



Gavita® Pro 900e LED

1 Introduction

Thank you for purchasing the Gavita® Pro 900e LED. This manual describes mounting, installation and how to use the product. Mounting and installation of the LED 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 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 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 900e LED is an electronic horticultural LED fixture. It drives eight LED rails. The Gavita Pro 900e LED is intended to be used in greenhouses or in climate rooms. In this manual, the Gavita Pro 900e LED will be referred to as: "the LED fixture".

3 Product information and specifications

3.1 General product information

Product name	Gavita Pro 900e LED 120-277 V			
Manufacturer	Hawthorne Gardening Company			
Part number	HGC906461			
UPC	849969034219			
Plug type (sold separately)	NEMA 5-15P / NEMA 6-15P / Open-end cable			

3.2 Technical specifications

Input voltage:	120 - 277V			
Input power:	345 W			
Heat load:	1180 btu/hr*			
Current - 100%	120 V: 2.9 A	208 V: 1.7 A	240 V: 1.5 A	277 V: 1.3 A
Inrush current:	< 30 A			
Frequency:	50/60 Hz			
Power factor	> 0.97			
Voltage THD	120 V: 1.05 %		277 V: 0.65 %	
Current THD	120 V: 6.25 %		277 V: 14.25 %	
Ambient temp:	32 - 104° F [0 - 40° C]			
Environmental rating:	IP66			
Control:	0 - 10Vdc Source (With E-Series Adapter)			
Mounting:	Multiple mounting methods included in the box			
Weight:	24.3 lb / 11.3 kg			
Dimensions:	44.1 in x 43.7 in x 2.3 in / 112 cm x 111 cm x 5.8 cm			
Certifications:	UL 1598, UL 8800, CSA C22.2 No. 250.0 FCC Part 15, Class A			
Warranty:	5 year			

*Please consult an HVAC expert to calculate total heat load in your grow space

3.3 Compatible products and accessories

Product	Product name	Gavita part number
Controllers <i>Unit will function with Gen 1 EL1, EL2</i>	Gavita EL1 Master Controller	HGC906120
	Gavita EL2 Master Controller	HGC906121
E-Series adapter	Gavita e-Series Adapter for Gavita LED (120-277 V only)	HGC906151
Power cords	Gavita 8 ft Power Cord 120 Volt for Gavita LED	HGC906147
	Gavita 8 ft Power Cord 208-240 Volt for Gavita LED	HGC906148
	Gavita 8 ft Power Cord 277 Volt for Gavita LED	HGC906149
	Gavita 8 ft Power Cord 277-400 Volt for Gavita LED	HGC906458
Interconnect cables	Gavita e-Series LED Adapter Interconnect Cable 2.5 ft RJ45 to RJ45	HGC906710
	Gavita e-Series LED Adapter Interconnect Cable 10 ft RJ45 to RJ45	HGC906711
	Gavita e-Series LED Adapter Interconnect Cable 10 ft RJ45 to RJ14	HGC906713
	Gavita e-Series LED Adapter Interconnect Cable 6 ft RJ45 to RJ9	HGC906715
	Gavita e-Series LED Adapter Interconnect Cable 10 ft RJ45 to RJ9	HGC906716
	Gavita e-Series LED Adapter Interconnect Cable 25 ft RJ45 to RJ9	HGC906717
	3-way RJ45 cable splitter	HGC906721
Light hangers	Sun Grip Original Light Hangers 1/8 in - Black	HGC710123

3.4 Environment

The product is intended to be used in greenhouses and climate rooms. The product can be used in wet environments. The product may not be used outdoors. The Gavita Pro 900e LED performs best when the max ambient temperature is between 68-104° F / 20-40° C.

3.5 Legal

This device complies with Part 15 of the FCC Rules, designated as Class A. Conforms to ANSI/UL STD 1598, UL 8800, and CSA C22.2 No. 250.0

4 Safety recommendations and warnings

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

⚠ Avertissement! Veuillez lire attentivement les avertissements ci-dessous avant de travailler avec le produit ou de l'utiliser!

