

Gavita Pro 315e SE 208-240 CMH

1 Introduction

Thank you for purchasing the Gavita Pro 315e SE 208-240 CMH. This manual describes mounting, installation and directions for use. 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 is a certification mark employed on electronic products manufactured or sold in the United States, which certifies that the electromagnetic interference from the device is under limits approved by the Federal Communications Commission.



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



This symbol on 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 Gavita Pro 315e 208-240 CMH is an adjustable horticultural fixture. The Gavita Pro 315e SE 208-240 CMH can be used to drive a single-ended 315W ceramic metal halide lamp.

The Gavita Pro 315e SE 208-240 CMH is an e-series product. It can be remotely switched by a Gavita Master controller. The controller can automatically switch the fixture on and off during a 24-hour cycle.

The controller also offers a temperature safety feature: auto-switching off connected fixtures when the temperature in a climate room becomes too high.

The product can also be controlled by conventional timers in combination with a contactor. **Make sure the dummy RJ plug sits in the IN port. If not, the fixture will not operate.**

In this manual, the Gavita Pro 315e SE 208-240 CMH will be referred to as: "the fixture."

3 Product information and specifications

3.1 General product information

Product name	Pro 315e SE 208-240 CMH	
Manufacturer	Gavita® International bv	
EAN Code	8718403052916	
Part number	906048 = 3100K / 906049 = 4100K	
Plug type	Nema 6-15	

3.2 Technical specifications

Product weight	7.28 lbs (3.3 kg)	
Dimensions (L * W * H)	14.8 x 9.33 x 9.96 in. (37.6 x 23.7 x 25.3 cm) (height excl. mounting hooks)	
Temperature case	< 70° Celsius / 158° Fahrenheit	
Temperature ambient	0 ~ 30° Celsius / 32 ~ 86° Fahrenheit	
Input voltage +/-10%	208 V AC	240 V AC
Input current at 100%	1.6 A	1.4 A
Input power at 100%	330 W	
Power factor	> 0.98	
Relative humidity	< 70% (not condensating)	
Total harmonic distortion	< 10%	
Input Frequency	50 - 60 Hz	
Certification	cCSAus	
Insulation	Class 1 - requires an earth connection	
Power inlet	IEC C14	
Power output settings	ON / OFF (no dimming)	
External control signal:	RJ connector built in (6P6C)	
Inrush current:	≤ 40 amps	
Inrush duration:	1.6ms	
Earth leakage current:	≤ 1 mA	

3.3 Compatible products and accessories

	Product name	Part number
Compatible controllers	Gavita EL1 Master Controller	906120
	Gavita EL2 Master Controller	906121
Replacement reflector	Gavita MW 140 SE CMH	907119
Compatible lamps (U/O rated)	Philips Master Color CMH-TP 315 930/U/O	901575
	Philips Master Color CMH-TP 315 942/U/O	901573
Compatible power cord	Power cord US 240 V, 2.5 meter / 8.2 ft	111954
Compatible interconnect cable	Interconnect cable RJ	906107 / 906171
	Repeater bus connection kit	906170





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 optimally when the ambient temperature is between 20 ~ 30° C / 68 ~ 86° Fahrenheit.

3.5 Legal

This device complies with Part 18 of the FCC Rules.
CSA approved (252952).

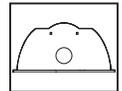
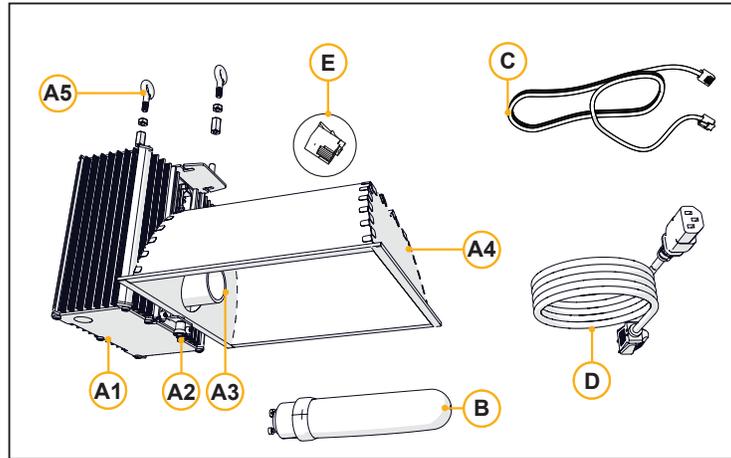
4 Safety recommendations and warnings

