

Gavita Pro / 1000^e DE US

1. Introduction

Thank you for purchasing the Gavita Pro 750^e DE US or the Gavita Pro 1000^e DE US. 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 can reach very high temperatures (>85° Celsius). Mind a cool down period before performing maintenance.

 The symbol on the material, accessories or packaging indicates that this product may not be discarded as household waste. Dispose of the equipment through a recycling centre that handles electronics and electrical appliances within the EU and in other European countries which use separate collection systems for used electronics and electrical appliances. 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 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 or performance.

 This symbol indicates the minimum distance (B) between the fixturetype (A) and the lid surface.

2. Product description

The Gavita Pro 750^e DE US and the Gavita Pro 1000^e DE US are adjustable horticultural fixtures. The Gavita Pro 750^e DE US can be used to drive a double ended 750W 400V high frequency (electronic) high pressure sodium lamp. The Gavita Pro 1000^e DE US can be used to drive a double ended 1000W 400V high pressure sodium lamp.

The Gavita Pro 750^e DE and the Gavita Pro 1000^e DE are e-series products. They can be remotely switched and adjusted 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, dimming or switching off connected fixtures when the temperature in a climate room becomes too high.

The product can also be controlled by hand or by conventional timers in combination with a contactor.

In this manual, the Gavita Pro 750^e DE US and the Gavita Pro 1000^e DE US will be referred to as: "the fixture".

3. Product information and specifications

3.1. Technical specifications

Input wattage	1060W typical
Power factor	0.95-0.98

3.2. Compatible products and accessories

	Product name	Gavita part number
Compatible controllers	Gavita EL1 Master controller	60.56.00.12.20
	Gavita EL 2 Master controller	60.56.00.24.11
Replacement reflector	HortiStar HR96 1000 DE	30.46.02.10
Compatible lamps	Gavita Pro 1000 W EL 400V	21.10.16.12
	Gavita Pro 1000 W EL DE HPS	26.10.16.11
	Gavita Pro 750 W EL DE FLEX HPS	26.74.16.11
Compatible power cords	Power cord US 120 V NEMA 5-15, 5 meter / 16 ft	60.30.40.11
	Power cord US 240 V NEMA 6-15, 5 meter / 16 ft	60.30.40.09
Compatible interconnect cables	Interconnect cable RJ14, 0.6 meter / 2 ft	60.50.00.08
	Interconnect cable RJ14, 1.5 meter / 5 ft	60.50.00.04
	Interconnect cable RJ14, 2.4 meter / 8 ft	60.50.00.09
	Interconnect cable RJ14, 3 meter / 10 ft	60.50.00.10
Compatible splitter	3 way RJ14 cable splitter	60.50.00.01

3.3. Environment

The product is meant for use in climate rooms. The product may be used in damp environments. The product may not be used in wet environments or outdoors.

3.4. Legislation

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

4. Safety recommendations and warnings



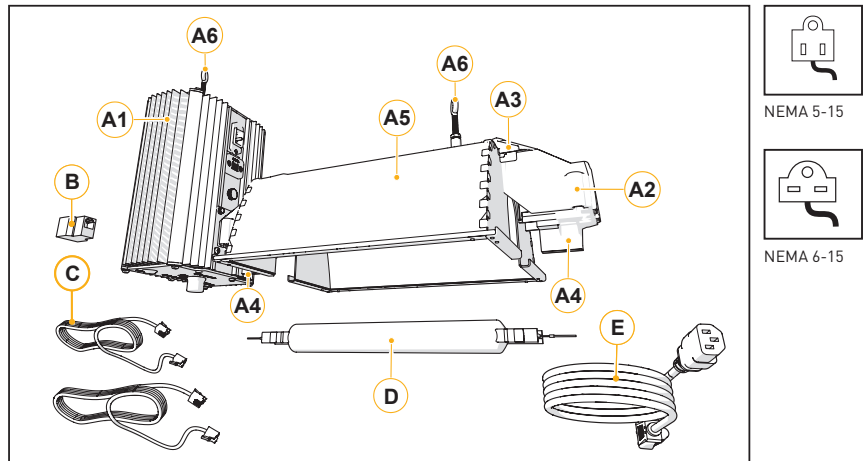
Warning! Carefully read the warnings below before using or working with the product!

