

A guide for:
Halogen Surgical Lighting Systems

SHOR-LINE
SCHROER MFG. CO.

▲WARNING This product is for animal use only. We do not condone this product for other uses.

▲WARNING To reduce the risk of injury, the user must read and understand this guide before installation of this product.

{Save This Guide For Future Reference}

PN: 006.9130.23
Updated: 02.20.15



Introduction

Thank you for purchasing Shor-Line products. As a leader in animal care equipment, our commitment to you is exactly the same as it was in 1927.

We hope this guide answers any questions you might have in regards to use, care or installation. If you can't find the answers to your questions, have further questions or would like to purchase additional products, please contact us at 800.444.1579 or 913.281.1500. If in Europe phone +44 1446 77 20 41.

Consider keeping this guide in a safe and convenient place for future assistance.

IMPORTANT: DO NOT ATTEMPT TO DISASSEMBLE THE LIGHT OR ANY ASSOCIATED PRODUCT WITHOUT FIRST CONTACTING SHOR-LINE.

For your safety, please follow the instructions on these labels:

▲CAUTION ▲WARNING

▲WARNING This product is for animal use only. We do not condone this product for other uses.

▲WARNING To reduce the risk of injury, the user must read and understand this guide before installation of this product.

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▲CAUTION

It is required that installations and repair of your Surgery Lights be performed by a qualified electrician only. Failure to comply will result in a void of all Shor-Line warranties.



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Section 1: Unpacking & Inspecting Shipment

{Unpacking & Inspecting Steps}

Step 1

Locate the Packing Slip that describes the parts and quantities shipped. Your Surgery Light should be carefully examined upon arrival for possible damage in shipment. If any damage is found, notify Shor-Line immediately.

Step 2

Review Section 11: Shor-Line's Warranty Information. For more information visit: www.shor-line.com/warranty. Then click the Damages/Returns/Repairs link on the left.

Step 3

Be sure that all parts are contained for your Light.

Step 4

Check content for concealed damage.

If Concealed Damage:

Follow instructions within Section 11: Shor-Line's Warranty Information. For more information visit: www.shor-line.com/warranty. Then click the Damages/Returns/Repairs link on the left.

Call Shor-Line immediately so we can expedite replacements or repairs.

IMPORTANT: After fifteen (15) calendar days of receipt of merchandise, this policy becomes void.

{Surgery Lighting System Options}

We've designed and tested our Surgery Lighting Systems to ensure years of quality illumination and high performance.

Our suite of Surgical Lights include:

Shor-Line Dome Light



Shor-Line Spot Light



Our Mounting Options include:

913.5005.03 *Dome Light, Wall Mount, 120V*

913.5005.13 *Dome Light, Wall Mount, 240V*



913.5006.03 *Spot Light, Wall Mount, 120V*

913.5006.12 *Spot Light, Wall Mount, 240V*



913.5005.01 *Single Dome Light, Ceiling Mount, 120V*

913.5005.11 *Single Dome Light, Ceiling Mount, 240V*



913.5006.01 *Single Spot Light, Ceiling Mount, 120V*

913.5006.11 *Single Spot Light, Ceiling Mount, 240V*





Mounting Options continued:

913.5005.02 *Dual Dome Light, Ceiling Mount, 120V*
913.5005.12 *Dual Dome Light, Ceiling Mount, 240V*



913.5006.05 *Dual Spot Light, Ceiling Mount, 120V*
913.5006.13 *Dual Spot Light, Ceiling Mount, 240V*



913.5005.04 *Single Dome Light, Mobile Mount, 120V*
913.5005.14 *Dual Dome Light, Mobile Mount, 240V*



913.5006.04 *Dual Spot Light, Mobile Mount, 120V*
913.5006.14 *Dual Spot Light, Mobile Mount, 240V*



913.5005.02 *Combination Dome and Spot Light, Ceiling Mount, 120V*
913.5005.12 *Combination Dome and Spot Light, Ceiling Mount, 240V*



NOTE: Installation and assembly are different for each option. We hope this guide increases your satisfaction with our product and safeguards your investment for years to come.

{Surgery Light Parts List}

PART NUMBER	DESCRIPTION
Light Head, Dome Light	
713.5005.14	Light Head Assembly Complete
037.0022.00	Light Bulb, 100 W/24V
012.2003.00	Glass, Filter
031.0015.00	ON/OFF Switch
181.5005.00	Quick Connect Handle-Light
Light Head, Spot Light	
713.5006.01	Light Head Assembly Complete
037.0023.00	Light Bulb, 150 W/21V
012.2004.00	Glass, Filter
031.0015.00	ON/OFF Switch
181.5005.00	Quick Connect Handle-Light
Arms	
176.0003.00	Arm for Single Ceiling Mount Light Installation
176.0003.01	Arm for Dual Ceiling Mount Light Installation
176.0003.02	Arm for Wall Mount Light Installation
176.0003.03	Arm for Mobile Mount Light Installation
Mechanical	
175.0000.00	Ceiling Mount (Column) Single Arm/Light Head
175.0000.01	Ceiling Mount (Column) Dual Arm/Light Head
181.0009.00	Ceiling Mount Decorative Cover
181.0011.00	Wall Mount Cover DC Power Top
181.0012.00	Wall Mount Cover DC Power Bottom
060.1425.00	Wood Screw #14 X 2½ (Ceiling or Wall Mount)
065.2500.00	Flat Washer ¼" (Wall Mount)
064.1000.56	Decorative Nut for Ceiling Cover (2 req.)
064.1000.00	Flat Washer #10 for Ceiling Cover (2 req.)
181.0013.00	Decorative Cover (Mobile Mount)
086.3000.11	Caster, 3" diameter with Brake (Mobile Mount)
Electrical	
160.0201.02	Ring Terminal 14-16AWG #10 Stud
160.0501.00	Splice Connector 14-20AWG
160.0101.00	Female Quick-Connect (used to Connect Power Supply)
039.1000.00	Power Inlet Module with Switch (Mobile Mount)
027.1803.03	IEC-230 Hospital Grade Power Cord
175.0000.07	Male Slip Ring (Mobile Mount)
036.0150.01	Fuse, 1.5A, 120V, Type 3AG, Fast Blo
036.0300.04	Fuse, 3.0A, 120V, Type 3AG, Fast Blo



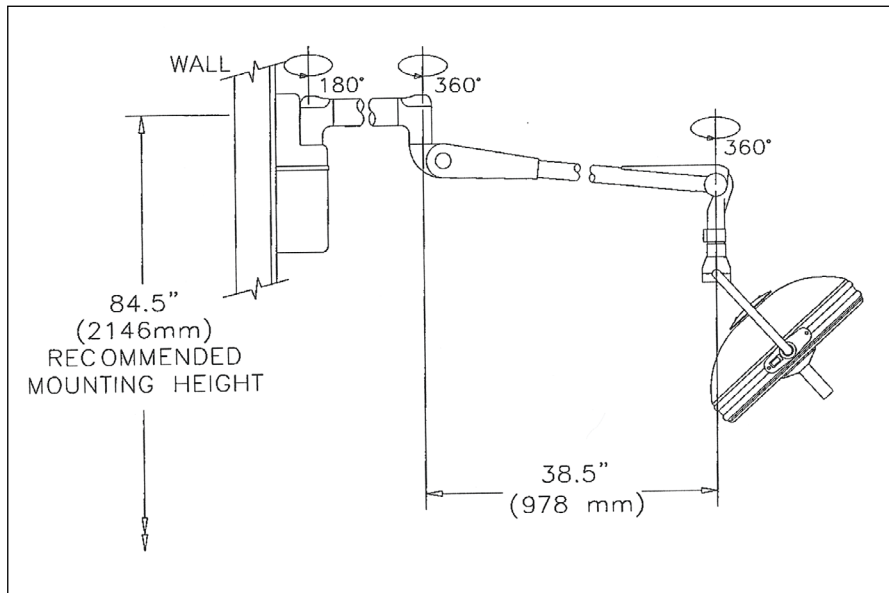
Section 2: Surgery Lighting System Technical Information

{Surgery Light Specifications}

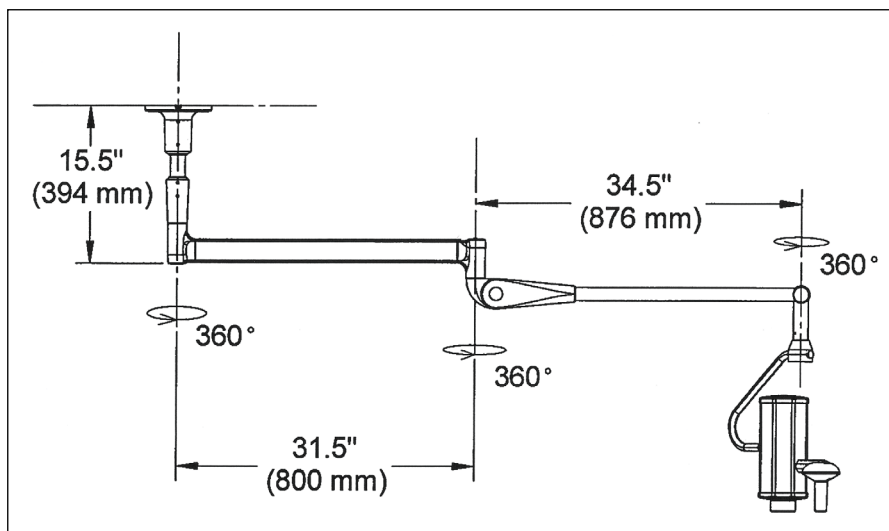
Component Weights	
Head Assembly, Dome Light	9.47 lbs.
Head Assembly, Spot Light	8.5 lbs.
Arm, Ceiling or Wall Mount Assembly	13.0 lbs.
Arm, Mobile Assembly	8.4 lbs.
Mount Assembly, Single Ceiling	28.0 lbs.
Mount Assembly, Double Ceiling	43.0 lbs.
Mount Assembly, Wall	17.0 lbs.
Mount Assembly, Mobile	108.0 lbs.
Assembly Weights	
Single Head Ceiling Mount System	85.4 lbs.
Dual Head Ceiling Mount System	49.2 lbs.
Wall Mount Mount System	38.2 lbs.
Mobile Mount System	124.6 lbs.
Electrical	
Input Voltage/Current, Dome Light	120 VAC ~ 50/60Hz, 1.0A per head
	240 VAC ~ 50/60Hz, 0.5A per head
Input Voltage/Current, Spot Light	120 VAC ~ 50/60Hz, 1.4A per head
	240 VAC ~ 50/60Hz, 0.7A per head
Luminous Intensity, Dome Light	4000 foot candles per head at 36" (914mm)
Luminous Intensity, Spot Light	4150 foot candles per head at 36" (914mm)
Light Pattern, Dome Light	6.5 inches (165mm) diameter
Light Pattern, Spot Light	Adjustable from 3" to 11" at 36"
	Adjustable from 76mm to 279mm at 36"
Motion-Extension	
Head Vertical Motion	47 inches (1194mm)
Head Horizontal Motion	360°
Single Head Extended from Mounting Axis	70 inches (1778mm)
Dual Head Extended Length (Head to Head)	144 inches (3658mm)
Dual Head Extended Lenth (Head to Head)	38.5 inches (978mm)

