Endurance™

Tilt Chair and Stand

User's Guide



AMETEK®
ULTRA PRECISION TECHNOLOGIES

Reichert®
TECHNOLOGIES

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Caution: Federal law restricts this device to sale by or on the order of a licensed physician. Rx only.

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Warnings and Cautions

Reichert Technologies (Reichert) is not responsible for the safety and reliability of this instrument when:

- Assembly, disassembly, repair, or modification is made by unauthorized dealers or persons
- Instrument is not used in accordance with this User's Guide.

WARNING: AN INSTRUCTION THAT DRAWS ATTENTION TO RISK OF INJURY OR DEATH



WARNING: UNITED STATES FEDERAL LAW AND EUROPEAN REGULATIONS REQUIRE THAT THIS DEVICE BE PURCHASED ONLY BY A PHYSICIAN OR A PERSON ACTING ON BEHALF OF A PHYSICIAN.

WARNING: THIS INSTRUMENT SHOULD BE USED IN STRICT ACCORDANCE WITH THE INSTRUCTIONS OUTLINED IN THIS USER'S GUIDE. THE SAFETY OF THE OPERATOR AND THE PERFORMANCE OF THE INSTRUMENT CANNOT BE GUARANTEED IF USED IN A MANNER NOT SPECIFIED BY REICHERT TECHNOLOGIES.

WARNING: DO NOT REPAIR OR SERVICE THIS INSTRUMENT WITHOUT AUTHORIZATION FROM THE MANUFACTURER. ANY REPAIR OR SERVICE TO THIS INSTRUMENT MUST BE PERFORMED BY EXPERIENCED PERSONNEL OR DEALERS WHO ARE TRAINED BY REICHERT OR SERIOUS INJURY TO THE OPERATOR OR PATIENT MAY OCCUR.

WARNING: MODIFICATIONS TO THIS INSTRUMENT ARE NOT ALLOWED. ANY MODIFICATION TO THIS UNIT MUST BE AUTHORIZED BY REICHERT OR SERIOUS INJURY TO THE OPERATOR OR PATIENT MAY OCCUR.

WARNING: IF THIS INSTRUMENT IS MODIFIED, APPROPRIATE INSPECTION AND TESTING MUST BE CONDUCTED TO ENSURE CONTINUED SAFE USE OF THIS INSTRUMENT.

WARNING: TO AVOID RISK OF ELECTRIC SHOCK, THIS EQUIPMENT MUST ONLY BE CONNECTED TO A SUPPLY MAINS WITH PROTECTIVE EARTH OR DAMAGE TO THIS INSTRUMENT AND/OR INJURY TO THE OPERATOR OR PATIENT MAY OCCUR.

WARNING: ENSURE THAT THE VOLTAGE APPLIED TO THE UNIT IS THE SAME AS THE VOLTAGE THAT IS INDICATED ON THE DATA PLATE OR DAMAGE TO THE UNIT MAY OCCUR.

WARNING: THIS INSTRUMENT MUST BE PLUGGED INTO AN OUTLET WITH AN EARTH GROUND. DO NOT REMOVE OR DEFEAT THE EARTH GROUND CONNECTION ON POWER INPUT CONNECTOR OR THE UNIT'S POWER CORD OF THIS INSTRUMENT OR DAMAGE TO IT AND/OR INJURY TO THE OPERATOR OR PATIENT MAY OCCUR.

WARNING: THE EQUIPMENT OR SYSTEM SHOULD NOT BE USED ADJACENT TO OR STACKED WITH OTHER EQUIPMENT AND THAT IF ADJACENT OR STACKED USE IS NECESSARY, THE EQUIPMENT OR SYSTEM SHOULD BE OBSERVED TO VERIFY NORMAL OPERATION IN THE CONFIGURATION IN WHICH IT WILL BE USED.

WARNING: THIS INSTRUMENT IS NOT SUITABLE FOR USE IN THE PRESENCE OF FLAMMABLE ANESTHETIC MIXTURES, SUCH AS OXYGEN OR NITROUS OXIDE.

WARNING: CARE MUST BE TAKEN TO ARRANGE THE CABLES FOR THE ACCESSORIES SUCH THAT THEY DO NOT PRESENT A TRIPPING HAZARD TO THE EXAMINER OR A DANGER TO THE PATIENT.

WARNING: THE USE OF ACCESSORIES OR CABLES OTHER THAN THOSE SPECIFIED, WITH THE EXCEPTION OF THOSE SOLD BY THE MANUFACTURER AS REPLACEMENT PARTS FOR INTERNAL COMPONENTS, MAY RESULT IN INCREASED EMISSIONS OR DECREASED IMMUNITY OF THE EQUIPMENT OR SYSTEM.

WARNING: DISCONNECT POWER TO THE UNIT BEFORE OPENING ANY OF THE COVERS ON THE CHAIR AND STAND.

WARNING: TO REDUCE THE RISK OF STATIC SHOCK, DO NOT TOUCH THE OVERHEAD LAMP AND PATIENT AT THE SAME TIME.

Warnings and Cautions (continued)

CAUTION: AN INSTRUCTION THAT DRAWS ATTENTION TO THE RISK OF DAMAGE TO THE PRODUCT.



CAUTION: THE INTERNAL CIRCUITRY OF THE INSTRUMENT CONTAINS ELECTROSTATIC DISCHARGE SENSITIVE DEVICES (ESDS) THAT MAY BE SENSITIVE TO STATIC CHARGES PRODUCED BY THE HUMAN BODY. DO NOT REMOVE THE COVERS WITHOUT TAKING PROPER ESDS PRECAUTIONS.

CAUTION: DO NOT USE SOLVENTS OR STRONG CLEANING SOLUTIONS ON ANY PART OF THIS INSTRUMENT AS DAMAGE TO THE UNIT MAY OCCUR. SEE MAINTENANCE SECTION FOR DETAILED CLEANING INSTRUCTION.

CAUTION: MEDICAL ELECTRONIC EQUIPMENT NEEDS SPECIAL PRECAUTIONS REGARDING EMC AND NEEDS TO BE INSTALLED AND PUT INTO SERVICE ACCORDING TO THE EMC INFORMATION PROVIDED IN THE ACCOMPANYING DOCUMENTS.

