



DTS-P302

Vet Mobile Dental Workstation

User Manual





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1 Introduction

Sincerely thanks for selecting the DTS-P302 Veterinary Mobile Dental Unit manufactured by MEDITECH.

MEDITECH DTS-P02 is designed with unique and practical features to make your work even more satisfying and productive.

Video Instructions

As for how to assemble and how to maintain MEDITECH dental system. All instructions are conveniently delivered to you by video instruction step by step.

Electric Driven

The brushless motor offers impressive functionality and comfort. Small, lightweight, comfortable to hold, LED technology, long life and quiet operation are popular features.

In addition to 1:1 and 1:5 speed increase, there are also low speeds of 16:1 and 20:1 for root canal treatment. There are two steering options: forward and reverse. Touch screen option, which can accurately set the speed and clearly see it.

Control Top

The top is a non-porous work surface which is easy to sanitize. It provides a smooth plate to supply a safe area to store the tools and prevent burs falling on the floor during procedures.

Silent Oil-Free Air Compressor

MEDITECH takes an Oil free compressor -low maintenance, oil free air. Mounts underneath the unit into the body, with coolant system and noise reduction system, supplying air wherever the unit is to be used. It is more convenient than a noisy compressor which is usually situated in another room and requires a length of airline.

Reliable Air Lines and Pipeline

All inter airlines are bundled with brass air tip in case loosen after longtime using. Outer airlines are locked with stainless connectors. And using the rubber pipeline instead of PCV pipeline to against the aging and crack.



LED Advantage

The self-generated LED provides daylight-quality, neutrally-coloured white light at 6,000 Lux. LED's offer a robust, long lasting Light source that barely heat up, are shock resistant and that do not emit any harmful IR and UVA rays. DTS-P302 is designed LED advantage into high speed handpiece and ultrasonic scaler.

Please read this instruction manual and all other auxiliary materials carefully before installing and using the product, it will be helpful to work with it better.

1.1 Application

Veterinary dental system is a dental platform that integrates polishing, repairing, cutting and auxiliary root canal treatment. It is used for dental beauty, tooth removal, oral tumor cutting, etc., providing a convenient and favorable operating environment for animal dentists.

1.2 Note

MEDITECH dental system should be operated by the qualified trained person

— for Veterinary use only

For operator safety, it is recommended that safety goggles or visor, face mask and surgical gloves be worn during all procedures.



1.3 Products List

Configuration

Dental Unit with Handpiece	High Speed Hand Piece	1pc
	Low Speed Hand Piece (Inner water channel)	
	3-way Syringe water/air/spray	
	LED Ultrasonic Scaler	
	10L Air Tank	1pc
	Water Bottle	1pc
	Disinfectant Bottle	1pc
	Foot Switch	1pc
Dental Consumable	Tips for Ultrasonic Scaler	5pcs
	Disposable Polishing Cup(for LS)	10pcs
	Disposable polishing Brush(forLS)	
	Burs(forHS)	

Specifications

Parameter	Description
High Speed Handpiece	Working Pressure:0.3-0.35Mpa
	Rated Speed:320,000-400,000RPM
Low Speed Handpiece	Working Pressure:0.15-0.25Mpa
	Rated Speed:20,000-40,000RPM
Ultrasonic Scaler Handpiece	Output Power: 3-20W
	Water Pressure: 0.01-0.5Mpa
	Vibration Frequency on Tips: 28KHz
Air Compressor	Power: 550W 220V: 2.5A 110V: 5A
	Output Pressure: 0.8Mpa
	Air tank: 10L
Noise	≤65dB
Size(L*W*H):	36*36*93cm
Net Weigh	41KG



