

FEATURES

- High texture appearance, the body adopts an arc shape, and the surface is treated with baking paint;
- A laminated glass viewing window is provided.
- The door double insulation sealing gasket can effectively isolate internal temperature leaks.
- External water supply system is useful for integrating water into a humidification barrel, and the water can automatically recycle.
- The refrigeration and dehumidification system adopts Copeland or Bitzer compressors.
- The controller adopts a 10" LCD touchscreen which can display the measured value, set value and time at the same time.
- The controller has multi-segment program, so the change, temperature and humidity can be controlled quickly and smoothly.
- The bottom of the chamber is equipped with a movable pulley and a positioning footrest, easy to move and place.



BASIC CONFIGURATION

- Control by touchscreen 10" "DOT" fixed on the door
- 2 Portholes 100mm (one for each side)
- Bottom plate reinforcement design, the maximum designed load-bearing capacity of the bottom plate is 100kg
- observation window on the door (size depends on design), with lighting Multi-layer vacuum glass window with electronic defogging film to heat and sweat
- 2, height adjustable, single layer load-bearing ≥30KG
- Air condenser
- Internal light
- Min/max digital thermostat with independent probe
- 1 free auxiliary contact
- Ethernet port
- RS232 serial interface
- Mobile casters and positioning foot cups are installed at the bottom of the equipment to facilitate equipment relocation and positioning

TECHNICAL PARAMETERS DRACARYS CLIMATIC CHAMBER

	Model	Dracarys 225 (A~G)	Dracarys 408 (A~G)	Dracarys 608 (A~G)	Dracarys 800 (A~G)	Dracarys 1000 (A~G)
Useful capacity (l)		225	408	608	800	1000
Internal Dimension (mm)	Width	225	408	608	800	1000
	Height	225	408	608	800	1000
	Depth	225	408	608	800	1000
External Dimension (mm)	Width	225	408	608	800	1000
	Height	225	408	608	800	1000
	Depth	225	408	608	800	1000
Temperature Range	-70°C +180°C					
	(A: +25°C B:0°C C: -20°C D: -40°C E: -50°C F: -60°C G: -70°C)					
Humidity Range	20%~98%R.H. (10%~98%R.H. and 5%~98%R.H. is a special optional condition)					
Temperature range for climatic test (°C)	+10°C~ +90°C					
Analytics/Precision/ Degree of uniformity of Temperature and Humidity in space	0.01°C ; 0.1%R.H./ ±1.0°C ; ±3.0%R.H.					
Control Accuracy Temperature Stability of Temperature and Humidity	±1.0°C ; ±2.0%R.H./ ±0.5°C ; ±2.0%R.H					
Temperature changing rate	Heating	3°C/min	3°C/min	3°C/min	3°C/min	3°C/min
Temperature changing rate Cooling	Cooling	2.5°C/min	2.5°C/min	2.5°C/min	2.5°C/min	2.5°C/min
Inner and Outer Materials	The external box is the SUS 304 stainless steel surface strips, and the inner box is SUS 304 mirror stainless steel					
Insulation Materials	High temperature resistant high-density polyurethane rigid foam and rock wool insulation materials					
Cooling System	Air cooling and water cooling condenser					
Controller	DOT 10" Touch pannel with "CliMaLogic"® software					
Compressor	Copeland or Bitzer compressor					
Power	400V ±10%/50Hz/3 + N + G					



DRACARYS

CLIMATIC AND THERMOSTATIC CHAMBERS



Il Disgelo
LA PERFEZIONE DEL FREDDO

MAIN STANDARDS

TEMPERATURE TESTS

COLD ONLY

DIN 40046 Page 3, Test A
IEC 60068-2-1 Ed. 6.0
BS 2011, Part 2, Test A
MIL-STD 810 G, Met. 502.6
MIL-E 5272, Test 4.2

HOT ONLY

DIN 40046, Page 4, Test 3
IEC 60068-2-2 Ed.5.0
BS 2011, Part 2, Test B
MIL-STD 810 G, Met. 501.6
MIL-STD 883 H, Met. 1008.2
MIL-E 5272, Test 4.1
MIL-STD 202 G, Met. 108 A