- Always adhere to local rules and regulations when installing or using the LED fixture.
Vous conformer en tout temps à la réglementation locale lors de l'installation ou de l'utilisation du dispositif à DEL.
- Do not open or disassemble the LED fixture; there are no serviceable parts inside. Opening or modifying the LED fixture can be dangerous and will void the warranty.
Ne pas ouvrir ou démonter le dispositif à DEL; aucune pièce n'est réparable à l'intérieur. Ouvrir ou modifier le dispositif à DEL peut être dangereux et entraînera l'annulation de la garantie.
- 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.
Ce produit peut causer des interférences avec l'équipement radio et il ne doit pas être installé près d'équipement de communication de sécurité maritime ou d'autres équipements de navigation essentiel ou de communication fonctionnant entre 0,45 et 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.
Ne pas utiliser le dispositif à DEL lorsqu'il est endommagé ou que son cordon d'alimentation est endommagé. Remplacez le cordon d'alimentation uniquement avec un cordon original et certifié.
- Modifications to the cords can lead to unwanted electromagnetic effects, which makes the product not comply with legal requirements.
Des modifications aux cordons peuvent entraîner des effets électromagnétiques non désirés, rendant le produit non conforme aux exigences légales.
- Do not expose the LED fixture to:
Ne pas exposer le dispositif à DEL:
 - (ambient) temperatures outside the specified range;
 - aux températures (ambiantes) au-delà de la plage spécifiée;
 - dust and contamination;
 - à la poussière et à la contamination;
 - direct sunlight during use or HID light that could heat up the ballast.
 - à la lumière directe du soleil ou à la lumière à DHI pendant l'utilisation, car cela pourrait faire chauffer le ballast.
- Always disconnect the LED fixture from mains before performing any maintenance.
Toujours débrancher le dispositif à DEL du conducteur principal avant d'effectuer tout entretien.
- 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 afterward can result in severe burns!
Toujours prévoir une période de refroidissement d'au moins 30 minutes avant de toucher les traverses du dispositif à DEL. Toucher les traverses lorsque le dispositif est allumé ou immédiatement après l'avoir éteint peut entraîner des brûlures graves!
- Do not use the LED fixture near flammable, explosive or reactive substances. Do not use sulfur vaporizers or water misters.
Ne pas utiliser le dispositif à DEL près de substances inflammables, explosives ou réactives. Ne pas utiliser de pulvérisateur de soufre ou de brumisateurs.
- 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 revokes the warranty.
L'installation et l'utilisation du dispositif à DEL sont la responsabilité de l'utilisateur final. Une mauvaise utilisation ou installation peut entraîner une défaillance et endommager le dispositif à DEL. Des dommages au dispositif à DEL et aux circuits électroniques résultant d'une mauvaise installation et utilisation révoqueront la garantie.

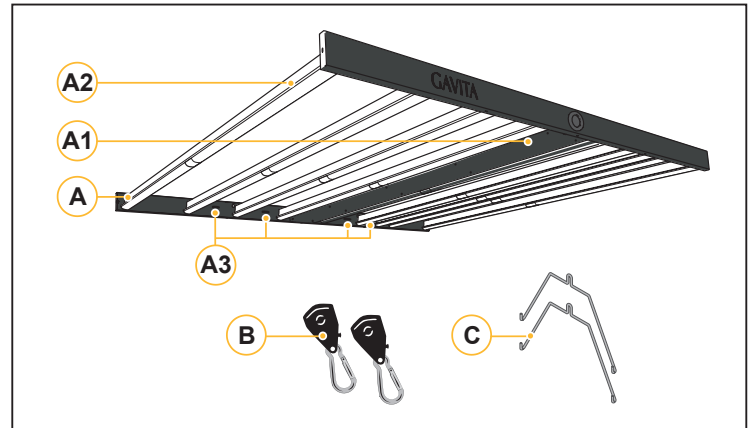
5 Contents (1)