{Surgery Light Technical Drawings}

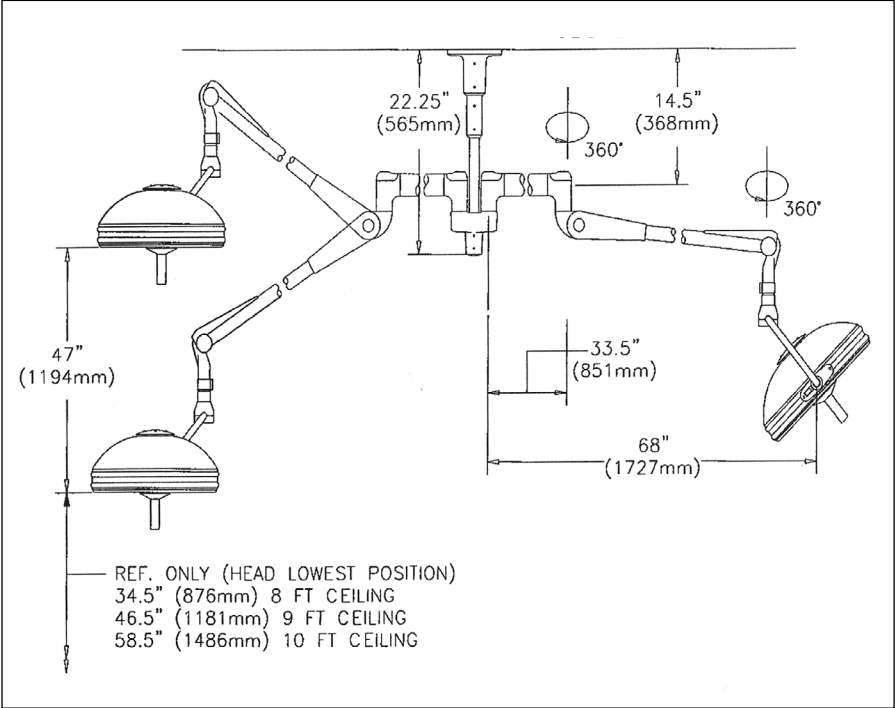
Single Wall Mount Light System



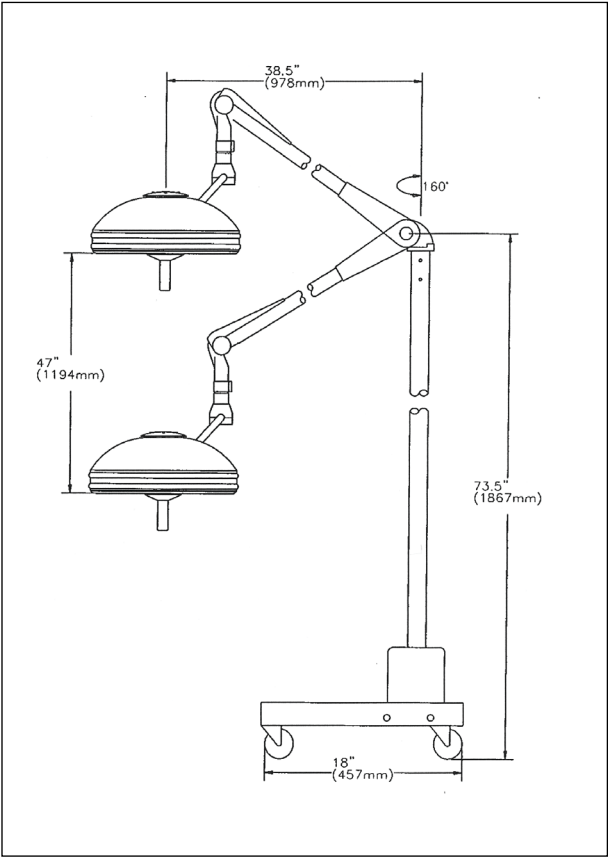
Single Ceiling Mount Light System



Dual Ceiling Mount Light System

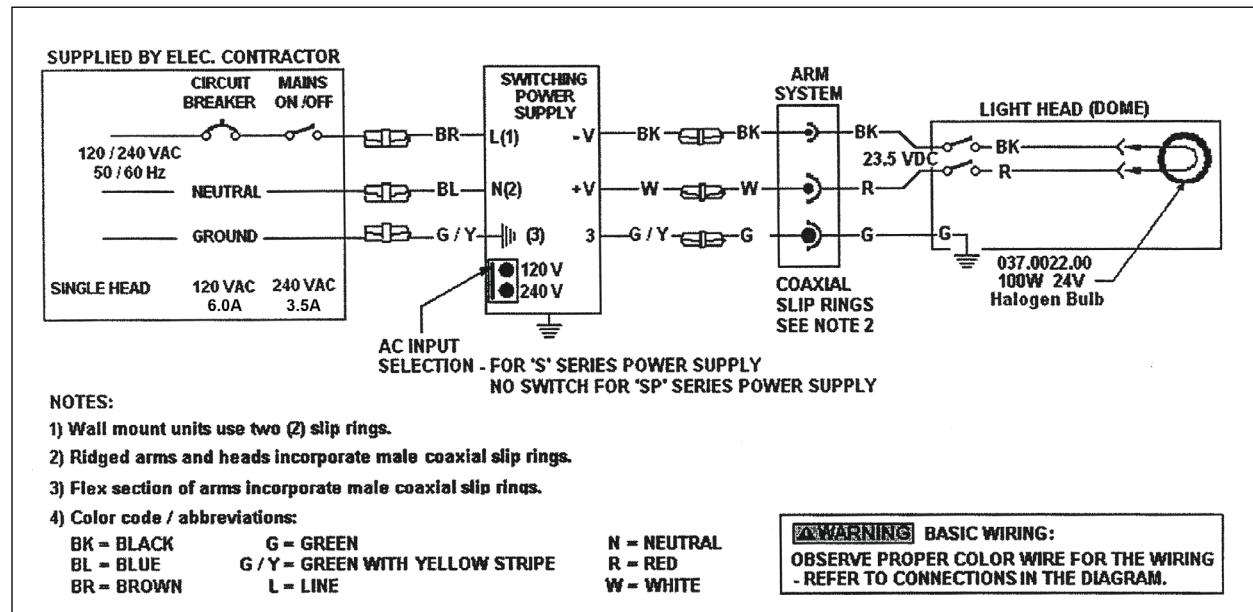


Mobile Light System Diagram

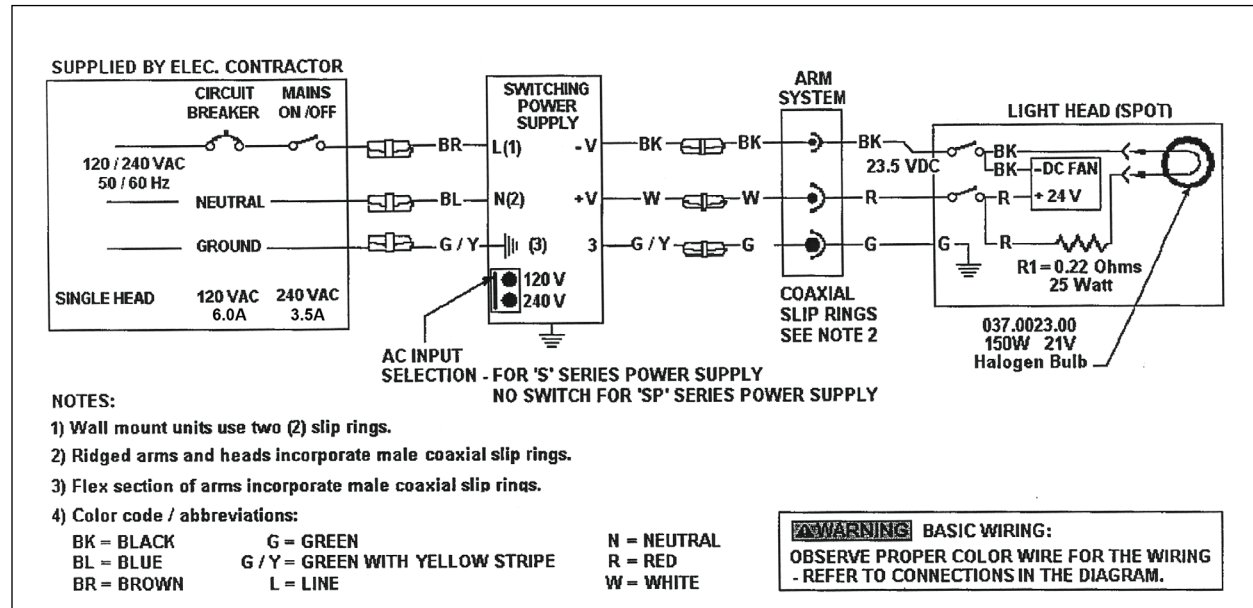


{Surgery Light Wiring Schematics}

Single Wall Mount Dome Light System

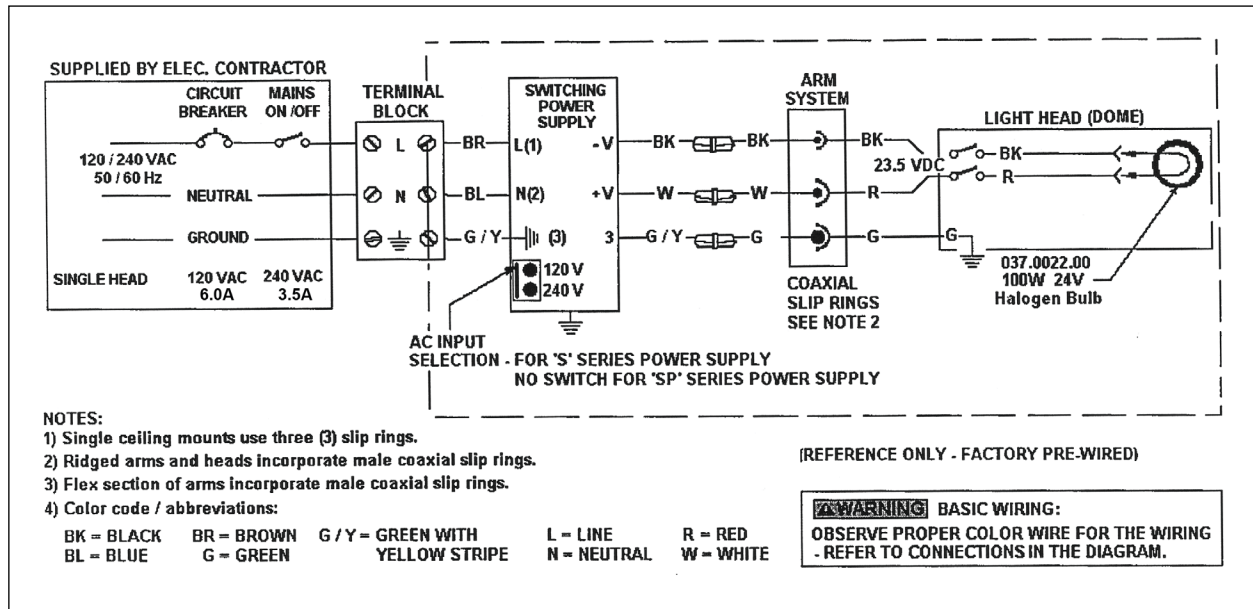


Single Wall Mount Spot Light System

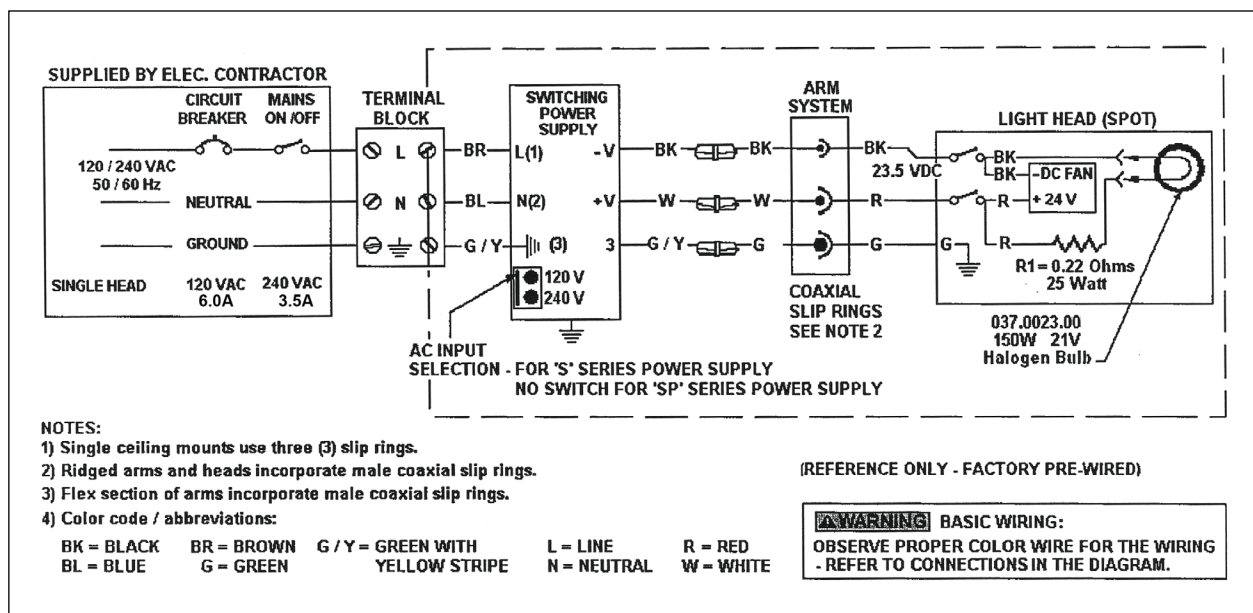




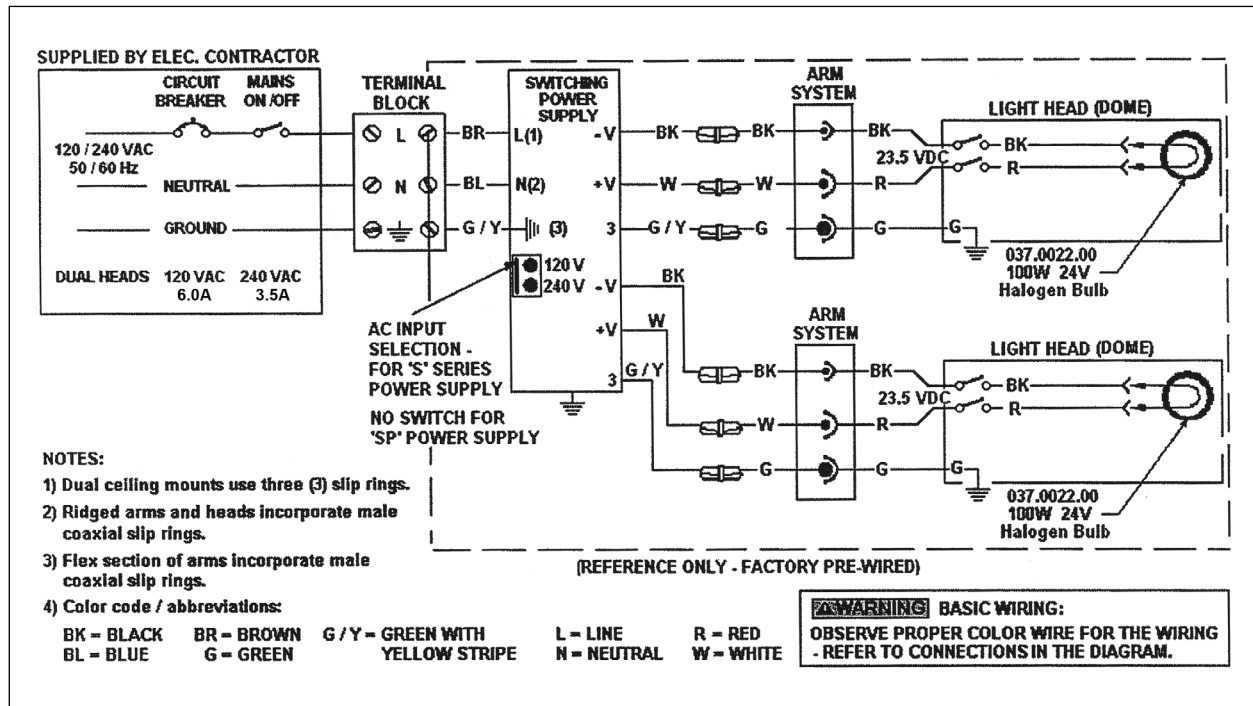
Single Ceiling Mount Dome Light System



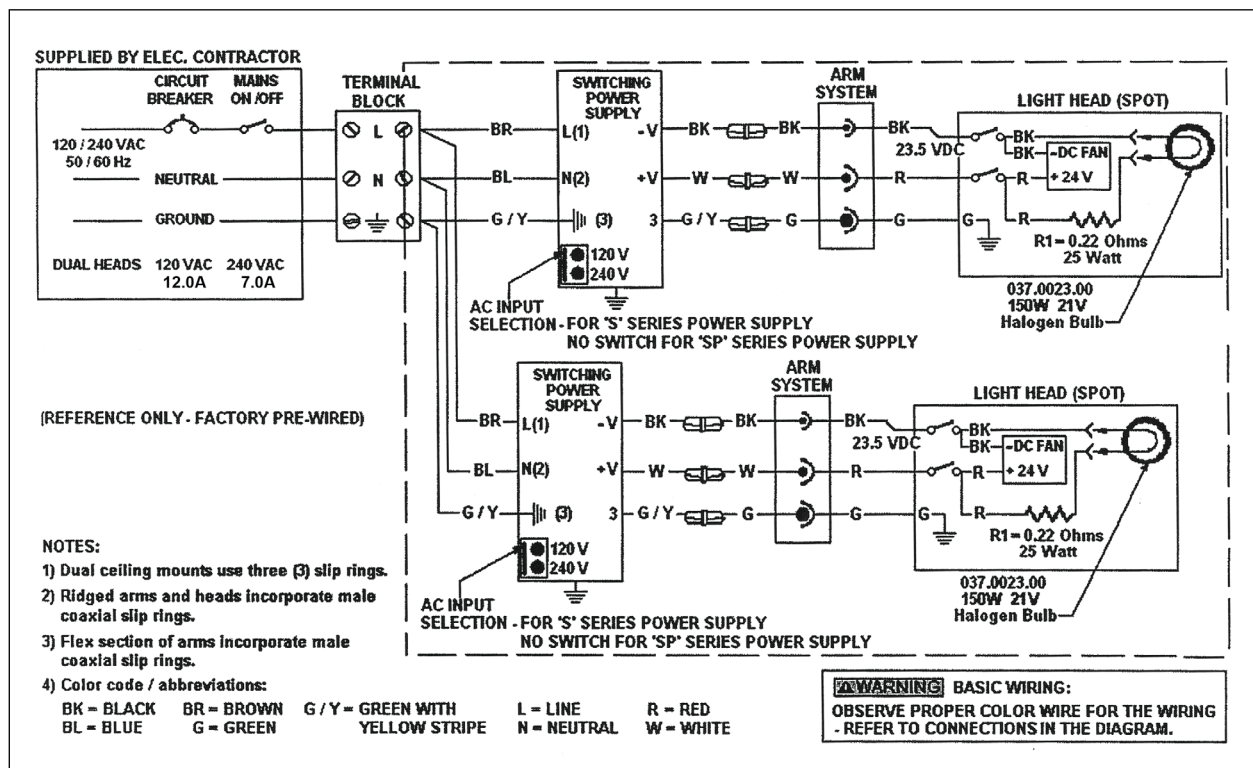
Single Ceiling Mount Spot Light System



Dual Ceiling Mount Dome Light System

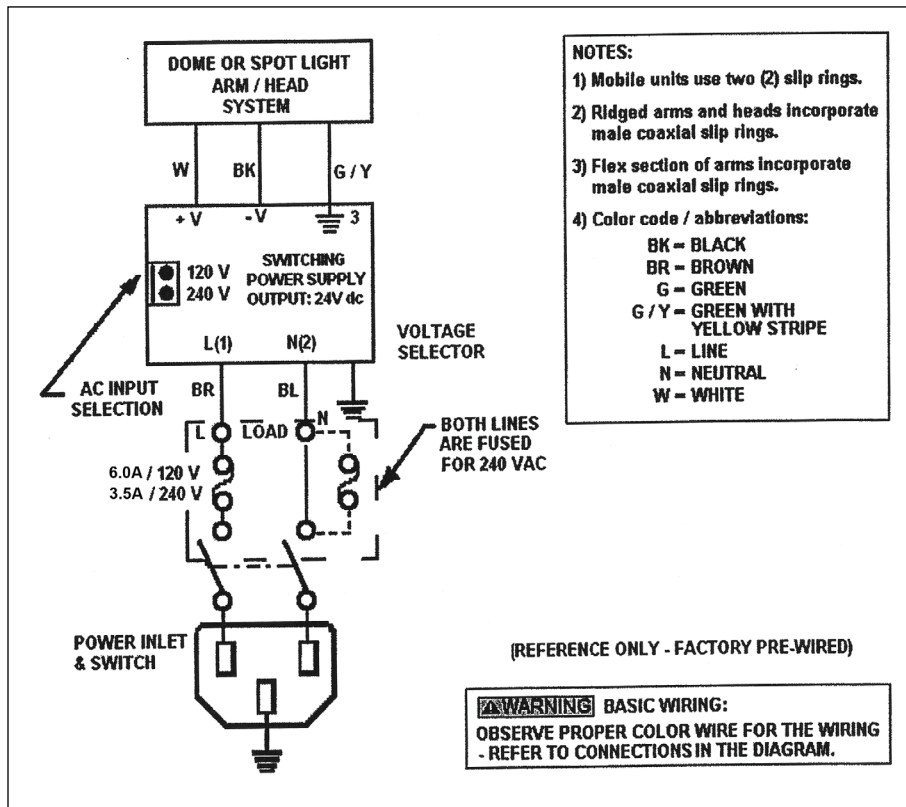


Dual Ceiling Mount Spot Light System

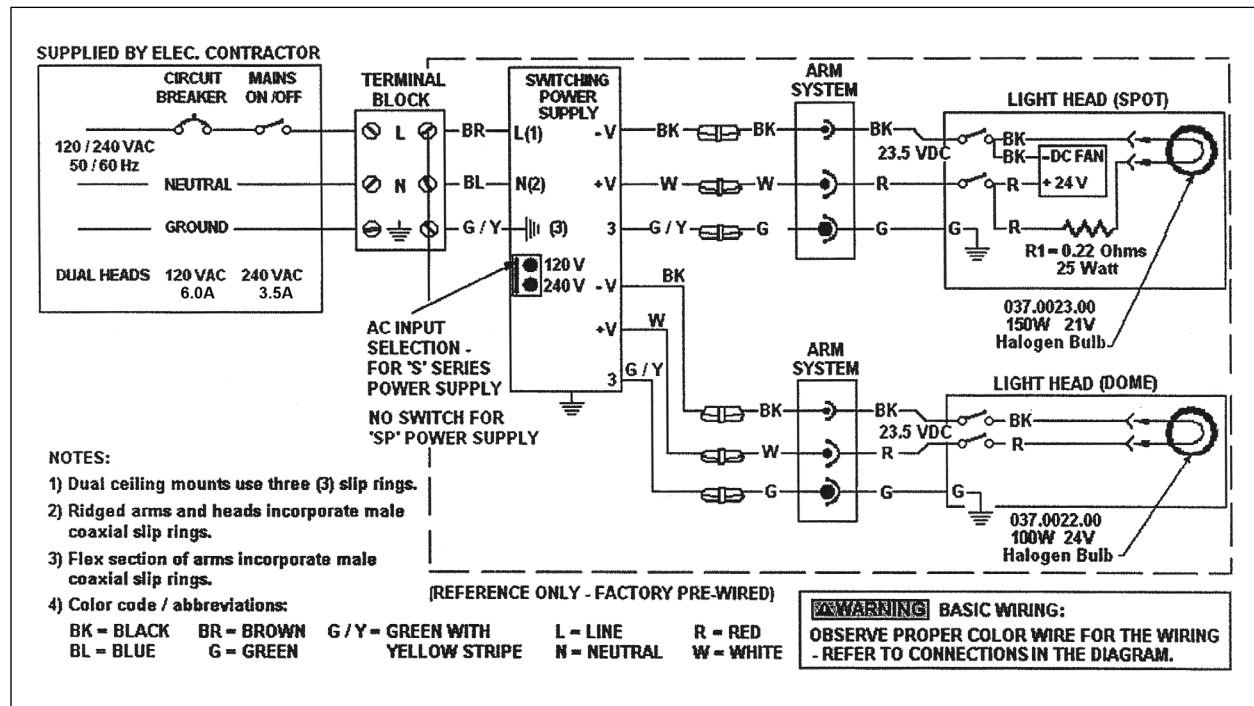




Single Mobile Mount Dome OR Spot Light System



Dual Ceiling Mount Combination Dome and Spot Light System



Section 3: Wall Mount Installation and Assembly (Option 1)

{Single Dome/Spot Light, Wall Mount}



{Pre-Installation Check}

IMPORTANT: For the safety of installers and equipment users, Shor-Line requires all installation and repairs be performed by a licensed electrician. Failure to comply will result in a void of all Shor-Line warranties.

⚠WARNING Single Wall Mounted Light Systems are heavy. Precautions must be taken. Utilize two or more people when installing.

⚠WARNING Improper installation of Single Wall Mounted Light Systems can cause serious injury and/or property damage. Installation requirements may vary depending upon the building construction encountered. The mounting hardware supplied is designed for standard wood studs. It is the installer's responsibility to provide any alternative mounting hardware for other types of construction.

