

Installation and Operation Instructions

ice 30^m LED Surgical Lights



Amico

Contents

Introduction	4
Symbols Used in this Manual	5
Markings	5
Typical Drawings	6-7
Technical Data for iCE30m Lightheads	8
Installation Considerations	9
Tools and Part Requirements	10
Safety Instructions	10-12
Static Inspection	13
Declaration of Acceptance	13
Components and Scope of Delivery	14

Installation

Installation: Structure Plates and Flanged Ceiling Tube	15-18
Structure Plate and Anchor Plate	15
Order Components for Each Threaded Rod	16
Installing the Flanged Ceiling Tube (Series 1)	17
Installing the Flanged Ceiling Tube (Series 3)	17-18
Installation: The Central Axis	19-21
Installing the Ceiling Cover (Series 1)	19
Installing the Ceiling Cover (Series 3)	19
Amico Ceiling Covers - Square Ceiling Covers Option for Both Series 1 and Series 3	20
Installing the Central Axis	20-21
Installation: Electrical	22-23
Labelling of the Extension Leads	22
Routing the Extension Leads	22
Routing the Supply Lines Through the Ceiling Tube	23
Grounding the Flange	23
Connecting the Power Supply	23
Installation: Spring Arms	24-27
Standard Spring Arms on the Central Axis - Series 1	24
Standard Spring Arms on the Central Axis - Series 2	25
Initial Setup	26
Installing/Removing the Spring Arm	26-27
Removing the Safety Plug	27
Installation: Amico iCE30m LED Light	29
Installing the Amico iCE30m Lighthead	29-30
Normal System/LCH	30-31
LCH - Friction Screws	31
Normal System/Lift with Camera	32-33
Touch Handle Servicing	34
Installing in Light Camera (Optional Accessory)	35
Connecting the Camera Controller Box	35

Contents

Installation: Adjustments	36-38
Brake Adjustment to Prevent Drifting	36
Installation/Removal of the Spring Arm	37
Load Adjustment	38
Installation: The Base Cap	39
Installation: Terminal Box	40-42
Installing the Terminal Box	40-41
Pre-Wired Harnesses	42

Operation

Operation: The Amico iCE30m LED Light	43-46
Lighthouse Control Panel	43
Wall Control Panel for Light (only if purchased)	44
Camera Control Box (Camera Adder Only)	44
Automatic Emergency Backup Board	45
Beam Size Adjustment	45-46
Operation: Cleaning the Amico iCE30m LED Light	47-48
Non-Sterilizable Handle (Plastic/Aluminum)	47
Smart Handle (option available)	47
Lamp Housing, Protective Lens and Support System	48

Maintenance

Maintenance: Amico iCE30m LED Lights	49
Maintenance: Spring Arm	49
Bi-annual Inspection (to be completed by qualified technicians)	49
Annual Inspection (to be completed by qualified technicians)	50
Troubleshooting	50
iCE30m	50
Terminal Box	50
Environmental Conditions	51
Operation	51
Transport/Storage	51
References on the Package	51
Electromagnetic Compliance Data for iCE30m Series	52-55
Guidance and Manufacturer's Declaration – Electromagnetic Emissions	52
Guidance and Manufacturer's Declaration – Electromagnetic Immunity	53-54
Recommended Separation Distances Between Portable and Mobile RF Communications Equipment and the Equipment or System	55
Disposal	55
Warranty	56

Introduction

Thank you for acquiring our new iCE30m LED Series Surgical Light.

The Amico iCE30m LED Series Surgical Lights provide high intensity and shadow free illumination to the patient surgical field during surgical procedures.

The iCE LED Surgical Lighting System brings the newest LED technology to the Operating Room. The iCE LED Surgical Lights are designed for superior shadow control, increased depth of field and light intensity. They have a CRI OF 97 and a R9 greater than 90, allowing surgeons to easily differentiate between tissues. The standard 4500 K color temperature provides a crisp white light ensuring the surgical field remains clearly illuminated. Amico's multi color light allows users to adjust the color temperature from 3500K to 5000K. The adjustable color temperature ensures the light can match the unique requirement of any procedure while also having the ability to adjust to surgeon's preference.

Intended User Profile:

- The iCE30m Surgical Lights are intended to be used by trained medical practitioners in operating rooms, procedure rooms, emergency departments and intensive care units.
- User has to be able to read the words in the mylar control and wall control to operate the light.
- User has to be able to understand the instructions for use (IFU) and the training provided by Amico staff (or other designated personnel)
- User has to be able to position the iCE30m Light by holding the light through the openings.

Intended Use:

- The iCE30m LED Surgical Lightning System is designed to illuminate the surgical field with a cool, bring white light and an adjustable pattern size.

Patient Population:

- Age: newborn, bariatric and geriatric
- Weight: not relevant
- Health: not relevant
- Nationality: Multiple
- Patient State: patient is not a user

Application:

- Environment: The iCE30m Surgical Lamp is intended to be used in the operating rooms, procedure rooms, emergency departments and intensive care units.
- Physical – see Environmental Conditions Section
- Frequency of use: Several times a day
- Mobility: Central Axis is fixed to the supporting structure but the extension arm and spring arm can be moved so as to position the surgical light to illuminate the operating field.

Training:

- Training provided by Amico Sales staff (or other designated) via hands-on demonstration of the equipment along with the Instructions for Use and the Quick Reference Card (File: "IcelightsTrainingCard").

Introduction

Symbols Used In This Manual

Symbol	Reference	Title
	ISO 7000-0434A	Caution - Risk of danger
	TUV	Certified by TUV
	ISO-7010-M002	Refer to instruction manual/booklet

Markings

The iCE30m LED Series Surgical Lights are designed to comply with the following Standards:

Standard(s):	IEC 60601-1 edition 3.1 CAN/CSA-C22.2 No. 60601-1 ANSI/AAMI ES60601-1 IEC 60601-1-6 IEC 60601-2-41
Product:	Surgical Light
Brand Name:	Amico
Models:	iCE30m 160



WARNINGS

Do not use this equipment prior to understanding the contents of this manual.

To avoid the risk of electric shock, this equipment must only be connected to supply mains with protective earth.

Do not modify this equipment without written authorization from Amico Clinical Solutions.

Only connect cameras and spring arms that are compatible with the iCE30m.

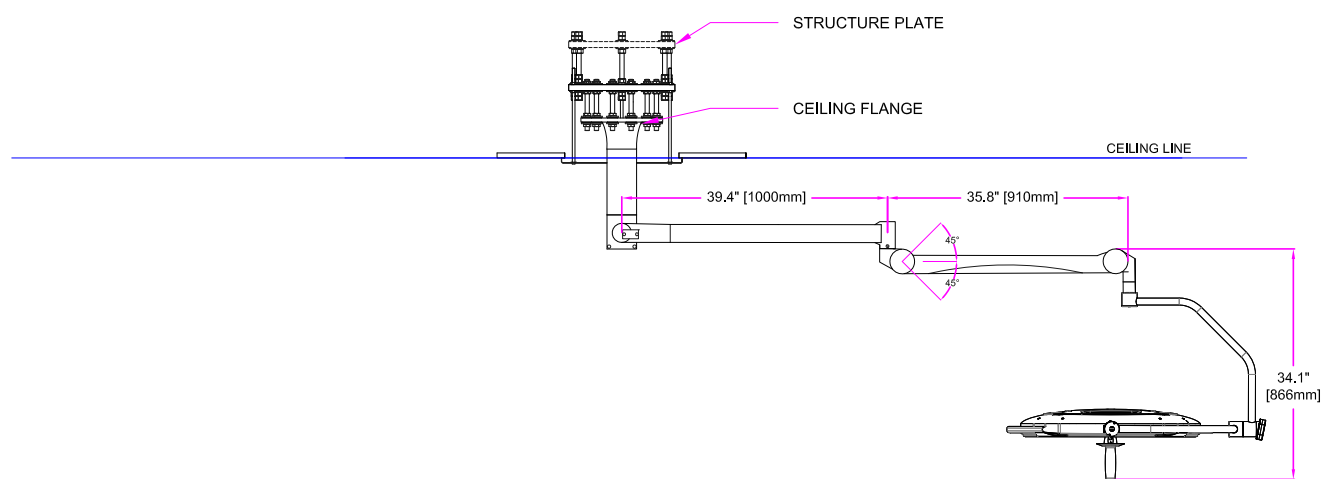
To terminate the operation of the equipment, turn off the breaker at the panel.

Max. Rating of fuses (breaker) used in Supply Mains is 20 A.

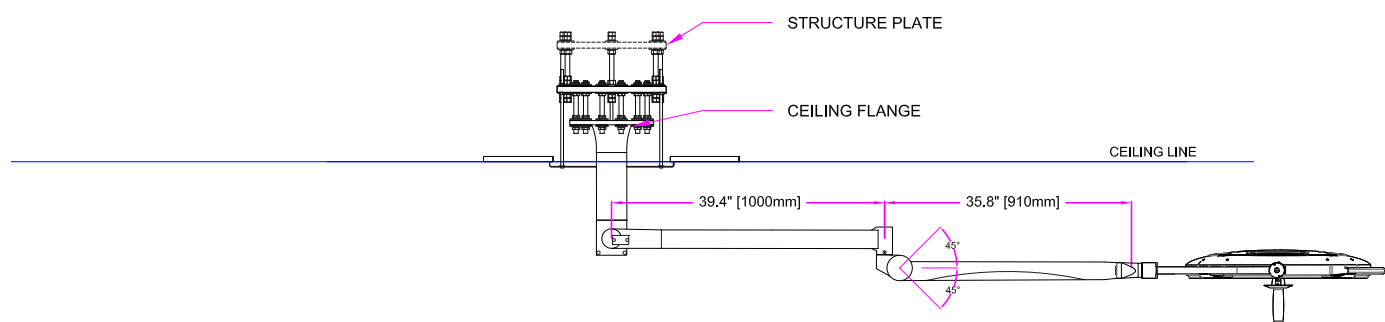
Keep this manual for future reference.

