

DT²⁺

Skin Resurfacing System

Instruction Manual

DM5002A



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General Warnings

The exclamation point within a triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instruction.



Type BF (referring to the degree of electrical protection against shock).

1. Before each use, inspect the DT² console and accessories for proper operation.
2. Altair Instruments' equipment is intended for use by professionals who are well versed in skin exfoliation.
3. Do not autoclave the console. Exposure to extreme heat will damage internal mechanisms.
5. Do not immerse the console in any solution.
6. Do not attempt to service the DT² console or remove any panels. There are no serviceable parts. Return to Altair Instruments for service as necessary.
7. Review the "Care and Cleaning Instructions" section of this manual. Proper cleaning of the wands is important to keep them clean and effective.
8. Equipment not for use in the presence of FLAMMABLE ANAESTHETIC MIXTURE WITH AIR OR WITH OXYGEN OR NITROUS OXIDE.
9. Never operate the system with a damaged power cable.
10. The power cable supplied has a "hospital grade" connector.

Indications and Contra-Indications

Indications

- Informing the patient of the reasonable expectation from exfoliation is essential to prevent disappointment, especially with acne scarring. It may take multiple treatments to visualize improvements and the patient should be told to expect results only after multiple treatments.
- Improved smoothness, texture, luminescence
- Improved mild photo damaged skin-mottled pigmentation
- Acne-comedonal
- Improves acne scarring

