DYCOMETAL

Testing Technology

CLIMATIC CHAMBERS

CCK SERIES

Climatic test reproduce the climatic conditions of temperature and humidity on the samples, environmental conditions that the samples will be subjected during its lifetime. Thanks to these tests, we can know their behavior under the environmental conditions of use, transport or storage, preventing defective product hits the market.

GENERAL FEATURES•

- Robust construction
- Standard volumes between 48 to 3000 liters.
- Temperature range from -70°C to +180°C.
- According with standards: UNE, DIN, MIL, ISO….
- Easy to install, easy to use and reliable.
- Custom designs.

CONSTRUCTION

- Built on a steel tube structure and externally based galvanized steel sheet with oven-dried acrylic paint (RAL-9010).

- Interior made in stainless steel, completely sealed and seamless.

- Door with observation window.

- Interior light.

- Thermal insulation formed by polyurethane and rock wool.

- Free of CFC and HFC, asbestos, lead oxide and mercury as stipulated in the environmental regulations concerning the installation of thermal-acoustic insulators.

- Airflow: forced air using fans placed on the backside of the interior of the chamber.

- Standard models with capacities from 48 liters (BENCHTOP) until 3000 liters.

- 4 height-adjustable legs with casters in order to facilitate the movement of the chamber (depending of the model).

- Access-port made in silicone with tight plug, diameter of 80 mm ø (available other diameters).

- 2 Stainless steel shelves.

- Humidity vapor generator by overpressure to facilitate entry and subsequent mixing in the general air ducts.

- Heating system by heating for fast transition, proportionally controlled by solid state.

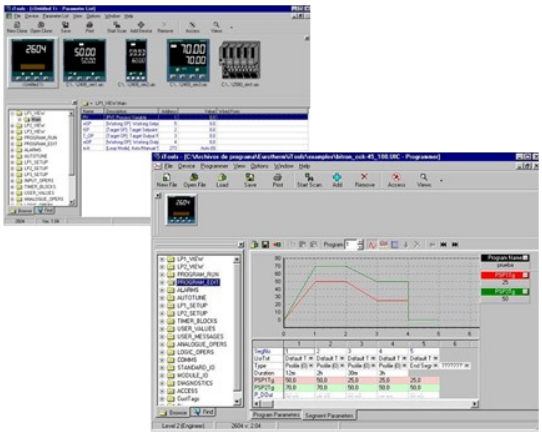
- Turn-key solutions.

CONTROL

- 50 storable programs.
- 500 segments per program.
- From 1 to 999 cycles.
- PID parameters regulation.
- Direct humidity in %.
- Pt-100 sensor for reading of the temperature values.
- Capacitive sensor for reading of the relative humidity values.
- RS-232 communication port.
- Digital LED screen with alphanumeric keyboard that allow visualization of the programmed values and the set-point values.
- The system allows to store all programmed data in non-volatile memory, not being affected by power failures.
- Monitoring of temperature and humidity allowing its programming in profiles by sections in function ramp and stabilization.
- Configuration of alarms, warn when it exceeds a safety limit value or if there is any reason there is a deviation from the programmed conditions.

SOFTWARE

Control and data recorder software with Windows support. The connection of the chamber with the PC is made by one RS-232 serial communication port.



- Recording and storage in ASCII file format.
- Visualization of the existing files.
- Visualization of the real time test.
- Digital data registers of the temperature and humidity values with programing of register intervals.
- Data recording and storage of the historical test files for real values and configured alarms.
- Graphical representation of the essay, type X-Y, that presents on the screen the programmed and real values, allowing to visualize the whole graphic or concrete amplifications thereof.

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TECHNICAL SPECIFICATIONS

MODELS			CCK-	40/81		40/125		40/180		40/300		40/480		40/648		40/1000		40/1500		40/2000	
			CCK-	70/81		70/125		70/180		70/300		70/480		70/648		70/1000		70/1500		70/2000	
Volume		Liters		81		125		180		300		480		648		1000		1500		2000	
Internal Dimensions	Height	mm		450		500		600		700		800		900		1000		1000		1000	
	Width	mm		450		500		600		700		800		900		1000		1000		1000	
	Depth	mm		450		500		500		625		750		800		1000		1500		2000	
External Dimensions	Height	mm		1293		1550		1743		1843		1943		1995		2270		2270		2270	
	Width	mm		974		790		900		1000		1093		1193		1293		1293		1293	
	Depth	mm		820		870		1050		1220		1185		1290		1505		2225		2650	
Temperature Test																					
Minimum Temperature (1)		°C	-40	-70	-40	-70	-40	-70	-40	-70	-40	-70	-40	-70	-40	-70	-40	-70	-40	-70	
Maximum Temperature		°C	+150 to +180																		
Cooling temperature change rate (2)		°C/min	1,5	2	1,5	2	2,5	2	3	2	2,5	2	2,5	2	2,5	2	2	1,5	2	1,5	
Heating temperature change rate (2)		°C/min	3,5	3	3,5	3	3,5	4	4	4	4	4	4	4	4	4	3,5	3,5	3,5	3,5	
Temperature Stability		°C	±0,1 °C to ±0,3°C																		
temperature Uniformity		°C	±0,5 °C to ±1,5°C																		
Maximum compensation (3)		KW	1,2	0,7	1,2	0,7	2	1,5	2	1,5	2	2	2	2	2,5	2	3,5	3	3,5	3	
Climatic Test																					
Temperature Range		°C	+10°C to +90°C																		
Humidity Range		%RH	10% to 98%																		
Dew point - Category 1		°C	6,5°C to 86°C																		
Dew point - Category 2		°C	Until -5°C (Limited on time)																		
Humidity stability		%RH	±1%HR to ±3%HR																		
Maximum compensation (4)		KW	0,1	0,25	0,1	0,25	0,4	0,4	0,4	0,4	0,4	0,4	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	
Power																					
Nominal power (kW aprox)		kW	4,3	6	5,2	7,5	6,1	7,8	7,8	9	9,5	10,1	10,7	11,8	12	13,4	16	18	20	22,9	
Weight (aprox.)		Kg	220	250	250	275	400	425	550	575	700	750	850	920	1000	1080	1120	1200	1280	1340	
Voltage		V	400V 3N~PE																		
Condenser			Air cooled																		
Noise level (dB aprox.)		dB	<60																		

Notes:

(1) Other temperature ranges: room +10°C, 0°C y –25°C.

(2) Temperature change rates according with IEC EN 60068-3-5, without load.

(3) In thermal test, at 25°C

(4) In Climatic test with range of +25°C at +80°C and <90%RH

Optional Elements

- Additional access-ports with several diameters.
- Additional shelves.
- Extended humidity/dry system.
- Temperature sample protection.
- External demi water reservoir.
- Independent data recorder unit.
- Analogical/digital outputs or inputs.
- Fan speed control.
- Ethernet communication port.

Parc D'activitats De Viladecans
C/ De La Ciència, 35-37. 08840
Viladecans (Barcelona) - España
Tlf: (34) 936 526 610
E-mail: dycometal@dycometal.com