- A. Gavita Pro 900e LED
 - 1. LED drivers
 - 2. LED rails
 - 3. Mounting points
- B. Sun Grip light hangers (2x)
- C. Metal Brackets (2x)

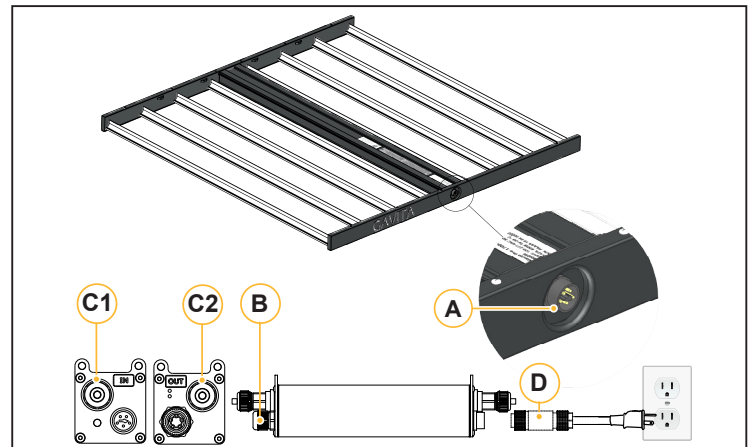
(Power cord sold separately).

6 Controls, connections and indications (2)

- A. Wieland RST 16i5 male connector
- B. Wieland RST 16i5 male connector
- C. Gavita 2xRJ connector
 - 1. RJ IN
 - 2. RJ OUT
- D. Wieland RST 16i5 female connector



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7 Installation

- ⚠ **Warning!** Mounting and installation of the LED fixture may only be executed by certified service personnel, in accordance with applicable local laws and regulations.
- ⚠ **Avertissement!** Le montage et l'installation du dispositif à DEL ne peuvent être effectués que par un personnel de service certifié conformément aux lois et règlements locaux.
- ⚠ **Warning!** The installer is responsible for correct and safe installation.
- ⚠ **Avertissement!** L'installateur est responsable d'une installation adéquate et sécuritaire.
- ⚠ **Warning!** Ensure the local cabling can support the voltage and current requirements of the LED fixture.
- ⚠ **Avertissement!** Assurez-vous que le câblage local peut soutenir la tension et les exigences actuelles du dispositif à DEL.
- ⚠ **Warning!** Avoid coiled cords and keep mains leads separated. This prevents electromagnetic interference.
- ⚠ **Avertissement!** Évitez que les cordons ne s'enroulent et gardez les câbles conducteurs principaux séparés. Cela permet de prévenir les interférences électromagnétiques.
- ⚠ **Warning!** Do not connect or disconnect the LED fixture under load.
- ⚠ **Avertissement!** Ne pas brancher ou débrancher le dispositif à DEL sous tension.

7.1 Installation preparations

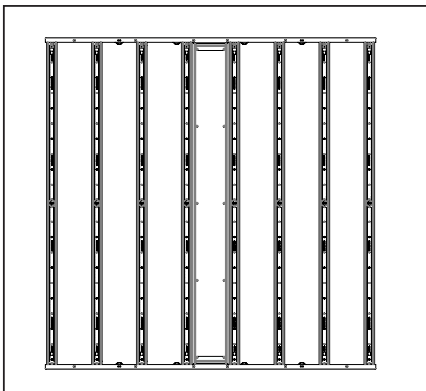
⚠ Warning! When mounting, attach the fixture to something that can support its entire weight.

⚠ Avertissement! Lors du montage, fixez le dispositif à une structure pouvant supporter tout son poids.

