



# **M.M. 808**

Pressure polymerization device

EN



EN Operating Manual

# Operating Manual

## Pressure polymerization device

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# 1 Scope of validity

## 1.1 General

Name and address of the manufacturer: LAM PLAN S.A.  
7 rue des Jardins - BP 15  
74240 GAILLARD / FRANCE

These operating instructions apply to:




Order no.	Type Features	Edition
08 00808 20	M.M. 808	2021/01

## 1.2 Designation and type of the unit

Designation of the device	Type of device	Valid from Serial no.
Pressure polymerization device for cold curing mounting resins	M.M. 808	2020060043

# 2 Information on safe operation

## 2.1 Explanation of symbols

Symbol	Text	Explanation
	Attention!	Safety-relevant chapters and sections within these operating manual.
	Note!	Information within the operating instructions on the optimum use of the unit.
 3 ... 10 bars	Compressed air supply	Connection – operating pressure 3 to 10 bars.

## 2.2 Transport damage



Caution

The unit is sensitive to shock. Particular care must therefore be taken during transportation as well as storage. The equipment shipped by LAM PLAN SA was checked thoroughly prior to shipment. The unit is correctly protected and packed when delivered.

Check the unit for damage after receiving it. If it is damaged, report this to the transportation company within 24 hours of delivery. Under no circumstances, install or work with a damaged unit.

## 2.3 Operator's obligations

In addition to complying with the statutory regulations specified by the manufacturer, the operator must ensure the statutory obligations are observed and implemented in the workplace, i.e. he must train his personnel and comply with industrial safety legislation and any other regulations or laws in force.

For working on and with the device, the operator must draw up written instructions in understandable form and give these to his employees in their own language. These instructions must be based on the operating manual and written in light of the work to be performed.

## 2.4 Safety instructions

The effectiveness of the safety instructions with regard to personnel protection, handling the unit and handling the processed product is to a large degree dependent on the behaviour of the staff working with the equipment.



Caution!

Prior to initial operation, carefully read through these operating manual and observe the information in order to avoid errors and subsequent damage, particularly damage to health.

In addition to the instructions in this operating manual, comply with the national laws, regulations, and directives in your country when setting up and operating the unit.

# Operating Manual

## Pressure polymerization device

Work on the device must be carried out only by **LAM PLAN S.A. or LAM PLAN service partners** and when the equipment is in a safe status. Only use authorised original spare parts and accessories. Avoid other parts as they hide unknown risks.

The operability and safety of the device is only guaranteed if the necessary maintenance and repair work is carried out by **LAM PLAN S.A. or LAM PLAN service partners**.

For possible damage coming from a fault / malfunction of the device due to improper repair, which was not carried out by **LAM PLAN S.A. or LAM PLAN service partners** or in cases where original spare / accessory parts were not used during a part replacement, LAM PLAN S.A. is **not liable**.

### 3 Use in accordance with specifications

The M.M. 808 pressure polymerization device is a laboratory device for polymerizing cold-curing mounting resins for materialographic applications.

The functional design of the device is specifically matched with processing methods of fast curing LAM PLAN cold embedding resins. The polymerization is performed at an operating pressure of 2 bars which is calibrated by an integrated pressure reduction valve. A pressure gauge on the operating panel shows the nominal pressure after pressurization. At a pressure of more than 2.8 bars within the pressure pot the safety valve opens automatically.

#### 3.1 Working rules



##### Attention!

The following must be observed when working with the device:

- Do not process or use easily flammable materials, liquids or gases.
- Do not use any material that causes or supports the formation of explosive mixtures.
- Do not use materials and/or procedures that cause an uncontrolled volume expansion in the pressure pot.

### 4 Scope of delivery

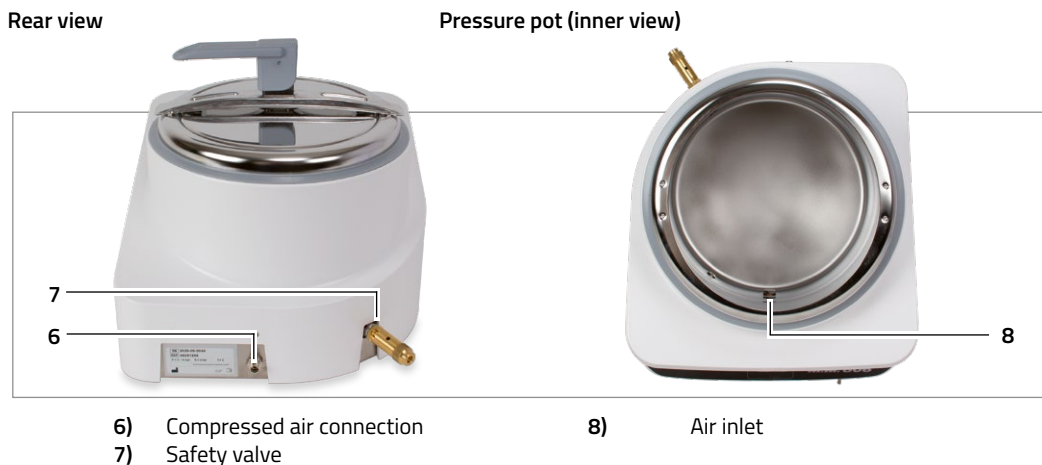
- 1 x device, quartz timer, operating manual
- 1 x Nozzle, hose clip

### 5 Description of the device

Front view



- |                 |                   |
|-----------------|-------------------|
| 1) Cover        | 4) Pressure gauge |
| 2) Pressure Pot | 5) Valve lever    |
| 3) Quartz-Timer |                   |




## 6 Setting up, installation and putting into operation

The device is to be mounted on a solid, non combustible surface e.g. laboratory bench (H x W x D): 450 x 315 x 550 mm in such a manner as to achieve a secure horizontal position.