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

- Always adhere to local rules and regulations when installing or using the fixture.
- Do not open or disassemble the fixture; there are 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 section 3.3).
- The use of other lamps may damage the product and lamp and will void the warranty. Always use a U/O rated lamp.
- Modifications to the cords can lead to unwanted electromagnetic effects, thereby voiding the product's compliance 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 fixture.
- 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 afterward 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 voids the warranty.

5 Contents (1)

- A. Pro 315° SE 208-240 CMH fixture
 1. Electronic ballast
 2. Lever to unlatch reflector
 3. Lamp socket
 4. Reflector Gavita MW140 SE CMH 315
 5. Mounting points
- B. Philips Master Color CMH-TP 315
- C. Interconnect cable (RJ/RJ)
Cable length: 2.5 m / 8 ft
- D. Power cord with NEMA 6-15 plug
- E. Dummy RJ Plug

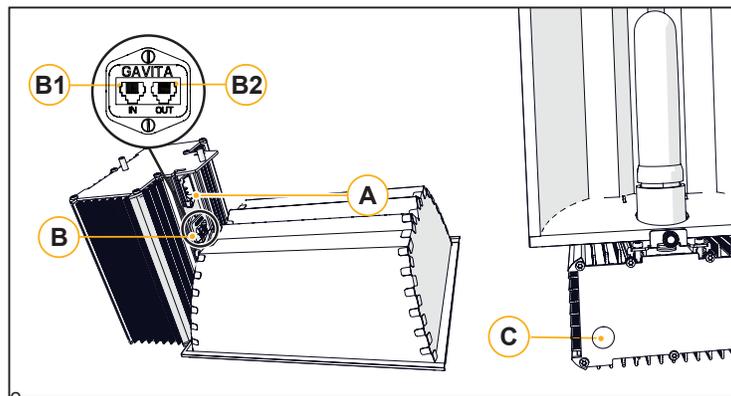


Gavita®
MW140 SE
CMH 315

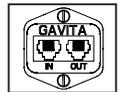
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6 Controls, connections and indications (2)

- A. IEC C14 connection
- B. Gavita 2xRJ connector
 1. RJ IN
 2. RJ OUT
- C. Status LED



NEMA
6-15



Gavita 2xRJ

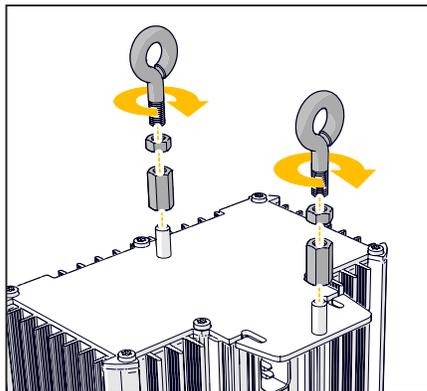
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7 Installation

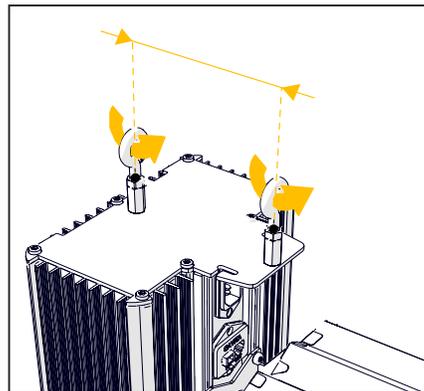
- ⚠ **Warning!** Avoid coiled cords. Coiled cords may lead to electromagnetic interference.
- ⚠ **Warning!** Always install the lamp before connecting the fixture to the mains.
- ⚠ **Warning!** When connecting the fixture to the controller it may ignite. Make sure either power is disconnected or the controller is switched off.
- ⚠ **Warning!** Ensure the local cabling can support the voltage and current requirements of the fixture.