Typical Drawings

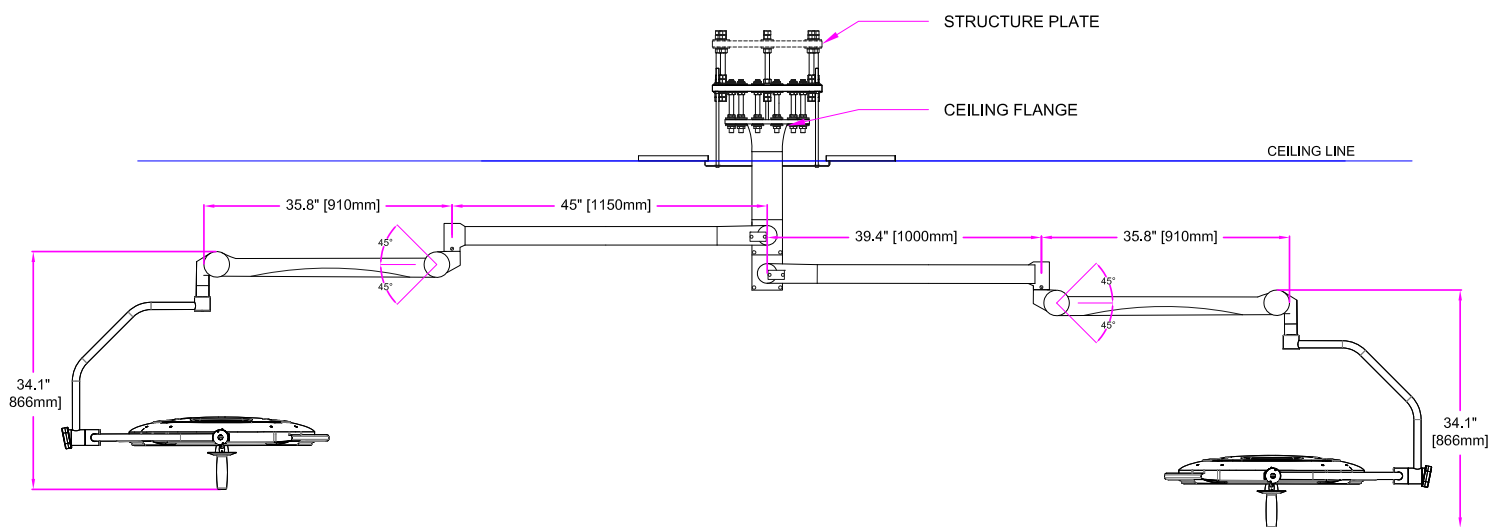
Single Ceiling Mount



Single Ceiling Mount for Low Ceiling Height

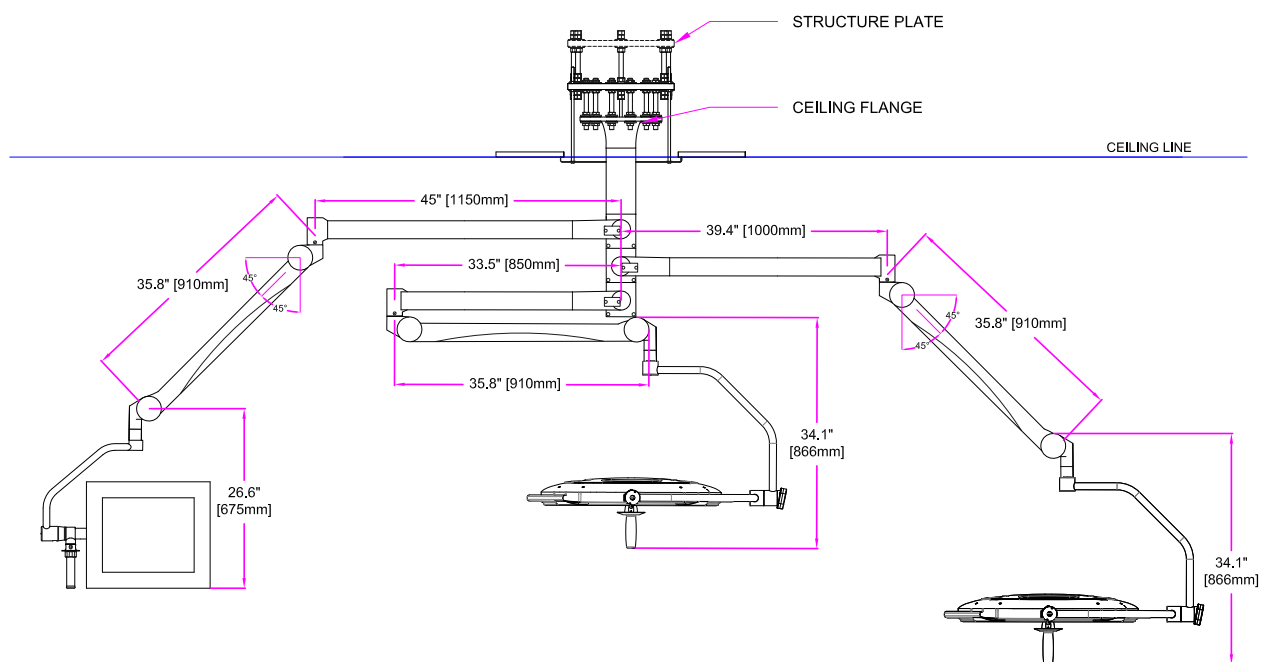


Dual Ceiling Mount

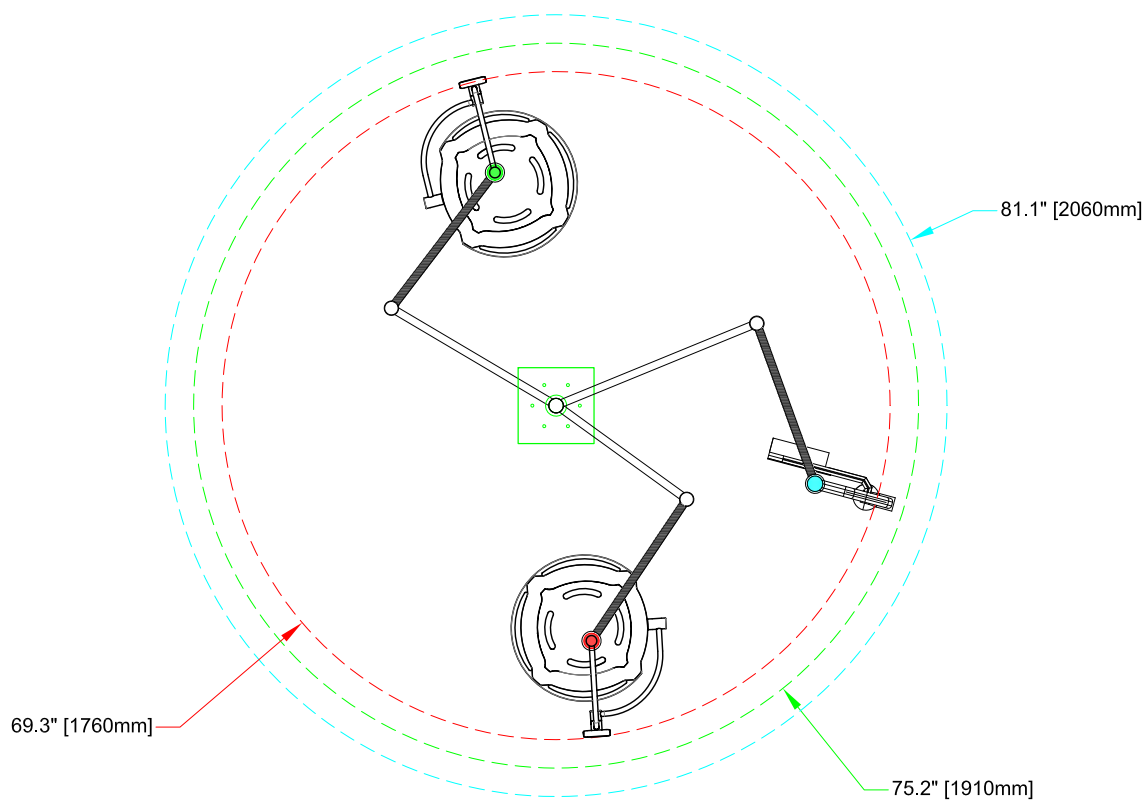


Typical Drawings

Dual Ceiling Mount with Monitor



Range of Motion for Dual Ceiling Mount



Technical Data for iCE30m Lightheads

Performance	Units	160,000
Lighthead Diameter	in (cm)	30 (76)
Light Intensity (Central Luminance)	lx (fc)	160,000 (14,870)
Brightness Control	%	50 - 100 (5% in Endo Mode)
Light Field Diameter	in (cm)	7.6 - 12 (19 - 31) ¹
Depth of Illumination (L1+L2) at 60%	in (cm)	16.8 (42.7)
Color Rendering Index (Ra)		97 ²
R9		>90
R13		97 ²
Color Temperature	K	3,500/4,000/4,500/5,000 ³
Shadow Dilution		
Single Mask	%	63
Double Mask	%	52
Cavity	%	99
Single Mask with Cavity	%	61
Double Mask with Cavity	%	50
Number of LEDs (main)		80
Number of Other LEDs		320
LED Service Life	hours	L70>60,000
Total Radiant Power at Max Intensity	W/m ²	515
Power Consumption at Lighthead	w @ 24 VDC	50
Electricity (VAC)		Universal VAC
Emergency Bypass		Yes
Mounting Options		Ceiling/Wall/Mobile Stand
Certificates		TUV

All tests conducted per 60601-2-41 standard • ¹LFD has a tolerance of 5% • ²CRI has a tolerance of 2.5% • ³CCT has a tolerance of 15%



Never combine beams from more than two lampheads, as the resulting irradiance at the spot can exceed 1000 W/m² resulting in a higher than normal temperature.

Upon request, Amico Clinical will make available the circuit board diagrams, component parts list, descriptions, calibration instructions or other information that will assist service personnel in conducting repairs to the iCE30m.

Recommended training for safe use of the iCE Light is approximately 30 minutes for users and two hours for biomedical staff.

Installation Considerations

- All Amico lamps are supplied with a flange with a graduated circle diameter of 310 mm (12.2") and six bores with a diameter of 17 mm (0.67"). The flange supports the vertical suspension tube. It is attached to the solid ceiling by means of a ceiling anchorage ring.
- The ceiling anchorage plate has six precisely positioned M16 threaded bolts. This makes it possible to fasten and adjust the lamp without causing dust or dirt after all building work has been completed.
- The ceiling anchorage ring is not required for a combination pendant and LED configuration.
- During mounting, take care to ensure that neither the flange nor the attachment elements are in contact with reinforcement components of the solid ceiling.
- The forces arising when the widely extending articulated arms tilt do make it necessary to drill very carefully with a certified hammer drill, paying close attention to the drilling tolerances.
- The suspension tube of the lamp or lamp combination must be adjusted vertically to prevent the lamp body from moving. For this purpose, the M16 counter nuts on the attaching bolt must be adjusted accordingly.
- For false ceilings, the suspension tubes for all lamps can be mounted directly through to the solid ceiling. The opening required for this purpose can be closed once the work has been completed. This can be completed by using the ceiling cover with a diameter of 450 mm (17.7") or a covering plate.
- Amico Clinical Solutions Corp. can only be made responsible for the safety of the light if repairs and alterations are carried out by Amico Clinical Solutions Corp. or a company that guarantees to observe the safety regulations.
- Amico Clinical Solutions Corp. cannot be made liable for personal or material damages if the light is operated inexpediently or incorrectly or used for purposes other than those for which it is intended.
- Please read the instructions carefully to install your lighting system and to avoid any damages to the device. Pay attention to the instructions for use when handling the lamp.
- This device has not been designed for use in potentially explosive areas. According to the Medical Device Regulation the light is classified under class I in Canada and class II in US per FDA.
- This device requires connection to a back-up system (done on site and provided by the facility) in the event of interruption of the supply mains for safety service. The back-up system shall restore power within five (5) seconds.

Tools and Part Requirements

1. Level
2. 2 mm Hex Drive
3. 2.5 mm Hex Drive
4. 2 mm Allen Key
5. 6 mm Allen Key
6. 5 mm Allen Key
7. 15/16" Wrench x 2
8. 3/8" Flat Head Screwdriver
9. 3 mm Flat Head Screwdriver
10. Soft Mallet
11. Pliers and Cutters
12. OASYS provided tools included within package

Safety Instructions



STORAGE AND USAGE HAZARD

- Store the iCE30m LED Series Surgical Light in its package for at least 24 hours in the respective room before mounting, in order to equalize temperature differences.
- Make sure that the light is in perfect working order before every use.
- **Attention:** The light works only with an external power supply of 240 VA.



SPRING-LOADED CRUSH POINT HAZARD

- The light is to be disconnected from the spring arm in reverse order of its assembly. This may only be carried out after the spring arm has been adjusted to a horizontal position, as the arm is under spring tension and can bounce up.
- Do not remove tension screw from the spring arm joint until the lighthead has been securely fastened onto the spring arm.
- Never attempt to install or remove the lighthead unless the tension screw is securely locked in place.
- Extend the spring arm and replace the tension screw to lock the arm in the extended position whenever removing the lighthead.

Safety Instructions



PINCHING HAZARD

Pinch points are created during extreme articulation of the suspension system. Do not place hands on or near the suspension knuckle during lighthead articulations.



IMPACT HAZARD

Do not remove the tension screw from the spring arm joint until the lighthead has been securely fastened onto the spring arm.



POSSIBLE PATIENT INJURY HAZARD

Failure to engage the light handle cover completely may result in the cover falling from the lighthead.



BIOHAZARD

- Sterile disposables are intended for single use only. Universal precautions must be observed when disposing of any single use disposable item.
- Do not use disposable handle covers if its packaging has been damaged, torn or opened as the sterility of the cover may be compromised.
- During surgical procedures, do not use the center focusing handle unless a disposable sterile cover is installed. If the focusing light handle (metal/plastic, provided with lighthead) is used without a disposable cover, the handle is not protected by a sterile covering.
- Sterilizable handles are available through Amico Clinical Solutions Corp.



DISPOSAL HAZARD

This product contains materials which may require disposal through appropriately licensed and permitted hazardous waste management firms.



PERSONAL INJURY HAZARD

- Do not attempt to replace any LED module unless power is turned off and the lighthead has cooled.
- Do not attempt to replace the lamp unless power to the lighthead is turned off.
- Do not attempt to clean the lighthead unless power is turned off and the lighthead has cooled sufficiently.
- Do not attempt to adjust the suspension system. Refer servicing to qualified service personnel.
- During operation, the LED panels attain a high temperature. Serious injury can occur if touched. Allow the lamp to cool before performing any maintenance on the lighthead.

Safety Instructions



POSSIBLE EQUIPMENT DAMAGE

- Cleaning and disinfecting agents used on this lighting system must be certified by their manufacturer to be compatible with polycarbonate.
- Use only recommended cleaning/disinfecting and/or anti-static agents on this light. Use of alcohol or aerosol spray cleaner/disinfectants containing a substantial amount of alcohol in the formula can damage the polycarbonate lens. Use manufacturer recommended cleaners only.
- Use of any disinfectant solutions OTHER than Germicidal Surface Wipes and Disinfecting/Deodorizing/Cleaning Wipes may cause discoloration or deformation of the polycarbonate lens surface. Other solutions have NOT been tested for compatibility or effectiveness.
- Cleaners intended for use on floors must NOT be used to clean this equipment.
- Prevent leakage of fluids into interior lighthead. Do not scratch optical coating on accessible portions of optic assembly when cleaning: always wear rubber gloves and use only a clean, white, lint-free cloth when wiping surfaces.
- Do not touch the glass portion of the lamp with bare fingers. Skin oils can cause deterioration of material leading to possible failure of the lamp.
- Do not bump lightheads into walls or other equipment.
- During all mounting steps, verify that wires are not pinched between spring arms or lightheads.
- Avoid cross-threading brake screws, align them with extreme care.
- Accessories or replacement parts not purchased from Amico are not to be used as they may negatively affect the equipment or result in equipment damage.
- During the mounting of the LED lights, the entire system (including the ceiling attachment) must be disconnected from mains. Dismounting of the lights from the spring arms or dismounting the sliding contacts inside the arms is to be done ONLY AFTER DISCONNECTING THE ENTIRE SYSTEM FROM MAINS. Otherwise the main control board will be damaged.
- Use only Amico supplied fuses. Any higher rating could cause damage to the LEDs and reduce their life.

Accessories:

- Cameras - Sony Models EH 6300, EH 6500, EV 7100 and EV 7500
- Handles - From Amico and other approved manufacturers

Static Inspection

The static (structural) inspection must be carried out before installation of the optional structural ceiling plate.

- The strength of the mount must be designed, checked and certified by a structural engineer or construction authority.
- Regional construction regulations that apply must be met.
- If a hole is drilled in an incorrect position, (e.g. drilling of a reinforcement rod) the structural engineer responsible must be contacted for re-assessment since static loading conditions may have changed, endangering the loading distribution.

Declaration of Acceptance:

It is hereby certified that the support ceiling and the ceiling anchoring is safe and adequately strong.

Project: _____

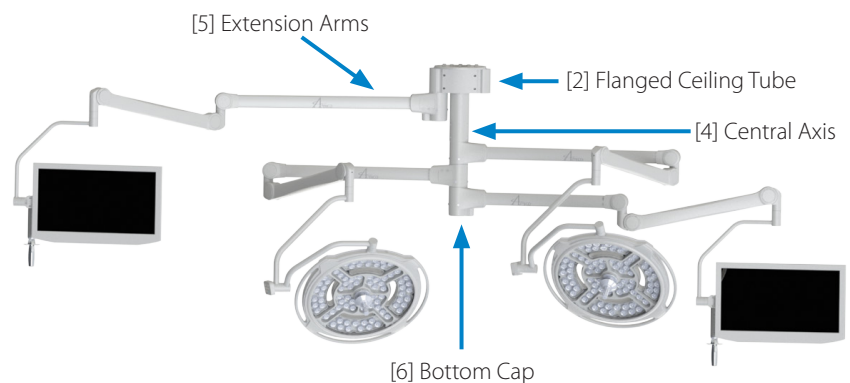
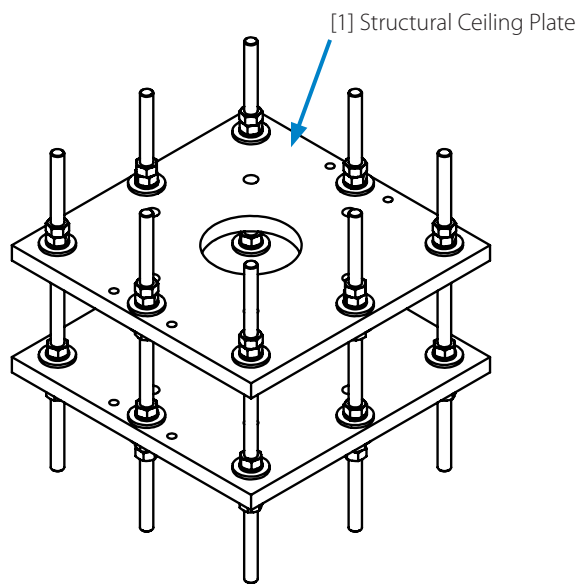
Anchoring (please check the applicable selection):

- ☐ With anchors/rods authorized by the structural engineer/construction authority
- ☐ With a counter-plate
- ☐ Other:

Location: _____

Signature/Stamp of Structural Engineer/Construction Authority:

Components and Scope of Delivery



1. Structural Ceiling Plate (Single or Dual Mount)

- 1 Structural Plate
- 1 Anchor Plate
- Dual Mount
 - 12 x M16 Lock Washers
 - 12 x M16 Flat Washers
 - 12 x M16-2 Hex Nuts
- Single Mount
 - 8 x M16 Threaded Rods
 - 48 x M16-2 Hex Nuts
 - 32 x M16 Lock Washers
 - 32 x M16 Flat Washers

2. Flanged Ceiling Tube (Series 1 or Series 3)

- 6 x M16 Threaded Rods
- 36 x M16-2 Hex Nuts
- 24 x M16 Lock Washers
- 24 x M16 Flat Washers

3. Ceiling Cover and Retainer (Plastic or Metal)

- Plastic Ceiling Cover Assembly
 - Type 1 Dome or Type 2 Flat Ceiling Covers
 - Retainer Ring with Set Screws

4. Central Axis (with 1 to 4 Arm Sockets)

- 8 x M10-1.5x32 Flat Head Socket Screw

5. Extension Arms (options)

- 46" Extension Arm with Slip Ring (9, 7, 5 or 3 pole) or Stop
- 40" Extension Arm with Slip Ring (9, 7, 5 or 3 pole) or Stop
- 34" Extension Arm with Slip Ring (9, 7, 5 or 3 pole) or Stop
- 28" Extension Arm with Slip Ring (9, 7, 5 or 3 pole) or Stop

