



LUMITRON LED  
MEDIUM  
(shown with optional legs)

# LUMITRON LED OWNER'S MANUAL

[WWW.WORKHORSEPRODUCTS.COM](http://WWW.WORKHORSEPRODUCTS.COM)

PARTS & SUPPLIES ARE AVAILABLE ONLINE AT:  
[https://support.workhorseproducts.com/parts\\_store/](https://support.workhorseproducts.com/parts_store/)

## CONGRATULATIONS!

*You are now the proud owner of a Lumitron LED.  
We thank you for choosing Workhorse Products!*

While our packaging has been designed to handle normal shipping conditions, we cannot foresee damages caused by the carrier and are not responsible for damages that occur during transportation.

Please check the contents of the packaging for damages immediately.

*If shipping damage has occurred:*

- 1) Contact the carrier to file a claim immediately  
---- AND ----
- 2) Contact Workhorse Products at 800.778.8779

### THE IMPORTANCE OF THE OWNER'S MANUAL

The purpose of the Owner's Manual is to familiarize you with the parts and operations of the product. Also included are explanations of the product's key features and additional information that will help with the maintenance of your product.

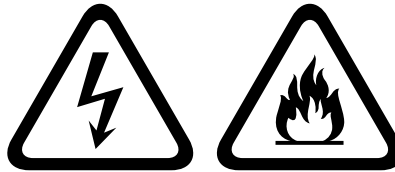
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# SAFETY INFORMATION

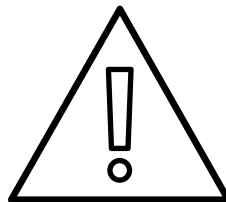
## WARNING!

**RISK OF ELECTRICAL SHOCK! Turn ALL power to the unit OFF before service.**  
All service should be done by or under the supervision of a trained technician.



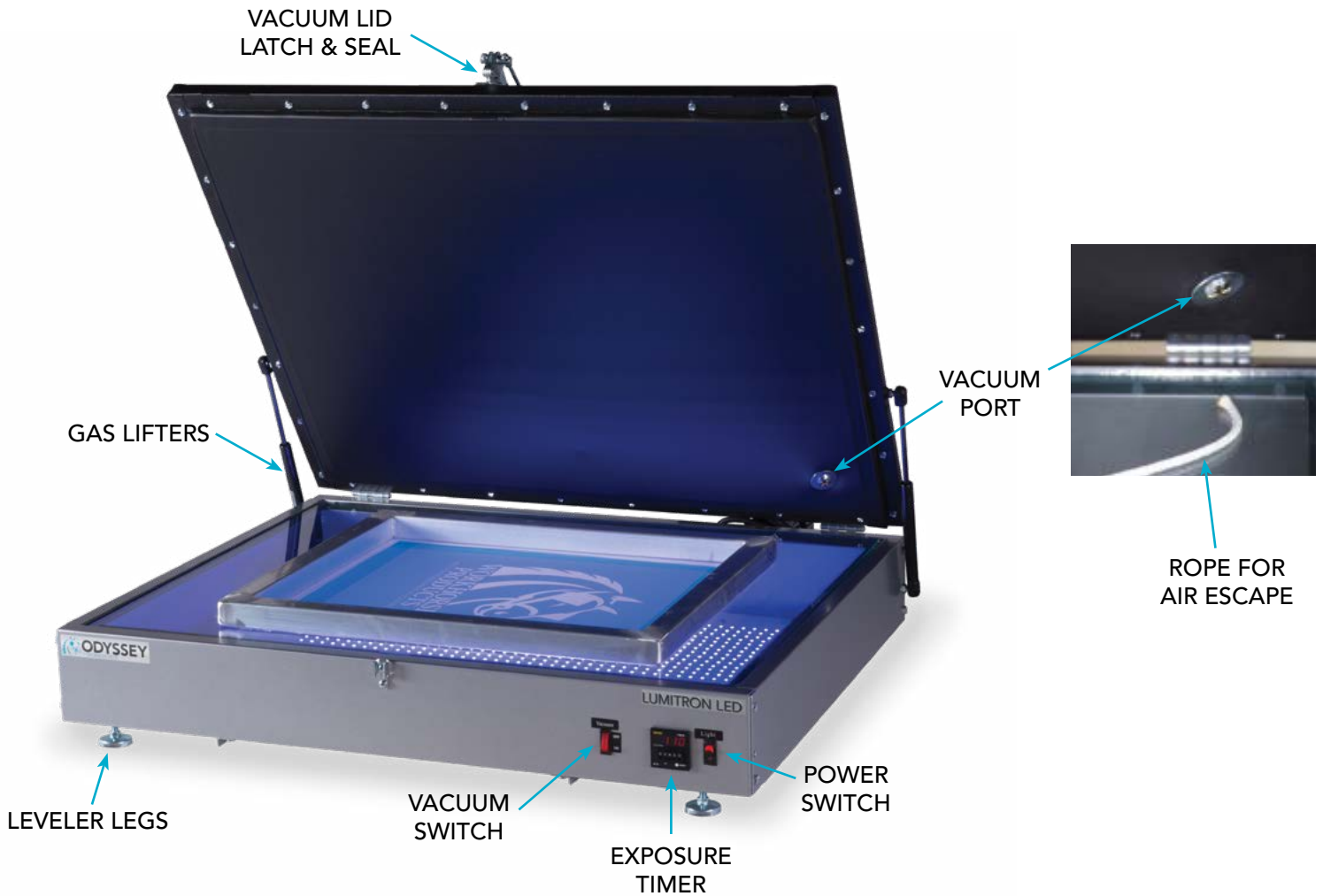
- › For your safety, do not store or use gasoline or other flammable vapors and liquids in the vicinity (at least three feet) of this or any other appliance.
- › NEVER later the internal wiring of this machine.
- › Keep all loose articles (including clothing, hair, jewelry, etc.) away from the vacuum motor.
- › Ensure all outlets used are sufficiently grounded and never plug in a frayed or damaged cord.
- › Do not use this unit if it has become wet or while standing in water.
- › Do not store objects on top of exposure unit.
- › Disconnect power prior to removing the glass or opening the control box.

