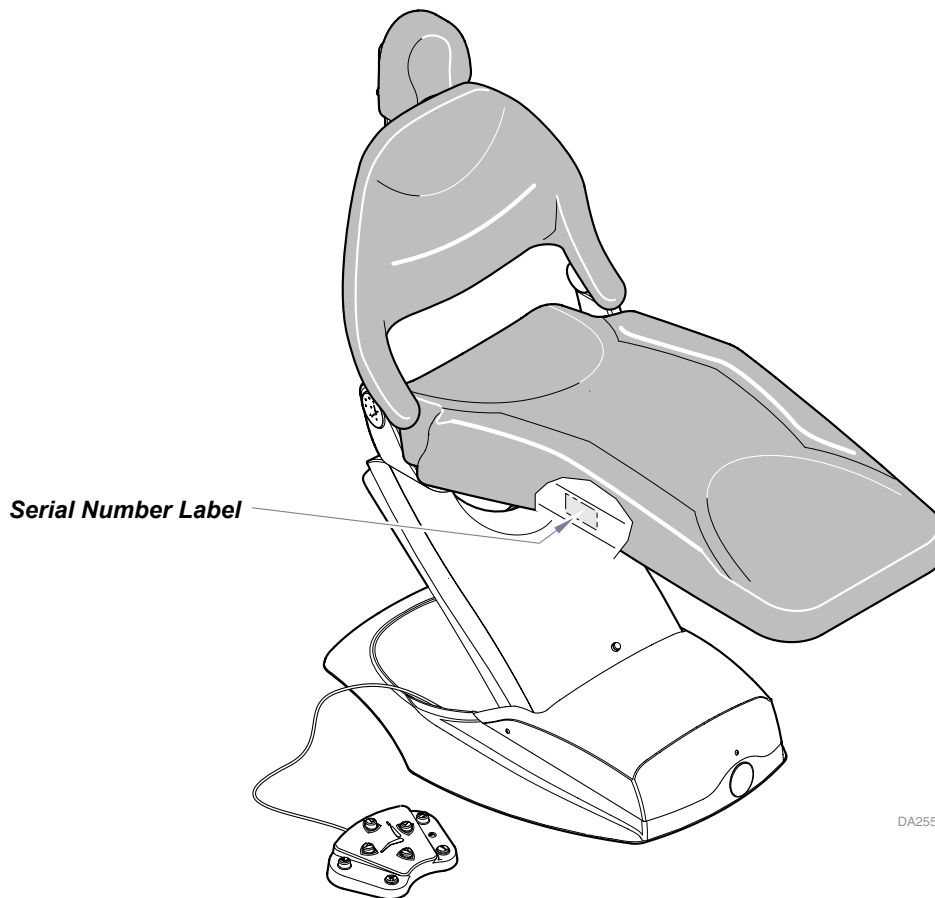


# Midmark Ultra-series Dental Chairs

[English](#)  
[Español](#)  
[Français](#)

**Models:**  
153592 and 153758



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[Technical Library at Midmark.com](#)

## **Compliance and Specifications**

### ***Intended Use***

To provide patient support and positioning during dental exams.

### ***Electromagnetic Interference***

Midmark dental operatory components are designed and built to minimize electromagnetic interference with other devices. However, if interference is noticed between another device and this operatory, remove the interfering device from room and / or plug product into an isolated circuit.

### ***Transportation / Storage / Operating Conditions***

Transportation / Storage Temperature:.....23°F to 100°F (-5°C to 38°C)

Relative Humidity:..... 10% to 90% (non-condensing)

Atmospheric Pressure: ..... 7.2 PSI to 15.3 PSI (50 kPa to 106 kPa)

Operating Temperature Range: .....59°F to 95°F (15°C to 35°C)

### ***Disposal of Equipment***

At the end of this product's life, the unit, accessories and other consumable goods may be contaminated from normal use. Consult local codes and ordinances for proper disposal of this equipment and other consumable goods.

### ***Authorized EU Representative***

Countries in the EU should direct all questions, incidents, and complaints to Midmark's Authorized EU representative listed below.

Newmed Srl.  
Via Lenin 79/A  
Quattro Castella (RE), 42020, Italy

Tel: +39.0522.875.166  
Fax: +39.0522.243.096

# Symbols

These symbols may appear on your equipment and/or in the manuals.



**WARNING**  
Indicates a potentially hazardous situation which could result in serious injury if not avoided.



**Caution**  
Indicates a potentially hazardous situation which may result in minor or moderate injury if not avoided. It may also be used to alert against unsafe practices



**Equipment Alert**  
Indicates a potentially hazardous situation which could result in equipment damage if not avoided.



Catalogue Number



Serial Number



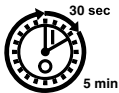
Manufacturer



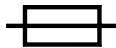
Refer to instruction manual/booklet



Type B,  
Applied Part



Duty Cycle



Type T  
Fuse



Maximum  
Patient  
Weight



Protective  
Earth Ground



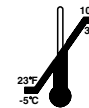
Fragile



Proper Shipping  
Orientation



Relative Humidity



Transportation &  
Storage  
Temperature



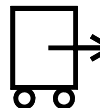
Atmospheric  
pressure



Keep Dry



Maximum stacking  
height (Refer to “n”  
number on package.)



