Microinjection Machine

Sabilex 2AD 400 Plus – Biotrong 400 Plus

5 Programs - Automatic

Since 1951

Sabilex®

User's Guide

Please, read this manual before using the machine.

Thank you for choosing Sabilex to produce quality flexible partials

This manual gives you important information about the use of the injector to create flexible partials and dentures.

About this manual
The information it contains might be changed without advice.
To obtain the most recent information about this product, we recommend asking your nearest Sabilex distributor.

Statement of agreement
Model : 2AD 400 PLUS / BIOSTRONG 400 PLUS
Mark: SABILEX
Responsable: Flexafil S.A.C.I.
Address: Leopoldo Marechal 1312 (1414) Buenos Aires – Argentina
Telephone : Tel/fax 54 (11) 4854-4814
. This machine is in accordance with the Machinery Directive 2006/42/CE , and the Low Voltage Directive(LVD) 2014/35/EU

CE "CE" mark means this product agree with European security requirements about security, health, environment and client protection.

Contents
Read the following items before using the injector

1. Accessories

You receive with the machine the following elements:

a. A bronze brush and a wood stick to introduce a chamois rag into the cylinder and keep it clean
b. One flask
c. One release compound lubricant
d. Injection cartridges
e. Promotional material

2. 2. Suggestions:

a. Every time you put the flask into the closing unit, verify it's well closed
b. We suggest preheat the cartridges before using during 30-45 minutes in 90ºC
c. Remember: it's convenient to preheat flask before injecting.
d. If you release some gas to the flask, it will improve the injection.
e. To remove the flask once you have injected, push the injection valve again.
f. Take care the cartridge is not dented, to avoid it get jammed inside the cylinder.
g. IMPORTANT: in order to achieve a good operation of the micro injector along the time, we recommend to filter and lubricate the air that is used (put a lubricator filter previous air entrance to the machine)

If you have any doubt about the flask filling or the injection technique, call Flexafil SACI.

3. 3. Warning

Unplug the machine of the electric line and air compressor before doing adjustments or repairing inside the unit. If you have any doubt, contact your nearest distributor.

Use cotton gloves to remove the flask to avoid heat in your hands.

Sabilex microinjection machine is protected with a ground line to avoid electric risk. Be sure your electric installation is effective.

Sabilex microinjection machine must be connected to protected line with fuses.

This machine doesn't need any preventive maintenance, such as lubrication, etc. If you have any problem, contact an authorized technician.

4. 4. Sabilex® Microinjection machine operation technique

The injector consists of 3 units:

a) Closing unit

b) Heating unit

c) Injection unit

Temperature and time controller

ON/OFF Switch (Right side)

Keyboard

5. 5. Injection Unit

It consists of a pneumatic piston, operated by an air compressor of Nitrogen tube. Minimum pressure required is 7 kg/cm^3.

6. 6. Heating unit

It consists of a cylinder where the user put the cartridge. The machine heats the tubes by an electric resistance, which are controlled by a digital pyrometer. This part is the one that controls the temperature, according to the selected material.

7. 7. Closing unit

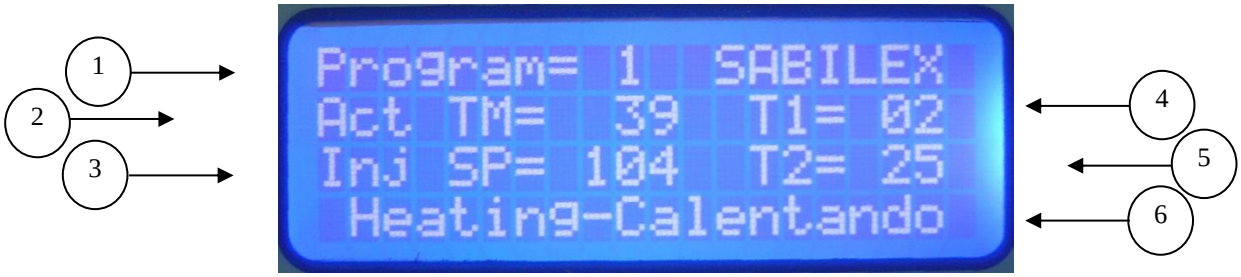
This unit contains the flask and holds it during injection process.