CAUTION: PORTABLE AND MOBILE RF COMMUNICATIONS EQUIPMENT CAN AFFECT MEDICAL ELECTRICAL EQUIPMENT.

CAUTION: THIS INSTRUMENT IS NOT TO BE USED NEAR HIGH-FREQUENCY EMITTING SURGICAL EQUIPMENT.

CAUTION: THIS INSTRUMENT IS NOT INTENDED TO BE CONNECTED TO EQUIPMENT OUTSIDE THE CONTROL OF REICHERT TECHNOLOGIES OR MUST BE TESTED TO AN APPLICABLE IEC OR ISO STANDARDS.

CAUTION: DO NOT RAISE AND LOWER THE CHAIR EXCESSIVELY. CONSTANT RAISING AND LOWERING OF THE CHAIR MAY CAUSE EXCESSIVE WEAR TO THE UNIT.

Symbol Information

The following symbols appear on the instrument:



Caution symbol indicating important information that is included in this User's Guide



Consult Instructions for Use symbol indicating important operating and maintenance instructions that are included in this User's Guide



Consult Instructions for Use symbol indicating important operating and maintenance instructions that are included in this User's Guide



Type B Product Classification
Class 1 Equipment, Continuous Operation



ON/OFF



Alternating Current Power



Hot Surface Hazard Warning



Protective Earth



Date of Manufacture



Manufacturer

REF Catalog Number

SN Serial Number



Waste of Electrical and Electronic Equipment



Keep Dry - Package shall be kept away from rain



Fragile Contents in Shipping Container - handle with care



Authorized Representative in European Community



This Way Up - Indicates correct upright position of package

Introduction

Congratulations on your purchase of the Reichert Technologies® (hereafter referred to as Reichert®) Endurance™ Tilt Chair and Stand.

The Endurance chair and stand is office equipment designed for performing ophthalmic examinations, and is intended to be used in conjunction with other ophthalmic equipment such as refractors and slit lamps. This all in one system can charge hand instruments, adjust to different heights, and keeps refractors and slit lamps within easy reach, making examinations streamlined and convenient.

This User's Guide is designed as a training and reference manual for operation, maintenance, and troubleshooting. We recommend that you read it carefully prior to use and follow the instructions in the guide to ensure optimum performance of your new instrument. Properly trained eyecare professionals such as ophthalmologists, optometrists, opticians and eye care technicians should operate this instrument.

Please retain this guide for future use and to share with other users. Additional copies can be obtained from your authorized Reichert Technologies dealer or contact our customer service department at:

Tel: 716-686-4500
Fax: 716-686-4555
E-mail: reichert.information@ametek.com

Indications for Use

The Endurance Tilt Chair and Stand is used to enable a patient to sit or recline during ophthalmological examination or treatment.

Contraindications

None.

Unpacking

Unpacking the Endurance Tilt Chair





1. Remove the plastic banding from the top of the box.



2. Remove the six screws (three each on opposite sides of the box) that secure the carton to the pallet.

Unpacking the Endurance Tilt Chair (continued)



3. Lift the carton off the chair.



4. Using a 14 mm wrench, remove the large screws on the board at the front of the chair.



5. Remove the remaining packing materials from the chair. Retain the box with additional parts for set-up. Carefully slide the chair off the pallet.

Unpacking (continued)

Unpacking the Endurance Stand





1. Remove the plastic banding from the top of the box.



2. Remove the six screws (three each on opposite sides of the box) that secure the carton to the pallet.

Unpacking the Endurance Stand (continued)



3. Lift the carton off the stand.



4. Cut the wire ties that secure the pole for the stand inside the box and remove it.



5. The plastic covering on the stand is secured with staples. Carefully pull away the plastic wrap.

Unpacking (continued)

Unpacking the Endurance Stand (continued)



6. The stand is packed with the lower arm mounted and two boxes of parts.



7. Remove the boards that secure the base of the stand to the pallet.



8. Using a 14 mm wrench remove the large screws that secure the board at the front of the pallet.

Unpacking the Endurance Stand (continued)



9. Remove the plastic wrap from the stand and boxes.



10. Remove the boxes from the stand and carefully slide the stand off the pallet. Retain the boxes with additional parts for set-up.

Features and Functions

Contents

The items listed below should be included in the Endurance Tilt Chair and Stand packaging containers. If any of these items are missing, please contact Reichert Customer Service.

- Endurance Tilt Chair (P/N 15250)
- Foot Switch Assembly (P/N 15250-002-001)
- Stand Base With Control Panel and Charging Wells (P/N 15253)
- Lower Instrument Arm (P/N 15257)
- Overhead Lamp Assembly (P/N 15253-002-021)
- Overhead Lamp Bulb (P/N 15253-002-022)
- Phoroptor® Arm (P/N 15256)
- Lamp Cable (P/N 15253-002-013)
- Spare Chair Fuses (P/N 15250-002-018)
- Spare Stand Fuses (P/N 15253-002-016)
- User's Guide (P/N 15250-101)



Features and Functions (continued)

Contents of Stand Accessory Boxes





Box 1

A. Overhead Lamp Assembly (P/N 15253-002-021)
B. Power Cord for Stand (P/N 12523-002-020)
C. Lamp Cord (P/N 15253-002-013)
D. Slit Lamp Arm Wrench (P/N 15257-002-006)
E. Collar for Base of Pole (P/N 12523-002-011)
F. Armlock Screw Handle (P/N 15257-002-004)
G. Phoroptor Safety Collar (P/N 15253-002-026)
H. Lamp Collar (P/N 15253-002-010)
I. 5/32 Phoroptor Hex Key (P/N 15256-002-006)
J. Spare Stand Fuse (P/N 15253-002-016)
K. 3/4 Needle Thrust Bearing (P/N 15257-002-005)

Box 2

L. Phoroptor Bearing Collar (P/N 15256-002-001)
M. Phoroptor Arm Assembly (P/N 15256)
N. Phoroptor Mounting Pole (P/N 15256-002-002)

Contents of Chair Accessory Box



Box 1

O. Foot Switch (P/N 15250-002-001)
P. Spare Chair Fuse (P/N 15250-002-018)
Q. Power Cord (P/N 15253-002-020)
R. Chair & Stand Connector (P/N 15250-002-002)

Available Accessories (Not Pictured)

