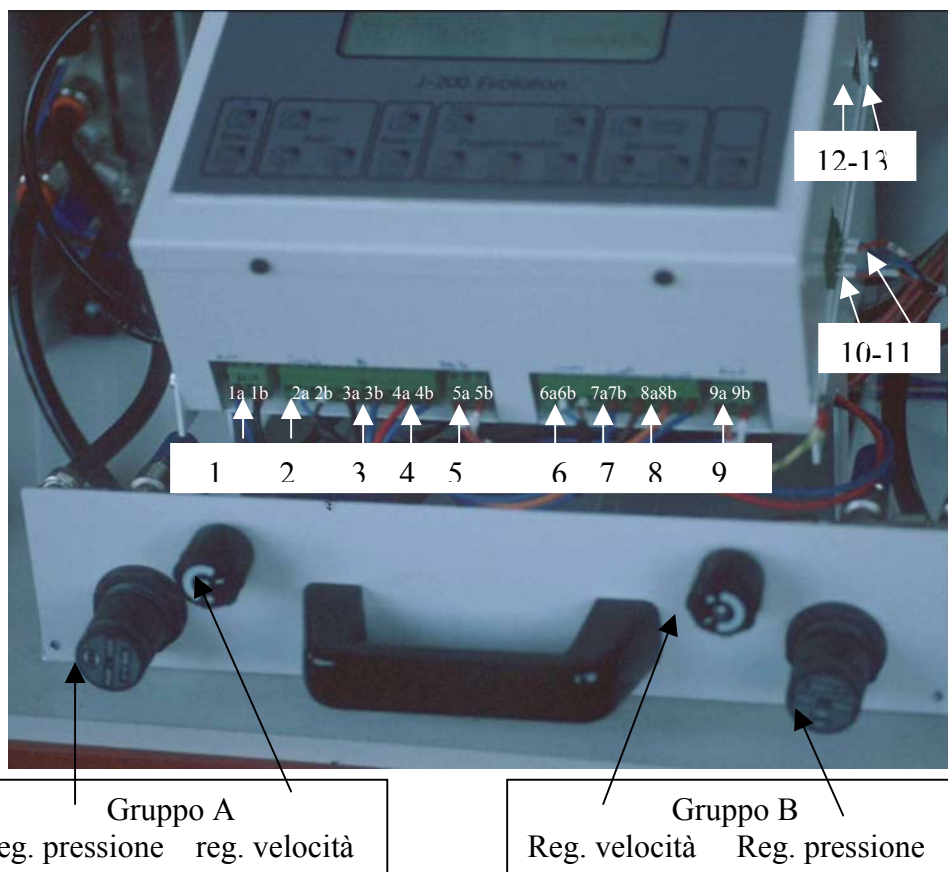
3



4

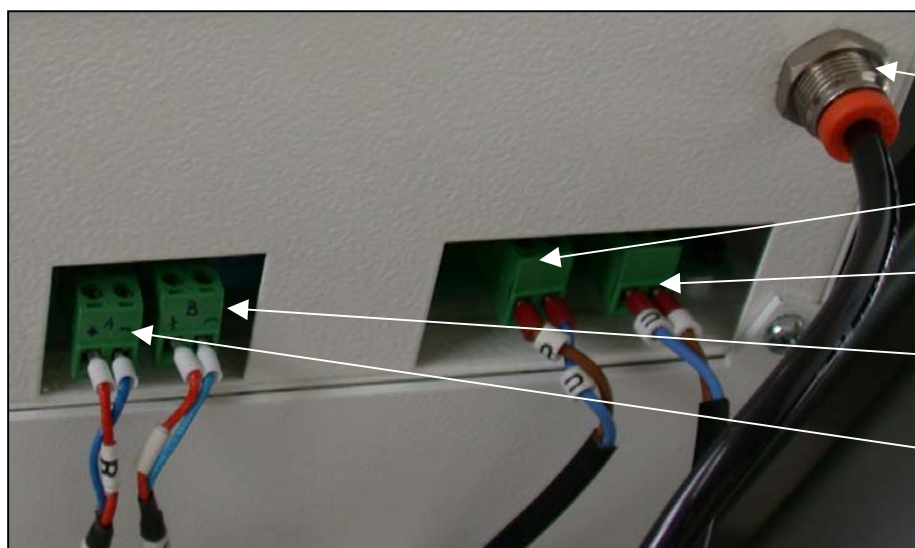


Particolari della versione evolution: Collegamenti elettrici



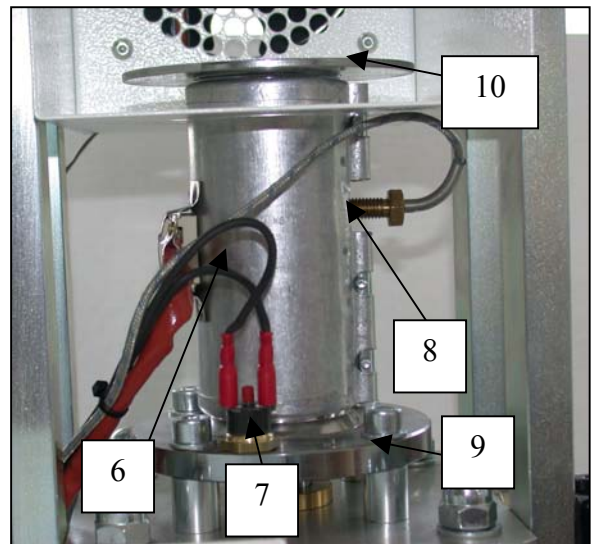
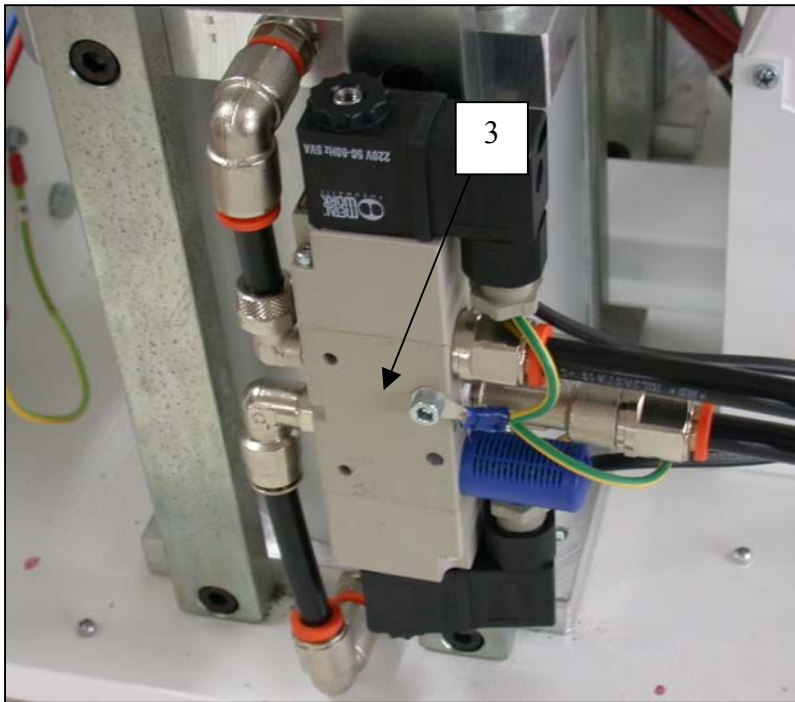
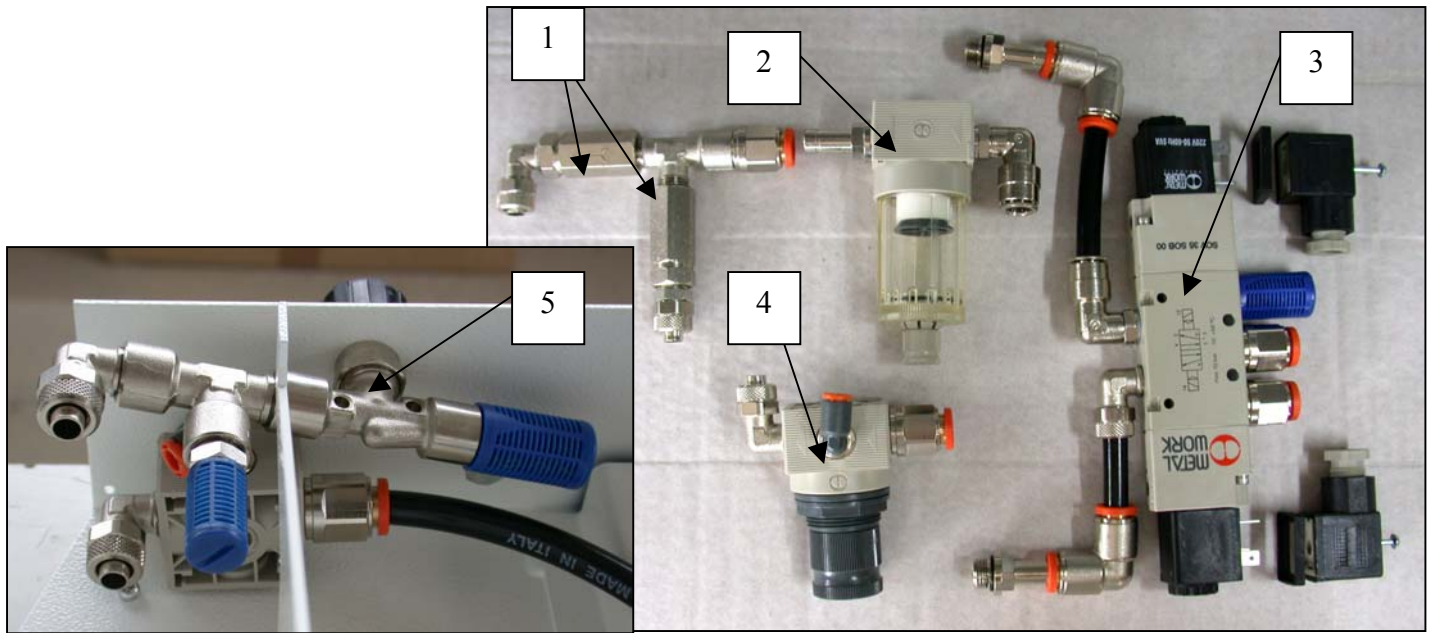
1	Alimentazione 220/240V 50 oppure 60 Hz.
2	Gruppo B ventola di raffreddamento
3	Gruppo B elettrovalvola "Piston down"
4	Gruppo B elettrovalvola "Piston up"
5	Gruppo B alimentazione resistenza B
6	Gruppo A ventola di raffreddamento
7	Gruppo A elettrovalvola "Piston down"

