

GC SERIES HORTICULTURAL LIGHTING SYSTEM

USER MANUAL & INSTRUCTIONS





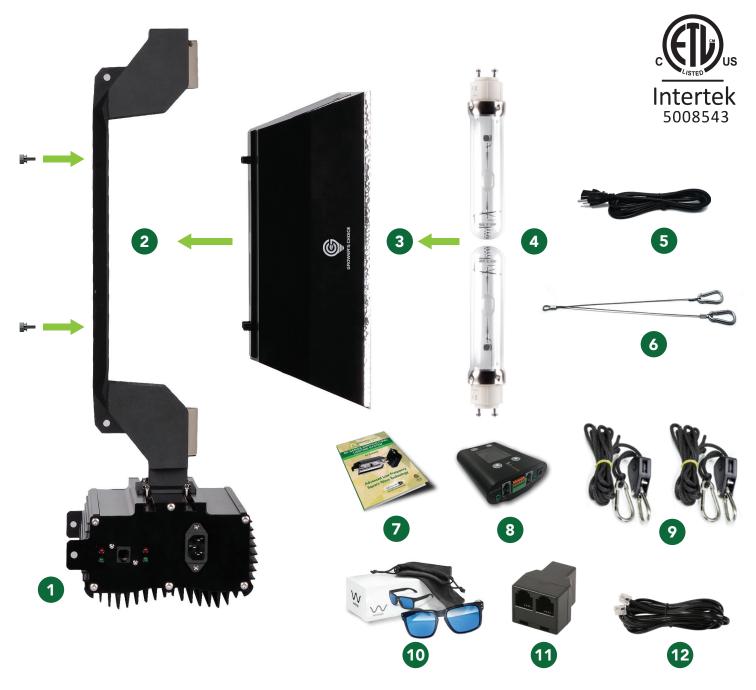
Advanced Low Frequency Square Wave Technology



315W CMH Grow Lamps Included



PACKAGE INCLUDES



- 1 GC Digital ballast
- 2 Integrated reflector bracket with PGZX18 CMH Socket
- 3 Replaceable premium horticultural reflector
- 4 Grower's Choice horticultural lamp
- 5 UL Listed power cord with 120V plug
- 6 Hanging kit
- User manual + product information page

Optional Accessories

- 8 Al lighting controller
- 9 Rope ratchet
- 10 Grow room glasses
- 11 RJ14 cable splitter
- 12 RJ14 Cables

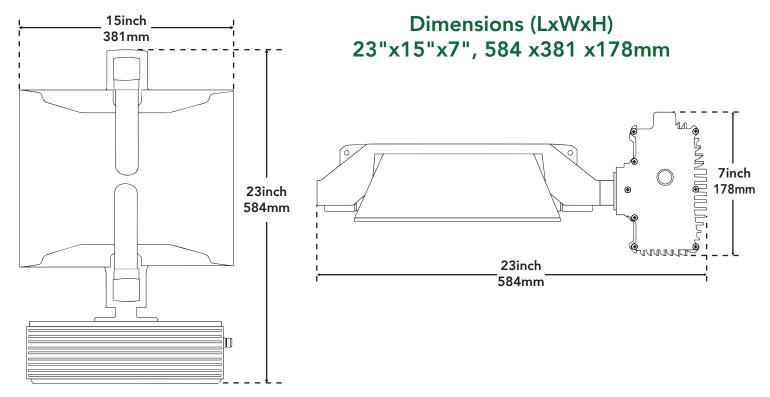
GROWER'S CHOICE GC SERIES FIXTURE

Thank you for purchasing Grower's Choice GC Series Fixture. Please take time to read through this booklet to familiarize yourself with the products features, operation and safety instructions.

The GC Horticultural fixture is a software controlled digital ballast fixture that has been designed to give the most selective growers the ultimate versatility and performance from a single lighting system. It should provide years of trouble free operation but in the unlikely event of a fault developing then please return the unit to your retailer along side proof of purchase for a warranty repair or replacement.