6. Bottom Cap

7. Amico Spring Arms

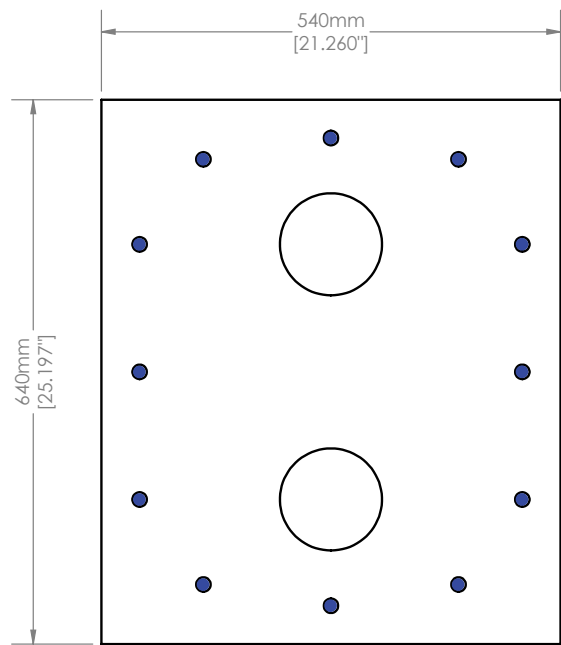
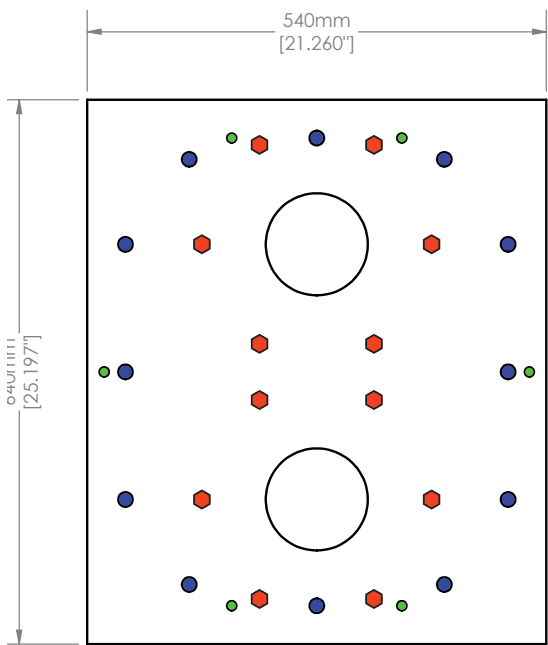
8. Approved Device Attachments

- Operating Lights
- Monitors
- Camera
- Rad Shield

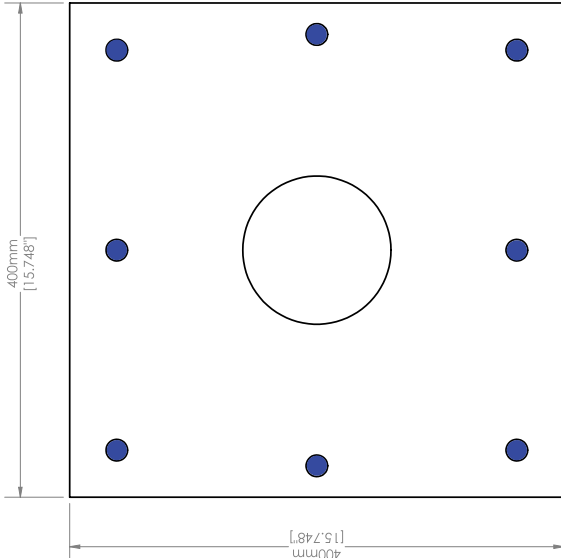
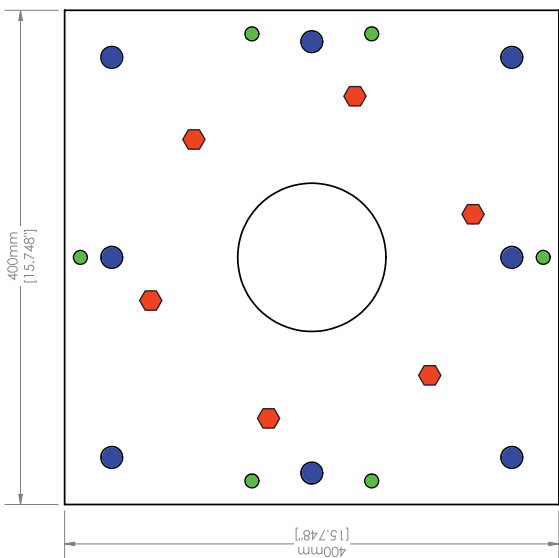
Installation: Structure Plates and Flanged Ceiling Tube




Structure Plate and Anchor Plate

Dual Mount



Single Mount



Legend	
* 	M16 clearance hole
* 	M16 clearance hole
* 	M10 clearance hole
*Hole markings for representation purpose only	

Installation: Structure Plates and Flanged Ceiling Tube

Order Components for Each Threaded Rod:

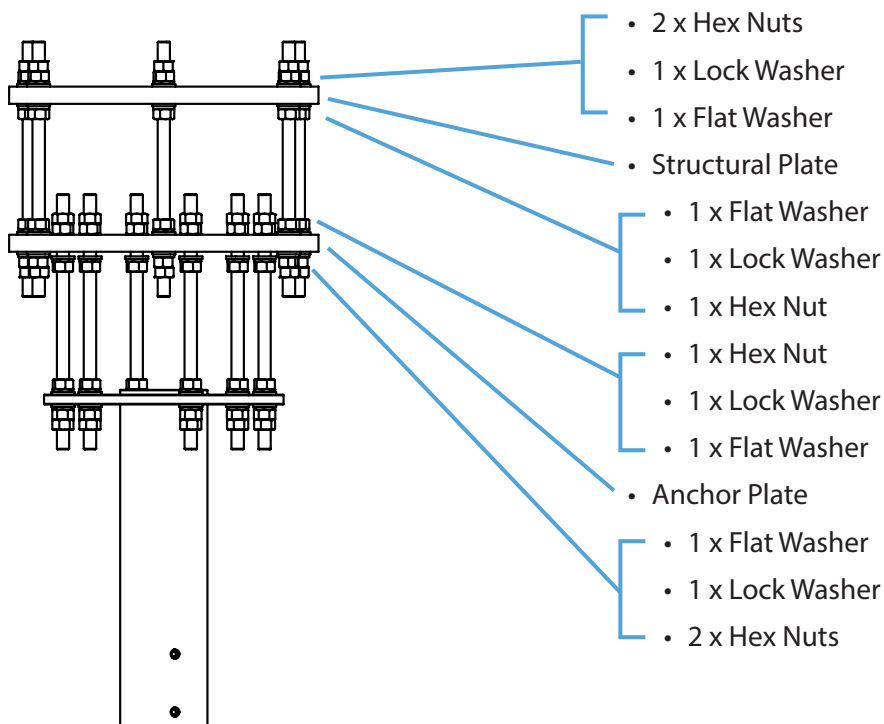
1. Attach two hex nuts, one lock washer and one flat washer to one threaded rod in the configuration shown below. Then drop the threaded rod through the top of the structural plate at the specified hole locations shown on the previous page.
2. Repeat the above procedure with the remaining rods (12 total for dual mount; 8 total for single mount) that are required for the installation of the anchor plate to the structural plate.
3. Carefully align and raise the anchor plate up to the mounting rods until the bottom face of the anchor plate is 10" (254 mm) above the bottom of the finished ceiling.
4. Attach the associated hex nut, lock washers and flat washers in the correct configuration as shown below. Tighten the M16 hex nuts to 145 lbs-ft using a torque wrench.



WARNING – Risk of Pendant System Dropping

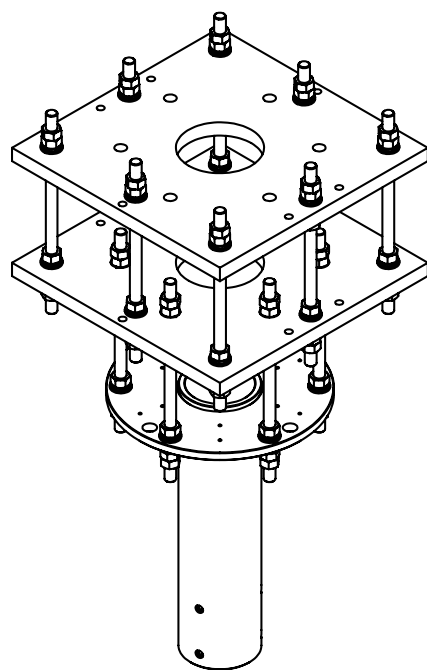
If the threaded rods are not completely screwed in, it may cause the pendant system to drop suddenly.

5. Install additional terminal strips for low voltage, video or communication lines on the interface plate according to the order specific configuration sheet in the submittal package.



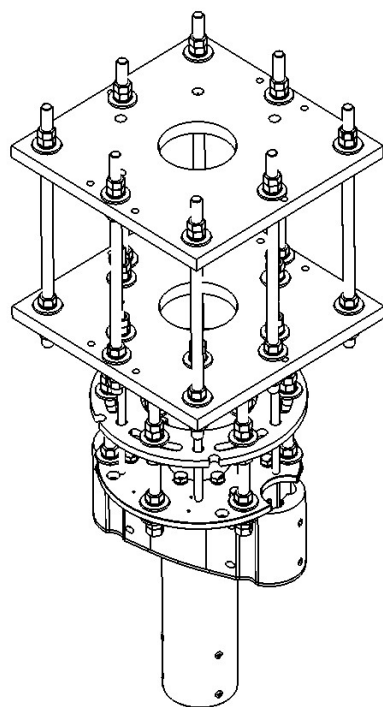
Installation: Structure Plates and Flanged Ceiling Tube

Installing the Flanged Ceiling Tube (Series 1)



Item	Description
1	6 x M16 Threaded Rods
2	24 x M16 Lock Washers
3	24 x M16 Flat Washers
4	Flanged Ceiling Tube
5	36 x M16 Hex Nuts

Installing the Flanged Ceiling Tube (Series 3) - option available



This Series includes:

- 1. One center drop tube and up to two satellite arms
- 2. Up to 4 extension arms
- 3. Maximum length arms on center tube: 1750mm, 1600mm, 1450mm
- 4. Maximum length arms on the satellite arms: 1750mm

Installation: Structure Plates and Flanged Ceiling Tube



WARNING – Risk of Flanged Ceiling Tube dropping:

- If the flanged ceiling tube drops, it may cause serious injury.
- Do NOT stand under the flanged ceiling tube during installation.

1. Determine the stop location of the central axis to ensure greatest range of motion.
2. Fit the threaded rods with the necessary components between the anchor plate and the flanged ceiling drop tube.
3. Push the flanged ceiling tube onto the six M16 threaded rods of the anchor plate.
4. Secure the flanged ceiling tube with two M16 hex nuts:
NOTE: Precise horizontal alignment of the flanged ceiling tube is essential to ensure that the pendant system can be removed easily and positioned reliably.
5. Complete the assembly by installing the rest of the hex nuts, flat washers and lock washers to the threaded rods.
6. Align the flanged ceiling tube horizontally by adjusting the M16 hex nuts. Check the horizontal alignment.



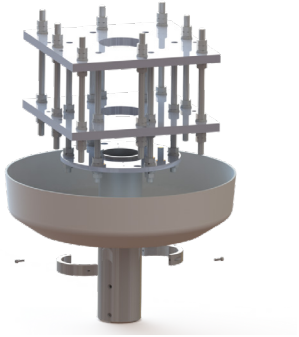
WARNING – Risk of Pendant System dropping:

Tighten the M16 hex nuts to 75 lbs-ft (torque).

7. Check that the flanged ceiling tube is securely in place.

Installation: The Central Axis

Installing the Ceiling Cover (Series 1)



1. Insert the Series One circular ceiling cover through the Series One Central Axis drop tube housing.

Note: Insert the Series One ceiling cover onto the drop tube and then clamp the collar underneath it.

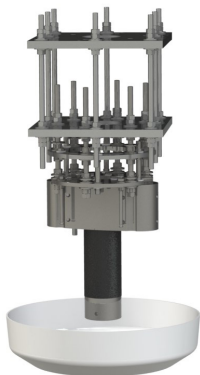
2. Clamp the collar around the central tube to keep the Series One circular ceiling cover in place.

Installing the Ceiling Cover (Series 3)

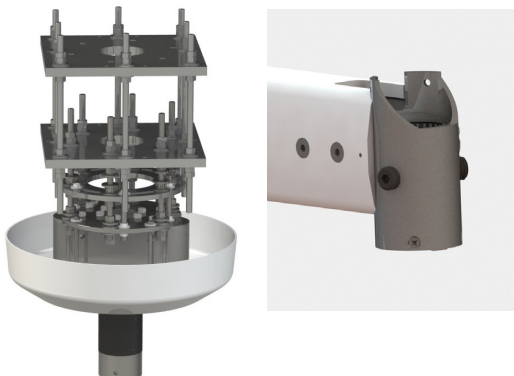


1. Insert an M10 rod into each of the four remaining holes in the Series Three ceiling flange using a M10 washer and M10 nut on either side of the bottom anchor plate to keep them from moving up and down. Be sure to mount the M10 rods at roughly the same height to keep the Series Three ceiling covers level.

Note: Threaded holes in the M10 rod should face downwards.



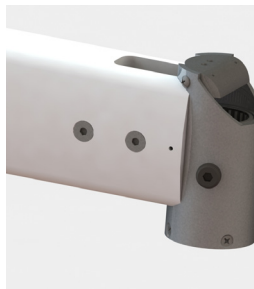
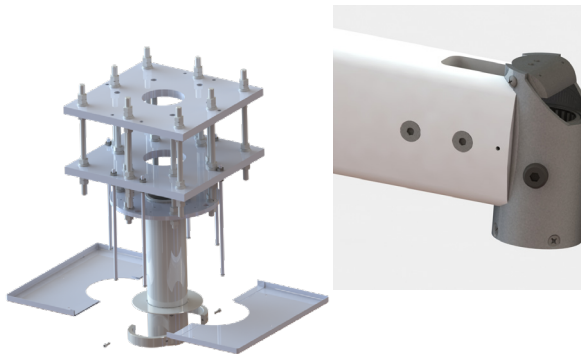
2. Insert the Series Three circular ceiling cover through the Series Three Central Axis drop tube housing.



3. Match up the holes to the Series Three circular ceiling cover to the bottoms of the M10 rods. Thread the screws through the screw caps, through the bottom of the Series Three circular ceiling cover and into the bottom of the M10 rods to keep the Series Three circular ceiling cover in place.

Installation: The Central Axis

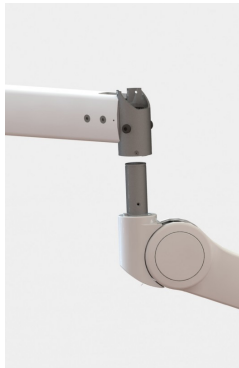
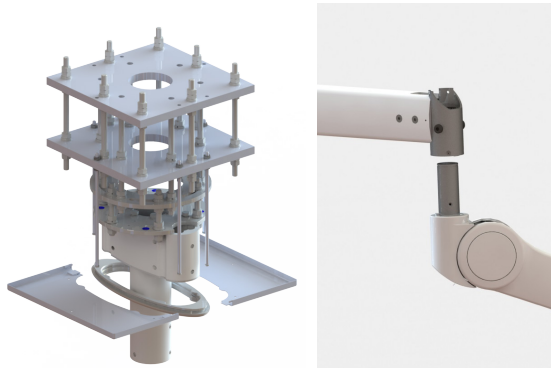
Amico Ceiling Covers - Square Ceiling Covers Option for Both Series 1 and Series 3



1. Insert an M10 rod into the six smaller outer holes in anchor plates using a M10 nut on either side of the bottom anchor plate to keep them from moving up and down. Be sure to mount the M10 rods at roughly the same height to keep the square ceiling covers level.

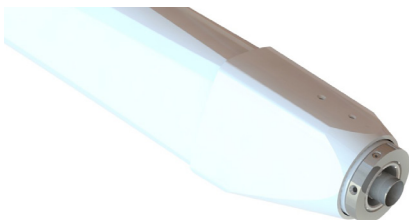
Note: Threaded holes in the M10 rod should face downwards.

Note: Collar must clamp under ceiling covers.



