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MODEL SLALEDW SURGICAL LIGHTING WALL MOUNT

Installation and Operations Manual



 **MORTECH**
MANUFACTURING

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It is important that the information provided in this manual is observed. These instructions should be read carefully and observed fully before installation and initial operation.

WARNING

It is crucial that any work performed on Mortech Mfg. manufactured items are carried out exclusively by skilled professionals who have the respective training. Improper use, maintenance, parts and service, or modification to the equipment may cause injury and/or damage. Use and maintain the equipment only for the purpose described in this manual. Use only prescribed approved parts and service. Use the equipment only as designed by Mortech mfg.

BLOODBORNE DISEASE NOTICE

To reduce the risk of exposure to bloodborne diseases such as HIV-1 and hepatitis when using the equipment, follow the disinfecting and cleaning instructions in this manual.

OPERATING SKILLS AND TRAINING SKILLS

Operators using the equipment needs

- A working knowledge of necessary procedures.
- The ability to carry out necessary service procedures.
- A complete understanding of the procedures described in this manual.

TRAINING

Be trained on the use of the equipment.

- Read the manual
- Practice with the equipment before using it in regular service.
- Be tested on their understanding of the equipment operation.
- Record their training.

BEFORE USING THE UNIT

Personnel working with this unit needs to read this manual. Assemble of the unit following instructions, and perform any pre-service checks to confirm the units operates properly.

INSPECTING THE UNIT BEFORE USE

Please take time to inspect all shipment prior to signing delivery ticket. If concealed damage is discovered, save the carton and immediately contact carrier agent to initiate claim of damage.

BE SURE TO CHECK

Are all components present?

- Do the moving parts operate smoothly?
- Is unit draining properly?
- Are all nuts, bolts, and pins secured in place? If unit has an issue contact customer relations.

INSTRUCTION FOR HANDLING

Adhere to state and/or local certification and regulations for operation of forklift and/or pallet jack. Cargo is extremely heavy, be sure to have the necessary manpower as well as equipment to successfully unload shipment from truck. We recommend a forklift and/or pallet jack with the capacity to lift up to 2000 lbs. to remove cargo from truck.

The forklift can be used to unload receiving products safely by placing the load on the floor, maneuvering the forklift into position, tilting the mast forward to vertical position so the load will be level, lowering the load, and smoothly backing away without dragging. Once cargo is unloaded, positioning unit for installation will once again require a forklift.

Read all manual and note on installation of the unit before installing.

The pallet jack can be used (with a loading dock and maneuverability on and off the transport vehicle) to unload receiving products safely. Maneuvering the pallet jack into position (in the appropriate position within the pallet), lifting the pallet then driving the pallet jack off the truck and safely into the place of installation.

RANGE OF ENVIRONMENTAL CONDITION

Mortech Mfg. equipment shall be placed in a controlled environment (housing or housed unit) hindering the weathering effects on the installed units. The units will have minimal corrosive and eroding factors that can break down the stability and operation of Mortech's equipment. The impact on the unit by the operator utilizing water or corrosives in the medical procedures can be controlled and responsibility for the cleaning and maintenance placed upon that person. The effects of anthropogenic (man-made) gasses on the environment, such as carbon dioxide (CO₂) that will be omitted from the unit should be minimal.

Due to continuous innovation and product development this installation guide is subject to change without notice. Please save these instructions for later use.



MODELS SLALEDW

The AIM LED uses the latest advances in state-of-the-art lighting technology to achieve incredible performance and unsurpassed value and energy efficiency. The AIM LED provides 10% more illumination (45,000 lux / 4181 fc at 1 meter) than even the high performing AIM-50®. A 92 CRI rating produces very accurate color visibility, which is important for an accurate diagnosis. With 10 times greater (20,000 hours) lamp life than traditional light source products, you will save more than \$1000 in bulb replacements alone.

Additionally, the AIM LED uses 70% less energy. The multiple reflectors of the AIM LED can be tilted by rotating the sterilizable light handle to adjust the size and pattern of the light to the working area.

The AIM LED has a unique Y-Shaped design, which facilitates placement of the lighthead around the physician's head minimizing the obstruction of light into the surgical field.

STANDARD DESIGN FEATURES

- 45,000 lux (4181 fc) at 1 meter
- 4300 K color temperature
- CRI (Color Rendering Index) of 92
- 3 LED modules with a 20,000-hour life
- Adjustable focus using center handle
- UL60601-1/IEC 60601-1/IEC60601-1-2/IEC 60601-2-41; CAN/CSA C22.2 601-1 M90 certified
- CE marked
- 5-year limited warranty
- Assembled in USA

Illuminance:	45,000 lux (4181 fc) at 1 meter
Color temperature:	4300 K
CRI (Color Rendering Index):	92
Diameter of lighthead:	20" (51 cm)
Light field diameter:	13" - 15" (33 cm - 38 cm)
Depth of illumination:	54" (137 cm)
Focusing:	Adjustable using center handle
Number of LED modules:	3
Light sources:	Light Emitting Diodes (LED)
Rated life of LED lamp:	20,000 hours
Swivel radius of lamp housing - ceiling mounted:	63" (160 cm) max.
Height movement of lamp housing - ceiling mounted:	41" (104 cm) vertical movement
Minimum ceiling height/maximum ceiling height:	8 ft./12 ft. (244 cm/366 cm)
Power:	84 Watts
Mounting options:	Single ceiling, double ceiling
Total weight:	Floor version 43 lbs. (19.5 kg), single ceiling version 44 lbs. (19.9 kg)
Seismic calculations available:	Yes
Certifications/approvals:	UL60601-1 / IEC 60601-1 / IEC 60601-1-2 / IEC 60601-2-41 CAN/CSA C22.2 601-1 M90 CE marked
Product warranty:	5-year parts and labor
Origin:	Assembled in USA

TRANSPORTATION AND STORAGE

The following storage conditions apply:

- Temperature: 0o-70 oC (32-158oF)
- Relative humidity: 10 - 75 % (no condensation)
- Air pressure: 500 - 1060 hPa

Store only in closed or covered spaces; thereafter, the values of the operating conditions in the usage instructions apply.

WARNING

Failure to properly follow installation and preventive maintenance instructions may result in mechanical failure.

WARNING

Before undertaking any work, ensure that the branch circuit power is off and secured from accidentally being switched on again.

NOTE

This light should only be installed by a qualified electrical contractor.

NOTE

NOTE-It is the responsibility of the customer to make sure the supporting wall / ceiling and the anchoring is safe, adequately strong and in compliance with all applicable building codes.