HOT/COLD

DIN 40046, Page 14, Test Nb
IEC 60068-2-14 Ed. 6.0
MIL-STD 331 C, Test C6

CLIMATIC TESTS

CONSTANT CLIMATE

DIN 40046
DIN 50014
IEC 60068-2-78, Ed. 2.0
MIL-STD 202 G, Met. 103 B
IEC 60068-2-78 Ed. 2.0

VARIABLE CLIMATE

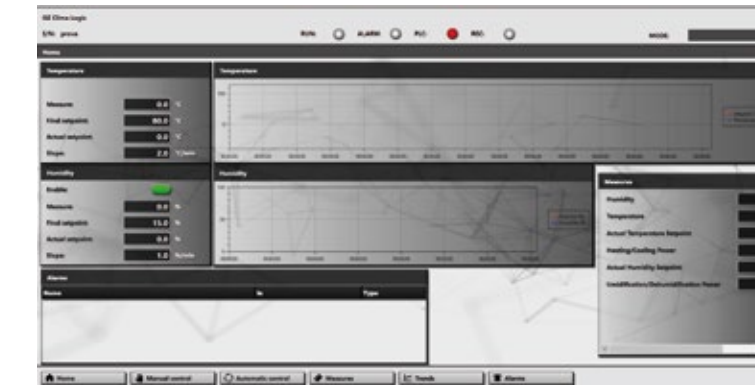
DIN/IEC 60068-2-30 Ed. 3.0
IEC 60068-2-38 Ed. 2.0
MIL-STD 202 G, Met. 106 G
MIL-STD 883 H, Met. 1004.7
DIN 40046 Page 6 and 31
BS EN 60068-2-75:1997
IEC 60068-2-75:1997
MIL-STD 750-1, Met. 1021.3
DIN 40046 Page 101
DIN 50016
MIL-STD 311 C, Test C11
MIL-STD 810 G, Met. 507.6 Proc. I-II

DOT ENSURES ENVIRONMENTAL TESTING IS PERFORMED IN ACCORDANCE WITH THE MAIN APPLICABLE STANDARDS:

Code	Title
SAE J2464	Electric and hybrid electric vehicle rechargeable energy storage system (RESS) safety and abuse testing.
SAE J2929	Electric and hybrid electric vehicle propulsion battery system safety standard - lithium - based rechargeable cells.
IEC 62133	Safety requirements for portable sealed secondary lithium cells, and for batteries made from them, for use in portable applications - Part 2: Lithium Systems.
UL 2580	Batteries for use in electric vehicles.
UN 38.3	Recommendations on the transport of dangerous goods - manual or tests criteria.

DYDRUS SOFTWARE

Dydrus is the Supervision and Management system operating on desktop device. The operator interface can also be remotely accessed via customer's LAN connections.



Main features Dydrus software

- Ethernet connection to the chamber.
- Visualization and graphical analysis of measures and recordings.
- Synoptic graphs of the entire system.
- Multilanguage support.
- High configurability of chamber parameters.
- Unlimited possibilities of measures recording
- Program and Manual mode of chamber operation
- Delayed start of a program
- Archive manager for an easy access to the stored recordings
- Test program editor
- Unlimited possibilities of storing cycles of 350 segments delaying their execution.
- Upload, edit, export, and delete existing cycles and recordings.
- Graphical and numerical profile's parameters data entry.
- Graphic functions (Graphic viewer)
- Live data update of measures on the charts
- Graphic charts or numeric table representation views on the monitor
- Graphic cursor for in-chart data measurements and evaluations.
- Calculation of Measure Slopes and reports generation.
- Export function to convert the Dydrus log file into ASCII format (usable in Excel or other applications)

OPTIONS

- Additional portholes
- UV lamp
- Handling port hole (available for models from 500 litres up)
- Internal shelves
- Water condenser
- Reinforced floor
- Capacitive probe
- Notch
- Set of no.4 analogic inputs
- Set of no.4 analogic inputs