Non-counterbalanced Keratometer Arm (P/N 15255)
Counterbalanced Keratometer Arm (P/N 15254)
Projector Arm Mount (P/N 15258)
Touch up paint kit (P/N 15259)

Features and Functions (continued)

Control Panel



Chart Projector ON/OFF Switch & LED

Lower Arm (Slit Lamp) ON/OFF Switch & LED

Hand Instrument Charging Wells

Charge Indicators

ON/OFF Button for Power to Membrane Panel

Voltage Selector Switches & Scale:

Controls voltage to corded instrument binding posts on rear panel

Accessory ON/OFF switch

Overhead Lamp ON/OFF Switch

Overhead Lamp Brightness Control Switches

Chair UP/DOWN Switches

Auto Down Switch



Hanger for Bios

Chart Projector Outlet

Accessory Outlet



Auxiliary Outlets

Corded Instrument Binding Posts

Voltage Limit Switch

Main Power Fuse

ON/OFF Switch

Power Cord Inlet

Chair Control 12 V 1ma

Chair Control 24 VAC/VOC Max 5A Max

The two outlets to the right are always powered on. Power to the two outlets to the left is controlled by membrane panel switches.

Installation And Assembly

Introduction

WARNING: TO REDUCE THE RISK OF ELECTRICAL SHOCK, DO NOT CONNECT THE UNIT TO A POWER SOURCE UNTIL THE ASSEMBLY PROCESS IS COMPLETED.

WARNING: WHEN INSTALLING THE ARMS ONTO THE STAND, BE AWARE OF THE POSITION OF THE ARMS. IF THE ARMS ARE ALL MOVED IN ONE DIRECTION, THE WEIGHT OF THE STAND WILL BE SHIFTED, MAKING IT EASIER TO TIP OVER.

WARNING: CARE MUST BE TAKEN TO ARRANGE THE CABLES FOR THE ACCESSORIES SUCH THAT THEY DO NOT PRESENT A TRIPPING HAZARD TO THE EXAMINER OR A DANGER TO THE PATIENT.

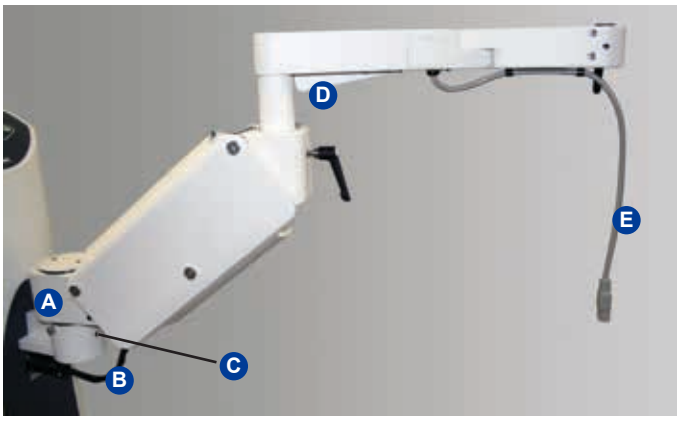
WARNING: POSITION THIS INSTRUMENT SO THAT IT IS NOT DIFFICULT TO OPERATE THE DISCONNECTION DEVICE (PLUG.)

Before you begin the assembly process:

1. Be sure the floor is level.
2. Be sure your stand is correctly positioned in the desired location.

Lower Instrument Arm

1. Connect the lower instrument arm power cord to the stand.



A. Drag set screw (5/32 allen key)
B. Lower arm power cord
C. The lower instrument arm is pre-installed on the stand. The arm can be removed and replaced with one screw located at the front of the stand.
D. Lock release lever
E. Power cord to slit lamp

2. Install the front brake handle.



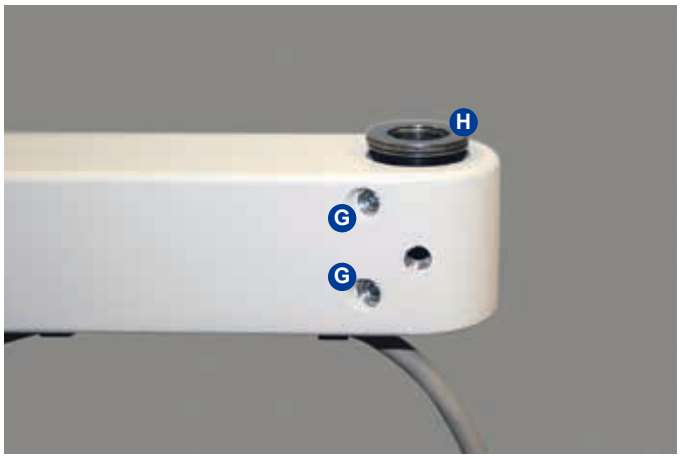
F. Front brake handle

-continued-

Installation And Assembly (continued)

Lower Instrument Arm (continued)

3. Place the needle bearing assembly on top of the arm port before installing the slit lamp.
4. Using the 5/32 allen key, adjust the instrument leveling set screws as needed to level the table when installing the slit lamp. There are six screws located in the front and on each side of the slit lamp port.



G. Slit lamp leveling set screws
H. Ø ¾ needle bearing assembly

Counterbalancing of Lower Instrument Arm

WARNING: THE LOWER INSTRUMENT ARM CAN RISE ABRUPTLY IF THE LOCK RELEASE LEVER IS PRESSED WHEN THE ARM IS IN THE DOWN POSITION AND IS NOT BALANCED. DO NOT LEAVE THE ARM IN THE DOWN POSITION WITHOUT AN INSTRUMENT INSTALLED ON THE ARM OR ACCIDENTAL MOVEMENT OF THE ARM MAY OCCUR, POTENTIALLY CAUSING INJURY.

The counterbalance mechanism on the lower instrument arm is a compression spring.

The counterbalance is factory set to 30 lbs. Use the hex wrench provided to adjust the tension on the compression spring.

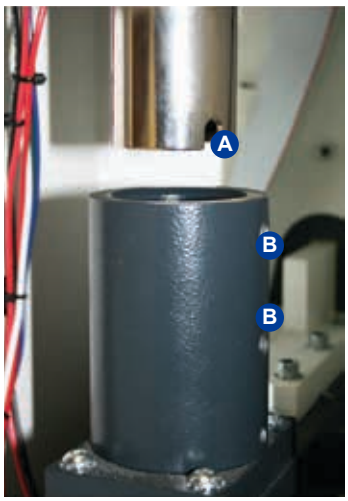


Installation And Assembly (continued)

Installing the Mounting Pole

1. Open the back of the lower section of the stand by removing the six screws that hold the panel in place. The back panel is notched at the bottom so slide it up and out of position to remove it.