ASSEMBLY PREPARATIONS TOOLS AND ACCESSORIES REQUIRED:

- Drill
- Level
- 9/16" (14,3 mm) open-end key (or adjustable key)
- Wire cutter/stripper
- Allen key (3/32 in / 2,4 mm)
- Screwdriver, small flat-blade
- Screwdriver, small Phillips
- Wire nuts and wiring for supply connections

Materials Required:

- Mounting plate. (See page 19)
- Washers and spacers. (For mounting flush with wall)
- Special anchors for concrete or brick walls.
- Switch box – For wall switch panel.
- Electrical wire—To light.
- Conduit for electrical lines to wall mount / switch.
- Wall switch. (For 100V and 230V, 240V versions only)

SUPPORT AND ANCHORAGE

To prevent sway and provide proper support of the light, the wall mount must be attached to a structurally-sound wall or similar structure.

Most walls will require adequate reinforcing to hold the light. The installing contractor is responsible for providing this reinforcement to suit the individual requirements for each installation.

A typical reinforcement consists of a ¼" (6 mm) steel plate. Make certain the mounting plate is vertical, or the arm may "drift".

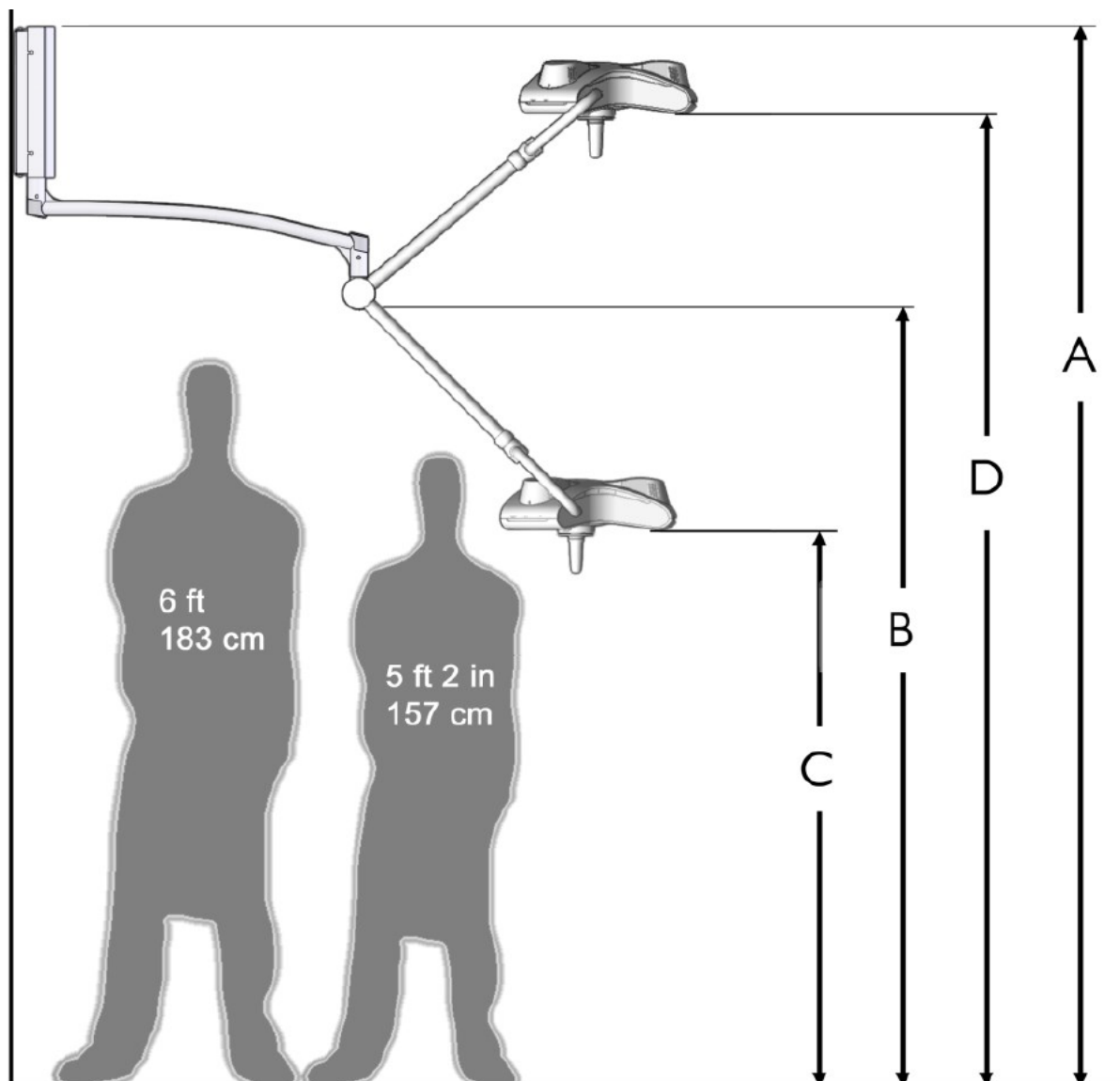
Equipment anchorage diagrams are supplied with these instructions to help with the installation. The diagrams were prepared by a California-licensed Structural Engineer. If the lights are installed accordingly, the system will meet requirements of the State Seismic Codes.

