Since 1951
Sabilex®
Sabilex Injection System

Microinjection Machine
User´s Guide

Models:
2A / 2AD / 2AD-400 / 2AD-400C / BIOSTRONG 400

Flexible partials. Operation technique.

Compact Models

Injection force: 630 kg
Measures: 52 x 17 x 22 cm
Weight: 8.5 kg

Super Power Model

Injection force: 1000 kg
Measures: 57 x 20 x 28 cm
Weight: 20 kg

300°C

Máx injection temperature 400°C

2A

•Heat up to 300 °C
•Digital display
•1 program

2AD

•Heat up to 300 °C
•Digital display
•1 program

2AD-400

•Heat up to 400 °C
•Digital display
•1 program

2AD-400C

•Heat up to 400 °C
•Digital display
•1 program
•Flask cover

BIOSTRONG 400

Extra power
•Injection force: 1000 Kg *2
•Heat up to 400 °C
•Digital display
•1 program
•Flask cover

*1 - LCD display allows clear observation of automatic injection process state, temperature and time settings. Stores information of time and temperature to inject 5 different materials.
*2 - Its greater injection force offers optimum results and maximum precision. Operator can make high density denture surfaces with this system.

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Sabilex Injection System

PLEASE, READ THIS MANUAL BEFORE USING THE MACHINE

Thanks 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 recomend to ask your nearest Sabilex distributor or in www.sabilex.com

Statement of ageement

Model: 2A/ 2AD / 2AD 400 / 2AD 400C / Biostrong 400
Mark: SABILEX
Responsable: Flexafil S.A.
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.
EN ISO 12100:2010: Safety Of Machinery -- General Principles For Design --
Risk Assessment And Risk Reduction.
EN 201:2009: Plastics And Rubber Machines. Injection Moulding Machines. Safety Requirements.
EN 61010-1: 2010 Directive Low Voltage.
Following the provisions or Machinery Directive 2006/42/EC.

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. SUGGESTIONS

A) Every time you put the flask into the closing unit, verify it's well closed
B) Remember that it is convenient for the flask to be hot before injecting certain materials. Flexiultra 60°C, Biostrong 100°C.
C) If you release some gas to the flask, it will improve the injection.
D) To remove the flask once you have injected, push the injection valve again.
E) Take care the cartridge is not dented, to avoid it get jammed inside the cylinder.
F) 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, consult with www.sabilex.com

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.

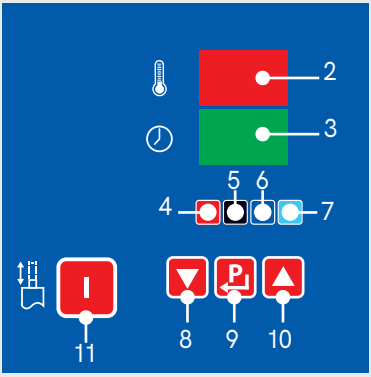
⚠ Use cotton gloves to remove the flask to avoid heat in your hands.

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

In case of damage, contact the authorized representative or service.

4. SABILEX MICROINJECTION MACHINE DESCRIPTION

Models: 2A / 2AD / 2AD-400 / 2AD-400C / BIOSTRONG 400



1. Heating cylinder where the cartridges to be heated to the desired temperature are placed
2. Red display temperature indicator
3. Green display time indicator
4. led heat: indicates which resistance is heating
5. Led timer: indicates that you are controlling cartridge heating time
6. Led injection: indicates that the order was given for the piston to rise
7. led alarm: it turns on if the cycle is interrupted for any reason

8, 9 and 10. Soft touch buttons to program the machine

11. Button to operate pneumatic piston independently

Knob to hold the flask fastener

Screws to hold the flask

Built-in oven

Flask cover (optional)

Flask (Clamped during the injection process)

Pressure gauge for air pressure

Compressor air inlet (Optimum pressure: 7 Kg/cm2 ó 100Psi

ON/OFF switch. (Right side)

Power outlet + fuse

2AD-400 C

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5. INSTRUCTIONS FOR USE TO INJECT A FLEXIBLE PARTIAL

The Microinjection machine automatic Sabilex 2AD, is most versatile and light of the market. It has a controller who allows to a easy handling and a simple visible interface with the user.

A) To ignite the machine push the general key located on the right side, next to the current entrance (220V or 110V).

B) Push P in order to program the desired temperature of injection. In red display, you can observed the message t1, in green display is observed temperature of injection, pressing the keys ▼ ▲ we can modify the value of temperature of injection.

C) Pushing P again in red display, is observed the message of tie, in green display the value of warm up time of the cartridge previous to the injection is observed, by pressing the keys ▼ ▲ we can modify the value of the time of heating.

