GC 401

Growth Chamber

GC 401

N-wise

GC 401 Growth Chamber is developed for simulating real environmental conditions by controlling temperature, humidity and day-night lighting cycles. GC 401 can be used for different purposes by the help of state-of-art design:
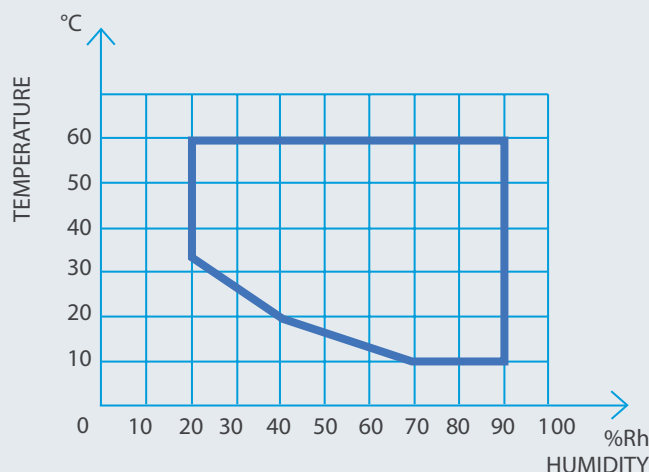
- Plant growth

- Seed germination

- Acclimation of plants

- Culture of plant cells and tissues

- Chemical industry

- Any test which needs specific temperature, humidity and illumination

- Genetic manipulations of plants

- Cultivation of protoplasm and cells

- Incubation and rearing of insects

DURABLE AND RELIABLE DESIGN

• Chamber made of stainless steel and glass window on the two sides of the chamber

• Double layer LOW-E type glass for perfect light transmittance and insulation

• The lamps, starters and other electrical parts are placed outside of the chamber

• Outer body, including the door, made of epoxy-polyester coated stainless steel to resist high humidity levels

• High density injected polyurethane insulation for back and top sides of the chamber
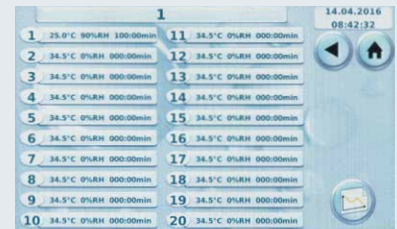
• Double door seals with heated surface

CLIMATIC CONTROL SIMILAR TO NATURE

• Powerful lighting from three sides: Left, right and front

• Ideal light density by the mixture of daylight and Grolux fluorescents

• Programmable lighting as real time or time period of program step

• Independent programming of lighting for each side with rate control

• Optional LED lighting over the shelf

• Humidity produced by the reliable humidity generator

• Accurate humidity measurement even at high temperatures by sensitive humidity sensor

• PID controlled heating and proportional controlled cooling and drying

• Powerful air circulation system maintaining temperature and humidity uniformity and stability even at low temperatures

OPTIMIZED CLIMATIC CONDITIONS WITH POWERFUL N-Wise™ CONTROL SYSTEM

• N-Wise™ control system for continuous optimization of climatic conditions

• Full information with 7" colourful touch screen mounted on the door

• Twenty program memories for frequently operated applications

• Programmable 20 steps for each program

• Program repetition up to 999 times

• Programmable altitude to calculate the dew point temperature according to psychometric formula

• Comprehensive self-diagnostic system to provide information regarding any malfunction

• Massive data storage with 2 GB internal memory

• N-Wise Closer™ software for programing and controlling GC 401

• Adjustable electronic safety thermostat

• Printer connection for printing operated programs in the memory and the current operating program

• RS 232 port for PC connection, Ethernet port for internet connection and USB ports for memory stick and printer connection

MONITORING, TRACEABILITY & COMMUNICATION

• Operating parameters can be tracked graphically against time

• Data tracking and storage on PC via N-Wise Closer™ software

• USB port to record the data in the memory to an external memory with selectable time intervals between 1 and 60 minutes

• Possibility of printer connection through USB / RS 232 port for printing data in the memory or connection to PC

• Ethernet port for remote access through internet by means of optional N-Wise Closer™ software

• Sending e-mails up to five e-mail addresses with the details of failure

• N-Wise Closer™ allows to access operating parameters, memory ,failure history and other technical parameters

• Audible alarms and on-screen messages in plain language, no codes

• For ultimate security, optional AlerText™ sends a text message to mobile phones

GC 401

TECHNICAL SPECIFICATIONS

Chamber Volume	308litres
Temperature Range without Humidity	- 10°C / +60°C (Lights off)
	0°C / +60°C (Lights on)
Temperature Range with Humidity	+10°C / +60°C
Humidity Range	20% / 90% RH
Control System	N-Wise™ Control System
Display	7" Colourful Touch Screen
Temperature Set and Reading Sensitivity	0,1°C
Humidity Set and Reading Sensitivity	1% RH
Lighting Timer	0-24 Hours or 20,000 Hours
Timer	1 minute - 20.000 Hours and Hold Position
Maximum Light Level	20.000 lux with 15 pcs. Daylight Lamp
Daylight Lamp Initial Lumen	3.250 lm
Daylight Lamp Kelvin	6.500 K
Grolux Lamp Initial Lumen	800 lm
Grolux Lamp Kelvin	8.500 K
No of Program Memory	20 +1 Program without Step Control
No of Steps	20
No of Program Repetition	1-999
Altitude Setting	0 – 2000 meters
Memory Capacity	2 GB
No of Shelves standard/max.	3 /16
Internal Material	Stainless Steel
External Material	Epoxy-Polyester Powder Coated Stainless Steel
Power Consumption	3.100 W
Power Supply	230 V, 50 Hz
Internal Dimensions (WxDxH)	509x557x1220 mm
External Dimensions (WxDxH)	750x860x1845 mm

FACTORY FITTED OPTIONS

GC XXX A	Automatic water supply unit
GC XXX L1	Shelf mounted led lamp set (1 set upon request)
GC XXX L2	Shelf mounted led lamp set (2 sets upon request)
GC XXX L3	Shelf mounted led lamp set (3 sets upon request)
	*Please contact for price and technical specifications in case of need.

OPTIONAL REQUESTS

A 08 191	AlerText™ GSM alarm module (Sim card not included)

ACCESSORIES

K 23 072	Shelf carrier (2 shelf carrier must be ordered for each shelf)
R 01 131	Stainless steel wire shelf