Transportation  
Orientation

# **Product Features**

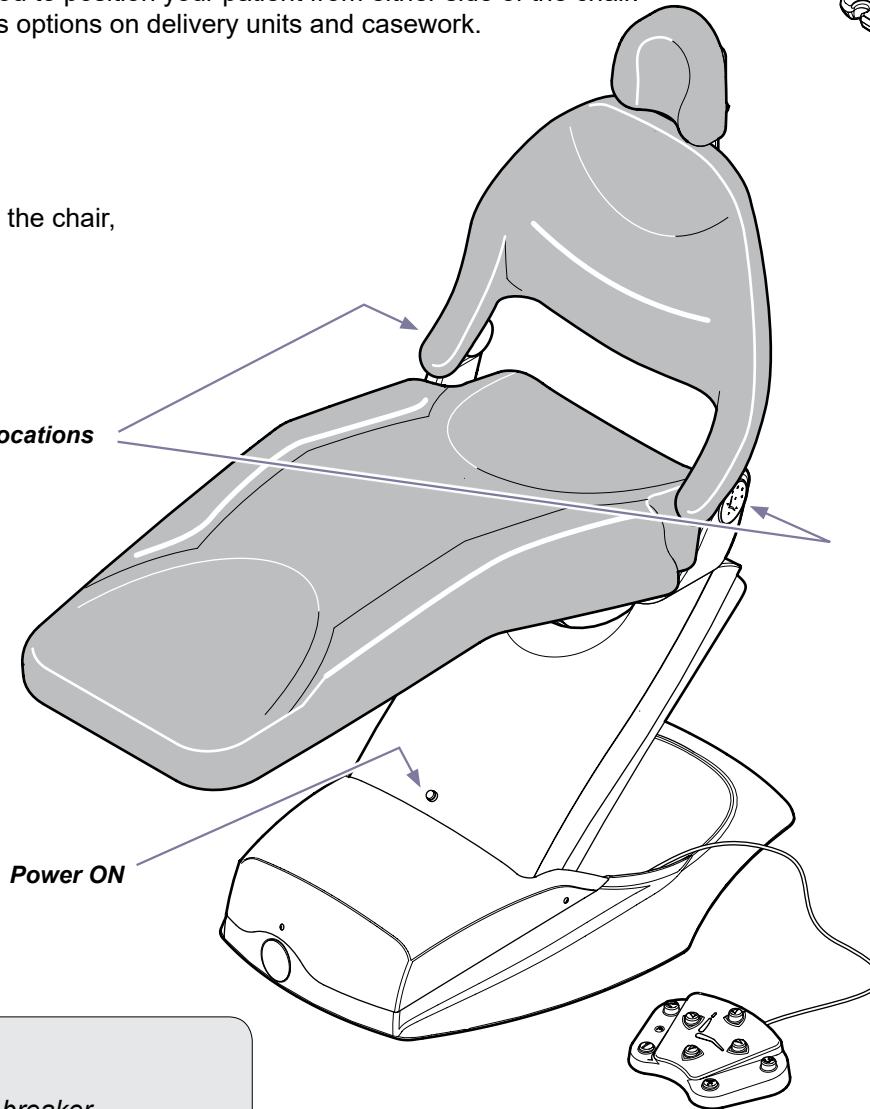
## **Touch Pad Location**

The chair position touch pads allow you to position your patient from either side of the chair. Additional touch pads are available as options on delivery units and casework.

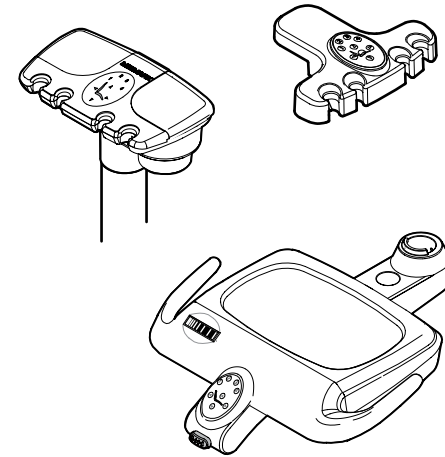
## **Power to the Chair**

When power is properly connected to the chair, the Power ON indicator illuminates.

**Standard Touchpad Locations**



## **Optional Touchpad Locations**



DA2549i

### ***If the chair has no power...***

- A. Check / reset facility circuit breaker.*
- B. Contact your dealer for service if necessary.*