D) Pressing P again, in red display is observed t2, in green display is observed the value of the time in seconds of the piston in the superior position (for example 30 seconds), pressing the keys ▼ ▲ we can modify this value.

E) Pushing P again and the program is set.

If we made modifications and we did not leave the program by pressing the key P , after 30 seconds without touching any key, the new values will not be kept and the machine will return to the reading.

F) When the machine gets the injection temperature a buzzer sounds. Introduce the cartridge at this moment and push ▲ during 5 seconds; it begins to count to timer the warm up time for the cartridge heating. When the timing is completed, the machine injects automatically and maintains the piston the programmed time, after which the piston goes down.

G) It appears Fin in green display and the resistance stops heating. This indicates that the cycle of injection has finished.

H) If you want to restart the cycle, push ▼ ▲ simultaneously and the machine will begin to warm up again.

I) To move the piston independent of the cycle, push I and the piston will go up. Push I again and the piston will go down.

Injection cycle without using the timer

If, for any reason, you want to do a manual injection, proceed as follows:

A) Turn the machine ON by pushing the ON/OFF button.

B) Program the injection temperature (See temperature programming).

C) Program the heating time in 0 (zero).

D) If the cycle was already programed, the machine will control normally the temperature with the information set before.

E) When the machine reaches the programmed temperature, put the tube inside the cylinder and wait 15 minutes.

F) Push the button I for the piston to go up.

G) Wait for 35 seconds and push the button I again for the piston to go down.

H) Remove the flask.

6. SOLUTION OF SMALL PROBLEMS

MICROINJECTION MACHINES SABILEX - REACTION PLAN:		
Problem	**Possible cause**	**Solution**
1) When turning on the injector does not turn on.	Fuse Burned.	Replace fuse in the power input connector.
2) When turning on the injector, it turns on the display and the "heating / heat" LED but does not raise the temperature.	Burned Resistance	Change the resistance. (Make sure the resistance is firmly tightened).
3) When turning on the injector, it turns on the display but the "heating / heat" LED does not turn on and does not raise temperature.	Control board failure.	Change control board.
4) When turning on the injector, it turns on but a message appears in the diplay: OPn (in red), tC (in green) And does not heat the injector.	Thermocouple measuring and open control.	a) Check Thermocouple connection. b) Change Thermocouple.
5) When the heating cycle starts, it does not stop at the indicated temperature and continues to raise the temperature and activate the alarm (red LED).	a) Programming failure b) Control board failure.	a) Restart the machine, turning on and off b) Control control board.
6) The machine performs an incomplete injection (Does not fill the cavity) or Slow.	a) Cartridge hitch. b) Dirty silencer filters in the air line. c) Lack of silicone lubricant on cartridge.	a) Check for cartridge hitch (burrs at the bottom), replace bronze bushing for wear. b) Change filters in solenoid valve. c) always use sabilex silicone lubricant.
7) Does not fill the cavity.	a) Very fine injection channels b) Low injection pressure c) Insufficient air flow d) Insufficient material in the cartridge	a) Enlarge the injection channels b) Verify minimum pressure of 7kg / cm3 c) Verify that the supply pipe does not have clogged or clogged filters or elbows. Try removing the air filter and injecting. If the injection is correct, the filter is dirty or clogged. Replace a new filter. d- Use a larger cartridge.
8) Air loss in circuit.	Damaged seals, loose connectors or hoses.	a) Check connectors and seals. b) Change pneumatic piston.
9) When heating the cartridge, the lid of the cartridge pops out.	The material is wet.	Pre-dry the material for 5 hours at 60 ° C.
10) Black points in the injected prosthesis.	Dirty heater cylinder.	Keep clean, with steel brush and rag stick.
11) The material crystallizes and breaks like glass.	It was injected with the flask cold.	Preheat the flask to 60°C before injecting in an electric oven. Suggestion: support the flask on a refractory ceramic on the stove and cover it with a pot.

7. TECHNIQUE FOR THE REALIZATION OF A SABILEX® INJECTED FLEXIBLE PARTIALS

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.

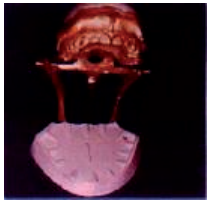
25. Figure 20 shows the finalized work, located in its original model, ready to give to the professional.