A. Rod Notch
B. Pins
C. Rod collar and key



2. Insert the pole into the opening at the top of the stand and align the notch at the bottom of the pole with the pins at the base of the pole support.
3. Slide the white rod collar down to the base of the pole and tighten the allen key to hold it in place.

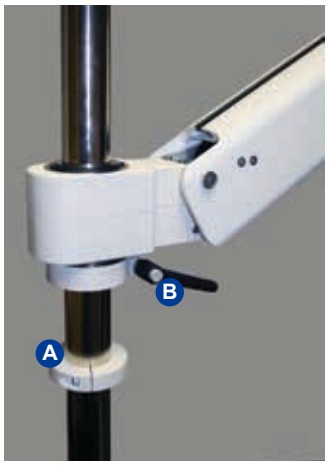
Optional Third Arm Installation

1. Slide the safety collar down the pole to the desired position for the Third Arm and tighten the allen key to secure it in place.
2. Slide the Third Arm down over the vertical post to the desired location and tighten the locking ring allen screw.
3. Remove the cover over the auxiliary power panel and plug the Third Arm power cord into the outlet labeled ACC.

Installation And Assembly (continued)

Phoroptor Arm Assembly

1. Slide the safety collar for the Phoroptor Arm down the mounting pole into the desired position and tighten the allen key with the 5/32 wrench.
2. Slide the Phoroptor Arm (with the lock ring to the bottom) down the vertical post to the desired position and tighten the lock handle to secure it in place.
3. Slide the white Phoroptor bearing collar down the pole until it is in place over the Phoroptor arm mount.
4. Slide the Phoroptor mounting bar into the Phoroptor Arm and tighten in place.
5. Any exposed wires from auxiliary instruments can be concealed in the Phoroptor arm by pulling up the wire cover strip, feeding the wire into the slot in the arm, and replacing the cover strip.







A. Phoroptor arm safety collar
B. Phoroptor arm lock handle
C. Phoroptor mounting bar
D. Wire cover strip

Adjustments

Note: For all the following adjustments, it only takes a small turn to make a noticeable adjustment. It is recommended to adjust the screw a quarter turn at a time. Turning the screw clockwise will tighten the screw and increase the tension. Turning the screw counter clockwise will loosen the screw and decrease the tension.

CAUTION: OVERTIGHTENING THE SCREWS WILL AFFECT THE LONG TERM PERFORMANCE OF THE LOCKS. IT IS BEST TO ADJUST THE LOCKS ENOUGH TO ACHIEVE THE MINIMUM NEEDED TIGHTNESS, AND NOT OVERTIGHTEN THE LOCKS. OVERTIGHTENING THE LOCKS MAY CAUSE PREMATURE LOOSENING AND/OR FAILURE OF THE LOCKS.

Phoroptor Arm Assembly (continued)

Adjustments (continued)

Counterbalance Adjustment

WARNING: THE PHOROPTOR ARM CAN RISE ABRUPTLY IF THE LOCKING HANDLE IS RELEASED, WHEN THE ARM HAS BEEN LEFT IN A DOWNWARD POSITION, AND IT HAS NOT BEEN BALANCED. DO NOT LOCK THE ARM IN THE LOWER POSITION WITHOUT A REFRACTOR INSTALLED OR ACCIDENTAL MOVEMENT OF THE ARM MAY OCCUR, POTENTIALLY CAUSING INJURY.

1. Using a flathead screwdriver, adjust the tension of the Counterbalance Spring Screw by either loosening or tightening the screw, until the desired tension is achieved.

Note: The instrument should rest at the middle of the stroke when the arm is unlocked.

Note: The default spring setting is calibrated for the weight of the Reichert Phoroptor®.

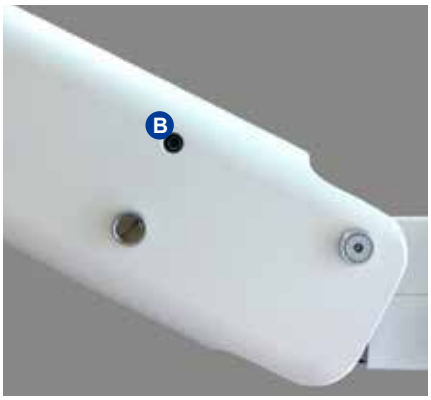
Vertical Lock Adjustment

1. Relax the Rear and Front Rotation Lock Screws and Drag Screws so that only the Vertical Lock is engaged during this adjustment.

Note: The Screw will only be visible with the Arm in a certain vertical position.

2. Using a 5/32 hex key, adjust the Vertical Adjustment Screw until the desired tension is achieved.
3. Cycle the release handle 5-10 times to ensure that the setting remains constant.
4. Readjust the Vertical Adjustment Screw if needed.





A. Counterbalance Spring Set Screw
B. Vertical Adjustment Screw

Installation And Assembly (continued)

Phoroptor Arm Assembly (continued)

Adjustments (continued)

Rear Rotation Lock Adjustment

1. Using a 5/32 hex key, adjust the Rear Rotation Lock Screw until the desired tension is achieved. Cycle the release handle 5-10 times to ensure that the setting remains constant.
2. Readjust the Rear Rotation Lock Screw if needed.

Note: The Rear Drag Screw adjusts the drag while the arm is being positioned. This screw should be backed off while adjusting the lock.

Front Rotation Lock Adjustment

1. Using a 5/32 hex key, adjust the Front Rotation Lock Screw until the desired tension is achieved. Cycle the release handle 5-10 times to ensure that the setting remains constant.
2. Readjust the Front Rotation Lock Screw if needed.

Note: The Front Drag Screw adjusts the drag while the arm is being positioned. This screw should be backed off while adjusting the lock.