## Collision Protection System

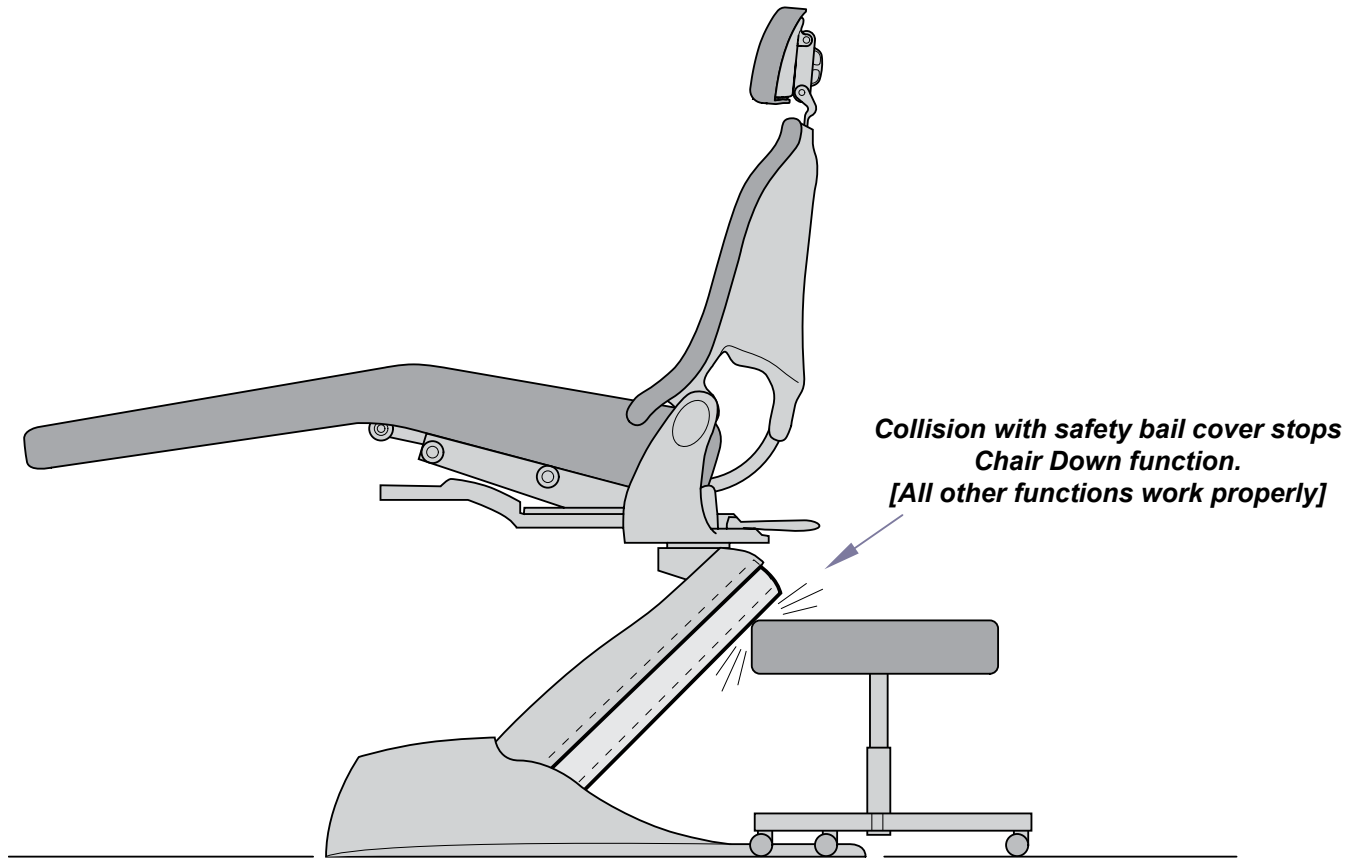
To prevent damage to the chair or other equipment, the Midmark Ultra-series dental chairs are equipped with a Collision Protection System. If the safety bail cover of the chair contacts an object while the chair is moving down, the *Chair Down* function is disabled.

To resume normal operation, remove the obstruction.



### **WARNING**

*Ensure patient is in a seated position while chair is moving.*

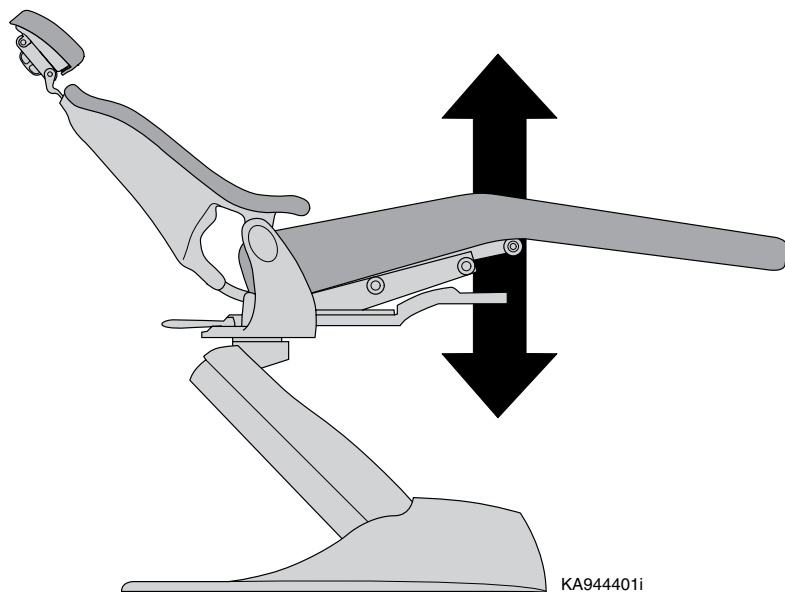
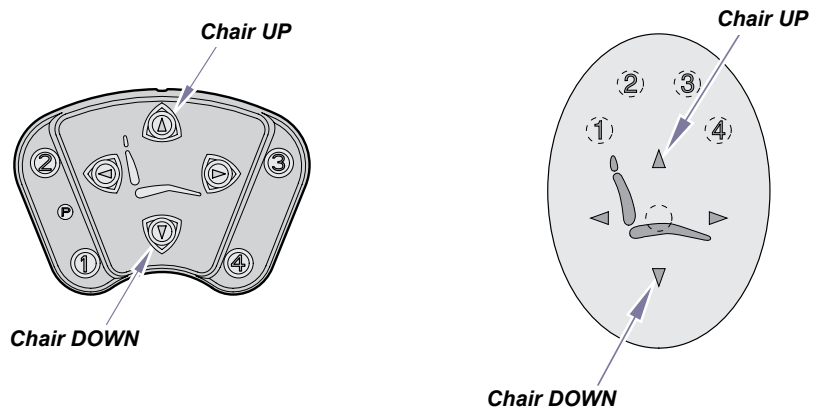