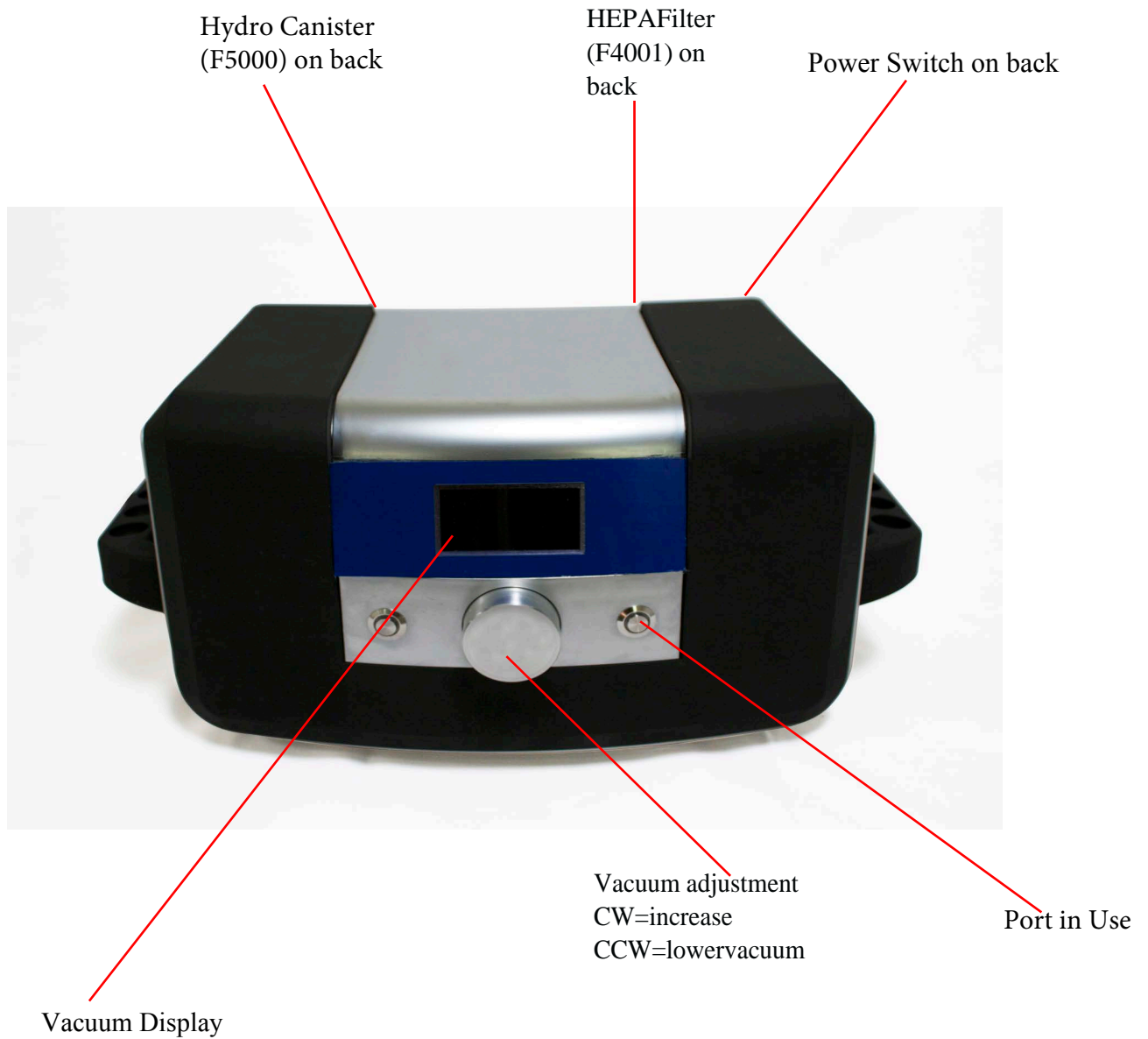
Contra-Indications

- Exfoliation is contraindicated for patients with active infection of all types, such as herpes simplex virus or flat warts.
- Active acne
- Uncontrolled diabetes
- Eczema, dermatitis
- Skin Cancer
- Vascular lesions
- Oral blood thinner
- Rosacea
- Tattoos-not effective
- Children, pregnant or nursing persons
- Recent Botox® treatment
- Recent Waxing

Side Effects and Complications

- Mild erythema and increased sensitivity is expected, symptoms resolve within a few hours.
- Petechiae may appear during or after the treatment. This usually indicates that the vacuum setting is too strong. Photodamaged skin is particularly sensitive to this type of reaction and will resolve within two days.
- Telangiectasia/erythema may be worsened or brought out by skin exfoliation.
- Post inflammatory hyperpigmentation can often be avoided with sun block and sun avoidance.

Console Components



System Setup

1. Review the voltage rating on the label to make sure it is the same as your wall outlet.
2. Plug the power cord into the receptacle on the back of the console. Plug remaining end of the power cord into a hospital grade grounded wall outlet.
3. Insert the F4001 HEPA filter into the back of the console.
4. Insert the F5000 Hydro Collection Canister into the back of the console.
5. Insert the DiamondTome wand into the tube set.
6. Insert the HydroWand into the Hydro tube set.
7. Depress the POWER switch in back of the console to turn on the unit.
8. Depress required Port button.
9. To adjust the pressure:
Occlude the wand tip. Turn the control knob (CW increases the pressure, CCW decreases the pressure). **Always start at a low setting. 5 in-hg is a common starting point.**

Warning: Test the setting on the patient's hand or arm. Excessive pressure will cause redness or bleeding.

Notes: See HydroWand User's Guide for system setup. .

Care and Cleaning Precautions

Cleaning and Sterilization

The DiamondTome wand and the HydroWand is a reusable device. It is considered a semi-critical device, which comes into contact with intact skin. High levels of disinfecting are the minimum process requirement.

Immediately after each use, the wand should be cleaned by soaking in enzymatic detergent for 15 minutes. The wand should then be washed in hot running water and the abrasive surface scrubbed with a brush to remove protein material.

The wand then can be placed in a disinfecting solution. Read the label on the solution for the proper soak time.

Caution: Carefully follow the labeling instructions of the disinfectant. Dilution and the soak times are important; the common soak time is 10 minutes. Soaking beyond the recommended time of 10 minutes will corrode the wands and the diamond surface will be damaged.

