GAN **Electronic** 750W/1000W DE US

1. Introduction

Thank you for purchasing the GAN Electronic 750 W / 1000 W DE US. This manual describes the mounting and installing of the product and also describes how to use the product. Mounting and installing of the fixture may only be executed by certified service personnel. Please read and understand this manual completely before using the product. Only use the product as specified in this manual.

1.1. Used symbols

Warning! A warning indicates severe damage to the user and/or product may occur when a procedure is not carried out as described.

Caution! A caution sign indicates problems may occur if a procedure is not carried out as described. It may also serve as a reminder to the user.

Note: A note gives additional information, e.g. for a procedure.

This symbol indicates that the reflector and lamp can reach very high temperatures (>85 °Celsius / >185 °Fahrenheit). Observe a cool down period before performing maintenance.

This symbol is an internationally recognized symbol used to designate recyclable materials.

This symbol shows that a product has been independently tested and certified to meet recognized standards for safety.

The symbol on the material, accessories or packaging indicates that this product may not be discarded as household waste. By disposing of the equipment in the proper way, you will be helping to prevent possible risks to the environment and public health, which might otherwise be caused by improper handling of the discarded equipment. Recycling of materials contributes to the conservation of natural resources. Therefore, please do not dispose of your old electronics and electrical appliances via household waste.



This symbol indicates the minimum distance (B) between the fixture (A) and the lit surface.

2. Product description

The GAN Electronic 750 W / 1000 W DE US is an electronic horticultural fixture. It can drive one double ended high frequency type (electronic) high pressure sodium lamp:

750 W DE US: HPS 750 W 400 V.
Recommended lamp:
- Gavita Pro 750 W EL DE HPS;
- Philips Master GreenPower 750 W EL.

1000 W DE US: HPS 1000 W 400 V.
Recommended lamps:
- Gavita Pro Plus 1000 W EL DE HPS;
- Philips Master GreenPower Plus TD 1000W EL.

The GAN Electronic 750 W / 1000 W DE US is intended to be used in greenhouses or in climate rooms.

In this manual, the GAN Electronic 750 W / 1000 W DE US will be referred to as: “the fixture”.

3. Product information and specifications

3.1. General product information

Product name	GAN Electronic 750 W DE US / CAN
Manufacturer	Gavita International bv
Version	400 V
EAN Code	8718692230163
Part number	14.77.11.04.11
Plug type	Wieland RST20i3

Product name	GAN Electronic 1000 W DE US		
Manufacturer	Gavita International bv		
Version	277 V	347 V	400 V
EAN Code	8718692230224	8718692230323	8718692230170
Part number	14.63.19.04.01	14.13.19.04.01	14.10.11.15.12
Plug type	Wieland RST20i3		

3.2. Technical specifications

Product name	GAN Electronic 750 W DE US / CAN	GAN Electronic 1000 W DE US		
Input voltage +/-10%	400 V	277 V	347 V	400 V
Input wattage +/-3%	795 W	1045 W	1040 W	1032 W
Apparent power +/-3%	811 VA	1050 VA	1051 VA	1042 VA
Input current at 100%	2,03 A	3,85 A	3,06 A	2,6 A
Inrush current:	30 A	< 40 A	20 A	35 A / 1,6 mSec
Power factor	> 0,98	> 0,98	> 0,98	> 0,98
Product weight	3,7 kg / 8.2 lbs	3,8 kg / 8.6 lbs	3,6 kg / 7.9 lbs	3,6 kg / 7.9 lbs
Dimensions (LxWxH)	22.2"x9.7"x7,8" (56.5x24.5x19.5cm). (height excl. mounting hooks)			
Temperature case	75 °Celsius / 167 °Fahrenheit			
Temperature ambient	0 ~ 35 °Celsius / 32 ~ 95 °Fahrenheit			
Relative humidity	70% (not condensating)			
Total Harmonic Distortion	< 10%			
Frequency	50 - 60 Hz			
Certification	CSA 252952			
Insulation	Class 1 - requires an earth connection			
Power inlet	Wieland RST20i3 IP20 connector			
Ignition voltage:	4 kV			
Earth leakage current:	≤ 1 mA			