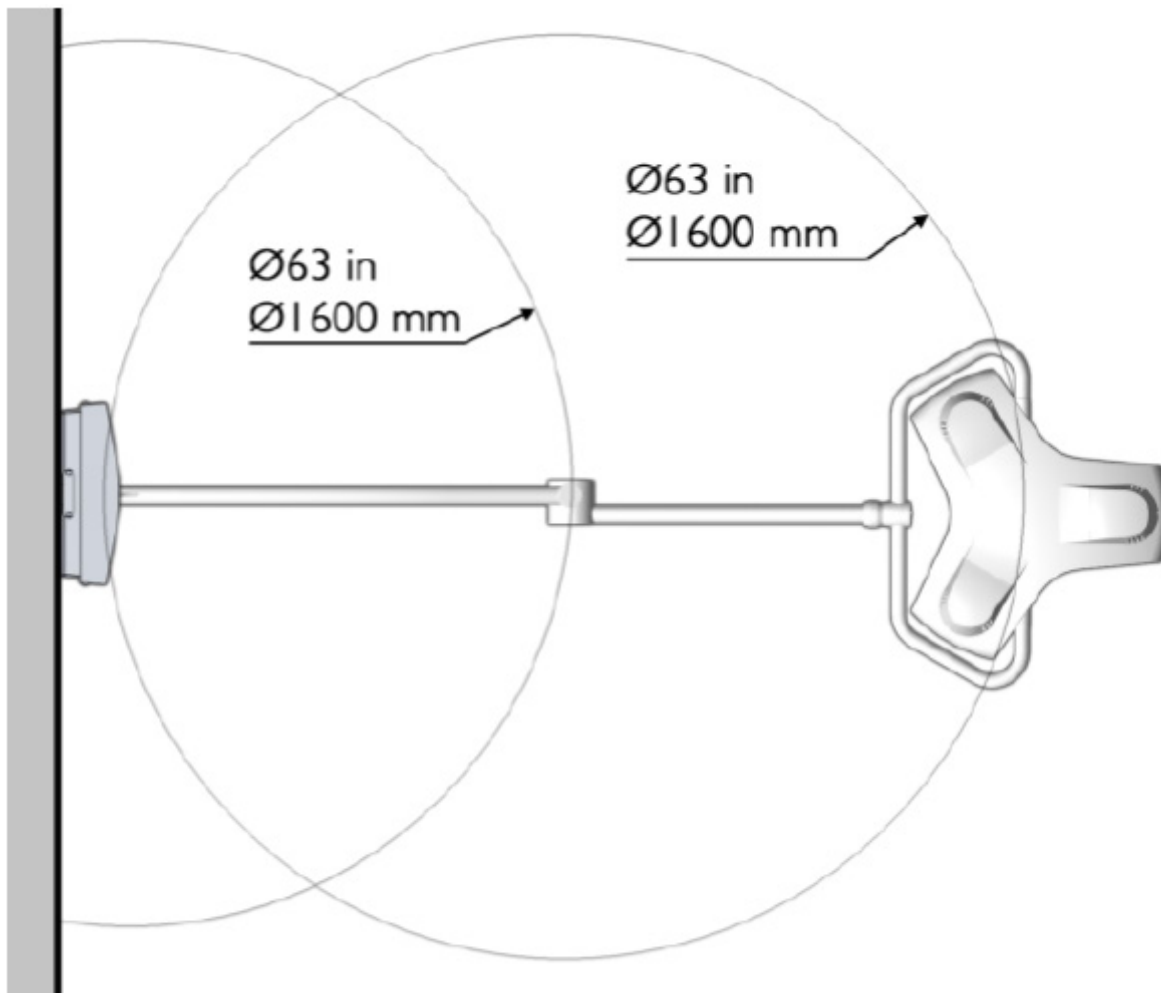
MOUNTING HEIGHT



The proper height of the light should be set by the end user. This depends on the height of the examination tables, types of procedures and the user's preferences.

Mounting Height A	Pivot Point B	Lower Limit C	Higher Limit D
8.0 ft (2440 mm)	67 in (1702 mm)	43 in (1092 mm)	84 in (2134 mm)
9.0 ft (2745 mm)	79 in (2007 mm)	55 in (1397 mm)	96 in (2438 mm)
10.0 ft (3050 mm)	91 in (2311 mm)	67 in (1702 mm)	108 in (2743 mm)

RANGE OF MOTION





	WARNING	Before cutting the wall, check with building maintenance so that you do not cut through existing electrical, plumbing or gas lines.
	NOTE	It is the responsibility of the contractor and engineer of record to design and build a suitable structure for mounting the light

INSTALLATION

UNPACKING AND INSPECTION

Carefully unpack the cartons and match the parts received with the parts list enclosed. Before Reporting Shortages:

1. Be sure you have received the correct number of boxes, cartons, etc., as shown on the bill of lading.
2. Check the entire shipment against the enclosed packing slip.
3. Items indicated in the column headed "Back Order" are not included in the shipment and will follow later.
4. Be sure that nothing has been removed from the cartons before they are checked by the individual in charge.
5. Empty all boxes completely, open all inside containers, and examine all packing material to ensure small articles are not overlooked.

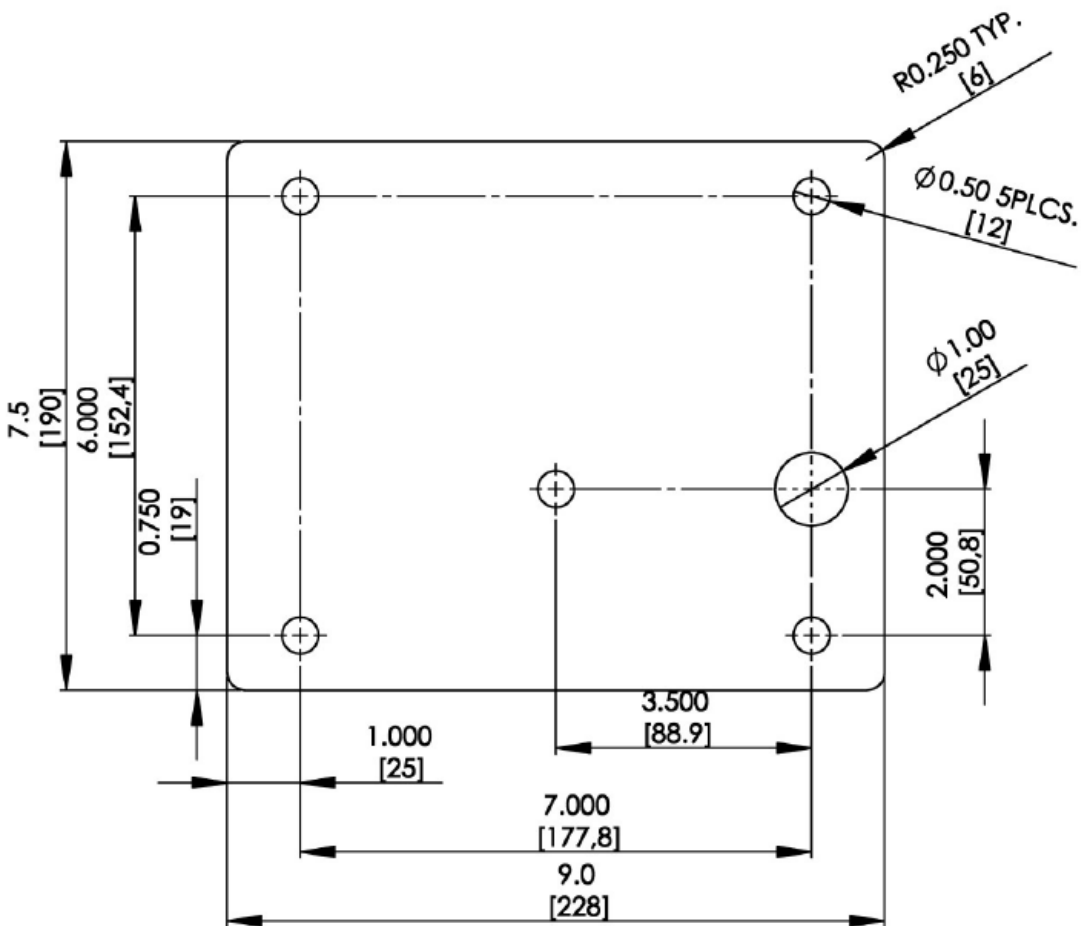
IF A SHORTAGE OR DAMAGE OCCURS:

1. You, the receiver, are responsible for filing any claim(s) with the delivering carrier within five (5) days after receipt of the shipment.
2. If damage or shortage occurs in transit, the delivering carrier is required by law to make notation of a shortage or damage. This notation is to be made on the bill of lading.
3. If, in your opinion, there may be concealed damage, an agent from the delivering carrier is obligated to make an inspection after the goods are unpacked.
4. Do not destroy packing material until after the agent has made out his report.
5. All claims must be made to the carrier, not Burton.
6. Written authorization must be obtained from Burton before merchandise can be returned.