7.1 Preparing the fixture for use

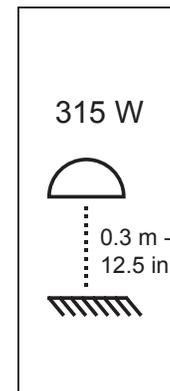
- Switch off mains power.
- Install the mounting points by screwing a big nut, a small nut and an eye bolt onto the threaded rods (3). Use the small nut to lock the orientation of the eyebolt.
- Install the lamp in the fixture (see section 10.1).
- Hang the lamp by its two mounting points (4). The mounting points are spaced 105 mm / 4 in. apart.



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7.2 Repeater bus connection kit (sold separately)

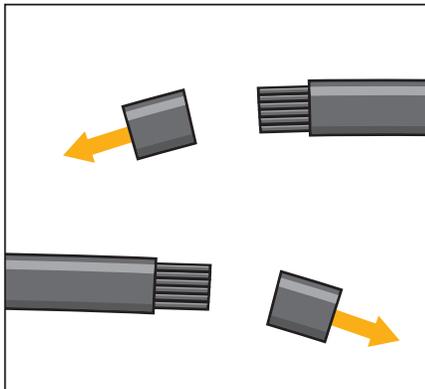
The repeater bus connection kit contains the following items:

1. 2x EMC Snap-on ferrite black (in bag) (13 x 12 x 5 x 25.5 x 2.4)
2. 4x Gavita 3-way splitter 6P6C grey RJ25 (in bag)
3. 8x modular jack 6P6C grey RJ25 (in bag)
4. 8x Snap-on ferrite grey (in bag)
5. Interconnect cable 6p 82 ft (25 m) grey (in bag)

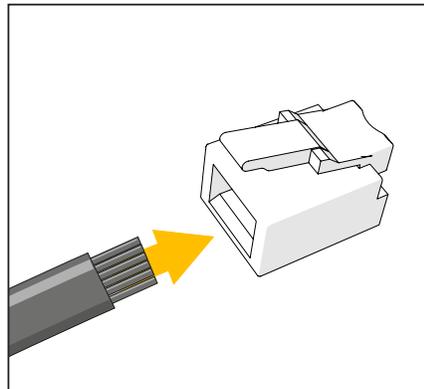
7.3 Preparation for use with a controller

Using a daisy-chain setup, a maximum of 100 fixtures can be connected to one controller. Up to 500 fixtures per daisy chain can be connected when using splitters. See sections 7.4 and 7.5 of this manual and the controller manual.

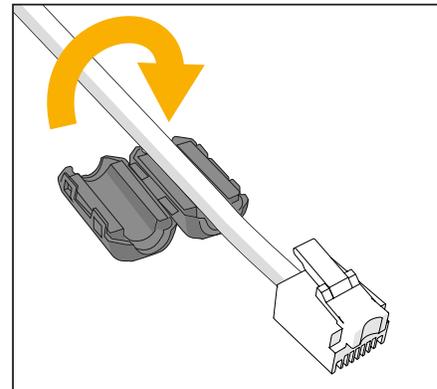
- Locate the unstripped black interconnect cable.
- Cut the cable (supplied with controller) to the desired length and strip both ends using a crimp tool (6).
- Insert the cable end in the RJ14 connectors (7) and use the crimp tool to finish the assembly.
- Mount ferrite cores (item 1 mentioned in section 7.2) to both cable ends close to the RJ14 connectors (8).