8. 8. INSTRUCTIONS

The new Microinjection machine automatic Sabilex BIOSTRONG 400 PLUS, is most versatile and light of the market. It has a controller who allows to an easy handling and a simple visible interface with the user and also the possibility to handle up to 5 programs of use of different materials.

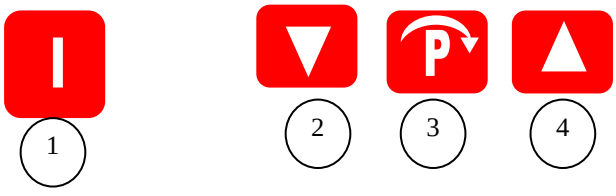
8.1 Identification of commands and operational display

DISPLAY:



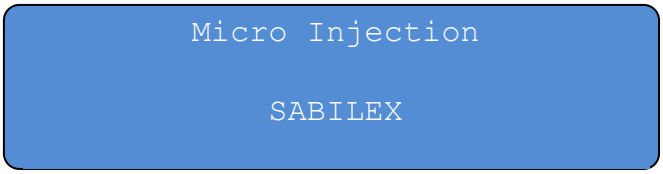
1. Program: Indicates the selected program and operating.
2. Act TM: Indicates the temperature of the system in real time.
3. Inj SP: Indicates the temperature set for the cartridge heating.
4. T1: Indicates the time set for the cartridge heating
5. T2: Indicates the time in seconds that the machine remains in injecting position
6. Describes the operation of the machine in real time.

COMMANDS



1- Switch for manually piston operation
2- Down switch for values modification
3- Switch for setting the program and jump to the next set
4- Up switch for process start and values modification

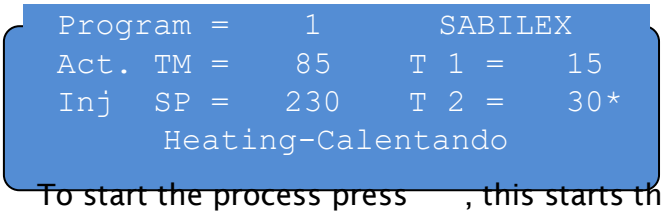
8.2 Programming



Start screen

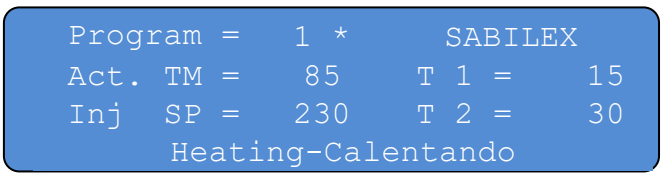
Press the power switch, located on the right side of the machine.

The machine will run and show the start screen, at this stage the machine does not heating.



To start the process press , this starts the operation of the machine and can access programming.

To choose between programs 1, 2, 3, 4, 5, press the button , the display shows an asterisk next to the value in the item "Program".



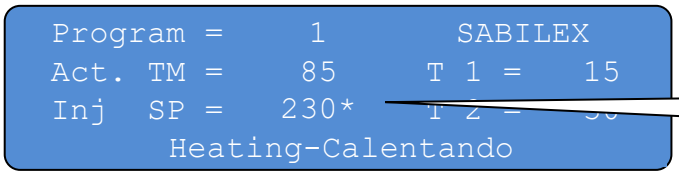
Press the or buttons to switch to the program you want.