Steam Sterilization

The DiamondTome wand and all metal parts of the HydroWand can withstand steam sterilization. Steam sterilization should always be used if the surface of the skin may be penetrated.

Gravity Displacement Steam Sterilization: If the wand is sterilized in a unwrapped tray the "flash" cycle may be used. This is five minutes at a minimum temperature of 132°C (270°F) in a steam autoclave.

Cleaning the Tubing

After removing the tubing from the filter, use a single use filter disc and insert into the tubing. Turn on machine and turn up the vacuum to 15 on the display. Place a finger over tubing to create suction and release. Filter will stop at the other end. Remove tubing from canister, remove the white tip, pull out filter disc and discard.

Refer to the Hydro Wand User's Guide for instructions for cleaning the Hydro Tubing.

The used filter disc and Hydro application pad must be disposed as a biohazard.

Cleaning the Console

The console can be cleaned with a damp cloth and mild liquid detergent.

F4001 HEPA Filter



The F4001 HEPA filter can be used with or without the small filter disc.

In some cases clients like to see the material removed and collected on the filter disc. In other cases, such large amounts of skin cells are removed, that the filter disc may have to be changed several times during one treatment. In these cases, simply do not use the small disc, as the HEPA filter will collect the cells.

The F4001 HEPA filter will entrap all the debris (down to a level of .3 microns)>

The F4001 HEPA filter is considered "limited use" and it is estimated that you will be able to do approximately 250 treatments before the filter is full. (When the filter is full, the vacuum will not fluctuate and the filter must be replaced.)

We recommend that you have a spare filter on hand.



The F5000 Hydro Collection Canister is used with the Hydro Wand. The F5000 Hydro Collection Canister collects residual fluid. Dispose when fluid reaches the fluid line or earlier. Always keep the canister upright.

Filter Disc Replacement

1. Remove the tubing from the filter housing.

After each use the filter disc should be replaced. A clogged disc will not allow the air to pass freely through the assembly.



2. Remove the soiled disc and discard. Replace with a new filter disc.

The replacement filter disc must be aligned so that it sits squarely within the tubing. If the disc is not properly installed, it will not trap all the debris.

3. Replace the tubing.

4. Connect the tubing and wand.

The wand and tube set are a simple friction fit. A small amount of lubricant on the wand connection makes removing the tubing easier.



5. Double check that everything is sealed.

Note: See Hydro Wand User's Guide for system setup

DT2

Skin Resurfacing System

The DT2 System is designed for removal of dead cells on the surface of the skin.

The variables the system offers are:

- Wand selection, 75, 100, 125 or 175 micron
- Vacuum setting
- Number of passes on the skin

Wands

Bonded on to the ends of the wand are natural diamonds. The diamonds abrasive size is measured in microns. The wand with 75-micron diamond abrasive is fine. The medium wand has a diamond abrasive which is 100 microns. The finer the abrasive, the less material is removed with each pass.

The diamond abrasive will not wear or become dull over time. What is very important is to keep the abrasive surface clean. Instructions for cleaning and sterilization are in previous chapters.

Vacuum

The vacuum setting determines the amount of pressure between the skin and the abrasive surface. Low vacuum setting, 8 in-hg, applies a low force. High vacuum setting, 20 in-hg, applies a high force between the skin and the abrasive. A high vacuum setting can cause redness (Petechiae). This usually indicates that the vacuum setting is too high. Normally, the redness resolves in a few hours.

Warning: Never use vacuum around the eye area. Vacuum can cause redness and swelling in this sensitive area.

The vacuum setting can only be read when the wand end is covered. Cover the end of the wand and the gauge will show the current vacuum setting. Turning the valve knob clockwise will increase the vacuum pressure. Turning the valve counter-clockwise will lower the vacuum setting. A low vacuum setting is conservative and a high setting is aggressive.