- Always adhere to the local rules and regulations when installing or using the fixture.
- This product contains delicate electronic components. This means that if it is placed near an object that transmits radio signals, it could cause interference. This could be, for example, mobile telephones, walkie talkies, CB radios, remote controls and microwaves. If interference occurs, move such objects away from the appliance.
- 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 10.1). 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.
 - temperatures outside the specified range.
 - dust and contamination.

- Only use the lamps specified by Gavita for this product. The use of other lamps may damage the product and lamp and will void the warranty.
- Always disconnect the fixture from the mains before performing any task on it.
- 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!
- Do not use the fixture near flammable, explosive or reactive substances. The lamp and the reflector of the fixture become very hot during use.
- Do not use sulfur vaporizers or water misters close to your fixture. Sulfur and calcium deposits on your reflector will decrease its efficiency.
- Never touch the lamp or the inside of the reflector with bare hands as this will cause damage to the lamp or reflector.

5. Contents (1)

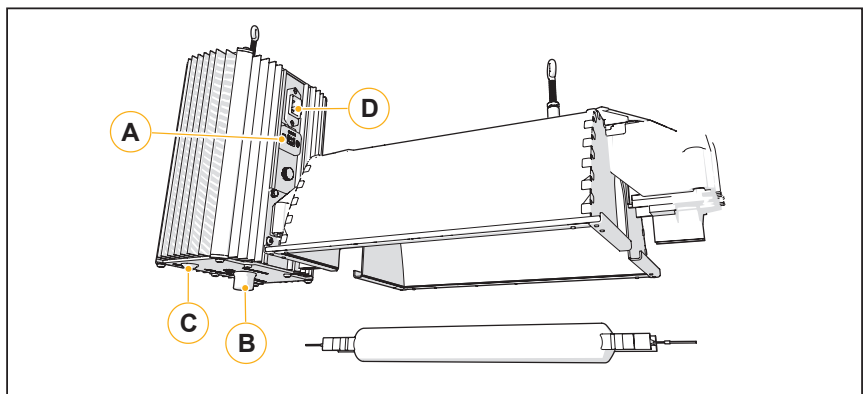
- A. Pro 750° DE / 1000° DE fixture
1. Electronic ballast
 2. Pro-line bracket
 3. Lever to unlatch reflector
 4. Lamp sockets
 5. Reflector Hortistar HR96 750/1000 DE
 6. Mounting points
- B. Threeway control cable splitter (3xRJ14)
- C. 2x Interconnect/ drop cable (RJ14/RJ14)
Cable length: 1.5 m.
- D. Gavita Pro 750W / 1000W EL 400V lamp
- E. Power cord with either NEMA 5-15 or NEMA 6-15 plug



1.

6. Controls, connections and indications (2)

- A. Female RJ14 port for controller input
- B. Power output selector knob
- C. Status LED
- D. IEC connector for power cord



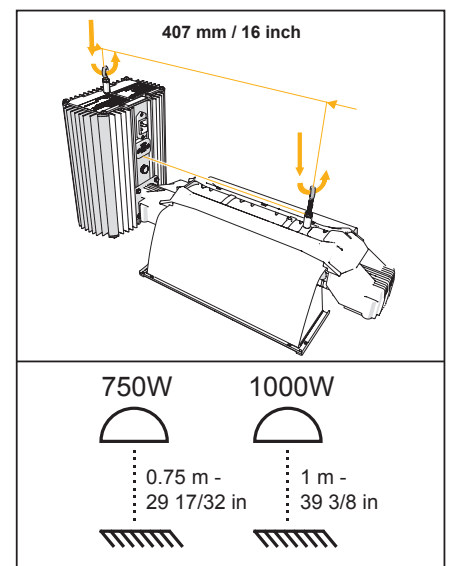
2.