To set the value you must press again the button

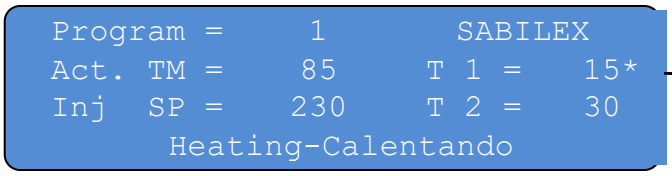
After choosing the program oppressing the button is accessed to set each of the parameters in each selection, the asterisk will be placed next to the value to be changed.

There, you must press the buttons or to change by the desired value or by the value suggested by the manufacturer of the cartridge

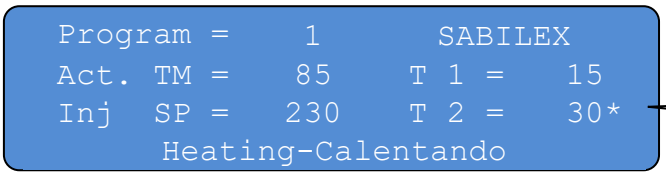
To set the value must press again the button



Setting of the heating temperature of the material

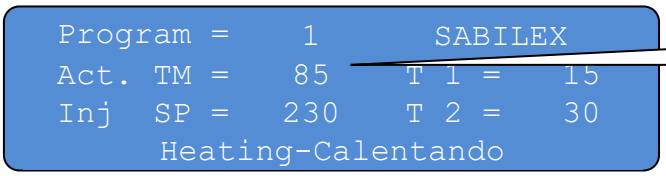


Setting of the heating time of material

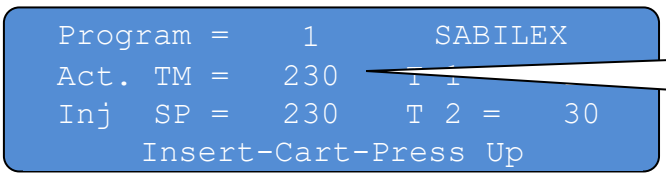


Setting of Injection time of the material

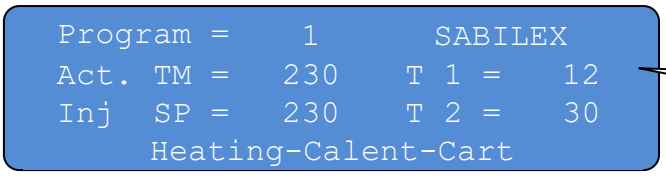
Description of cycles



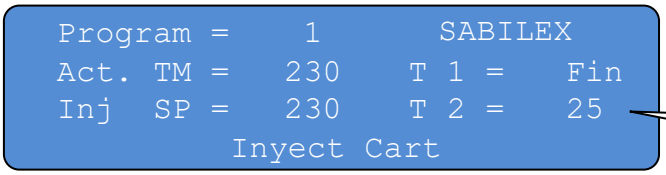
Heating



Once desired temperature has been reached, place the cartridge and flask in position and press ▲



The counter will indicate in regressive form the heating time of cartridge



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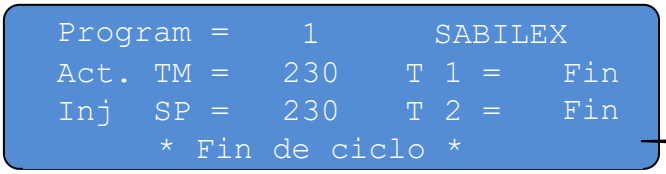
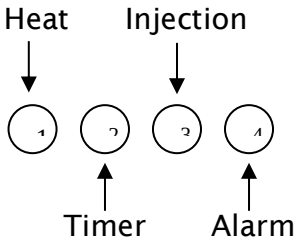


End of cycle

Advise Leds



- **LED1:** Indicates that resistance is heating
- **LED2:** Indicates that the timer is controlling the heating time
- **LED3:** Indicates that the piston is going up.
- **LED4:** Alarm. It turns on if there is any cause that interrupts the cycle.

