



YDE300 Series

LED Minor Surgery Lights

UserManual&InstallationGuide

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1.1 Supported Lights

The Following Models are supported in this Manual	
YDE300 Minor surgery Light	YDE300 Mobile Mounted Edition
	YDE300 Ceiling Mounted Edition
	YDE300 Wall Mounted Edition

1.2 Lighting Specification

Light Specifications	
Light intensity	80,000 lux
Colour Temperature	4,500K±500K
Colour Rendering Index (CRI)	>93
Light Field Diameter (d50-d10)	80-150mm
Depth of Illumination	800mm
Light Intensity Adjustment Range	10 - 100%
Radiated UV energy with wavelength less than 400nm (w/m) ²	<0.002
Input Rating	220V 50Hz
Input Power	50W
Average working life	>30,000 Hours

1.4 Component packing list

Fitting / installation should be the following items in the specified quantities.

YDE300 Mobile Mounted Pack List	Qty.
Lighthouse	1
Mobile Base with 4 wheels (2 lockable)	1
Lower vertical tubing	1
Upper vertical tubing + joint spigot	1
Suspension arm first section	1
Suspension arm Second Section (Hook Section)	1
IEC Power Lead	1
Allen Keys	2
Manual	1

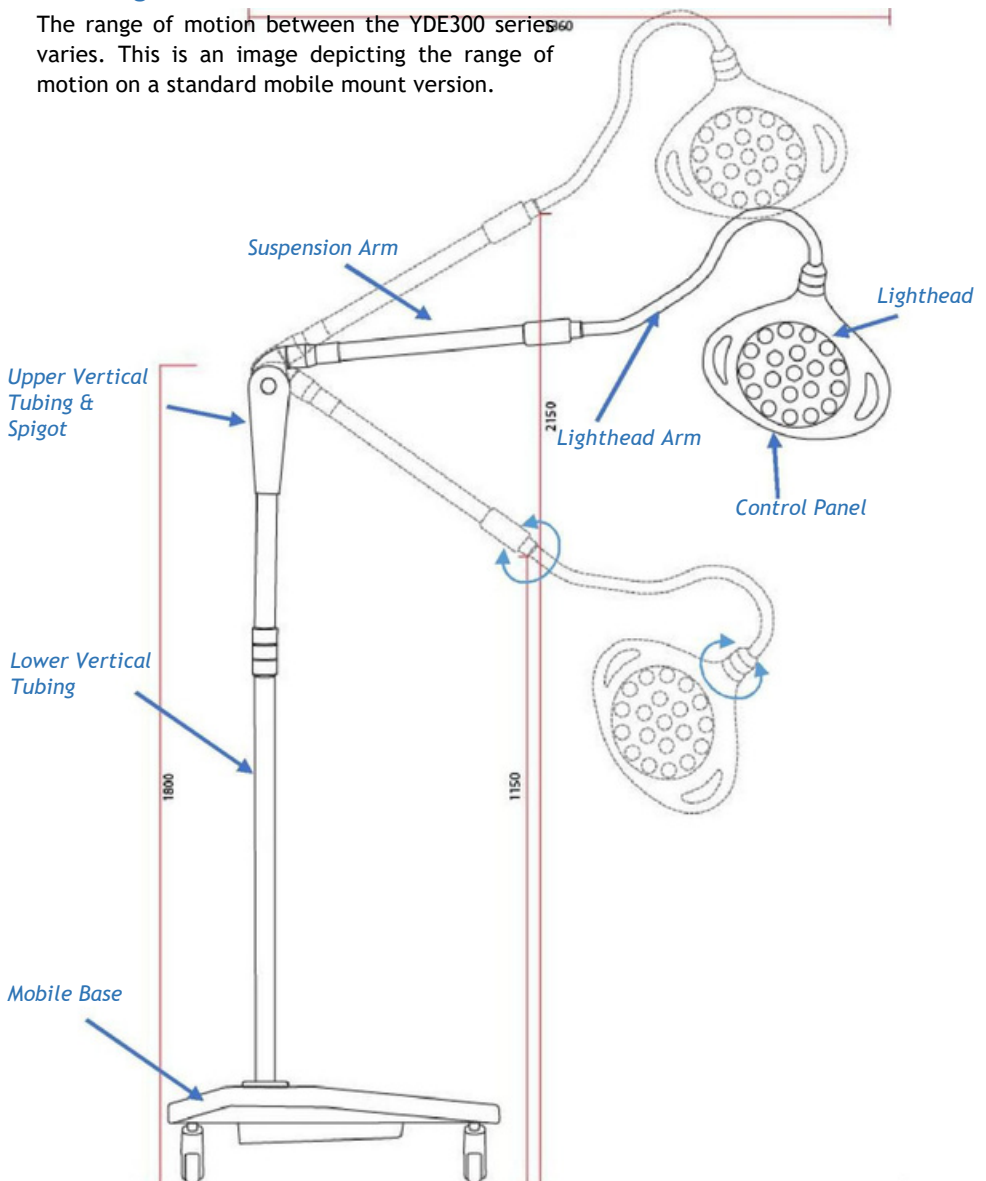
YDE300 Ceiling Mounted Pack List	Qty.
Lighthouse	1
Ceiling Plate with downtube & Transformer	1
Primary Rotation arm and arm boss joint	1
Suspension arm first section	1
Suspension arm Second Section (Hook Section)	1
Allen Keys	2
Manual	1

YDE300 Wall Mounted Pack List	Qty.
Lighthouse	1
Wall Plate with rotation arm	1
Suspension arm first section	1
Suspension arm Second Section (Hook Section)	1
Wall plate	1
Allen Keys	2
Manual	1

2. Operation

2.1 Range of Motion

The range of motion between the YDE300 series varies. This is an image depicting the range of motion on a standard mobile mount version.