**THIS ELECTRIC EXPOSURE UNIT IS INTENDED SOLELY FOR THE PURPOSE OF EXPOSING SCREENS USED FOR PRINTING ON TEXTILE AND CUT GOODS. THIS EXPOSURE UNIT IS INTENDED FOR IN-DOOR USE ONLY.**



**THE EXCLAMATION WITHIN AN EQUILATERAL TRIANGLE IS INTENDED TO ALERT THE USER OF IMPORTANT SAFETY PRECAUTIONS SHOP PERSONNEL SHOULD BE AWARE OF DURING OPERATION.**

# SPECIFICATIONS



	LUMITRON LED SMALL	LUMITRON LED MEDIUM	LUMITRON LED LARGE
<i>Part Number</i>	11609	11610	11611
<i>Max Screen Size</i>	20" x 24" 51 cm x 61 cm	25" x 36" 63 cm x 91 cm	34" x 50" 86 cm x 127 cm
<i>Power Requirements</i>	ELECTRIC 120V, 60Hz, 5 amps	ELECTRIC 115V, 60Hz, 5 amps	ELECTRIC 120V, 60Hz, 6 amps
<i>Dimensions</i>	37" x 37" x 6" 94 cm x 94 cm x 15 cm	41" x 43" x 6" 104 cm x 109 cm x 15 cm	58" x 48" x 6" 148 cm x 122 cm x 15 cm

# UNCRATING

1. The picture on the right is how the Lumitron LED is delivered. The first step is to remove the top of the crate.



2. After the top is removed, remove the front panel of the crate. The front panel is the side opposite of the vacuum motor.



3. With two people lift the exposing unit and place it into the desired location. Remove all of the plastic wrap and foam packing. When the blanket of the Lumitron is opened there will be a small cord on the glass, do not throw it away. Plug the unit into a grounded wall outlet.

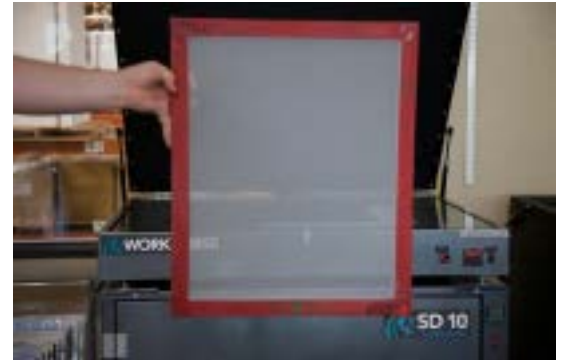


Congratulations! The Lumitron LED is now ready to use.