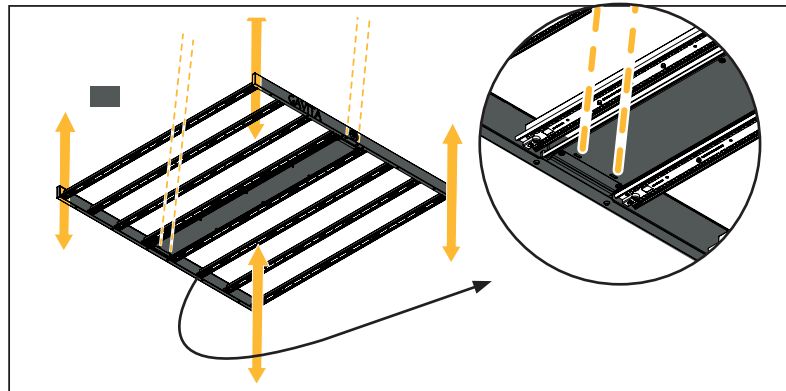
- Switch off mains power.
- Install the wire hanging bracket (C).
- Install the Sun Grip[®] light hangers (B).
- Distribute the fixture weight evenly so fixture hangs level (fig. 3). Sun Grip light hangers allow the LED fixture to easily move upward and downward (fig. 4) according to your crop height (fig. 5).
- Make sure power cords:
 - 1) Are not concealed or extended through a wall, floor, ceiling, or other parts of 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 routed so that they do not contact any LED rails.
 - 7) 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

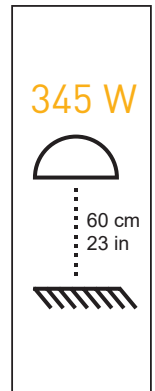
- Attach the LED fixture to the mounting system.
- If you plan to use the LED fixture as a stand-alone fixture, skip to section 7.7.
- If you plan to use a Master Controller, connect the e-Series adapter to the LED fixture (fig. 6) and skip to section 7.3.



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To install other LED fixtures, repeat the steps from sections 7.1 and 7.2.

7.3 Contents of the repeater bus connection kit *Not included. Sold separately.

The e-Series adapter interconnect kit contains the following items:

HGC906712: 1) 1x 80 ft interconnect cable.
2) 6x RJ45 terminal connectors.
3) Gavita e-Series LED Adapter Interconnect Cable 80 ft Kit (Includes 6 RJ45 Terminals).

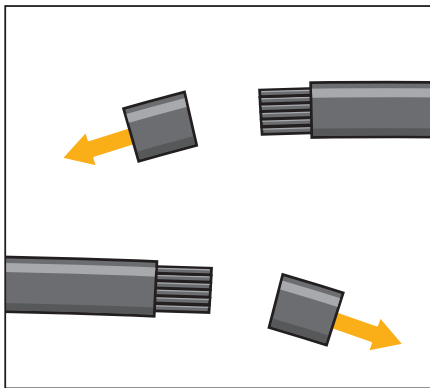
HGC906714: 1) 1x 80 ft interconnect cable.
2) 3x RJ45 + 3x RJ14 terminal connectors.
3) Gavita e-Series LED Adapter Interconnect Cable 80 ft Kit (Includes 3 RJ45 and 3 RJ14 Terminals).

OPTIONAL: HGC906721: Gavita e-Series LED Adapter Interconnect Cable 3-Way Splitter RJ45.
HGC906720: Interconnect Cable Crimper.

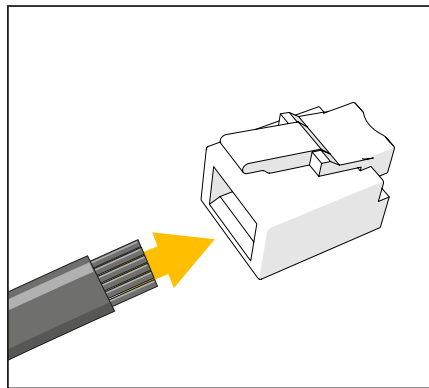
7.4 Preparation for use with a controller

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

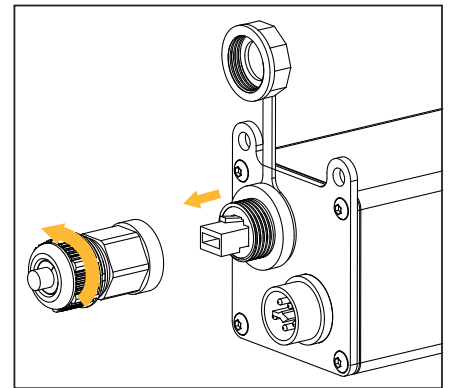
- Take the unstripped interconnect cable.