3.3. Compatible products and accessories

	Product name	Gavita part number
Replacement reflectors	Gavita HR96 DE	30.46.13.00
	Gavita MD 135 DE HC	30.07.13.00
	Gavita W 150 DE	30.26.13.00
Compatible lamps	Gavita Pro 750 W EL DE HPS	26.74.19.11
	Philips Master GreenPower 750 W EL	21.74.02.21
	Gavita Pro Plus 1000 W EL DE HPS	26.10.16.12
	Philips Master GreenPower Plus TD 1000W EL	21.10.16.11
Compatible cable plug	Wieland RST20i3 female connector	63.70.11.71

3.4. Environment

The product is intended to be used in greenhouses and climate rooms. The product can be used in damp environments. The product may not be used in wet environments or outdoors. The lamps function optimal when the ambient temperature is between 20 ~ 30°C / 68 ~ 86° Fahrenheit.

3.5. Legal

CSA approved according to: 252952.

4. Safety recommendations and warnings

Warning! Carefully read the warnings below before using or working with the product!

- Always adhere to the local rules and regulations when installing or using the fixture.
- Do not open or disassemble the fixture, it contains no servicable parts inside. Opening the fixture can be dangerous and will void the warranty.
- This product may cause interference to radio equipment and should not be installed near maritime safety communications equipment or other critical navigation or communication equipment operating between 0.45 - 30 MHz.
- Do not use the fixture when either its lamp or its power cord are damaged. Replace the power cord only with original certified cords. Replace the lamp only with lamps specified by Gavita (see paragraph 3.3).
- The use of other lamps may damage the product and lamp and will void the warranty.
- Modifications to the cords can lead to unwanted electromagnetic effects, which makes the product not comply with legal requirements.
- Do not expose the fixture to:
  - condensing humidity, heavy mist, fog or direct spray;
  - (ambient) temperatures outside the specified range;
  - dust and contamination;
  - direct sunlight during use or HID light that could heat up the ballast.
- Always disconnect the fixture from mains before performing any maintenance.
- Always allow for a cool down period of at least 30 minutes before touching the lamp or reflector. Touching the lamp or the reflector when the lamp is lit or immediately afterwards will result in severe burns!
- Never touch the lamp with bare hands as this will cause damage to the lamp.
- Do not use the fixture near flammable, explosive or reactive substances. The lamp and the reflector of the fixture reach temperatures of >85 °Celsius / 185 °Fahrenheit.
- Do not use sulfur vaporizers or water misters. Sulfur and calcium deposits on your reflector will decrease its efficiency.
- The installation and use of the fixture is the responsibility of the end user. Incorrect use or installation can lead to failure and damage to the fixture. Damage to the fixture and electronic circuitry as a result of incorrect installation and use revokes the warranty.

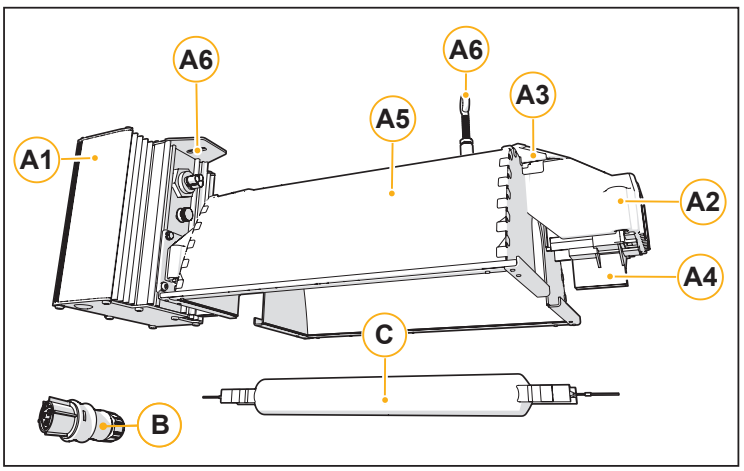
5. Contents (1)