# EXPOSING A SCREEN

There are many variables that influence how a screen is to be exposed. Some of these variables are: emulsion brand, emulsion type, coating technique, mesh count, humidity, atmospheric temperature, and even the light source itself. The Lumitron LED works best with pure photopolymer emulsion or capillary film. The LED does work with dual cure emulsions and other diazo based products, but exposure times will be longer compared to using pure photopolymer.

1. Properly prepare the screen to be exposed.  
The screen needs to be clean, dry and properly tensioned.



2. Direct emulsion is typically applied with a scoop coater. The scoop coater should fit inside the screen and be larger than the image.

Working under subdued light, fill the coater's reservoir with room temperature direct emulsion. Put the screen in the vertical position with the print side facing out. Place the coater at the bottom edge and tilt it slightly forward until the emulsion touches the mesh. With even speed slowly pull the coater towards the top of the screen. Stop pulling the coater about two inches from the top and tilt the coater slightly backwards to let the emulsion settle into the reservoir.

Repeat this process for the inside (squeegee side).



It's important to coat the outside (print side) first because it will leave a heavier deposit on the screen.

Most likely, a small amount of emulsion will escape from the reservoir during the coating process and leave thick deposits along the edge of emulsion. Just simply remove the thick deposits by scraping off the excess.



# EXPOSING A SCREEN

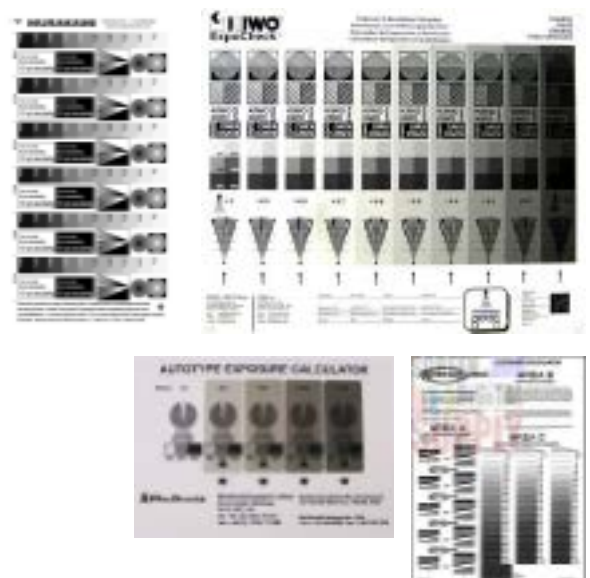
3. The screen needs to be dried in a dark location. Dry the screen in a horizontal position with the outside print side facing down. This positioning is essential to aid the drawing emulsion to create a flat and smooth surface. A fan can be used to circulate the air around the screen to decrease the drying time. The normal drying time for a properly coated screen can be anywhere from 30–60 minutes. However, areas that have moisture in the air will take longer.



A Workhorse SD-10 drying cabinet will speed up the drying process and eliminate the danger of dust, which will guarantee high quality screens and increase production speed.

4. There is no standard exposure time because of all of the variables involved. Use an exposure calculator to properly determine the correct exposure time. Most emulsion manufacturers have their own exposure calculator, but they all function in a similar manner.

Exposure calculators are film positives that have various degrees of detailed lines that are covered with different factors. The purpose is to expose the calculator onto a screen as a starting time and each filter will have a factor number. After the screen is washed out, observe which image is the hardest while containing the most detail and multiply the factory number by the starting exposure time to get the correct exposure time.



For example, a screen is exposed for one minute with the calculator and the best image washed out has a filter factor of .5, so  $1:00 \times .5 = 30$  seconds. To guarantee the best screens, test every screen that has a different variable like: different mesh count, different emulsion brand, and different coating technique.

A dual cure emulsion will need a starting point of at least two minutes with an exposing calculator.

