

Pro line

# Gavita HortiStar 600 SE EU



- ◆ Horticultural design
- ◆ HortiStar 600 HR 96 reflector
- ◆ Reflector efficiency 96 %
- ◆ Easily replaceable reflector
- ◆ Shielded cord terminal
- ◆ For HPS/MH lamps up to 750 W

## Gavita HortiStar 600 SE reflector

A reflector should bring as much light to your crop as possible, and do this in a uniform way. The Gavita HortiStar 600 does just that: It has one of the most efficient reflectors in the market with an efficiency of 96 %. It is our most popular 600/750 W horticultural reflector. Using a professional quality fixture and reflector has suddenly become very affordable.

The reflector is one of the key elements of a successful fixture. You can have the best ballast and the best lamp, but without a good reflector you waste a lot of light, every day you use it. Keeping your reflectors in optimal condition is a must for good results.

In horticulture we see that reflectors lose on average more than 5 % of their efficiency per year due to deposits, dust and oxidation. That is valuable light that will not reach your crop.

As tests have shown it is almost impossible to clean reflective material without damaging them it is important that you use reflectors that are made of the best materials and, if needed, can be replaced.

The Gavita HortiStar 600 reflector fixture comes with a replaceable Miro aluminum reflector that can be replaced with the lamp still in the lampholder. As an alternative, inlay reflectors are available. The fixture is suitable for HPS/MH lamps up to 750 Watt. The lamp cord terminal is shielded by a metal housing. Installation is very easy with the two eye bolts.

### Technical specifications

Dimensions	: 20.1" / 511 mm (length) x 9.6" / 244 mm (width) x 7.6" / 193 mm (height)
Lamp holder	: E40
Reflector	: Gavita HortiStar HR 96 600 Miro aluminium reflector
Cable gland	: M20
Lamp cord	: Optional (4m with IEC or Wieland plug)

400-750

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## Gavita HortiStar 600 SE EU reflector

### PLEASE READ THESE INSTRUCTIONS FIRST BEFORE INSTALLATION

Congratulations on your purchase of the Gavita HortiStar 600 SE reflector. We have done everything to insure a long life and safe operation, but the installation and use of the reflector is the responsibility of the user. Incorrect use or installation can lead to failure and damage to your equipment. Damage to the reflector and attached ballasts as a result of incorrect installation and use revokes your warranty, so we recommend you read this manual carefully before installing your reflector.



### Product description

The Gavita HortiStar 600 SE (SE for Single Ended lamp) is a state of the art adjustable horticultural reflector. It is designed to hold the any E39 base HPS or Metal Halide lamp (including electronic high frequency HPS lamps) between 400 and 750W. The high quality, hand-made HR96 reflector guarantees you the optimal light reflection and uniformity.

The Miro Aluminum high efficiency reflector (HortiStar HR 96 600 SE) is replaceable without tools and even without unscrewing the lamp.

The high quality of the used materials and precision of manufacturing result in 96% reflector efficiency, which means that 96% of all light exiting the fitted lamp will reach your crop.

The EU version is standard delivered without lamp cord, though lamp cords with Wieland or IEC plug are available.

### Scope of use

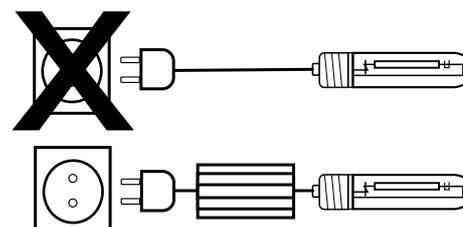
The Gavita HortiStar 600 SE is designed for plant cultivation and intended for climate room use. It is suitable for a damp location but should not be used in wet environments or outdoor.

High Intensity Discharge lamps generate intense heat. Installation of HID lamps should be carried out according to local installation and safety regulations.

### Suitable lamps

The Gavita HortiStar 600 SE EU is equipped with a E40 lamp holder and is suitable for a 400-750W MH/HPS (high frequency) lamp. Only use lamps that have been rated safe for open fixture use.

HID such as high pressure sodium and metal halide can not be used without an appropriate ballast. Never try to connect a HID lamp directly to mains.



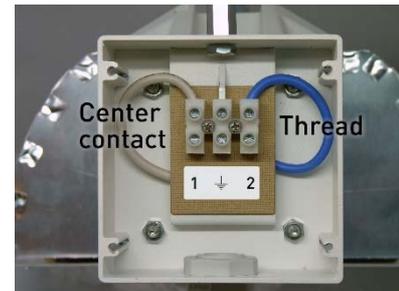
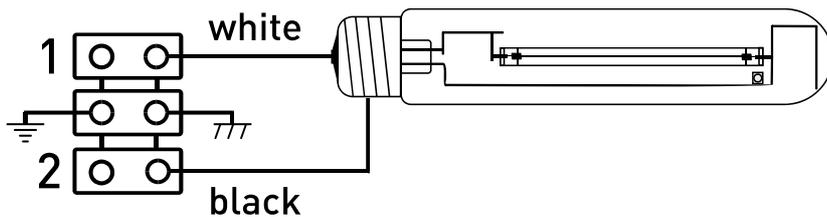
## Gavita HortiStar 600 SE EU reflector

### Wiring the reflector

#### Be sure to comply to local installation regulations

When wiring HID lamps make sure that the lamp cord you use is tested and approved for high voltage (5 kV) ignition pulses and high temperature. Always use stranded wired and use cable end sleeves to protect the strands in the screw terminals.