KA944300

# Operation and Adjustments

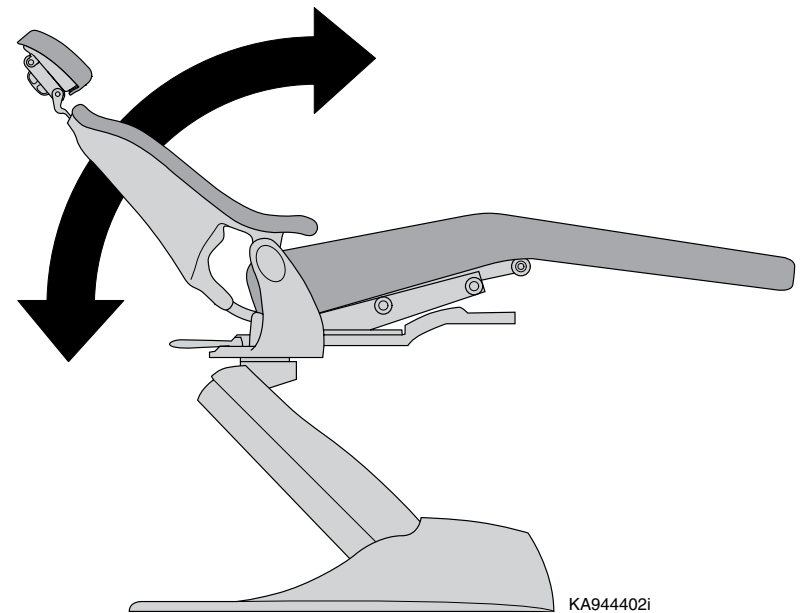
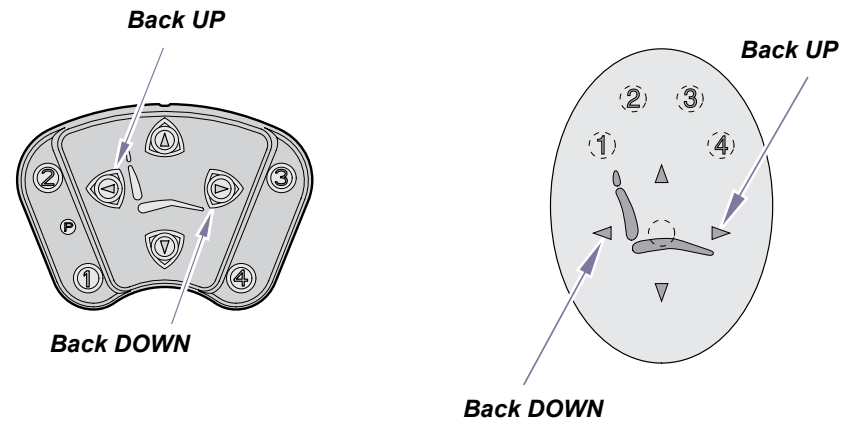
## Chair Up / Down

