

DIGITAL INCONTROL VACUUM WAX INJECTOR MULTI FUNCTION SYSTEM

No.0662 120V

No.0663 240V

USER'S MANUAL



FEATURES: Digital Incontrol-Vacuum Wax injector Designed inject consistent, repeatable wax patterns, draws air out of the mold before inject the wax, eliminating the air bubbles and voids all cause pattern defects, and shrinkage increas.

You are incontrol the following steps of the process :

1. Wax pot temperature.
2. Injection nozzle temperature.
3. Vacuum and injection time.
4. Applied air pressure.
5. Counts each day of total production rate.

SPECIFICATIONS :

Power : 120V / 10A (No.0662)

240V / 5A (No.0663)

Air pressure : 30 psi maximum (Air compressor not supplied)

Vacuum : High vacuum 27 Hg or higher (Vacuum pump order separately)

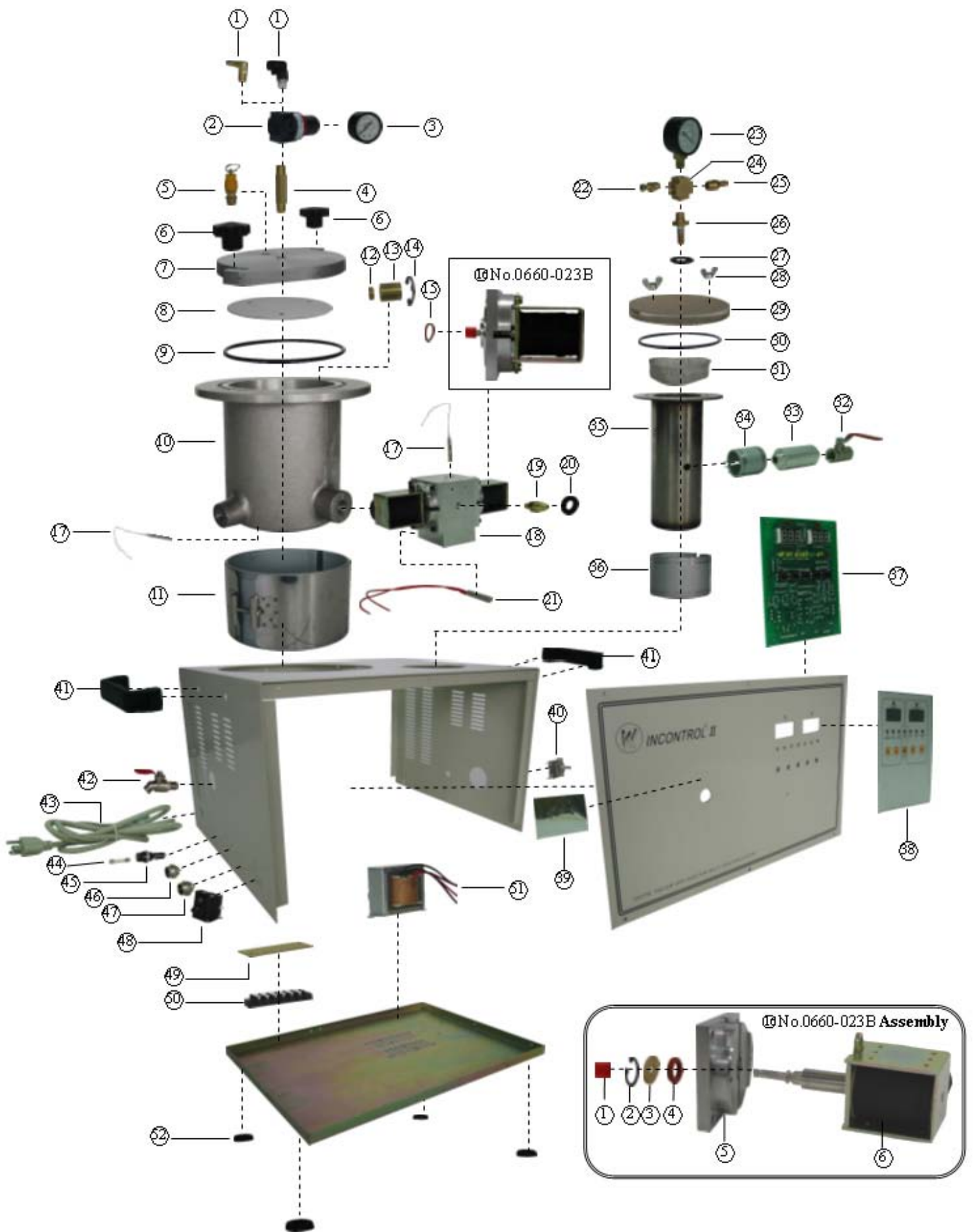
Wax capacity : 6 lbs (2.7kg)