7. Installing the fixture

- ⚠ **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

- Install the lamp in the fixture (see paragraph 10.1).
- Hang the lamp by its two mounting points (3). The two mounting points are spaced 407 mm/16 inches apart.



3.

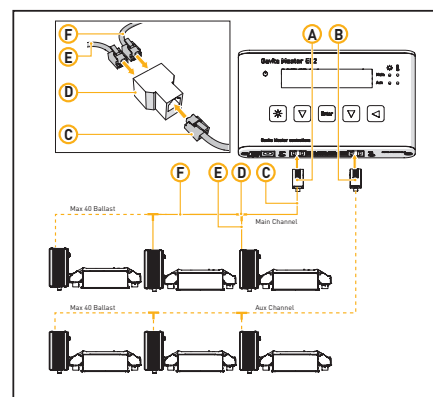
7.2. Connecting the fixture to a controller (controller required)

Note: A RJ14 splitter is provided with the fixture to allow for a group of up to 40 fixtures to be daisy chained to one controller port [4].

For more information on connecting fixtures to a controller, consult the controller manual.

- Switch the power selector knob on the Gavita ballast to the “EXT” (9) position.
- Connect the controller to the included RJ14 splitter (4D) using the controller’s connection cable (4C).
- Connect one output of the splitter to the RJ14 plug of the fixture using the interconnect cable (4E). The indicator light on the ballast will blink when the connection is successful.
- Connect the other output of the splitter to the input of the following RJ14 splitter using and interconnect cable (4F).
- Repeat this process to connect up to 40 ballasts per controller port [4A/B].

Warning! Ensure the power cord and the controller cable do not touch the reflector.



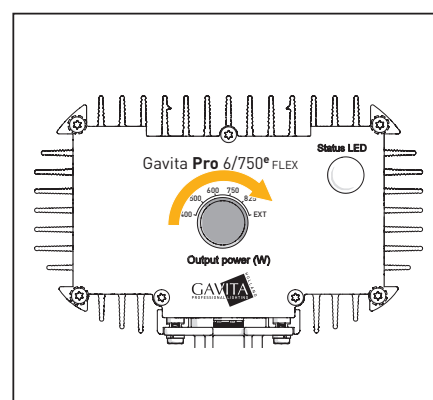
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7.3. Connecting the fixture to the mains

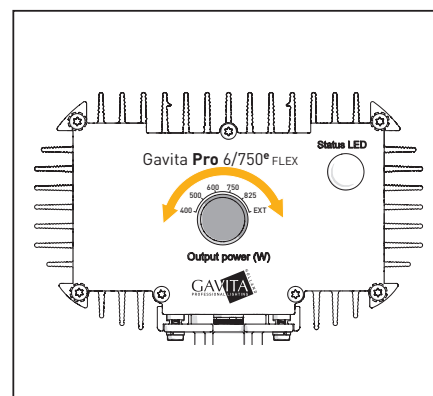
Warning! Ensure the cord is not coiled and does not touch any hot surfaces.

Warning! If external switching gear is used to switch the fixture, ensure it can cope with the inrush current of the fixture (see paragraph 3.2). Always use a double throw 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.



5.



6.

9. Troubleshoot using the status LED

The multi colour status LED provides information on the condition of the controller and the lamp. Consult table 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 (on EXT)	Fixture is connected to the mains and to a controller. Output of ballast is off	
	Ballast on (on EXT)	Fixture is connected to the mains and to a controller. Output of ballast is on	
	Ballast on (Manual dim)	Fixture is connected to the mains and set to manual output	
	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
	Too low voltage	Input voltage is too low	Check mains voltage
	Too low voltage occurred in past		See above, reset
	Too high voltage	Input voltage is too high	Check input voltage, check wiring and connection, check neutral in 3 phase systems
	Too high voltage occurred in past		See above, reset
	Too high temperature	Electronics temperature is too high (max. 115°C/ 239°F)	Disconnect from mains. Check installation, clean ballast, check environment temperature (max 35° Celsius/ 95° Fahrenheit). Make sure fixture is not heated by HPS lamp light. Wait until the lamp is cooled down, then reconnect to mains
	Too high temperature occurred in past		See above, reset
	No signal from controller (on EXT)	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