**To move the chair UP or DOWN...**  
Press and hold the appropriate button on the foot control or touch pad.



## Back Up / Down

**To move the back section UP or DOWN...**  
Press and hold the appropriate button on the foot control or touch pad.



## Programming Chair Positions

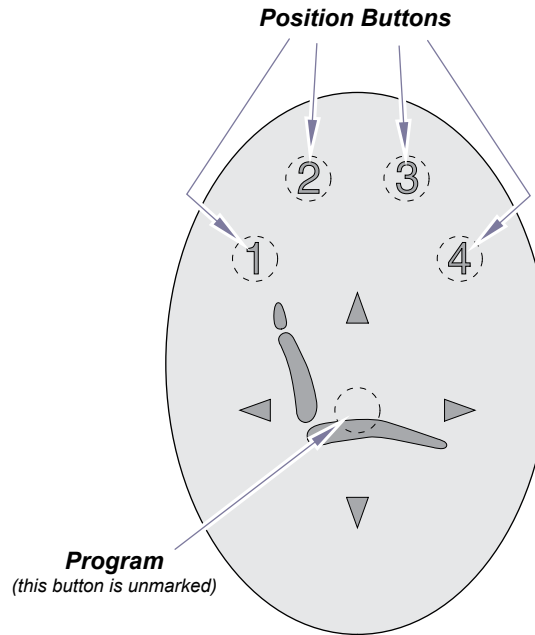
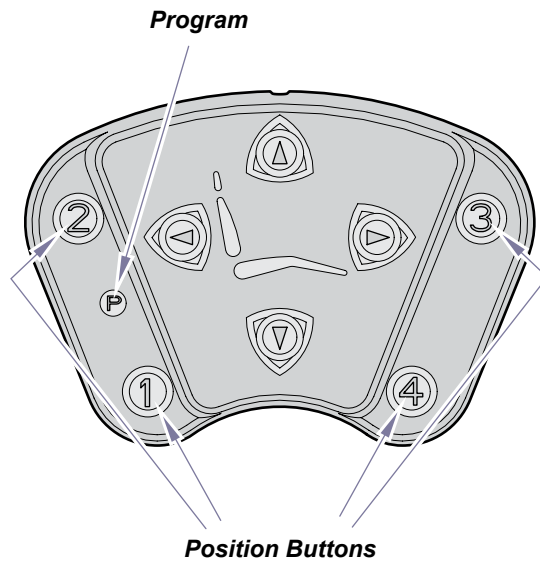
### To program a chair position...

- A) Move the chair to desired position.
- B) Press and hold the **Program** button. (single “beep”)
- C) Press the desired **Position** button (1, 2, 3, or 4). (three “beeps”)

Tip: You must press the **Position** button within three seconds of pressing the **Program** button

### To recall a programmed position...

Press desired **Position** button (1, 2, 3, or 4).



KA944403i

## Rotating the Chair



### Caution

Be sure release handle is in the **LOCKED** position and chair is secure before beginning any procedure.

30°  
(LR/console models: 15°)

30°  
(LR/console models: 15°)

**LOCKED**

**UNLOCKED**

### To rotate the chair...

- A) Move release handle to **UNLOCKED** position.
- B) Move chair to desired position.
- C) Move release handle to **LOCKED** position.

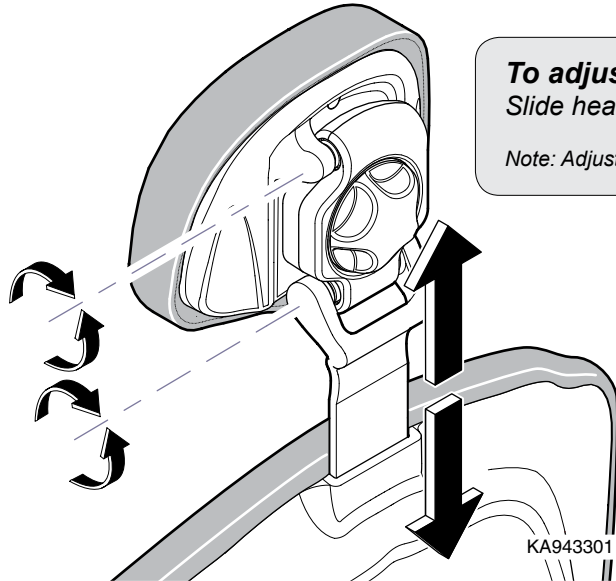
KA9437011



## Adjusting the Headrest

### To adjust the headrest at pivot point(s)...

- A) Loosen clamp knob.
- B) Adjust headrest to desired position.
- C) Tighten clamp knob.



### To adjust the headrest length...

Slide headrest up / down as desired.

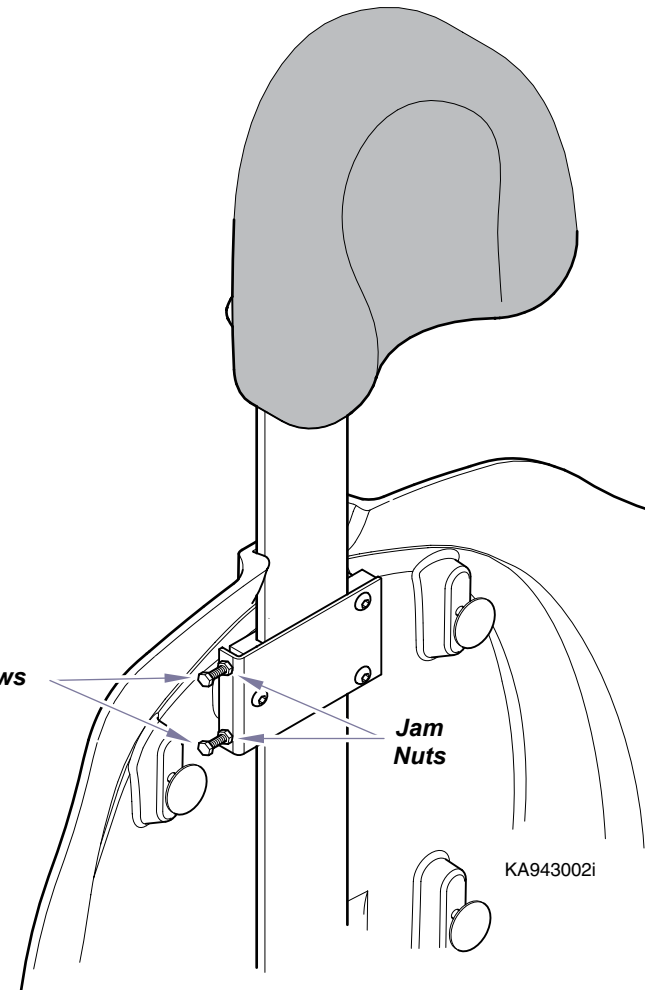
Note: Adjust friction if headrest will not stay in position.