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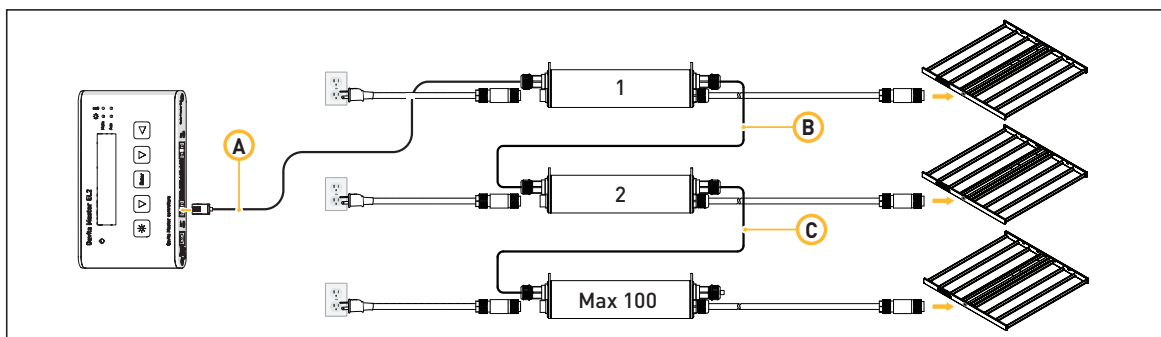
- Cut the cable to the desired length and strip both ends using a crimp tool (product #HGC906720) (fig. 7).
- Insert the cable end into the RJ connectors (fig. 8) and use the crimp tool to finish assembly.

7.5 Connecting up to 100 LED fixtures

- Remove the dummy plug from the input port on the first LED adapter (fig. 9).
- **Note: Keep the dummy in a safe place!** The dummy is necessary to operate the LED fixture in stand-alone mode.
- Use the controller cable (RJ45-RJ9) to connect the primary channel of the controller to the input port of the first LED adapter (fig. 10A).
- Remove the dummy from the input port on the second LED adapter.
- Use interconnect cable (RJ45-RJ45) to connect the output port of the first LED fixture adapter to the input port of the second LED fixture adapter (fig. 10B).
- Repeat these steps to connect up to 100 LED fixtures (fig. 10C).

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

Avertissement! Assurez-vous que le cordon d'alimentation et que les câbles de contrôle ne touchent pas les traverses du dispositif à DEL.



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7.6 Connecting up to 500 or 1,000 LED fixtures

Using a setup with daisy-chained splitters, up to 500 LED fixtures on EL1 and 1,000 LED fixtures on EL2 (over two channels) can be connected as shown in fig.12.

- Use the controller cable (RJ45-RJ9) to connect the primary channel of the controller to the input port of the first splitter (fig. 12A).
- Remove the dummy from the input port of the LED adapter (fig. 10).
- **Note: Keep the dummy in a safe place!** The dummy is necessary to operate the LED fixture in stand-alone mode.
- Use a RJ45-RJ45 modular jack interconnect cable (item C) to connect the output port of the splitter to the input port of the first LED fixture adapter (fig. 12C).
- Use a RJ45-RJ45 modular jack interconnect cable (item C) to connect the output port of the first LED adapter to the input port of the second (fig. 12D).
- Repeat these steps to connect up to 100 LED fixtures per splitter output port (fig. 12E). Up to 500 LED fixtures can be connected to the primary channel.
- Use RJ45-RJ45 modular jack interconnect cables (item C) to connect the output of a splitter to the input port of the next (fig. 12F).
- Use the secondary channel (fig.12G) to connect another 500 LED fixtures, in the same way the LED fixtures are connected to the primary channel.

⚠ Warning! Ensure the power cord and the controller cables do not touch the LED fixture.

⚠ Avertissement! Assurez-vous que le cordon d'alimentation et les câbles de contrôle ne touchent pas le dispositif à DEL.