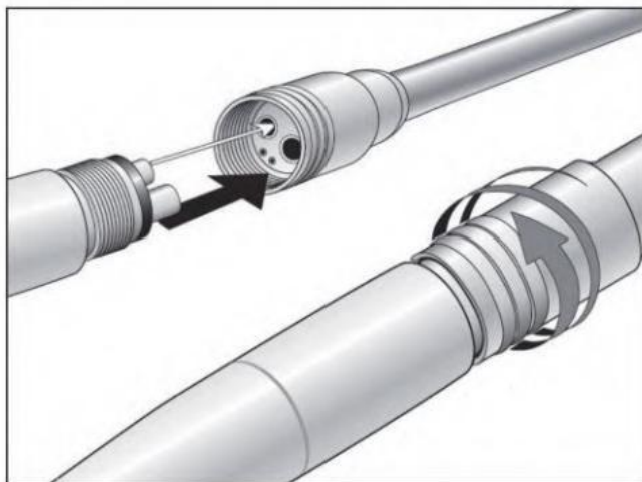
1.5 Environment Requirements

Parameter	Description
Operation Environment	Temperature:5-40°C
	Humidity:30%-85%(non-condensing)
	Air pressure:70-106kPa
Storage Environment	Temperature:-40°C~55°C
	Humidity:<85%(non-condensing)
	Air pressure:70kPa~106kPa
Working Power	120/220V, 50/60HZ



2 Getting Started

1. When you take the machine away from the bottom plate, do not take the Control Top, but take the Body, in case damage the Control Top.
2. Loosen the four castor wheels under the body to move machine or lock them to fix it unmovable.
3. Unscrew the clean water supply clear bottle, then push out the accessory box, which includes all handpiece and pedal inside. Take out of all accessories, assembly and put them in holder correspondingly, and place the foot switch on the floor in front of machine.
4. Fill the clear plastic water bottle with distilled water, not too full, and screw the bottle into the hole with pipe under the Control Top, tight the bottle.
5. Place the 3 way air/water/spray syringe in its handpiece holder.
6. Assemble the handpieces according to the manufacturers instructions. Screw the gray handpiece air/waterline onto the handpiece and place in correctly labeled handpiece holder on the dental system.

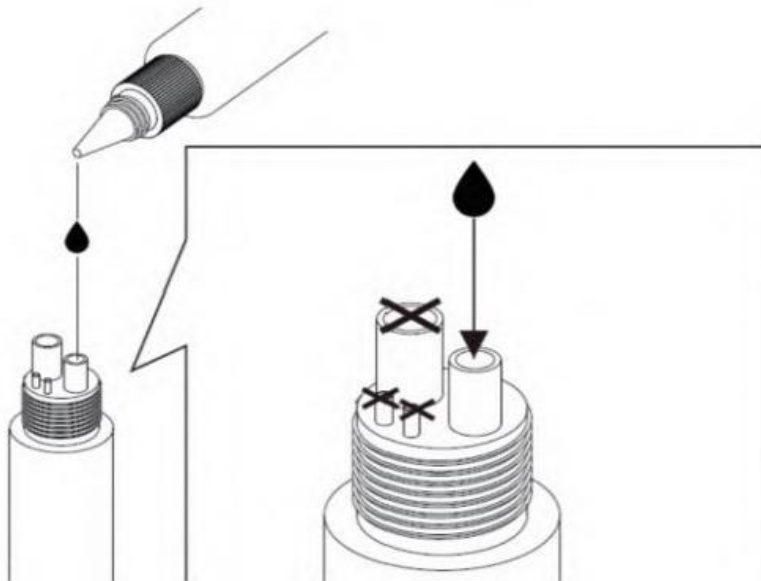


HShandpiece



LS handpiece

7. Connect the host to power supply with the supplied power cable.
 8. Turn on the power and the compressor start to pressurize. It needs 1 minutes to get ready on working pressure at the first time by using.
- MEDITECH factory sets the working pressure. You can use it directly. But you still can adjust individual handpiece pressure by corresponding knob easily.





If adjustment is required, make sure your compressor is set to deliver the correct working pressure. When you depress the foot switch, the air pressure regulator gauge should be within working pressure.

10. Check handpiece and ultrasonic scaler operation:

- a) Remove High Speed Handpiece from holder and depress foot switch, then handpiece starts to operate.
- b) Replace the High Speed handpiece and remove the Low Speed Handpiece from holder and depress foot switch, then handpiece starts to operate.
- c) Replace the Low Speed handpiece and remove the Ultrasonic Scaler Handpiece from holder and depress foot switch, then handpiece should start to operate.

