Gavita® **Pro RS** 2400e LED 208 - 480 V

1   Introduction

Thank you for purchasing the Gavita® Pro RS 2400e. This manual describes the mounting, installation, and use of the product. Mounting and installing of the LED fixture may only be performed by certified service personnel. Please read and understand this manual completely before using the product. Only use the product as specified in this manual.
NOTICE: Failure to follow directions related to installation, use and/or maintenance may result in serious injury, death, or property damage and will void the warranty, and the purchaser will be responsible for any and all repairs and/or damages incurred.

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 is an authorized use mark employed on electronic products manufactured or sold in the United States, which indicates that the electromagnetic emissions from the device have been measured to be under the limits published by the Federal Communications Commission. The FCC logo is a mark that declares that the equipment is authorized to market and operate under the FCC's SDOC procedure.

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 properly disposing the equipment, 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 old electronics and electrical appliances via household waste.

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

2   Product description

The Gavita® Pro RS 2400e LED is an electronic horticultural LED fixture. It drives eight LED rails. The Gavita® Pro RS 2400e LED is intended to be used in greenhouses or in climate rooms. In this manual, the Gavita® Pro RS 2400e LED will be referred to as: "the LED fixture". This luminaire is intended for use as a horizontally positioned toplight for use inside greenhouses and indoor growing environments to provide sole source or supplemental lighting.

Photobiological Safety

⚠ **Caution!** Possibly hazardous optical radiation emitted from this product.
Do not stare at operating lamp. May be harmful to the eyes.
⚠ **Mise en garde!** Risque de rayonnement optique dangereux émis par ce produit.
Ne pas regarder fixement la source lumineuse quand elle est allumée. Peut être néfaste pour les yeux.

Photobiological safety assessment: Risk Group 1
Évaluation de la sécurité photobiologique: Groupe de risque 1

3 Product information and specifications

3.1 General product information

Product name	Gavita® Pro RS 2400e LED 208 - 480 V
Manufacturer	Hawthorne Gardening Company
Part number	HGC906409
UPC	849969001174
Plug type (sold separately)	NEMA 6-15P, NEMA L7-20P, Pigtail Leads

3.2 Technical specifications

Product name	Gavita® Pro RS 2400e LED 208 - 480 V
Input voltage +/- 10%	208 - 480 V
Input wattage +/- 7%	750 W
Input current at 100%	3.6 A @ 208V, 2.7 A @ 277V, 1.56 A @ 480V
Power factor	>0.95
Product weight	33.6 lb / 15.2 kg
Dimensions (LxWxH)	43.25 x 44.8 x 3.3 in / 109.9 x 113.8 x 8.4 cm
Operating temperature	0-40° C
Frequency	50/60 Hz
Certification standards	Conforms to ANSI/UL STD 1598. Certified to CSA STD C22.2 No. 250.0. Conforms to ANSI/CAN/UL STD 8800.
Power inlet	Wieland RST 20i3 connector
External dim:	Gavita Master Controller Analog Protocol (0-10V) or Digital RS485
External control signal:	RJ45 Connector (8P8C)
Environment	This product is suitable for indoor wet environments. Ingress protection code: IP66.

3.3 Compatible products and accessories (sold separately)

Product	Product name	Gavita® part number
Controllers *Unit will function with EL3*	Gavita™ EL3 Master controller	HGC906174
Power cords	Gavita™ 8 ft Power Cord 208-240 Volt for Gavita® LED	HGC906204
	Gavita™ 8 ft Power Cord 277-480 Volt for Gavita® LED	HGC906234
	Gavita™ 8 ft Power Cord 277 Volt Twist Lock Plug for LED	HGC906272
	Gavita™ 20ft 3 Pin Power Cord 277-480 V for LED	HGC906401
	Gavita™ 5 Pin to 3 Pin Power Cord Adapter	HGC906403
Interconnect cables	Gavita™ Pro Interconnect Cable 10ft RJ45 (provided)	HGC906722
	3 way RJ45 cable splitter	HGC906721
Light hangers	Wire Hangers (provided)	MS5761
	Gavita™ Rail System Hanging Bracket (may be shipped separately)	HGC906743
Power Accessories	Gavita™ Daisy Chain T-Splitter	HGC906708

3.4 Environment

The product is intended to be used in greenhouses and climate rooms. The product is suitable for indoor wet environments. This product may not be used outdoors. This luminaire is suitable for operation in an ambient not exceeding 40°C. This should be the maximum sustained temperature of the installed environment (ambient temperature) that will ensure safe operation of the lighting equipment. To prevent sustained temperatures above a 40°C ambient a mechanical ventilation or cooling system is required to maintain the temperature within the growing space at or below 40°C when the luminaire is in operation.