⚠ Warning! Distribute number of LED fixtures evenly over daisy chains.

⚠ Avertissement! Distribuez uniformément le nombre de dispositifs à DEL sur les chaînettes en sangle.

⚠ Warning! Ensure the repeater bus connections are properly integrated within a correct installation for best results

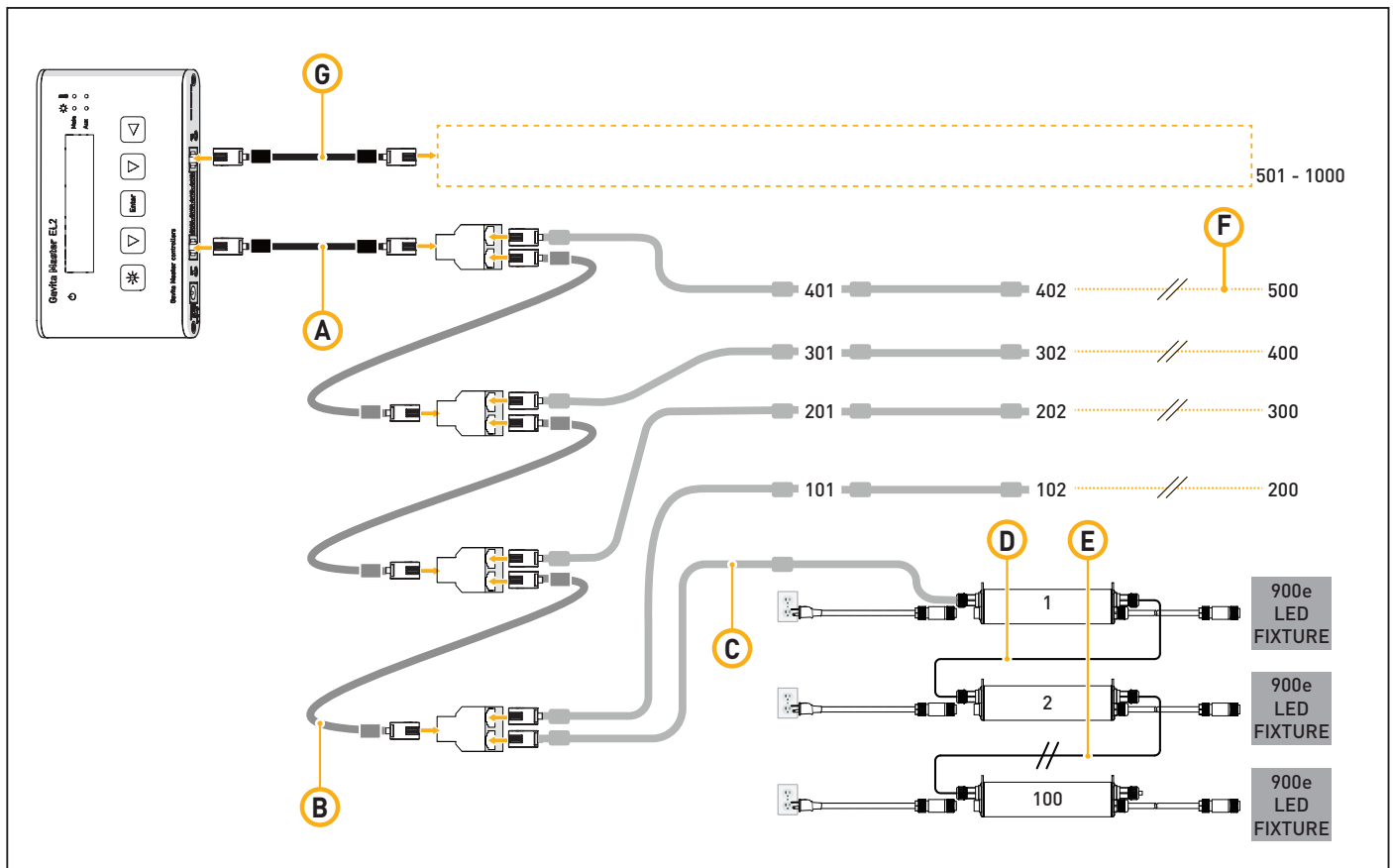
⚠ Avertissement! Assurez-vous que les raccordements de barres omnibus répéteurs sont adéquatement intégrés dans les limites d'une bonne installation pour obtenir les meilleurs résultats.