2.2 Pre-Start Checks



Please check (when using the mobile version) that the power cable is without visible damage, harsh folds, knots or cuts in the rubberised coating.



Users should not look directly into the light as it is bright and will illuminate when powering on.



If you are using a mobile version; check that the cable is fully connected to the device and that the plug is fully inserted into the power socket, when switching the power on.



Please check (when applicable) that the head and arms are without visible damage, and all LED's are present in the head.

2.3 Powering On & Variable Intensity

The YDE300 Series uses a single button (on the side of the head) to power the light on and off.

Next to this switch are 2 controls for the lights variable intensity; press the + button to change the light intensity up and the - button to reduce it.



2.4 Adjusting the Lighthouse

The YDE300 Series lights are secured using a large white, balanced and adjustable arm. The head itself has forward and backward motion through the hinge joint connecting the head to the tertiary arm. The head can be adjusted through use of the handles located on the side of the head.



Care should be taken not to violently or forcibly adjust the head as this may damage the light.

3. Assembly Guide Section

-3.1 Considerations



The procedures below are detailed to a high level however *If in doubt please consult a qualified electrician.*

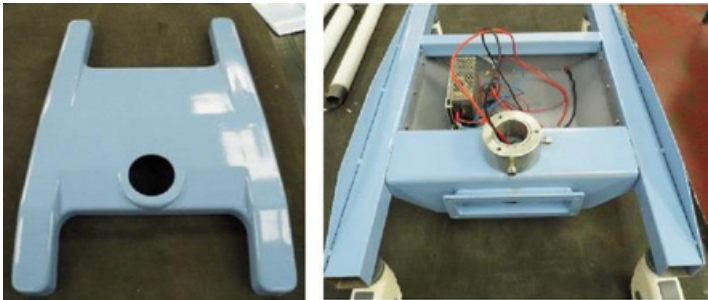
Live Electric Circuitry	All personnel working around live circuitry should be qualified and following proper procedures
Environmental Responsibility	Once our products are installed all packaging should be disposed of appropriately and recycled where appropriate and in accordance with local governing regulations.

3.2 Mobile Mounted Version

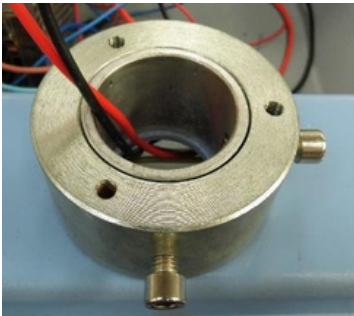
For the mobile assembly, the base should already have all casters in place, however if for some reason they are not, they can simply be pushed into the base and at the correct point they should click and lock in.

Making sure all the wheels are in place, set the base down facing up and lock the brakes of the casters: This will avoid movement during assembly.

Remove the top panel of the mobile base, this provides access to the electrical components and securing bolts for the vertical tubing.



Loosen the 2 screws on the side of the downtube hole.



Retrieve the primary vertical tubing from the packaging, check the cable connections are fed through the hole in the base of the light then feed the cables through the tube (grooved edge first) while inserting the tube into the base. Re-tighten the securing screws to lock the vertical tubing securely.



Once the primary tubing is secured, replace the blue base cover by sliding it down over the tubing and onto the base. Place the white plastic ring from the packaging on over the tubing and insert 3 locking screws.



Remove the 3 screws from the top half of the lower vertical tubing and place to one side, now find the connectors to the cable section from the secondary section of vertical tubing and attach these connectors to the first section of tubing.

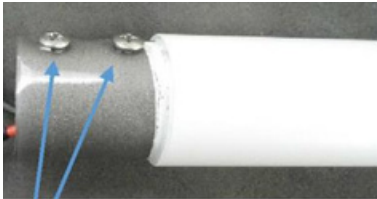


Warning, please observe the Cable Polarities and ensure that they match, incorrectly wiring the device will cause damage to the system

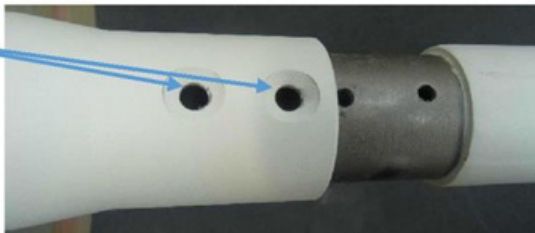
Tuck the wires inside and insert the upper vertical tubing into lower tubing. Now re-insert the 3 screws that were removed, locking the upper half of the tubing in place.



Remove the suspension arm from the packaging and remove the 2 screws that are in the end of the arm.



Remove screws
then re-insert
to lock sections
together



Connect the molex connections from the arm to the vertical tubing ensuring they match polarities. Once connected align the screw holes in both sections and insert the arm into the vertical tubing. Now re-insert the screws previously removed.



Warning, without the lighthead attached, this arm will spring upwards rapidly. Keep control of the arm at all times and avoid any obstructions in its path.

You will now need to attach the lighthead to the suspension arm. To connect the head you will need to loosen the grub screw points around the edge of the joint.



Warning, without the lighthead attached, this arm will spring upwards rapidly. Keep control of the arm at all times and avoid any obstructions in its path.

Pull the arm down to a workable height, someone will need to keep control of the arm whilst you connect the Molex connections and slot the lighthead onto the suspension arm. Fix the lighthead onto the end of the arm and ensure that one of the grub screws locates into the hole at the end, then tighten all the grub screws to secure the head in place.