WALL SUPPORT STRUCTURE

The engineer of record for the building shall provide a support structure designed to support weights and forces shown on the Equipment Anchorage Diagrams in this manual.

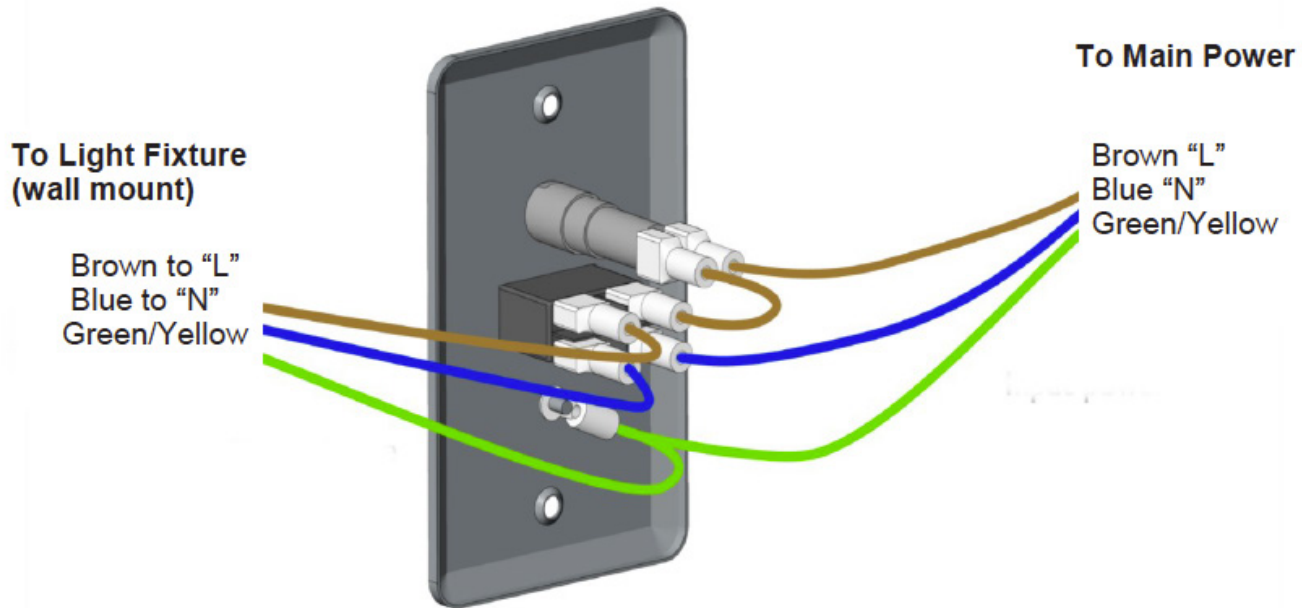
1. An example of a mounting plate (not included), of minimum thick-ness 3/16", which can be used to mount the wall mount. The attachment method (screws), number of screws, and location of the screws will vary depending on the type and structure of the wall, therefore it is not shown.
Contractor supplied mounting plate (dimensions are inches [mm])



2. Install the mounting plate (not included) to the bearing structure of the wall.
3. Feed the wires coming through the central hole in the mounting plate into the wall mount assembly.
4. Install the wall enclosure to the mounting plate. Use four (4) 3/8" (10 mm) Use four (4) 3/8" (10 mm) bolts, flat washers, split lock washers, and nuts.

ⓘ	NOTE	Wires and cabling to be routed and connected by certified electrical contractor.
ⓘ	NOTE	Only installation connections are shown. For a complete wiring diagram, refer to the Instruction for Use & Maintenance manual.

WALL SWITCH INSTALLATION FOR WALL MOUNT MODEL



CAUTION: Wall switch and fuse assembly **MUST** be installed with ALL 120V wall and ceiling models. Failure to do so may cause electric shock or damage to property.

NOTE: There is one wall switch for each light head.

120V version:

Install the wall switch/s furnished with the product to a standard junction box per local codes. The wires that go to the light fixture are labeled "to Light Fixture".

100V / 240V versions:

Wall switch is not furnished with the product. The customer provided switch must disconnect both poles (double pole) and be certified to IEC/EN 60158 (which superseded IEC 328). Install wall switch per local codes.

Connect ground wire from face plate to ground.