⚠ Warning! Boosters should never be used to expand

⚠ Avertissement! Ne jamais utiliser d'éclairages horticoles de croissance et de floraison pour étendre.

⚠ Warning! The maximum cable length per splitter is 250 m (100 interconnect cables).

⚠ Avertissement! La longueur maximale de câblage par séparateur est de 250 m (100 câbles de liaison).



7.7 Connecting the LED fixture to the mains

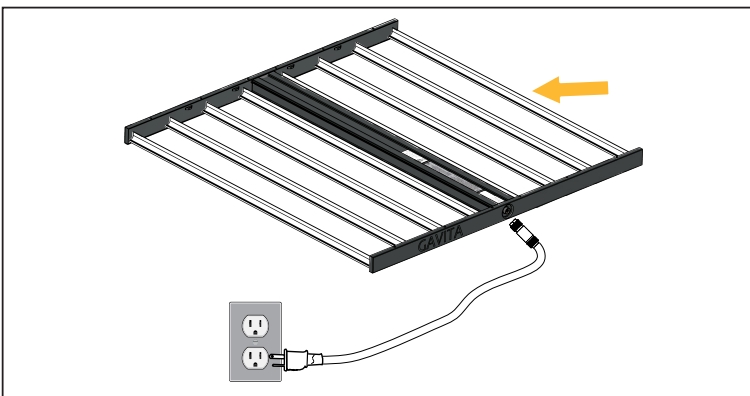
- ⚠ **Warning!** Make sure mains power is switched off.
 - ⚠ **Avertissement!** Assurez-vous d'éteindre l'alimentation au conducteur principal.
 - ⚠ **Warning!** Ensure the cord is not coiled and does not touch any hot surfaces.
 - ⚠ **Avertissement!** Assurez-vous que le cordon n'est pas enroulé et qu'il n'est pas en contact avec des surfaces chaudes.
 - ⚠ **Warning!** Connect the cables according to local rules, safety regulations and electrical code.
 - ⚠ **Avertissement!** Branchez les câbles conformément aux règlements locaux, aux règlements de sécurité et au code de l'électricité.
 - ⚠ **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!
 - ⚠ **Avertissement!** Assurez-vous que l'équipement de commutation externe peut soutenir l'appel de courant du dispositif à DEL (voir section 3.2). Toujours utiliser un contacteur bipolaire convenant à la commutation d'une charge capacitive. Ne jamais utiliser une minuterie maison pour commuter le dispositif à DEL!
- If you use the LED fixture stand-alone, connect the Wieland RST 16i5 female connector on the power cable to the Wieland RST16i5 male connector on the LED fixture (fig. 13).
 - If you use the LED fixture with a Master Controller, connect the Wieland RST16i5 female connector on the e-Series adapter to the Wieland RST16i5 male connector on the LED fixture (fig. 14).
 - Connect the power cable to the mains. The Gavita® Pro 900e LED 120-240 V power cables connect to a NEMA Receptacle. The Gavita® Pro 900e LED 277 V uses an open-end cable.