Number of Passes

The wands should pass over the skin surface at least twice and the passes should be overlapping to achieve a uniform result. The first pass is normally vertical and the second pass is horizontal.

Basic Skin Resurfacing Treatment

Use basic treatment parameters for the following skin conditions:

- Fine Lines
- Dry Skin
- Sun Damaged Skin
- Seborrhea

Treatment should go in the following manner for 6 sessions:

- The first 3 treatments should be done in 14 day intervals.
- The next 3 treatments should be done in 21 day intervals.
- Maintenance treatments should be done once every 6 weeks.

Clients need to comply with a maintenance program to achieve full results.

Basic Protocol

- Drape clients hair and clothing.
- Apply a small amount of cleansing liquid to skin with fingertips. Massage in upward, circular pattern. Work into lather. Rinse thoroughly with pre-moistened warm towel or tepid 4x4 gauze pads.
Hint: There is no need to wait for the skin to dry before beginning treatment.
- Start the first exfoliation procedure with the vacuum adjustment at a lower setting: 5 to 10 in-hg.
- Begin first treatment with the medium DiamondTome wand (100 micron).
- Perform a test site on the under side of the patient's arm before proceeding.
- Success of the treatment protocol is selecting the appropriate DiamondTome wand, number of passes, and vacuum setting.
- Keep skin taut and wand at a 90 degree angle where applying treatment.

Divide the face into Zones

Zone A: Forehead (below the hairline and above the eyebrows)

Zone B: Eye Area (treat this area last)

Zone C: Nose, Cheek's to Upper Lip (midface)

Zone D: Lower Lip to Lower Jaw (mandible)

Zone E: Neck and Décolleté

Zone A: The Forehead

Begin the first treatment conservatively and observe the effect by sight. With the medium wand and vacuum setting at 5-10hg, start by going from the brows to hairline vertically; go over area repeatedly to achieve desired depth of abrasion. Repeat the pattern horizontally.

Zone B: The Delicate Eye Area

Do this area last. Use the fine wand without vacuum for comfort and safety. Take additional steps to keep the skin taut and avoid areas inside the orbital opening.

Zone C: The Mid-face

Begin on the side of the face with vertical passes and cross with horizontal passes. Go over areas repeatedly to achieve desired depth of abrasion. Move down on the nose following the contours, and around the creases on the side of the mouth. Work the Upper Lip area moving horizontally from the corner of the mouth over to encompass the smile lines, make sure the skin is kept taut. To treat vertical rhytids (wrinkles) use vertical passes in conjunction with horizontal passes. For clients prone to Herpetic outbreaks on their lips, avoid the vermilion border.

Zone D: Lower Lip to Lower Jaw

Work the Lower Lip & Lower Jaw areas with vertical and horizontal passes.

Zone E: Neck and Décolleté

Use the fine or medium wand with reduced vacuum settings when working on the neck to avoid streaking. Most clients require only upward and downward passes on the neck area, unless you are blending non-lasered skin. If horizontal passes are necessary, perform them from center outward. Always make sure the skin is held taut. The Décolleté will require vertical and horizontal passes using the fine or medium wand with lower vacuum setting just like the neck.

- After fully exfoliating the face, neck, etc., return to areas that require more attention: hyperpigmentation, fine lines or scars.
- Apply appropriate calming mask and place cool compress over mask, leave on 5-10 min.
- Remove product with cool towel.
- Apply moisturizer and sun block.

