

# TPC

## USER MANUAL

### Power Max Ultrasonic Scaler

#### Model# PM25



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## ATTENTION:

Thank you for choosing TPC PowerMAX Scaler **Model PM25** . Before using the unit, please carefully read this User Manual since it contains important information including installation procedures, operation tips and warnings.

### Warnings: Important Notes!

- ✓ The equipment is only to be used by a qualified doctor or dentist.
- ✓ Patients with pacemakers cannot be treated with the equipment.
- ✓ A shielded AC power cord must be used with this equipment.
- ✓ PowerMAX should be powered from separate wall outlet with a grounding point.

## I. DESCRIPTION OF COMPONENTS

### Description:

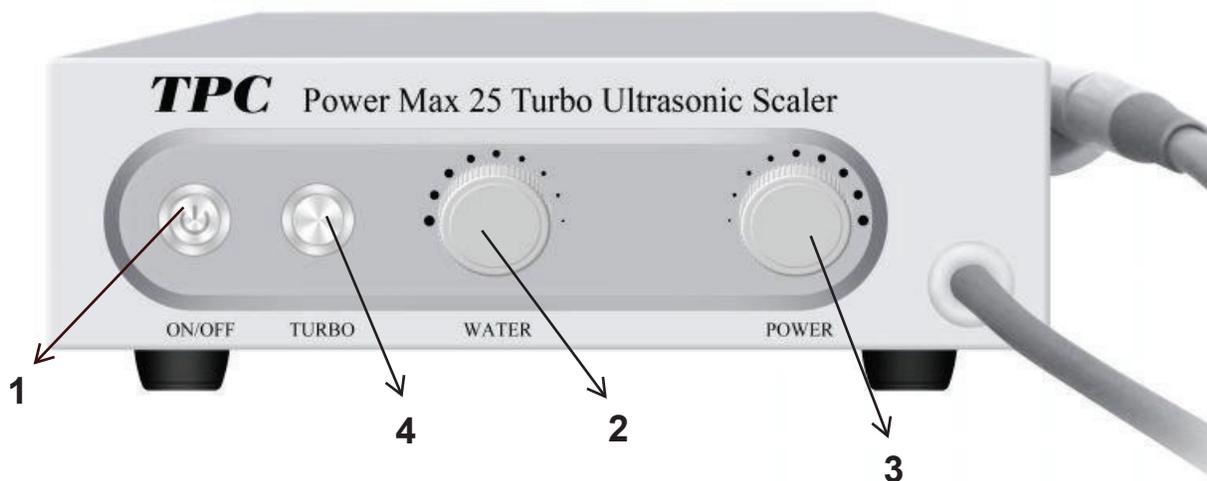
1. Main unit in 25KHz
2. Foot control
3. Water line with male quick connect coupler
4. AC power line
5. Scaler Insert

### Part Number:

PM25  
FC  
WLWCCM  
ACPC  
S1025

## II. DESCRIPTION OF CONTROL PANEL

The function of each button or knob on the control panel is detailed below:



## 1. ON/OFF

Indicating the main power switch. When pushed, the AC power is sent to the Main unit, and the power indicator (LED) will be lit up. If pushed again, the power is then turned off and the power indicator will be extinguished.

## 2. WATER

Indicating the water volume control knob. When turning clockwise, the water volume coming out of the handpiece will be decreased. Turning counter-clockwise will increase the water volume. When operating, a continuous flow of water is required to keep the handpiece and insert cool. Adjustment of the water flow rate controls the water temperature, the greater the water flow, the lower temperature and vice versa.

**NOTE:** Do not turn water control knob anti-clockwise repeatedly, or knob will come off.

## 3. POWER

Indicating the output power intensity control knob. When turning clockwise, the output power intensity will be increased. When turning counter-clockwise, the output power intensity will be decreased. This power intensity control knob gives the flexibility to adjust the output power intensity based on the difficulty of the cleaning job (e.g., toughness of the calculus).