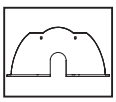
A. GAN Electronic 750 W / 1000 W DE EU
   1. Electronic ballast
   2. Lamp bracket
   3. Lever to unlatch reflector
   4. Lamp socket (2x)
   5. Reflector Gavita HR96 DE*
   6. Mounting points

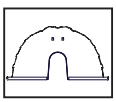
   *The reflector is delivery dependent, it may differ from the image

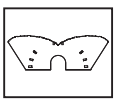
B. Wieland RST20i3 female connector

C. Gavita Pro 750 W EL DE HPS lamp / Philips Master GreenPower 750 W EL lamp / Gavita Pro Plus 1000 W EL DE HPS lamp / Philips Master GreenPower Plus TD 1000W EL




Gavita HR96 DE


Gavita MD
135 DE HC

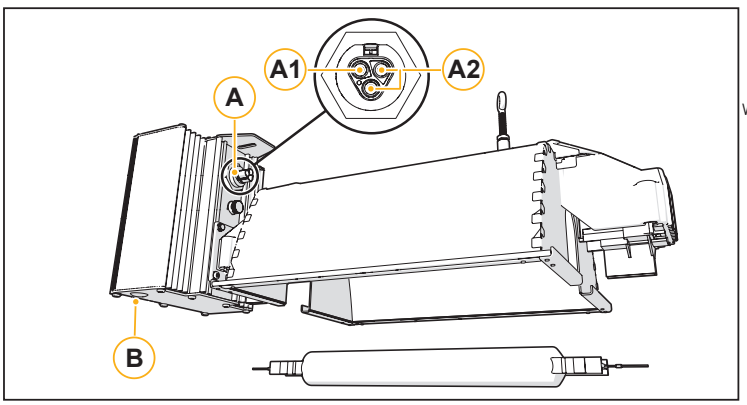

Gavita W
150 DE

1.

6. Controls, connections and indications (2)

A. Wieland RST20i3 male connector
   1. Ground connection
   2. 277 V & 347 V: Phase / neutral connections
      400 V: Phase / Phase connections

B. Status LED




Wieland RST20i3

2.

7. Installation

⚠ **Warning!** Mounting and installing of the fixture may only be executed by certified service personnel, in accordance with the applicable local laws and regulations.

⚠ **Warning!** The fitter is responsible for correct and safe installation.

⚠ **Warning!** Ensure the local cabling can support the voltage and current requirements of the fixture.

⚠ **Warning!** Avoid coiled cords and keep mains leads separated. This prevents electromagnetic interference.

⚠ **Warning!** Do not connect or disconnect the Wieland RST20i3 plug under load.

7.1. Installation preparations

- Switch off mains power.
- Read the Gavita light distribution plan.
- If not done already, install the lamp in the fixture (see paragraph 10.2).
- If not done already, screw the mounting point into the fixture (3).

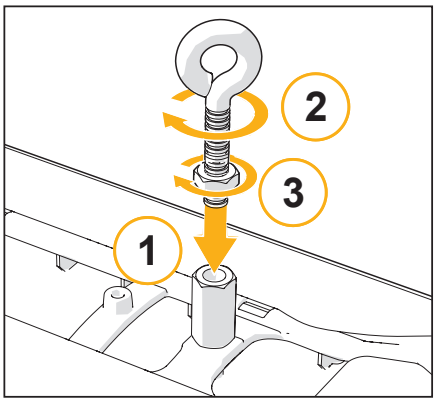
7.2. Installing the fixture

- Mount the suspension bracket* according to the light distribution plan.
- Hang the fixture by its two mounting points onto the suspension bracket (4). The two mounting points are spaced 30 - 32 cm / 11.81 - 12.59 inches apart.