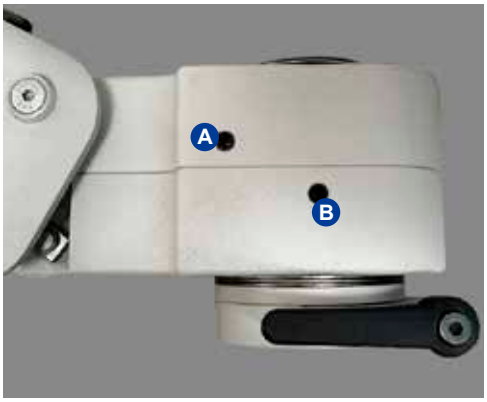
Final Check

1. Verify that all the locks are functioning by engaging the 3 locks, securing the arm into place.

Note: The Phoroptor Arm should not move on its own after all the locks are engaged. The arm should stay firmly in place.

Note: Any adjustments necessary at this point should be minimal.

2. Readjust any of the screws that need adjusting by repeating the above instructions for the specific lock(s) that require adjustment.
3. Once the locks are set to the correct tension, adjust the Rear and Front Drag Screws until the desired amount of drag is achieved.





A. Rear Rotation Lock Screw
B. Rear Drag Set Screw
C. Front Rotation Lock Screw
D. Front Drag Set Screw

Installation And Assembly (continued)

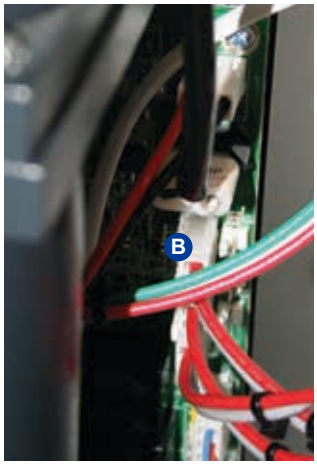
Overhead Lamp Assembly

1. Feed the lamp cord through the mounting pole. Fit the rod cap with lamp wire extended into the top of the pole.



2. Connect the lamp cord to the keyed plug in the stand





A. Keyed lamp plug
B. Lamp cord plugged in

3. Connect the lamp assembly to the lamp plug at the top of the pole.



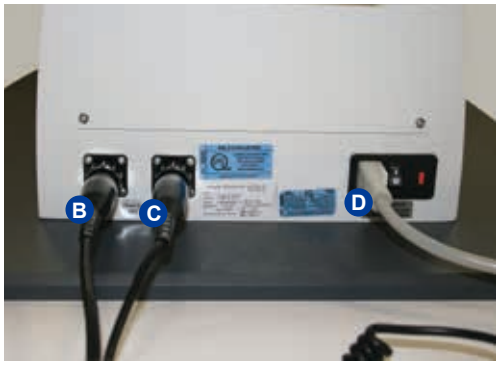


Installation And Assembly (continued)

Chair Set-Up

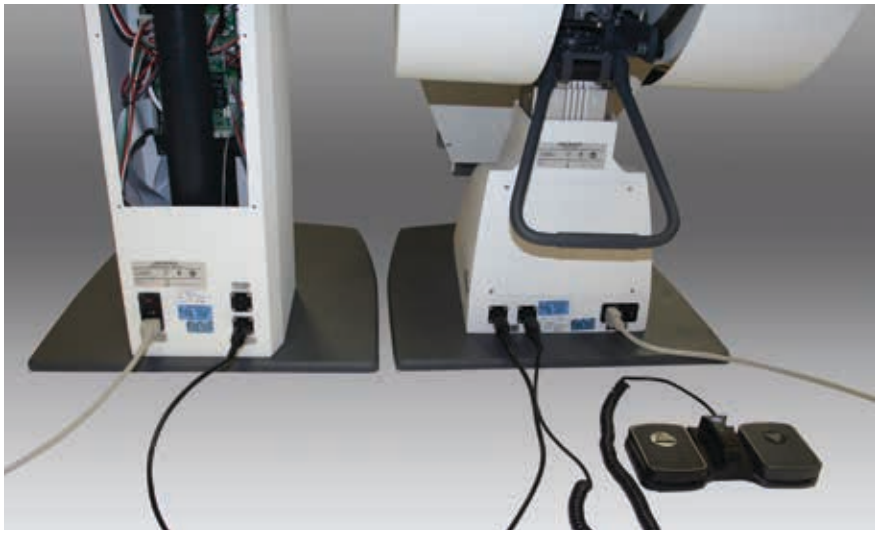
1. Connect the power cords to the stand and the chair and plug them into outlets.





A. Stand Power Cord
B. Chair Power/Control Cord
C. Foot Switch
D. Chair Power Cord

2. Connect the Chair Power/Control Cord to the stand and the chair.
3. Connector the Foot Switch to the connector on the chair base.

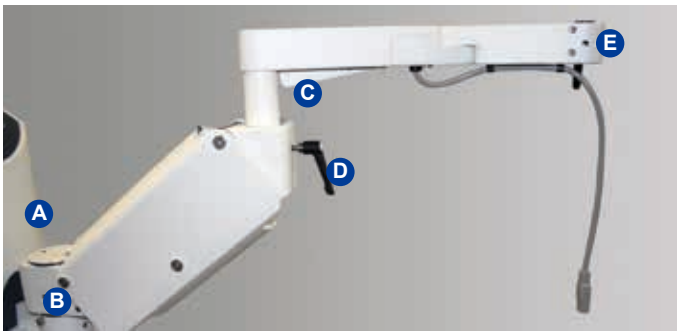


Operation

Lower Instrument Arm

There are three locking handles on the lower instrument arm: one that controls the position of the lower section of the arm, one that controls movement of the upper section of the arm, and one that tightens and loosens the slit lamp table. Turn the locking handles to the right to tighten and hold the arm in position, and turn them counterclockwise to loosen the handle and move the arm into a different position.

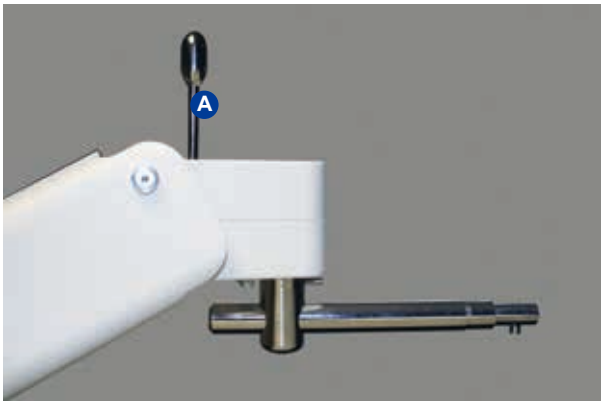
Press the release latch in the upper section of the arm to raise and lower the entire arm.