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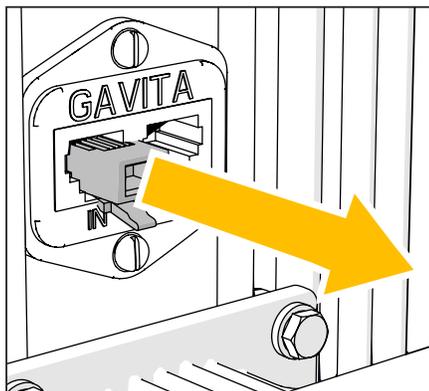


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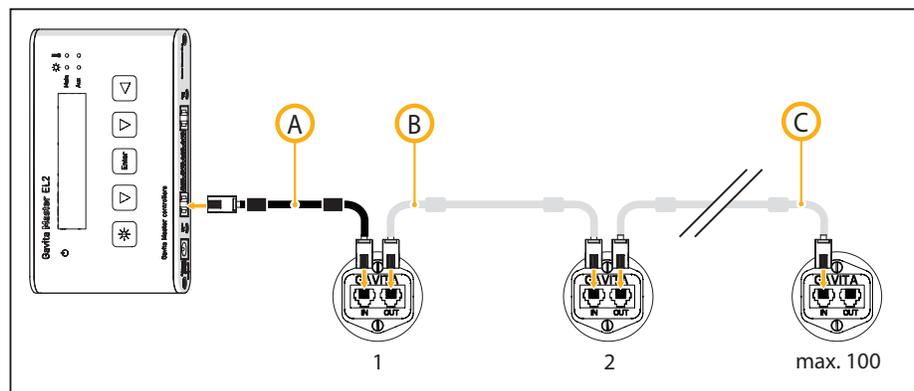
7.4 Connecting up to 100 fixtures

- Remove the dummy from the input port on the first fixture (9).
- **Note: Keep the dummy in a safe place!** The dummy is necessary to operate the fixture in standalone mode.
- Use the black controller cable (item is supplied with controller) to connect the controller input port on the first fixture (10A).
- Remove the dummy from the input port on the second fixture.
- Use a grey 6PC6 modular jack interconnect cable (item 3) with integrated ferrite cores to connect the output port of the first fixture to the input port of the second fixture (10B). The indicator light will blink when the connection is successful.
- Repeat these steps to connect up to 100 fixtures (10C).

Warning! Ensure the power cord and the controller cables do not touch any of the reflectors.



