Walk-in Plant Growth Chambers

Temperature Range: 0ºC - 60ºC Lights Off

Humidity Range: 40%Rh to 90%Rh Lights On
40%Rh to 90%Rh Lights Off

Features | Functions | Flexibility

- Agriculture, agrobiology
- Horticulture, fruit farming, winemaking, cultivation of ornamental plants
- Green genetic engineering
- Phytobiology, photobiology
- Plant physiology and plant genetics
- Plant protection, plant health
- Entomology

Key Features

- Excellent temperature stability
- High quality LED lights
- Interlocked insulated panels for Walk-In Chambers
- High & low limit temperature protection
- Color touch screen display
- Uniform air flow inside chamber
- User programmable alarm settings
- Unparalleled light efficiency
- Automatic PLC controls
- Stainless steel inner construction
- Adjustable shelving arrangement

Climatic Control

- Air based, CFC free, mechanical refrigeration by sealed condenser group
- Heating technology with stainless steel electric heaters
- Humidification by ultrasonic generator with automatic water level control

Key Features

- Dynamic airflow through blowers
- Forced airflow in horizontal and downward direction
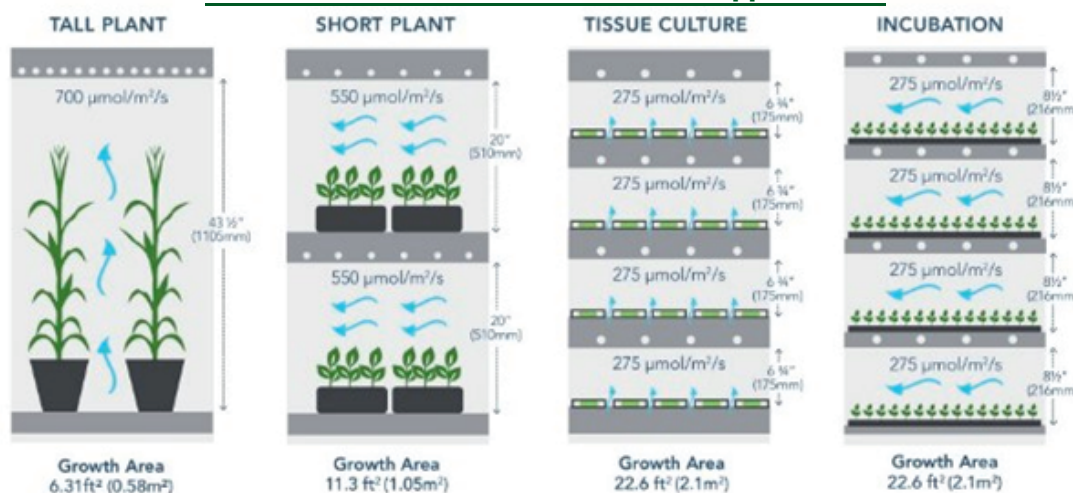- Horizontal airflow across the shelves to assure uniformity to all growth area

Research Protection and Security

- Independent thermostats for maximum and minimum temperature limits
- Automatic cut-off function, in case of excessive heating or cooling
- Configurable maximum and minimum temperature and humidity limits
- Visual and audible alarms for temperature and humidity deviations

PLC Controller

- Controller exclusively developed by Newtronic
- Controls every environmental variable available (Temperature, Humidity, Lights)
- Easy to use touch-screen interface
- Password protection of the controller functions
- Configurable high and low temperature and humidity alarms and automatic notifications
- Recording of all alarms
- Non-volatile memory, allowing the automatic restart of previously defined power failure, without losing data
- Real-time monitoring of all the functions and active components of the equipment, allowing for a fast and accurate diagnostic in case of malfunction

Different Airflow Patterns based on Application

TALL PLANT
700 µmol/m²/s
43 ½" (1105mm)
Growth Area
6.31ft² (0.58m²)

SHORT PLANT
550 µmol/m²/s
20" (510mm)
550 µmol/m²/s
20" (510mm)
Growth Area
11.3 ft² (1.05m²)

TISSUE CULTURE
275 µmol/m²/s   6 ¼" (175mm)
275 µmol/m²/s   6 ¼" (175mm)
275 µmol/m²/s   6 ¼" (175mm)
275 µmol/m²/s   6 ¼" (175mm)
Growth Area
22.6 ft² (2.1m²)

INCUBATION
275 µmol/m²/s   8½" (216mm)
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275 µmol/m²/s   8½" (216mm)
275 µmol/m²/s   8½" (216mm)
Growth Area
22.6 ft² (2.1m²)

Precise Control with Diverse application

Assured Uncompromising Performance...

Standard Equipments

- Doubled walled with 80 mm PUF insulated modular panels which can be easily assembled at site
- SS 304 Interior & Exterior made of either pre-coated GI sheet or SS 304
- Stainless steel trays
- Observation window - 300mm x 300mm
- LED lights, Day/night programmable cycle
- Light Intensity Range (LUX) - upto 20,000 LUX
- U shaped SS tubular heater
- Flooring of linoleum carpet
- Forced air circulation for Uniform temperature
- CFC free cooling system consists of hermetically sealed compressor coupled with evaporation coil and condenser.
- System is made up of Condenser unit in well-ventilated area to avoid throw of hot air in the room
- Complete operation driven through PLC with data logging capacity of up to 1000 readings
- Printer interface facility
- All operations through a 7" color touch screen display
- High quality European make split type temperature & humidity combo sensor with 4-20mA output..
- Safety device: Low & High temperature cut-off settable thermostats & high humidity cut off device
- Audio/visual alarms for deviations
- Operation & Maintenance Manual

Power Supply: 230 Volts, 50 Hz/ 440 Volts, 50 Hz mains supply. Also available with 60 Hz cycle.

Optional Accessories

- CO_2 control 0-1000 ppm.
- Steam based Humidification system with automatic water level control
- ICDAS - A Single Software installation for all Newtronic make equipments
- PAR Light
- Standby Cooling and Humidity options are available
- Door Access System (Biometric / Numeric in case of PLC-based)
- Door Access System (Biometric only in case of PID-based)

Walk-In-Plant Growth Selection Guide (Model exterior made of pre coated GI sheet with Interior made of Stainless Steel0

Model	Capacity		Internal Size	External Size	Trays Qty.	Tray Size.
	CuFt	Litre	(H*W*D)mm	(H*W*D)mm		mm
NLWH184SI	184	5160	2000 x 1500 x 1720	2120 x 1620 x 1840	8	650 x 350
NLWH278SI	278	7790	2000 x 1900 x 2050	2120 x 2020 x 2170	8	800 x 550
NLWH300SI	300	8400	2000 X 2000 X 2100	2160 X 2160 X 2100	24	870 X 600
NLWH360SI	360	10080	2400 X 2000 X 2100	2560 X 2160 X 2260	32	870 X 600
NLWH428SI	428	12000	2400 X 2000 X 2500	2560 X 2160 X 2660	48	700 X 600
NLWH552SI	552	15480	2400 X 2500 X 2580	2560 X 2660 X 2740	48	700 X 800
NLWH660SI	660	18480	2400 X 2660 X 3240	2560 X 2660 X 3240	48	870 X 800

* Models with exterior of pre-coated GI & interior of SS 304 will be available on request.

Features

PLC Control	Touch Screen	Alarms	Safety