CHECK TO ENSURE ALL SPECIFICATIONS HAVE BEEN MET:

- Each mounting joist or support must hold a minimum of 100 pounds.
- Power supply must be routed and wired to the light system in compliance with all existing codes.
- Power supply lines must be two wire with ground, single phase,
 - For US/Canada: 120V, .50/60 Hz, capable of supplying 1.5 amps for each light assembly-two wire with ground, single phase 240 VAC - 50/60 Hz, capable of supplying .8 amps for each light assembly.
 - For Europe: 240V, .50/60 Hz, capable of supplying .8 amps for each light assembly.
- Verify input mains voltage and connect the Power Supply as shown in the electrical diagrams. Improper connection will damage the lamps.
- Maintain proper grounding. Ground wire connections within the wall mount must be fastened at all times.

Tools Required

- Electric Drill
- 3/16 Drill Bit
- Phillips and Flathead Screwdrivers
- Tape Measure
- Level
- Standard Electrician Tools

Equipment/Parts

The shipping carton contains a Wall Mount Assembly, Arm Assembly, Lamp Head Assembly, bag containing a Primary Wiring Harness for one Power Supply and a bag containing two wood screws (#14x2-½" long), two Flat Washers and one Post Washer.



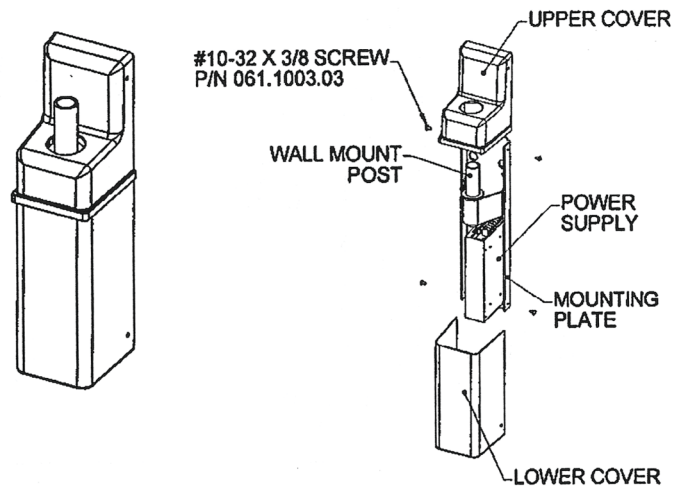
⚠WARNING

Turn off electricity to the circuit.

Step 1

Remove the four cover screws and the Upper and Lower Covers from the Wall Mount Assembly. See Fig. 3-1.

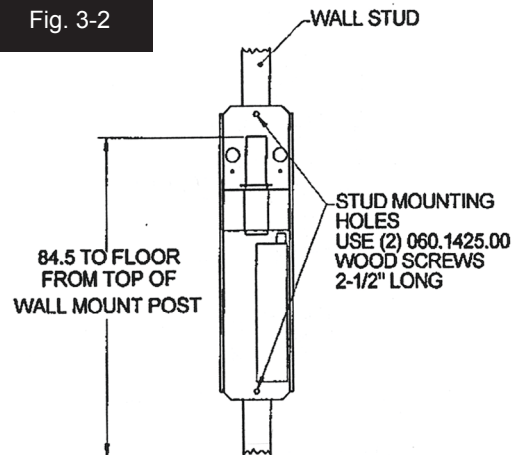
Fig. 3-1



Step 2

Determine where to attach the Mounting Plate. Install to a backing with sufficient support (a wall stud or backing plate). Recommended height is 84.5" from the floor to top of the post. See Fig. 3-2.

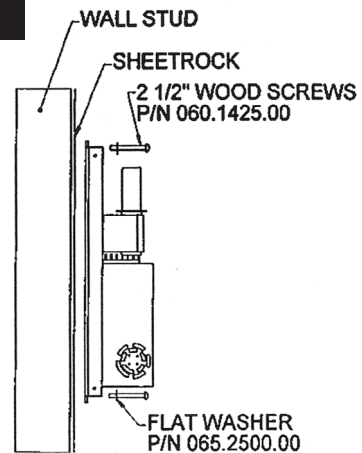
Fig. 3-2



Step 3

Attach the Mounting Plate at the determined location using the two Wood Screws and two Flat Washers provided. See Fig. 3-3.