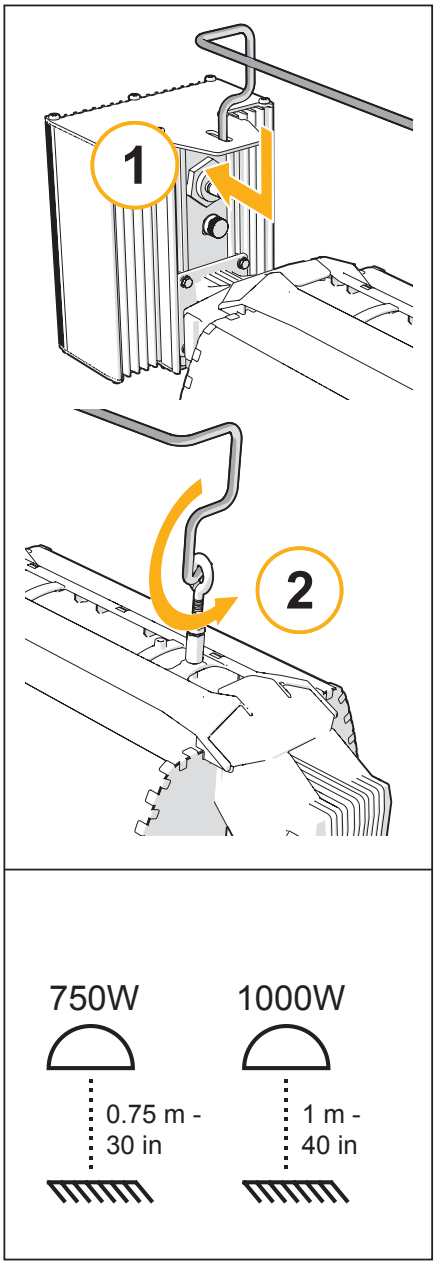
⚠ **Caution!** Always hang the fixture horizontally. Adjustments can be made by screwing the mounting point in or out.

To install other fixtures, repeat the steps at paragraph 7.1 and 7.2.

* The suspension bracket is delivery dependent, it may differ from the image.



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7.3. Connecting the fixture to the mains

⚠ **Warning!** Make sure mains power is switched off.
⚠ **Warning!** Always install the lamp before connecting the fixture to the mains.
⚠ **Warning!** Ensure the cord is not coiled and does not touch any hot surfaces.
⚠ **Warning!** Connect the cables according to local rules, safety regulations and electrical code.
⚠ **Warning!** Ensure external switching gear can cope with the inrush current of the fixture (see paragraph 3.2). Always use a double pole contactor suitable for switching a capacitive load. Never use household timers to switch the fixture!
Note: A power cord is not included in the package.

- If not done already, remove the top part of Wieland RST20i3 female connector from the bottom part (5).
- Pull the mains cable through the bottom part (6).
- Strip the wiring (7).
  The insulation strip length is 8 mm / 0.31" and the dismantling length is 32 mm / 1.26".
- Connect the wiring to the top part connections (8).
  Cable description:

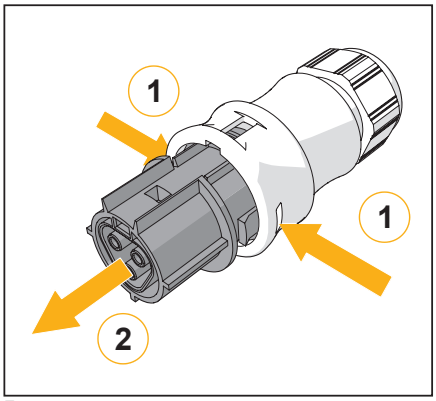
Wire	277V/347V	400V
Blue / White	Neutral (N)	Phase (N)
Brown / Black	Phase (L)	Phase (L)
Green+Yellow	Ground (⏚)	Ground (⏚)

- Slide the top part into the bottom part and tighten the gland nut (9).