Internal wiring diagram:



**Do NOT connect any of the ballast outputs to the middle (ground) terminal.** Connecting the ground wire to the center terminal only provides protection when the ballast is also plugged into a grounded receptacle with a grounded cord and plug. This is the recommended way of installation.

The white terminal wire (1) is connected to the center contact of the lamp holder, the black/blue terminal wire (2) is connected to its thread.

If you have an electronic ballast there is normally no phase or neutral wire, so the way you connect the two live wires to the outer terminals makes no difference. Our DigiStar models for example have two black wires in the lamp cord. For fixed mounted magnetic ballasts it is advised to connect the phase wire to the center connection of the lamp, so to the screw terminal with the white wire (1).

1. Locate the cover plate of the screw terminal and remove the 4 screws. One of the screws has a tooth lock washer to make sure that the housing and the plate are electrically connected.
2. Feed the lamp cord through the opened cable gland. Do not tighten the cable gland yet.
3. Make sure the screw terminals are open and insert the cable ends completely into the screw terminals, tightening them with a screwdriver. Connect the yellow/green ground wire to the middle terminal which is connected to the metal housing, the other two (live) wires to the outer terminals. Electronic ballasts usually do not have a preferred way of connection the wires, but the left (white) wire goes to the center contact of the lamp holder.
4. **Before you replace the terminal cover you must tighten the cable gland first now.** Failing to do this now may rotate the cable inside the connection box, which can lead to loose contacts, malfunctions and sparks. Hold the inner washer with a spanner or pliers to prevent it from turning when fastening the cable gland. Make sure that the cable gland is as tight as possible, providing strain relief for the cable, while the wires are not twisted.
5. Only then replace the terminal cover and make sure you place the tooth lock washer at the same spot.



## Gavita HortiStar 600 SE EU reflector

### ■ Installing the reflector and lamp

The coverage of your reflector depends on the light levels you want to achieve and the output of your lamp. With a 600W 1000- 1100  $\mu\text{mol s}^{-1}$  lamp you can cover an area of almost 1 square meter (~11 square feet) with 900-1000  $\mu\text{mol s}^{-1} \text{m}^{-2}$  average. The reflector has a rectangular (wide) throw.

**Keep your reflector away from combustible materials at all sides.** Use reliable mounting materials and keep your lamp cords away from the direct heat from the lamp and the reflectors. **Make sure that the lamp cord does not touch any hot parts of the reflector.** Make sure the lamp is clean and inserted correctly. Use light hangers or small chains to hang the reflectors at the correct height.

The recommended distance to a crop:

400W lamp – 40 cm

600W lamp – 60 cm

750W lamp – 75 cm

Only relamp with lamps that are suitable for an open reflector. When using MH lamps, use self shielding lamps.

**Let the reflector and lamp cool down and disconnect the ballast from mains when replacing a lamp.** Use gloves to keep the lamp clean, as the lamp surface becomes very hot. Screw in the lamp firm, but not to tight to prevent breaking the lamp. Always check the center contact for damage when replacing a lamp.

### ■ Lamp replacement

- Always install the lamp before connecting your ballast to mains.
- Always be sure to connect your lamp cord to the ballast before switching it on
- When changing the lamp always disconnect the ballast 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 from an electronic ballast the new lamp may not start: disconnecting the power will in many cases reset the electronic ballast safety circuitry.
- Only use lamps in this fixture that have been rated safe for open fixture use.

## Gavita HortiStar 600 SE EU reflector

### ▀ 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, but it is recommended to do so for easy installation. Pull up the lever at the end of the reflector bracket while holding the aluminum reflector at that end. The reflector will unlatch and can be removed now by pulling it over the lamp / unlatching it. 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

Keep the bracket clean from dust and dirt with a dry or damp cloth. 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. For stranded wire always 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. Do not use sulfur vaporizers when lamps are operating and do not use sulfur vaporizers or water misters close to your reflectors. Sulfur and calcium deposit will damage your reflector and decrease the efficiency of your reflector.

You can not clean the reflector without damaging it. Wiping it carefully with a soft cloth is the best you can do. Never use polishes, detergents, sprays or normal tap water when wiping your reflector. If you need a damp cloth, use a completely clean soft cloth with demi water only, or pure alcohol.

We recommend to change your reflector once a year, together with the lamp.

## Gavita HortiStar 600 SE EU reflector

### ▀ Troubleshooting

If your lamp does not fire up first check if the lamp is inserted correctly before restarting. Then check all wires and connector. If all connections are correct and the lamp still does not start check the ballast or replace the lamp.

### ▀ Technical specifications

Dimensions : 20.1" / 511 mm (length) x 9.6" / 244 mm (width) x 7.6" / 193 mm (height)  
 Lamp holder : E40  
 Reflector : Gavita HortiStar HR 96 600 SE Miro aluminium reflector  
 Lamp cord : Optional  
 Ambient temp. : 0-35 ° Celsius

This reflector should be used below 2000 m above sea level.

Made in the European Union according to EN 60598-2-1

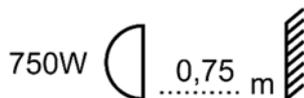
### ▀ Warning symbols explained



Warning: Use self shielding lamp only.  
 Only use lamps that are suitable for open reflectors and have UV blocking glass.



Warning: Reflector temperature > 85° Celsius  
 Do not touch the aluminum reflector when operating to prevent injuries.



Minimal distance to object 75 cm using a 750W HID lamp  
 Keep the lamp 75 cm from lighted objects to prevent fire risk.

## Gavita HortiStar 600 SE EU reflector

### ■ 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](http://www.gavita-holland.com)