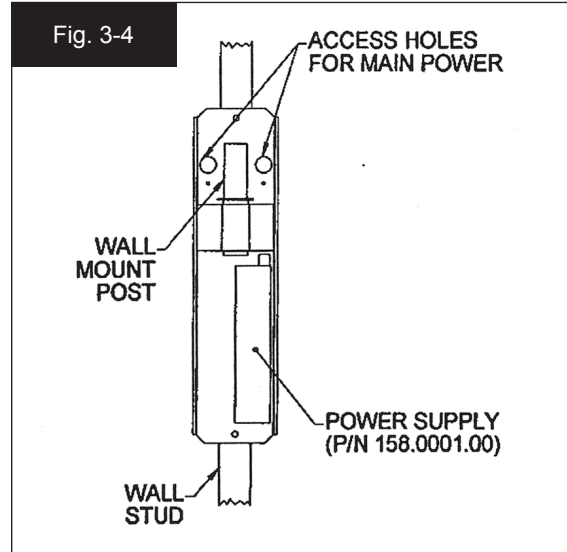
Fig. 3-3



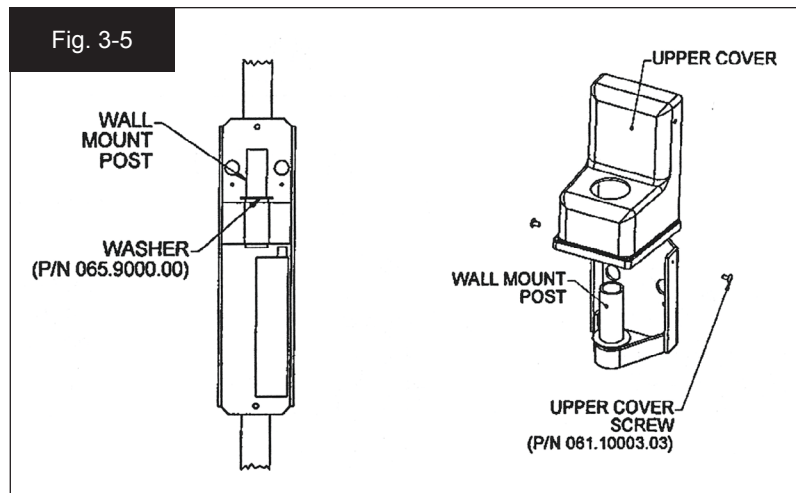
Step 4

Route and secure Main Power Circuit through one of the Mounting Plate's two access holes. Join the Input Main to the Wall Mount Power Supply per the wiring schematic (Dome Light, page 11; Spot Light, page 11). See Fig. 3-4.

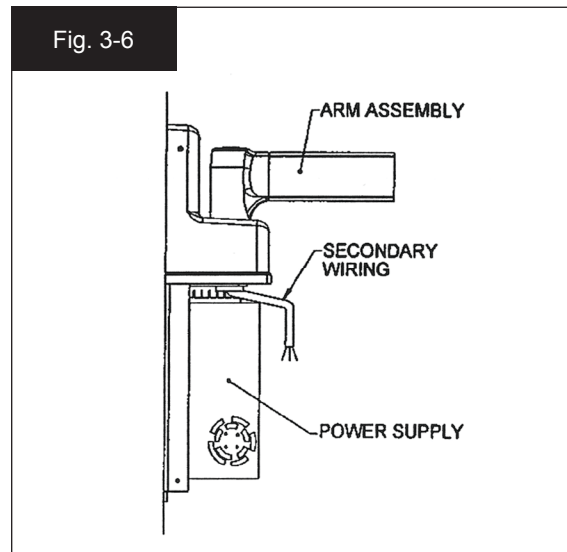
▲WARNING Do not energize circuit at this time.

**Step 5**

Insert Post Washer onto the Wall Mount Post. Reattach the Upper Cover using two screws removed in Step 1. See Fig. 3-5.

**Step 6**

Through the hole on the top of the Upper Cover, install the Arm Assembly to the Wall Post Mount. At the same time, feed the Arm's Secondary Wiring through the shaft of the Wall Mount Post. See Fig. 3-6.



Step 7

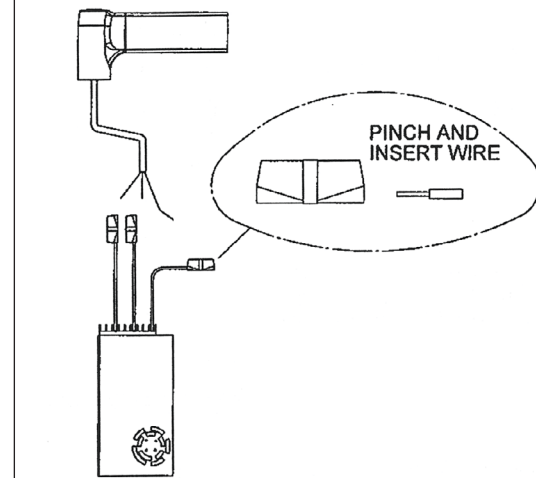
Join the Wire Connections from the Arm Assembly to the Wall Mount Power Supply using the three quick-fasten Wire Connectors and matching wire colors per the wiring schematic (Dome Light, page 11; Spot Light, page 11). See Fig. 3-7.

Step 8

Go to Light Head to Arm Assembly (page 32).

NOTE: If the Arm doesn't hold the Lamp Head (drops) or if the tension is too strong, go to Arm Assembly Adjustment on page 34.

Fig. 3-7



Section 4: Single Ceiling Mount Installation and Assembly (Option 2)

{Single Dome/Spot Light, Ceiling Mount}



{Pre-Installation Check}

IMPORTANT: For the safety of installers and equipment users, Shor-Line requires all installation and repairs be performed by a licensed electrician. Failure to comply will result in a void of all Shor-Line warranties.

▲WARNING Single Ceiling Mounted Light Systems are heavy. Precautions must be taken. Utilize two or more people when installing.

▲WARNING Improper installation of Single Ceiling Mounted Light Systems can cause serious injury and/or property damage. Installation requirements may vary depending upon the building construction encountered. The mounting hardware supplied is designed for standard wood studs. It is the installer's responsibility to provide any alternative mounting hardware for other types of construction.

CHECK TO ENSURE ALL SPECIFICATIONS HAVE BEEN MET:

- Each mounting joist or support must hold a minimum of 100 pounds.
- The mounting joists or support are on 16" centers so it can accommodate the junction box with dimensions of: 14.25"L (362 mm) x 8.00"W (204 mm) x 5.50 inches"D (140 mm)
- Power supply must be routed and wired to the Light System in compliance with all existing codes.
- Power supply lines must be two wire with ground, single phase,
 - For U.S./Canada: 120V.50/60 Hz, capable of supplying 1.5 amps for each light assembly-two wire with ground, single phase 240VAC - 50/60 Hz, capable of supplying .5 amps for each light assembly.
 - For Europe: 240V, 50/60 Hz, capable of supplying .8 amps for each light assembly.
- Verify input mains voltage and connect the Power Supply as shown in the electrical diagrams. Improper connection will damage the lamps.
- Maintain proper grounding. Ground wire connections within the wall mount must be fastened at all times.
- Light Mount Column supplied and make sure it is the proper length to install and operate the Light System without interference or over reach.

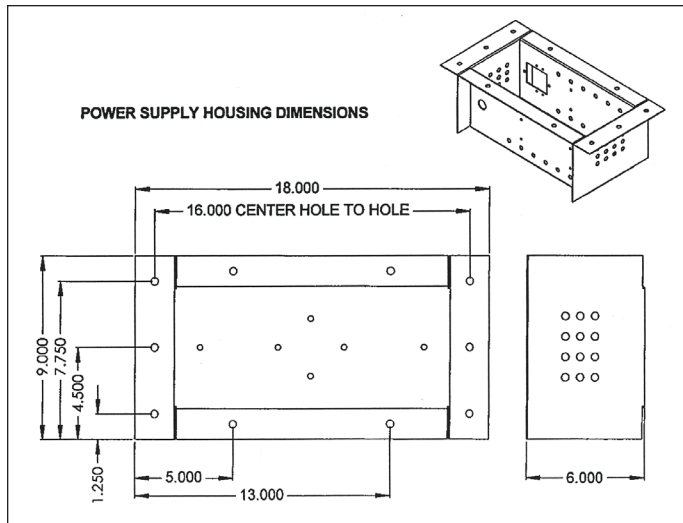
Tools Required

- Electric Drill
- 3/16 Drill Bit
- Phillips and Flathead Screwdrivers
- Tape Measure
- Level
- Standard Electrician Tools

Equipment/Parts

The shipping carton contains a Power Supply Housing (with Decorative Cover) and Column Assembly (with Washers and Retaining Ring inside top of Protective Cover), Single Arm Assembly with Pivot Cover, Lamp Head Assembly, bag containing single harness for one Power Supply, and a bag with six wood screws.

NOTE: All installation hardware is packed in Power Supply Housing.

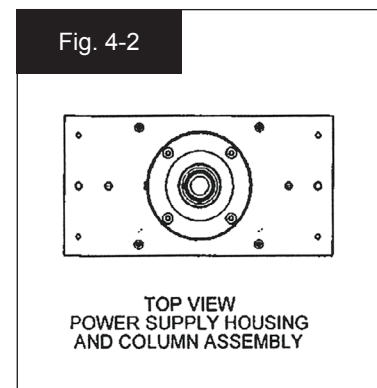
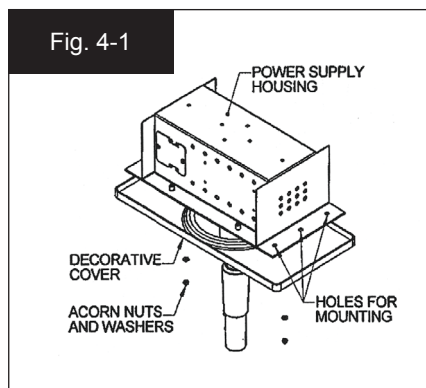


⚠WARNING Turn off electricity to the circuit.

Step 1

Remove the two Acorn Nuts and the two Flat Washers that secure the Decorative Cover to the Power Supply Housing and remove the Decorative Cover. See Fig. 4-1 and 4-2.

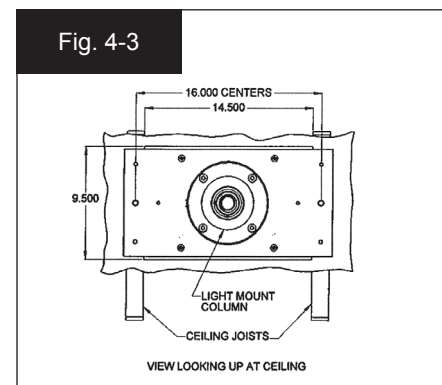
NOTE: The six holes on the outside perimeter of the Power Supply Housing that will be used for mounting the light system.



Step 2

Locate the ceiling joists. The Power Supply Housing has six holes provided for ceiling joist on 16" (406mm) centers. If necessary, cut a hole in the sheet rock 9.5" x 14.5". Mindful of safety precautions, lift the Power Supply Housing to the ceiling and using the holes as templates, pre-drill six holes into the ceiling joists (use 3/16 drill bit). See Fig. 4-3.

⚠WARNING The column is heavy and must be held up for a several minutes. Two or more installers are required for this step.



Step 3

Secure the Power Supply Housing to the ceiling joists using a 2-1/2" Wood Screw at each of the six pre-drilled holes on the Power Supply Housing. See Fig. 4-4.

⚠WARNING If the Power Supply Housing is not properly secured to the ceiling joists, it may result in a mounting system failure causing the light to fall from the ceiling. All six screws must be used according to specifications.

Step 4

After installing the Power Supply Housing into the ceiling, connect Main Power Wiring by first removing the Cover Plate (two screws and washers) to access Terminal Strip. Then route and secure Main Power through the Access Hole located on the backside of the Power Supply Housing. Attach the Main Power Lines to the Terminal Strip at the designated locations for ground, neutral, and load. See wiring schematic (Dome Light, page 12; Spot Light, page 12) Re-attach the Cover Plate. See Fig. 4-5.

Step 5

Re-attach the Decorative Cover using the two Acorn Nuts and Flat Washers removed in Step 1. See Fig. 4-6.

Fig. 4-4

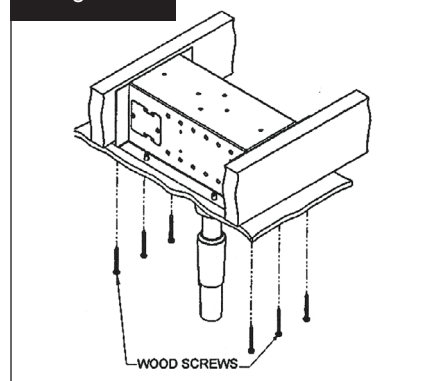


Fig. 4-5

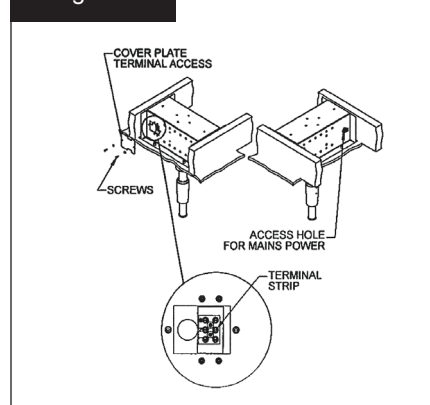
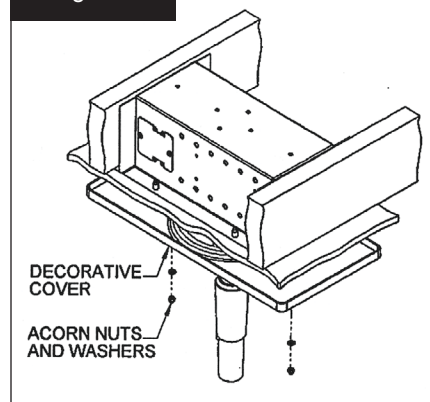


Fig. 4-6





⚠WARNING

Light System should still not be energized at this time.

⚠CAUTION

Do not install the Arm Assembly with the Lamp Head Assembly attached. This can cause damage to the light system.