GC-630NS

Input Voltage +/- 10%	120V AC	240V AC		
Input Current at 100%	5.6 A	2.8 A		
Power Factor		>0.97		
Total Harmonic Distoration		<10%		
Working Frequency		50-60 Hz		
Power Output Setting	190W, 245W, 315	W, 350W		
Ignition Voltage		3kV-5kV		
Operating Temperature	32-95 Fa	ahrenheit		
Product Weight 18 lbs, 8				



FEATURES



Smart Start™ Ignition Control

This revolutionary feature, unique to our products, makes GC Series Digital Ballast the safest and most reliable ballast when used in automated multiple lamp applications. When multiple units are connected to the same mains circuit, our integrated Ignition Control software will completely balance the electrical draw by igniting one lamp at a time to prevent electrical surges and spikes that can overload the mains circuit and trip circuit breaking systems. For further efficiency, this feature is activated alongside our 'Soft Start Technology'.



Soft Start Technology

Soft Start Technology prolongs lamp life by stopping current rush to the lamp and preventing lamp overload. When the ballast is started from cold there will be a 3 second fixed delay before ignition. After ignition there will be a series of random 0-2 second delays before full brightness is reached after approximately 3-5 minutes. SoftStart Technology is also activated when increasing and decreasing power to the lamp using the 'Smart-Step' feature.



Re-Strike of Hot Lamp after Mains Failure:

The GC Series Digital Ballast uses a timed re-strike system that prevents the ballast from re-striking a hot lamp after a power failure. If a hot lamp is detected, the re-strike will be delayed for 60 second intervals until the lamp has cooled sufficiently to be re-ignited. Re-ignition is then controlled by 'SmartStart Ignition Control' and 'Soft Start Technology' software.



Lamp Compatibility

The GC Series Digital Ballast is suitable for use with all good quality HPS, Metal Halide and Ceramic Metal Halide lamps. For a guaranteed perfect match and the best results we recommend Grower's Choice horticultural lamps. Grower's Choice lamps are optimized for use with high efficiency electronic ballasts with adjustable output.



Automatic Frequency Adjustment:

The GC Series Digital Ballast automatically adjusts its output frequency to maintain a constant output regardless of input power fluctuations and ageing lamps. This also prevents 'lamp flicker'



Running Temperature

The GC Series Digital Ballasts' unique case design acts as a superior heat sink making the ballast extremely cool running without the need for internal fans.



Full Circuit Protection

The GC Series Digital Ballast uses a sophisticated software controlled circuit breaking system that is not seen in other manufacturer's ballasts. The system protects against a series of faults including: Open Circuit Protection, Short Circuit Protection, Over Voltage Protection, Under Voltage Protection and Over Temperature Protection. On Ignition the ballast performs a 3 second test of the circuit and in the event of a fault the ballast will go into protection mode to avoid damage to the ballast and lamp.



RF Shielding

The GC Series Digital Ballast has superior RF Shielding with Total Harmonic Distortion (THD) of less than 10% meaning it will not interfere with television or radio equipment.



Silent Operation

The GC Series Digital Ballast has no noisy internal fans and is completely silent in operation.



High Energy Efficiency:

The GC Series Digital Ballast is up to 30% more efficient than standard magnetic ballast producing more lumens of light per watt of consumed energy. Efficiency does not diminish and is maintained for the entire life of the unit.

DIAGNOSE

State	Off-DB	On-DB	Off-Rem	On-Rem	Open	Short	HTP	LVP	HVP
Green	Off	Off	Flash	On	On	Off	On	Flash	Flash
Red	Flash	On	Off	Off	Flash	Strobo	On	Flash	On



Off-DB =Ballast is switched off by dim button.

On-DB =Ballast is switched on by dim button.

Off-Rem = Ballast is switched off by remote.

On-Rem = Ballast is switched on by remote.

Open =Ballast is off because of an open contact or defect bulb

Short =Ballast is off because of short-circuit or defect bulb

HTP =Ballast is off because of High Temperature Protection (Ballast is too hot)

LVP =Ballast is off because of Low Voltage Protection

HVP =Ballast is off because of High Voltage Protection

When both LED's are off, check fuse and power supply.

