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ZD ZEST DENTAL
SOLUTIONS

From the pioneers in dental air abrasion.

PrepStart™ H₂O



OPERATORS MANUAL

EC REP

MDSS GmbH
Schiffgraben 41
30175 Hannover
Germany

CE
0086

RxOnly

PRODUCT DESCRIPTION

The PrepStart H₂O is a portable, self-contained, pneumatically powered device for hydroabrasion. The device is similar to dental air abrasion equipment in that it utilizes aluminum oxide particles, but it adds a water spray to the cutting process. This technology has been named “hydroabrasion”. Hydroabrasion eliminates the objectionable powder plume created by air abrasion.

INDICATIONS FOR USE

The PrepStart H₂O is indicated for cutting and preparation of tooth structure, both enamel and dentin for all classes of cavity preparation, removal of composite resin restorations, and surface roughening of enamel, dentin, and metal dental structures prior to adhesive resin bonding.

CONTRAINDICATIONS

- 1) The PrepStart H₂O is not recommended for use on amalgam fillings.
- 2) Clinical use which is not in accordance with the indications listed in this manual should be avoided.
- 3) In all applications, clinical use must be subject to the discretion of the dental professional.

H₂O ACCESSORY INSTALLATION TO EXISTING PREPSTART UNITS ONLY

(If you have purchased the PrepStart H₂O as a complete unit, please skip to section “A. Preparing your PrepStart H₂O for use.”)

Your H₂O unit comes equipped with a .019 nozzle. An optional .015 nozzle can be purchased separately from Danville.

Note: You will need a #2 Phillips screwdriver for installation

1. Disconnect air supply line from the PrepStart and turn On/Off toggle switch in rear to OFF position (Down).
2. Open abrasive cap and discard abrasive powder.
3. Remove black O-ring located below the abrasive jar threads, be careful not to damage O-ring. It is easily removed using an explorer, slide it under the O-ring, hook it and lift it off. If damaged, it must be replaced prior to use.
4. Turn the PrepStart upside down. Using a Phillips screwdriver, remove the 4 screws located in deep pockets near each corner.
5. Turn the PrepStart right side up again, caution as the screws are loose and so is the cover. Lift the top cover off by grasping the rear of the cover, pivot the cover up at the rear and detach from the front bracket, some force may be required to dislodge from this bracket.
6. **Note:** Do not attempt to install the H₂O sidecar already attached to the new cover, this will cause an improper fit with the base.
7. Attach the new H₂O cover by installing the plastic clip in the front of the cover into the metal bracket on the front bezel, ensure the plastic clip is fully engaged in the metal bracket, pivot the rear of the cover down and align the four (4) screw bosses in the base and the cover. Replace the four (4) screws previously removed and tighten, caution do not over-tighten the screws. Replace the O-ring and abrasive jar cap. The cover and base should be even (see picture).
8. Install the H₂O sidecar accessory using a #2 phillips screwdriver and the three (3) screws provided, leave them slightly loose for now.
9. View the PrepStart H₂O from the front of the unit and ensure the sidecar and PrepStart bezels are aligned vertically (see Fig 1), then tighten the screws, do not over-tighten.

A. Preparing your PrepStart H₂O for use

1. The PrepStart H₂O is a portable compact system and can be located conveniently on a countertop or roll-around tray.

2. Attach the foot pedal supplied with the unit to the rear of the unit. The connectors are colored coded; the red and blue go to the back of the PrepStart while the green attaches to the back of the water unit (see Fig 2). Hand tighten all connections until firmly secured to avoid leaks.
3. Attach the hand piece to the front of the PrepStart H₂O. The dark gray tubing with the metal end attaches to the PrepStart abrasive exit port first, and then the clear luer style fitting attaches to the water unit (see Fig 1).
4. Fill the water bottle with distilled water, (temperature of the water should not exceed 115° F) and screw bottle cap in place with fitting facing the back of the unit by holding the white portion of the cap and screwing the blue ring in place. Hand tighten only. Note: Only use distilled sterile water.
5. Attach the blue line with white fitting to the white fitting in the base of the water unit, and then the two (2) yellow fittings together. Hand tighten (See Fig 2).
6. Reconnect the air supply line to the PrepStart unit.
7. **Test cutting performance without water spray.** Flip the water toggle switch located at the rear of the unit to the “OFF” position. The toggle level should be pointing to the left when viewing the unit from the rear. Turn on the PrepStart main toggle switch to activate the unit, this is the larger toggle switch located at the rear of the PrepStart, “ON” is in the up position. Once in the “ON” position you should have a pressure reading on the pressure gauge located on the front bezel of the PrepStart. Evaluate cutting performance on extracted tooth without the water spray. Adjust air pressure and powder flow using gray control knobs on front panel of main PrepStart unit to the desired settings.
8. **Adjust water flow to hand piece in the absence of abrasive.**
 - a. Flip the PrepStart main toggle switch to the “OFF” position (down).
 - b. Flip the switch on the water toggle switch to the “ON” position (toward the main PrepStart).
 - c. Position the hand piece in a container and depress the foot-pedal and observe water flow at the hand piece tip. Allow a few seconds for water to exit the hand piece tip. The time will be considerably longer if the water control knob is set at less than maximum.
 - d. Adjust the water flow by using the gray water control knob located on the front bezel of the water unit. Ideal flow is about 3 drops ever couple of seconds. Excessive water flow may decrease working visibility.
 - e. Water flow rate may need to be adjusted once you supply pressure via the PrepStart abrasive unit, see section 10.
9. Turn on PrepStart main toggle switch, verify you have a pressure reading of at least 60 psi.
10. Position hand-piece in beaker or garbage can and evaluate water spray and abrasive/air mix. If necessary, fine tune water flow (see section 8) to suite your needs. The PrepStart H₂O has three operating modes;
 - 1) compressed air/abrasive. Abrasive toggle “ON”, water toggle “OFF”.
 - 2) compressed air/abrasive + water. Both toggle switches “ON”.
 - 3) water only. Water toggle “ON”, abrasive toggle “OFF” .

