

## **INSTRUCTION MANUAL**

### **DEFLEX INJECTION SYSTEM**

SERIES: MD1500

**Equipment to manufacturer dental prosthesis**

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### 1. Description:

FIG 1



FIG 2



## 2. Technical information

Layout	Vertical	
Temperature control	Digital	
Injection cylinder	Pneumatic	
Manometer	Built-in	
Heating furnace	Built-in	
Pressure regulator	Built-in	
Height	64 cm. / 24.4´	
Platform	15 cm.x 30 cm. / 5.9´´x11.8´	
Approximate weight	22 Kg. / 48.5 lb	
Piston diameter	O 22 mm. O 25mm	
Power supply	O 220V	Power supply voltage 220V~ 2P+T Frequency 50 Hz. Consumption 650 W. Fuse 3,5A F 250V. Ø 6 X 32
	O 110V	Power supply voltage 110V~ 2P+T Frequency 60 Hz. Consumption 650 W. Fuse 7A F 250V. Ø 6 X 32
Maximum temperature of use	Programmable: 500 C° / 932° F Recommended: 390 C° / 734° F	
Pneumatic power supply	Minimum line pressure 7 kg/cm2 / 100 PSI Minimal line pressure 150 l/min.	
Environmental conditions of use	<ul style="list-style-type: none"> <li>- Equipment for indoor use</li> <li>- Ambient air humidity</li> <li>50% at ambient temperature de 40 °C</li> <li>80% at ambient temperature de 31 °C</li> <li>90% at ambient temperature de 20 °C</li> <li>The permissible fluctuation in ambient air humidity between these temperatures is linear.</li> <li>- Altitude:</li> <li>Can be operated at altitudes up to 2000m.</li> </ul>	

### 3. Installation

FIG 3



#### STEP 1 - Air Connection

Connect a 8x5mm hose (provided with the machine) for snap plug-in, connection the air entrance to the compressor.

**IMPORTANT:** It is recommended that the connection be direct from the compressor to the injector, without couplings or filters that affect the airflow.

#### **!** Note 1 - Air Pressure:

The air pressure of the injection machine already comes regulated in 6 kg/cm<sup>2</sup> +/- 1 = 86 PSI +/- 14, which is the recommended pressure. If it needs to be modified, consult the item "Pressure Modification".

#### **!** Note 2 - Characteristics of the Compressor:

Minimum and maximum air pressure: The compressor should be regulated with a minimum air outlet of 7kg/cm<sup>2</sup> (100 PSI), so that it recharges when it drops below this level of pneuma c pressure. The maximum recommended pressure is 8,5kg/cm<sup>2</sup> / cm<sup>2</sup> (120 PSI). When in doubt, consult the manufacturer, compressor manual or a service technician.

Any doubts ask the compressor service.

#### **!** Note 3 - Airflow:

We suggest that the connection of air should be through a hose no longer tan 5 meters. A longer length can result in an insufficient flow of air at the time of injection, even when the pressure in the injection machine´ s manometer coincides with the recommended parameters, 6 kg/cm<sup>2</sup> +/- 1 = 86 PSI +/- 14.



**¡IMPORTANT!**

Perform a first air flow test on the Deflex Injector

A way to detect if the airflow is insufficient is by ensuring that, at the moment of injection, the needle of the manometer does not drop below 4kg/cm<sup>2</sup> (55 PSI) of pressure.

### STEP 2 - Electrical connection

Install the power cord in the connection socket of the injection machine, and then connect the plug to the electrical outlet. The equipment must be installed closet to an electrical point, in such a way that it is accessible to the operator of the equipment during the operation for its disconnection.

**! Not 4 - Ground cable:**

Do not change the plug for an other 2 spikes; do not use adapters with three-prong input and two outputs, because in both cases the protection of the ground connection is eliminated.

**! Note 5 - Ground cable:**

It is important to have a ground cable of 1mm (minimum) in the electrical outlet being used.

 **IMPORTANT**

The machine has an electrical power cut key, remember to activate for starting the machine.

## 4. Injection Programming



Injection parameters of Deflex Polyamide

**! Note 6:** The injection machine is default programmed according to the parameters required by Deflex Classic SR.

Parameters Deflex CLASSIC SR	
Temperature	280°C +/- 10°C
Air pressure	6 kg/cm2 +/- 1 = 86 PSI +/- 14

To modify the injection parameters, follow these instructions:

### 4.1. Temperature modification

Press the key PROGRAM during two seconds approximately until the numbers start to blink and SP appears. In that moment, the programmed temperature can be modified by pressing the arrows  (up) or  (down) located on the side of the key **PROGRAM**. The parameter is automatically fixed pressing again **PROGRAM** (during 2 seconds), and the real current temperature appears again on the display.

### **4.2 Modification of the air pressure:**

The air pressure is set at 6 kg/cm<sup>2</sup> +/- 1 = 86 PSI +/- 14. In case you need a modification this can be done manually. Pull out the air regulator knob (see diagram 1) until you hear a click and rotate clockwise to increase or counterclockwise to decrease the air pressure. Once you have set the desired parameter, push the knob inwards until you hear a click.

! **Note 7:** It is recommended a trial injection (without either flask or cartridge), directly pressing the injection key. This will allow leveling the pressure and checking whether the desired parameter has been established. Then press the key again to turn off the piston.

