

## Vertex™ ThermoJect 22 Instructions for use



## 1.0 General cautions:

- Read this manual carefully before operation.
- This machine should be operated by a user who is well trained.
- The built-in safety mechanism should not be removed or modified.
- Do not allow unauthorized persons to repair the machine.
- Do not use this machine for any other kind of material than Vertex ThermoSens.

## 1.1 Safety warning label information:



- Do not touch live electric parts.
- Turn off power source and disconnect input power before installing or servicing the equipment.
- Turn off the equipment when not in use.
- Do not use worn and damaged cables.
- Use only well maintained equipment.
- Do not handle power cord with wet hand.



- Keep children away.
- Do not open the safety bar during operation.
- Always turn-off the machine before cleaning.
- Do not close the chamber, while touching the injection room.
- Do not operate the machine, while touching the injection room.
- Only operate the machine with 22mm cartridges filled with Vertex ThermoSens.



- Do not touch the injection plate during operation (this plate heats up)
- Do not touch the left side panel with air ventilation holes during operation (this panel heats up).

## 2.1 Prepare the area where the Vertex ThermoJect will stand:

- The surface should be flat and dust free.
- Make sure there is enough space on all sides.

## 2.2 Steps for installation:

- Connect an air hose to the protection filter on the backside of the machine.
- Connect the power cable into power socket.

## 3.0 Description of the backside of the machine

### 3.1 Protection Filter

The machine is equipped with a protection filter on the back of the machine to extend the life cycle of air cylinder.



### 3.2 AC power cable

### 3.3 Identification label

### 3.4 Fuse Box

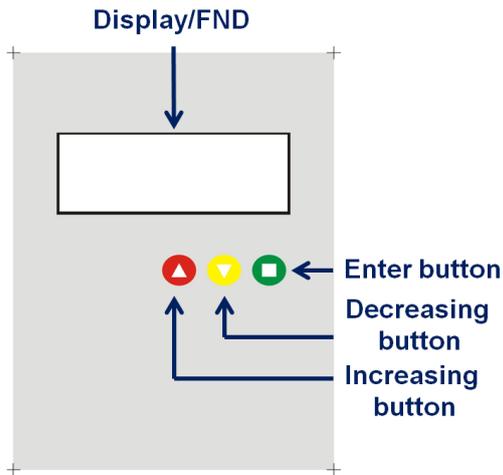


3.2

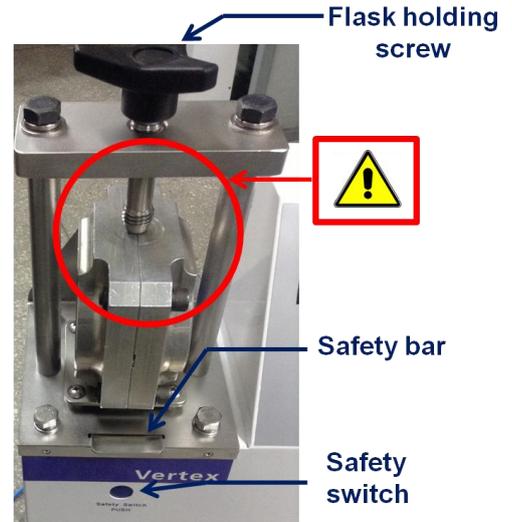
## 2.0 Check the package contents:

- Vertex ThermoJect 22
- AC Power cable
- Users Instruction Manual
- Electric diagram
- Declaration of conformity
- Warranty conditions

## 4.0 Description of the front panel



## 4.2 Description of the injection room



### 4.1 Description of function keys



- Enter button to go into another mode.



- Increasing button for setting up temperature, heating time, cooling time on the program Z.  
 - Increasing button for pushing up the piston in manual piston up and down step.  
 - Increasing button for the scrolling through the program, mode, step and setting value.



- Decreasing button for setting up temperature, heating time, cooling time on the program Z.  
 - Decreasing button for pushing down the piston in manual piston up and down step.  
 - Decreasing button for the movement the program, mode, step and setting value.

- Flask holding screw: after placing the flask or taking out the flask, use the screw.
- Safety bar: when injecting mode or pushing up the piston in manual piston up and down step, pull up the safety bar.
- Safety switch: when placing or taking out the flask, pull down the safety bar by pressing the safety switch.



**When placing the flask and screw the flask fixing screw, always make the joint notch of the flask and the flask fixing screw to fit perfect.**



**Do not touch the injection plate and the left panel with air circulation vents when the machine is switched on.**



## 5.0 Operating

Press the power switch (green color) on the right side.



The following message will appear on the display:



## 5.1 Warming up and “starting mode” / “idle mode”

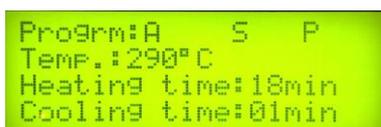
When switching on the machine and the machine is not warm enough for injecting, the machine is going into “warming up mode”. The following message will appear:



On this mode, time will be displayed and the machine will go into “idle mode”.

After the warming up mode, the machine makes beeps for three times. This is a self testing function and is carried out automatically.

When the machine is already warm enough for operating, the machine will go into the “idle mode” without “warming up mode” and the following message will appear:



The ThermoJect 22 will stay on “idle mode” as long as it is not be switched off, and will stay warm. The machine can be operated without “warming up mode” on “idle mode”. The display of “idle mode” is the same with “starting mode”.