Adjustment Screws

Jam Nuts

### To adjust the headrest friction...

- A) Remove back section upholstery.
- B) Loosen two jam nuts.
- C) Loosen / tighten two adjustment screws as necessary.
- D) Tighten two jam nuts (hold adjustment screws in place).



# Cleaning

## Barriers

Single-use barriers and disposable items significantly reduce the need for chemical cleaners, thus prolonging the life of the equipment. Barrier material must be impervious to moisture / fluids.

### Examples of protective barriers:

- Plastic covers (available from your dealer or equipment manufacturer)
- Clear plastic wrap
- Plastic bags
- Plastic sheets
- Plastic tubing
- Plastic-backed paper
- Materials similar to those listed here

## Cleaning Chair Upholstery

Spot Cleaning      use mild soap and water solution

Difficult stains      use a mild solvent (ex. Fantastic®, 409®)

Allow upholstery to air dry or use a hair dryer on the lowest setting!



### Caution

Midmark assumes no responsibility or liability for any result, expressed or implied. These are suggested practices, based on the best information available at this time this is written.

## Cleaning Procedures

Use cleaners that are appropriate for the situation, such as warm water and mild detergents, or a 10% solution of bleach with water.

### NOTE

Every dental practice is different, and no single cleaner is the best choice for every facility. Listed below are some organizations to assist you in choosing the best cleaners available for your practice.

- **Organization for Safety & Asepsis Procedures:**

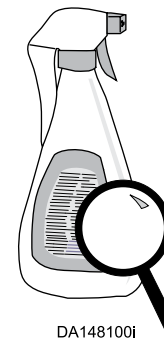
<http://www.osap.org>

- **American Dental Association:**

<http://www.ada.org>

- **Dept. of Health & Human Resources  
Centers for Disease Control & Prevention (CDC):**

<http://www.cdc.gov>



DA148100i

**Read all labels  
carefully!**



DA177400i

# Specifications

## Midmark Ultra-series Dental Chairs

<b>Patient Weight (max):</b>	300 lbs (136 kg)
<b>Electrical Rating:</b>	115 V~ Models: 5A, 60 Hz 230 V~ Models: 3A, 50/60 Hz
<b>Fuses:</b> 115 VAC Models	<b>F1 &amp; F2 (line input):</b> 250V, T6.3AL, Time-delay <b>F3 (transformer):</b> 250V, T0.125AL, Time-delay
230 VAC Models	<b>F1 &amp; F2 (line input):</b> 250V, T3.15AL, Time-delay <b>F3 (transformer):</b> 250V, T0.08AL, Time-delay
<b>Duty Cycle</b> (Motor Run Time):	Intermittent Operation (30 seconds ON / 5 minutes OFF)
<b>Classifications:</b>	Class I, Type B Applied Part Ordinary Equipment Intermittent Operation
<b>Certifications:</b>	ES/IEC/EN 60601-1, CAN/CSA-C22.2 No. 60101-1 (Safety Standards), EN/IEC 60601-1-2 (EMC Standards)

# Ultra Dental Chair Warnings



### WARNING

No modification of this equipment is allowed.



### WARNING

Use of this equipment adjacent to or stacked with other equipment should be avoided because it could result in improper operation. If such use is necessary, this equipment and the other equipment should be observed to verify that they are operating normally.



### WARNING

Use of accessories, transducers and cables other than those specified or provided by the manufacturer of this equipment could result in increased electromagnetic emissions or decreased electromagnetic immunity of this equipment and result in improper operation.



### WARNING

Portable RF communications equipment (including peripherals such as antenna cables and external antennas) should be used no closer than 12 inches (30 cm) to any part of the Dental Chair, including cables specified by the manufacturer. Otherwise, degradation on the performance of this equipment could result.



### WARNING

Equipment is not suitable for use in the presence of a flammable anesthetic mixture with oxygen, air, or nitrous oxide.

**Clarification:** Equipment is suitable for use in the presence of oxygen, air, or nitrous oxide.

## EMC - Manufacturer's Declaration and Guidance

### Guidance and manufacturer's declaration – electromagnetic emissions

The Midmark Ultra Chair is intended for use in the electromagnetic environment specified below. The customer or the user of the Midmark Ultra Chair should assure that it is used in such an environment.

<i>Emissions Test</i>	<i>Compliance</i>	<i>Electromagnetic environment – guidance</i>
RF Emissions CISPR 11	Group 1	The Midmark Ultra Chair uses RF energy only for its internal functions. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF Emissions CISPR 11	Class A	The Midmark Ultra Chair is suitable for use in all establishments, including domestic establishment and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
Harmonic emissions IEC 61000-3-2	Class A	
Voltage fluctuations/flicker emissions IEC 61000-3-3	Complies	

### Recommended separation distances between portable and mobile RF communications equipment and the Midmark Ultra Chair

The Midmark Ultra Chair is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the Midmark Ultra Chair can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communication equipment (transmitters) and the Midmark Ultra Chair as recommended below, according to the maximum output power of the communications equipment.