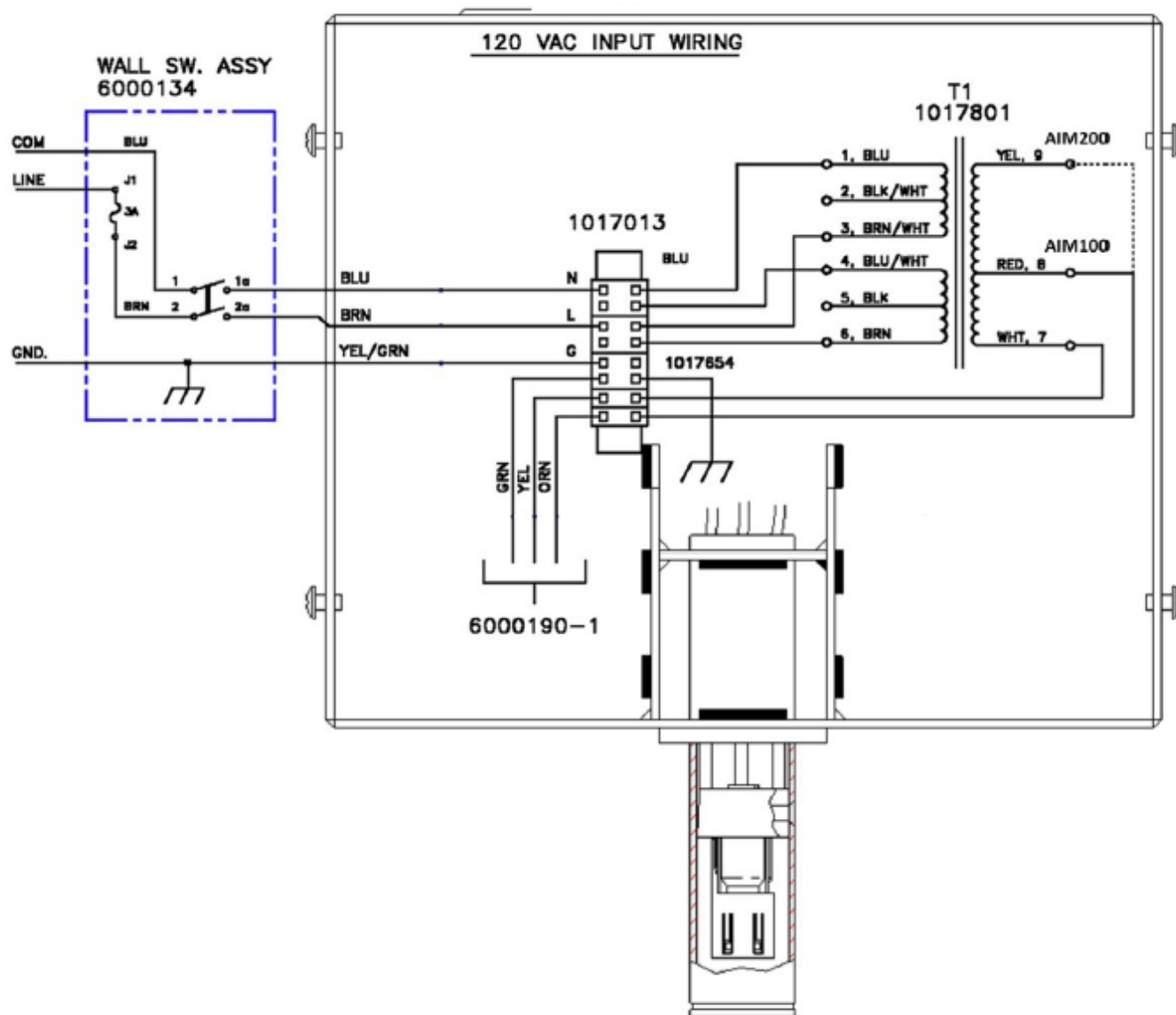
Switch wiring (contractor-supplied) must be three-conductor minimum AWG 18 (0.75mm²) and no more than AWG 14 (2.5mm²) from the terminal block to the switch. Both neutral and line connections must be wired to meet UL standards. Wiring and conduit must meet local and national fire protection codes.

The input power (from the wall switch) and the wires out of the down tube should now be connected to the terminal block, which is pre-mounted on the ceiling casting.



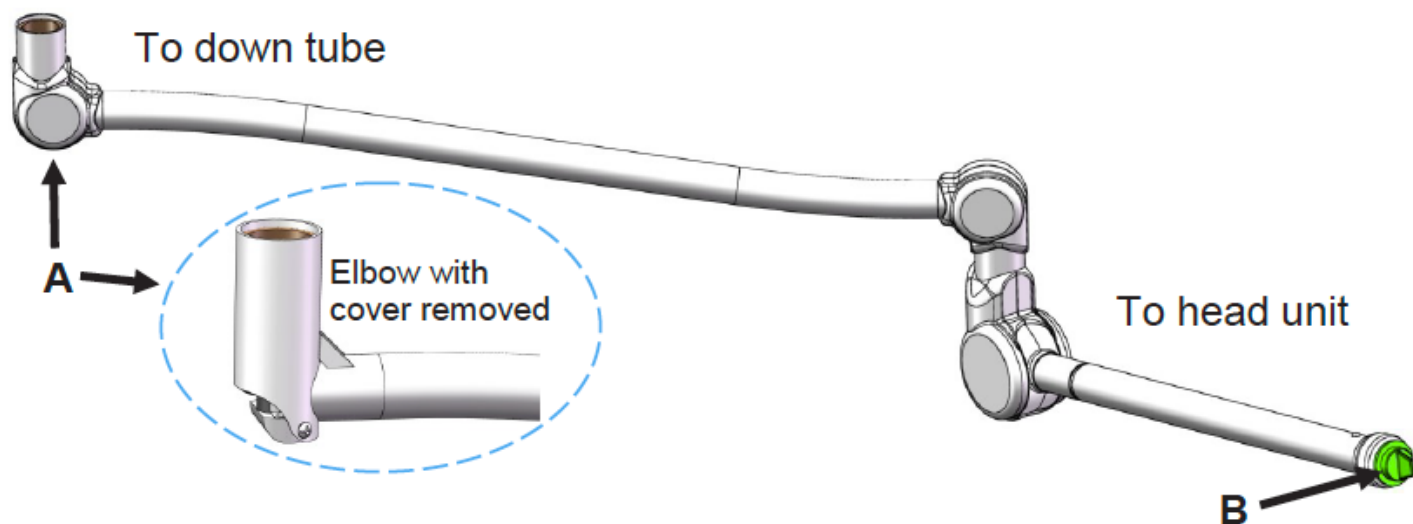
WALL MOUNT WIRING

1. Route conduit and electrical lines to wall mount. Use AWG 18 (.75 mm²). Max AWG 14 (2.5 mm²).
2. Install the cover on the wall mount and secure it by tightening the 4 screws with serrated lock washers on the sides. NOTE: Serrated washer must be in place to ensure proper grounding of the cover.



EXTENSION/SPRING ARM - WALL

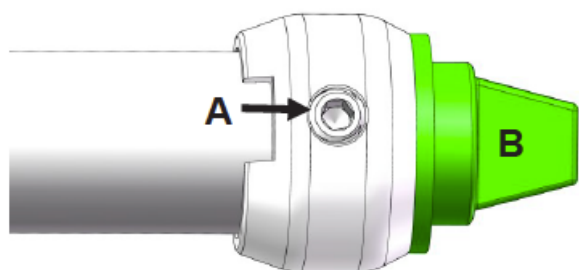
Place Extension/Spring Arm onto a flat surface before continuing with following steps. Locate the plastic bag, secured to the arm, containing hardware kit.



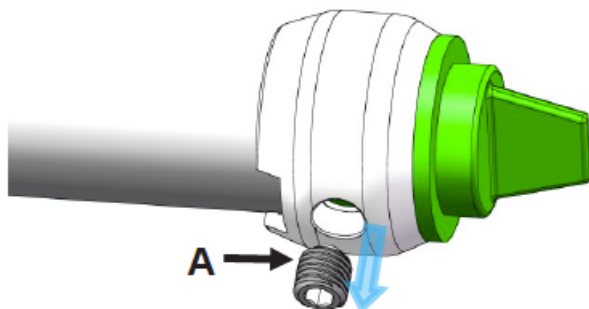
ORIENTATION OF EXTENSION/SPRING ARM.