8	Gruppo A elettrovalvola "Piston up"
9	Gruppo A alimentazione resistenza A
10	Termocoppia gruppo A (rosso dx /blu sx)
11	Termocoppia gruppo B (rosso dx /blu sx)
12	Switch door gruppo A
13	Switch door gruppo B



- Collegamento pneumatico Gruppo B
- Microswitch door B**
- Microswitch door A**
- Sensor B**
- Sensor A**

Particolari foto varie



- 1 gruppo valvole di non ritorno**
- 2 filtro**
- 3 gruppo elettrovalvola**
- 4 regolatore di pressione**
- 5 regolatore di velocità**
- 6 resistenza**
- 7 microswitch a riarmo manuale**
- 8 sonda**
- 9 forno**
- 10 anello copri forno**

DICHIARAZIONE DI CONFORMITÀ CE

DICHIARAZIONE CEE DI CONFORMITÀ - EC CONFORMITY DECLARATION

89/392/CEE- EEC 91/368/CEE - EEC 89/336/CEE -EEC

Fabbricante Manufacturer

Pressing Dental Srl

Via Edoardo Collamarini, 5/d 47891 Dogana (Rep. di San Marino)

Mandatario Agent

Pressing Italia Srl

Via Emilia Romagna, 233 47841 Cattolica -RN (Italia)

dichiariamo sotto la nostra esclusiva responsabilità che il prodotto:
declare under our own sole responsibility that the product::

Modello. J- 100 Evolution J-200 Evolution
(matricola vedi etichetta sull'apparecchiatura)

al quale questa dichiarazione si riferisce è conforme alle seguenti norme:
to which this declaration refers complies with the following norms:

EN 292/1 - EN 292/2 - EN 60335/1- EN 50082/1 EN 50081/1

Cattolica, 30.05.2002



Monticelli Stefano

Organismo di certificazione autorizzato e notificato C.E.E. :
E.E.C. authorized and notified certification body :

I.C.E.P.I.

Istituto Certificazione Europea Prodotti Industriali S.r.l.
Via Emilia Parmense, 11/a
29010 Pontenure (PC) Italy

Attestato di Certificazione CE - EC Certification n. **M 83/95**