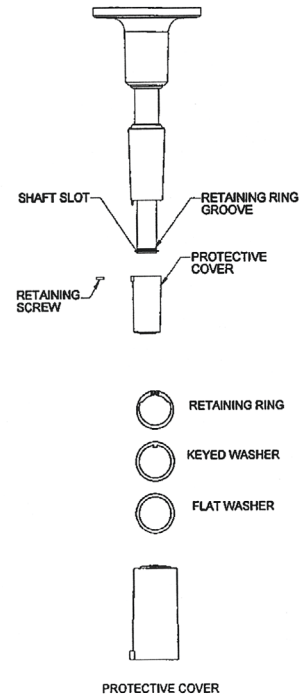
Step 6

Loosen the Retaining Screw and pull off the plastic Protective Cover from the Light Mount Column Shaft. (Note the Retaining Ring groove cut around the top of the Column Shaft and the slot cut out for the Keyed Washer.)

NOTE: Protective Cover can be discarded once installation has been completed.

Remove the Retaining Ring, Keyed Washer and Flat Washer located in the outer top of the Protective Cover. Use retaining ring pliers to remove the Retaining Ring and release the Washers. See Fig. 4-7.

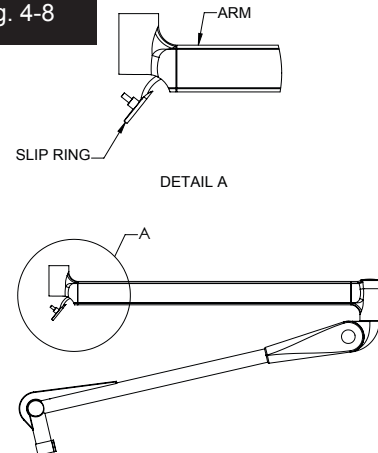
Fig. 4-7



Step 7

Before installing the Arm Assembly, remove the tape that is securing the Slip Ring and gently lift the Slip Ring back until the Slip Ring has been pulled completely out of the Arm Assembly. See Fig. 4-8.

Fig. 4-8

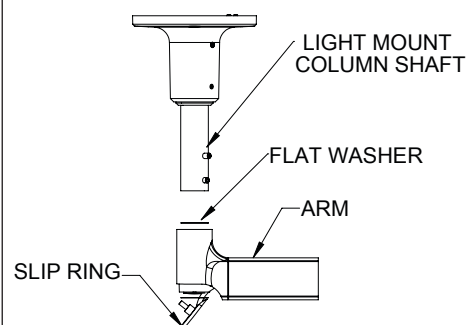


Step 8

Place the Flat Washer onto the Light Mount Column Shaft and then mount Arm Assembly. Keep Arm Assembly level (perpendicular to Column) while positioning onto the Column Shaft. Raise Arm until the Light Mount Column Shaft protrudes (see next bullet). See Fig. 4-9.

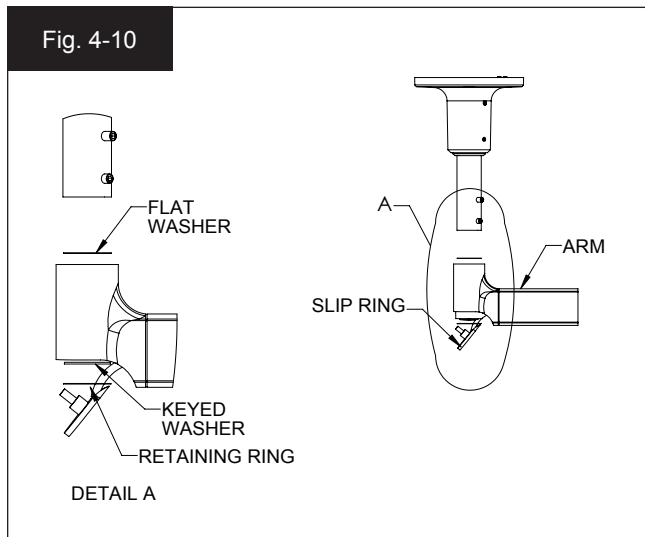
⚠WARNING The Arm Assembly is heavy and must be held up for a several minutes. Assembly requires two or more people.

Fig. 4-9

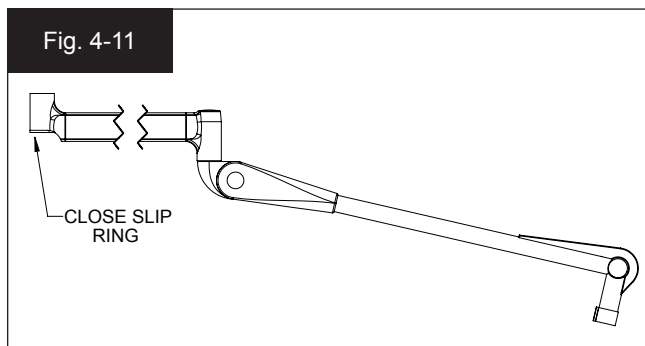


Step 9

Align the Keyed Washer with the cutout portion of the protruding Shaft and attach. Place the Retaining Ring onto the Shaft and push upwards until it locks into Shaft Retaining Ring groove - thus locking the Arm Assembly to the Light Mount Column. See Fig. 4-10.

**Step 10**

Re-assemble the Slip Ring. BE CAREFUL not to bend or distort the Slip Ring. See Fig. 4-11.

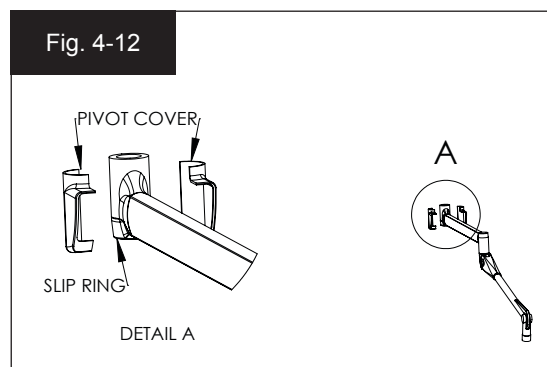
**Step 11**

Install the Pivot Cover by placing one of the panels on each side of the Arm Assembly to enclose and secure the Slip Ring. Press the two panels together until they snap into place. See Fig. 4-12.

Step 12

Go to Light Head to Arm Assembly (page 32).

NOTE: If the Arm doesn't hold the Lamp Head (drops) or if the tension is too strong, go to Arm Assembly Adjustment on page 34.





Section 5: Dual Ceiling Mount Installation and Assembly (Option 3)

{Dual Dome/Spot Light or Combination Dome/Spot Light, Ceiling Mount}



{Pre-Installation Check}

IMPORTANT: For the safety of installers and equipment users, Shor-Line requires all installation and repairs be performed by a licensed electrician. Failure to comply will result in a void of all Shor-Line warranties.

⚠WARNING Dual Ceiling Mounted Light Systems are heavy. Precautions must be taken. Utilize two or more people when installing.

⚠WARNING Improper installation of Dual Ceiling Mounted Light Systems can cause serious injury and/or property damage. Installation requirements may vary depending upon the building construction encountered. The mounting hardware supplied is designed for standard wood studs. It is the installer's responsibility to provide any alternative mounting hardware for other types of construction.

CHECK TO ENSURE ALL SPECIFICATIONS HAVE BEEN MET:

- Each mounting joist or support must hold a minimum of 100 pounds.
- The mounting joists or support are on 16" centers so it can accommodate the junction box with dimensions of: 14.25"L (362 mm) x 8.00"W (204 mm) x 5.50 inches"D (140 mm)
- Power supply must be routed and wired to the Light System in compliance with all existing codes.
- Power supply lines must be two wire with ground, single phase,
 - For U.S./Canada: 120V.50/60 Hz, capable of supplying 1.5 amps for each light assembly-two wire with ground, single phase 240VAC - 50/60 Hz, capable of supplying .5 amps for each light assembly.
 - For Europe: 240V, 50/60 Hz, capable of supplying .8 amps for each light assembly.
- Verify input mains voltage and connect the Power Supply as shown in the electrical diagrams. Improper connection will damage the lamps.
- Maintain proper grounding. Ground wire connections within the wall mount must be fastened at all times.
- Light Mount Column supplied and make sure it is the proper length to install and operate the Light System without interference or over reach.

Tools Required

- Electric Drill
- 3/16 Drill Bit
- Phillips and Flathead Screwdrivers
- Tape Measure
- Level
- Standard Electrician Tools

Equipment/Parts

The shipping carton contains a Power Supply Housing (with Decorative Cover) and Column Assembly (with Washers and Retaining Ring inside Protective Covers and Column Cover), Dual Arm Assembly with Pivot Covers, Two Lamp Head Assemblies, bag containing double harness for two Power Supplies and a bag with six wood screws.

NOTE: All installation hardware is packed in Power Supply Housing.

⚠ WARNING

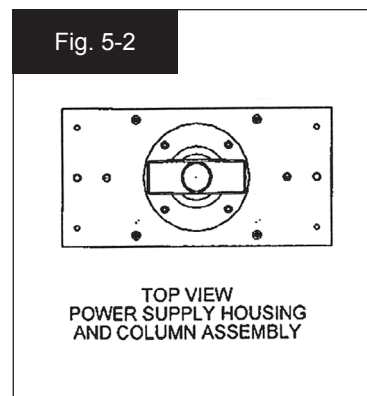
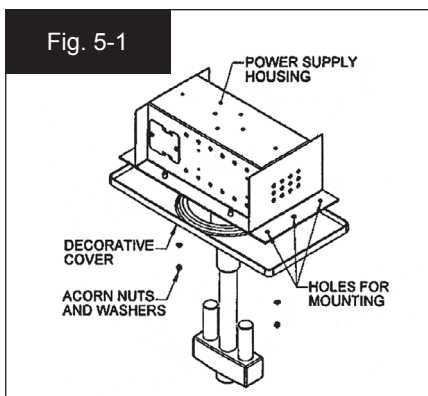
Turn off electricity to the circuit.

Step 1

Remove the two Acorn Nuts and the two Flat Washers that secure the Decorative Cover to the Power Supply Housing and remove the Decorative Cover.

See Fig. 5-1 and 5-2.

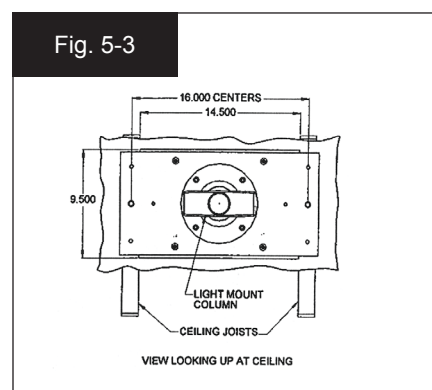
NOTE: The six holes on the outside perimeter of the Power Supply Housing that will be used for mounting the light system.



Step 2

Locate the ceiling joists. The Power Supply Housing has six holes provided for ceiling joist on 16" (406mm) centers. If necessary, cut a hole in the sheet rock 9.5" x 14.5". Mindful of safety precautions, lift the Power Supply Housing to the ceiling and using the holes as templates, pre-drill six holes into the ceiling joists (use 3/16 drill bit). See Fig. 5-3.

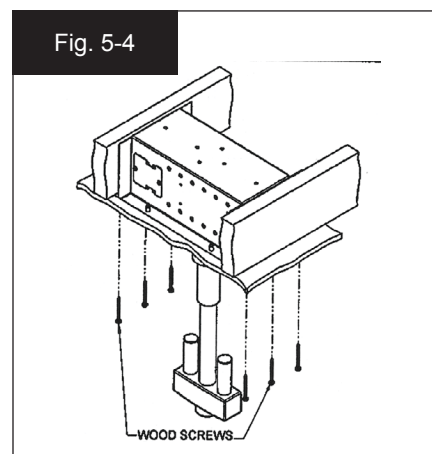
⚠ WARNING The Arm Assembly is heavy and must be held up for a several minutes. Assembly requires two or more people.



Step 3

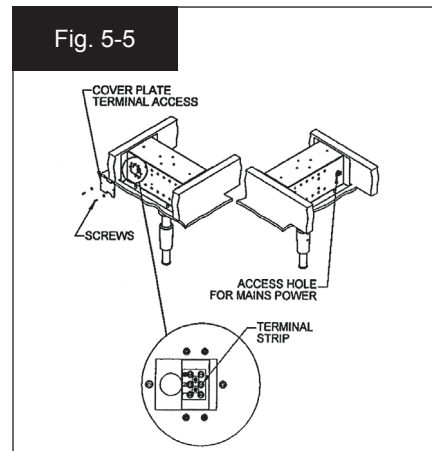
Secure the Power Supply Housing to the ceiling joists using a 2-1/2" Wood Screw at each of the six pre-drilled holes on the Power Supply Housing. See Fig. 5-4.

⚠ WARNING If the Power Supply Housing is not properly secured to the ceiling joists, it may result in a mounting system failure causing the light to fall from the ceiling. All six screws must be used according to specifications.



Step 4

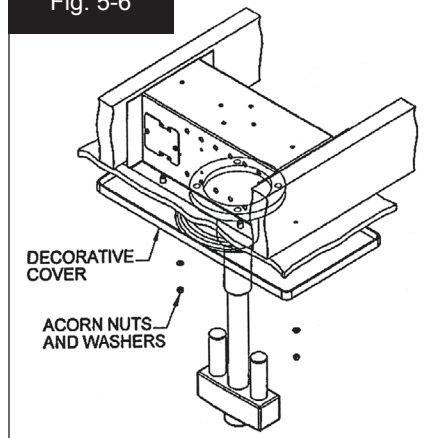
After installing the Power Supply Housing into the ceiling, connect Main Power Wiring by first removing the Cover Plate (two screws and washers) to access Terminal Strip. Then route and secure Main Power through the Access Hole located on the backside of the Power Supply Housing. Attach the Main Power Lines to the Terminal Strip at the designated locations for ground, neutral, and load. See wiring schematic (Dual Dome Light, page 13; Dual Spot Light, page 13; Combination Dome and Spot Light, page 14) Re-attach the Cover Plate. See Fig. 5-5.