Insert the power cable into the base of the light, then turn the power on at the base of the light and power the light on using the button located on the lighthead. Check that all lights illuminate. Check the arm and head for smooth and correct movement. If the head is drifting, or if the movement of the arm is stiff, use a hex tool to adjust the tensions detailed in maintenance section of this manual. Your new MT MEDICAL light is now ready for use.

3.3 Ceiling Mounted Version



The ceiling structure must be capable of handling up to a 500kg load.

The procedures below are detailed to a high level however ***If in doubt please consult a qualified electrician.***

Minimum Room Requirements	The YDE300 Series ceiling mounted light has a standard fixing height of 2.4m. the design works off a fixed plate system and has a large vertical motion.
Maximum Room Requirements	Please note, if the ceiling / fixing point of the light is above 2.5m then a customised ceiling mount will be required, (please contact MT MEDICAL for more information). If a suspended ceiling is in the room, you will need to construct a platform down to the required fixing height.
Live Electric Circuitry	All personnel working around live circuitry should be qualified and following proper procedures
Heavy or Difficult fittings	Fitting the ceiling plate can be difficult and aspects of the fitting may require more than one person; this work should only be attempted by appropriate and competent personnel.
Existing Environmental Factors	When fitting, considerations have to be taken for existing services such as; fire alarms, vents, lights, etc. along with interior ceiling construction and any surrounding hazard.
Environmental Responsibility	Once our products are installed all packaging should be disposed of appropriately and recycled where appropriate and in accordance with local governing regulations. The normal life span of the YDE300 series is up to ten years. We recommend the equipment should be discarded and recycled when reaching the end of its life.

These instructions are based on the assumption of a fresh fit into a room with no previous lighting structures. With installations onto sites with equipment already in place, we recommend that the previous lights' mounting plates be removed and the new ones fitted as if into a fresh fitting.

After concluding the structural stability of the ceiling structure it will be necessary to assess the construct and decide on the best course of action for installing the ceiling plate. There are various different methods for loading the plate onto the ceiling, below are various example methods that can be used.

3.3.1 Attachment methods and void suspension

The ceiling mount is split into 2 parts, the fixing plate and the ceiling plate. Please note, the recommended room height allowed for fixing requires the bottom of the ceiling plate to be no lower than 2.4m.

- **Bolted Directly into a structural slab and secured with chemical bonding**

This is our primary choice for mounting our lights to the ceiling structure, appropriate rawl bolts and chemical bonding should be used to secure the fitting.

- **Bolted to a Uni-strut Construct**

When using a uni-strut construct for mounting the ceiling plate, you should ensure that the uni-strut is cross braced to ensure it is secure and does not move.

- **Welded to structure**

The fixing plate is the component that would be welded to the structure; any welding must be assessed to be capable of handling a 500Kg load.

- **System anchored to composite deck**

A customised composite deck could be used either in conjunction with or as a replacement to the fixing plate. Any substitute parts must meet safety standards and be assessed by a competent structural assessor. The composite deck is designed to spread the weight of the light over an enlarged area.

- **System bolted to structure**

This system requires prior planning during the base construction phase of the ceiling above, bolts should be fed through the metal ceiling prior to the concrete base being poured.

These bolts should be based on the fixing plate layout in section 3.5.1

3.3.2 Lighting configuration

Dependant on the choice of attachment method, and whether the light is being attached in a void or directly onto an open surface ceiling; custom mounting aspects may be required.

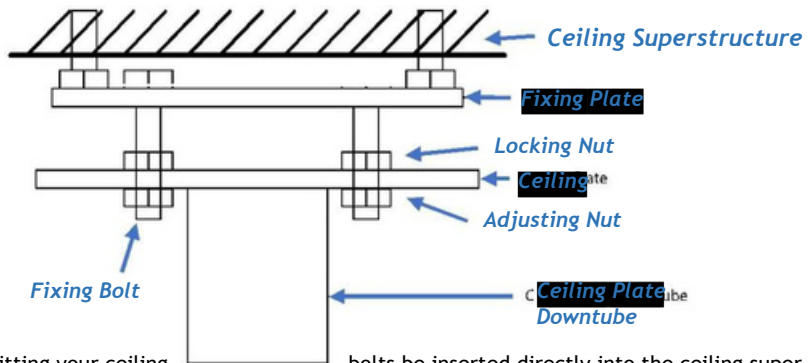
EYAL MEDICAL'S standard mounting recommendation is to have the fixing plate directly bolted into the structure of an open surface ceiling when possible.

Ultimately the mounting method used is the responsibility of the project engineer or fitter. This includes the specification of attachment hardware, lateral bracing and the suitability of the surface to be fixed to.

3.3.3 Installing the Ceiling plate

The location of the light should be decided by the end user / project manager or through schematical drawings.

Once the location has been decided it will be necessary to first mark the location of the fixing/ceiling plate.

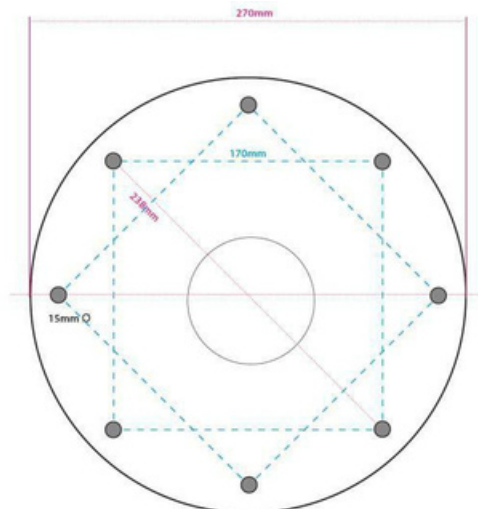


As shown, fitting your ceiling bolts be inserted directly into the ceiling super structure. The ceiling plate can however be fitted to an optional fixing plate instead. The fixing plate would then attach to the ceiling super structure instead of the ceiling plate. Whichever fixing method used; it is highly advisable that the plate being fixed to the ceiling, is secured with a minimum of 4 bolting points to ensure a complete and sturdy fit.