2. Install using the 2 x 1/4-20 button head screws with a 1/4" washer as shown in the image.

Installing the Central Axis



1. Raise the extension arm assembly and insert the Central Axis coupler into the shaft of the Central Axis drop tube housing. Match the six holes on both the Central Axis coupler and the Central Axis drop tube housing, and put in the 6x 1/4-20 button head screws with a 1/4" washer to keep it in place. This step will be the same for both the Series One and Series Three center tubes.

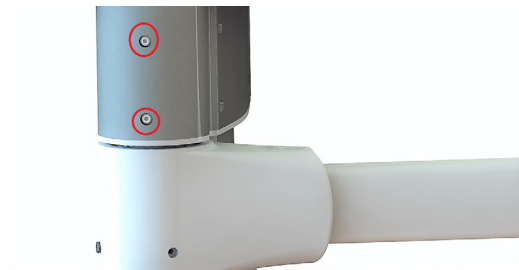
For the Series Three side mounts, use 2x 1/4-20 button head screws with the 1/4" washers to keep it in place on the sides, and 4x 1/4-20 socket cap screws on the front and back holes with the deeper counter sinks.

If there is a monitor arm on the center axis, set up the up the stoppers in the correct orientation so that once installed, the range of motion is as desired.

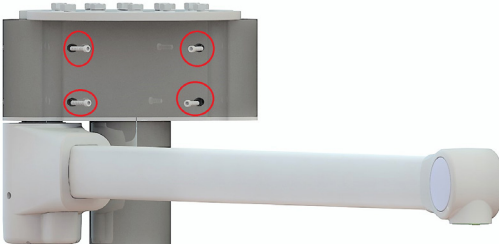
Installation: The Central Axis



1. Installing the Satellite extension arm. Begin with opening the cover to first locate the 2x stop screws as shown in the image. This is critical to ensure the correct stop position. (Rotate shaft as needed to achieve this alignment).



2. Install using the 2 x 1/4-20 button head screws with a 1/4" washer as shown in the image.



3. Finish the installation using the 4 x 1/4-20 socket cap screws with 1/4" washers through the angled holes.

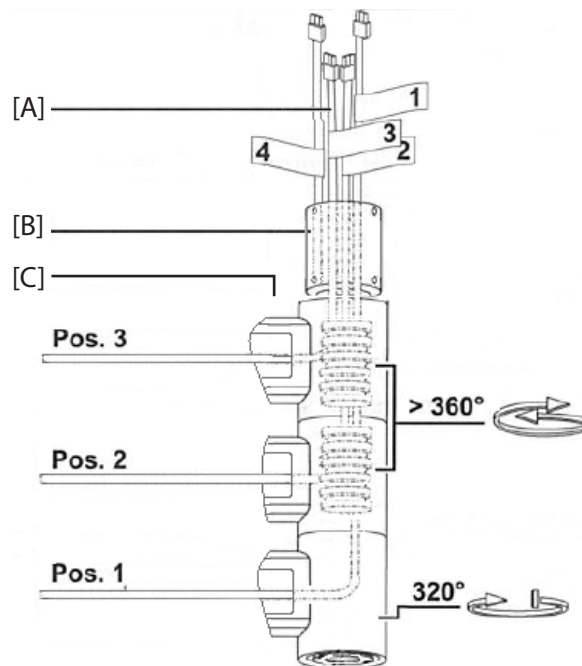
Installation: Electrical

Labelling of the Extension Leads

Supply lines in the central axis:

The supply lines [A] in the central axis [B] are identified with numbers. The numbers identify which supply leads [A] are for which extension arm [C]. For example, number 1 identifies the supply lines [A] for the lower extension arm [C] in Position 1.

Item	Description
A	Extension Leads
B	Central Axis
C	Extension Arm
D	Flanged Ceiling Tube

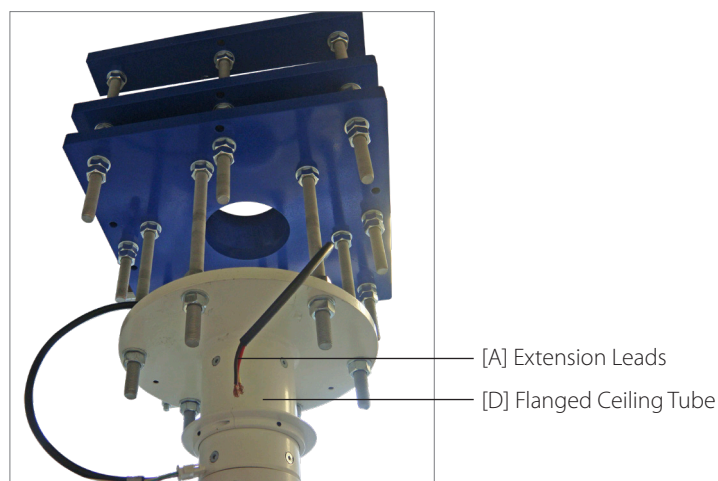


Routing the Extension Leads



WARNING – Electric Shock Hazard:

- If the extension leads are damaged, the pendant system may be live.
- Carefully route the extension leads [A] through the flanged ceiling tube [D] with gentle force.
- For extension arms without stop: route the extension leads [A] through the flanged ceiling tube [D] to the interface plate [A].



Routing the Supply Lines Through the Ceiling Tube



WARNING – Electric Shock Hazard

- If the supply lines, position 2 and position 3 are damaged, the pendant system may be live.
- Carefully route in the supply lines, position 2 and position 3.

Grounding The Flange



WARNING – Electric Shock Hazard Due To Defective Insulation:

- If the insulation is defective, the pendant system central axis may be live.
- Always ground the pendant system central axis.
- Strip the 2.5 mm² ground conductor (not supplied) and connect it to the grounding point on the flange.

Connecting The Power Supply

Qualification:

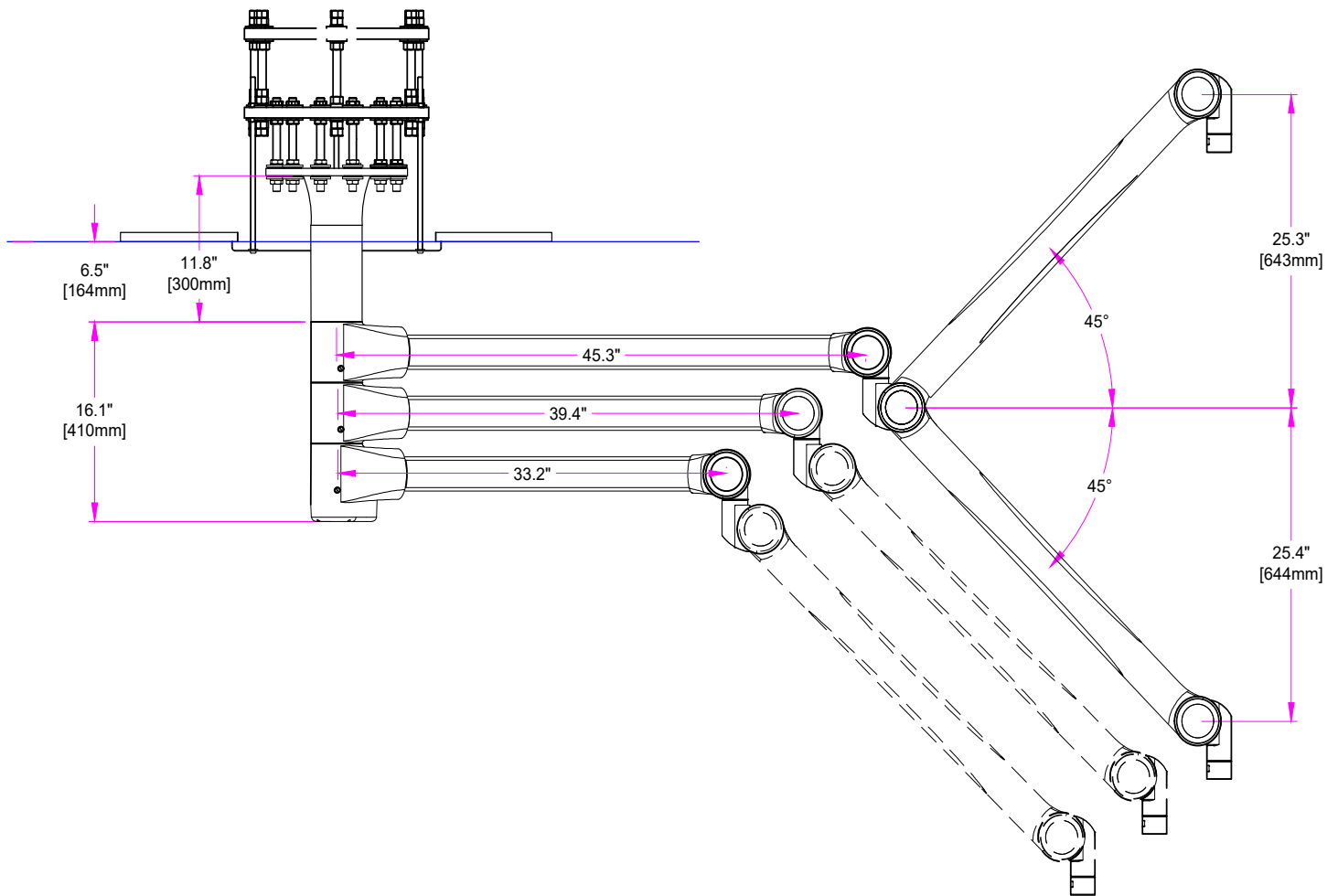
- Electrical connection of the pendant system central axis may only be carried out by a qualified electrician as per NEC 70.
 - Follow the Safety Instructions, pages 10 - 11.
 - Stranded supply lines installed by the customer must be fitted with wire end connector sleeves.
 - It is the customers responsibility to provide either a switch or breaker to allow for the disconnection of mains from the power supply.
1. All conductors must be secured to the interface plate using the strain relief.
 2. Feed the power supply leads through the strain relief.
 3. Connect the power supply lines to the terminal block, as shown in pages 40-42.

Installation: Spring Arms

Standard Spring Arms on the Central Axis - Series 1

The following diagram illustrates possible spring arm configurations.

- The pendant system central axis and the mounted spring arms are not intended for operation in potentially



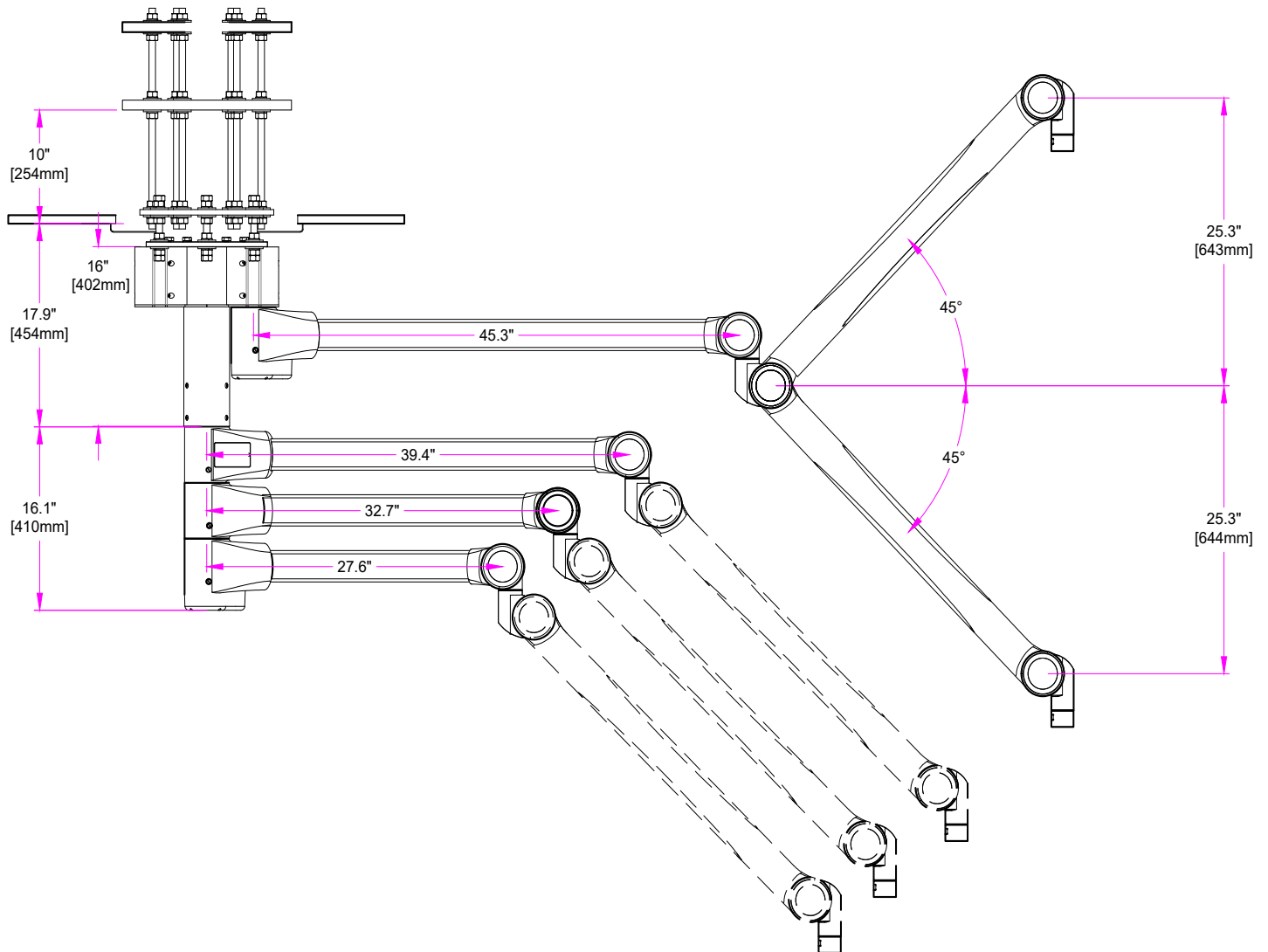
explosive atmospheres.

- The pendant system central axis is suitable for continuous operation.
- The ID plate can be found on the top extension arm.

Installation: Spring Arms

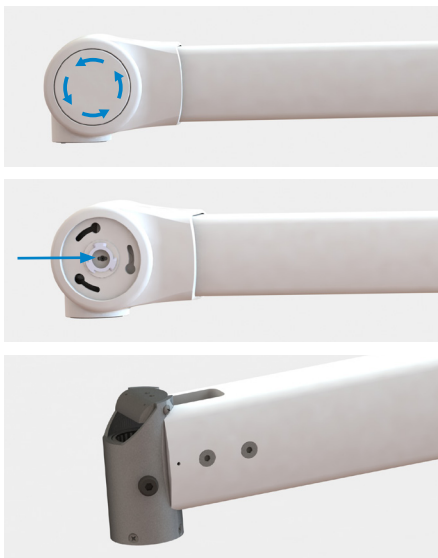
Standard Spring Arms on the Central Axis - Series 3

The following diagram illustrates possible spring arm configurations.



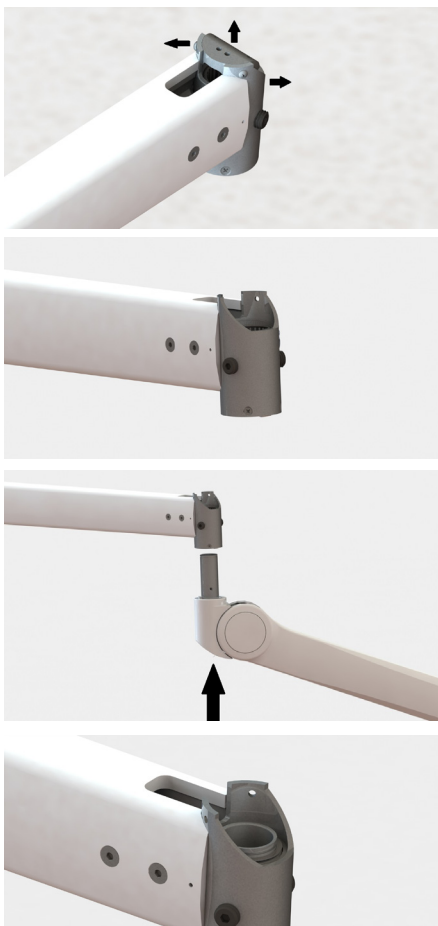
Installation: Spring Arms

Initial Setup

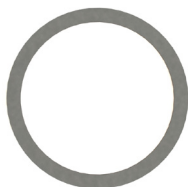


1. Press and turn the plastic cover cap on each side, remove them, and set them aside.
2. Use a 4mm Allen key to remove the two M4-6 screw securing the front plastic cover on each side and remove both the front plastic covers.