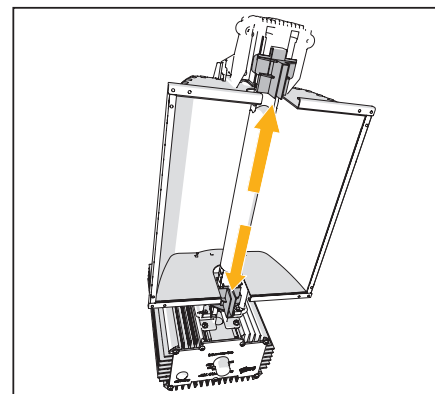
10. Inspection, maintenance and repair

- ⚠ **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 and do not use water, abrasives or detergents to clean it. This will damage the reflective surface.
- ⚠ **Caution!** Wait 20 minutes before activating the fixture after maintenance work has been conducted.

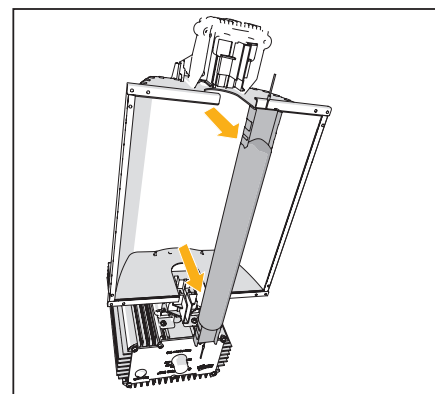
- Regularly check the fixture for dust or dirt buildup. Clean if necessary. Contamination may cause overheating and decreased performance.
 - Clean the inside of the reflector only with a soft, dry cloth.
 - Clean the electric ballast and the outside of the fixture using a dry or damp cloth.
- Check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

10.1. Placement and replacement of the lamp

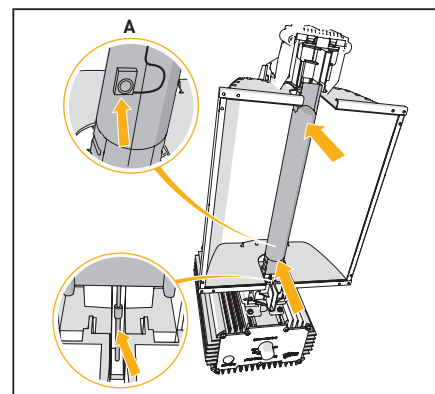
- ⚠ **Caution!** Do not touch the lamp with bare hands as this will damage the lamp. Always use a fabric glove to handle the lamp.
- ⚠ **Caution!** Only use lamps specified by Gavita (see paragraph 3.3).
- ⓘ **Note:** The lamp must be replaced every year or after 5000 lighting hours, whichever one comes first.
- 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 outward (7).
- Carefully take the lamp out (8).
- Install the new lamp with the getter (A) near to the ballast, with the glass vacuum seal pointed downward (9).
- Use a fabric glove to carefully press the lamp in the fitting until the metal springs hold the lamp.
- Close the lamp holders by sliding them inward (10).
- Plug the fixture back into the mains.



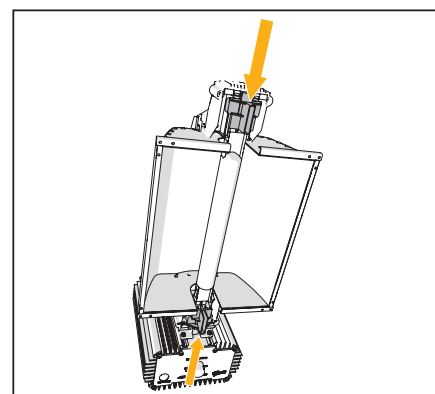
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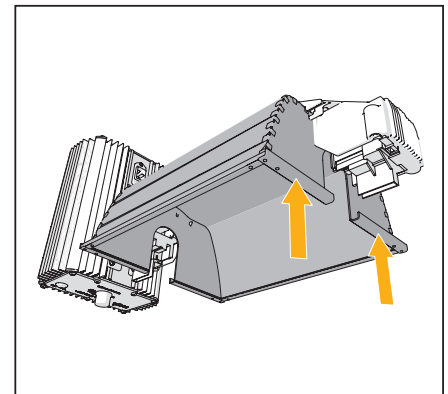


10.