Overall : 22-1/4 "(W) x 14-1/4 "(D) x 16-3/8 " (H)

Machine weight : 51lbs (23kgs)

Shipping weight : 57lbs (26Kgs)

NOTE: For better performance, use No.0449 oil-type vacuum pump for No.0662 injector; No.0450 vacuum pump for No.0663 injector.



No.0662 120V

No.0663 240V

	Parts No.	Parts Description
1	0596-028	Compressed air inlet barb 120V
2	0660-003	Air pressure control valve (regulator)
3	0596-023	Air pressure indicator gauge
4	0660-008	Long nipple
5	0596-002	Safety & pressure release valve for wax pot
6	0590-015	Cover lid hold-down nuts (2)
7	0660-010	Wax Pot Cover Lid
8	0660-011	Stainless steel inner lid
9	0590-007	"O" Ring G165
10	0660-012	Wax pot
11	0590-008	Band heater for wax pot 800W 120V
12	0660-114	Brass filter screw
13	0660-113	Brass filter for wax
14	0660-121	E-Type ring stopper
15	0660-023B-2	"O" Ring G25
16	0660-023B	Solenoid valve assy
17	0662-003	Thermocouple
18	0660-022	Three way block
19	0660-034	Injection nozzle
20	0660-034-1	Rubber ring
21	0660-035	Pipe heater f/nozzle (120V)
22	0660-095	Vacuum chamber air release valve
23	0660-093	Vacuum gauge
24	0660-094	Four way fitting
25	0625-035	Vacuum chamber air outlet barb
26	0660-005	Fitting
27	0610-01-21-04	"O" RingP14
28	0660-092	Cover lid nuts (2) for vacuum chamber
29	0660-085	Acrylic lid-vacuum chamber
30	0660-084	"O" Ring G100
31	0660-090	Filter (Stainless steel)
32	0473-003	Vacuum chamber wax drain valve (Rocker handle)
33	0660-061	Fitting union for vacuum pot
34	0660-088	Band heater for fitting union 60W 120V
35	0660-083	Vacuum pot
36	0660-082	Band heater for vacuum pot 50W 120V
37	0662-002	PC board
38	0662-004	PVC sheet
39	0660-112	Connector (3pins)
40	0590-028	Vacuum chamber heater switch
41	0660-101	Handle
42	0590-011	Wax pot drain cock
43	YLC-004	Main power line cord 120V
44	0660-086	Wax pot heater fuse (120V / 10A)
45	0660-110	Fuse holder
46	0660-112	Connector (3pins)
47	0660-065	Foot pad switch socket (2pins)
48	0660-063	Main power switch
49	0660-085	Acrylic lid-vacuum chamber
50	0660-102	6 pins terminal
51	0660-060	Transformer
52	1298-014	Rubber foot

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No.0660-023B

1	0660-023B-4	Silicon rubber pad
2	0660-023B-3	C-type clamp
3	0660-023B-5	Brass washer
4	0660-023B-1	"O" Ring P5
5	0660-023B-6	Three way block lid
6	0660-049B	Solenoid valve

