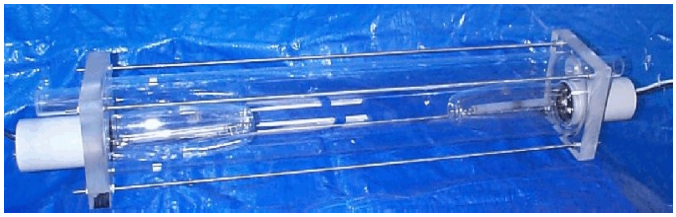
Vortex Research Incorporated

Produced by: Clae Manufacturing

Water Cooled Hydroponic Light Housings

250watt to 2000watts per enclosure



Vortex Research produces a series of Light Housings for use in residential and commercial grow operations. These housings were developed with National Research Council support in 2000 and were successfully applied in an experimental robotic grow chamber.

A serious advantage to this kind of lighting is the reduction of ambient heat close to your crops. By water cooling the lights, 95% of the heat is extracted. This produces a series of benefits such as lower humidity and a reduction in bacterial/fungal growth, lower environmental control costs for air conditioning and de-humidification and of course it reduces the amount of plant feeding required by lowering evaporation rates. In addition, ***heat removal means little or no thermal footprint***.

Our water cooled housings for HPS lights can be supplied in lengths from 12" (single bulb) to 30" for dual 1000 watt bulbs. Disassembly, cleaning and assembly is a simple process and only requires the removal of four fasteners. The water supply for the light housings can be provided through 1/2", 3/4" or 1" female NPT fittings or a 3/4" quick connect tube in socket fitting with dual seals to ease installation in larger operations where many lights are in series. ***The lighting system has been tested for 24 months in an experimental robotic commercial growing chamber with no failures.***

We supply operating, piping, electrical instructions and safety specifications for use, and a 2 year limited warranty on all parts and labour. If you require help to design your system, we can supply the information for DIY projects or we can provide complete commercial/industrial turnkey systems that can be built or shipped anywhere in the world. Our systems are modular and designed for multiple horizontal/vertical configurations and crop applications.

If you would like additional information on spectral response, light efficiency, PRF delivery, light installation and safety, system design and integration, frequency tuned spectrally adjusted electronic lighting systems or if wish to view additional photographs of systems and crops, please visit **http://www.vortexresearch.com/html/hydroponics.html** or you can email us at **sales@vortexresearch.com** to obtain pricing, delivery times and any other data you may require. **Investors may contact invest@vortexresearch.com for additional information.**