Step 5

Re-attach the Decorative Cover using the two Acorn Nuts and Flat Washers removed in Step 1. See Fig. 5-6.

Fig. 5-6



⚠WARNING

Light System should still not be energized at this time.

⚠CAUTION

Do not install the Arm Assembly with the Lamp Head Assembly attached. This can cause damage to the light system.

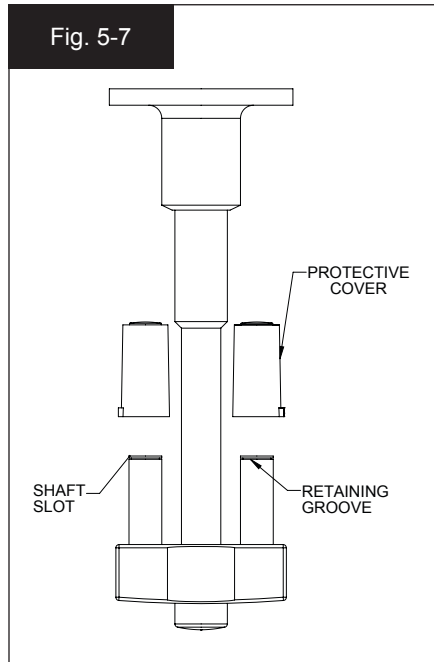
Step 6

Loosen the Retaining Screw and pull off the two plastic Protective Covers from the Light Mount Column Shafts. (Note the Retaining Ring groove cut around the tops of the Column Shafts and the slot cut out for the Keyed Washers.)

NOTE: Protective Covers can be discarded once installation has been completed.

Remove the Retaining Rings, Keyed Washers and Flat Washers located in the outer tops of the Protective Covers. Use retaining ring pliers to remove the Retaining Rings and release the Washers. See Fig. 5-7.

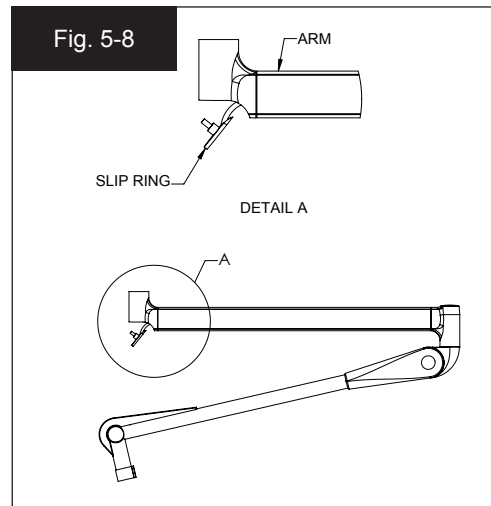
Fig. 5-7



Step 7

Before installing the Arm Assemblies, remove the tape securing Slip Rings and gently lift the Slip Rings back until the Slip Rings have been pulled completely out of the Arm Assemblies. See Fig. 5-8.

Fig. 5-8

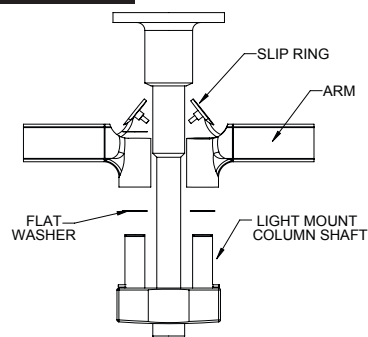


Step 8

Place the Flat Washer onto the Light Mount Column Shaft and then mount Arm Assembly. Keep Arm Assembly level (perpendicular to Column) while positioning onto the Column Shaft. Raise Arm until the Light Mount Column Shaft protrudes (see next bullet). See Fig. 5-9.

⚠WARNING The Arm Assembly is heavy and must be held up for a several minutes. Assembly requires two or more people.

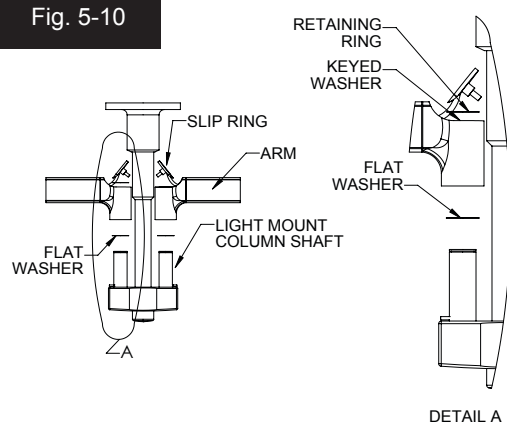
Fig. 5-9

**Step 9**

Align the Keyed Washer with the cutout portion of the protruding Shaft and attach. Place the Retaining Ring onto the Shaft and push upwards until it locks into Shaft Retaining Ring groove - thus locking the Arm Assembly to the Light Mount Column. See Fig. 5-10.

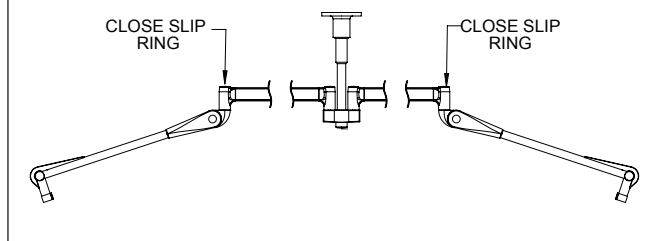
Repeat Steps 8 and 9 for the other Arm.

Fig. 5-10

**Step 10**

Re-assemble both Slip Rings. BE CAREFUL not to bend or distort the Slip Rings. See Fig. 5-11.

Fig. 5-11



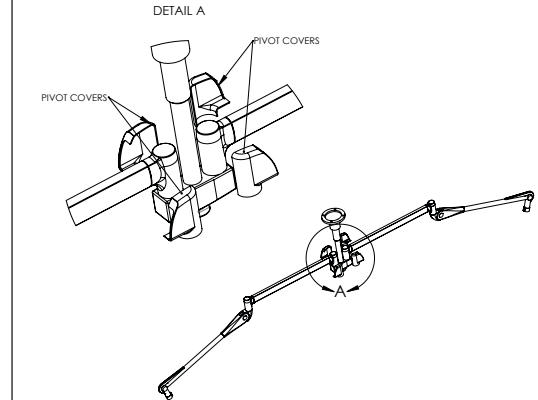


Step 11

Install the Pivot Cover by placing one of the panels on each side of the Arm Assembly to enclose and secure the Slip Ring. Press the two panels together until they snap into place. See Fig. 5-12.

Repeat for other Arm.

Fig. 5-12



Step 12

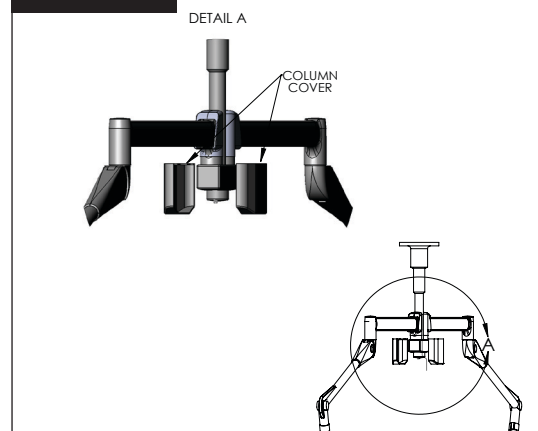
Install the Dual End Column Cover by placing one of the panels on either side of the bottom of the Column Assembly and press together until they snap into place. See Fig. 5-13.

Step 13

Go to Light Head to Arm Assembly (page 32).

NOTE: If the Arm doesn't hold the Lamp Head (drops) or if the tension is too strong, go to Arm Assembly Adjustment on page 34.

Fig. 5-13



Section 6: Mobile Mount Installation and Assembly (Option 4)

{Single Dome/Spot Light, Mobile Mount}



{Pre-Installation Check}

IMPORTANT: For the safety of installers and equipment users, Shor-Line requires all installation and repairs be performed by a licensed electrician. Failure to comply will result in a void of all Shor-Line warranties.

⚠WARNING Mobile Mounted Light Systems are heavy. Precautions must be taken. Utilize two or more people when installing.

Tools Required

- Phillips and Flathead Screwdrivers
- Tape Measure
- Level
- Standard Electrician Tools

Equipment/Parts

The shipping carton contains a Floor Base with Upright Post, Arm Assembly, Lamp Head Assembly, Power Cord and a bag with an Upright Post Washer.

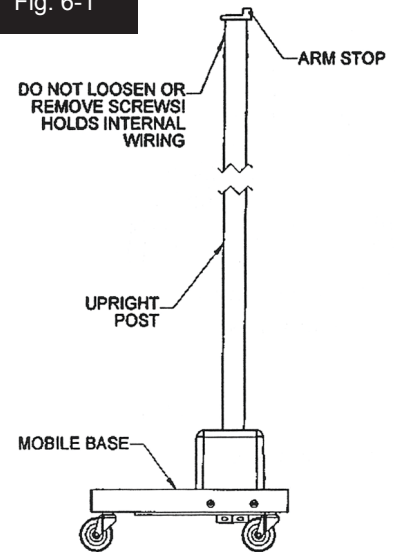


Step 1

Floor Base with Upright Post is pre-assembled in the factory. Upright Post and Arm Assembly are pre-wired. See Fig. 6-1.

⚠CAUTION There are four screws at the top of the Upright Post that secure the internal wiring mechanism. Removing these will cause the mechanism to slip down the shaft of the Post and loss of electrical connectivity.

Fig. 6-1



Step 2

Insert the Upright Post Washer onto the Slip Ring and position Slip Ring into the top of the Upright Post. Keep Arm Assembly level (perpendicular to Post) while lowering the Arm Assembly into the shaft of the Upright Post. See Fig. 6-2.

⚠CAUTION

Do not install the Arm Assembly with the Lamp Head Assembly attached. This can cause damage to the light system.

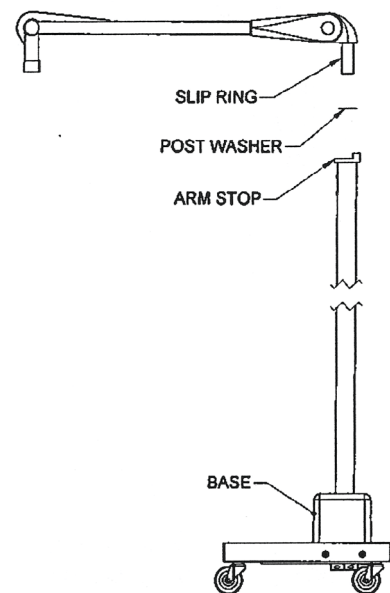
NOTE: The Arm Stop located at the top of the Upright Post prevents the Arm Assembly from moving more than 160° and maintains the stability of the Mobile Base.

Step 3

Go to Light Head to Arm Assembly (page 32).

NOTE: If the Arm doesn't hold the Lamp Head (drops) or if the tension is too strong, go to Arm Assembly Adjustment on page 34.

Fig. 6-2



Step 4

Verify voltage on the Voltage Indicator. See Fig. 6-3.

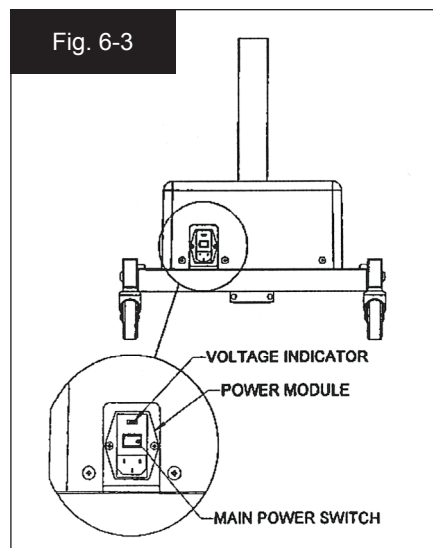
Step 5

Plug Main Power Cord into the Receptacle on Power Module located at the back of the Floor Base. See Fig. 6-3.

Step 6

Connect Power Cord to an electric outlet and verify operation. NOTE: Both the Main Power Switch located on the Floor Base and Lamp Head Switch located on the lamp must be "ON" to operate. See Fig. 6.3.

Fig. 6-3





Section 7: Light Head to Arm Assembly

{Dome/Spot Light Lamp Head}



Assembly for the two products are the same regardless of the type of mounting. The Lamp Head and Arm Assembly have been pre-wired in our factory so parts merely need to be fit and connected for illumination.

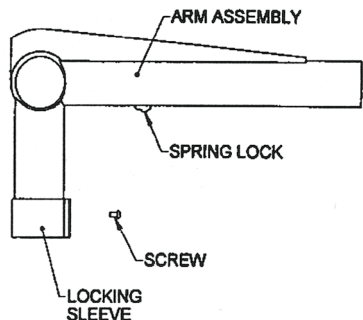
IMPORTANT: For the safety of installers and equipment users, Shor-Line requires all installation and repairs be performed by a licensed electrician. Failure to comply will result in a void of all Shor-Line warranties.

Step 1

Remove the Screw on the Locking Sleeve. See Fig. 7-1.

IMPORTANT: The Spring Lock restricts movement of the Arm Assembly and must not be removed until the Lamp Head is completely attached.

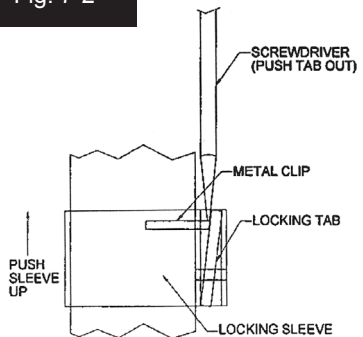
Fig. 7-1



Step 2

With a flathead screwdriver, push back the plastic Locking Tab inside the Locking Sleeve and push the Locking Sleeve upwards. The Sleeve cannot move unless the Tab is completely unlocked. See Fig. 7-2.