Cable description 900e LED 277 V:

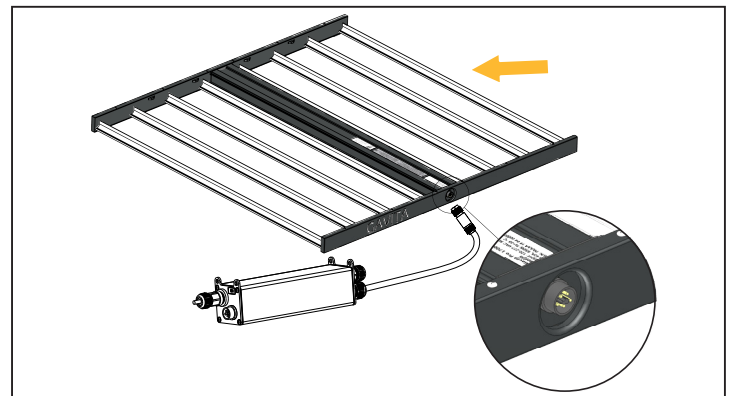
Wire	277 V
White	Neutral (N)
Black	Phase (L)
Green	Ground (⊕)

- Switch on mains power.

- ⚠ **Warning!** Do not connect or disconnect the power cable to the LED fixture when under load.
- ⚠ **Avertissement!** Ne pas brancher ou débrancher le câble d'alimentation du dispositif à DEL lorsque ce dernier est sous tension.



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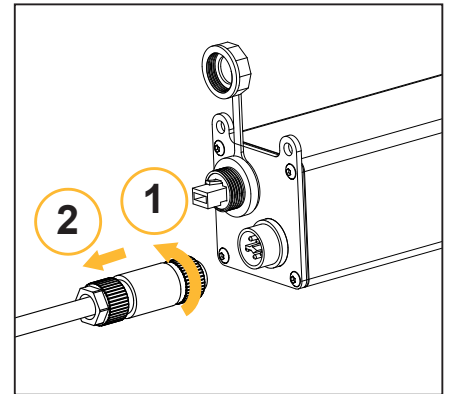
8 Precautions when using the LED fixture

- ▲ **Warning!** Always wait 20 - 30 minutes for the LED rails to cool down!
- ▲ **Avertissement!** Toujours attendre de 20 à 30 minutes que les traverses du dispositif à DEL refroidissent!

9 Inspection, maintenance and repair

- ▲ **Warning!** Disconnect the LED fixture from mains before performing any maintenance or repairs.
- ▲ **Avertissement!** Débranchez le dispositif à DEL du conducteur principal avant d'effectuer tout entretien ou toute réparation.
- ▲ **Warning!** Do not connect or disconnect the LED fixture under load.
- ▲ **Avertissement!** Ne pas brancher ou débrancher le dispositif à DEL lorsqu'il est sous tension.
- ▲ **Warning!** Do not open or disassemble the LED fixture; there are no serviceable parts inside. Opening the LED fixture can be dangerous and will void the warranty.
- ▲ **Avertissement!** Ne pas ouvrir ou démonter le dispositif à DEL; aucune pièce n'est réparable à l'intérieur. Ouvrir le dispositif à DEL peut s'avérer dangereux et annulera la garantie.
- ▲ **Warning!** Always allow for a cool-down period of at least 30 minutes before touching the LED rails.
- ▲ **Avertissement!** Toujours prévoir une période de refroidissement d'au moins 30 minutes avant de toucher les traverses du dispositif à DEL.
- ▲ **Caution!** Do not clean the LED fixture with detergents, abrasives or other aggressive substances.
- ▲ **Mise en garde!** Ne pas nettoyer le dispositif à DEL avec des détergents, des substances abrasives ou autres substances agressives.

- Regularly check the LED fixture for dust or dirt buildup. Clean if necessary. 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 it is undamaged.



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9.1 How to disconnect the Wieland RST16i5 plug

- ▲ **Warning!** Do not connect or disconnect the Wieland RST16i5 plug when under load.
- ▲ **Avertissement!** Ne pas brancher ou débrancher la fiche Wieland RST16i5 lorsqu'elle est sous tension.

- Switch off mains power.
- Turn the ring on the Wieland RST16i5 female connector counterclockwise and pull the Wieland RST16i5 female connection from the LED fixture (fig. 15).

10 Storage and disposal

- Store the LED fixture in a dry and clean environment, with an ambient temperature of -4~185° F / -20~85° 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.

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, 3204 NW 38th Circle, Vancouver, WA 98660., Attn: Customer Service.



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

3204 NW 38th Circle, Vancouver, WA 98660

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