Legal

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

⚠**Caution!** Changes or modifications not expressly approved by the party responsible for FCC compliance could void the user's authority to operate the equipment. Conforms to ANSI/UL 1598 and Certified to CSA C22.2 No. 250.0 and ANSI/CAN/UL 8800.

4   Safety recommendations and warnings

Care should be taken not to damage the coating on the LED array during installation and use and cleaning of the luminaire.

⚠ **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 LED fixture.
- Do not open or disassemble the LED fixture, it contains no serviceable parts inside. Opening or modifying the LED 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 LED fixture when either the LED fixture or its power cord are damaged. Replace the power cord only with original certified cords.
- Modifications to the cords can lead to unwanted electromagnetic effects, which makes the product not comply with legal requirements.
- Do not expose the LED fixture to:
  - (ambient) temperatures outside the specified range;
  - dust and contamination;
  - direct sunlight during use or other heat source that could heat up the driver.
- Always disconnect the LED fixture from mains before performing any maintenance.
- Always allow for a cool down period of at least 30 minutes before touching the LED rails. Touching the LED rails when the fixture is lit or immediately afterwards can result in severe burns!
- Do not use the LED fixture near flammable, explosive or reactive substances. Do not use sulfur vaporizers or water misters; doing so will void any warranty.
- The installation and use of the LED fixture is the responsibility of the end user. Incorrect use or installation can lead to failure and damage to the LED fixture. Damage to the LED fixture and electronic circuitry as a result of incorrect installation and use voids the warranty.
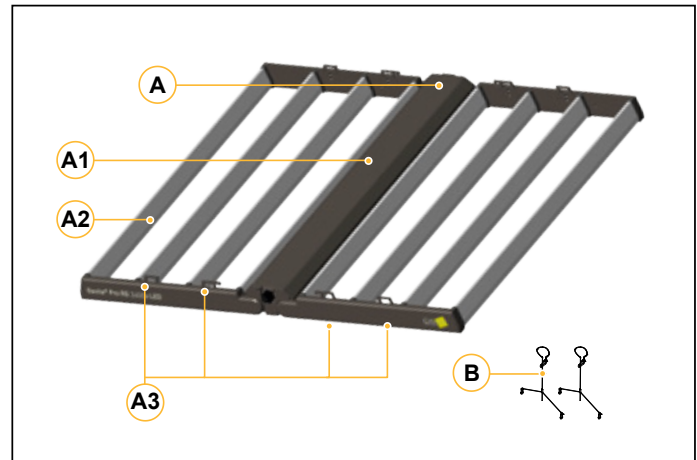
5   Contents (1)

A. Gavita® Pro RS 2400e
  1. LED driver
  2. LED rails
  3. Mounting points
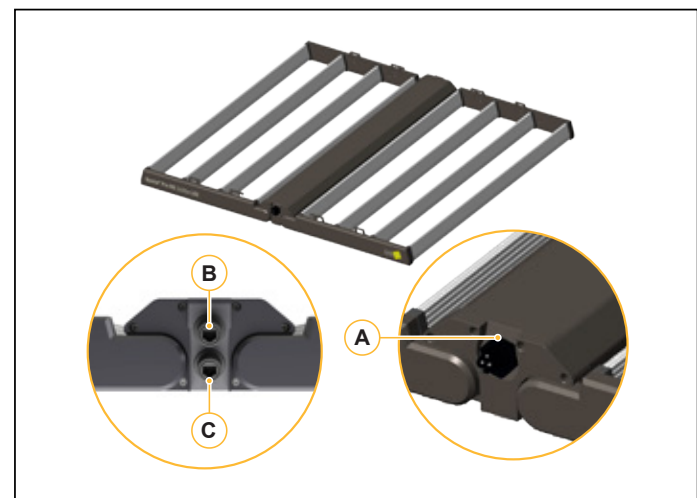B. Wire Hangers (2x)
C. Y-Hangers

(*Power cord sold separately*).

1.

6   Controls, connections and indications (2)

A. Wieland RST 20i3 male connector
B. Communication IN Port
C. Communication OUT Port

2.