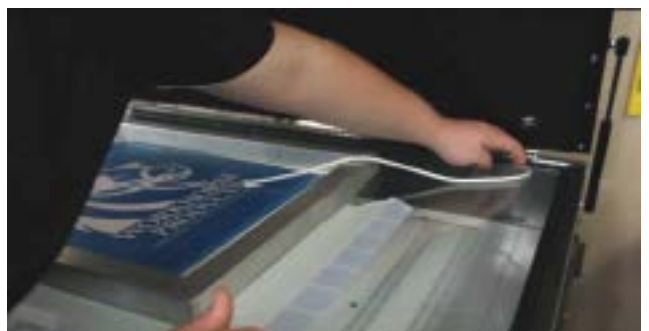
It's best to test for each season change. The seasons influence temperature, humidity and moisture that will affect the exposing of a screen.



# EXPOSING A SCREEN

5. Release the red latch and lift the hold down blanket to expose the glass. Inspect the glass to make sure that it's clean. Clean glass makes a better quality screen.
6. The film positive should be positioned on the squeegee side, to be read left to right. It can be helpful to use a pre-registration system to make sure each piece of film is aligned in proper relation to the other images.
7. Lay the frame on the glass with the film side down and the squeegee side up. Next, place the rope from inside the screen across the screen edges and in front of the vacuum hole. The rope creates an escape route for the air inside the frame, it also keeps the vacuum port from sealing against the glass.
8. Close the vacuum lid and latch it into place with the red latch/seal mechanism. Turn the power button on. Second, hit the vacuum switch and allow the vacuum blanket to form a complete draw down around the frame. Third, when starting the timer, the rocker switch for the light needs to be turned on and this will begin the countdown of the timer. When starting over, turn the light rocker switch off and then back on again. This will begin the countdown again.
9. When the exposure time ends turn the vacuum switch to the off position. Release the latch handle and very slowly lift the lid to release the air. Opening the lid slowly is very critical, because the screen could potentially be pressurized to the top of the lid and if lifted too quickly it could fall and break the glass.

Next, take the exposed screen to be washed out in a sink.



# EXPOSURE TIMER

There are five setting displays on the timer face:



The two digits to the left of the letters are for whole units

The two digits to the right of the letters are for fractions of units

The center character is a letter:  
S for seconds  
M for minutes  
H for hours

For example:  
01M10 = 1 minute and 10 seconds  
18S00 = 18 seconds  
04S50 = 4.5 seconds

To adjust the digits press the buttons located directly over and under each digit. The top button increases the number, whereas the bottom button decreases it.

When the Lumitron is powered on for the first time that day, the timer will count up from zero to the set point. For every exposure afterwards, just simply turn off the light rocker switch and turn back on. This will start the LED lights and begin the count down again.

# PARTS LIST

## 11609 LED LUMITRON, SMALL 115V

PART NO.	DESCRIPTION	QTY.
31-76051	VACUUM PUMP 115V	1
30-1265	TIMER, DIGITAL CODED SWITCH SESTOS	1
30-1552	POWER SUPPLY, 12V 20A	1
30-3100-2	SWITCH ROCKER LIGHTED	1
30-6227	SWITCH ROCKER	1
39-76212	DUPLEX RECEPTACLE 15 AMP GROUNDING	1
39-1020	ADHESIVE CLAMP	2
39-1170	TIE WRAP, 4" BLACK	15
39-1120	WIRE TIE BLOCKS	8
39-1150	STRAIN RELIEF	1
39-2126	LEVER NUT, 3 PORT COMPACT CONNECTOR	1
30-1695	RELAY, 40A 120V SPST	1
40-75021	GAS LIFTERS	1
SA-3315R	LED SUB PANEL ASSEMBLY, SMALL	1
20506R	BLANKET EXPOSURE 34x41	1
EA-0048	HARNESS, POWER	1
40-94462	CLAMP LATCH, PULL ACTION	1
391048	HARNESS, AC POWER	1
391049	HARNESS, DC POWER	1
40-75015	BALL STUD	1