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PARTS NAME

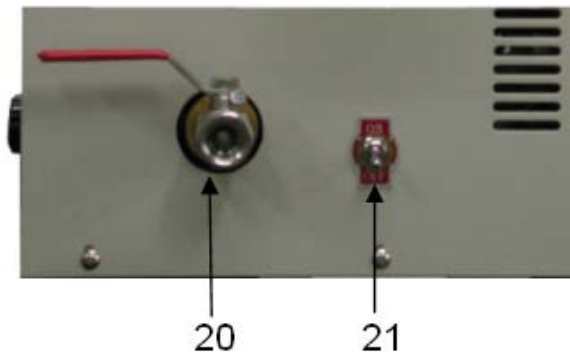
1. Compress air inlet barb.
2. Air pressure regulator.
3. Safety & pressure release valve.
4. Pressure gauge.
5. Serew nuts(2) for wax pot.
6. Lid.
7. Vacuum gauge.
8. Win nuts (2) for vacuum chamber.
9. Lid for vacuum chamber.
10. Control pane(1) panel.
11. Injection nozzle.
12. Vacuum release valve.
13. Vacuum outlet barb.
14. Wax drain cock.
15. Main power line cord.
16. Main power fuse(10A).
17. Connector for No.0634/0635 TECHTROL PRO.
18. Foot pad switch.
19. Main power switch.
20. Wax drain valve for vacuum chamber.
- 21 Heat. switch for wax drain.



Front

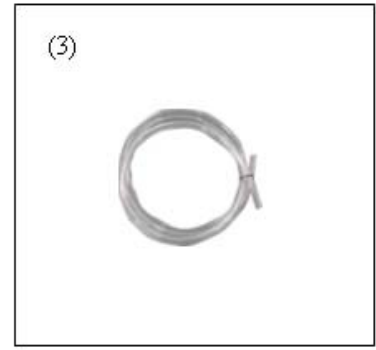
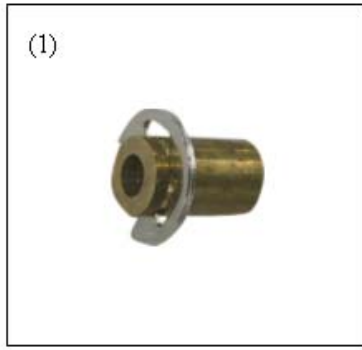