7 Installation

⚠ **Caution! PROPRIETARY WIRING SYSTEM**. Use Hawthorne cord set model, HGC906204, HGC906234, HGC906272, HGC906401, or HGC906403 only for connection from the luminaire power inlet to a standard junction box for power connection.
⚠ **Mise en garde! SYSTÈME DE CÂBLAGE EXCLUSIF.** Utilisez le jeu de cordons Hawthorne modèle HGC906204, HGC906234, HGC906272, HGC906401 ou HGC906403 uniquement pour la connexion de l'entrée d'alimentation du dispositif d'éclairage à une boîte de jonction standard pour la connexion électrique.

⚠ **Warning!** Mounting and installing of the LED fixture may only be executed by certified service personnel, in accordance with the applicable local laws and regulations.
⚠ **Warning!** The installer is responsible for correct and safe installation.
⚠ **Warning!** Ensure the local cabling can support the voltage and current requirements of the LED fixture.
⚠ **Warning!** Avoid coiled cords and keep mains leads separated. This prevents electromagnetic interference.
⚠ **Warning!** Do not connect or disconnect the LED fixture under load.
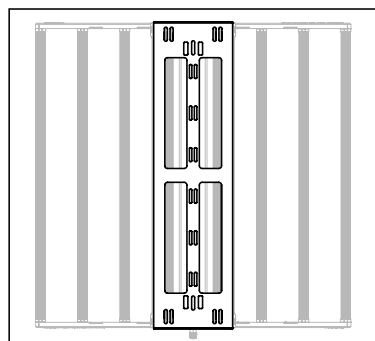
7.1 Installation preparations

⚠ **Warning!** Mount the system to something that can hold the weight of the LED fixture.
- Switch off mains power.
- Install the Gavita Rail System Hanging Bracket (fig. 3) (sold separately). Or install the Wire Hangers (fig. 1B).
- Make sure power cords:
    1) Are not concealed or extended through a wall, floor, ceiling, or other parts of the building structures
    2) Are not located above a suspended ceiling or dropped ceiling.
    3) Are not permanently affixed to the building structure.
    4) Are routed so that they are not subject to strain and are protected from physical damage.
    5) Are visible over their entire length.
    6) Are used within their rated ampacity as determined for the maximum temperature of the installed environment specified in the instructions.

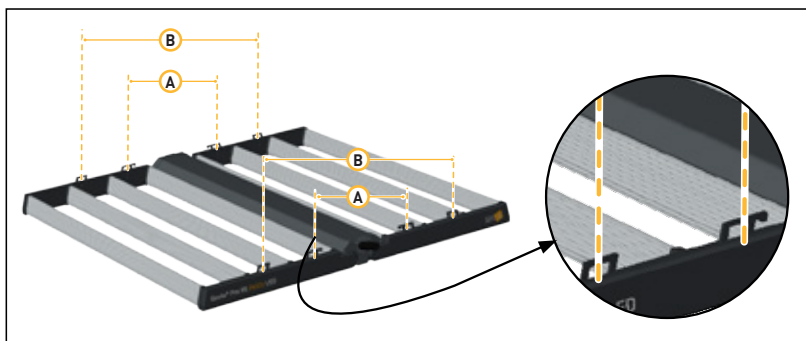## 7.2 Installing the LED fixture

The Gavita Pro RS 2400e offers multiple mounting points for increased versatility. When using the Gavita Rail System Hanging Bracket (fig. 3) (sold separately), use the innermost mounting point (fig. 4A). If utilizing ratchet style rope hangers, included mounting hardware, or hanging from a single point; utilize the outermost mounting point (fig. 4B). Note: when mounting from a single point, utilizing the outermost mounting points will allow the fixture to completely unfold and remain flat.