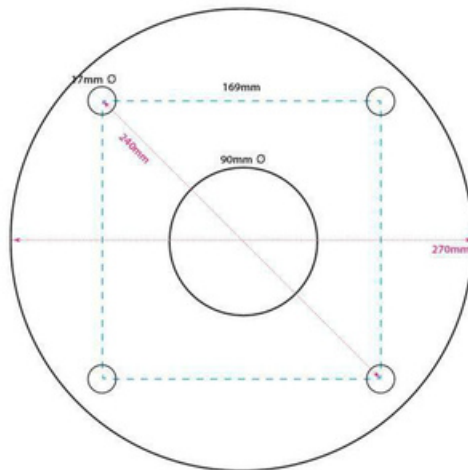
Once the fixing plate is fitted and secured, you will need to attach a locking nut to each bolt protruding from the fixing plate before attaching the ceiling plate. Now fit the ceiling plate to the fixing plate by sliding the fixing points onto the bolts from the fixing plate and attach a

2nd nut to the bolts.

Fixing plate Dimensions



Ceiling plate Dimensions



Once the ceiling plate has been fitted, it will be necessary to ensure that it is balanced on the vertical plane. This can be achieved by adjusting the 2nd level of nuts (the adjusting nut). Once this adjustment has been done tighten the 1st level of nuts down to the ceiling plate to lock the plate into position.

After any adjustment it will be necessary to check that all fixings are still sound and that locking nuts are tight.

3.3.4 Wiring and transformer layout

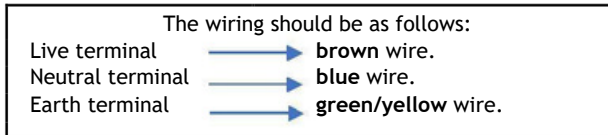


Before working on electrical connections please make sure that the power to the light is switched off at the source and secured so that it will not be turned on during your work.



The mains power supply should meet IEC60245-1 requirements and should be fitted with a fixed master switch. (The switch should meet IEC328 requirements and the directional movement parts of the switch should meet IEC447 requirements and the symbols should meet IEC60601-1 requirements.)

Ideally the cable used to power the light should be of a 1.5mm twin and earth type. EYAL MEDICAL recommends that the power supplied uses an earthed switched fused spur, protected with a 3 amp fuse.



The above wiring is for modern wiring applications (post 2000). On completion of the wiring, the next stage will be attaching the suspension arms to the ceiling mount.



The cables leading to the transformer live, earth and neutral are already attached. This is the connection point for your mains supply to the transformer used to power the light head. **You will not need to perform any electrical wiring on the transformer other than connecting the three power wires to your source.**



3.3.5 Primary rotation arm installation

The Ceiling plate has an integrated downtube system which cannot be modified after installation. If you require a customised length of downtube please contact EYAL MEDICAL.

The primary rotation arm is fitted to a 340 Degree arm boss system; the arm boss is the section that is inserted into the downtube and secured in place with locking screws. Before attaching the arm into the downtube; you should ensure the ceiling mount is absolutely true on the vertical plane.

This installation will require 2 or more people to fit, when inserting the arm boss into the downtube you will need to feed the cables from the arms up through a hole located on the downtube at the same time as the arm is attached.



Once secured you will need to connect the cables from the arm boss to the connections that come off the transformer (sometimes this is already done).

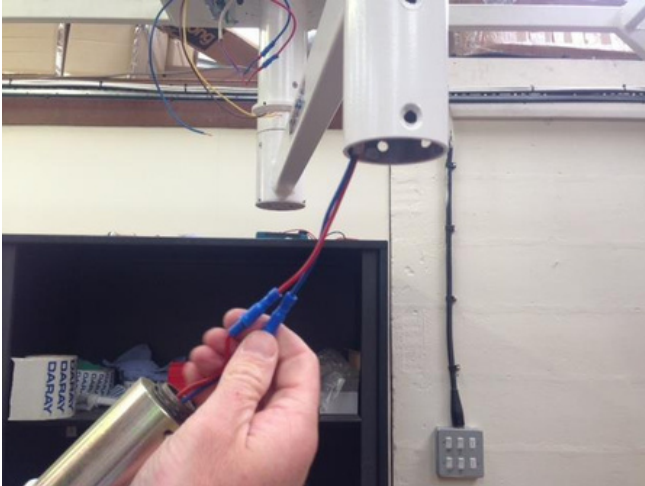


Warning, please observe the Cable Polarities and ensure that they match, incorrectly wiring the device will cause damage to the system

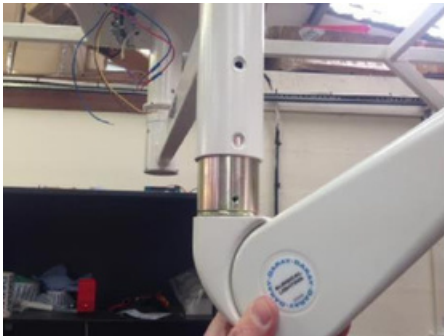
Before progressing onto fixing any other arms, ensure that the rotation arm is attached securely.

3.3.6 Suspension arm Installation

Make electrical connection between first and second arm, observing polarity.



Insert secondary arm into primary arm, ensuring all holes locate, and fix using four countersunk screws.