Dot markings on knob indicate level of power input. Minimum power output at smallest dot mark which gradually increases to maximum power output at largest dot mark.

## 4. TURBO FUNCTION

Indicating the turbo function control switch. Press to turn on turbo mode. This will increase vibration to it's maximum capacity.

**NOTE:** Follow power setting guidelines from insert manufacturer for different type of tips.

## III. INSTALLATION

### A. Safety Instructions

#### Grounding:

Before any connection to the output connectors is made, the unit must be connected to a protective earth conductor via the three-core main cable. The main plug must be inserted only into a socket outlet that has a protective earth contact.

#### Main voltage range and fuse:

Before plugging the main plug into the outlet, make sure that the instrument is suitable for local main voltage.

The fuse holder is located on the rear panel in the main input socket. To replace a new fuse, proceed as follows:

- \* Disconnect the unit from the power supply outlet
- \* Remove the cover of the fuse holder with a small screwdriver
- \* Fit a new fuse of the correct rating and refit the cover of the fuse holder

**WARNING:** The unit should be disconnected from the power supply outlet when replacing a fuse.

### B. Installation Instructions

\* Water connection: Connect the scaler's water to a water supply with the male quick disconnect that is at the end of the water line.

**NOTE:** Water supply should be of drinking quality. Purified water or distilled water is Recommended.

\* Electrical Connection: Plug the foot control and AC power cord into the back of the main unit. Then plug the AC power line to a grounded power outlet.

\* Inserts: Choose the correct INSERT for your scaler, TPC 25k (long type) inserts for your 25HKz scaler. The handpiece will also accept Dentsply and Hu-Friedy inserts.

**NOTE:** When pushing the insert into the handpiece, do not put the insert all the way into the handpiece at once. First push the insert into the handpiece half way, step on the foot control to turn on the scaler and allow some water to come out of the handpiece, and then push the insert all the way into the handpiece. The above procedure will help to reduce air inside the handpiece. This will prevent the handpiece from generating too much heat due to extra air, and thus extending the product life of the handpiece.

## IV. OPERATION PROCEDURES

### • Preparation:

Step 1: Push the POWER SWITCH to light ON indicator (LED)

Step 2: Check the water.

Step 3: Select the needed INSERT TIP, wet the O-ring then place the INSERT into the HANDPIECE with a clockwise motion until it is fully seated.

CAUTION: Insert should be sterilized before each use.

Step 4: Set the POWER KNOB to a suitable level for the insert.

Step 5: Hold the HANDPIECE with the insert end pointing up over a suitable drain. Step on the foot control and allow water to run from the handpiece for a few seconds until it flows without spurting.

**CAUTION:** Make sure that the water spray is at the desired temperate and is reaching the working edge of the tip.

Step 6: Place insert tip into the patient mouth and use the foot control to activate the handpiece and water follow.

### • Operation Tips:

During treatment, keep the angle between the patient's tooth surface and the Handpiece Insert as close to 15 degree as possible. If the patient is not comfortable during the treatment, try the following steps:

- A. When treating areas where patient is very sensitive, try to increase the Handpiece movement speed on the surface.
- B. Leave these sensitive areas for later treatment, and do other areas first.
- C. If the problem persists, reduce the output power intensity of the Handpiece.
- D. When operating, a continues flow of water is required to keep the Handpiece cool. The greater the water flow, the lower the water temperature and vice versa.
- E. After six months, or if you find the output power of the Handpiece is not enough to perform treatment, it is very possible that the Insert is worn out. If the Insert is worn out, replace it with a new one, otherwise, have your authorized agent provide a maintenance service to the system.

## V. MAINTENANCE

The PowerMAX Scaler does not need special maintenance routine. The following daily startup/Shut-off routine and tips are useful to extend the product life of the Scaler.