NOTE: The Unit is fitted with automatic handpiece holders. Only one Handpiece can be used at any one time. Make sure that you put the handpiece back to the holder before picking up the handpiece you need to use.

11. Check water and air supply to the 3 way air water syringe. Depress the right hand button for air and left hand button for water or both together for mist.

12. Pressurize water system by moving the water system switch to ON located on the control panel.

NOTE: When filling distilled water bottles de-pressurize the water system, moving the system switch to OFF.

13. Water volume. Remove HS/LS/Ultrasonic Scaler Handpiece from holder and depress foot control pedal. Adjust water spray volume by flow control knob, and then, if required, to get a fine mist by rotating vaporization control knobs.

14. Adjust Ultrasonic Scaler Handpiece by the white color knob, located on the last of control panel.

15. HS handpiece should be lubricated regularly to get optimal performance and life. Recommend lubricated before using each time. The foot pedal should be depressed for 15 seconds after oiling to ensure the lubricant will reach the turbines and working portions of the handpiece.

NOTE: The lubricant is placed in the smaller of the 2 large holes. "Air entry hole" at the base of the HS handpiece. Using before and after using for 30 minutes, please drop with lubricant.

3 Product Structure and Guide

Front



Right Side



Water Switch: to switch on or off the water system

Knob of Water Regulate: to adjust the water volume

Knob of Air Regulate: to adjust the air volume

Knob of Scaler: to adjust the scaler power

High speed handpiece: to adjust the air pressure of handpiece

Low speed handpiece: to switch on or off the LS handpiece (electric driven)

ON/OFF Ultrasonic scaler: to adjust the air pressure of scaler



Clean water bottle: to supply clean water to handpieces

Disinfectant bottle: to collect waste water, saliva from patient

Left Side



- 1: Power button
- 2: Holder to place foot pedal
- 3: Power socket: to supply power to machine

3.1 Water System

MEDITECH dental system is supplied with a clear and a disinfectant bottle. The clear bottle should be filled only with distilled water to assist in preventing mineral or bacteria build up in the handpieces. This water bottle supplies the handpieces, 3-way air water syringe and ultrasonic scaler. And disinfectant bottle be filled with disinfectant and supply for 3 way syringe.

The water system has been preset, and can turn on and off it by toggle switch to get the water supply.

Clean Water Bottles

To refill the distilled water, toggle the pressure switch on the dental system to OFF -depressurizing the system. After the system has been depressurized, unscrew the bottle and refill with either distilled water. After filling the water bottle screw it back into the holder and toggle the pressure switch to ON, repressurize the system.



DO NOT OVERTIGHTEN THE BOTTLES.

Please Note: When the day's dental procedures are complete, toggle the pressure ON/OFF switch to the OFF position, depressurizing the distilled water and waste water bottles.

NOTE: Failure to use distilled water will void the machine warranty, which will result in crystal deposits forming, damage handpieces gear/motor and block valves.

Water System

The use of distilled water is mandatory in the clean water bottles, as local water may clog the system and can corrode the brass valves in the system, apart from the risk of a bacterial build up.

Chlorine in tap water can cause flocculation, clogging filters and valves. If you have no choice to use tap water, you need buy Inline filter, and fix it on the pipeline in the supply bottles. This kind of filtration helps prevent particles from entering the system and blocking handpieces. This kind of filter is located in the distilled water bottle.

Attention: This kind of inline filter needs to be checked and replaced if they appear dirty.

Disinfectant bottle

Fill disinfectant into transparent bottle marked with Disinfectant and switch to disinfectant. The bottle will be pressured and flows out via 3-way syringe.

Cleaning

Bottles may be sterilized with ethylene oxide or by chemical sterilization

3.2 3-way Syringe

Your choice of air, water, or fine mist spray. Depress the right-hand button for air (with air injection icon) and the left-hand button for water (with water drop icon) and both for a fine mist.

User could select water or disinfectant by the water/disinfectant toggle switch.

The 3 way syringe is ideal for flushing away debris during prophylaxis or drying areas during endodontic procedures.



- 1)Outer ring housing
- 2) Air
- 3)Water

Tips Removal

The tip of the 3 way syringe may be removed for cleaning and autoclaving.