B. Refilling the Water Bottle

1. Turn off water toggle switch (located at the back of the water unit) controlling water flow. When the water toggle switch is turned off, the compressed air in the water bottle automatically vents to atmosphere.
2. Remove bottle from its housing and unscrew the cap while holding the bottle.
3. Fill with distilled water, reattach the cap and place back in the housing.

C. Internal Water Lines & Water Bottle Cleansing Procedure

At the end of each day, the water lines of the PrepStart H₂O should be flushed with a disinfecting agent to prevent growth of micro-organisms. Potential disinfecting agents include isopropyl alcohol, ethanol, mouth rinse formulated with quaternary ammonium compounds, and hydrogen peroxide.

Do not use any chlorine containing compounds (e.g., hypochlorite, Clorox, hypochlorous acid, etc.) as these compounds will result in corrosion of the internal metal components.

Procedure to flush the unit:

1. Fill the water bottle with ~ 100ml of the disinfecting solution. Attach cap and shake bottle so liquid contacts the bottle walls. Place bottle in housing.
2. Verify that the main unit toggle switch is in the “OFF” position.

3. Flip water toggle switch to “ON” position.
4. Depress foot pedal and allow disinfecting solution to flow through unit out the hand-piece tip into beaker/sink. Leave disinfectant solution in water lines for sufficient time to achieve disinfection. Time period will depend on type of disinfectant used.
5. Flush remaining disinfectant solution through unit.
6. Purge unit with air, at least five (5) minutes to remove residual disinfectant from lines.

**D. Handpiece Cleansing Procedure – External Surfaces
(DO NOT STEAM STERILIZE HANDPIECE TUBING)**

1. Place hand piece in autoclavable pouch and place in a gravity displacement autoclave and sterilize at 275° F for 15 minutes. Allow cooling before handling.

Do not utilize dry heat sterilizers or toaster ovens... i.e. Cox Sterilizer.



Fig 1

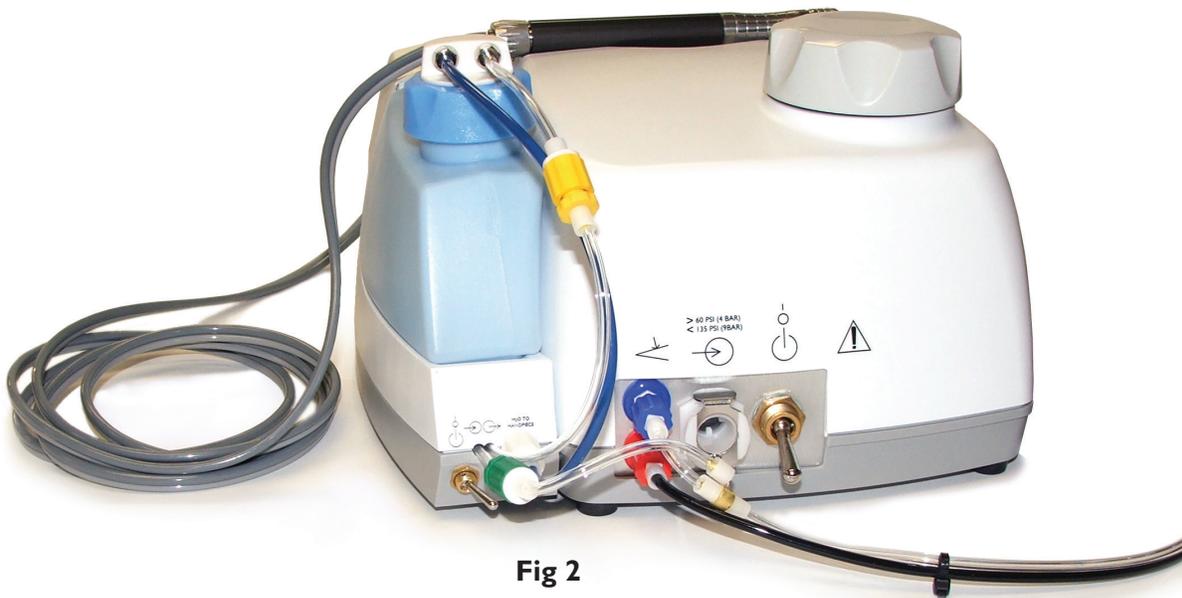


Fig 2

DEFINITIONS OF SYMBOLS

The following symbols may appear on the product packaging or labeling.

Symbol	Definition	Symbol	Definition
	Reference number		Serial number
	Use by		Manufacturer
RxOnly	Caution: Federal law restricts this device to sale by or on the order of a dentist.		European Community Authorized Representative
	European Mark of Conformity		Consult instructions for use

NOTICE

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