Strobo is a very fast flash

LAMP INSTALLATION

- Always be sure to install the appropriate Grower's Choice 315W CMH Lamp correctly before connecting the GC630NS's hood/luminaire to the main ballast.
- All Grower's Choice 315Watt Ceramic Metal Halide bulbs will come with a 'Bayonet style connector'. The lamp has to be installed in the PGZX18 Socket Connector in a certain way with the contact-pins (one small size and one larger sized) lining up to the PGZX18 Socket Connector perfectly.
- Once your 315Watt CMH lamp is secured in the fixture you NEVER want to change the lamp without allowing sufficient cooling time (manufacturer suggests: 20 Minutes/More or until CMH Lamp is sufficiently cooled for handling).
- Allow your lamp at least 20 minutes to cool before restarting (hot restrike)
- When in need of replacing the GC630NS CMH lamp, be sure to disconnect all power sources that may be connected to your fixture before doing ANYTHING ELSE.
- Remove the CMH lamp by turning counter-clockwise and softly pulling the lamp form its socket base. Be extremely careful as your lamp may still be very hot. (Always be sure to hold your lamp by it's base as to avoid any major/minor burn related injuries.)
- When installing a new CMH Lamp be sure to double check that your fixture is not plugged in to any source of power.
- Use gloves and water on a soft cotton cloth to maintain the cleanliness of your fixtures by giving minor/major cleanings when possible. (The use of alcohol or a soft dry cloth is applicable, however just do not use any type of detergent.)
- Make sure the new CMH Lamp is clean and free from any oil residue or any fingerprints that may have been left behind from handling the bulb. (Use pure alcohol or wipe clean with a dry clean soft cloth.)
- Hold the CMH Lamp from the base and align the 2 contact pins to their respective socket.
- Once the 2 contact pins are aligned you may give the lamp a gentle push inwards and then continue to rotate the lamp clockwise to lock the lamp in place.
- Wipe the lamp with a clean, dry, soft cloth.
- Always be sure not to touch any of the reflective material with your bare hands as this can cause the natural oil in your skin to overheat and become permanently burned into your fixture's reflector.

SAFETY

- Read all instructions carefully and keep in a safe place for future reference.
- Check that there is no damage to the product or its components before use.
- Keep this product and its components away from water and never handle with wet or damp hands.
- Never use this product outdoors.
- Keep product away from Children.
- Never use this product if there is any sign of damage to the unit or its components.
- Keep power cord away from hot surfaces.
- Prevent the power cord from causing a trip hazard.
- Allow adequate space around the ballast so air can easily circulate around it.
- Always switch power off at the mains supply before inserting lamp into reflector.
- Allow lamp to cool for at least 20 minutes before handling.
- Do not try to open the ballast. There are no user serviceable parts inside and opening the ballast will void the warranty.

WARRANTY

Grower's Choice USA 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 importer use Grower's Choice USA shall, at its discretion, either replace or repair the product using suitable new or reconditioned products or parts. For HID lamps the warranty period is one (1) year from the original purchase. In case Grower's Choice USA decides to replace the entire product, this limited warranty shall apply to the replacement product for the remaining initial warranty period.

Grower's Choice USA shall not be held responsible for any damage caused by the operation of the unit, be it incidental or consequential or any type including, without limitation, damage or injury caused to other products or machinery or buildings. Nor will responsibility be accepted for loss of time or profit, loss of finished product, or for any inconvenience caused in any way whatsoever.

For service and return please contact Grower's Choice USA at info@growersc.com

A WARNING A

IF IN ANY DOUBT ABOUT THE INSTALLATION, OPERATION OR TROUBLE SHOOTING OF THIS PRODUCT PLEASE CONTACT A QUALIFIED ELECTRICIAN.

AWARNINGA



ENSURE THE CORD IS NOT COILED AND DOES NOT TOUCH ANY HOT SURFACES.

A WARNING A



NEVER USE THE FIXTURE WITHOUT A LAMP OR REFLECTOR!

A WARNING A

GROWER'S CHOICE GC-630NS FIXTURES ARE DESIGNED AND TESTED TO DRIVE CERAMIC METAL HALIDE LAMPS ONLY. DO NOT USE ANY OTHER TYPE OF LAMP OR RATED WATTAGE, WHICH MAY CAUSE DAMAGE TO YOUR BALLAST AND LAMP.