Slide the outer ring housing and remove the tip.(See picture as

3. Handpiece

The high speed handpiece is designed to operate well at pressure gauge in Green area (Yellow means not enough,Red means too high pressure).

The standard HS handpiece is designed at speeds of up to 40,000 rpm. A very light touch is necessary as handpieces operates with very low torque and high speed.Pressure on the handpiece of 30gms(1ounce)or more,will cause the bur to stall.

Distilled water can be ejected by HS handpiece. Fine mist is easily adjusted by knob on control panel.

Note: All handpieces should be lubricated before use.

Bur Replacement

1. Depress the head back of handpiece with your thumb and pull out the bur.



2. Insert the bur into the hole all the way until it stops, and then depress the head back of handpiece with your thumb, at the same time, depress the bur again until it stops.

3. To change the Bur repeat step 1 and step 2.

To increase the life of the Handpiece, oil between each use and use a new Bur between each patient. See Handpiece manual.



3.4 Low Speed Handpiece

The low speed handpiece includes Straight and elbow type with electric driven.



Adjust the speed, rotating direction etc., on the touch screen. Optional speeds for low speed handpiece, including 1:20, 1:16, 1:1 and speed increasing 1:5. The electric motor achieves long service life and quiet operation. And it makes possible to satisfy the highest ergonomic demands and effectively avoid fatigue, even when working for extended periods of time.

20,000-40,000rpm electric motor

16:1 for speed of 2,500 RPM

1:1 for speed of 40,000 RPM

1:5 for increasing speed of 200,000 RPM

Please refer to the video to understand how to install the polishing head (lock and unlock),
adjust speed and direction.



- 1: To light up the LED inside the handpiece
- 2: To change the rotating direction of the tips of handpiece
- 3: To preset 3 set of parameters(memory function)
- 4: To save preset parameter

Use 75% alcohol to scrub the surface, use a 1mm special brush to scrub the pinholes of the bending machine, and install an oil filling pipe at the tail of the straight machine and the bending machine for oil filling

After each use, run it without water and no load for 5-8 seconds, and wipe the surface oil with a paper towel

3.5 Ultrasonic Scaler Handpiece

Find the red dot to match and assemble the ultrasonic scaler handpiece.

Using the plastic wrench to lock and unlock the tips. It allows users to set power output at their desired level of operation by white knob which is located on control panel.

The ultrasonic scaler with LED light technology has been designed for use in the areas of scaling, periodontology, endodontics, and micro-preparation. Lightweight handpiece with foot switch ON/OFF control.



3.6 Handpiece Pressure Regulation

The high and low speed handpieces should be set to a specific pressure. Even factory sets the default working pressure, user still can adjust it. The handpiece pressure adjustment is located on the front control panel, one is for HS, one is for LS, and one is for scaler. See below picture and notes.



Water Switch: to switch on or off the water system

Knob of Water Regulate: to adjust the water volume

Knob of Air Regulate: to adjust the air volume

Knob of Scaler: to adjust the scaler power

High speed handpiece: to adjust the air pressure of handpiece

Low speed handpiece: to switch on or off the LS handpiece (electric driven)

ON/OFF Ultrasonic scaler: to adjust the air pressure of scaler

Pressure Gauge to indicate the working pressure of the handpiece.

Pressure Regulation Method:

1. Turn the unit on and remove the HS handpiece to be adjusted.
2. Depress the foot switch and turn the knob clockwise or anti-clockwise, until the desired pressure is displayed on the pressure gauge.



3. Make sure that the HS handpiece is plugged into its bracket, then take off the scaler handpiece and then adjust the corresponding knob ,until the desired pressure is displayed on the pressure gauge.



3.7 Silent Oil-Free Air Compressor

The compressor is perhaps the most crucial part of any dental system as it supplies the valuable air needed to run handpieces and pressurize the water and cooling system.

Parameters preset before shipment, no any change if there is no special requirement. **Just be a attention: Connect The Host to The Appropriate Voltage.**

High voltage used on this equipment.

Isolate from mains before removing any covers, which should only be carried out by a qualified electrician.

Ensure power outlet is adequately rated for this unit.

Isolate power supply and relieve air pressure prior to service tasks.