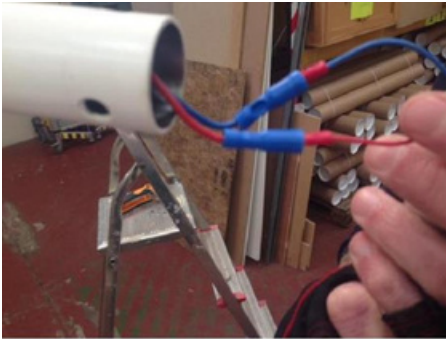
The two non countersunk holes are for adjustment of allen keys on shaft inside.

These must align.



Warning, Please observe the Cable Polarities and ensure that they match, incorrectly wiring the device will cause damage to the system

Make connection between second arm and bent hook arm, observing red/blue polarity.



Warning, without the lighthouse attached, the suspension arm will spring upwards rapidly. Keep control of the arm at all times and avoid any obstructions in its path.



Push arms together, fix with three screws.



Adjust Allen key underneath if necessary



Warning, without the lighthead attached, the suspension arm will spring upwards rapidly. Keep control of the arm at all times and avoid any obstructions in its path.

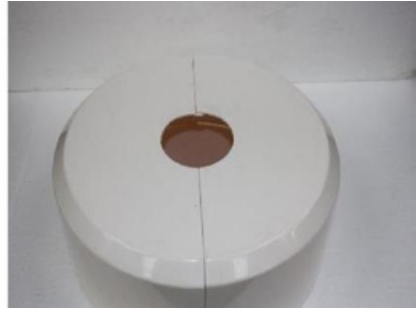
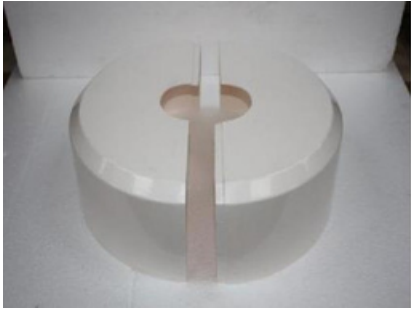


Supply power to the mains connection and power the light on using the button located on the lighthead. Check that all lights illuminate. Check the arm and head for smooth and correct movement. If the head is drifting, or if the movement of the arm is stiff, use a hex tool to adjust the tensions detailed in maintenance section of this manual. Your new EYAL MEDICAL light is now ready for use.

3.3.7 Attaching the Ceiling Cover

The last aspect of fitting is to attach the ceiling mount cover.

The primary cover is split into 2 halves. You will need to place the two halves over the ceiling mount and secure them together using the screws provided.



Once the two halves of the primary cover are connected, work the cover over the cabling and then attach the secondary securing ring around the downtube to lock the ceiling mount cover in place.



If the head is drifting, or if the movement of the arm is stiff, use a hex tool as indicated in section 4.6 of this manual to tighten the arms.

The light can now be tested by applying power and pressing the power button on the head. Check the arm and head for smooth and correct movement. Your new EYAL MEDICAL light is now ready for use.

3.4 Wall Mounted Version



The wall structure must be load bearing.

Power Supply	Please take the length of the supplied Power Cable into consideration when deciding on the location and placement of your unit.
Heavy or Difficult fittings	Fitting the mounting plate can be difficult and aspects of the fitting may require more than one person; this work should only be attempted by appropriate and competent personnel.
Existing Environmental Factors	When fitting, considerations have to be taken for existing services such as; cabinets, vents, light switches, etc. along with interior wall construction and any surrounding hazard.
Environmental Responsibility	Once our products are installed all packaging should be disposed of and recycled appropriately and in accordance with local governing regulations. The normal life span of the YDE300 series is up to ten years. We recommend the equipment should be discarded and recycled when reaching the end of its life.

These instructions are based on the assumption of a fresh fit into a room with no previous lighting structures. With installations onto sites with equipment already in place, we recommend that the previous lights’ mounting plates be removed and the new ones fitted as if into a fresh fitting.

After concluding the structural stability of the wall structure it will be necessary to assess the construct and decide on the best course of action for installing the wall plate.

3.4.1 Attachment methods

The wall mount system is split into 3 parts, the fixing plate and primary arm boss, the suspension arm and the lighthead. Please note, the recommended installation height is with the bottom of the suspension arm’s rigid section being no lower than 1.9m.

Note: The wall mounting plate should be installed on a load bearing wall.

3.4.2 Lighting configuration

EYALMEDICAL's standard mounting recommendation is to have the wall plate directly bolted into the structure of an open surface when possible.

Ultimately the mounting method used is the responsibility of the project engineer or fitter. This includes the specification of attachment hardware, lateral bracing and the suitability of the surface to be fixed to.

3.4.3 Installing the wall plate



To install the wall plate you may need more than 1 person. Align the mount to the wall and mark your fixing points. Ensure the light is completely true on both the horizontal and vertical planes.

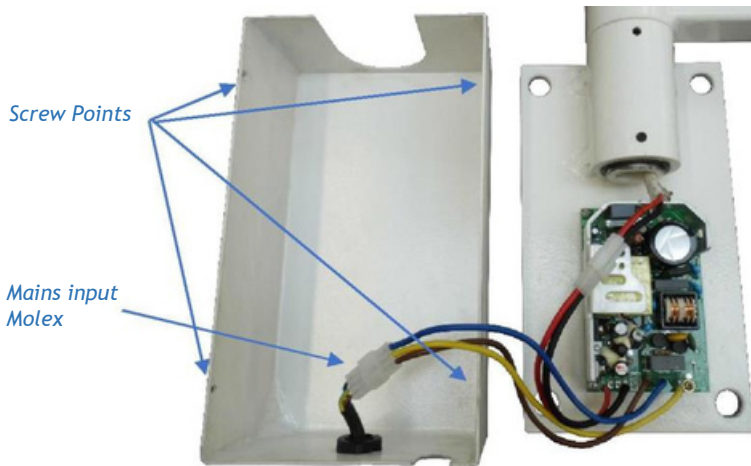
It is essential that this mount is true on both planes as otherwise it may cause the arms to swing uncontrolled.