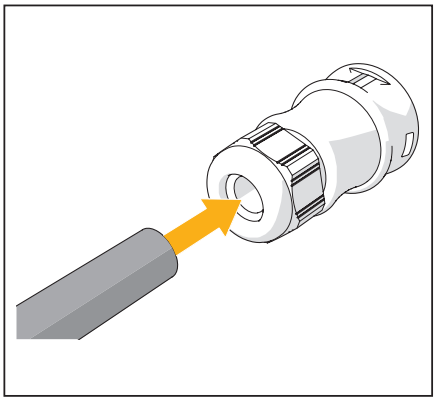
Note: When the parts connect correctly, you will hear a 'CLICK' sound.

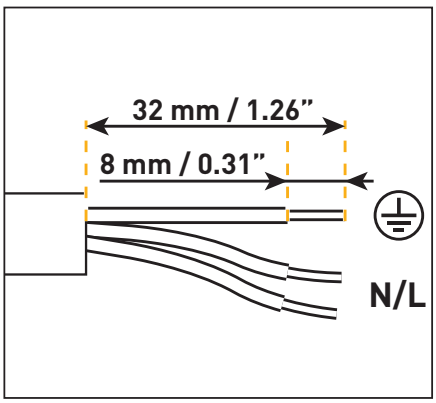
- Plug the Wieland RST20i3 female connection onto the Wieland RST20i3 male connection on the fixture (10).
- Switch on mains power.

⚠ **Warning!** Do not connect or disconnect the Wieland RST20i3 plug under load.

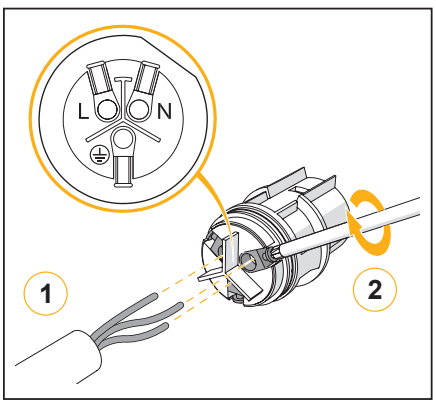


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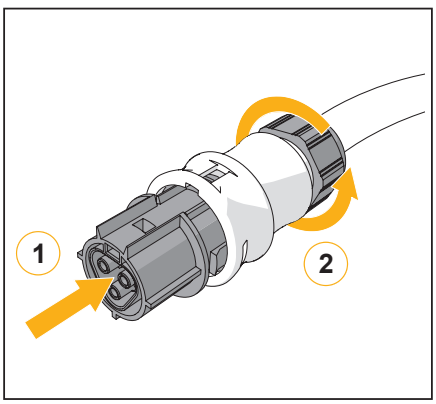

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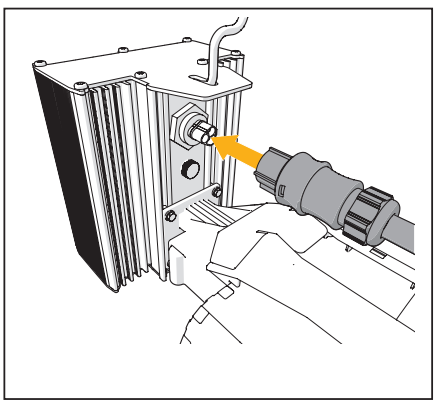
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8. Precautions when using the fixture

⚠ **Warning!** Never use the fixture without a lamp or reflector!
⚠ **Warning!** Always wait 20 - 30 minutes for the reflector to cool down!