Assembly Instructions:

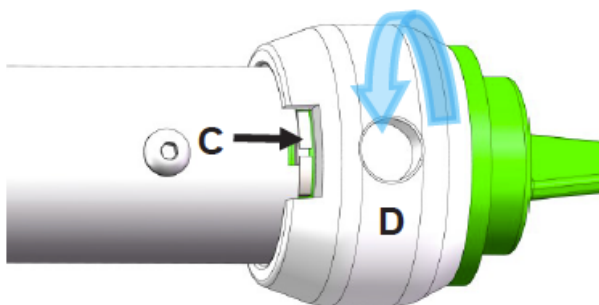
1. Remove the elbow cover from one end (A) of the Extension/Spring Arm. For detailed instructions on how to remove cover, refer to table of contents for "Elbow cover removal instructions". Set the covers aside.
2. Remove green plug (B) from end of the spring arm as follows:



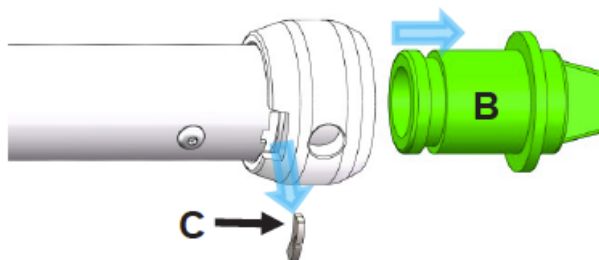
Step 1
Locate spring arm collar, set screw (A) and plug (B) at end of spring arm



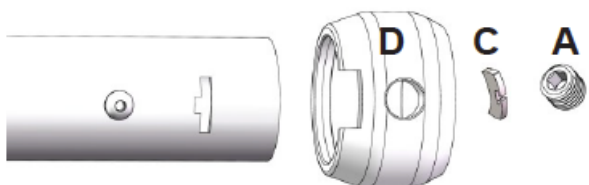
Step 2
Remove the set screw (A) from collar.



Step 3
Rotate collar (D) 180° until the collar notch exposes the locking key (C) on the spring arm.



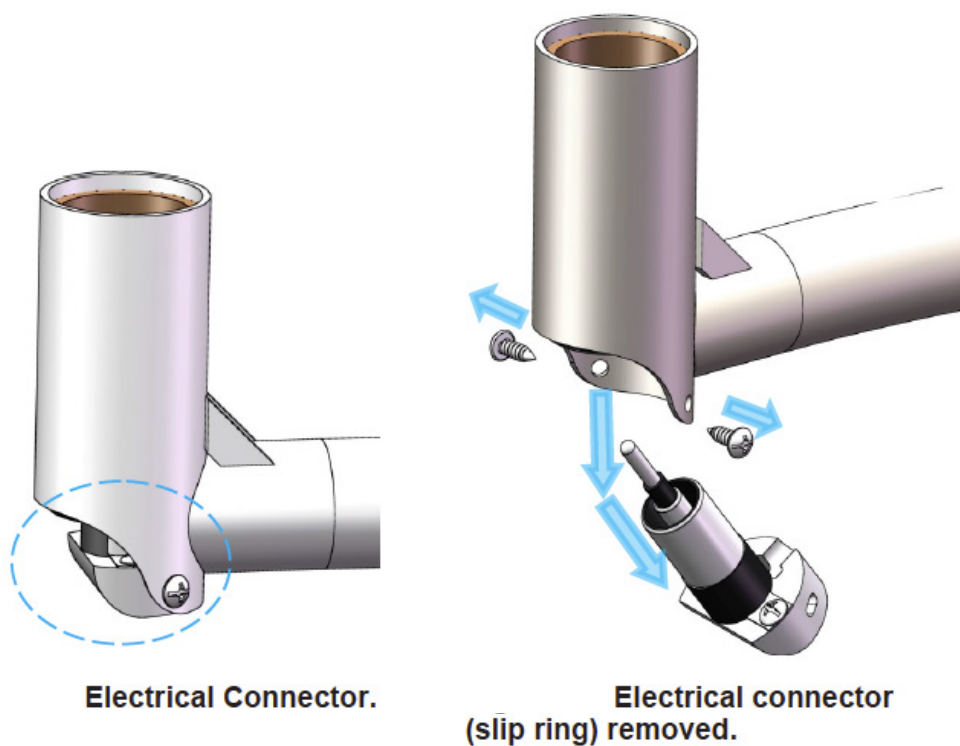
Step 4
With needle nose pliers, remove the locking key (C) and a green plug (B) from spring arm. Discard green plug.



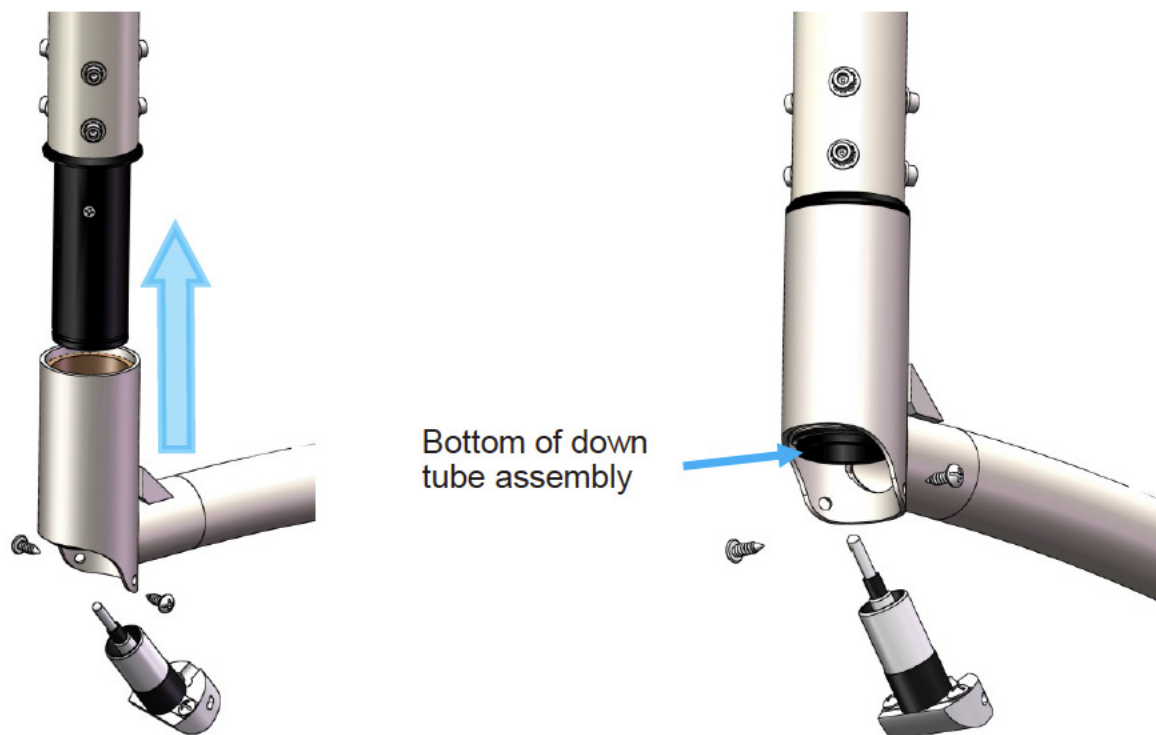
Step 5
Remove collar (D), and set it aside together with set screw (A) and locking key (C).