With the fixing bolts secured, place a nut onto each of the fixings, then mount the plate onto the wall. Place a final nut onto the fixing bolt to lock the design in place.

3.4.4 Wiring and transformer layout

The last aspect of fitting is to attach the wall mount cover.

If previously disconnected re-attach the power lead to the transformer through the mains input Molex connection. Then, work the cover over the wall plate ensuring you do not catch the cabling. Once flush with the wall mount you will need to lock the cover in place using screws that will locate around the edges of the cover.



Supply power to the mains connection and power the light on using the button located on the lighthouse. Check that all LED's illuminate.

The light can now be tested by applying power and checking the arms and head for smooth & correct movement. If the head is drifting, or if the movement of the arm is stiff, use a hex tool to adjust the tensions detailed in maintenance section of this manual. Your new EYAL MEDICAL light is now ready for use.

3.4.5 Primary rotation arm installation

This wall system will have the primary rotation pre-installed into the wall plate / arm boss system and will not require any additional installation.

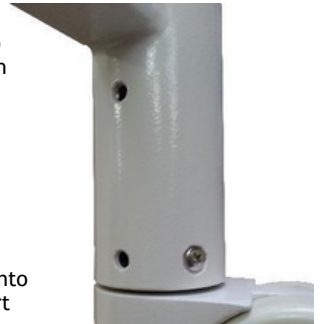


3.4.6 Suspension arm Installation



Warning, Please observe the Cable Polarities and ensure that they match, incorrectly wiring the device will cause damage to the system

With the wall mount and primary arm connected; the vertical suspension arm should be connected. This arm uses an internal rotary system which allows the joint to have 340 degree rotation. To install the arm you will need to first remove all the screws from each side of the arm joint spigot.



Connect the power cables and then align the screw holes in both sections with each other, then push the suspension arm's spigot up into the rotation arm (ensuring you do not catch the wires), then re-insert the screws to secure it in place.



Warning, without the lighthouse attached, the suspension arm will spring upwards rapidly. Keep control of the arm at all times and avoid any obstructions in its path.

3.4.7 Lighthouse Installation

The hook arm and lighthouse section needs to be attached to the suspension arm system. Remove all screws within the joint including the grub screw.



Warning, Please observe the Cable Polarities and ensure that they match, incorrectly wiring the device will cause damage to the system

Connect the Molex points and whilst ensuring the cables do not get caught, insert the spigot into the arm. Align the holes and reinsert all screws. Be careful when inserting the grub screw, insert until hand tight then slacken the grub 1/4 of a turn



Warning, without the lighthead attached, the suspension arm will spring upwards rapidly. Keep control of the arm at all times and avoid any obstructions in its path. You will now need to attach the lighthead to the suspension arm. To connect the head you will need to loosen the grub screw points around the edge of the joint.



Warning, without the lighthead attached, the suspension arm will spring upwards rapidly. Keep control of the arm at all times and avoid any obstructions in its path.

Pull the arm down to a workable height (someone will need to keep control of the arm whilst you connect the Molex connections and slot the lighthouse onto the suspension arm. Fix the lighthouse onto the end of the arm and ensure that one of the grub screws locates into the hole at the end, then tighten all the grub screws to secure the head in place.



Insert the power supply into the light, check that all the light modules are illuminated.

Check the arm and head for smooth and correct movement. If the head is drifting, or if the movement of the arm is stiff, use a hex tool to adjust the tensions detailed in maintenance section of this manual. Your new EYAL MEDICAL light is now ready for use.

4. Maintenance

The proposed maintenance is only a suggestion. Depending on the use of the product and the operating environment, this may need to be revised more often. EYAL MEDICAL would strongly recommend against “quick fixes” with tape, etc. If you cannot resolve a problem then please contact our helpline on 058-666-666-1 or email eyalmedicals@gmail.com

4.1 Maintenance schedule

Weekly checks should include:-	Range of movement testing, it should be light and easy to move throughout the range
	No visible signs of excessive wear.
Monthly checks to include:-	Check the downtube and thumb screws for wear and report as necessary
Six monthly checks to include:-	Check all electrical connections are sound and that there is no visible cable wear.
	All fixings to be checked and be of sound construction.
	Check optional battery back-ups for deformities and overheating

4.2 Safety Precautions

- For all cleaning work, power off the equipment and where possible completely power off any mains connection, only minimal cleaning fluids should be used.
- Please do not look directly into the light source when illuminated.
- If the equipment is dented or scratched this should not impact the usability of our lights however we advise that you do not attempt to cover over any damage as this will impact upon the effectiveness of any cleaning you do. Simply use an alcohol based cleaning spray when cleaning and pay special attention to any damaged areas.

(When applicable) If there is damage to the power cable or if exposed wire is visible

DO NOT USE



The YDE300 is to be disassembled and maintained only by a qualified technician.

4.3 Cleaning



Do not use strong chemical cleaning agents or any abrasive materials to clean the light. The light is not waterproof so the use of excessive amounts of cleaning fluids could cause serious harm or injury.

We advise that the light should only be dusted with a soft flannel cloth, and the front cover gently cleaned with an alcohol-based liquid (aerosol) spray, and wiped dry.

4.4 Fuses and their replacement

The YDE300 series mobile mounted light uses a transformer to control the power to the device. On the mobile mounted version there are 2 Qty. user replaceable fuses located at the base of the light next to the IEC plug socket, these are both 3 amp fuses.