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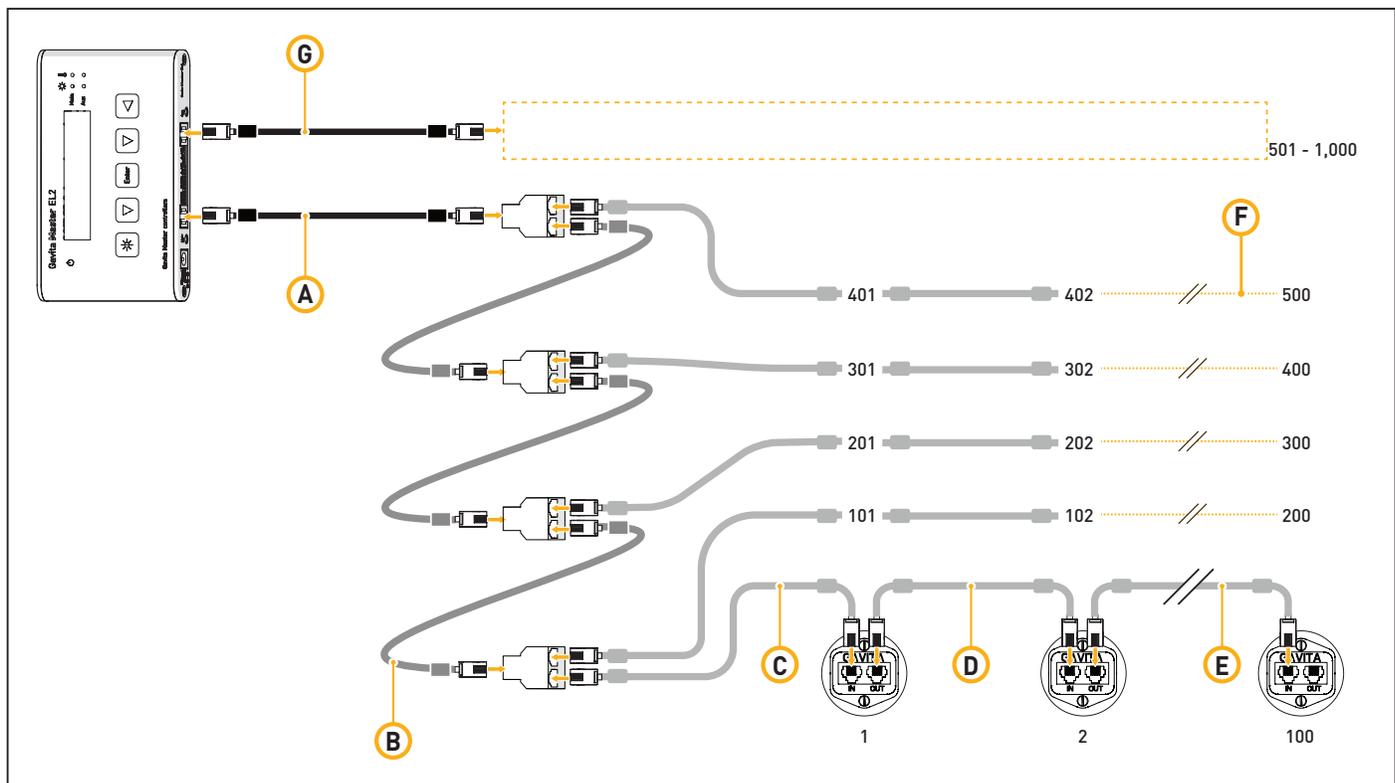
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7.5 Connecting up to 500 or 1,000 fixtures

Using a setup with daisy-chained splitters, up to 500 fixtures on EL1 and 1,000 fixtures on EL2 (over two channels) can be connected as shown in fig. 11.

- Use the black controller cable (item comes with the controller) to connect the primary channel of the controller to the input port of the first splitter (11A).
- Remove the dummy from the input port of the fixtures (9).
- ! **Note: Keep the dummy in a safe place! The dummy is necessary to operate the fixture in standalone mode.**
- Use a grey 6PC6 modular jack interconnect cable (item 3) to connect the output port of the splitter to the input port of the first fixture (11C).
- Use a grey 6PC6 modular jack interconnect cable (item 3) to connect the output port of the first fixture to the input port of the second (11D).
- Repeat these steps to connect up to 100 fixtures per splitter output port (11E). Up to 500 fixtures can be connected to the primary channel.
- Snap the two grey ferrite cores (item 4) onto the grey interconnect cable (item 3) close to the 6P6C plugs.
- Use the grey 6PC6 modular jack interconnect cables (item 3) to connect the output port of a splitter to the input port of the next (10B).
- Use the black secondary channel (item comes with controller) (11G) to connect another 500 fixtures, in the same way the fixtures are connected to the primary channel.