- Hang the LED fixture to the mounting system.
- Distribute weight evenly and ensure the LED fixture is the appropriate distance above crop height (fig. 5).
- If using the LED fixture as a stand-alone device, continue to Section 7.4.
- If using the LED fixture with a Master Controller, continue to Section 7.3.
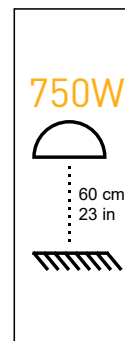
To install additional LED fixtures, repeat sections 7.1 and 7.2 for each device.
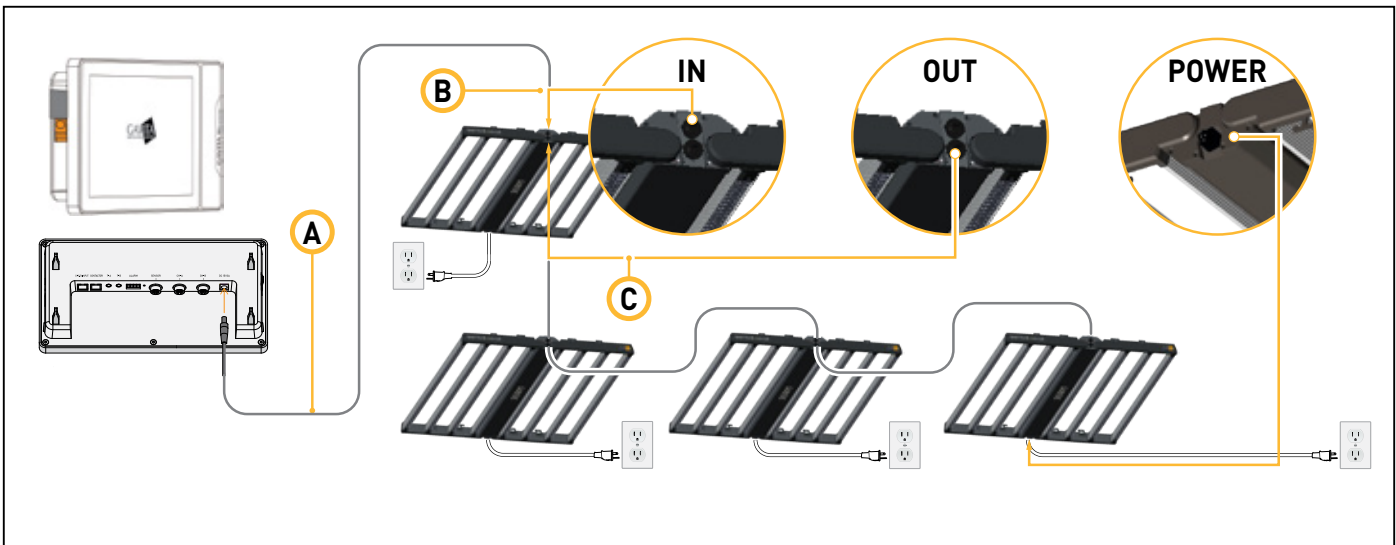

3.

4.

750W

60 cm
23 in

5.

7.3 Connecting up to 512 LED fixtures

- Remove the dummy plug from the input port on the first LED.
- 🛈 **Note: Keep the dummy in a safe place!** The dummy is necessary to operate the LED fixture in standalone mode.
- Use the controller cable (RJ45 to RJ45) (fig. 6A) to connect the controller input port (fig. 6B) on the first LED.
- Remove the dummy from the input port on the second LED.
- Use interconnect cable (RJ45-RJ45) to connect the output port (fig. 6C) of the first LED fixture to the input port of the second LED fixture.
- Repeat these steps to connect up to 512 LED fixtures.

⚠ **Warning!** Ensure the power cord and the controller cables do not touch any of the LED rails.
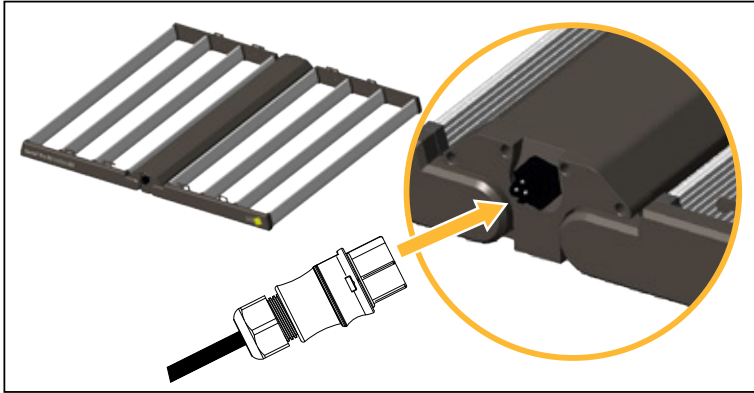

6.

7.4 Connecting the LED fixture to the mains

⚠ **Warning!** Make sure mains power is switched off.
⚠ **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 LED fixture (see section 3.2). Always use a double pole contactor suitable for switching a capacitive load. Never use household timers to switch the LED fixture!

- Connect the Wieland RST 20i3 female connector on the power cable to the Wieland RST20i3 male connector on the LED fixture (fig. 7).
- Connect the power cable to the mains (fig. 8). Ensure use of the appropriate power cord for the NEMA socket. Please reference section 3.3 for compatible power cords.