For any internal transformer burnouts please contact EYAL MEDICAL.

The ceiling mounted YDE300 series uses a transformer to control the power to the device.

The system itself should be fitted into the mains via an earthed, switched fused spur.

We recommend a minimum supply fuse of 3 amps however this will be affected and dependant on individual circumstances such as power systems used per country.

The ceiling mounted version has 1 user replaceable fuse which is located on the ceiling plate next to the central terminal block as depicted below and in section 3.3.2 of this manual. For any internal transformer burnouts please contact EYAL MEDICAL.



4.5 Replacing the LED Bulbs

The LED bulbs in the YDE300 series are high quality and should not need to be replaced in the lifetime of the light, however if any bulbs need to be replaced, please consult a qualified electrician or contact a EYAL MEDICAL authorised service centre.

4.6 Adjustments

Rotation arm (ceiling version)

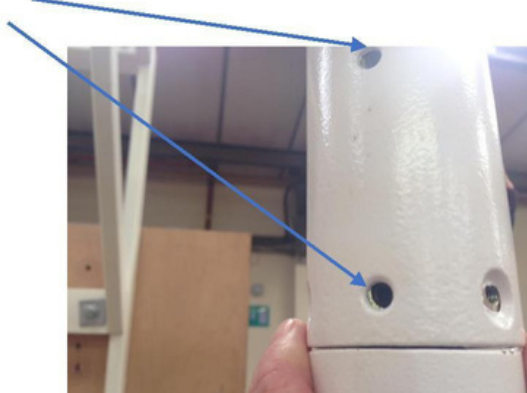
If the Rotation arm's start to drift then the ceiling mount system may have become uneven; to correct this issue you will need to adjust the relevant nuts on the ceiling mount, these are indicated in section 3.3.1 of the installation section in this user manual. The suspension arm can also have its tension adjusted by using a hex tool in the grub screw located on the opposite side of the arm boss to the main arm section.



Suspension arm (all versions) The suspension arms can be adjusted in several ways however its upward and downward movement is controlled with internal adjusters accessed through a sliding cover halfway down the arm. Slide the white plastic cover to the side to reveal a cut-out section. Insert a hex tool into the hole in the silver section and turn to the side to adjust the tension. The horizontal rotation of the suspension arm is controlled by an allen key at the two points pictured below.



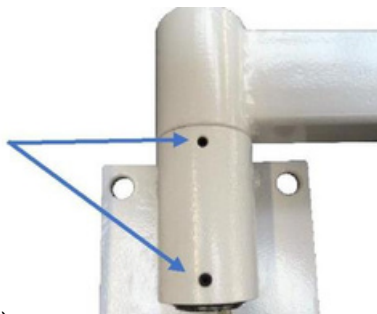
Adjustment points



Rotation arm (Wall version)

If the Rotation arm starts to drift then the wall plate may have become uneven; to correct this issue you will need to adjust the relevant nuts on the mount fixings to balance the rotation arm. The rotation arm can also have its tension adjusted by using a flat blade tool in the grub screws located on each side of the arm boss.

*Tension grub
screw for
arm rotation*

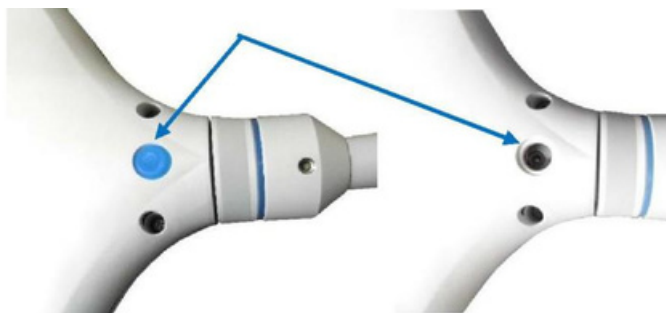


Lighthouse arm (all versions)

The side turning movement of the lighthouse arm is controlled by the central tension screw as indicated here.



Lighthouse (all versions) The tilting / forward and backward movement of the lighthouse itself can be tightened by using the tension screw located underneath a blue rubber bung at the rear base of the light as shown below.



Warning, without the lighthouse attached, the suspension arm will spring upwards rapidly. Keep control of the arm at all times and avoid any obstructions in its path.

Once all your required adjustments are complete, please check for correct movement. You should be able to place the light at its highest and lowest points with little to no drift/movement in the head once placed. We would recommend the lighthouse arm and head movements should not be overly tightened so they are stiff, and should not be overly loose which would cause drift.

4.6.1 Detaching Parts

De-construction of the lights should be done following a reverse order of the instructions in section 3.



Warning, without the lighthouse attached, the suspension arm will spring upwards rapidly. Keep control of the arm at all times and avoid any obstructions in its path.



The YDE300 is a completely enclosed lighthouse as such, the head should not be opened and is only serviceable by a EYAL MEDICAL Authorised service centre.

For any issues requiring internal service work on the YDE300 please contact EYAL MEDICAL, as unauthorised work will **invalidate the warranty**.