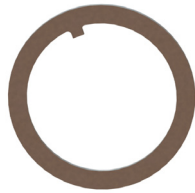
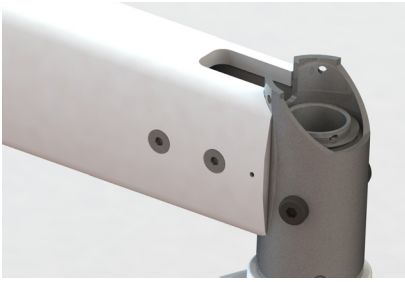
Installing/Removing the Spring Arm



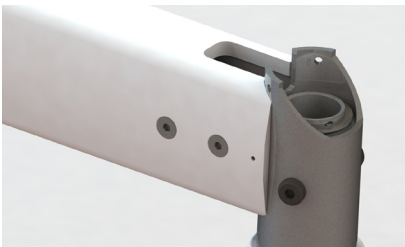
1. Use a Phillips head screw driver to remove the two 6-8 screws on either side on the top of the adaptor weld and remove the plastic slip ring holder.
Note: Be careful when dealing with the 9-pole male connector, if it gets bent, it will not mesh properly.
2. Loosen the two friction screws in the side of the adaptor weld. Slide the rear weld tube of the Spring Arm into the adaptor weld through the bottom. Ensure that the rear weld tube is inserted all the way in, pressure must be applied upwards to the area directly below the adaptor weld.
3. On the top side of the adaptor weld, put two spacer shims onto the extruding rear weld tube.



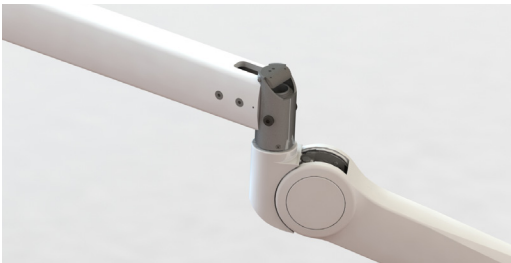
Installation: Spring Arms



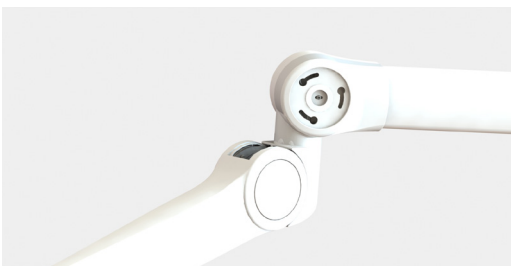
1. Place the tooth washer on top of the two spacer shims. Insert the tooth into the hole located in the back of the rear weld tube and slide the tooth washer over the lip until it sits around the rear weld tube.



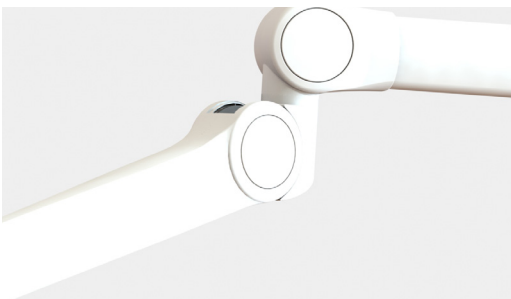
2. Lock the Spring Arm in place using a retaining ring. Make sure that the retaining ring sits fully in the groove cut out.
 - For Oasis Spring Arms, use provided thick spacer. Tooth washer and 2x snap rings.
 - Ensure Spring Arm is positioned correctly. Pull down if necessary.



3. Remount the pole tab using the two 6-8 screws on either side of the adaptor weld. Ensure friction screws are put back and screwed in all the way.



4. Clip the front plastic cover pieces together and secure them in place using two M4-6 screws on either side.

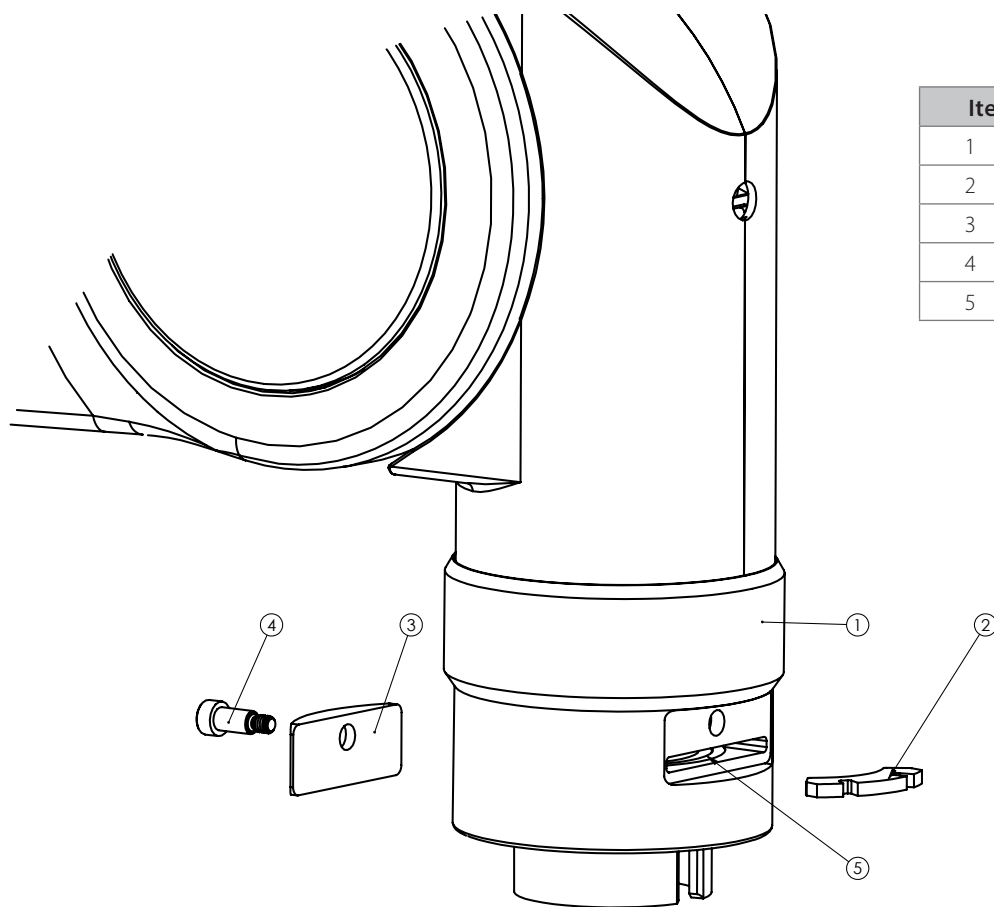


5. Replace the plastic cover caps by pressing inwards and turning. Ensure that any labeling is positioned right side up.

Installation: Spring Arms

Removing the Safety Plug

1. Use a 2 mm Allen key to unscrew the M3 screw [4] and take out the cotter holder cover [3] from the back.
2. Rotate the cotter holder [1] 180° and slide it upwards so that the slot lines up with the slot in the stem [5]. The cotter pin [2] should be exposed.
3. Using a small flat head screwdriver, remove the cotter pin [2] from the groove in the device end stem.
4. Once the locking key has been removed, slide the safety plug out from the light-head end of the spring arm.



Item	Description
1	Cotter Holder
2	Cotter Pin
3	Cotter Holder Cover
4	M3 Screw
5	Groove

Installation: Amico iCE30m LED Light

Installing the Amico iCE30m Lighthead



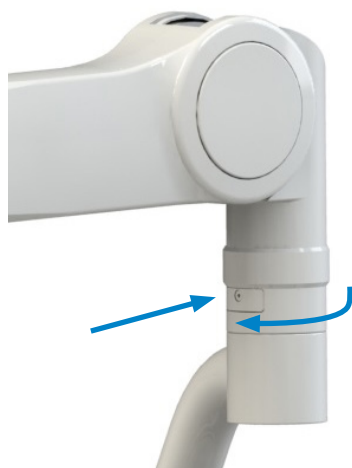
1. Insert the cotter holder onto the front weld tube with the larger diameter side towards the spring arm. Slide the cotter holder all the way up the front weld.



2. Note that Monitor Spring Arms will have a ring stop inserted into the bottom of the front weld tube with the extruding tooth facing downwards.



3. While keeping the assembly straight, insert the end of the yoke upwards into the front weld tube. Use a cotter pin to secure the yoke in place.



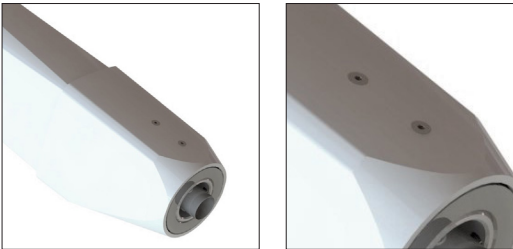
4. Slide the cotter holder down to touch the yoke and turn 180° to screw in the cotter holder cover using an M3 screw.

Installation: Amico iCE30m LED Light

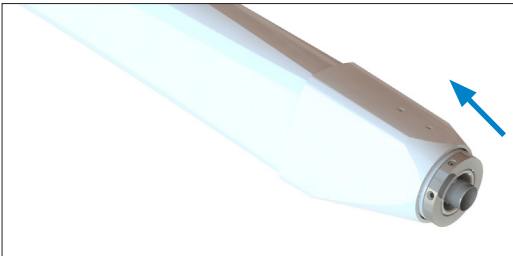
CAUTION - Installation and removal for service or inspection must be carried out by a hospital technician or a person with similar qualifications who has been trained by Amico Clinical Solutions Corp.

- Never perform an installation or removal of the LED light alone. Always have a second person to assist with the installation or removal.
- Always disconnect the spring arm system from the power supply when installing or removing the LED light. Failure to do so may result in electric shock.
- Always make sure the spring arm is at the highest position when removing the light. Failure to do so will cause the spring arm to spring upwards, and may cause serious injury.
- The LED light may separate from the spring arm if the key is not properly in place. This may cause serious injury. Always make sure that the key is installed properly.
- Failure to comply with load specifications may cause serious or fatal injuries. Ensure that the LED light load is within the specifications.

Normal System/LCH



1. Open the front section of the cover using the 2 x M3 screws located as shown in image. Following this slide the cover to access the mounting spot for the surgical light.



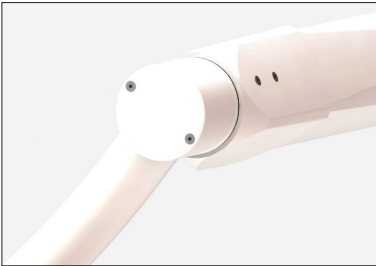
2. Locate 3 x M6 set screws that are currently installed at the front end piece as shown in image. Loosen these M6 set screws so that they will not interfere with the mounting of the yoke. These will be needed for the next step.
3. Install the light yoke to this section. Ensuring the flat portion of the yoke is in contact with the flat portion of the Spring Arm.

Note: Light will not have plastic bushings**

Installation: Amico iCE30m LED Light



1. Install the 3 x M6 -14 mm set screw. Tighten evenly and proportional to each other (step by step) so that there is even pressure on the yoke from all sides. Ensure the screws are tightened as much as possible by hand, so the top of the set screws are flush with the metal surface of the spring arm. If the set screws are left protruding from the spring arm, they are not tightened fully which is a safety hazard.

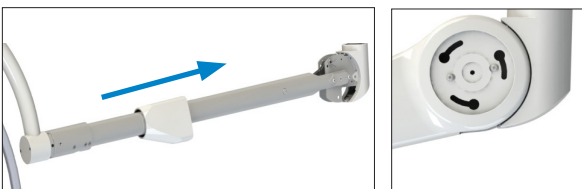


2. Install the cover from Step 1 to complete the light installation and install the 2 x M3 screws.

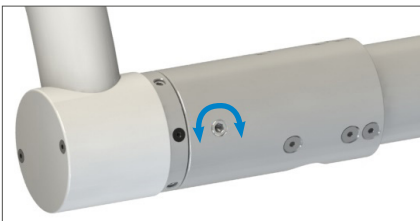
LCH - Friction Screws



1. To adjust the friction screws, remove the 2x M3 screws on the front cover. Also remove both cover caps at the rear of the side covers by rotating counter clockwise.



2. Remove the 2x M4 screws from the rear of each side cover. Pull the side covers apart, and slide the front cover backward.



3. Then you are able to adjust the 2x 5/16" friction screws on the LCH. Tighten to make the LED rotation stiffer, and loosen to make smoother.

4. Close the covers in the same way they were opened. Slide the front cover forward, press the side covers together, fasten screws, and place the cover caps.

Installation: Amico iCE30m LED Light

Normal System/LCH with Camera

1. Ensure 9-pole slip ring is removed from the light head.
2. Ensure the unit is disconnected from the power supply, with no possible accidental reconnection.



3. Install light head as a normal light head.
4. Fish camera cable through the yoke axle. The cables should now be arranged as shown below.



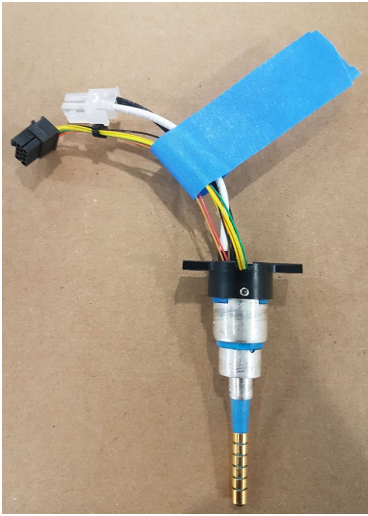
Fish the Power Cable through this end.

Power Cable

5. Align connectors of the 9-pole slip ring.

Installation: Amico iCE30m LED Light

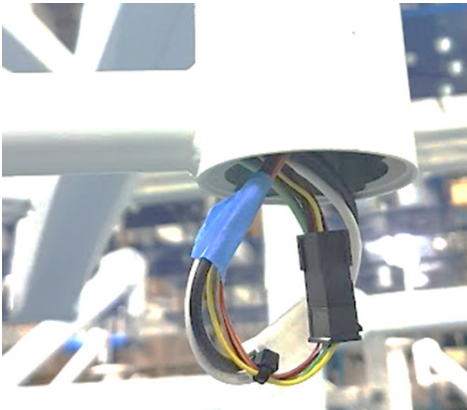
6. Connect the 9-pole slip ring to cable by joining the connectors and ensuring they are secure.



9-pole slip ring



7. Push the cables into the yoke axle as seen below and insert screws to keep in place.



Connect Cables and push them up

8. Install protective cap of the light yoke with the Allen Key. Re-install or re-tighten the brake screw as necessary.



Protective Cap of the Light Yoke

Installation: Amico iCE30m LED Light

Touch Handle Servicing

Follow the steps below whenever a Touch Handle needs to be serviced.