Left

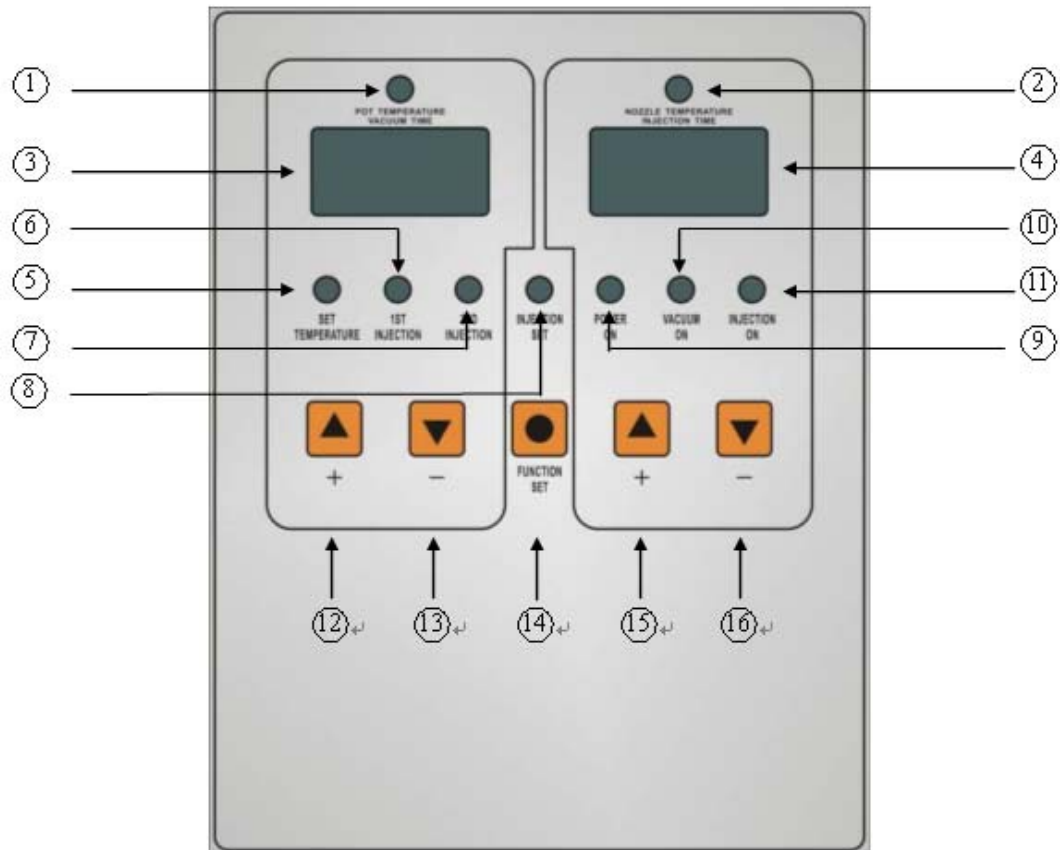


Right

ACCESSORIES



CONTROL PANEL INSTRUCTION



1. Wax pot heater indicator light.
2. Nozzle heater indicator light.
3. Wax pot temperature and vacuum time.
4. Nozzle temperature and injection time.
5. Set temperature indicator light.
6. Single injection time set.
7. Multi injection time set.
8. Single or multi injection set light.
9. Power on.
10. Vacuum on.
11. Injection on.
12. Wax pot temperature and vacuum time increasing button.
13. Wax pot temperature and vacuum time decreasing button.
14. Function set.
15. Nozzle temperature and injection time increasing button.
16. Nozzle temperature and injection time decreasing button.

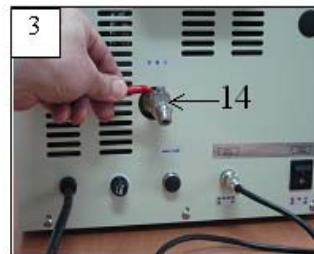
SET-UP INSTRUCTION



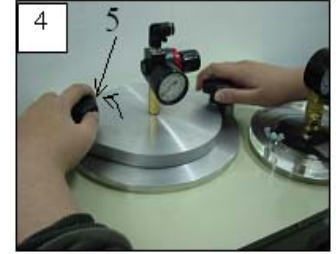
1 Place machine on a working bench.



2 Connect foot pad switch to NO. 18 connector.



3 Close NO.14 wax drain cock for the wax pot before wax is heated.



4 Loosening NO.5 screw nuts from lid of wax pot.



5 Open NO. 6 lid from wax pot.



6 Unpack wax drain filter (accessories No. 1) from the Wax tank.



7 Insert the wax drain filter into the wax drain hole inside the wax tank.



8 Connect air hose to NO.1 compressed air inlet barb



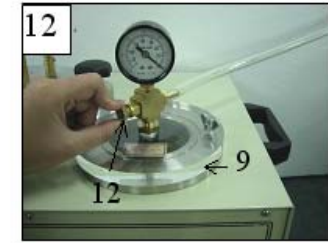
9 Connect PU hose (accessories No. 3 to NO. 13) Vacuum chamber outlet barb. (Make sure it is tie fit and no leaking air during vacuum is in processing.)



10 Connect the other end of PU hose to vacuum pump



11 Close NO.20 Vacuum chamber wax drain valve and NO.21 Vacuum chamber heater valve are tightened.



12 Check both NO.9 lid of vacuum chamber and NO.12 Vacuum chamber air release switch is in "OFF" position.



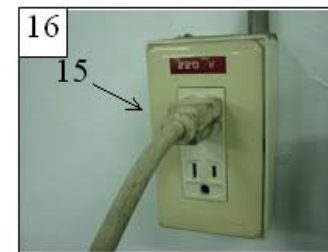
13 Make sure NO.19 main power switch in "OFF" position.



14 Fill in waxes to the full line mark inside wax pot.



15 Close the wax pot lid with 2 NO.5 screw nuts



16 Plug NO.15 Main power line cord to power source.

Note: Electrical outlet of power source must be well grounded.