5. Troubleshooting Guide

Problem	Possible Cause	Corrective Actions
No light output	PowerSupply	Wall & Mobile Version - Check the plug top adapter is plugged in and switched on at the power socket and the base of the light. Ceiling Version - Check the power is on at your power source control point (switched fused spur) and that the transformer is producing power (this will require the use of a voltmeter to confirm a measurement).
	On/Off Button	Press the button on the side of the light to check if the light will power on (if not refer to power supply actions).
	Fuses	Visually check fuses then check continuity with meter
	Cables	Check the visible wiring and make sure the DC connectors between the light and the downtube / PSU are fully connected
Poor Light output	Power Button	Please check the variable intensity is not set to its minimum.
	Voltage in	Verify that the correct mains voltage and correct transformer is being used
	Voltage out	Verify correct secondary voltage at the end of the suspension arm
Light patch not focused	Light head	In the unlikely event that this happens, please contact EYAL MEDICAL
Arm drift sideways	Loosened screw	If a screw has worked loose please check all grub screws and follow the tension adjustment procedure detailed in section 4.6.
	Ceiling Plate not aligned	If the ceiling plate is not true or if the locking nuts have not been tightened; this may cause arm drift that cannot be controlled through the grub screw tension points. Please check the alignment of the plate and locking nuts, adjust as necessary.
Stiff Head movement or uncontrolled drift	Light head	Please check the grub screw connections as detailed in section 4.6.

ANNEX

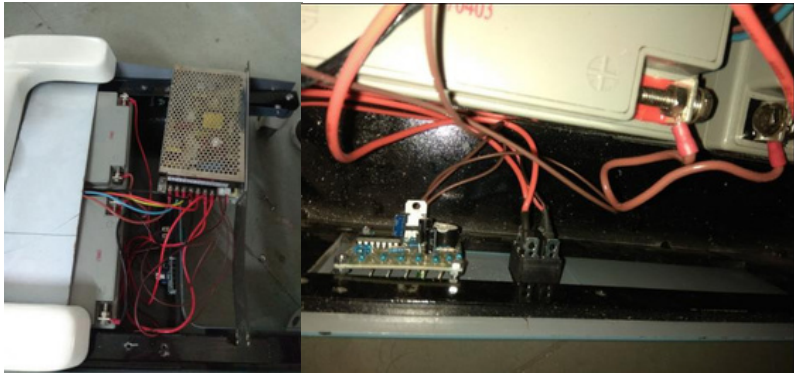
7.with battery



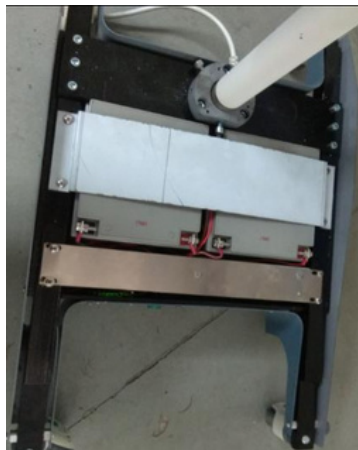
7.1 battery details



Main switch on/off



The wire lines are connected to power supply. One red line and one black line



Hidden Battery is inserted in foundation with white cover.

7.2 How to maintain the battery ?

7.2.1 Battery features:

1) Maintenance free professional design

The use of highly reliable professional valve control sealed design, battery no leakage, no acid mist, no corrosion to ensure, the gas generated during charging is absorbed and reduced into electrolyte, when in use, no need to add water, re hydration and measuring the specific gravity of electrolyte. 2) Ultra long service life

Unique formulation of grid and alloy design, effective resistance to plate corrosion; excellent high current discharge characteristics, reliable fast charging performance, superior deep discharge recovery capability, ensure battery life. Float design last longer (25°C).

3) Minimal self discharge current

Design of high quality and high purity materials, minimum discharge current, the capacity loss caused by self discharge is less than 4% per month, reduce battery storage maintenance work.

4) Very wide operating temperature range

The battery can work under the temperature of -20°C to +50°C or even wider, the internal resistance of the battery is smaller than that of the conventional battery, High current discharge in the temperature range of -20°C to +50°C, the output power is higher than that of the conventional open cell.

5) Good batch consistency

Leading design technology and 100% air tightness, voltage, capacity and safety performance test, ensure the mass production of the battery has good consistency, the utility model is especially suitable for occasions which require the use of a plurality of batteries, for example, UPS backup battery pack, inverter backup battery pack, etc.

6) Reasonable installation and structure design

The latest international pole column design and compact overall structure design, convenient installation and disassembly, easy maintenance, User cost savings.

7.2.2 battery precautions

1. Battery poles can not short-circuit, the shell was prohibited, The charge discharge process to maintain the best placed upright, can not put the battery in honey seal space, ventilation must be maintained.

2. Try to use constant current constant voltage battery charger.

3. Long time high charge (overcharge) will shorten battery life; A long time low charge (not enough) will affect the load or lead to abnormal voltage. Charging the best use of constant current charger. Do not charge parallel, Otherwise it will shorten the battery life. Charge the charger must be positive (red), the negative (black) charging clip corresponds to a clamping battery, do not reverse. After filling well, turn off the power switch, Take the battery clip. Battery static three months to add electricity, it is the best way to keep the battery full.

Do not place the battery near the fire source or burn the battery, do not decompose the Battery, Reform.

For example

1. Battery hot, higher temperature can affect battery?

General condition, in charge discharge process, due to the large current, the battery has a certain internal resistance, temperature increased. However, when the battery charging current is too large, the small gap between the battery will lead to a cumulative increase in charge current and battery temperature, and damage the battery, thermal runaway, So, do not charge too much, Otherwise, the battery will be affected.

2. Selection of standby power supply?

It is best to choose the same model as your previous battery, our batteries are international standard size, the same model can be used. If you want to replace the larger size of the battery, as long as the location of the battery is not required to place the size can be.

3. Battery is not into electricity?

Battery is a new product. If there is a high charge (overcharge) phenomenon, it is recommended to use multimeter to detect whether the voltage is normal, if the voltage is too low, it is indicated that the battery has been put off, Professional staff should be activated with a high-pressure gun; If it is the original rated voltage, indicates that the battery is normal, may be affected by other factors such as charger or equipment