CAUTION: Do not lose these parts.

3. Remove the electrical connector (slip ring) by unscrewing the two screws and placing them aside. Slide out the electrical connector from the tube and allow it to hang off to the side.

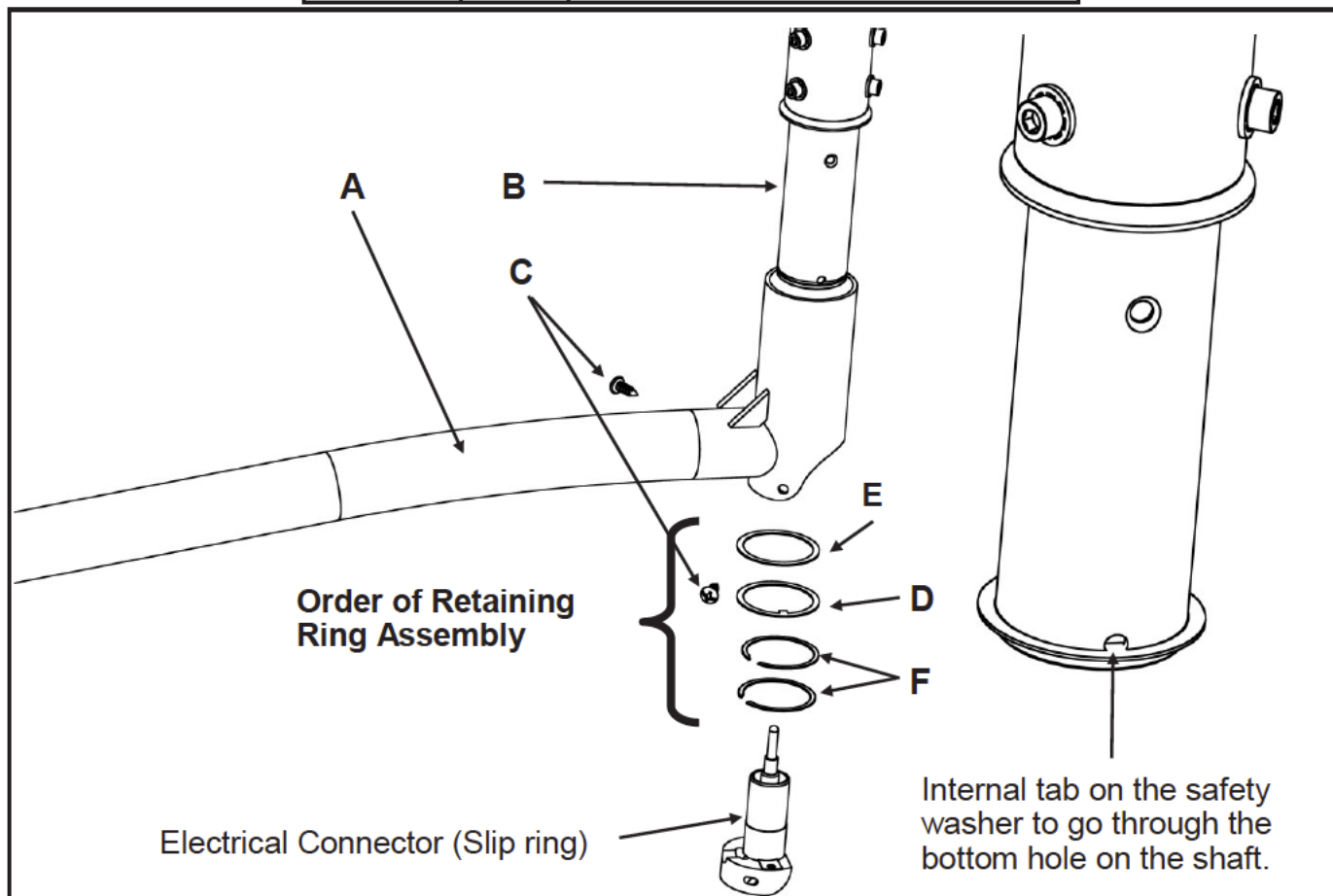


4. Slide the Extension/Spring Arm assembly up and onto the ceiling mount down tube and hold it in place.



5. Remove the 2 x Retaining Rings, 1 x Safety Washer and 1 x Retaining Ring Washer from the arm's hardware kit.

Part #	Qty	Description
A	1	Extension/Spring Arm Assembly
B	1	Wall/Ceiling mount down tube
C	2	Slip Ring Screws
D	1	Safety Washer
E	1	Retaining Ring Washer
F	2	Retaining Rings