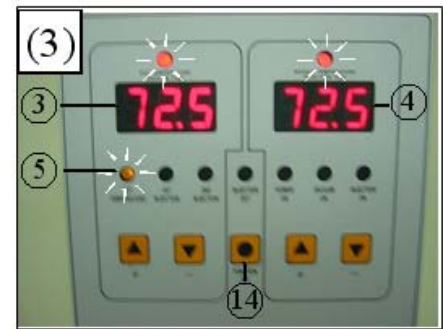
1) SET WORKING TEMPERATURE FOR WAX POT AND INJECTION NOZZLE



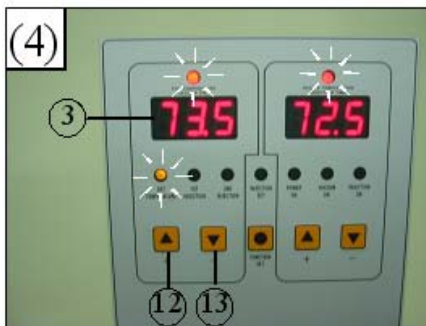
Switch NO.19 power on.



Both NO.3 indicate wax pot temperature (It shows present temp.) NO.4 indicate nozzle temperature (It shows present temp.) NO.12 NO.9 lights are brinking at same.



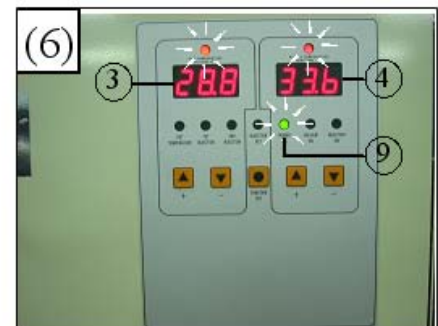
Press NO.14 button (once) one time, NO.5 light will on and same time both NO.34 display will shows "72.5" (Factory set temperature).



Wax pot temp set by pressing NO.12 button for increasing up and NO.13 button for decreasing to your desire set temperature will show on NO.3 display.



Nozzle temp set by pressing NO.15 button for increasing up temp and NO.16 button for decreasing temp to your desire set temperature.



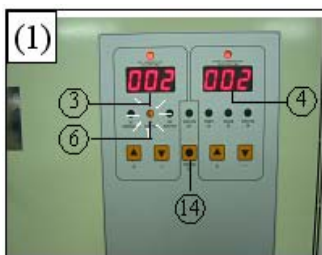
Stop and wait for 10 seconds the both NO.3 and NO.4 will shows present temperature and NO.9 lights (shows power on) will on.

Remark:

1. When heating both wax pot and nozzle temp and both NO. 1 and NO. 2 indicate lights will be on.

2. Your desire set temp please confirm the correct temperature with your wax supplier for best use with WW DIVWI.

(2) SET VACUUM AND INJECTION TIME



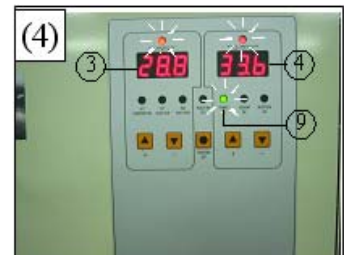
Pressing NO.14 button TWICE and NO.6 lights will on NO.34 will show 002 (factory set time).



Set vacuum time: pressing NO.12 to increasing and NO.13 to decreasing set to your desire vacuum time as show on NO.3 display 003



Set injection time: pressing NO.15 to increasing and NO.16 to decreasing set to your desire injection time-as



Stop and wait for 10 seconds the NO.9 light will on and NO.34 will shows continue of wax pot and injection nozzle

for 3 seconds. 004 for 4 seconds and on or down. show on NO.4 display temperatures. 004 for 4 seconds, 005 for 5 seconds and on or down.

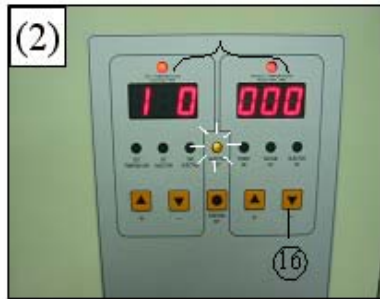
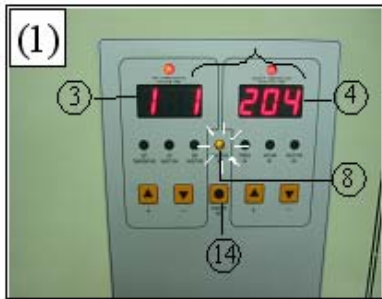
Remarks:

- 1. Both vacuum and injection time can set from 1 second to 990 seconds working time.
- 2. Injection time must be set from one second and up. Do not set at 0 second and the machine will not function.