<i>Radiated maximum output power of transmitter W</i>	<i>Separation distance according to frequency of transmitter m</i>		
	150 kHz to 80 MHz $d = 1.2 \times \sqrt{P}$	80 MHz to 800 MHz $d = 1.2 \times \sqrt{P}$	800 MHz to 2.5 GHz $d = 2.3 \times \sqrt{P}$
0.01	0.12	0.12	0.23
0.1	0.37	0.37	0.74
1	1.17	1.17	2.34
10	3.69	3.69	7.38
100	11.67	11.67	23.34


For transmitters rated at a maximum output power not listed above, the recommended separation distance  $d$  in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where  $P$  is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

**NOTE 1:** At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies

**NOTE 2:** These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

## Guidance and manufacturer's declaration – electromagnetic immunity

The Midmark Ultra Chair is intended for use in the electromagnetic environment specified below. The customer or the user of the Midmark Ultra Chair should assure that it is used in such an environment.

<i>Immunity Test</i>	<i>IEC 60601 Test Level</i>	<i>Compliance Level</i>	<i>Electromagnetic environmental - guidance</i>
			<p>Portable and mobile RF communications equipment should be used no closer to any part of the Midmark Ultra Chair including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter.</p> <p>Recommended separation distance:</p>
Conducted RF IEC 61000-4-6	3V rms 150kHz to 80MHz	3V	$d=1.2 \times \sqrt{P}$
Radiated RF IEC 61000-4-3	3V/m 80MHz to 2.5GHz	3V/m	$d= 1.2 \times \sqrt{P}$ 80 MHz to 800 MHz $d= 2.3 \times \sqrt{P}$ 800 MHz to 2.5 GHz
			<p>Where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation in meters (m).</p> <p>Field strength from fixed RF transmitters, as determined by the electromagnetic site survey, <sup>a</sup> Should be less than the compliance level in each frequency range. <sup>b</sup> Interference may occur in the vicinity of equipment marked with the following symbol:</p> <div style="text-align: center;">  </div>

**NOTE 1:** At 80 MHz and 800 MHz, the higher frequency range applies

**NOTE 2:** These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

<sup>a</sup> Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the Midmark Ultra Chair is used exceeds the applicable RF compliance level above, the Midmark Ultra Chair should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the Midmark Ultra Chair.

<sup>b</sup> Over the frequency range 150kHz to 80MHz, field strengths should be less than 3 V/m.

## Guidance and manufacturer's declaration – electromagnetic immunity

The Midmark Ultra Chair is intended for use in the electromagnetic environment specified below. The customer or the user of the Midmark Ultra Chair should assure that it is used in such an environment.

<i>Immunity Test</i>	<i>IEC 60601 Test Level</i>	<i>Compliance Level</i>	<i>Electromagnetic environmental - guidance</i>
Electrostatic discharge (ESD) IEC 61000-4-2	± 6 kV contact ± 8 kV air	± 6 kV contact ± 8 kV air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%.
Electrical fast Transient / burst IEC 61000-4-4	± 2 kV for power supply lines ± 1 kV for input/output lines	± 2 kV for AC and DC power lines I/O lines not tested, all less than 3 meters	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	±1kV line(s) to line(s) ±2kV lines(s) to earth	±1kV line(s) to line(s) ±2kV lines(s) to earth	Mains power quality should be that of a typical commercial or hospital environment.
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	<5% $U_T$ (>95% dip in $U_T$ for 0.5 cycle)  40% $U_T$ (60% dip in $U_T$ for 5 cycles)  70% $U_T$ (30% dip in $U_T$ for 25 cycles)  <5% $U_T$ (>95% dip in $U_T$ for 5 s)	V Dip >30% of $U_T$ for 500ms  V Dip < 60% of $U_T$ for 100ms  V Dip > 95% of $U_T$ for 5000ms and 10ms	Mains power quality should be that of a typical commercial or hospital environment. If the user of the Midmark Ultra Chair requires continued operation during power mains interruptions, it is recommended that the Midmark Ultra Chair be powered from an uninterruptible power supply or a battery.
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	3 A/m	3 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.

**NOTE:**  $U_T$  is the a.c. mains voltage prior to application of the test level.

# Warranty Information

## Midmark Limited Warranty - Dental Products

### SCOPE OF WARRANTY

Midmark Corporation ("Midmark") warrants to the original retail purchaser that it will at Midmark's option repair or replace components of the dental products manufactured by Midmark (except for components not warranted under "Exclusions") that are defective in material or workmanship under normal use and service. Midmark's obligation under this limited warranty is limited to the repair or replacement of the applicable components. This limited warranty shall only apply to defects that are reported to Midmark within the applicable warranty period and which, upon examination by Midmark, prove to be defective. This warranty extends only to the first retail purchaser of a product and is not transferable or assignable. Replacement components or products may be used and/or refurbished components or products, provided they are of like quality and specifications as new components or products.