Technical Specifications



Wands for the Face

DT75 Fine Wand
DT100 Medium Wand
DT125 Coarse Wand
DT175 X-Coarse Wand

DN75 Fine Nose Wand
DN100 Medium Nose Wand
DN125 Coarse Nose Wand
DN175 X-Coarse Nose Wand

Contoured Wands for the Face

DC20-75 Fine Contoured Wand
20mm
DC20-100 Medium Contoured Wand
20mm
DC20-125 Coarse Contoured Wand
20mm
DC20-175 X-Coarse Contoured Wand
20mm

Contoured Wands for the Body

DC25-75 Fine Contoured Wand 25mm
DC25-100 Medium Contoured Wand 25mm
DC25-125 Coarse Contoured Wand 25mm

DC30-75 Fine Contoured Wand 30mm
DC30-100 Medium Contoured Wand 30mm
DC30-125 Coarse Contoured Wand 30mm

HydroWands

HYA00 Smooth tip 19mm Hydro Wand
HYA75 Fine tip 19mm Hydro Wand
HYA100 Medium tip 19mm Hydro Wand
HYAR00 Smooth tip 12mm Hydro Wand
HYAR75 Fine tip 12mm Hydro Wand
HYAR100 Medium tip 12mm Hydro Wand



DM5002A Console Assembly

Classification: Protection Class I, (per IEC 60101-1)
Type BF Applied parts
Water Ingress protection: Ordinary Equipment

Line (Mains) Supply: DM5002A rated voltage, 5N115V-60 Hz

Duty Cycle: 50% - 30 minutes on 30 minutes off

Fuses: 6.3A 250V Time Delay, 5mm x 20mm
Bussman P.N. GDC-6.3A
To replace the fuses, the power cord must be disconnected from the console.
The fuses are located in the Power Entry Module on the rear of the Console. Use a small screwdriver to open the cover. Replace fuses if necessary.

Protective Grounding:
The DT2 Console uses a protective ground connected internally; use cord supplied or medical grade grounded cord to ensure integrity of this feature.

Technical Information for repair:
The DT2 Console does not contain any parts that are serviceable except by Altair Instruments or authorized service centers.

Environmental Conditions:
Cooling: Do not cover. Allow free ventilation of unit. Do not block ventilation.
Stability: Use on horizontal surfaces.

Transportation and Storage:
Temperature: -20°C to +70°C (-4°F to 158°F)
Relative Humidity: 10% to 100% non-condensing
Atmospheric Pressure: 500 hPa to 1060 hPa

Disposal:

The single use filter disc and hydro application pad, which accumulates skin cells during the procedure, should be disposed of as a biohazard. Place the disc in a "sharps" container for disposal following each procedure.

The HEPA filter and Hydro canister may be used for multiple procedures but, ultimately it will become clogged with cells or fluid. To dispose of the filters, replace the protective cap on the vacuum inlet. Dispose of as a biohazard, which conforms to local government regulations.

The console does not contain any hazardous materials that may contaminate or harm the environment or present any risk to individuals disposing of the product.

Warranty

Altair Instruments warrants that the instruments and parts sold by Altair Instruments have been tested, inspected and left the factory in proper working condition, free of visible defects. Altair Instruments warrants the DT2 Console for 3 years from date of invoice. Defective parts replaced under Altair Instruments warranty shall become the property of Altair Instruments. The Diamondtome wands and Hydro Wands (excluding the plastic cylinder) are warranted for 2 years from the date of invoice. This warranty is exclusive and in lieu of all other warranties, whether written, oral or implied. Altair Instruments specifically disclaims the implied warranties of merchantability or fitness for a particular purpose.

Repairs and Service

Altair Instruments warrants to the Customer that any product service or repair work performed by Altair Instruments will be free from defects in workmanship and materials for a term of six (6) months after the date of shipment back to the Customer. This limited warranty applies only to the actual work performed by Altair Instruments. All parts replaced under these limited warranties shall become the property of Altair Instruments.

Altair Instruments does not warrant any product, components or parts not manufactured by Altair Instruments, damage caused by use of any product for purposes other than those for which it was designed, damage caused by unauthorized repairs, attachments, accessories or modifications, or any other abuse or misuses by the Customer.

The console must be returned in the original shipping container. The packaging is designed to protect the console from damage during shipping.



4864 Market St Ste D
Ventura, CA 93003
PH: 805.850.0800
FX: 805.850.0803
Toll Free: 866.325.8247