# PARTS LIST

## 11610 LED LUMITRON, MEDIUM 115V

PART NO.	DESCRIPTION	QTY.
31-76051	VACUUM PUMP 115V	1
30-1265	TIMER, DIGITAL CODED SWITCH SESTOS	1
30-1553	POWER SUPPLY SINGLEOUT 12V 29A	1
30-3100-2	SWITCH ROCKER LIGHTED	1
30-6227	SWITCH ROCKER	1
39-76212	DUPLEX RECEPTACLE 15 AMP GROUNDING	1
39-1020	ADHESIVE CLAMP	2
39-1170	TIE WRAP, 4" BLACK	15
39-1120	WIRE TIE BLOCKS	8
39-1150	STRAIN RELIEF	1
39-2126	LEVER NUT, 3 PORT COMPACT CONNECTOR	1
30-1695	RELAY, 30A 120V SPST	1
40-75021	GAS LIFTERS	1
SA-3320	LED SUB PANEL ASSEMBLY, MEDIUM	1
20502R	BLANKET EXPOSURE 39x47	1
EA-0047	HARNESS POWER, MEDIUM	1
40-94462	CLAMP LATCH, PULL ACTION	1
391045	HARNESS, AC POWER	1
391046	HARNESS, DC POWER	1
40-75015	BALL STUD	1