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

4 System Safety

Please read safety instructions carefully. For the sake of safety, please be sure to be aware of the followings:

4.1 Attentions

1. Correct cable connection
2. Ensure the correct voltage and securely grounding.
3. Avoid exposure of all electronic cables
4. Do not touch any electronic devices and circuits inside the device. Please stop the device in case of suspected failure
5. If there is potential danger in the device or it cannot be operated properly, contact authorized technical personnel.
6. Correct device (all handpiece) connection
7. Connect device correctly to avoid difficulties in operation due to wrong connection, resulting in disconnection.

4.2 Precautions

1. Fasten power cord to prevent poor power contact.
2. Pay attention to shock, water, humidity, pressure, and fire-proof.
3. Pay attention to handling strength and position during moving and handling, to prevent damage or dump the instrument.
4. Untrained personnel are prohibited from operating the equipment. Please use a reliable grounding device.
5. Users shall undertake corresponding duties due to any improper cleaning, maintenance and operation.
6. In case that the equipment host is disassembled without permission of MEDITECH, it shall no longer be guaranteed by the MEDITECH with technical maintenance service. Please contact authorized personnel or MEDITECH for support in case of any technical problems.

5 Maintenance

5.1 Handpiece Maintenance & Sterilization

All handpieces have a working life but it can be extended by maintaining with the correct operating pressures and speeds as well as adequate lubrication.

Device	Maintenance		Sterilization	
	Daily	Yearly	Before	After
HS Handpiece	Oil before or after use Oil in smaller of 2 big holes Depress the foot pedal for 10 seconds to ensure the oil reaches the Turbine	Replace turbine and o'rings and sealing gaske if worn	1. Thoroughly cleaned to remove any foreign particles, eg blood, saliva etc 2. Clean the exterior of the handpiece with any good surgical disinfectant. Be sure to rinse and dry thoroughly 3. Remove moisture with a towel or use air from the 3 way air water syringe 4. Take off the bur and lubricate handpiece turbine with lubricant 5. Seal the handpiece in sterilization tubing bags before autoclaving	1. Allow handpieces to cool down then lubricate handpiece thoroughly 2. Stored in another container to avoid recontaminating
LS Handpiece	Same as above (HS instruction)	Replace 'o'rings and sealing gasket if worn	Check whether the chuck, water spray nozzle, sealing gasket and other parts are aging or damaged, and replace them in time.	Same as above (HS instruction)
Ultrasonic Scaler Handpiece	1. Clean with any good surgical disinfectant 2. Be sure to rinse and dry thoroughly	Replace turbine and o'rings and sealing gasket if worn	1. Clean and remove the 'o' ring and led diffuser 2. Clean with any good surgical disinfectant, but be sure to rinse and dry thoroughly.	Stored in another container to avoid recontaminating.



The working life of most handpieces turbines is 12-24 months, however, it will depend upon the degree of care and the frequency of use.

Note: Make sure that the turbine cartridge and head cavity are cleaned thoroughly before autoclaving.

If autoclaved with bloody particles in the turbine housing, autoclaving will cause particles to be scorched and damage to the turbine. Prior to autoclaving, lubricate items.

**Note: Do not autoclave the handpiece with a bur.
Do not exceed temperatures of 273°F or 134°C**

Lubricant after cooling down, do not allow hand-piece to sit in sealing bag overnight or for a long period.

5.2 Air Compressor Maintenance

Turn off the power before **Daily Maintenance**

Yearly Maintenance:

It is recommended to replace the inlet filters and pressure regulator filters every year, please contact the after-sale service personnel for dealing with it.