## **5. Injection procedure**

### **STEP 1 - Turn on the machine**

Press the key on the back of the machine (see figure 3) to turn on the micro-injector. The initial temperature will increase progressively until it reaches the programmed temperature (it delays between 10 and 15 minutes).

### **STEP 2 - Cartridge Spraying**

Select the cartridge that corresponds, open the container and spray the tube with silicone demoulder (type "Neutral" for plastic injection) in its entire perimeter, but do not spray either the cover or the base.

! **Note 8:** Spray before with a Little bit of demoulder in the inner part of the furnace

### **STEP 3 - Cartridge Placement**

Insert the tube in the furnace making sure that the closed end, which has a small round mark in its center, is facing upwards, and the end with the furrow is facing downwards.

### STEP 4 - Muffle Placement:

Place the muffle with the injection hole facing downwards and rotate the gate forward so that it stops with the left column of the machine as shown in figure 4. Then tighten the muffle seal firmly.



FIG 4

### STEP 5 - Activate the injection cycle:

Set on the timer provided with the machine 15 minutes and press START. When 5 minutes are missing for the injection, the timer will sound, this is to verify that the machine has the correct air pressure to make the injection. After 15 minutes press the **INJECTION** key to inject. Reset the timer and after 1 minute press the **INJECTION** key again to lower the piston of the micro-injector.

! Note 9: The injection key has a detent, this means that it is not necessary to keep it pressed for the piston to go up, one touch for the ascent and another for the descent of the same.

### STEP 6 - Muffle Ejection:

The injection has already been made, and the next step is to loosen the adjustment closing of the muffle, take the muffle with a glove, and at the same time press the key **INJECTION**, so that the piston is activated manually until the muffle is ejected.

Once the injection cycle is completed, press again **INJECTION** until the piston is off.



FIG 5

! Note 10: Do NOT try to force or speed up the ejection of the flask by pulling up manually. Simply hold the flask firmly with your hand until the piston carries out the ejection.

! Note 11:  **WARNING!**

Do NOT touch used injection cartridge, as it will be very hot.

## 6. Cleaning and maintenance

Clean the furnace at high temperature, making a swab of absorbent paper on some long tongs, introducing them inside the furnace, thus eliminating all the impurities or sediment that might have been deposited. It is of vital importance to maintain clean the exterior of the muffles which are placed on the furnace of the machine, eliminating, if necessary, the remains of wax or other elements, since when injecting, the waste could be dragged to the interior of the muffle, contaminating the material and damaging the injected piece.

The furnace cleaning operation must be carried out once a day or as many times as it is necessary to maintain it completely clean



### 7. Warnings





Hot surface



Read manual



Connection of protective earth line

- It must be kept in mind that it is a machine, which is connected at a power supply voltage of 220V (110V)
- It is necessary to have an electrical power supply with a ground connection, and the machine must not be wet.
-  **Danger:** Do not touch the furnace when the machine is on.
-  **Danger:** Never put your hand between the muffle and its muffle holding device.
- **OBSERVATION:** It is normal for the temperature display to register a variation of +/- 4°C regarding the programmed temperature. This does not indicate any bad operation of the machine.

### 8. Technical service

In case of any difficulty, contact Nuxen S.R.L. Via mail to: [info@deflex.com.ar](mailto:info@deflex.com.ar) or by telephone at: 0054-11-4812-9638. Do not under any circumstances attempt to disassemble or repair the machine, as this will automatically void the warranty.

### CERTIFICATE OF GUARANTEE

Injection machine Deflex MD1500

NUXEN S.R.L./DEFLEX guarantees the buyer of this device for the term of 1 (one) year starting from the date of its acquisition, its normal operation against any manufacturing flaw and/or material defect, and it commits to repair it, free of charge for the client, if it fails in normal situations of use and under the conditions that are detailed below:

-The guarantee will be limited to the substitution of parts that present a faulty manufacture.

-The guarantee does not include the transport, the visits of Deflex technical staff, packaging, etc.

-The offered guarantee will not cover the parts subject to the wrong use and which present damages derived from a faulty maintenance, incorrect power supply, negligence, lack of capacity for its operation or causes which are not attributable to Deflex.

-In case the user has carried out repairs and/or opening of the machine, or an inappropriate use has been given to it, the guarantee will expire automatically.

-The guarantee neither will cover the damages suffered in the equipment by accidents or agents of the nature.

-In any case NUXEN SRL / DEFLEX will take the responsibility for damages whose total value exceeds the price of acquisition of the equipment, or for any accidental, special or indirect damage, commercial loss or loss of profit that can be derived of the use or of the impossibility of use of the equipment.

-IMPORTANT: The microinjecting machine must be used with Deflex Demolder (or with those demolders indicated by the official distributor), which is a siliconed temperature insulator that avoids the aluminum tube from being adhered to the furnace of the machine. The guarantee will not cover the damages caused by the use of demolders not authorized by the manufacturer or official distributor, which could have components that may harm some of the parts of the injection machine.

To make use of the guarantee, the buyer must address only the salesperson or the manufacturer of the machine.

#### GUARANTEE CERTIFICATE (For the client)

Client \_\_\_\_\_

Serial number \_\_\_\_\_

Purchase date \_\_\_\_\_

DISTRIBUTOR  
SIGNATURE

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