(3) YOU ARE READY TO WORK!!

- 1. Make sure wax has fully melted and ready to work.
- 2. Increasing pressure by adjust the NO.2 air regulator to read NO.4 vacuum gauge to your desire pressure.

(4) HOW TO READ DAILY PRODUCTION RATE COUNTER

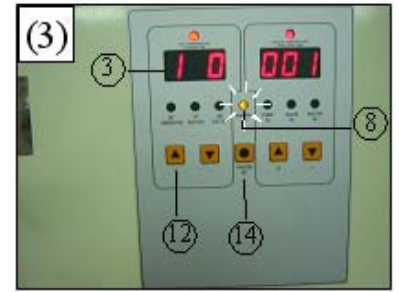
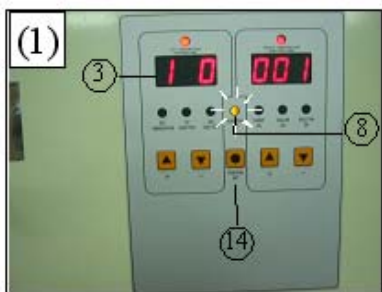


Pressing NO.14 button 4 times NO.3 and NO.4 display will shows "1 204" this is means there are 1204 injections been made.

Pressing NO.16 one time and all counter will show "0 000", now you can start a day work.

You must set counter back "0 000" to start work, otherwise all will start with factory set "1 204" when next power on.

(5) DOUBLE PRESSURES INJECTION FOUNDATION SET

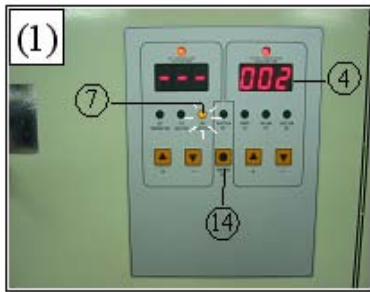


Pressing NO.14 button 4 times and NO.8 lights will be on. NO. 3 display will show 1 0 .

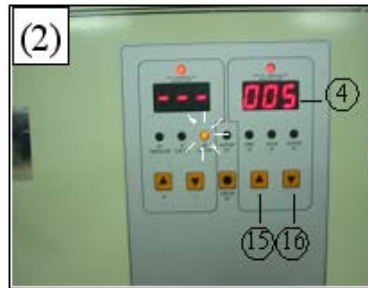
Pressing NO.13 **once (one time)** and NO.3 display will show 2 0 . It is ready to work combined with our NO.0634 120V / 0635 240V, TECHTROL PRO ROBOT CLAMP to work.

You may change back to single injection work by pressing NO.12 button one time. (NO.3 display will read 1 0 .

(6) SET DOUBLE PRESSURE INJECTION TIME



Pressing NO.14 button **3 times** and NO.7 lights will on NO.4 display will shows "002" for 2 seconds.



Pressing NO.15 button to increasing injection time as show 005 for 5 seconds and you may increasing up to 990 seconds for large big mold and decreasing by pressing NO.16 button.

USEFUL GUIDELINES

1. Different waxes inject at different temperatures (actual injection temperature depends on the wax being used).
2. Temperature of wax in tank and nozzle are significant and must be adjusted by experienced operator and according to wax property and test result. The same is true of vacuum and injection time.
3. Keep molds clean and free of wax residues at all times.
4. Lubricate mold with very light application of mold release compound as required.
5. Air pressure very depending on the size, shape, and delicacy of a wax pattern and its mold. Such information can be written on each mold as reference for later use.
6. From time to time wax pot should be drained and kept clean. Old contaminated wax should be discarded and replaced. Do not re-use dirty or contaminated wax because this could cause nozzle stoppage and poor fidelity in patterns.
7. If nozzle stoppage is caused by contaminated wax, wax pot has to be emptied and cleaned. Set maximum air pressure and activate injection cycle several times to force out foreign objects that might be jammed inside the nozzle.
8. Raising wax pot temperature 10~20°F above operating temperature for about one hour may speed up the melting process of newly added wax.
9. Do not allow wax level to get below 2 lbs (1 kg), because low level of wax in tank could cause air bubbles in wax pattern.
10. It is not necessary to shut down the unit everyday after work. Keep unit warmed up over night will save you time and electricity.
11. Call service personnel, if you have problems that can not be resolved.

