

Gavita Pro 600 SE EU complete fixture

PLEASE READ THESE INSTRUCTIONS FIRST BEFORE INSTALLATION

Congratulations on your purchase of the Gavita Pro Electronic luminaire. We have done everything to insure a long life and safe operation, but the installation and use of the luminaire is the responsibility of the user. Incorrect use or installation can lead to failure and damage to the ballast. Damage to the luminaire and electronic circuitry as a result of incorrect installation and use revokes your warranty, so we recommend you read this manual carefully before installing your luminaire.



Product description

The Gavita Pro 600 SE EU (for Single Ended lamp) is a state of the art horticultural quality electronic luminaire. It is specifically designed to drive the professional 600W 400V EL electronic high frequency HPS lamps. Professional electronic HPS lamps operate at very high frequencies to prevent acoustic resonance and to optimize lamp life. The electronics are manufactured by Philips, the luminaire and reflector are designed and built by Gavita.

The luminaire housing is sealed. In the housing Gore-Tex membrane is mounted to allow warm air to exit the housing, cool air to enter the housing when cooling down and to prevent dust and moisture from entering the ballast.

The Miro Aluminum high efficiency reflector (HortiStar HR96 600) is replaceable without tools and without unscrewing the lamp.

The input connector on the housing is an IP54 sealed IEC connector. A power cord is provided.

On the bottom panel there is a red status LED, which is used to show the operating state of the luminaire and for trouble-shooting purposes. The LED flashes a code which indicates the status of the ballast. During normal operation this LED is switched off.



Scope of use

The Gavita Pro 600 SE EU is designed to drive horticultural high frequency HPS lamps for plant cultivation. It is intended for climate room use. It is suitable for a damp location but should not be used in wet environments or outdoor.

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Installation

Be sure to comply to local installation regulations.

These luminaries are suitable for a damp indoor location. Do not install your ballasts in a wet environment / outdoor. Though the ballasts are sealed to prevent dust and humidity from entering the luminaire we recommend to install this luminaire in an environment with temperatures below 40° Celsius and below 70% RH.

Do not operate the luminaries close to combustible materials. The lamp and the reflector will get hot during operation, do not touch the reflector and/or lamp during, or right after operation. **Make sure that the power cord does not touch any hot parts of the luminaire.** Make sure the lamp is clean and inserted correctly.

The temperature of the electronics is in practice the most important parameter for lifetime and reliability. A normal operating environment temperature should be below 40 degrees Celsius. Exceeding the maximum environment temperature will stress the electronic components, which will lead to shorter lifetime and decreased reliability.

Switching gear

We recommend to use two pole contactors. Be advised that all electronic ballasts have an inrush current so appropriate switching gear is recommended. Do not use household timers to switch electronic ballasts.

Preventing EMI

The Gavita Pro 600 SE EU is tested for EMI (Electro Magnetic Interference) and has met the highest standards. Using an integrated fixture such as the Gavita Pro 600 SE EU is your best insurance against electro magnetic interference as all leads are shielded inside the housing and the reflector bracket. Greenhouses operate thousands of this type of luminaries in one location without causing EMI.

Suitable lamps

The Gavita Pro 600 SE EU is designed and tested to drive professional High Pressure Sodium (HPS) **400V Electronic lamps**. The Gavita Pro ballasts are not suitable for regular HPS lamps. Using regular 600W HPS lamps can cause damage to your luminaire and lamp.

Lamp replacement and hot restrike

- Always install the lamp *before* connecting your luminaire to mains.
- Allow a lamp to cool for 20-30 minutes before restarting (hot restrike)
- When changing the lamp **always** disconnect the luminaire from mains by removing the mains plug. Let the lamp and reflector cool down for 20 minutes before changing as they can be very hot. When replacing a defect lamp without disconnecting mains the lamp will not start: disconnecting the power will reset the ballast.

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■ Reflector replacement

The HortiStar HR96 reflector is a precision high efficiency reflector that should be handled with care. If it is damaged or deformed you should replace it. We recommend to change the reflector every year for optimal results. Replacement reflectors are available from your Gavita reseller.