9. Troubleshooting using the status LED

Note: The status LED is present at 400 V models only.
The status LED provides information on the condition of the lamp and electronic ballast. Consult table 1 to interpret the status LED. LED signals are represented by colored red dots.

9.1. Status indications

Status LED message	Status fixture	Description	Action/Solution
	No error	The lamp is working correctly	No action required.
	EOL timer expired	Maximum number of ignition attempts done without succesfull ignition or a driver is locked or has failed	Reset mains cycle manually. If the problem persists, it could be the end of the lamp's lifecycle. Replace the lamp
	Cycle error	Maximum number ignition attempts done (lamp stopped for unknown reason)	Check the lamp. Replace the lamp when damaged
	Low mains	Mains voltage too low	Check the voltage, mains cycle automatically resets
	Thermal overload	Maximum driver temperature exceeded	Reset mains cycle manually
	Lamp voltage out of range	Lamp voltage too low, lamp voltage too high or DC shift detected	This could be the end of the lamp's lifecycle. Replace the lamp
	High mains	Mains voltage too high and/or DC-bus voltage too high	Check the voltage, mains cycle automatically resets
	Ignition busy	Ballast is trying to ignite the lamp	No action required.

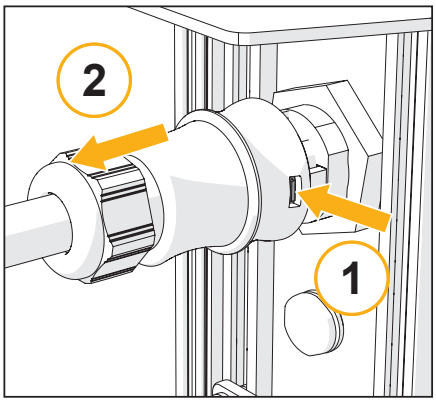
Table 1

Legend

LED message	Time (approx.)
●	256 ms.
●	
●●	512 ms.
●●	

10. Inspection, maintenance and repair

⚠ **Warning!** Disconnect the product from mains before performing any maintenance or repairs.
⚠ **Warning!** Do not connect or disconnect the Wieland RST20i3 plug under load.
⚠ **Warning!** Do not open or disassemble the fixture, it contains no servicable parts inside. Opening the fixture can be dangerous and will void the warranty.
⚠ **Warning!** Always allow for a cool down period of at least 30 minutes before touching the lamp or reflector.
⚠ **Caution!** Do not clean the fixture with detergents, abrasives or other agressive substances.
⚠ **Caution!** Do not touch the inside of the reflector.
! **Note:** Gavita recommends to measure the lamp and reflector for aging every year. Replace the lamp and/or reflector when they are aged.

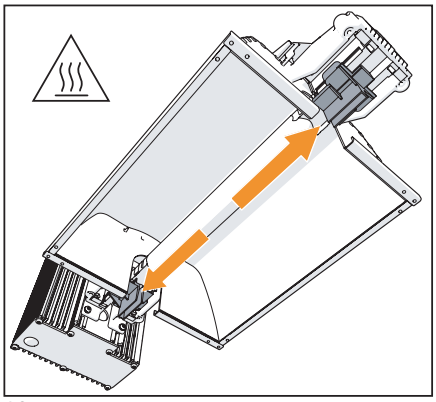


11.

- Regularly check the fixture for dust or dirt buildup. Clean if necessary. Contamination may couse overheating and decreased performance.
  - Clean the inside of the reflector with soapy water, but use demineralised water to rinse the reflector;
  - Clean the electronic ballast and the outside of the fixture using a dry or damp cloth.
- Check the lamp monthly for discolorations or black markings. Always replace a damaged lamp.

! **Note:** Before initial use, the lamp could have black markings. This will disappear when the lamp runs on full power. If not, replace the lamp.