MAINTENANCE

1. Keep a minimum space distance of 8" from back and all sides of unit .
2. Turn off unit completely, if it is not going to be used within 24 hours.
3. Always release vacuum by loosening air release valve (**12**) before shutting off vacuum pump. Otherwise, due to in balance of air pressure. wax can be sucked into vacuum pump and hence damage the pump.
4. Vacuum pot has to be cleared regularly, at least once a day, to maintain the best performance of the unit. Too much leftover wax in vacuum tank may disable vacuum cycle. To clean wax, turn on Vacuum chamber heater switch (**21**) wait for wax to meet completely (about 10 min.) make sure vacuum pump is off, and then open wax drain valve (**14**) to have wax drained out. Until wax drained and close wax drain valve (**14**) and must to shut off heater switch(**21**).
5. If No.0449/0450 vacuum pump is used, change vacuum pump oil every three months.

CAUTIONS

For the safety of a person who operates the unit, the following safety guidelines have to be followed and good judgement has to be utilized at all times.

1. Release air pressure, if the unit is not operated.
2. Do not remove cover lid with air pressure in wax pot.
3. Do not use bottled oxygen as air pressure supplier.
4. Electrical plug must be properly grounded at electrical outlet.
5. Do not use you hand to touch liquid wax in tank. Hot wax can cause painful burns.
6. Do not depress foot pad switch and activate injection process while not injecting wax patterns. Spilled wax on body, especially on eyes and face, could cause serious injry.
7. Do not sit (or stand) right in front of injection nozzle to prevent from possible harm, particularly while doing maintenance or troubleshooting the unit.

TROUBLESHOOTING

Problems	Possible Causes	Solution
1.MACHINE DOES NOT OPERATE	No power	<ul style="list-style-type: none"> . Check circuit breaker or fuse. . Check if unit is plugged in properly. . Check Main power fuse (16). . Check fuse (10Amp 250V) if necessary.
2.WAX POT NOT MELTING WAX	Broken fuse	<ul style="list-style-type: none"> . Check Main power fuse (16). . Replace fuse(10Amp 250V) if necessary.
	Incorrect temperature	<ul style="list-style-type: none"> . Check wax pot temperature (3).
3.NOZZLE DOES NOT HEAT	Broken fuse	<ul style="list-style-type: none"> . Check Main power fuse (6). . Change fuse (10Amp 250V) if necessary.
	Incorrect temperature	<ul style="list-style-type: none"> . Check injection nozzle temperature (3).
4.VACUUM PUMP DOES NOT OPERATE	No power	<ul style="list-style-type: none"> . Check if vacuum pump is plugged in socket properly.
	Vacuum pump not working	<ul style="list-style-type: none"> . Use another vacuum pump.
5.UNIT HAS NO VACUUM	Air leakage	<ul style="list-style-type: none"> . Check that vacuum release valve (12) is shut. . Check if vacuum chamber O-ring is properly sealed. . Check vacuum hose connection for tightness.
	Too much wax in vacuum chamber	<ul style="list-style-type: none"> . Check if there is too much wax left in the vacuum chamber and needs to be cleaned.
6.UNIT VACUUMS BUT CAN NOT INJECT WAX	Incorrect injection time	<ul style="list-style-type: none"> . Check Nozzle injection time.
	Wax in pot not melted	<ul style="list-style-type: none"> . Check wax in pot. If not melted, raise temperature slightly. Allow enough time for wax to melt. Also refer to the solution of problem 2.
	Injection nozzle not heated	<ul style="list-style-type: none"> . Refer to the solution of problem 3.

Air pressure in wax pot
is too small

- . Check air pressure indicator gauge (4) for correctness. Adjust air pressure control (2) to desired pressure.
- . Check all air hoses and connection for leakage.