A. Locking handle of the lower section of the arm (not shown)
B. The chair moves up and down from this pivot point.
C. Lower arm release latch
D. Locking handle for the upper section of the arm.
E. Slit Lamp table locking handle

Phoroptor Arm

The position of the Phoroptor arm can be raised or lowered by releasing the locking handle. Push the handle away from yourself to release it. Pull the handle toward yourself to lock the Phoroptor arm in place.



A. Phoroptor arm locking handle

Operation (continued)

Control Panel

The Control Panel (See page 15 for Control Panel diagram) contains all of the electrical controls except:

1. Main Power ON/OFF Switch
2. Secondary Chair UP/DOWN Switch
3. Lower Arm Vertical Motion Switch



Main ON/OFF Switch

Located on the bottom left corner of the back of the stand the Main ON/OFF Switch controls the electric power for the entire stand. This switch is a rocker type. Press the side with the straight line “I” to turn the stand ON. You will hear a beep that indicates the stand is energized. Press the side with the circle “O” to turn the stand OFF.

Chair UP/DOWN Switch

Press and hold the UP Arrow to raise the chair. Press and hold the DOWN Arrow to lower the chair. Press the AUTO button for Auto-Down mode.

Note: The Chair can be operated from the Foot-Switch or Lower Arm Switch as well.

Lower Instrument Arm ON/OFF Switch

The S.L. Switch is a push type on-off switch to control the electricity to the outlet on the Lower Instrument Arm. If the switch is off, depressing it once will turn it on and apply power to the outlet on the Lower Instrument Arm. If the switch is on, depressing it once will turn the switch off. An LED just to the left of the switch illuminates to indicate the switch is on.

Chart Projector ON/OFF Switch

The C.P. Switch is a push type on-off button. It controls the electricity to the C.P. Outlet on the lower left of the Auxiliary Power Panel. If the switch is OFF, pressing the switch once will turn it on. If the switch is on, pressing the switch once will turn it off. An LED just to the left of the switch lights up when the switch is ON.

Accessory ON/OFF Switch

The ACC Switch is a push type on-off switch. It controls the electricity to the ACC Outlet on the left of the Power Input Panel when facing the back of the stand. If the switch is OFF, pressing the switch once will turn it ON. If the switch is ON, pressing the switch once will turn it OFF. An LED just to the left of the switch lights up when the switch is ON.

Charging Wells

CAUTION: DO NOT ATTEMPT TO STORE HANDLES THAT USE ONLY ALKALINE BATTERIES IN THE CHARGING WELLS OR DAMAGE TO THE CHARGING WELLS OR HAND-HELD INSTRUMENTS MAY OCCUR.

The Charging Wells are designed for hand-held instruments with a rechargeable battery. The Charging Wells will charge instrument batteries as long as the instrument handle is fully inserted in the well. There is a Charge Indicator Light beneath each well that indicates an instrument is properly seated and charging.

Note: Your hand-held instruments must be turned OFF prior to placing them in the Charging Well. Additionally, the Stand Main ON/OFF Switch must be ON for the instrument batteries to charge.

Control Panel (continued)

Overhead Lamp ON/OFF Brightness Controls

The area labeled “LAMP” has 3 separate buttons and a minimum to maximum LED scale. Pressing the Up or Down Arrow one position at a time will increase or decrease lamp intensity. Pressing the POWER Switch will apply power to the Overhead Lamp. The LED on the scale will flash indicating power is applied to the lamp. Pressing the POWER Switch again removes power from the Overhead Lamp and the LED will remain ON.

Corded Instrument Voltage Selector

Locate the Voltage Limit Switch for corded instruments located on the rear of the stand. Refer to the Features and Functions section of this manual. Using a small flathead screwdriver, adjust the switch to the maximum voltage of your corded instrument connected to the Binding Post.

CAUTION: DO NOT SELECT A VOLTAGE THAT EXCEEDS THE VOLTAGE RATING OF THE BULB IN YOUR INSTRUMENT OR DAMAGE TO THE BULB MAY OCCUR.

Once the maximum voltage has been selected, press the Power Button in the area labeled “VOLTAGE” to turn your corded instrument on and off. Pressing the Up or Down Arrow one position at a time will increase or decrease the voltage to the corded instrument connected to the Binding Posts of the stand within the range of the maximum voltage set by the Voltage Limit Switch on the rear of the stand.

Overhead Lamp

WARNING: HOT SURFACE. DO NOT TOUCH THE LAMP SHADE DIRECTLY NEAR THE BULB OR SERIOUS INJURY MAY OCCUR. GRASP THE OPEN RING HANDLE AROUND THE LAMP TO ADJUST THE POSITION OF THE LAMP ASSEMBLY TO AVOID INJURY.

WARNING: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT TOUCH THE OVERHEAD LAMP AND A PATIENT AT THE SAME TIME.

To operate the Overhead Lamp you must:

1. Switch on the Main ON/OFF Switch on the front of the stand.
2. Press the Lamp POWER Switch on the Control Panel.
3. Press the Left or Right Arrow to increase or decrease lamp intensity.
4. The lamp can also be turned on and off using the rocker switch on the lamp shade.

Operation (continued)

Chair Operation

CAUTION: THE LIFT MECHANISM IS EQUIPPED WITH A THERMAL CUTOFF SWITCH TO PROTECT THE MECHANISM FROM OVERHEATING. RAISING AND LOWERING OF THE CHAIR CONTINUOUSLY FOR APPROXIMATELY ONE AND A HALF MINUTES WILL ACTIVATE THE THERMAL CUTOFF SWITCH AND NOT ALLOW THE CHAIR TO BE RAISED OR LOWERED. ONCE THE THERMAL CUTOFF SWITCH HAS BEEN ACTIVATED, SEVERAL MINUTES OF COOLING TIME COMBINED WITH TURNING THE CHAIR MAIN POWER SWITCH OFF AND THEN ON AGAIN TO RESET THE SYSTEM ARE NECESSARY BEFORE THE LIFT MECHANISM WILL OPERATE AGAIN. THE TEMPERATURE AT WHICH THE SYSTEM IS ALLOWED TO OPERATE AFTER COOLING IS MUCH LOWER THAN THE CUTOFF TEMPERATURE, HENCE SEVERAL MINUTES OF COOLING TIME ARE REQUIRED.