# PARTS LIST

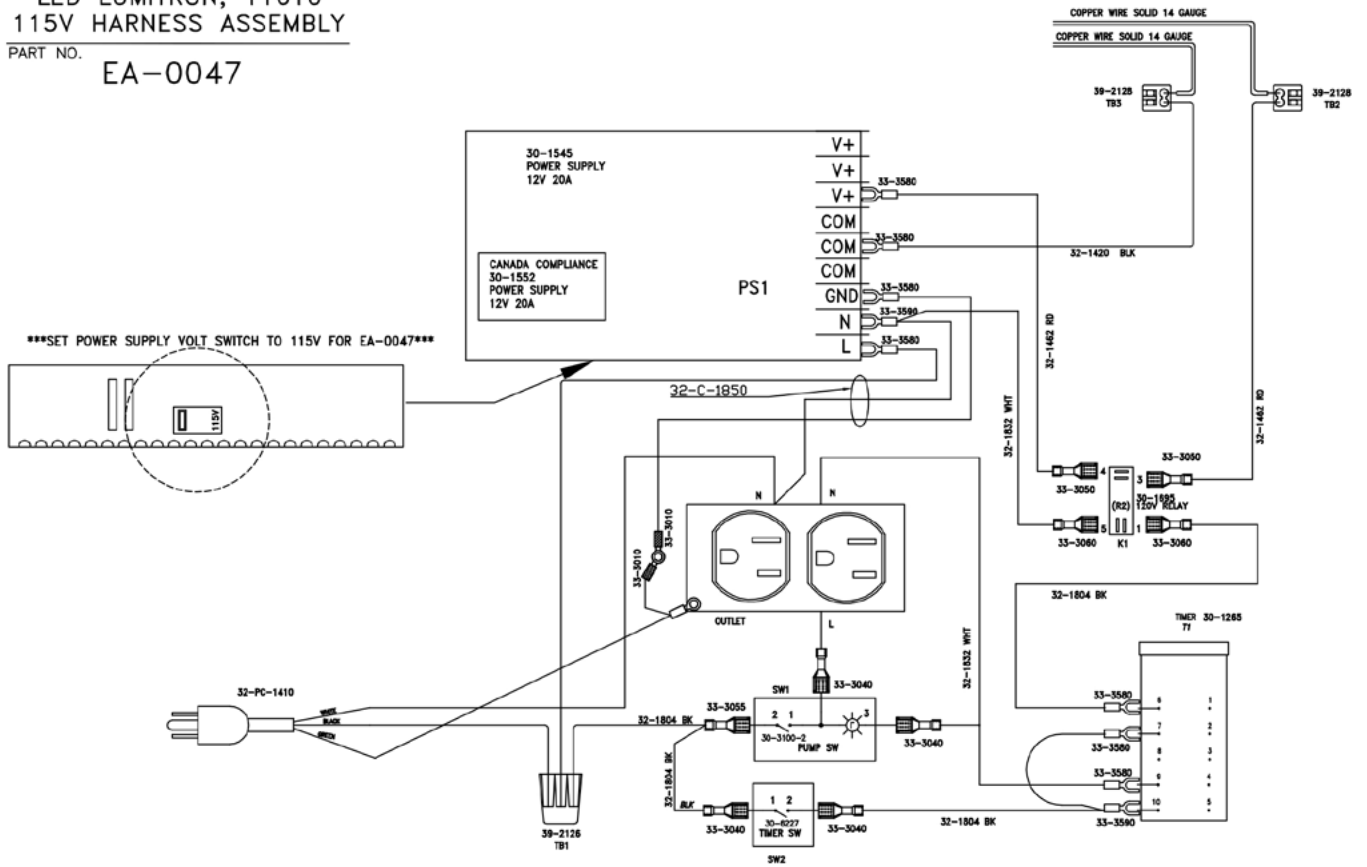
## 11611 LED LUMITRON, LARGE 115V

PART NO.	DESCRIPTION	QTY.
31-76051	VACUUM PUMP 115V	1
30-1265	TIMER, DIGITAL CODED SWITCH SESTOS	1
30-1559	POWER SUPPLY, 12V 41.7A	1
30-3100-2	SWITCH ROCKER LIGHTED	1
30-6227	SWITCH ROCKER	1
39-76212	DUPLEX RECEPTACLE 15 AMP GROUNDING	1
39-1020	ADHESIVE CLAMP	2
39-1170	TIE WRAP, 4" BLACK	8
39-1120	WIRE TIE BLOCKS	8
39-1150	STRAIN RELIEF	1
39-2126	LEVER NUT, 3 PORT COMPACT CONNECTOR	1
30-1695	RELAY, 40A 120V SPST	1
40-75022	GAS LIFTERS	1
SA-3325	LED SUB PANEL ASSEMBLY, LARGE	1
20507R	BLANKET EXPOSURE 44x62	1
EA-0049	HARNESS POWER, LARGE	1
40-94462	CLAMP LATCH, PULL ACTION	1
391051	HARNESS, AC POWER	1
391052	HARNESS, DC POWER	1
40-75015	BALL STUD	1

# WIRING DIAGRAM

LED LUMITRON, 11610  
115V HARNESS ASSEMBLY

PART NO. EA-0047



# LIMITED WARRANTY

*Although every effort has been made to provide accurate specifications, Workhorse Products does not assume any liability for damages, whether consequential or incidental, that may result from the use or misuse of the indicated specifications. Workhorse Products requires the use of a licensed industrial electrician for the installation of electrical service to equipment requiring electrical power.*

Workhorse Products reserves the right to alter specifications in the manufacture of its products. It is understood and agreed that Seller's liability for any equipment whether liability in contract, in tort, under any warranty, in negligence, in strict liability or otherwise shall not exceed the return of the amount of the purchase price paid by Buyer. Notwithstanding the foregoing provision, under no circumstances shall Seller be liable for special, indirect or consequential damages. The price stated for the equipment is a consideration in limiting Seller's liability. No action regardless of form, arising out of the transactions under this Agreement may be brought by Buyer more than two (2) years after the cause of action has occurred. Our warranty is specified, is exclusive and no other warranty, whether written or oral, is expressed or implied. Workhorse Products specifically disclaims the implied warranties of merchantability and fitness for a particular purpose. Equipment manufactured or sold by Workhorse Products is warranted against defects in workmanship and materials for a period of one year from receipt by customer. All warranties initiate from date of shipment to original customer. Replacement parts are covered for the term of the equipment warranty period. Parts not under warranty are covered for thirty (30) days from receipt by customer. Any part found by Workhorse Products to be defective in material or workmanship within the stated warranty period will be replaced or repaired at Workhorse's option without charge.

**AFTER OBTAINING AN RMA# SEND RETURNED FREIGHT PREPAID TO:  
3730 E. Southern Avenue, PHOENIX, AZ 85040 USA.**

Written authorization must be obtained from Workhorse before any part will be accepted. Replacement parts are sent out freight collect. Parts sent out prior to receiving defective require a credit card hold for cost plus freight. Upon return of defective part, if it is deemed that the part was not damaged by customer but failed, the cost of the replacement part will be refunded.

*This warranty does not extend to expendable parts such as filters, fuses, elements and brushes, rubber lids, glass tops and UV bulbs. Workhorse does not warrant failure of parts or components resulting from misuse or lack of proper maintenance. Installation, inspection, and maintenance costs are the sole responsibility of the purchaser.*

**FOR WARRANTY TO TAKE PLACE YOU MUST COMPLETE THE PRODUCT REGISTRATION FORM ONLINE:**

<https://workhorseproducts.com/equipment-registration-form/>





[WWW.WORKHORSEPRODUCTS.COM](http://WWW.WORKHORSEPRODUCTS.COM)

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67-1580 REV 421