- Set of no. 4 PT100 inputs
- Set of no. 4 PT100 probes
- Set of no. 8 auxiliary contacts
- No break power unit for PLC
- Temperature extension to +200°C
- Air fan motor speed adjustment
- Air flow booster
- Specimen switching off in case of chamber alarm
- Compressed air dehumidification kit
- The RH analogic retransmission

OPTION EUCAR FOR LITHIUM-ION BATTERY TEST

HAZARD LEVEL	ACCESSORY CODE	DESCRIPTION
0...2	Option 1	BASE CONFIGURATION
	Option 2	OPTICAL AND ACOUSTIC ALARM
3...4	Option 3	DOOR LOCKING SYSTEM
	Option 4	DUT PROTECTION
	Option 5	SAMPLING SYSTEM FOR TEST CHAMBER MONITORING (Eranntex)
	Option 6	CIO GAS SENSOR (Eranntex)
	Option 7	HC GAS SENSOR (Eranntex)
	Option 8	H2 GAS SENSOR (Eranntex)
	Option 9	O2 GAS SENSOR (Eranntex)
	Option 10	FLUSHING WITH AIR BY A ATEX BLOWER
	Option 11	OVERPRESSURE FLAP RELIEF BLOW-OUT
5...6	Option 12	FIRE EXTINGUISHER SYSTEM (CO2, ARGON, WATERMIST)



NEW HMI 10 INCH ON BOARD DISPLAY

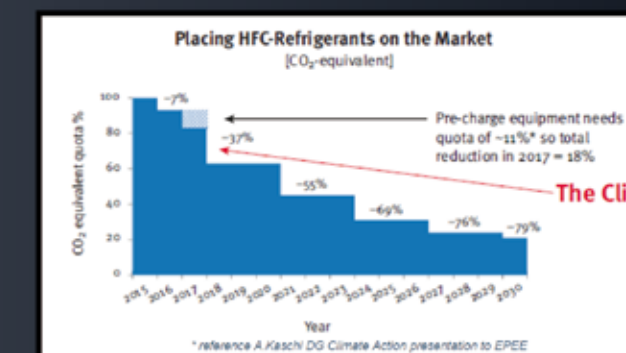
- All functions available on the on board panel
- The same software on any device

CLIMALOGIC® AN INTELLIGENT CONTROL SYSTEM READY FOR THE FUTURE

- Thanks to their hyper-connectivity, DOT test chambers can match current and future needs related to the new demands of the Industrial Internet of Things and Industry 4.0 for integrated, interconnected and communicating machines.
- Clarity, consistency and efficiency of use
- The interface consists of a powerful software accessible from the 10 inch on board display and from remote devices (PC, tablet, smartphone) through the App Easy Access.
- The chamber is equipped with a PLC (Programmable Logic Controller) for managing all the chamber's functions and safety interlocks.

NEW EUROPEAN STANDARD FOR F-GAS (REGULATION 517/2014 EU)

- The member States of the European Union have come to an agreement to protect the environment through the reduction of greenhouse gas emissions (ton of CO2 equivalent) and there is an impact on HFC refrigerant
- Each refrigerant seller has the possibility to sell according a given QUOTE evaluated on past amount of gas which have been sold by the seller.
- The QUOTE of each refrigerant seller will decrease with the same reduction target given by the Regulation; this means, Gas with low GWP (Global Warming Potential) are promoted in order to stay within the QUOTE at the end of the year (1kg R-404A = 3922kg CO2 and 1kg R-23 = 14800kg CO2)



NEW REFRIGERANT

New European Standard for F-Gas (Regulation 517/2014 EU) – (3)

- New gas instead of R-404A (all the following Gases GWP<2500)
- R-407F (not good performance at lower temperature) not for ATT
- **R-449A**
- **R-452A** **TEST COMPLETED!**
- R-448A
- R.....
- R.....
- About R452A (GWP 2140): High performance also at low temperature
- Unfortunately, not so green... Not so many data available from compressor and other manufacturer, but it seems to us a perfect drop-in replacement of R404
- About R449A (GWP 1397): Greenest option at the moment available on climatic chamber
- Some problems with Tev < -30°C