## 5.2 Program setting on “starting mode” / “idle mode”

Program Table

	Prog	Target Temp.	Heating Time	Cooling time
preset prog.	A	290 °C	18 min	1 min
	B	285 °C	18 min	1 min
	C	280 °C	19 min	1 min
Editable prog.	Z	300 °C / 270 °C ~320 °C	16 min / 12 min ~ 25 min	1/1-5min
Pre-warming up / idle mode	150 °C			

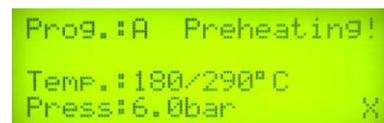
There are three preset programs (A, B and C).

- Select the program by pressing the increasing / decreasing buttons.
- The program can be selected by pressing the enter button. Followed up by “S”(starting step) than continue to start by pressing enter button again.

There is an editable program (Z). Temperature, heating time and cooling time can be selected using program Z.

- It can go into “Z” by pressing the increasing or decreasing button.
- “Z” can be edited by pressing enter button.
- Temperature and heating time can be set by using the increasing and decreasing buttons followed by the enter button.
- Cooling time can be set by pressing the increasing and the decreasing button followed by the enter button.
- After setting up the cooling time, the program goes into “S”, starting step and the machine will start the preheating by pressing the enter button again.

### - Display



How to change the program in case choosing a wrong setting?

- Preheating can be stopped by pressing the enter button twice. After first pressing of the enter button, the X on the display will be blinking. After second pressing of the enter button, the preheating will stop.
- The program goes back to the starting mode/idle mode, clause 5.2.



### Error message by automatic self-checking function before "heating mode"

Before the machine will heat up, it will check automatically the air pressure. In case the air pressure is too low or too high, the following will be displayed:

```
[ERROR]
Pressure Too Low
Press:4.5bar
Cancel Going on
```

```
[ERROR]
Pressure Too High
Press:7.6bar
Cancel Going on
```

At the same time, it beeps three times. Cancellation or continuation can be accomplished by pressing the increasing or decreasing buttons followed by pressing the enter button. By cancellation the "C" is blinking. By going on the "G" is blinking. By selecting going on, air pressure supply must be adjusted in order to continue the process.

## 5.3 Prepare for injection

After the preheating mode, the chamber must be sprayed-in with silicone oil followed by pressing the enter button

```
PLEASE SPRAY
CHAMBER
PRESS ENTER BUTTON
```



Spraying the chamber is necessary to avoid any problem with the chamber when injecting.

After spraying the chamber, spray the cartridge and insert it into the chamber followed by pressing the enter button.

```
PLEASE SPRAY
CARTRIDGE
AND INSERT
PRESS ENTER BUTTON
```

At the same time, the heating mode will start.

```
Prog.:A Heating Up!
Time :17:55/18:00
Temp.:290/290°C
Press:6.0bar X
```

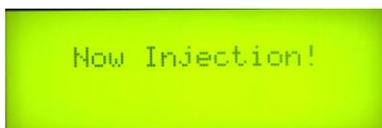
Now, place and secure the flask.

## 5.4 Injection

The machine will only operate automatically when the safety bar has been pulled up. In case the safety bar has not been pulled up, the machine beeps three times.



After a beep sound, the injection process will be performed automatically.



## 5.5 Cooling.

After the injection, the program goes to the cooling mode.



After the cooling mode, the piston will go down and the machine beeps three times.

## 5.6 Releasing and cleaning

Unscrew the flask fixing screw and then press the red button to push up the piston.



Be sure that the flask fixing screw was unscrewed first and the safety bar was pulled up.

Pull down the safety bar by pressing the safety switch. Now the flask can be removed. After taking out the flask, press the enter button for the next step.



For the cleaning mode, spray to chamber and press the enter button.



The piston will automatically go up and down three time.



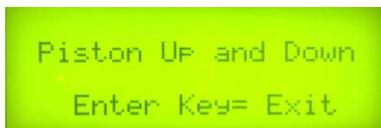
After automatic cleaning, the program will automatically go back to the Starting mode/ Idle mode, Clause 5.2.

In case an user needs to take away some residual material inside the chamber, lift up the piston in the following way at "P"-the piston manual up and down step.

In the Starting/Idle mode, the program can move to the "P" (piston manual up and down step) by pressing the increasing button and the decreasing button. And then, press the enter button.

An user can lift up the piston by pressing the increasing button after pulling up the safety bar.

### Display:



The piston can be lifted up and down by pressing the increasing and decreasing button manually on program "P" (piston manual up and down step) .This is for cleaning the chamber after the injection process. Exit the program by pressing enter button.

## 6.0 Specification

1. Related voltage: 230VA, 50Hz, 2.78A
2. Power consumption: max 640W
3. Fuse: 5A, AC250V
4. Dimension: W 326 X D 223 X H 978
5. Weight: 28.5Kg

## 7.0 Manufacturer Information

Vertex-Dental B.V.  
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*Please note that electrical/electronic units must be disposed off separately. Do not dispose with household waste. The black bar on the "garbage bin" symbol indicates that the unit was put into circulation after August 13, 2005. Please note that the unit is subject to regulation 2002/96/EC (WEEE) and applicable following national laws and must be disposed off accordingly. Please contact your dealer if the unit needs to be disposed off.*

This machine has been developed for use in dentistry only. Liability cannot be accepted for damage resulting from misuse or failure to observe the instructions. Modifications and miss prints with reservation.

## **Attention!**

**Before using and cleaning the machine, silicone oil must be used:**

- **Before** injection
- **After** injection

*See chapter 5.3 and 5.6 of the instruction manual for more information. In case silicone oil has not been used in order to maintain the machine as described, Vertex-Dental hold no responsibility for complains and malfunctions and the machine will lose its warranty.*

**Silicone oil can be ordered separately with article number TVTIMACOIL.**

*Silicone oil must be treated as dangerous good. Therefore it is not allowed to send it by airfreight.*