



# GC 401

Growth Chamber



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:*

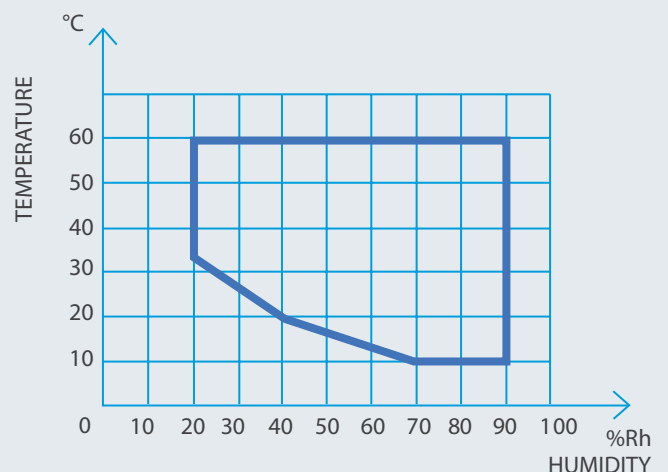
- Plant growth
- Seed germination
- Acclimation of plants
- Culture of plant cells and tissues
- Chemical industry
- Any test which needs specific temperature, humidity and illumination
- Genetic manipulations of plants
- Cultivation of protoplasm and cells
- Incubation and rearing of insects

## 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

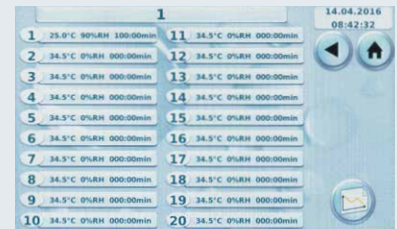
## CLIMATIC CONTROL SIMILAR TO NATURE

- 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 programming 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

## TECHNICAL SPECIFICATIONS

Chamber Volume	316 litres
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.	2 /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)	507x560x1115 mm
External Dimensions (WxDxH)	760x810x1780 mm
Packing Dimensions (WxDxH)	900x950x2050 mm
Net/Packed Weight	265 / 380 kg

### FACTORY FITTED OPTIONS

GC400A Automatic water supply unit



**NÜVE SANAYİ MALZEMELERİ İMALAT VE TİCARET A.Ş.**

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ISO 9001: 2008  
ISO 13485: 2003 