10.2. Placement and replacement of the reflector

Note: you have to remove the lamp to replace the reflector (see paragraph 10.1) Depending on the environment and contamination levels the reflector will degrade. The vega aluminum can not be cleaned without damage. Therefore we recommend to change the reflector once every year or two years.

- Support the reflector on the side of the reflector lever to prevent it from falling (11).
- Move the reflector lever up to retract the two pins holding the reflector in place (12).
- Remove the reflector (13).
- 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 (14).
- Release the reflector lever so its two pins hold the reflector in place.



11.

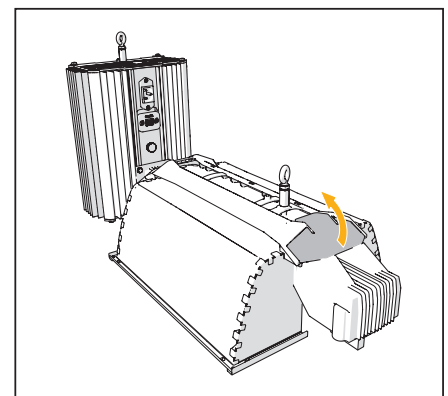
11. Storage and disposal

- Store the fixture in a dry, clean environment.
- 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.

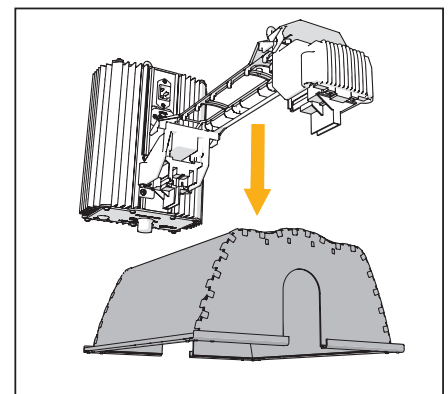
⚠ Caution! The lamps are chemical hazardous waste and must be delivered to the designated authorities.

12. Warranty

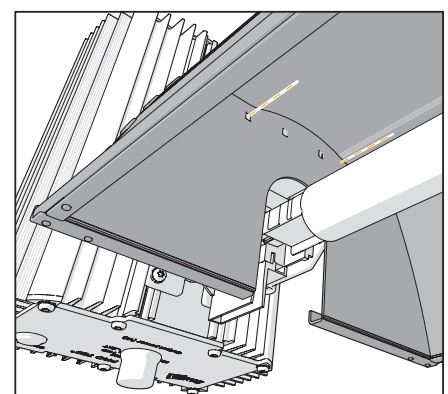
Gavita Holland warrants the mechanical and electronic components of their product to be free of defects in material and workmanship if used under normal operating conditions for a period of three (3) years from the original date of purchase. If the product shows any defects within this period and that defect is not due to user error or improper use Gavita Holland shall, at its discretion, either replace or repair the product using suitable new or reconditioned products or parts. For HPS lamps the warranty period is one (1) year from the original date of purchase. In case Gavita Holland 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.



12.



13.



14.



NOTE:

This device complies with Part 18 of the FCC Rules.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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. If this occurs, please change outlet or move the lamp far away from other appliance.

(a) The interference potential of device or system:

"Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation."

(b) Simple measures that can be taken by the user to correct interference:

"NOTE: This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.*
- Increase the separation between the equipment and receiver.*
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.*
- Consult the dealer or an experienced radio/TV technician for help."*