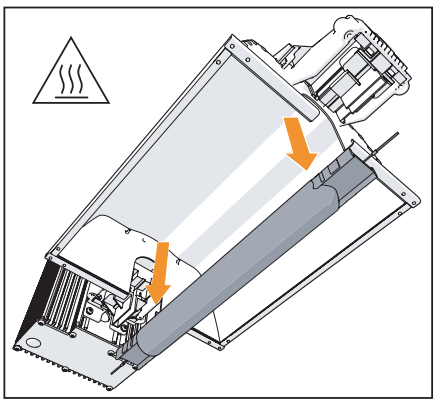
- Regularly check the wiring of the product to ensure it is undamaged.


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10.1. How to disconnect the Wieland RST20i3 plug

⚠ **Warning!** Do not connect or disconnect the Wieland RST20i3 plug under load.

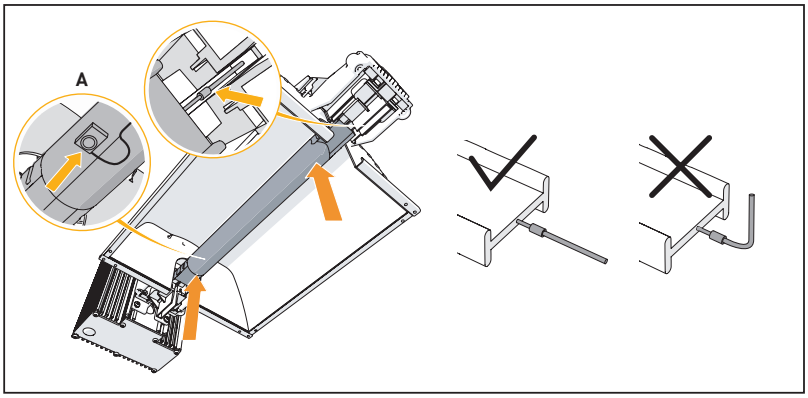
- Switch off mains power.
- Press the pin on the Wieland RST20i3 male connection downwards and pull the Wieland RST20i3 female connection from the fixture (11).


13.

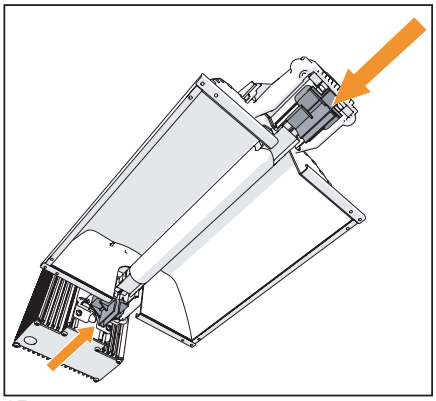
10.2. Placement and replacement of the lamp

⚠ **Warning!** Always allow for a cool down period of at least 30 minutes before touching the lamp or reflector.
⚠ **Caution!** Do not touch the lamp with bare hands as this will damage the lamp. Always use a fabric glove to handle the lamp.
⚠ **Caution!** Only use lamps specified by Gavita (see paragraph 3.3).
! **Note:** Gavita recommends replacing the lamp after 10000 lighting hours.

- Switch off mains power.
- Hold the lamp with a fabric glove to prevent it from falling. Use a protective glove if the lamp is damaged.
- Open the lamp holders by sliding them outwards (12).
- Carefully take the lamp out of the fixture (13).
- Install the new lamp with the getter (A) near the ballast (14), with the glass vacuum seal pointed downwards (Philips lamp) or sideways (Gavita lamps).
  Both lampwires need to be placed straight into the lamp holder and need to touch the metal part of the lamp holder.
- Close the lamp holders by sliding them inwards (15).
- Switch on mains power.



14.