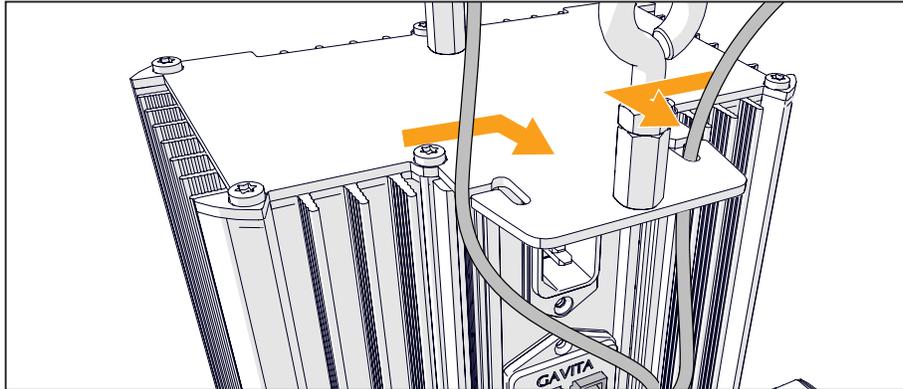
- ⚠ **Warning!** Ensure the power cord and the controller cables do not touch any of the reflectors.
- ⚠ **Warning!** Distribute number of fixtures evenly over daisy chains.
- ⚠ **Warning!** Ensure the repeater bus connections are properly integrated within a correct installation for best results.
- ⚠ **Warning!** Boosters should never be used to expand.
- ⚠ **Warning!** The maximum cable length per splitter is 250 m (100 interconnect cables).



7.6 Protecting the interconnect cables from the reflector

⚠ Warning! Ensure the cables are not coiled and do not touch any hot surfaces.

- Clip the interconnect cables into the cable guides to ensure they do not touch the hot reflector surface (12).



12.

7.7 Connecting the fixture to the mains

⚠ Warning! Ensure the cord is not coiled and does not touch any hot surfaces.

⚠ Warning! If external switching gear is used to switch the fixture, ensure it can cope with the inrush current of the fixture (see section 3.2). Always use a double-pole contactor suitable of switching a capacitive load. Never use household timers to switch the fixture!

- If a controller is used, ensure the controller is connected to the fixture.
- Plug the power cord into the mains.
- Switch on mains power.

8 Product use

⚠ Warning! Never use the fixture without a lamp or reflector!

⚠ Warning! Observe a cool-down period of at least 20 minutes before restarting. Failure to do so will damage your lamp.

⚠ Caution! Before first use, run the lamp for at least 100 hours to stabilize it. Failure to do so may lead to sub-optimal light levels and premature end-of-life failure of your lamp.

8.1 Using the controller to adjust the output of the lamp

The output of the lamp is switched by a controller.

- To switch the lamp on, set the controller to an output level of 50% or more.
- To switch the lamp off, set the controller to an output level of less than 50%.

9 Troubleshooting using the status LED

The multi-color status LED provides information on the condition of the controller and the lamp. Consult tables 1 and 2 to interpret the status LED. LED signals are represented by colored dots.

- All operating modes include GREEN;
- All warning codes include RED;
- All history codes (except the ignition code) include ORANGE;
- WARNINGS and history codes overrule operating mode display.

9.1 Status indications

Status LED message	Status fixture	Description	Action / Solution
●●●●●●●●●●●●●●	No power / off	The fixture is not connected to the mains or the power is off	Check power
●●●●●●●●●●●●●●	Ballast stand-by	Fixture is connected to the mains and to a controller. Output of ballast is off	
●●●●●●●●●●●●●●	Ballast on	Fixture is connected to the mains and to a controller. Output of ballast is on	
●●●●●●●●●●●●●●	Fixture is igniting the lamp	Fixture is trying to restart the lamp	No action required. When lamp doesn't start: Lamp too hot, defect or not properly connected (remote). Disconnect, check power cord and connections