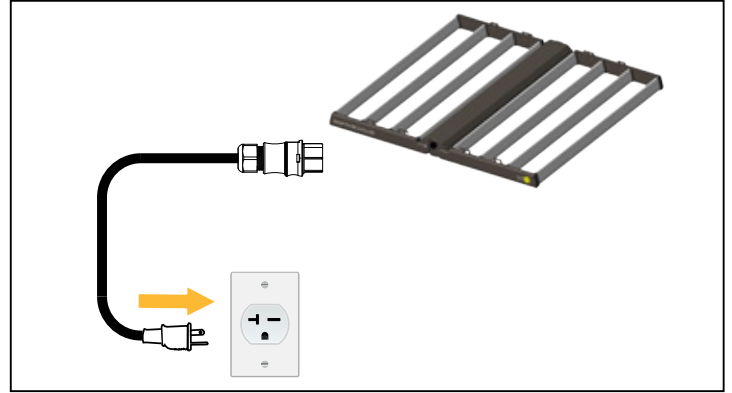Cable description Pro RS 2400e LED 208 V, 240 V, 277 V, 347V, and 480V when using power cordset with pigtails:

Wire	277, 347 Vac.	208, 240, 480 Vac.
White	Neutral (N)	Line (L1)
Black	Phase (L)	Line (L2)
Green	Ground (⏚)	Ground (⏚)

- Switch on mains power.

⚠ **Warning!** Do not connect or disconnect the power cable to the LED fixture while under load.

7.

8.

8   Inspection, maintenance and repair

⚠ **Warning!** Disconnect the LED fixture from mains before performing any maintenance or repairs.
⚠ **Warning!** Do not connect or disconnect the LED fixture under load.
⚠ **Warning!** Do not open or disassemble the LED fixture, it contains no serviceable parts inside. Opening the LED 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 LED rails.
⚠ **Caution!** Do not clean the LED fixture with detergents, abrasives, or **ANY** other **POTENTIALLY** aggressive substances. Care should be taken not to damage the coating on the LED array during installation and use and cleaning of the luminaire.

- Regularly check the LED fixture for dust or dirt buildup. Clean if necessary with 70% Isopropyl Alcohol and apply with a non-abrasive cloth. Contamination may cause overheating and decreased performance. Clean the outside of the LED fixture using a dry or damp cloth.

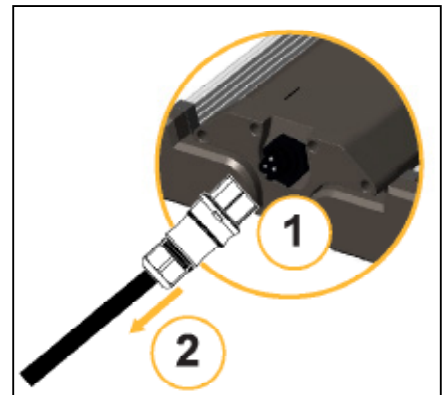- Regularly check the cables of the LED fixture to ensure they are undamaged.

8.1 How to disconnect the Wieland RST20i3 plug
⚠ **Warning!** Do no connect or disconnect the Wieland RST20i3 plug while the fixture is in operation.

- Switch off mains power.
- Pull the Wieland RST20i3 female connection from the LED fixture (fig. 9).

9   Storage and disposal

- Store the LED fixture in a dry and clean environment, with an ambient temperature of -4~104° F / -20~40° C.
- 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.

9.

10 Warranty service:

For LED Products, the Product shall be considered "defective" only if: (i) for indoor rack toplights, 15% or more of the individual light emitting diodes fail to illuminate, or the luminaire's output has less than 80% of its original photon output as published in the applicable Product Documentation, including tolerances; (ii) for the CT1930e, 5% or more of the individual light emitting diodes fail to illuminate, or the luminaire's output has less than 80% of its original photon output as published in the applicable Product Documentation, including tolerances; and (iii) for the Agrolux WEGA, the luminaire's output has less than 90% of its photon output as published in the applicable Product Documentation, including tolerances; in each case, as measured by Hawthorne or by an unaffiliated third party nationally recognized laboratory, in Hawthorne's sole discretion.

11 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, 800 Port Washington Blvd. Port Washington, NY 11050 Attn: Customer Service.

Please note that failure to follow directions related to installation, use and/or maintenance may result in serious injury, death, or property damage and will void the warranty, and the purchaser will be responsible for any and all repairs and/or damages incurred.