Fig. 7-2



Step 3

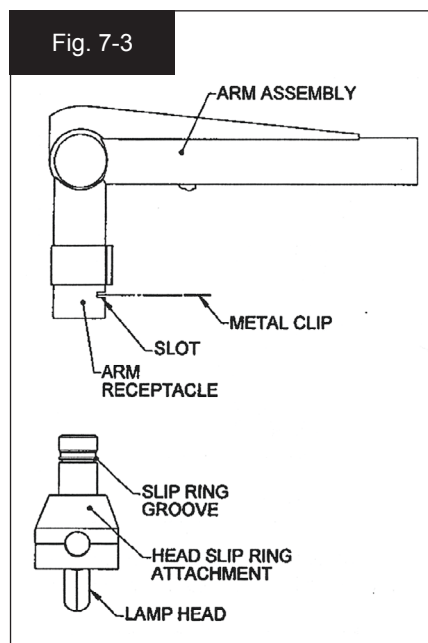
Extract the Metal Clip that is now exposed on the Arm Receptacle using Needle Nose Pliers. See Fig. 7-3.

Step 4

Remove the plastic cap from the Head Slip Ring Attachment. See Fig. 7-3.

Step 5

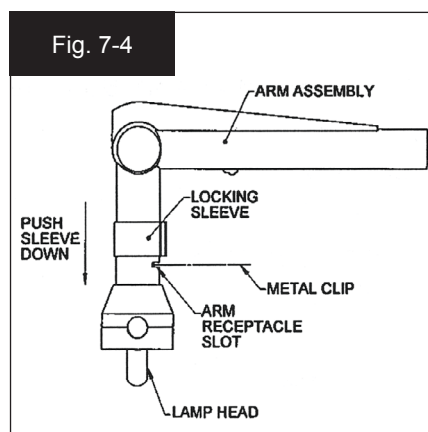
Push the Head Slip Ring Attachment into the Arm Receptacle. Align the Groove that is cut around the Head Slip Ring Attachment so it can be seen through the Arm Receptacle slot. See Fig. 7-3.

**Step 6**

Lock the Lamp Head and Arm Assembly by re-inserting the Metal Clip into the Arm Receptacle slot. See Fig. 7-4.

Step 7

Push the Locking Sleeve downward until the plastic Tab locks (clicks). See Fig. 7-4.

**Step 8**

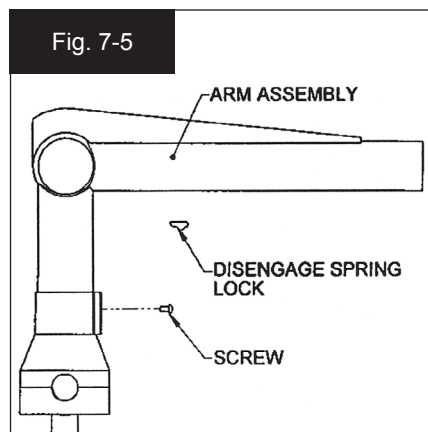
Re-install the Locking Sleeve Screw. See Fig. 7-5.

Step 9

Disengage the Spring Lock by removing the screw. See Fig. 7-5.

Step 10

Energize Mains and verify operation. See Fig. 7-5.



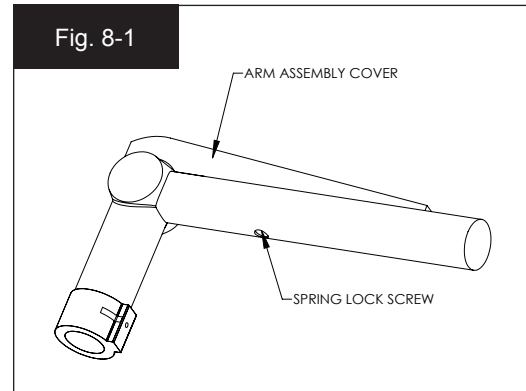


Section 8: Adjustments and Maintenance

{ Arm Assembly Adjustment }

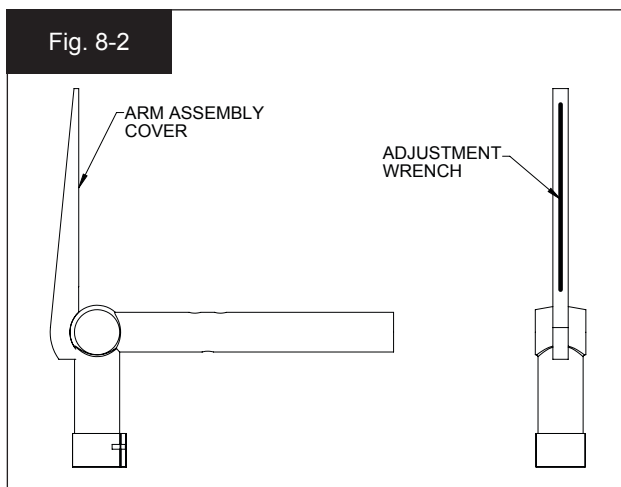
The Arm Assembly was pre-adjusted at our factory. If the Arm doesn't hold the Lamp Head (it drops) or if the tension is too strong, then adjustments are necessary.

IMPORTANT: Adjustments can only be made when a Lamp Head Assembly is attached and the Spring Lock is disengaged (reference page 33, Step 9). See Fig. 8-1.



Step 1

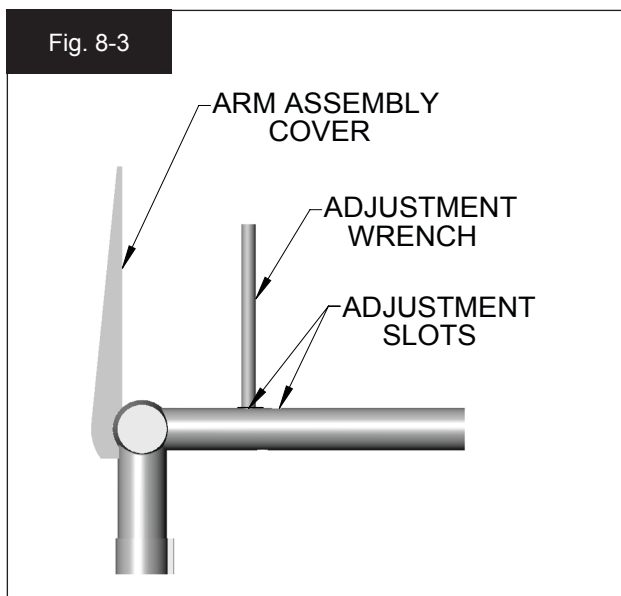
Push back the Cover on the Arm Assembly and lift up. Inside the Cover, you will find an Adjustment Wrench. See Fig. 8-2.



Step 2

There are two Adjustment Slots that allow you to view some of the Arm's internal assembly.

Slowly move the Arm Assembly vertically until the Adjustment Nut appears in one of the two slots. The Nut has small slots (holes) that fit the Adjustment Wrench. Note: The Adjustment Nut is not the fixed white plastic insert that can be seen inside one of the holes. See Fig. 8-3.



Step 3

Using the Adjustment Wrench, turn the Adjustment Nut in the appropriate direction of the arrow to increase or decrease the arm tension. If the Arm drops too easily, then turn the Nut towards " + ". If the Arm rises too easily, then turn the Nut towards " - ". As you turn the Nut, test the tension of the Assembly Arm. Do not over-tighten.

Step 4

When complete, replace the Adjustment Wrench and Cover to their original positions.

{Dome Light Bulb Replacement}

Step 1

Turn the power off at the switch on the Lamp Head and allow bulb to cool for approximately 30 minutes.

Step 2

Remove the screw and lift off the Top Cover.

Step 3

Remove the Lamp Holder by pulling the Black Knob straight upward.

Step 4

Using a clean, dry cloth to handle the bulb, carefully pull the bulb from the Lamp Holder.

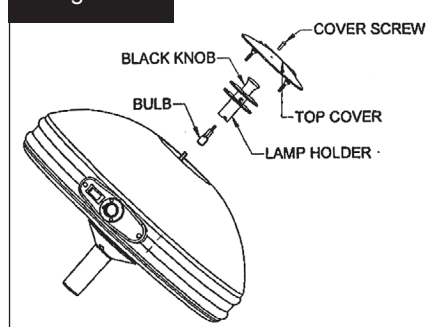
Step 5

Insert new bulb into the Lamp Holder and repeat the steps above in reverse.

IMPORTANT: Never touch existing or replacement light bulbs. Oils from your skin will damage the bulb. Handle with a cloth.

IMPORTANT: Do not substitute bulbs. Only replace with specified bulbs.

Fig. 8-4



{Spot Light Bulb Replacement}

Step 1

Turn the power off at the switch on the Lamp Head and allow bulb to cool for approximately 30 minutes.

Step 2

Remove the two screws and washers. Remove the End Bezel.

Step 3

Pull the Fan and Lamp Holder Assembly straight outward (along the rails inside the barrel) and only far enough to gain access to the bulb.

Step 4

Push the Release Level (on the Lamp Holder) forward and slide the old bulb outward. Return Release Level to original position.

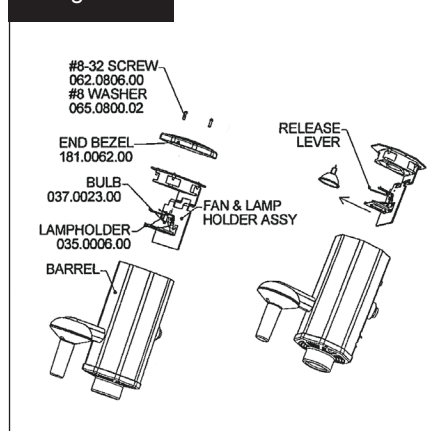
Step 5

Insert the new bulb into the Lamp Holder and repeat the steps above in reverse.

IMPORTANT: Never touch existing or replacement light bulbs. Oils from your skin will damage the bulb. Handle with a cloth.

IMPORTANT: Do not substitute bulbs. Only replace with specified bulbs.

Fig. 8-5

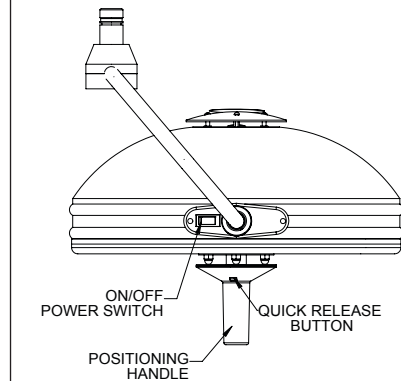


Section 9: Functionality

{Dome Light}

- Single 15" reflector provides a shadow-free beam at 4,000K.
- 6" diameter field of harmonious light and 4,000 foot candles at a normal 36" working distance.
- Autoclavable Positioning Handle - push quick connect release button to remove.
- Independent ON/OFF switch for each Lamp Head.

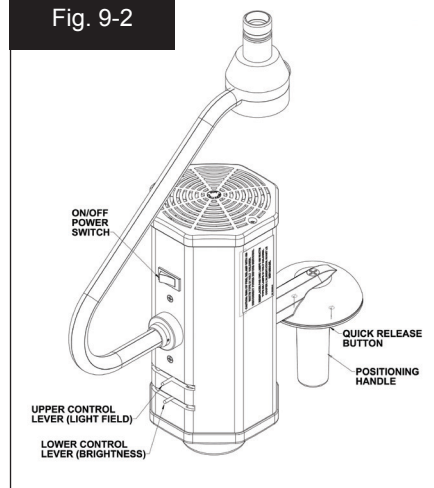
Fig. 9-1



{Spot Light}

- Continuously adjustable spot from 3" to 11" diameter provides homogenous light with 4, 150 foot candles at a distance of 36" and color temperature of approximately 4,000 degrees Kelvin.
 - The Upper Control Level adjusts the diameter of the light field (3" diameter minimum to 11" diameter maximum at a distance of 36 inches.)
 - Mechanical dimmer provides constant purity of light without affecting color temperature.
 - The Lower Control Level adjusts the brightness of the light.
- Easily replaceable 150W / 21V Halogen bulb.
- Heat absorbing glass filter
- Lamp Head rotates 360 degrees on a horizontal plane.
- Positioning handle mounted on perimeter allows for easy movement of Lamp Head.
- Autoclavable Positioning Handle - push quick connect release button to remove.
- International AC input range (88-132 VAC / 176-264 VAC). 320W switching power supply. Short circuit, overload, over-voltage, over-temp protected. Reset: auto-recovery.
- AC current 1.42 amp.

Fig. 9-2



Section 10: Surgery Light Safety, Maintenance and Cleaning

{Safety Instructions}

Only facility authorized maintenance personnel should troubleshoot or repair the unit. Troubleshooting or repair by unauthorized personnel could result in personal injury and/or property damage.

After repair of the unit, ensure the unit is in proper working order. Failure to do so could result in personal injury and/or property damage.

Do not pinch any wires during installation. Pinched wires can cause an electrical shock hazard, resulting in personal injury and/or property damage.

{Cleaning}

Units operate at high temperatures. Allow the unit to cool at least 30 minutes before performing any maintenance. Failure to do so could result in personal injury.

Do not expose the unit to excessive moisture. Failure to do so could result in personal injury and/or property damage.

Do not use harsh cleaners, solvents or detergents. Failure to do so could result in equipment damage.

Clean the lens using glass/plastic cleaner or mild soap and water mix. It is very important to use a clean, soft cloth to avoid any scratching of the front lens. Never spray the cleaning fluid directly onto the Light Head or Arm.