1. Remove the Light Handle by pressing in the pins and pulling the Handle off.



2. Use a 1/16" Allen Key to loosen the set screw holding the Touch Handle.



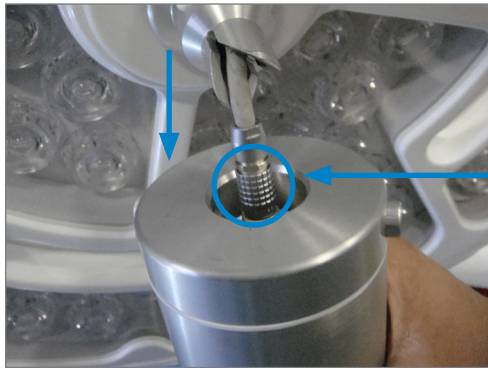
3. Pull the Touch Handle out and disconnect the black connectors.
4. At this point the Touch Handle can be serviced or replaced.
5. Complete the preceding steps in reverse to install the Touch Handle.



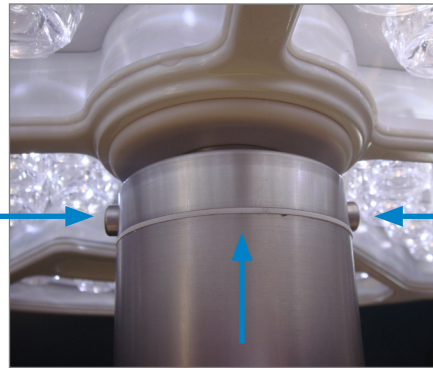
Installation: Amico iCE30m LED Light

Installing in Light Camera (Optional Accessory)

1. Connect the Lemo Connector to the camera.



Connector Jacket



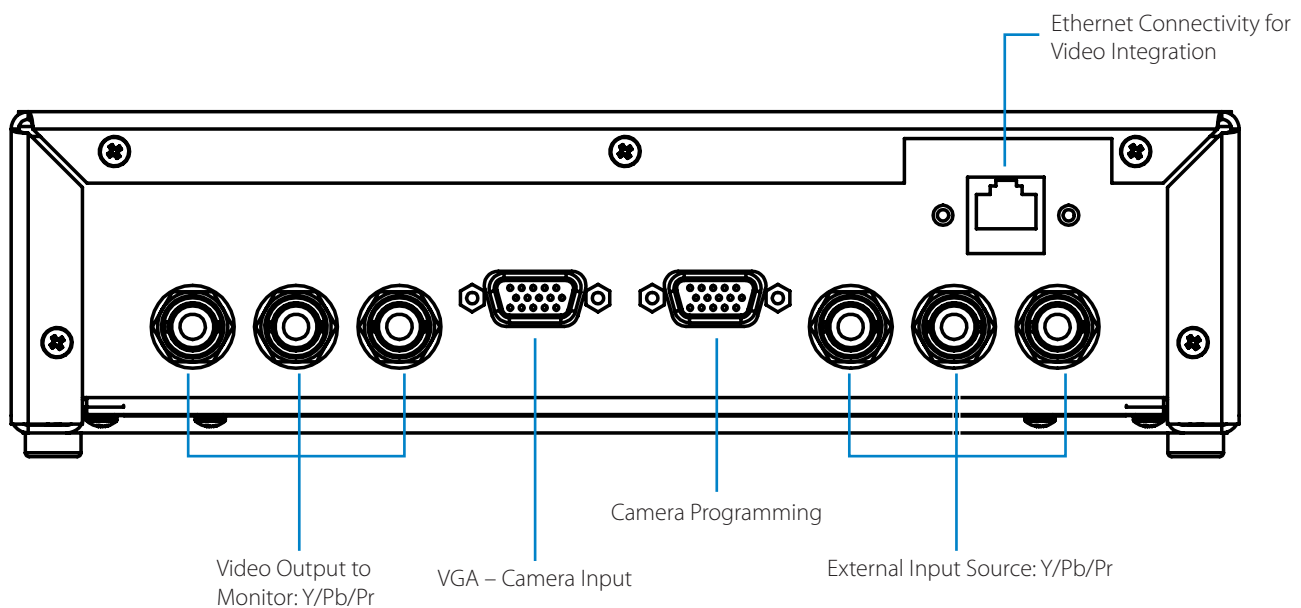
Release Button

Release Button

2. Install camera on light.
3. In order to remove the camera press the two release buttons highlighted by the arrows above.
4. To disconnect the connection, pull on the connector jacket only.
NOTE: Do not pull on cable.

Connecting the Camera Controller Box

1. Insert the 15-Pin VGA Cable into the Camera Controller Box's Input.
2. Connect the Output of the Camera Controller Box to the monitor's Input.



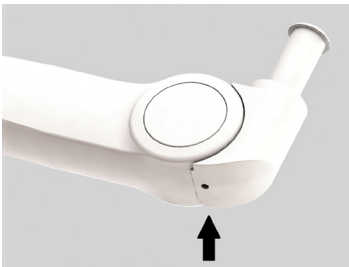
Installation: Adjustments

Brake Adjustment to Prevent Drifting



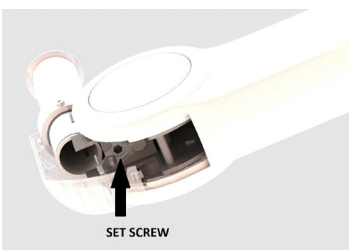
In order to conduct brake adjustments, the extension arm covers must be installed/ removed using a 2.5 mm hex screwdriver. Once the screws are removed:

1. Firmly grasp the ends of the covers, pull them apart until they separate from one another and are free from the arm.
2. Tighten or loosen the friction screws as needed.
3. In order to install the covers, line up the tabs and slots and then press in.
4. Tighten the screw.



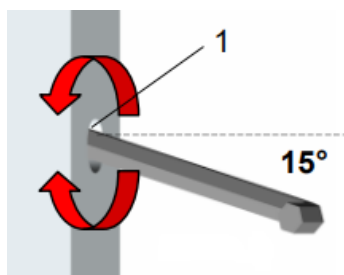
To adjust tension of the spring arm, use a 6 mm T-handle and turn:

1. Clockwise to decrease tension.
2. Counterclockwise to increase tension.



To adjust the height, use a 5mm T-handle through the front and turn:

1. Clockwise to limit the height.
2. Counterclockwise to allow for maximum height.



Add screws to limit the LCH spring arm height. Use a 5mm T-handle to limit the height.

Installation: Adjustments

Installation/Removal of the Spring Arm

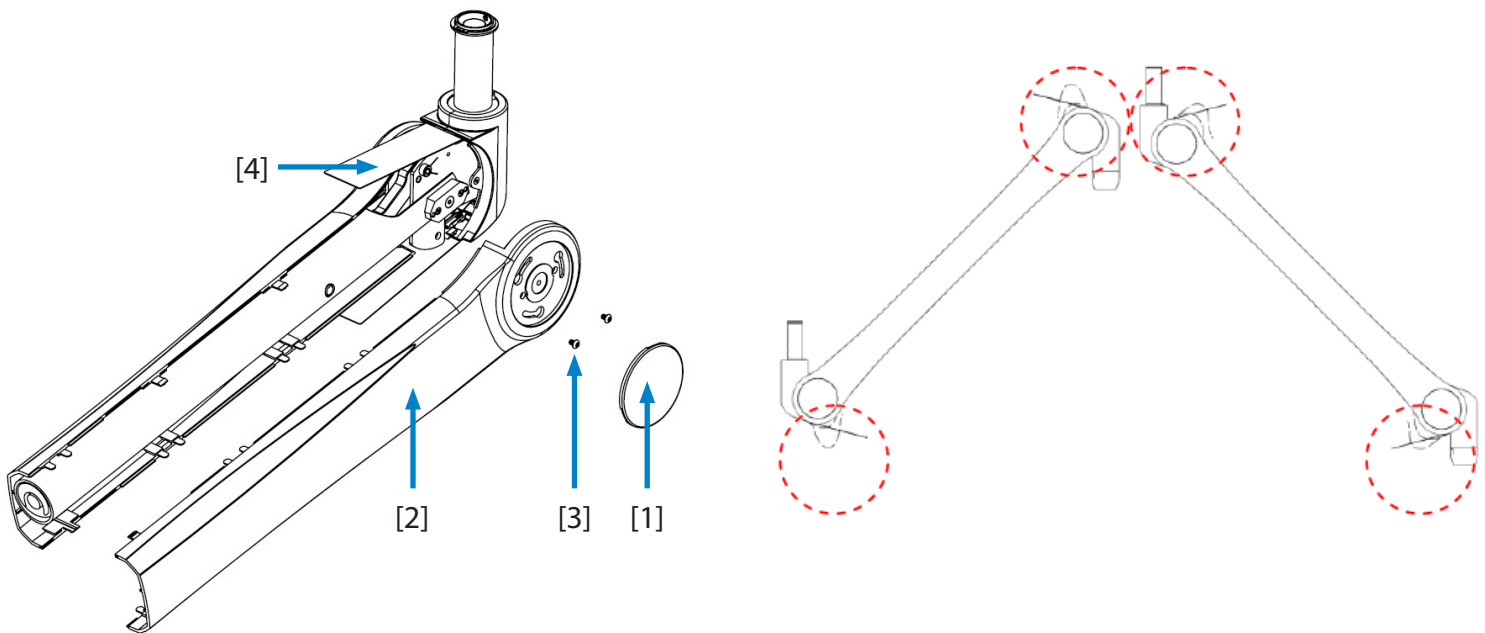
In order to access the spring arm to carry out load, parallel and vertical adjustments; as well as access for cable routing, you must be able to remove the plastic covers surrounding the spring arm.

Removal:

1. Remove all four plug covers [1] first by rotating each one counter clockwise until you hear a *click* and removing them from the spring arm main covers [2].
2. Remove four screws [3] from one main cover using a 2.5 mm Allen Key and pry the first cover off.
3. Remove the last four screws from the second main cover, then remove the final cover. Be sure not to damage the sliding flap covers [4] when removing the main covers.

Installation:

4. In order to install the plastic covers, carry out the preceding steps in reverse.
5. Do not attempt to install the main covers with the sliding cover flaps installed.
6. Leave the flap covers extended and raise the spring arm to its highest and lowest positions and slide each flap into its groove when all other plastic covers have been assembled.



Item	Description
1	Plug Covers
2	Spring Arm Main Covers
3	Screws
4	Sliding Flap Covers

Installation: Adjustments

Load Adjustment

Drifting

If a spring arm supports a load that is greater (or less) than the force of the spring, the spring arm will not stay perfectly in place because the weight of the load pulls the spring arm downward (or upward).

Adjustment of the spring inside the spring arm will allow the user to fine tune the spring arms ability to support a load. Load adjustments must also be carried out during regular maintenance.

Risk of Damage to the Spring

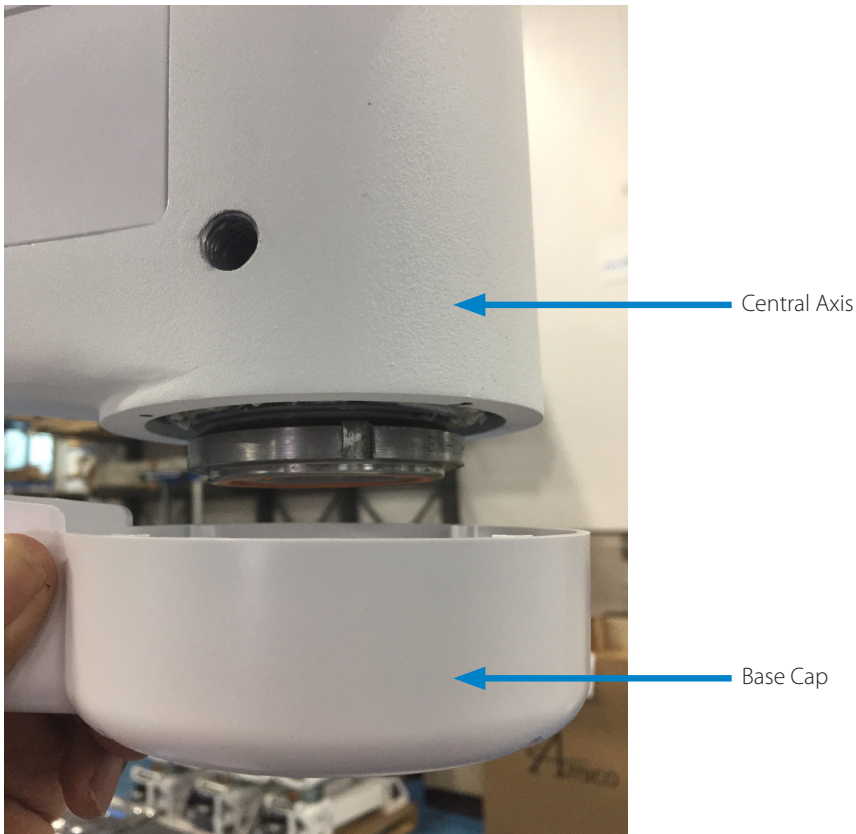
The spring arm supplied has a specific spring with a specific load range. Please refer to your product sticker attached to the arm for your exact load ranges. Not adhering to these load ranges may result in permanent damage to the spring, causing the arm to drift and prematurely fail. Replacement or service by a technician may be required.

Risk of Pinched Fingers

Fingers can be pinched or cut if inserted into the load adjustment window of the spring arm body. Exercise caution when making adjustments to components inside the spring arm body. Components inside will move when spring arm is moved up or down. Do not insert fingers or tools into the load adjustment window when the spring arm is moving.

Installation: The Base Cap

1. Center the base cap at the bottom of the central axis over the retaining lock nut.
2. Align the locking tooth into one of the notches in the nut at the bottom of the central axis.
3. Press the cover up until it bottoms against the nut. Lightly tighten the three set screws equally, until the cover is snug and secure.



Installation: Terminal Box

Installing the Terminal Box

There are two mounting options to installing the Terminal box:

- Drop Tube Mount
- Anchor Plate Bolt Mount (*Available upon request).

Option 1: Drop Tube Mount

1. Using two of the three M4 Pem Nuts (circled in Figure 1), with a 3 mm Hex Drive, fasten the Terminal Box on the top side of the Flanged Drop Tube using two M4 screws with washers (circled in figure 2).
2. Connect all wire harnesses per configuration.
3. Use cable tie all loose wired together to a structure

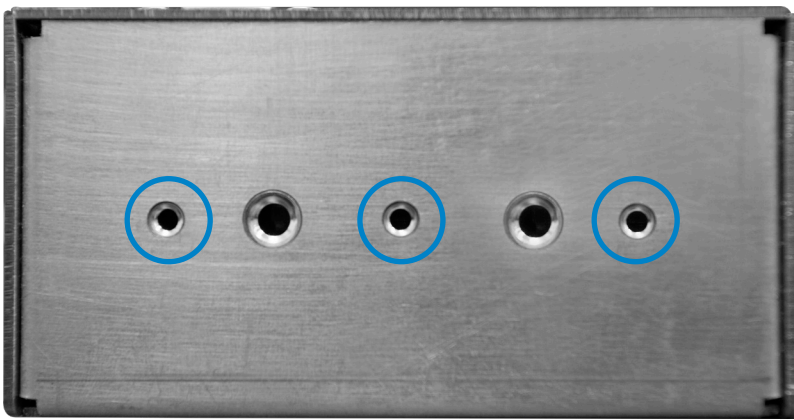


Figure 1

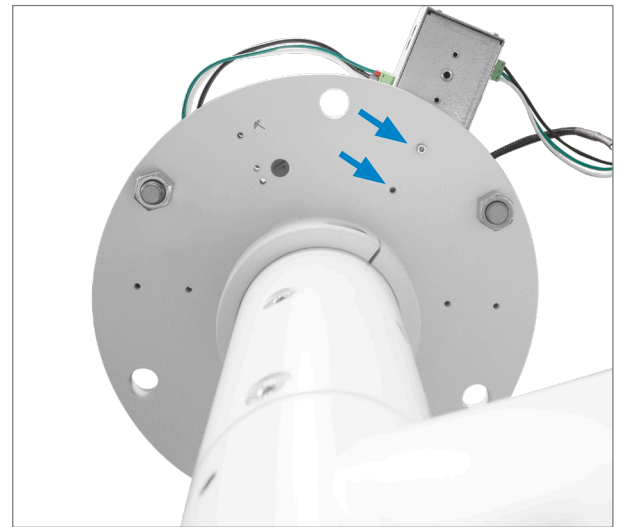


Figure 2

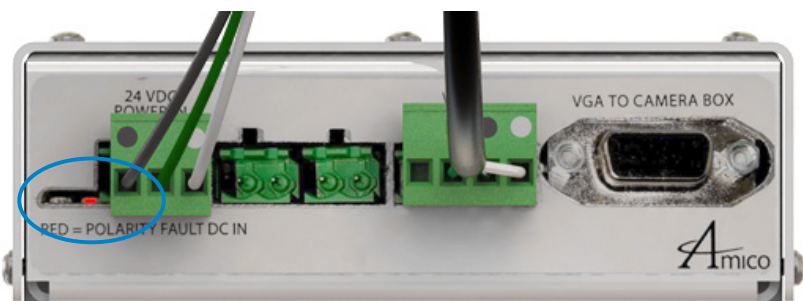
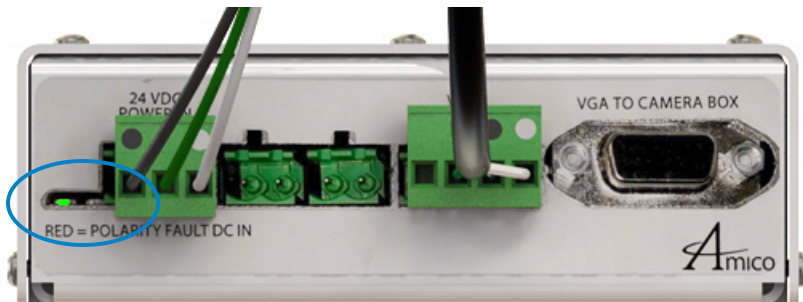
Part Number	Description	Quantity
FS-SCR-SC-M4-22-SS	M4X0.7-22 Socket Cap Screw	2
FS-WSH-M4-SS	M4 Flat Washer	2

Installation: Terminal Box

The iCE30m system comes with wire harnesses pre-installed on all related components. Plug in all the required components depending on your configuration.