To replace the reflector you do not have to remove the lamp. Pull up the lever at the end of the reflector bracket while holding the reflector at that end. The reflector will unlatch and can be removed now by pulling it over the lamp. When inserting the new reflector make sure the notches are in the appropriate holes. **Always let your lamp and reflector cool down first before changing the reflector to prevent injuries.**



Using the lever to unlatch the reflector, aligning the notches with the reflector holes

■ Maintenance

There are no serviceable parts inside the ballast. Opening the luminaire will void the warranty. Keep the luminaire housing clean from dust and dirt with a dry or damp cloth to ensure optimal cooling. When using a damp cloth please disconnect the power first. We recommend you check your electrical connections regularly: check if the plugs are inserted completely and don't show any (contact) damage, check if the wiring is undamaged and that the wire ends connected to the reflector are tightly secured in their terminals. Always replace damaged power cords with original certified cords. For fixed installation with stranded wire use cable end sleeves.

The Miro aluminum reflector should not be cleaned with any detergent or water, use a soft dry soft cloth to avoid scratching the material. Do not touch the reflective material. Replace the Miro reflector each year together with your lamp, which is rated for at least 5000 hours of use with a light maintenance of approximately 96%. Do not use sulfur vaporizers when lamps are operating and do not use sulfur vaporizers or water misters close to your luminaries. Sulfur and calcium deposit will damage your reflector and decrease the efficiency of your reflector.

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Troubleshooting

Your Gavita Pro 600 SE EU is equipped with a professional Philips electronic ballast. It has a diagnosis LED which is visible from the front plate. The LED flashes to indicate the status of the ballast. Please refer to the list below for status indication and troubleshooting:

Status ballast	LED indicator	Description	Solution
End of life timer exceeded	1 x flashing	Lamp outside specs, could not start within allowed attempts	Lamp is end of life or defect, replace lamp, reset power supply (disconnect power supply before changing lamp).
Bulb is cycling	2 x flashing	Lamp is restarting, exceeds maximum number of restarts	Lamp is end of life or defect, replace lamp, reset power supply (disconnect power supply before changing lamp).
Low Voltage	3 x flashing	Input voltage is too low	Check input voltage, check wiring and connection, check neutral in 3 phase systems.
Temperature luminaire too high	4 x flashing	Luminaire electronics temperature is too high (max. 115°C)	Check installation, clean ballast, check environment temperature (max 40 Celcius), make sure luminaire is not heated by HPS lamp light. Reset power supply.
lamp voltage outside specification standards	5 x flashing	Lamp voltage is too high or too low, lamp outside specs	Lamp is end of life or defect, replace lamp, reset power supply (disconnect power supply before changing lamp).
High Voltage	6 x flashing	Input voltage is too high	Check input voltage, check wiring and connection, check neutral in 3 phase systems.
Ignition process (luminaire is trying to ignite)	7 x flashing	Luminaire 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 lamp cord and connections

Remember to always disconnect the mains connection by unplugging the mains cord before replacing a lamp.

Technical specifications

Article no : 18.10.60.23.10
 P mains 100% : 634 W typical
 V mains : 230 V AC $\pm$ 10%
 I mains 100% : 2,8 A typical
 PF : 0,95 - 0,98
 Frequency : 50-60 Hz
 Inrush : < 50 A
 Dimensions : (lxwxh) 567 x 240 x 191mm
 Weight : 3,4 kg
 Lamp specs : 600W 400V EL HPS - **use 400V EL lamps only!**
 Reflector : HortiStar HR96 600 - Miro Aluminum 96% reflector efficiency (article number 30.46.02.10)
 Mains cord : IEC C14, power cable 5m with Schuko 230V plug (included)

CE approval according to:
 EN 61347:2008, EN 61347-2-9:2001+A12003+A2:2006.

EMC approval according to:
 EN 55015:2006+A2:2009, EN 61547:2009, EN 61000-3-2:2006+A2:2009, EN 61000-3-3:2008.

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■ Warranty

GAVITA Holland warrants the mechanical and electronic components of this 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 luminaire to your shop **with the original sales receipt**.

For more information about electronic ballasts please visit our website www.gavita-holland.com