SABILEX® INJECTED FLEXIBLE PARTIALS


1


2


3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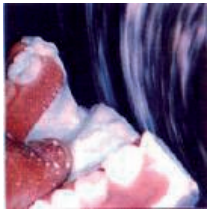
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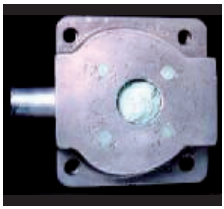
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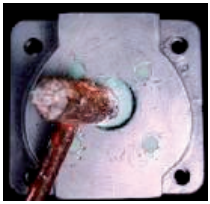
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Sabilex Since 1951
Sabilex Injection System

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CERTIFICATE OF SABILEX GUARANTEE

Sabilex guarantees the buyer of this product the proper functioning of the same against material or manufacturing failures, from the date of purchase and for the term of 6 (six) months:

Reach:

1. Sabilex (or its distributor in the country that was purchased) undertakes to repair the defective product free of charge, during the term of the warranty, if it fails in normal situations of use and as indicated in the User Manual .

2. Have the Certificate of Guarantee corresponding to the product purchased where the date of purchase must be recorded.

3. The causes of cancellation of this guarantee will be:

3.1. Improper or different use than it was designed.

3.2. Excess or drop in electrical voltage that implies use in abnormal conditions.

3.3. Installation, intervention or alteration of the equipment by unauthorized personnel.

4. For distributors in other countries: Because they are imported parts and spare parts products, in the event of not having the necessary ones for repair, the repair time will be subject to the current import rules and terms.

5. Damage to the exterior of the cabinet as well as breakages, knocks, falls or scratches caused by transfers of any nature are not covered by this guarantee.

6. For this certificate to be valid, the following information must be completed:

MODEL .....

DATE OF PURCHASE .....

DIRECTION .....

.....

COMERCIO VENDEDOR .....

(House seal)

SERIAL Nº ..... INVOICE Nº .....

Sabilex® Since 1951

CE

Aesthetic
Translucent, imperceptible and finely natural.

Confortable
Light weight and exceptional fit, occlusal support.

Reliable
They last for years when properly used.

Hypoallergenic
Monomer free, they do not produce allergic reactions.

Sabilex Materials and Cartridges

Sabilex offers an integral aesthetic solution where health and confort join for your benefit.
Find a variety of materials that guarantee a wide range of applications.
High technology materials for the making of metal free dentures. Materials approved by: FDA and CE.

- Copolimer
- For flexible partials
- Unbreakable
- Does not absorb moisture
- Due to its high fluency it can be used with any injection machine

Colors: Cristal FF 100; Translucent pink 110; Intense pink112; Extra intense pink 114; Pink 120; Ethnic brown 180

230°C / 15 min

- Thermoplastic Poliolefin
- It is produced through a molecular orientation process, achieving greater shine and surface hardness
- For flexible partials
- Easy to adjust, finish and polish
- Long lasting
- Unbreakable
- Does not absorb moisture

Colors: Pink 238; Pink 245

240°C / 15 min

- Its low flexibility achieves more resistance and stiffness
- For the making of total and partial dentures
- Easy to adjust, finish and polish
- High shine
- Long lasting
- Dense and smooth surface

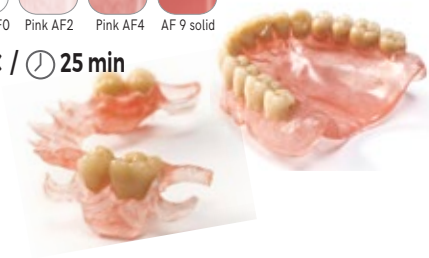
Colors: Cristal FU 10; Pink 21; Pink 35; Pink 78; Pink 20

280°C / 15 min

- Injectable translucent monomer free acrylic
- Low flexibility
- Ten times more resistant than conventional acrylics
- For full and partial dentures
- Can be repaired and relined with acrylics
- Thinner dentures than conventional acrylic
- Quick and easy to finish and polish
- Monomer free
- Allows characterization of gums with resins

Colors

280°C / 25 min



- Its high fluency allows for complex design
- Great and easy solution for the making of clasps, frameworks and more
- It can be combined with acrylic partials and chromes
- Monomer free
- SNAP FIT: FlexiAcetal bends and returns to its original shape achievinga comfortable and secure fit

Colors

220°C / 20 min

- Top performance semi-crystalline polymer made with PEEK
- For the making of frameworks, crowns, bridges, attachments and telescopic structures
- It can be veneered with traditional veneer composites
- It is a very comfortable material due to its bone-like properties and low weight

2 types

Biostrong P (standard).
E-modulus: 3600 MPa
Flexural strength: 168 MPa

Biostrong CF (Ceramic Filled).
Ceramic fillings optimize its mechanical characteristics. Excellent polishing and adhesion qualities with veneer resins.

380°C / 20 min

ACCESORIES

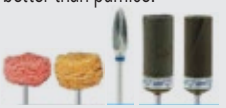
Polimagic. Polishing abrasive powder. Works better than pumice.

High temperature lubricant

Microtorch

Flask for Unilaterals

Standard Flask



Denture polishing and finishing accessories