Table 1

9.2 Error or warning indications

Status LED message	Status fixture	Description	Action / Solution
●●●●●●●●●●●●●●	Voltage too low	Input voltage is too low	Check mains voltage
●●●●●●●●●●●●●●	Voltage was too low in the past		See above, reset
●●●●●●●●●●●●●●	Voltage too high	Input voltage is too high	Check input voltage, check wiring and connection, check neutral in 3 phase systems
●●●●●●●●●●●●●●	Voltage was too high in the past		See above, reset
●●●●●●●●●●●●●●	Temperature too high	Electronics temperature is too high (max. 115° Celsius / 239° Fahrenheit)	Disconnect from mains. Check installation, clean ballast, check environment temperature (max 30° Celsius / 86° Fahrenheit). Make sure fixture is not heated by HPS lamp light. Wait until the lamp has cooled down, then reconnect to mains
●●●●●●●●●●●●●●	Temperature was too high in the past		See above, reset
●●●●●●●●●●●●●●	No signal from controller	Fixture is connected to the mains and set to EXT but there is no signal on the control input	If a controller is connected, search for loose connections, defect contacts or short-circuits

Table 2

10 Inspection, maintenance and repair

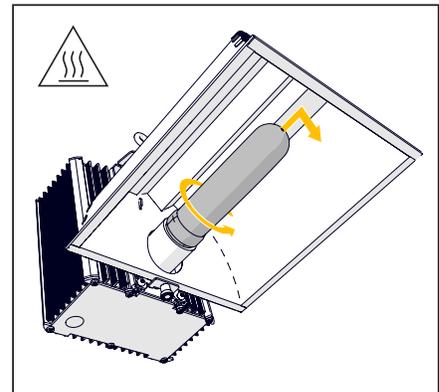
- ⚠ **Warning!** Disconnect the product from mains before performing any maintenance or repairs.
- ⚠ **Warning!** Do not open or disassemble the fixture, it contains no servicable parts inside. Opening the fixture can be dangerous and will void the warranty.
- ⚠ **Warning!** Always allow for a cool-down period of at least 30 minutes before touching the lamp or reflector.
- ⚠ **Caution!** Do not clean the fixture with detergents, abrasives or other aggressive substances.
- ⚠ **Caution!** Do not touch the inside of the reflector during installation and do not use water, abrasives or detergents to clean it. This will damage the reflective surface.

- Regularly check the fixture for dust or dirt buildup. Clean if necessary. Contamination may cause overheating and decreased performance.
 - Clean the inside of the reflector using only a soft, dry cloth;
 - Clean the electronic ballast and the outside of the fixture using a dry or damp cloth.
- Check the lamp monthly for any signs of damage. Always replace a damaged lamp.
- Regularly check the wiring of the product to ensure it is undamaged.

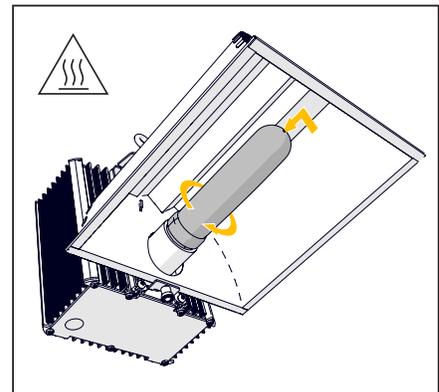
10.1 Placement and replacement of the lamp

- ⚠ **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 section 3.3).
- ⓘ **Note:** The lamp must be replaced every year, or after 5,000 lighting hours, whichever comes first.

- Switch off mains power.
- Use a fabric glove to carefully unscrew the lamp from the socket (13). Use a protective glove if the lamp is damaged.
- Use a fabric glove to carefully screw a new lamp into the socket (14).
- Switch on mains power.



13.



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10.2 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 5,000 lighting hours. Depending on the environment and contamination levels, the reflector will degrade. The Vega/Miro™ aluminum cannot be cleaned without damage. Therefore, we recommend changing the reflector once every year. Also replace the lamp when replacing the reflector.

- Switch off mains power.
- Remove the lamp from the fixture (see section 10.1).
- Support the reflector on the side of the reflector lever to prevent it from falling (15).
- Pull the reflector lever to release the lock (16).
- Turn the reflector backward and remove it from the fixture (17).
- Place the new reflector. Pull the reflector lever to allow the reflector to pass (18).
- Ensure the holes in the reflector are aligned with the pins in the fixture (18).
- Release the reflector lever so the two pins hold the reflector in place.
- Insert the lamp into the lamp holder (see section 10.1).
- Switch on mains power.