CAUTION: THE PATIENT WEIGHT LIMIT IS 350 LBS. DO NOT USE THE CHAIR MOTOR TO LIFT OR LOWER A PATIENT IN THE CHAIR WHO IS OVER 350 LBS OR IT MAY CAUSE THE THERMAL CUTOFF SWITCH TO OPEN, DISABLING THE CHAIR MOTOR.

Note: To raise or lower the chair, the Main Power ON/OFF Switch on the front of the stand must be ON.

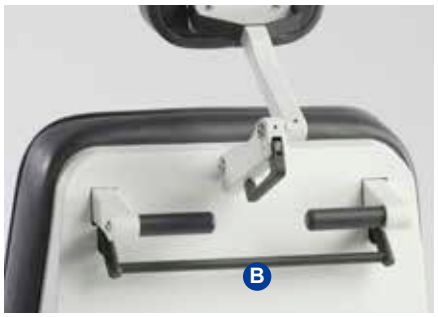


Main ON/OFF Switch

Located on the bottom right corner of the back of the chair the Main ON/OFF Switch controls the electric power for the chair. This switch is a rocker type. Press the side with the straight line “I” to turn the stand ON. You will hear a beep that indicates the chair is energized. Press the side with the circle “O” to turn the chair OFF.



To raise the chair press the up arrow on the Foot Switch, the up arrow in the CHAIR section of the Control Panel, or the UP Switch on the Lower Instrument Arm. Press the down arrow on the Foot Switch, the down arrow in the CHAIR section of the Control Panel, or the DOWN Switch on the Lower Instrument Arm to lower the chair incrementally. Press the Auto-Down button to lower the chair to the lowest position.



A. Head Rest
The Head Rest can be positioned by pulling the Lock Handle to the unlocked position, positioning the Head Rest in the desired position and squeezing the handle until it snaps into the locked position.

B. Chair Tilt
The Chair Tilt can be positioned as required by squeezing the bar at the top back of the chair and positioning the patient in the desired degree of tilt. When the bar is released, the chair will lock into position. Slowly raise and lower the chair to the desired position.



C. Chair Rotation
The release and lock lever for chair rotation is located at the bottom rear of the chair. Pull up with your foot to release the lock. Push down with your foot to lock the chair in position.

Arm Rests
The Arm Rests can be positioned in the vertical or horizontal position as desired.

Foot Rest
The Foot Rest can be positioned in the upright or horizontal position as needed.

Cleaning & Maintenance

There is no periodic or routine maintenance required.

Cleaning

WARNING: BEFORE CLEANING WITH A DAMP CLOTH, DISCONNECT OR UNPLUG THE STAND FROM ANY POWER SOURCE.

CAUTION: DO NOT USE SOLVENTS OR STRONG CLEANING SOLUTIONS ON ANY PART OF THE ENDURANCE TILT CHAIR & STAND OR DAMAGE TO THE UNIT MAY OCCUR.

Clean the external surfaces of this instrument using a clean, soft cloth moistened with a mild detergent solution (1 cc of liquid dish soap to one liter of clean, filtered water (filtered below 5 microns)).



Fuse Replacement

WARNING: BEFORE CHECKING THE FUSES, DISCONNECT OR UNPLUG THE STAND FROM ANY POWER SOURCE AND UNPLUG THE POWER CORD FROM THE POWER INPUT PANEL.

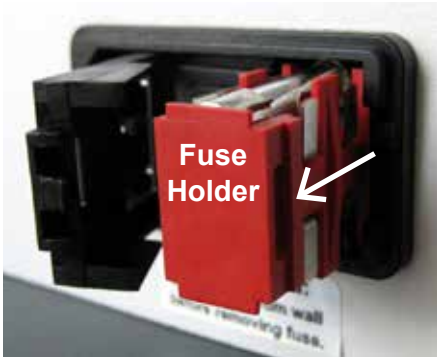
There is one Fuse located in the chair, and one in the stand. Both fuses are replaced using the following procedure:



Note: The fuse replacement procedure is the same for both the stand fuse and the chair fuse. The orientation of the Fuse Holder is different for each. The chair Fuse Holder is horizontal while the stand Fuse Holder is vertical.

1. Unplug the power cord from the Power Input Panel.

Note: If the power cord is not removed, the Fuse Door will not open all the way and it will not be possible to remove the Fuse Holder.

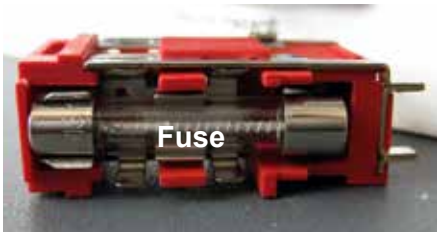


2. Swing open the Fuse Door.
3. Pull out the Fuse Holder (red) from the Power Input Panel.
4. Remove the Fuse and replace it with a new one.

Note: Only replace the chair fuse with a 6.3A Time-Lag (T 6.3 A L 250V), 3AG, RoHS fuse (P/N 15250-002-018).

Note: Only replace the stand fuse with a 6A Fast Response Time (6 A L 250V), 3AG, RoHS fuse (P/N 15253-002-016).

Note: There is only one Fuse in each Fuse Holder. One side of the Fuse Holder contains the Fuse, while the other side has a metal clip to prevent a fuse being placed where it should not go.



Note: Install the Fuse Holder in the same orientation as it was removed.

Troubleshooting

Chart of Common Errors

WARNING: TO HELP PREVENT THE POSSIBILITY OF ELECTRICAL SHOCK, ALWAYS UNPLUG THE STAND BEFORE REMOVING OR REPLACING THE FUSES.

WARNING: WHEN CHANGING THE BULB IT MAY BE HOT! ALLOW TO COOL BEFORE REMOVING.