### APPLICABLE WARRANTY PERIOD

The applicable warranty period, measured from the date of delivery to the original user, shall be as follows: Effective March 1, 2018 these applicable warranty periods are measured from the date of invoice to the original user, shall be as follows:

#### 1. OPERATORY PRODUCTS

- a. Five (5) years for all products (except for the items in (b) through (e)).
- b. Two (2) years for upholstery (chairs and stools).
- c. "KINK-VALVE" module carries a ten (10) year warranty.
- d. The original light bulb on a new light carries a one (1) year warranty.
- e. Accessories not manufactured by Midmark are excluded including but not limited to Bien Air handpiece systems, Dentsply Cavitron scaler, Satelec scaler and curing light, and Sopro cameras.

#### 2. ORAL SURGERY PRODUCTS are warranted for a period of one (1) year.

#### 3. STERILIZER PRODUCTS are warranted for a period of one (1) year.

#### 4. ULTRASONIC CLEANER PRODUCTS are warranted for a period of two (2) years.

#### 5. AIR AND VACUUM PRODUCTS

- a. PowerAir® oil-less compressors – Five (5) years or 3,500 hours of use, whichever occurs first.
- b. PowerVac® and PowerVac® G dry vacuums – Five (5) years or 10,000 hours of use, whichever occurs first (except that the vacuum pump warranty term is ten (10) years or 20,000 hours of use, whichever occurs first).
- c. Classic Series® wet-ring vacuums – Five (5) years or 10,000 hours of use, whichever occurs first.
- d. PowerMax surgical suction – Two (2) years.
- e. Hg5 Series Amalgam Separator - One (1) year. (f) Midmark manufactured accessories - One (1) year.

#### 6. SYNTHESIS™ DENTAL CASEWORK AND ARTIZAN® EXPRESSIONS PRODUCT

- a. Five (5) years for all products and components including door and drawer fronts, casters and slides, except for the items in (b), (c) and (d).
- b. Three (3) years for electrical components such as task lights/LED lights, cords, controls and accessories.
- c. Two (2) years for sliding track monitor mount and components and upholstery. (d) One (1) year for countertops and resin, including accessories.

7. IMAGING PRODUCTS are warranted for a period of two (2) years except for the ClearVision CR reader which is warranted for a period of one (1) year.

8. MIDMARK Replacement Parts and Accessories carry a ninety (90) day warranty

### EXCLUSIONS

This warranty does not cover and Midmark shall not be liable for the following:

1. defects, damage or other conditions caused, in whole or in part, by misuse, abuse, negligence, alteration, accident, freight damage, negligent storage, tampering or failure to seek and obtain repair or replacement in a timely manner;
2. products which are not installed, used, and properly cleaned and maintained as required or recommended in the Midmark "Installation" and/or "Installation/Operation Manual" for the applicable product, including the specified structural and operational environment conditions and electrical power requirements;
3. products considered to be of a consumable or sterile nature;
4. accessories or parts not manufactured by Midmark;
5. charges by anyone for adjustments, repairs, replacement parts, installation or other work performed upon or in connection with such products which are not expressly authorized in writing in advance by Midmark
6. costs and expenses of routine maintenance and cleaning;
7. representations and warranties made by any person or entity other than Midmark;
8. matching of color, grain or texture except to commercially acceptable standards;
9. changes in color caused by natural or artificial light;
10. custom manufactured products;
11. alterations or modifications to the product by any person or entity other than Midmark; and
12. Products that would otherwise be covered under Sections 1 and 2 of this limited warranty, but are acquired: (i) from a person or entity that is not Midmark or one of its authorized dealers; or (ii) from a Midmark dealer that is not authorized to sell the product at issue in the geographic territory where the purchaser is located, or is not authorized to sell the product at issue within the medical, animal health or dental market, as the case may be, in which purchaser intends to use the product.

### EXCLUSIVE REMEDY; CONSEQUENTIAL DAMAGES DISCLAIMER

MIDMARK'S ONLY OBLIGATION UNDER THIS LIMITED WARRANTY IS THE REPAIR OR REPLACEMENT OF DEFECTIVE PARTS. MIDMARK SHALL NOT BE LIABLE FOR AND HEREBY DISCLAIMS ANY DIRECT, SPECIAL, INDIRECT, INCIDENTAL, EXEMPLARY OR CONSEQUENTIAL DAMAGES OR DELAYS, INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFITS OR INCOME, LOSS OF USE, DOWNTIME, COVER AND EMPLOYEE OR INDEPENDENT CONTRACTOR WAGES, PAYMENTS AND BENEFITS.

### WARRANTY DISCLAIMER

THIS LIMITED WARRANTY IS MIDMARK'S ONLY WARRANTY AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED. MIDMARK MAKES NO IMPLIED WARRANTIES OF ANY KIND INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THIS WARRANTY IS LIMITED TO THE REPAIR OR REPLACEMENT OF DEFECTIVE PARTS.

### STATUE OF LIMITATIONS

No action may be brought against Midmark for breach of this limited warranty, or implied warranty, if any, or for any other claim arising out of or relating to the products, more than ninety (90) days following expiration of the limited warranty period.

**Midmark Corporation**

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Versailles, OH 45380  
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1-937-526-3662  
[www.midmark.com](http://www.midmark.com)

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