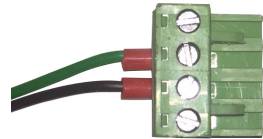



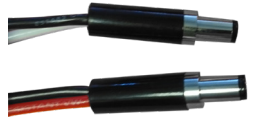
If the power supply is working properly, a green LED should turn on. If there is a fault with the power supply, a red LED would turn on instead. See Trouble Shooting for other instructions.

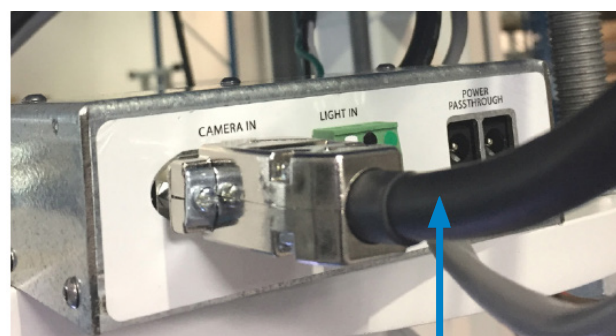


Installation: Terminal Box

Pre-Wired Harnesses

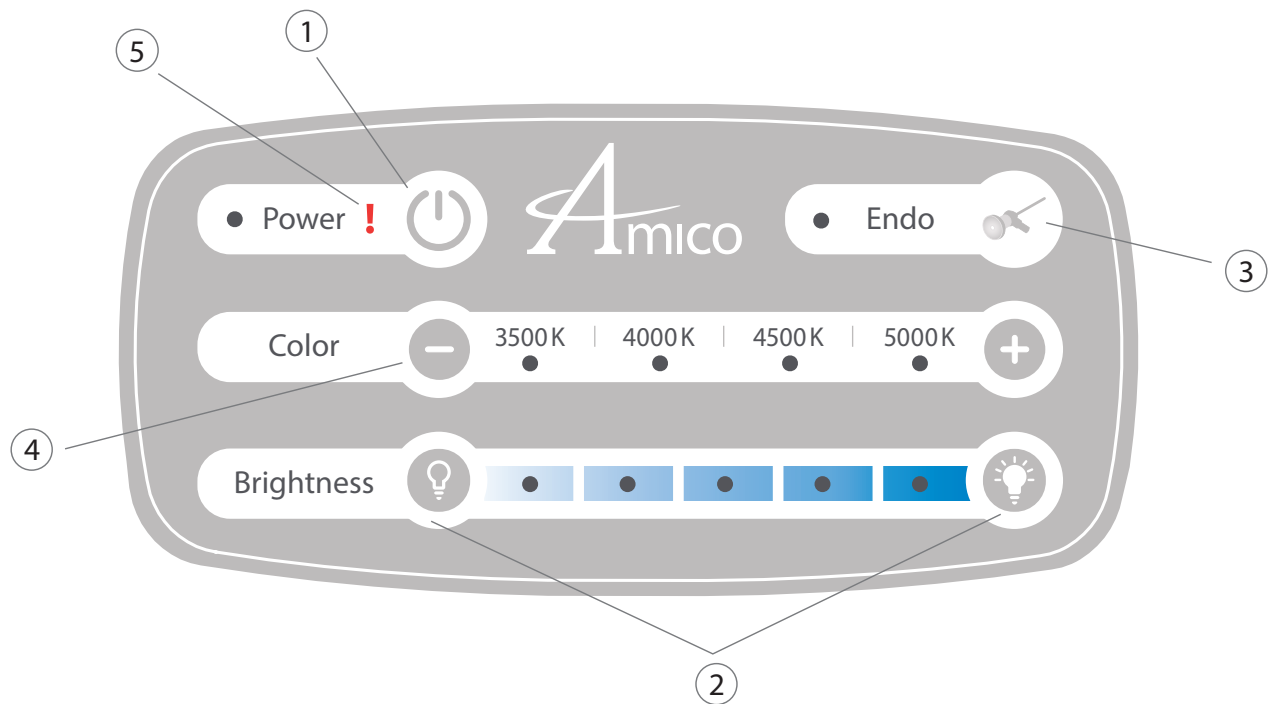
All harnesses are pre wired on to all of the components needed for installation.

Pre wired Harnesses	Connect To	Wiring Description	Reference Figure
iCE30m/iCE25m Lamphead	Light In	<ul style="list-style-type: none"> White: +24 VDC Black: Negative Green (18 AWG): Communication 	
iCE30m/iCE25m Wall Control	Wall Control	<ul style="list-style-type: none"> Blank Green (18 AWG): Communication Black: Negative White: +24 VDC 	
24 VDC Power Supply	24 VDC Power In	<ul style="list-style-type: none"> Black : Negative Green (12 AWG): Ground (if applicable) White: +24 VDC 	
Camera Control Box Cable	VGA to Camera Box	<ul style="list-style-type: none"> Standard SVGA-15 Cable Included in camera adder and spring arm camera units 	
Camera Video/Data Cable	Camera In	<ul style="list-style-type: none"> Custom DSUB9 Cable Included in camera adder, camera ready and spring arm camera units 	
Camera Power Cable	Power Pass Through	<ul style="list-style-type: none"> Custom Barrel Connectors Positive Centre; +12VDC Included in spring arm camera units 	



Camera cable

Operation: The Amico iCE30m LED Light



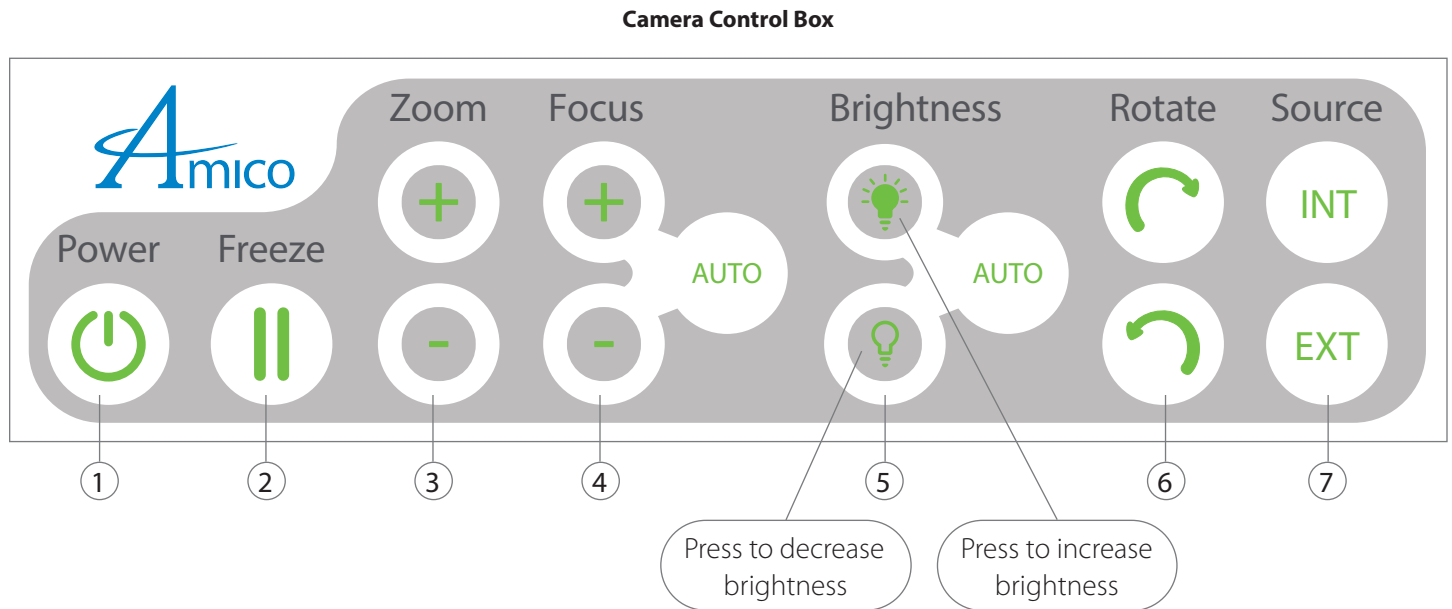
Lighthouse Control Panel

1. Turning the light ON and OFF: The LED will light up when the lamp is in the ON position.
2. Adjusting the light brightness: The brightness can be adjusted to 50% - 100% (total of 5 steps). Brightness level indicators show the current brightness level of the LED.
3. Switching to Endo mode: To deactivate Endo mode you can either press the Endo button or press any brightness buttons.
4. The color can be adjusted from warmer to cooler from 3500 K - 5000 K. Use the + and - keys to adjust color.
5. A blinking red light indicates an issue with lamp head and activation of automatic backup board.
6. Wall control panel available as an option.

Operation : The Amico iCE30m LED Light

Wall Control Panel for Light (only if purchased)

- The Wall Control Panel will have the exact same features as the Lighthead Control Panel. The Wall Control Panel is a feature provided at an additional cost.



Camera Control Box (Camera Adder Only)

1. Pressing the Power button turns the camera On and Off. During initial boot up, there is a 1 minute delay as the IP address is obtained.
2. To freeze the image please press Freeze button. Press the button again to continue viewing with camera.
3. Zoom in and out as required with these buttons.
4. Adjust the Focus feature to focus on the required area. The Auto Focus feature is initiated automatically on startup for user convenience (the Auto button will light up for easy indication). To deactivate auto focus, press either of the two Focus buttons.
5. Adjusting the brightness (camera iris) of the camera as required. The Auto Brightness feature is initiated automatically on startup for user convenience (the Auto button will light up for easy indication). To deactivate auto brightness press either of the two Brightness buttons.
6. Rotate camera is unlimited (0° – 360°)
7. The internal source will be automatically pre-selected when camera is turned on. Press the Ext button to use other external video sources, to be displayed on the connected monitor.
8. White Balance: Place a white sheet in front of the camera such that the entire visible surface is occupied by the white sheet. Press and Hold the "Auto Focus" button for 5-6 seconds to trigger the white balance.

Operation: The Amico iCE30m LED Light

Automatic Emergency Backup Board

Amico iCE30m LED Lights come equipped with an automatic backup circuit board which ensures that the light works all the time.

Beam Size Adjustment

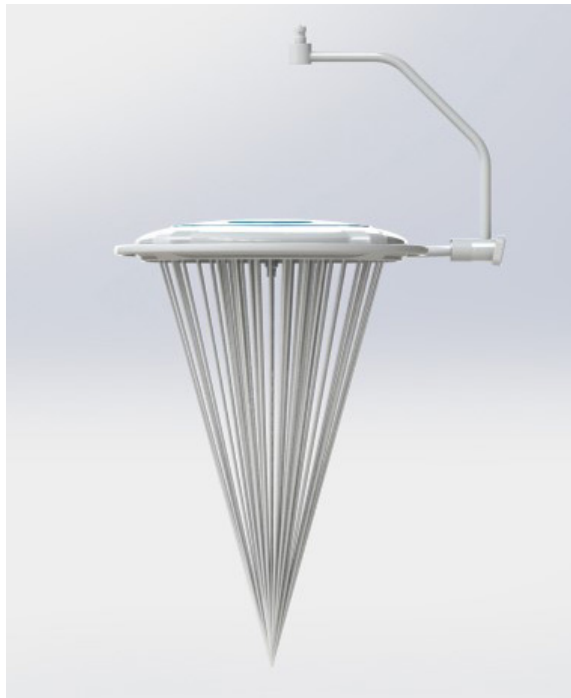
Amico iCE30m Series LED Lights come with a handle for adjusting the beams. By turning the handle, you can either increase or decrease the beam size. This creates a beam ranging from 7.6" - 12" (193 mm - 305 mm).