### • Daily start-up

\* Turn on the water supply

\* Push the MAIN POWER SWITCH to light the on indicator (LED)

**NOTE:** If no water comes out, please check the water supply.

**NOTE:** if the power LED does not light, please contact your local authorized agent.

- **Daily Shut-off**

- \* Place the Main Unit on an open area where air can flow freely.

- \* If Main Unit need to be moved, handle with care.

- \* Before leaving the Clinic Room, check that the ACpower is turned off and the water faucet is tightly closed.

## **VI. CLEANING AND STERILIZATION**

In this section, we describe the procedures to clean and sterilize the scaler. It is important to follow these procedures before using the machine on human bodies, otherwise, patients and/or personnel may have the possibility of infection.

It is mandatory that operators wear sterilized gloves during these procedures at all times to avoid any possibility of incomplete sterilization and/or infection. Below we detail the procedures for the Handpiece, the Insert and the Main Unit, respectively.

- **Handpiece**

Before cleaning, remove the Insert from the Handpiece. Let the Handpiece run for a couple of seconds to drain out the water and any possible contamination left inside the Handpiece. The outer surface of the handpiece should be cleaned with an antiseptic soap or solution. Rinse off with water and wipe or spray with a chemical disinfectant that is compatible with the handpiece material, such as a 1:6 dilute solution of Sporidicin brand disinfectant. A sterilized Insert or Tip is then reassembled to the Handpiece in preparation of the next patient.

**Warning:** *Do not put the Handpiece and the extension wire directly into any sterilization fluid. Any such fluid left inside the machine will interfere with the normal operations of the system. At the end of the day with the Insert removed, the Handpiece and cable should be scrubbed with an antiseptic soap or solution, and rinsed off with water.*

**Warning:** *The chemical disinfectant should not be allowed to remain on the surface longer than the recommended time or damage may result.*

- **Insert**

After each usage, there may be saliva and/or blood or other debris left on the Insert, consequently, it is necessary to clean the Insert with a supersonic cleaner. This can be done manually by scrubbing with a brush or by use of an ultrasonic cleaner with a solution of detergent and water. After scrubbing the Insert should be rinsed thoroughly with water to remove all detergent and dried. Finally, the Insert is put into a sterilization pouch and placed into a medical equipment autoclave. Sterilize the Insert at 260 F (127

C) for 30 minutes or as recommended by the manufacturer of the particular sterilizer used.

**Warning:** *High room temperature conditions, improper dilutions or excessive immersion time in a chemical sterilant can result in damage to the plastic and elastomeric materials of the Insert.*

**Caution:** The use of a dry heat over, incompatible chemical vapor style sterilizers, quaternary ammonium compounds, or alcohol based compounds must be avoided as damage can result to the plastic and elastomeric materials.

## • Main Unit

The Main Unit should be cleaned as follows. Carefully swab the Main Unit with isopropyl alcohol, and keep it away from dust.

## VII. SPECIFICATION

PowerMAX Scaler is designed and manufacturers to meet the most demanding environment. Its specification is listed below:

### 1. Standard List

- Emission: EN55011 Class B EN60555-2 Class A EN60555-3
- Immunity: IEC 1000-4-2 IEC 1000-4-4 IEC 1000-4-5 IEC 801-3 ENV50141
- Safety: IEC 60601-1 EN1640

### 2. Function List

- Scaler power control
- Water flow control
- Footswitch control
- Power Turbo mode
- Power perio mode
- 25 KHz Insert Selectable

### 3. Specifications

Item Specification:

<b>Power supply</b>	110-125V ~ 60Hz 0.85A
<b>Max. Output Power</b>	24.6W (Scaling mode)
<b>Min. Output Power</b>	8.9W (Scaling mode)
<b>Basic Vibration Frequency</b>	24.5KHz (for 25KHz Insert Model)

**Water** Input pressure 25-60 pounds/inch<sup>2</sup> •