### Ambient conditions:

- Temperature range 0 °C (32 °F) to 40 °C (104 °F)
- Relative humidity between 30 % and 75 %
- Use only indoors
- No direct exposure to UV light
- Max. 2.000 m above sea level

### Compressed air connection:

- Connect to compressed air supply using the connection at the rear of the device (6).  
 Connection to pressure system with: 3 to 10 bar.  
 Maximum pressure: 10 bar.



### Note!

The compressed air must be clean and dry!

Any guarantee claims shall be excluded in case of malfunctions or damage resulting from inadequate compressed air supply! If a corresponding compressed air quality cannot be guaranteed, a cleaning filter (e.g. compressed air cleaning filter for metallography devices, LAM PLAN code 60 00375 90) must be connected upstream of the M.M. 808.

## 7 Working with the M.M. 808



### Attention!

Check the content of the shipping carton and compare with the scope of delivery described in the operating manual (see chapter 4 scope of delivery).

Prior to operation it must be verified whether the information provided on the type plate correspond with the local pressure supply data.

### 7.1 Pressure pot

After completing the polymerization process, the handle must be in a perpendicular position to open the lid. The lid can only be removed if it has been lowered into the pot after release of pressure. To open the lid (1), locking lever must be in upright position. Turn the lid by 90°, tilt it and remove it from the pressure pot. The lid is inserted and closed in reverse order. It must be ensured that the supporting strut of the lid fits into the grooves on the pressure pot rim.

### Opening and closing the pressure pot



- 1) Place handle in perpendicular position and turn lid by 90°
- 2) Tilt lid slightly
- 3) Remove lid

The pot is closed in reverse order.

## 7.2 Polymerization

### Time setting

Place the timer in the middle of the front panel (magnetic holder) and set the time setting according to the polymerization time of the corresponding mounting resin. (For further information please refer to the extra Timer instructions for use)

### Recommended times for LAM PLAN mounting resins:

#### Polymerisation times

Resin 603 :	1 h polymerisation - (hardening 10 h)
Resin 603.2 :	20 min polymerisation - (hardening 2 h)
Resin 605 :	5 – 7 min
Resin 607 :	16 – 20 min
Resin 665 :	8 – 10 min
Resin 609 :	9 – 13 min

#### Capacity of the pot

Embedding mold 25 mm :	30 pcs
Embedding mold 30 mm :	24 pcs
Embedding mold mm :	15 pcs
Embedding mold 50 mm :	10 pcs

**Tip:** Covering the bottom of the pot with a PE film prevents contamination with any escaping mounting resin and makes cleaning the M.M. 808 easier.

### Operating pressure

The compressed air is applied by moving the valve lever upwards (5). The pressure pot is then pressurized with 2 bar pressure. Additional control is provided by the pressure gauge (4).

Set the time according to the recommended polymerization time for the resin. After the timer expires, an acoustic signal sounds.

### Pressure relief

Release the air: The pressure is released by moving the valve lever downwards.

### Removal

(s. 7.1. open and close the pressure pot)

## 8 Putting out of operation

- Lock external compressed air supply
- Move valve lever down
- Remove the compressed air hose from the device
- Any material residues should be removed with a sponge cloth

## 9 Cleaning

Use a moist cloth to clean the device and make sure that no water penetrates into the device. Do not use aggressive cleaning agents (scouring powder, solvents).

The device consists of makrolon components which may only be cleaned with mild agents or ethanol (96 %).

## 10 Maintenance



### Attention!

When blowing off the safety valves, please note that gases can exhaust in high velocity and with high temperature and excessive noise.

In the event of minor leaks, which may be caused by contamination between the sealing surface, the valve can be made to blow off through lifting, for cleaning purposes.

In the case of safety valves with a lifting device it is recommended, that the valves from time to time must be made to blow-off by lifting the seal off the seat, in order to assure the correct functioning of the safety valve.

They can be made to open by hand at the latest when the working pressure is > 85 % of the response pressure.

Lifting is carried out by turning the twist-type lifting mechanism above the bonnet in a counterclockwise direction. Turn the twist-type lifting mechanism back to the stop again afterwards.

## 11 Technical data

Pressure connection	3 bis 10 bar		
Nominal pressure	2 bar		
Max. operating pressure	2,8 bar		
Dimensions	Required utility space		Dimensions pressure pot
Height 300 mm	approx. 450 mm		Operture diameter approx. 210 mm
Width 305 mm	approx. 315 mm		Inner diameter bottom approx. 225 mm
Depth 400 mm	approx. 550 mm		Height of pressure pot to lid edge approx. 190 mm
Weight	8,6 kg		

## 12 Service



We appreciate your comments, feedback, and suggestions.

More information about our product range "metallography" are **available by the displayed QR code** or at our website [www.lamplan.com/en/metallography](http://www.lamplan.com/en/metallography)

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