9. TECHNIQUE FOR MAKING A FLEXIBLE DENTURE SABILEX®

1. Once you have your original cast model from the dentist, take care it get to the end of the groove. (Picture 1). Prepare a 2nd copy of the model.
2. Watch the picture 2 by where you should alleviate and remove false square, alleviate to all soft tissue, specially the cervico gingivo distal areas and mesial gingival cervical areas and eliminate the retentive areas of the teeth without invading the oclusal or incisal third of he himself. Once you finalized the work, make its duplicate.
3. Make the duplicate with reproduction jelly, soaking the model completely by 10 minutes. Passed this time proceed to duplicate the model.
4. Figure 3 shows to a conventional base plate with its buns to send to the professional.
5. Once received the work with its bite and antagonist, putt it in oclusor or articulator, as it shows figure 4.
6. Consider that when we lined up, do not wear away too much the heel of the tooth, since this one needs its retentions by mesial, distal and oclusal sides, as it shows figure 5.
7. Proceed with the waxing and design of the denture. The waxing should be thin and fine, minimum 0.3 mm. (special waxes are not required).
8. Take the waxing to the cíngulum of the previous teeth, as it shows figure 6.
9. By the vestibular part of the tooth, take the waxing of the clasp 2mm by above of the gingival part as it shows figure 7.
10. Trim the teeth until its waxing, to avoid the teeth to be retained in the flask, as it shows figure 8.
11. Trim the model with the Thimmer machine to avoid retentive areas, as it shows figure 9.
12. Observe in figure 10 the putting in muffle, alleviating with plaster its retentive areas.
13. Figure 11 shows the bolt of entrance, that it's a wax leaf, and with wax "utility" to cover the entrance orifice .
14. Once made the previous step, place the contra flask, locating two screws only in its ends.
15. Proceed to conventional washing removing the screws previously.
16. Once washing was done correctly, put pink separator in flask and contra flask, close it with its 4 screws affluent fit and proceed to the injection (to see "Instructions in page 5").
17. Figure 12 shows the injected flask.

18. To open to the flask, remove the 4 screws and strik with a hammer the superior part, as it shows figure 13.
19. Figure 14 shows a correct injection, eliminating therefore the plaster of the denture and taken care by far of not hurting the clasps.
20. To eliminate the bolt of entrance with a metal disc, as it is observed in figure 15.
21. Once eliminated the entrance bolt, scrape the denture with an acrylic stone or grinder, as it shows figura16.
22. Clear the edge parts and eliminate with a cylindrical rubber as in figure 17.
23. As it is observed in figure 18, polish the denture with a brush of 4 or 5 rows with pumice paste.
24. With a sheepskin or rag, give brightness to the denture with its corresponding paste, as it is seen in figure 19.
25. Figure 20 shows the finalized work, located in its original model, ready to give to the professional.

MICROINJECTOR SABILEX
Troubleshooting guide:

Problem	Cause	Solution
1) When you turn on the injection machine, the temperature controller doesn't work	The fuse is damaged	Replace the fuse.
2) When you turn on the injector the temperature controller doesn't increase temperature	The heating-element got burned	a- Replace the heating-element
3) When you heat the tube, the cup pops out o	The material got moisture	Pre-heat the material for 5 hours at 60ºC
4) The cavity in the flask doesn't get filled.	a- Slender injection channels b- Low injection pressure c- Air volume insufficient	a- Enlarge the injection channels b- Check the minimum pressure:7 kg/cm^3 c- Check the feeding pipe doesn't have the filter or any other part obstructed d- Try to take out the air filter and inject. If the injection is correct, the filter is dirty or obstructed. Replace the filter.
5) The material crystallizes and breaks	the injection was made with the flask cold	Pre-heat the flask before injecting. Suggestion: put the flask on a heat resistant ceramic over the oven and cover it.