Beam Focused in to Form a 7.6" (193 mm) Diameter Light Field

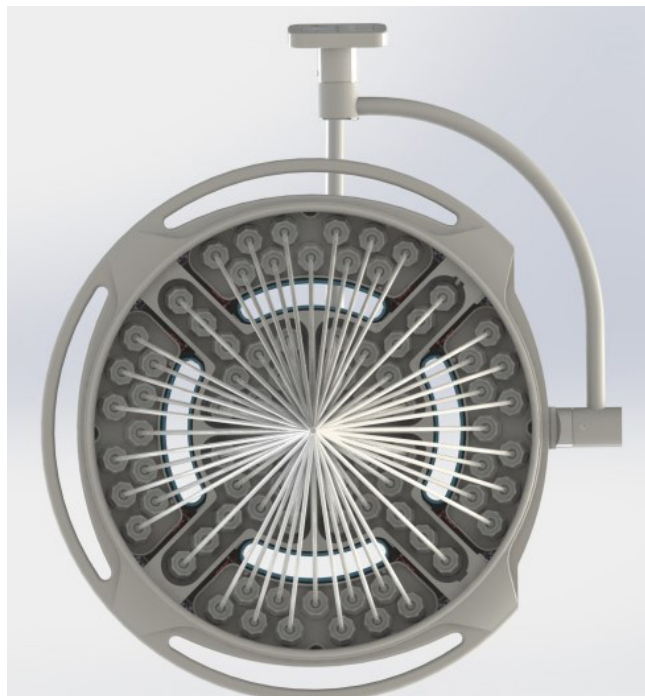


Use the Center Handle or the In-Light Camera to Decrease or Expand Beams

Operation: The Amico iCE30m LED Light



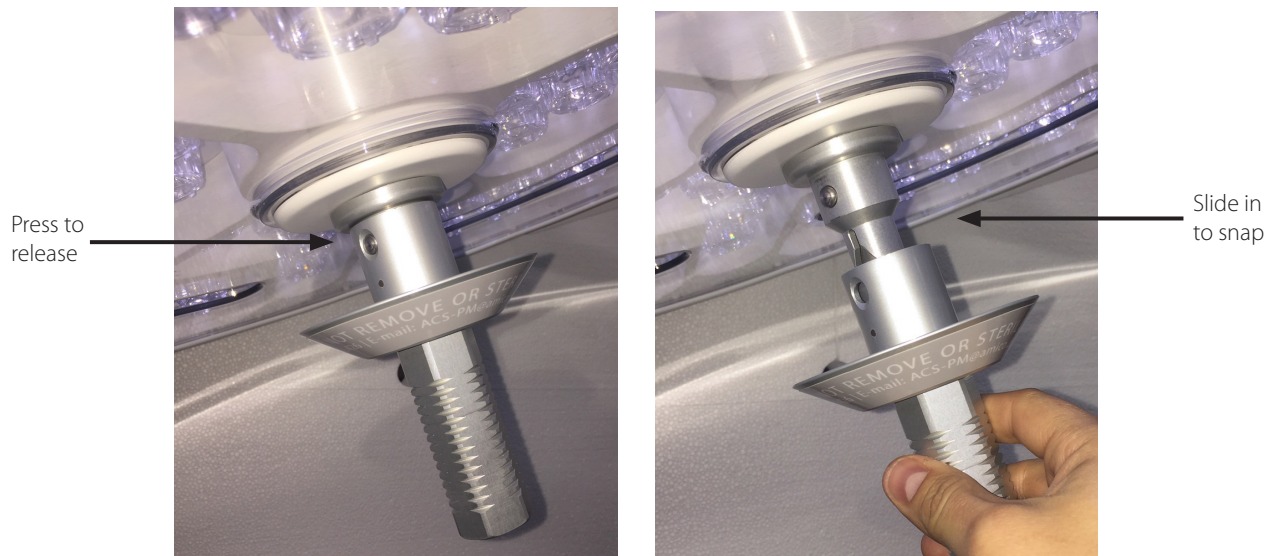
Expanded Beam



Operation: Cleaning the Amico iCE30m LED Light

Non-Sterilizable Handle (Plastic/Aluminum)

1. At delivery, the lamp is equipped with an aluminum or plastic non-sterilizable handle. This handle must not be sterilized as it will cause damage to the handle.
2. The handles will be supplied with disposable, sterile covers. Handle disposable covers often become unsterile during an operation. Therefore always keep extra disposable handle covers available for exchange.
3. An in-light camera may be purchased as an accessory to the lamp. In this case, you can remove the handle using the below steps:
 - To remove, press the release button and pull the handle away from the light.
 - To attach, simply insert the handle into the handle adapter until a "click" is heard.



Disconnecting and Reconnecting Non-Sterilizable Handle

Smart Handle (option available)

Smart handle offers doctors the capability to control the brightness levels and allows them to turn the lights ON/OFF. Smart handle operates using a specific non-sterile plastic handle and sterile cover. the functions of the smart handle as follows.

1. ON: Quick tap
2. Brightness: Each tap transitions brightness from Level 1 to Level 5 continuously
3. OFF: Long press



Operation: Cleaning the Amico iCE30m LED Light

Lamp Housing, Protective Lens and Support System

1. The Amico lamp system has a high-quality surface which can be cleaned with conventional cleaning agents.
 - Virox Accel TB
 - Virox 5
 - Dispatch Hospital Cleaner disinfectant towels with Bleach
 - Clorox Healthcare Professional Disinfecting Bleach Wipes
 - Sani-cloth super germicidal disposable wipes
 - Viroidin-X
 - Clinell cleaning wipes (Sporicidal & Universal)
 - Oxivir Tb Wipes
 - Avert Wipes
2. The lens system (front glass) is made of a high-quality clear acrylic.
 - a. Pay attention to the following during cleaning:
 - i. Never wipe over the lens system with a dry cloth (always clean with a wet/damp cloth).
 - ii. Do not use disinfectants with any alcohol.
 - iii. In addition the following disinfectants may be used to clean the lens.
 - Virox Accel TB (Accelerated Hydrogen Peroxide 0.5%)
 - Virox 5
 - Dispatch Hospital Cleaner disinfectant towels with Bleach
 - Clorox Healthcare Professional Disinfecting Bleach Wipes
 - Clinell cleaning wipes (Sporicidal & Universal)
 - Oxivir Tb Wipes
 - Avert Wipes
 - iv. Wipe the lens system after cleaning with an anti-static, smooth cloth.


* Always follow instructions outlined by the cleaning agent manufacturer. Do not deviate without approval from Manufacturer.

** Do not exceed the recommended cleaning time outlined by the manufacturer

*** Always wipe parts with anti-static, non-fluffy cloth to remove excess cleaning agent

**** Do NOT use any agents not listed above, as it may result in premature failure of product

Maintenance: Amico iCE30m LED Light

1. Amico iCE Series LED Lights are supplied with brakes on the suspension fixture and on the lamp housing. If necessary, adjust these brakes after installation.
2. If the lamp is difficult to move, or if it does not keep its position, the brake forces needs to be adjusted.
3. Preventive maintenance of the light should be done every two years. This includes a technical and mechanical check-up.
4. In order to keep the system working properly throughout its lifespan, we recommend that the hinges should be greased once a year with acid-free grease.
5. When adjusting the brakes, please refer to Installing the Central Axis Arms on pages 19-21.
6.  Before dismounting the lamp, set the height adjustment of the spring arm to the horizontal position.

Maintenance: Spring Arm

Bi-annual Inspection (to be completed by qualified technicians):

1. The spring arm and lighthead moves smoothly without any noise or grinding.
2. Locking key thickness must not be less than 0.060" (1.52 mm) thick and 0.250" (6.35 mm) deep at any point.
3. Ensure that the spring arm does not have any cracks or damage to the paint or plastic covers.
4. The spring arm should not drift when loaded.
5. Lubricate the moving joints with approved grease.

Maintenance: Spring Arm

Annual Inspection (to be completed by qualified technicians):

1. All labels are attached and are legible.
2. All spring arm components are not deformed.
3. All moving parts are free from squeaking and are not loose.
4. Rotational stops are working correctly.
5. All components are free from collision damage.
6. Welds are free from cracks.
7. Load, parallel, brake and vertical adjustments are conducted to ensure the spring arm is performing correctly. Refer to section, Installation: Adjustments, pg. 35-37.

Troubleshooting

iCE30m

Should problems arise with the use of the Amico Series iCE30m LED Lights, review the following chart. Find the fault and complete the recommended solution. If the fault is not found and or/the solution does not correct the problem contact Amico Clinical Solutions Corp.

Fault	Recommended Solution
The emergency red light indicator is "On"	Qualified Technician to replace the main board on the yoke
A button on the main mylar controller has stopped functioning	The mylar controller may need to be replaced
A button on the wall mylar controller has stopped functioning	The wall mylar controller may need to be replaced
Lighthouse is drifting	Tighten up the exposed screws on the yokes or the central axis using a 3/8" flat head screwdriver.
Glass is dirty	Follow "Operation: Cleaning the Amico iCE LED Light"
An LED is not functioning	The pod needs to be replaced by a qualified technician

Terminal Box

Description of Issue	Steps to Repair
The red LED is on and nothing is working.	Carefully check the power supply's voltage; the voltage should be 24 VDC. If not, then the power supply will have to be changed.
The green LED is on but the lights do not power on.	Check that the connection of the "LIGHT IN" is properly plugged in. If it is, there might be a problem with the Light.
The green LED is on and the Lights work, the camera however does not turn on.	Check if the VGA connection and the DSUB9 connection are secure. Also check the VGA connection on the camera control box is secure.
The LED's on the power supply box do not turn on, and nothing is working.	Make sure the main power is on. If it is and the LED indicator is still off, turn off the main power again and double check your connections.

Environmental Conditions

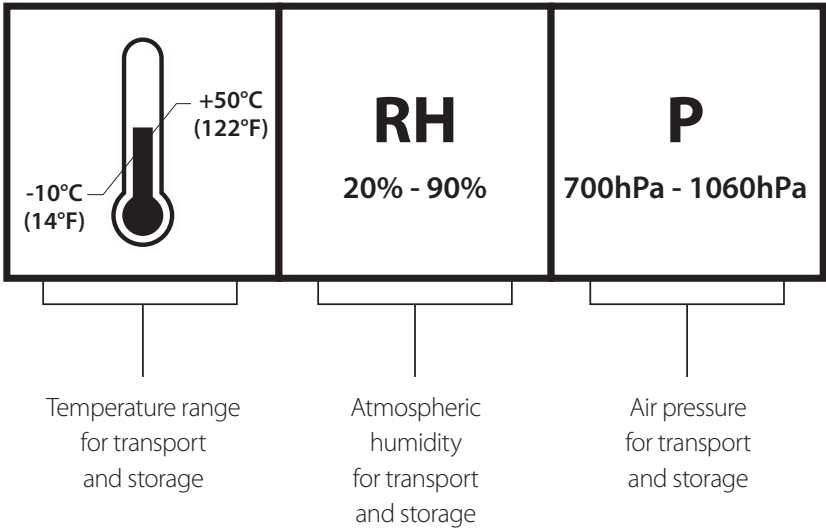
Operation

	MIN	MAX
Temperature	+10°C	+40°C
Relative atmospheric humidity	30%	75%
Air pressure	700 hPa	1060 hPa

Transport/Storage

	MIN	MAX
Temperature	-10°C	+50°C
Relative atmospheric humidity	20%	90%
Air pressure	700 hPa	1060 hPa

References on the Package



Electromagnetic Compliance Data for iCE30m Series

Guidance and Manufacturer's Declaration – Electromagnetic Emissions

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

Emissions Test	Compliance	Electromagnetic Environment – Guidance
RF Emissions CISPR 11	Group 1	The equipment or system uses RF energy only for its internal function. 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 equipment or system is suitable for use in all establishments other than domestic establishments 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	

Electromagnetic Compliance Data for iCE30m Series

Guidance and Manufacturer's Declaration – Electromagnetic Immunity

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


Immunity Test	IEC 60601 Test Level	Compliance Level	Electromagnetic Environment – Guidance
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	±1 kV for power supply lines ±0.250 kV for input/output lines	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	±1 kV line(s) to line(s) ±2 kV line(s) to earth	±1 kV line(s) to line(s) ±2 kV line(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 % UT (>95 % dip in UT) for 0,5 cycle 40 % UT (60 % dip in UT) for 5 cycles 70 % UT (30 % dip in UT) for 25 cycles <5 % UT (>95 % dip in UT) for 5 sec	<5 % UT (>95 % dip in UT) for 0,5 cycle 40 % UT (60 % dip in UT) for 5 cycles 70 % UT (30 % dip in UT) for 25 cycles <5 % UT (>95 % dip in UT) for 5 sec	Mains power quality should be that of a typical commercial or hospital environment. If the user of the equipment or system requires continued operation during power mains interruptions, it is recommended that the equipment or system be powered from an uninterruptible power supply or a battery.
Power Frequency (50/60 Hz) Magnetic Field IEC 61000-4-8	3 A / m	Not Applicable	Power frequency magnetic fields should be at levels characteristic of a typical commercial or hospital environment.

NOTE: UT is the A.C. mains voltage prior to application of the test level.

Electromagnetic Compliance Data for iCE30m Series

Guidance and Manufacturer's Declaration – Electromagnetic Immunity

The ME EQUIPMENT or ME SYSTEM is intended for use in the electromagnetic environment specified below. The customer or the user of the ME EQUIPMENT or ME SYSTEM should assure that it is used in such an environment.

Immunity Test	IEC 60601 Test Level	Compliance Level	Electromagnetic Environment – Guidance
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	3 Vrms	<p>Portable and mobile RF communications equipment should be used no closer to any part of the ME EQUIPMENT or ME SYSTEM, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter.</p> <p>Recommended separation distance: $d = 1.2\sqrt{P}$ 80 MHz to 800 MHz $d = 2.3\sqrt{P}$ 800 MHz to 2,5 GHz</p> <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 distance in metres (m).</p> <p>Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey (a) should be less than the compliance level in each frequency range (b)</p> <p>Interference may occur in the vicinity of equipment marked with the following symbol:</p> <div style="text-align: center;">  </div>
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2,5 GHz	3 V/m	

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.

- a. Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones, land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be accurately predicted. To assess the electromagnetic environment for fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the ME EQUIPMENT or ME SYSTEM is used exceeds the applicable RF compliance level above, the ME EQUIPMENT or ME SYSTEM should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the ME EQUIPMENT or ME SYSTEM.
- b. Over the frequency range of 150 kHz to 80 MHz, field strengths should be less than 3 V/m.

Electromagnetic Compliance Data for iCE30m Series

Recommended Separation Distances Between Portable and Mobile RF Communications Equipment and the Equipment or System

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

Rated maximum output power of transmitter W	Separation distance according to frequency of transmitter m		
	150 kHz to 80 MHz	80 MHz to 800 MHz	800 MHz to 2.5 GHz
	$d=1.2\sqrt{P}$	$d=1.2\sqrt{P}$	$d=2.3\sqrt{P}$
0.01	0.12	0.12	0.23
0.1	0.38	0.38	0.73
1	1.2	1.2	2.3
10	3.8	3.8	7.3
100	12	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance (**d**) in metres (**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.

Disposal

1. The surgical lamp doesn't contain any dangerous goods.
2. The components of the surgical lamp should be properly disposed of at the end of its shelf-life.
3. Make sure that the materials are carefully separated.
4. The electrical conducting boards should be submitted to an appropriate recycling facility.
5. The rest of the components should be disposed of in methods applicable to the contained materials.



Warranty Policy - Surgical Lights

Amico Clinical Solutions Corp. will warrant its manufactured equipment for up to five (5) years from date of installation. Amico Clinical Solutions Corp.'s warranty will not cover any disposable, sterilizable or single use products.

iCE series surgical lamp heads are warrantied to be free of defects for five (5) years from date of installation. During the first twelve (12) months after installation, Amico Clinical Solutions Corp. will, at its own cost, repair and/or replace any part on site or at the factory which has proven to be defective. After the first twelve (12) months, Amico Clinical Solutions Corp. will only provide replacement parts; shipping and installation costs will be borne by the customer.

Monitors are warrantied as per the warranty provided by the monitor manufacturer selected by the customer or Amico Clinical Solutions Corp.

Monitor holders are warrantied to be free of defects for five (5) years from date of installation. During the first twelve (12) months after installation, Amico Clinical Solutions Corp. will, at its own cost, repair and/or replace any part on site or at the factory which has proven to be defective. After the first twelve (12) months, Amico Clinical Solutions Corp. will only provide replacement parts; shipping and installation costs will be borne by the customer.

HD Cameras, in-light or spring arm mounted, are warrantied for a period of twelve (12) months from date of installation. During this period, Amico Clinical Solutions Corp. will, at its own cost, repair and/or replace any part on site or at the factory which has proven to be defective.

Suspension systems for the surgical lamps and monitor holders are warrantied for a period of twelve (12) months from date of installation. During this period Amico Clinical Solutions Corp. will, at its own cost, repair and/or replace any part on site or at the factory which has proven to be defective.

This warranty is valid only when the equipment has been properly installed as outlined in the Amico Clinical Solutions' Corp. specifications. The validity of this warranty also depends on the proper usage and timely servicing of our equipment according to Amico Clinical Solutions Corp.'s recommendations. Amico Clinical Solutions' Corp. does not cover damages as a result of shipment failures, accidents, misuse, abuse, neglect, mishandling, alteration, misapplication or damages which may be attributed to acts of God.

Amico Clinical Solutions Corp. shall not be liable for incidental or consequential damages resulting from the use/misuse of the equipment.

All claims for warranty must first be approved by Amico Clinical Solutions Corp.'s service department at: acs-service@amico.com or 1.877.462.6426. A valid Return Goods Authorization (RGA) number must be obtained from Amico Clinical Solution Corp. prior to commencement of any service work. Warranty work which has not been pre-authorized by Amico Clinical Solutions Corp. will not be reimbursed.



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www.amico.com

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