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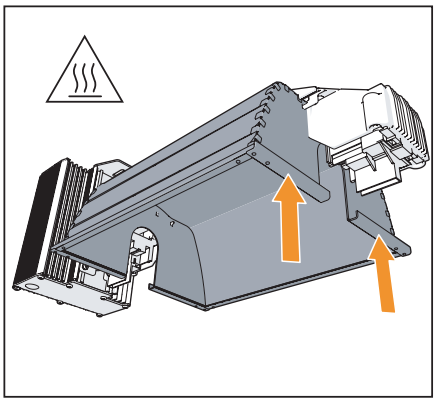
10.3. Placement and replacement of the reflector

⚠ **Warning!** Always allow for a cool down period of at least 30 minutes before touching the lamp or reflector.

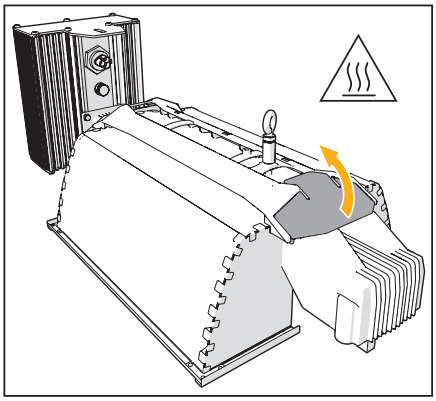
Note: Gavita recommends replacing the reflector* after 10000 lighting hours. Depending on the environment and contamination levels the reflector will degrade. The vega/Miro™ aluminum can be cleaned (see chapter 10), but we recommend to change the reflector every two to four years. Also replace the lamp when replacing the reflector.

* The reflector is delivery dependent, it may differ from the image.

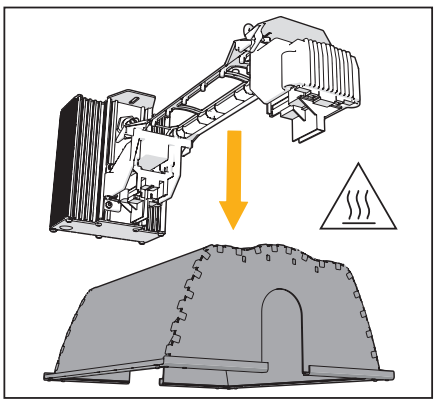
- Switch off mains power.
- Remove the lamp from the fixture (see paragraph 10.2).
- Support the reflector on the side of the reflector lever to prevent it from falling (16).
- Move the reflector lever up to retract the two pins holding the reflector in place (17).
- Remove the reflector (18).
- Place the new reflector. Ensure the reflector lever is in the opened position to allow the reflector to pass.
- Ensure the holes in the reflector are aligned with the pins in the fixture (19).
- Release the reflector lever so its two pins hold the reflector in place.
- Insert the lamp in the lamp holder (see paragraph 10.2).
- Switch on mains power.



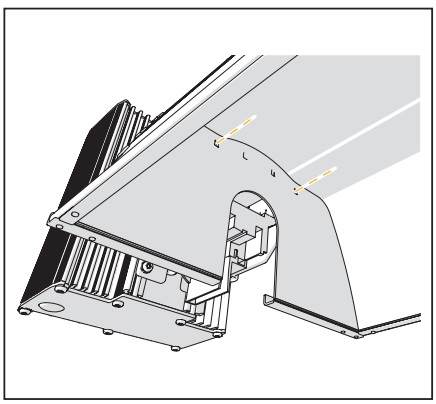
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11. Storage and disposal

- Store the fixture in a dry and clean environment, with an ambient temperature of -20 ~ 85 °Celsius / -4 ~ 185 °Fahrenheit.
- The product must not be discarded as unsorted municipal waste, but must be collected separately for the purpose of treatment, recovery and environmentally sound disposal.

⚠ **Caution!** The lamps are chemical hazardous waste and must be delivered to the designated authorities.

⚠ **Caution!** The lamp contains mercury.

12. Warranty

The warranty conditions are delivery dependent and can be found on a separate sheet.

252952

Manual: GAN Electronic 750 W / 1000 W DE US
Changes reserved - Version 17/24

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