6-Troubleshooting

The chapter describes problems (faults) and suggested measures that are common in using the product

6.1 High Speed Handpiece

Problem	Caused	Solution
No Water Flow in Handpiece	1. Compressor not ON	Turn compressor ON and check that ON/ OFF tap is in the ON position
	2. Water flow control not ON	Turn water control to ON
	3. Clean Water bottle empty	Fill water Bottle
	4. The water line is blocked	Check lines and pressure.
	5. Check if 3 way syringe has water	If yes, lack of water must be in the valves or the handpiece. The 3 way syringe is the quickest way to check for water
	6. Use of tap water, blocking water filter	Valves will need replacing.
	7. Pressure regulator is loose	Contact after-sales personnel.
Mineral Accumulation	1. Use of tap water-mineral or chemical action blockage will usually take 3-4 years to occur.	Pass a fine wire through the water intake hole. Pass another fine wire through the hole in the handpiece head. Pass the wire as far as possible each way, blow out the loosened mineral accumulation
	2. Verdigrise build up in brass water valves due to chemical reaction with tap water	Replace valves
Use of Chlorhexidine	1. Most of disinfectants will cause solution deposit and block valves Note: insufficient dilution can also cause deposition.	Do not dilute beyond its label recommendations Contact the after-sales personnel if request
	2. Chlorine in tap water will cause a flocculation and block filters and valves	Use distilled water only
Handpiece won't run	Drive head damaged	Contact the after-sales personnel
LED is not on	LED damaged	Contact the after-sales personnel

6.2 Low Speed Handpiece

Problem	Caused	Solution
No Water Flow in Handpiece	1. Compressor not ON	Turn compressor ON and check that ON/OFF tap is in the ON position
	2. Water flow control not ON	Turn water control to ON
	3. Clean Water bottle empty	Fill water Bottle
	4. The water line is blocked	Check lines and pressure.
	5. Check if 3 way syringe has water	If yes,lack of water must be in the valves or the handpiece.The 3 way syringe is the quickest way to check for water
	6. Use of tap water,blocking water filter	Valves will need replacing.
	7. Pressure regulator is loose	Contact after-sales personnel.
Mineral Accumulation	1. Use of tap water-mineral or chemical action blockage will usually take 3-4 years to occur.	Pass a fine wire through the water intake hole. Pass another fine wire through the hole in the handpiece head. Pass the wire as far as possible each way, blow out the loosened mineral accumulation
	2. Verdigrease build up in brass water valves due to chemical reaction with tap water	Replace valves
Handpiece won't run	1. No or low air pressure	Check the air line to be sure the air is turned on and the line is unobstructed
	2. Inferior oil, too much or too little oil or water in the turbine	Refer to lubrication instructions
	3. Drive head damaged	Contact the after-sales personnel
The polishing head has no effect	Polishing head is loose	Reinstall the polishing head and screw it.
Overheat of polishing head	Pressure is too large	Adjust the speed of handpiece
The polishing head not run	Handpiece doesn't run	Check the manual of LS handpiece, depress the foot switch, adjust the speed

6.3 3-Way Syringe Air/Water/Spray

Problem	Cause	Solution
No Water Flow in Handpiece	1)Compressor not ON	Turn compressor ON and check that ON OFF tap is in the ON position.
	2)Water flow control not ON	Turn water control to ON
	3)Water/Disinfectant bottle empty	Fill water/Disinfectant Bottle.
	4)The water/air line is blocked.	Check lines and pressure.
	5)Use of tap water,blocking water filter	Valves will need replacing
	6)Pressure regulator is loose.	Contact after-sales personnel.
Mineral Accumulation	1)Use of tap water -mineral or chemical action blockage will usually take 3-4 years to occur	Pass a fine wire through the water intake hole.Pass another fine wire through the hole in the handpiece head.Pass the wire as far as possible each way,Blow out the loosened mineral accumulation
	2)Verdigrease build up in brass water valves due to chemical reaction with tap water	Replace valves.

6.4 Air Compressor

Check the supply voltage and grounding.

Check whether the power cord in socket is well plugged.

Contact the after-sales personnel.



7-Warranty

The warranty of this equipment starts from the date of leaving the factory. During the warranty period, the equipment cannot be used normally due to problems such as materials and process defects. MEDITECH undertakes after-sales service such as equipment maintenance and parts replacement.

Any damage caused by improper use or over-range use is not covered by the warranty. If repair or replacement of parts is required, the cost will be borne by the user.

If there worked equipment was found to have been unauthorized disassembly, MEDITECH will not provide after-sales service such as warranty, free maintenance and parts replacement.

The warranty statement (including its restrictions) is exclusively issued by MEDITECH and covers all other warranties.



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