Problem	Possible Cause	Possible Solution
Stand does not function/turn on.	Outlet is not live.	Plug into an outlet that has power.
	Cords not connected properly between chair and stand.	Check cords between the chair and stand and ensure they are connected properly.
	Fuses blown in either the chair and/or stand.	Replace any blown fuses.
Chair does not move up or down.	The Thermal Cutoff Switch may be activated.	Turn the power to the chair off. Allow the chair to cool down for 30-60 minutes. Turn it on. Try to raise or lower it. If the chair is still not functional, turn the chair off again, and let it cool down further.
Overhead lamp does not work.	Power to stand may be switched to OFF.	Check the stand Main ON/OFF switch and ensure it is set to ON.
	Overhead Lamp Switch may be set to OFF.	Check the Overhead Lamp ON/OFF switch and ensure it is set to ON.
	Bulb is blown.	Replace halogen bulb. (P/N 15253-002-021) **WARNING: LAMP MAY BE VERY HOT.**
Slit Lamp does not power on.	Power to the Slit Lamp Arm may be set to OFF.	Check the Slit Lamp Arm ON/OFF switch and ensure it is set to ON.
	Power on the Slit Lamp may be set to OFF.	Check the Power Supply on the Slit Lamp and ensure it is set to ON.
Chart Projector does not power on.	Power to the Chart Projector may be set to OFF.	Check the Chart Projector ON/OFF switch and ensure it is set to ON.

Specifications

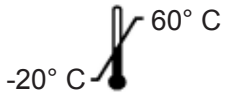
Catalog Number 15250

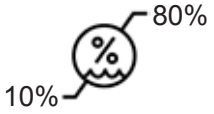
WARNING: BEFORE CHECKING THE FUSES, DISCONNECT OR UNPLUG THE STAND FROM ANY POWER SOURCE.

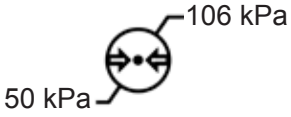
Physical Dimensions		
	Chair	**Stand**
Shipping Weight:	315 lbs	2315 lbs (includes slit lamp & Phoroptor arm)
Gross Weight:	280 lbs	280 lbs (includes slit lamp & Phoroptor arm)
Baseplate:	22” wide by 22” deep	22” wide by 22” deep
Lifting Column:	500 lbs capacity	na
Patient Weight Limit:	350 lbs capacity	na
Lifting Column Stroke:	8”	na
Rotation:	360˚	na
Chair Tilt:	45˚	na
Lower Limit:	22.5”	na
Upper Limit:	30.5”	na
	Slit Lamp Arm	**Phoroptor Arm**
Weight:	30 lbs	20 lbs
Stroke:	13.25”	12.25”
Counterbalance:	Up to 60 lbs	Up to 20 lbs
Lower Limit:	24”	na
Upper Limit:	37.25”	na

Electrical
Input Voltage: 120 VAC, 60 Hz
Stand Fuse: 6A Fast Response Time (6 A L 250V), 3AG, RoHS
Chair Fuse: 6.3A Time-Lag (T 6.3 A L 250V), 3AG, RoHS

Operational Conditions
Environmental: The environmental conditions are as follows: Operating: Temperature: 10° to 35 °C (50° to 95 °F) Relative Air Humidity: 30% to 75% (non-condensing) Atmospheric Pressure: 80 kPa (23.6 in. Hg) to 106 kPa (31.3 in. Hg) Transportation & Storage: Temperature: -20° to 60 °C (-4° to 140 °F) Relative Air Humidity: 10% to 80% (non-condensing) Atmospheric Pressure: 50 kPa (14.8 in. Hg) to 106 kPa (31.3 in. Hg)







Disposal

This product does not generate any environmentally hazardous residues. At the end of its product life, follow your local laws and ordinances regarding the proper disposal of this equipment.

Warranty

This product is warranted by Reichert, Inc. against defective material and workmanship under normal use for a period of two years from the date of invoice to the original purchaser. The linear actuator lift mechanism is warranted for five years against defective material and workmanship under normal use. (An authorized dealer shall not be considered an original purchaser.) Under this warranty, Reichert's sole obligation is to repair or replace the defective part or product at Reichert's discretion.

This warranty applies to new products and does not apply to a product that has been tampered with, altered in any way, misused, damaged by accident or negligence, or which has had the serial number removed, altered or effaced. Nor shall this warranty be extended to a product installed or operated in a manner not in accordance with the applicable Reichert instruction manual, nor to a product which has been sold, serviced, installed or repaired other than by a Reichert factory, Technical Service Center, or authorized Reichert Dealer.

Lamps, bulbs, charts, cards and other expendable items are not covered by this warranty.

All claims under this warranty must be in writing and directed to the Reichert factory, Technical Service Center, or authorized instrument dealer making the original sale and must be accompanied by a copy of the purchaser's invoice.

This warranty is in lieu of all other warranties implied or expressed. All implied warranties of merchantability or fitness for a particular use are hereby disclaimed. No representative or other person is authorized to make any other obligations for Reichert. Reichert shall not be liable for any special, incidental, or consequent damages for any negligence, breach of warranty, strict liability or any other damages resulting from or relating to design, manufacture, sale, use or handling of the product.

If notified promptly in writing of any action brought against the purchaser based on a claim that the instrument infringes a U.S. Patent, Reichert will defend such action at its expense and will pay costs and damages awarded in any such action, provided that Reichert shall have sole control of the defense of any such action with information and assistance (at Reichert's expense) for such defense, and of all negotiation for the settlement and compromise thereof.

Reichert reserves the right to make changes in design or to make additions to or improvements in its products without obligation to add such to products previously manufactured.

We use extreme care in selection, checking, rechecking and packing to eliminate the possibility of error. If any shipping errors are discovered:

1. Carefully go through the packing materials to be sure nothing was inadvertently overlooked when the unit was unpacked.
2. Call the dealer you purchased the product from and report the shortage. The materials are packed at the factory and none should be missing if the box has never been opened.
3. Claims must be filed within 30 days of purchase.

Our shipping responsibility ceases with the safe delivery in good condition to the transportation company. Claims for loss or damage in transit should be made promptly and directly to the transportation company.

If, upon delivery, the outside of the packing case shows evidence of rough handling or damage, the transportation company's agent should be requested to make a "Received in Bad Order" notation on the delivery receipt. If within 48 hours of delivery, concealed damage is noted upon unpacking the shipment and no exterior evidence of rough handling is apparent, the transportation company should be requested to make out a "Bad Order" report. This procedure is necessary in order for the dealer to maintain the right of recovery from the carrier.

Notes

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