{Care & Cleaning Best Practices}

IMPORTANT: You play an essential role in safeguarding your investment and rights to Shor-Line's Warranty. We strongly recommend:

- Daily or weekly cleaning of stainless steel to prolong its longevity and value and to help you maintain its finish.
- Using the mildest cleaning procedure that will do the job effectively.
 - Ordinary waste deposits and fluids can usually be removed with soap and water. Rinse thoroughly with clear water and dry completely with a soft cloth to discourage water spotting.
 - Minor scale build up and some hard water spotting can be removed by washing with vinegar followed by a clear water rinse and thorough drying.
 - If rubbing, brushing, or scraping is required, use only stainless steel wool, brushes with plastic, nylon or stainless steel fibers, and scrubbers made of plastic or nylon. Ordinary steel wool or steel brushes should never be used.
 - Stubborn deposits or tightly adhering debris may require a commercial cleaning product. Scouring powders will scratch stainless and should not be used. Always review label statements on cleaning products regarding use on metals.
 - Cleaning is not completed until fresh water has been used to thoroughly rinse all residue of salt, bleach, deodorizing agents, disinfectants, and sanitizers.
- Rubbing, drying, and polishing should always be in the direction of the product's grain so scratches will blend into the surface. Efforts opposite the grain may produce a scratched surface appearance.
- Rubbing a soft cloth moistened with olive oil, undiluted white or cider vinegar, or club soda may brighten stainless steel and help remove surface streaks and heat stains.
- Never use paint, lacquer, or varnish as a substitute or shortcut for properly caring and cleaning stainless steel.
- Never intentionally stamp or etch stainless surfaces.



{Protecting Against Disease & Infection}

IMPORTANT: Shor-Line shares your commitment to health and safety. This information is intended help protect your animals, as well as, safeguard your investment.

- Bleaches can be harmful to animals. Bleaches can react with acids and release chlorine gas that is highly toxic.
- Because of its strong corrosive and toxic properties, bleach is diluted with water. The solution's potency (shelf-life) quickly degrades as the active chlorine dissipates with water. Animal care professionals, therefore, cannot know with certainty how effective the bleach solution is over time without implementing a formal monitoring system.
- If chemical deodorizers, disinfectants, or sanitizers are used, protect your animals from respiratory problems and infections by using clean water to wash residue from all surfaces and dry thoroughly.
- Clorox® Company warns: "We cannot recommend Clorox® to clean metal surfaces, including stainless steel. Prolonged or repeated exposure of metal to strong solutions of our product eventually can cause discoloration or corrosion. To reduce the possibility of metal discoloration, we suggest that exposure time to Clorox® be less than five minutes and that surfaces be rinsed well after application of the solution."

Section 11: Services, Terms & Conditions and Warranty

{Terms & Conditions}

ORDER & ACCEPTANCE By submitting an order for the products described herein, Buyer shall have agreed to purchase the products subject to all Seller's terms including these TERMS and CONDITIONS. Buyer's order is subject to and effective only upon acceptance and approval at Seller's offices in Kansas City, Kansas as evidenced by Seller's issuance of an Order Acknowledgement or Invoice. Processing of an order shall not commence until receipt of any applicable deposit and all required paperwork and customer sign-offs. The resulting contract shall be deemed made in Kansas and shall in all respects be governed and interpreted according to the laws of the State of Kansas. Buyer also consents to the jurisdiction of Kansas courts over any dispute involving this order.

ENTIRE AGREEMENT This order as accepted and approved by Seller constitutes the entire final agreement between the parties. Except as otherwise provided in writing by Seller, the terms set forth herein constitute the sole TERMS AND CONDITIONS for Buyer's order. Seller's acceptance of Buyer's order is expressly conditioned on Buyer's assent to these TERMS AND CONDITIONS which may not be supplemented, modified, superseded or otherwise altered except as authorized in writing by Seller. Any different, conflicting or additional terms in Buyer's purchase order or any other document of Buyer are rejected and Seller's TERMS AND CONDITIONS shall prevail.

TERMS OF PAYMENT Unless otherwise expressly specified by Seller in writing, payment shall be due 30 days from the date of invoice, payable in U.S. Funds. Seller reserves the right to negotiate terms or orders of any unique or special nature and may require full or partial payment in advance in its sole discretion. Acceptance of all orders and the payment terms for such orders are subject to approval by Seller's Credit Department. Seller may decline to make any shipment or perform any work except upon terms satisfactory to said Department. A charge of 1½% per month (or the highest monthly interest rate that may be imposed under applicable law) will be imposed on overdue accounts. Buyer will be liable for all expenses (including reasonable attorneys' fees) incurred in collecting any overdue accounts.

PRICES & QUOTES Prices on products specified herein are F.O.B. Seller's factory unless otherwise specified in writing and are exclusive of any city, state, local or federal tax. Prices are subject to adjustment without notice and Seller reserves the right to correct errors in prices or specifications. Any quotation (whether written or oral) is not an offer to contract or acceptance of an order. Similarly, neither a price list nor a catalog constitutes an offer to sell or contract, but are provided solely for customers' convenience.

TAXES Any sales, use, property, or other taxes or duties which Seller may be required to pay or collect (under any existing or future law) in connection with the sale, purchase, delivery, storage, processing, consumption or use of the products purchased herewith shall be for the account of Buyer and Buyer shall promptly reimburse Seller therefore.

DELIVERIES Delivery dates are estimates only and time shall not be of the essence unless specifically provided by Seller in writing. Seller will not have any liability for loss or damage resulting from a delay in a scheduled delivery or for non-delivery resulting from labor trouble, part or material shortages, accident, fire, war, strike, natural disaster, carrier delays or any contingency whatsoever (whether of the same class of those enumerated or otherwise) beyond its reasonable control. Buyer assumes all freight, handling and installation costs and the risk of loss or delay in transit. Seller will assist Buyer with transit arrangements, but Seller shall be free of any liability in connection therewith. Title to all materials and products sold by Seller shall pass to Buyer upon delivery to the carrier and Seller's responsibility ceases at that time. Risk of loss, injury, or destruction of the products shall be borne by the Buyer and any such loss, injury or destruction shall not release Buyer from payment of the purchase price.

INSPECTION Buyer must inspect all materials for shortages, damages, conformity with order and defects before signing any documentation requested by the carrier. Buyer must immediately complete such inspection and shall not accept delivery of goods that are damaged or not in accordance with the bill of lading or packing slip without proper notification to the carrier and Seller. If goods are damaged, defective, shorted or appear not to conform to the order, Buyer shall discontinue their use and immediately notify the carrier and Seller of such condition and afford a reasonable opportunity to inspect the same. Buyer shall make, or provide Seller in writing with all information necessary to make, a claim against such carrier for any shortage, damage, or discrepancy of the shipment within fifteen (15) days after receipt of the goods. Claims or written information thereon not so presented within fifteen (15) days after receipt of the goods will not be allowed. No products will be taken back and credited or replaced unless arrangements for their return have been made in compliance with Seller's Return Policy stated below.

SEE SELLER'S CATALOG FOR INFORMATION ON HOW TO FILE A FREIGHT CLAIM.



PRODUCT SATISFACTION In the event Buyer is not fully satisfied with the quality or workmanship of a product purchased hereunder, Seller in its sole discretion may arrange either to credit Seller's account (excluding shipping and handling costs) or replace the product. However, Buyer must notify Seller in writing of its dissatisfaction within fifteen (15) days of receipt of the product from Seller and immediately discontinue its use. Buyer also must return the rejected product to Seller freight paid within thirty (30) days of its receipt in compliance with Seller's Return Policy stated below. Seller's obligation is limited to providing the applicable credit or product replacement, which will be processed only after receipt of the returned product. In addition, this Product Satisfaction policy does not apply to specially designed, discontinued, used, factory second or repaired products.

LIMITED WARRANTY Seller warrants to the initial purchaser only of products manufactured by it that such products are free from defects in materials or labor for varying periods depending on the particular product and subject to the limitations and conditions set forth herein. Seller's stainless steel products are warranted to be free from such defects for their normal useful life. Seller's mechanical and electrical products, parts, devices and components (including such parts, devices and components of stainless steel products), and other-non-stainless steel products are warranted to be free from such defects for only one year. Seller disclaims any express or implied warranty for products not manufactured by Seller and the only warranty available therefore to Buyer is that offered by the products' manufacturers.

The warranty period shall run from the date of delivery to Buyer. If within the applicable warranty period a product proves to be defective as described herein, Seller will repair or replace the product, at Seller's sole discretion, conditional upon Buyer's written notice of the defect within fifteen (15) days after its discovery. Upon receipt of Buyer's notice including substantiation of Buyer's status as the initial purchaser and details of the defect, Seller shall advise Buyer whether it plans to repair or replace the product. Seller's obligation is solely limited to repair or replacement of a defective product and in no event shall Seller be liable for transportation from or to Seller's offices or any other expense which may arise in connection with this Limited Warranty or the aforementioned Product Satisfaction policy.

SELLER MAKES NO OTHER WARRANTY OR GUARANTEE OF ANY KIND WHATSOEVER, WHETHER EXPRESS OR IMPLIED, STATUTORY OR OTHERWISE INCLUDING, BUT NOT LIMITED TO IMPLIED WARRANTIES OF FITNESS, AND/OR MERCHANTABILITY. THE ABOVE LIMITED WARRANTY CONSTITUTES SELLER'S ONLY WARRANTY AND NO PERSON OR ENTITY IS AUTHORIZED, ON BEHALF OF THE SELLER, TO MODIFY OR EXPAND UPON THE PROVISION EXPRESSED IN THIS PARAGRAPH NUMBER NINE. THE SELLER'S LIABILITY UNDER THIS LIMITED WARRANTY SHALL BE LIMITED AS PROVIDED FOR ABOVE AND THE FOREGOING SHALL BE THE BUYER'S SOLE REMEDY AND RECOURSE UNDER THIS CONTRACT. There are no warranties which extend beyond the description on the face hereof and goods are sold as is. Seller's Limited Warranty is only available to the initial purchaser of its products and is effective only upon compliance with the terms set forth herein.

Buyer agrees that the products subject to this Limited Warranty will be properly maintained in the ordinary course of business. Buyer agrees to comply with all instructions and specifications furnished by Seller relating to the installation, care, use and application of products purchased. Buyer agrees that it will not modify, misapply, or misuse such products in any manner which would deviate from Seller's instructions. Any repairs, alterations or service provided by parties other than Seller, or its authorized representative, may void this Limited Warranty. This Limited Warranty shall not apply to normal wear and tear, improper or insufficient maintenance, routine maintenance, or damage caused by accident, negligence, improper operation or the use of corrosive materials (including without limitation bleach or sodium hypochlorite used on stainless steel surfaces). THE SELLER'S LIMITED WARRANTY MADE IN CONNECTION WITH THIS SALE SHALL NOT BE EFFECTIVE AND SHALL BE VOID UNLESS SUCH GOODS ARE APPLIED AND USED IN ACCORDANCE WITH SELLER'S INSTRUCTIONS.

LIMITATION OF LIABILITY UNDER NO CIRCUMSTANCES SHALL SELLER BE LIABLE TO BUYER OR ANY OTHER PERSON FOR ANY SPECIAL, LIQUIDATED, INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING, WITHOUT LIMITATION, DAMAGES BASED UPON LOST GOODWILL, LOST SALES OR PROFITS, WORK STOPPAGE, DELAY, PRODUCT FAILURE, IMPAIRMENT OF GOODS OR OTHERWISE AND WHETHER ARISING OUT OF BREACH OF WARRANTY, BREACH OF CONTRACT, NEGLIGENCE OR OTHERWISE, and in any case, Seller's liability for any and all losses and damages sustained by Buyer and others, rising out of or by reason of this contract, shall not exceed the original purchase price of the products upon which liability is founded.

IN NO EVENT SHALL ANY ACTION BE COMMENCED AGAINST THE SELLER MORE THAN ONE YEAR AFTER THE CAUSE OF ACTION WITH RESPECT TO WHICH THE CLAIM IS MADE HAS ACCRUED. SELLER SHALL NOT BE RESPONSIBLE FOR EXPENSES FOR REPAIRS NOT MADE BY SELLER WITHOUT THE PRIOR WRITTEN CONSENT OF SELLER.

RETURN POLICY All products being returned for any reason or delivered for repair service (whether or not pursuant to our Limited Warranty) must receive advance authorization from Seller. Buyer must contact Seller's Technical Service Department at 1.800.444.1579 to receive a Return Authorization Number. All products returned, except for warranty service or pursuant to the Product Satisfaction policy, are subject to a minimum 15% restocking charge. Buyer will be responsible for all freight charges on returns.

INDEMNITY Buyer agrees to protect, defend, indemnify and hold harmless the Seller from and against any and all direct loss suffered and any liability to third parties due to bodily injury (including death) to any person or animal, or damage to any property as a result of Buyer's misuse, misapplication or failure to inspect or maintain the Seller's products, or such loss or liability caused by the act or omission of the Buyer in the performance of any services using said products. Buyer also agrees to indemnify and hold harmless the Seller for any taxes paid as discussed in paragraph five above. This indemnity provision expressly includes attorney's fees and settlements of claims in a reasonable manner under the circumstances.

UNLAWFUL USE Buyer agrees that no goods covered by this contract shall be used in any manner violative of any laws of the United States, whether state or federal, or local ordinance, and no such goods shall be distributed to any foreign country in any manner prohibited by United States law.

REGULATIONS AND CODES Seller makes no representation or promise, express or implied, that goods delivered hereunder will conform to any state or local laws, regulations, codes, ordinances, or standards, except as particularly and expressly specified and agreed upon for compliance in writing as a part of the contract between Buyer and Seller.

SELLER'S REMEDIES Seller hereby expressly reserves all remedies provided for by the Uniform Commercial Code and such remedies are expressly cumulative in nature and include all of the available remedies for breach and Seller need not make any election of remedy.

MISCELLANEOUS Buyer may not assign its rights or duties relative to this order without Seller's written consent, but Seller may assign its interest in such order to any affiliate or successor in interest. The waiver of any breach of these TERMS AND CONDITIONS shall not constitute a waiver as to any further breach. Any of these TERMS AND CONDITIONS found to be invalid, illegal or unenforceable, shall be considered inoperative and the remaining TERMS AND CONDITIONS shall be valid and enforceable as though such provisions are not included herein.

Contact our Credit Department toll-free for questions: 800.444.1579

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