EXTENSION/SPRING ARM ASSEMBLY

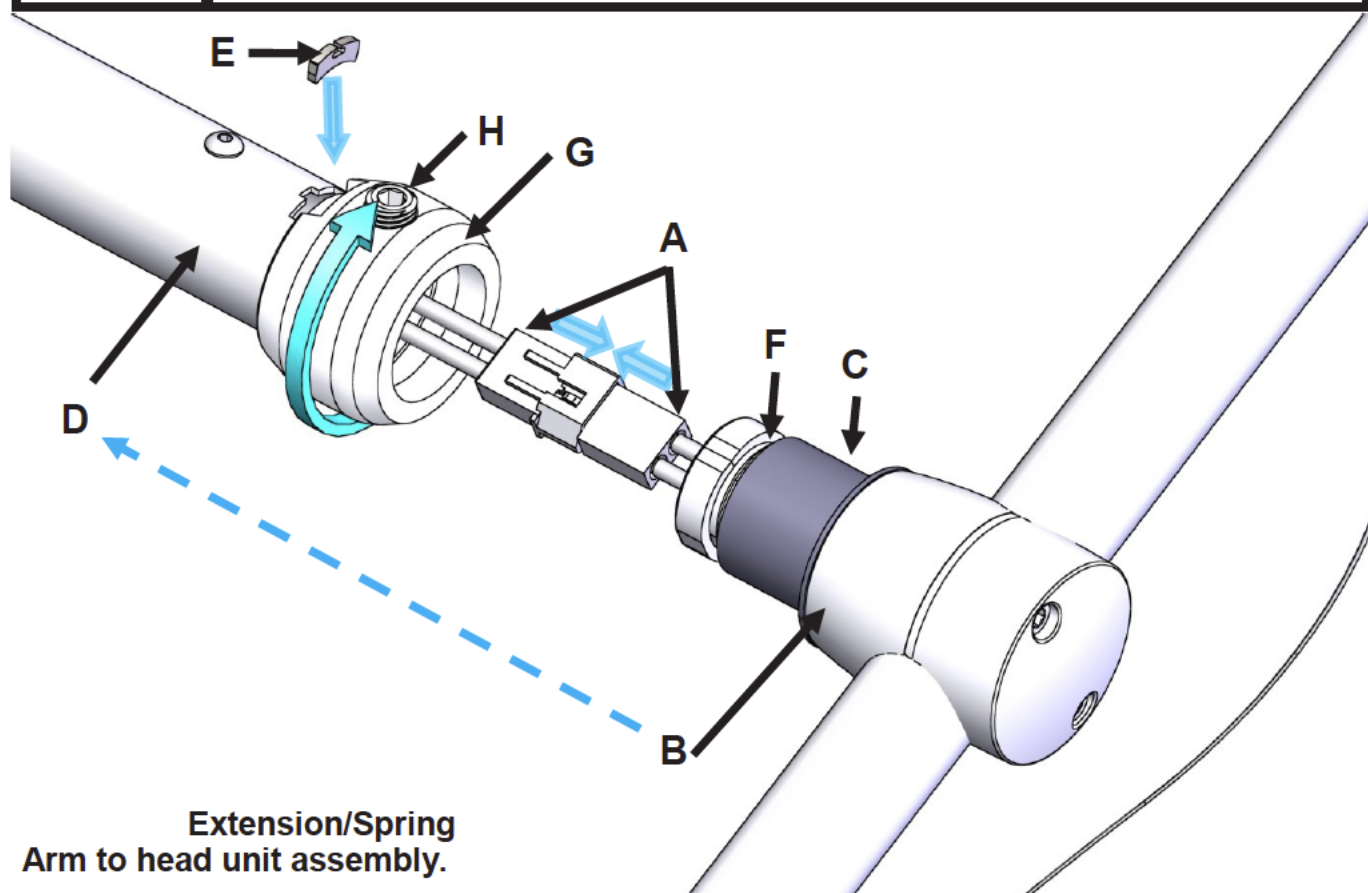
6. Install the retaining ring washer, then install the safety washer with the notch facing into the hole, and finally snap the two retaining rings into the groove.

	WARNING: It is critical that the retaining rings and washers be installed in given order per Step 6. Disregarding this instruction can present the risk of serious or fatal injury.
	WARNING: It is critical that the retaining rings are fully seated inside the down tube shaft's groove. Disregarding this instruction can present the risk of serious or fatal injury.
	WARNING: It is critical that the safety washer tooth is properly inserted into the hole of the down tube shaft to avoid a potential safety hazard. The safety washer acts as a secondary safety support in the case that both retaining rings fail.

7. The extension/spring arm is now correctly mounted to the wall/ceiling.
8. Reposition the electrical connector (slip ring) up into the extension/spring arm, and secure it into place using the two screws which were set aside.
9. Reinstall the covers by reversing the instructions followed for cover removal. Gently snap the 2 pieces together, and check the parting line to ensure proper fit with no gaps.

MOUNTING THE LIGHT HEAD TO THE SPRING ARM

	WARNING: The spring arm is under a high spring load. If the spring arm is lowered with out head unit, it MUST be held firmly. If it is released it will spring up, possibly causing serious injury.
	ELECTRIC SHOCK: Disconnect all power and remove all fuses prior to assembly.



EXTENSION/SPRING ARM TO HEAD UNIT ASSEMBLY

1. Join the connectors (A). Then push the joined connectors partially into the yoke T-junction (B). Do not bend or twist. CAUTION: make sure the connectors (A) are fully engaged.
2. Make sure the plastic bearing (C) is sitting on the yoke T-junction (B).
3. Push the yoke T-junction (B) into the spring arm (D).
4. Push the locking key (E) completely into the slot, so that the key is engaging in the yoke T-junction groove (F).
5. Rotate the collar (G) 180 degrees until the hole in arm aligns with the set screw (H).
6. Tighten set screw (H) so that collar (G) cannot be rotated. If the collar rotates, reposition the set screw hole to the arm hole and try again. Once collar does not rotate, give set screw another 1/2 turn. CAUTION: Do not over tighten the set screw or the damage to the collar can occur.



WARNING: It is critical that the locking key (**E**) is properly installed, the collar (**G**) is rotated 180° and the set screw is correctly positioned and tightened . Disregarding this instruction can present the risk of serious injury.

CLEANING



ELECTRIC SHOCK: For all cleaning work, power off the equipment and secure it from being switched on again. Ensure that no cleaning fluid runs into the equipment.



Damage to equipment. Apart from mild detergents and isopropyl alcohol, no other cleaning agents or chemicals should be used on the product.

Suggested cleaning technique is to use a soft cloth and mild detergent solution in water or isopropanol 70% solution. Do not let any solution run inside electrical assemblies. After cleaning, dry all surfaces promptly with a soft cloth or towel.

EXTENSIVE CLEANING

For more thorough cleaning of the light head, the top housing should be removed. This is done by first removing the pods to get access to the 3 screws holding the top and bottom housing together. See module replacement in the Instructions for Use. Remove the screws that has now become visible under the pod and lift the top housing off.

Use a soft cloth to wipe the corners and hidden surfaces when the parts are assembled. Be careful not to bend any components inside the light head. Damaging parts may affect the operation and light output.

WARRANTY STATEMENT

Mortech Mfg. warrants all fabrications to be free of defects due to its own workmanship and materials. Repair and/or replacement of materials furnished that may develop such defects, will be warranted for a period of one year from the date of shipment. Items not manufactured by Mortech Mfg. will receive the manufacturer's warranty.

PARTS AND SERVICE

Customer relations and product support are important aspects of Mortech Mfg.

For assistance with this or any of our fine products please contact us below:

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DISCLAIMER

This manual contains general instructions for the use, operation, and care of this product. The instructions are not all inclusive. Safe and proper use of this product is solely at the discretion of the user. Safety information is included as a service to the user. All other safety measures taken by the user should be within and under consideration of applicable regulations. It is recommended that training on the proper use of this product be provided before using this product in an actual situation.

Retain this manual for future reference. Include it with the product in the event of transfer to new users. Additional free copies are available upon request from Customer Relations.

Mortech Mfg. has made every effort to ensure that this Manual is accurate; Mortech Mfg. Inc. abdicate liability for any inaccuracies or omissions that may have occurred.

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IMPORTANT

BEFORE INSTALLATION AND OPERATION OF THE UNIT, CHECK ANY ENCLOSURE PANELS AND PLUMBING FIXTURES THAT MIGHT HAVE LOOSENED DURING SHIPPING.

ATTENTION

All images and Drawing in this manual may not represent your model. Refer to your particular project for exact specifications