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 may not be discarded as unsorted municipal waste, but instead 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.

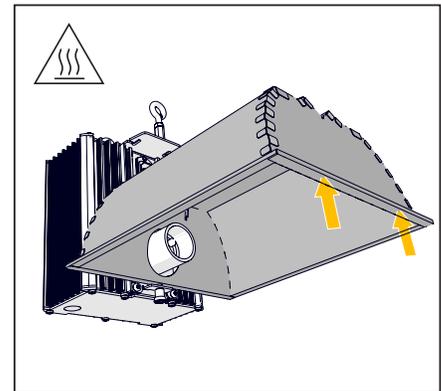
⚠ Caution! The lamp contains mercury.

12 Warranty

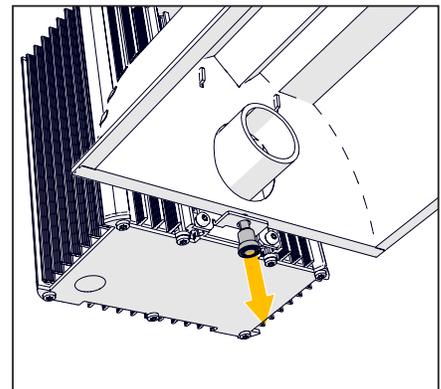
Gavita International bv warrants the mechanical and electronic components of their product to be free of defects in material and workmanship if used under normal operating conditions for a period of three (3) years from the original date of purchase. If the product shows any defects within this period and that defect is not due to user error or improper use, Gavita International bv shall, at its discretion, either replace or repair the product using suitable new or reconditioned products or parts. For CMH lamps the warranty period is one (1) year from the original date of purchase. In case Gavita International bv decides to replace the entire product, this limited warranty shall apply to the replacement product for the remaining initial warranty period, i.e. three (3) years from the date of purchase of the original product. For service, return the fixture to your shop with the original sales receipt.

13 LIMITED WARRANTY:

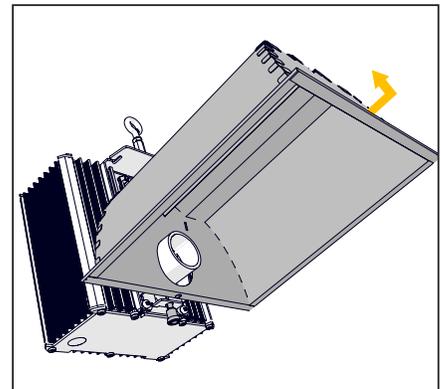
When purchased from an authorized Hawthorne dealer, this product is covered by a LIMITED WARRANTY, available at hawthornegc.com/warranties. You can also obtain the Terms of Sale and Limited Warranty by calling Hawthorne toll-free at: 1-888-478-6544 or writing Hawthorne at: Hawthorne Hydroponics LLC, 3204 NW 38th Circle, Vancouver, WA 98660., Attn: Customer Service.



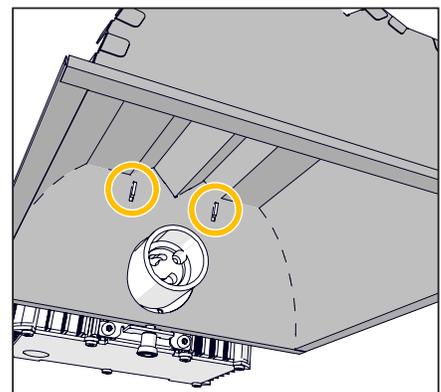
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**Manufactured for Hawthorne Hydroponics LLC,
a subsidiary of The Hawthorne Gardening Company**

3204 NW 38th Circle, Vancouver, WA 98660

HawthorneGC.com | Canada: HawthorneGC.ca

P +1-360-883-8846 | **E** info@gavita.com

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