Uses and Functioning of Growth Chamber

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Talking about the growth of any product, be it a plant, hair or bacteria, every second item needs certain conditions to grow and survive. For instance, if we discuss about the growth of human hair, then it is always advisable to oil your hair so that it tends to grow fast and swiftly. Similarly, if we discuss about plants, even they need certain conditions to grow, be it sunlight or water.

Apart from the above mentioned products, there are plants that are even used in laboratory and micro organisms like bacteria and fungi require conditions to grow and survive. So in order to provide, these conditions growth chambers are used. These chambers are designed to study the effects of different environmental parameters. They are responsible for controlling and maintaining temperature ranges, relative humidity and illumination levels. Growth chambers are double walled convection heated and cooled units wherein the outer body is made of thick PRPC sheet and the inner chamber is made of heavy gauge stainless steel of SS-304 grade or anodize aluminum sheet.

The gap between the inner and the outer wall is filled with high grade mineral glass wool, which assures maximum thermal efficiency. The temperature inside these equipments is controlled through programmable micro processor based temperature controller. The system even has two doors, in which the inner door is made of thick plexi glass/float in order to view the specimens without hampering the temperature range of the chamber.

The outer door is made of mild steel sheet with a coating of stainless steel inside the door. These doors are incorporated with lock and key arrangements. Growth chambers are available in both standardized and customized models, depending on the requirements of industries and medical laboratories, where these items are supposed to be used.

The temperature ranges of these chambers are from 5 degree Celsius to 50 degree Celsius. These units even consists of back lit high contrast LCD display that aids to read the menu guide easily. The operating temperatures of these chambers are from 100 to 1000 degree Celsius, and the voltages vary from 208 ~240 VAC. Apart from these features, these systems are provided with bulk data storage capacity with high data retention life and with the feature to adjust or select baud rate for any serial communication port. These systems are incorporated with user friendly custom developed software that attains and examines the data that makes easy for the user to create reports and graphs.

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Rodsi Bhatia is a great author. She writes article for Laboratory and Educational Science Instruments. You can also find information about a Test chamber, Salt Spray Cabinet and a Stability chamber.

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