

# PRODUCT DATASHEET

## AIR CONDITIONER | DRAGON 3.1 | NATURAL GAS



Reference	
	CLIDRAG000015
Applications	Rapid, precise and reproducible heating & cooling of samples
Version	3.1
Temperature range	<b>From -75°C to +250°C</b> (with arm length = 1m)

General specification	
Frame dimensions (H x W x D)	1040 x 900 x 700 mm (without electrical arm)
Construction	Electrogalvanized steel with epoxy paint
Net weight	250 kg
Standard equipments	4 swivel casters with lock 2 easy moving handle Glass Thermo Cup (T-Cup) & nozzle n°7 Foam mat Type K thermocouple
Climate class (temperature)	From +18°C to +30°C
Relative humidity	< 70%
Indoor / Outdoor use	Indoor use only
Environment	Not designed for use in an explosive atmosphere (ATEX)
Noise level	< 63dBa
Warranty	2 years by FROILABO (during and after warranty period)

Electrical arm & head	
Positioning	2 electric cylinders for vertical and horizontal positioning of the head
Arm length (deployed / folded)	900 mm / 1400 mm (from pivot to nozzle)
<b>Working height</b>	<b>From 675 mm to 1270 mm</b>
Arm rotation	270°
Head cylinder	Pneumatic for component change (fast up/down)
Head rotation	180°
T-Cup dimensions	Internal diameter : 144 mm / available height : 50mm

Refrigeration and thermal production	
Refrigeration system	2 cascade-mounted compressors with intermediate plate heat exchanger
Type of regulator	Capillary tube
Refrigerant charge (natural gas)	1 <sup>st</sup> stage : R1270 (340g) / 2 <sup>nd</sup> stage : R170 (110g) Certified F-gas
Thermal production	Electrical heating resistance

Performances (ambient temperature : 22°C)	
Temperature range	From -75°C to -250°C, display and setting (on air) at +/- 0.1°C
Air flow	From 2.2 L/s to 8.4 L/s
Controlled ramp	From 0.03°C to 15°C /s
Transition time without control	From -55°C to +125°C /s : 7 seconds / from +125°C to -55°C/s : 14 seconds
Head stability (AIR regulation)	≤ 0.5°C
DUT stability	Being characterised

Control & programming	
Controller	Temperature regulator
Interface	7" tactile display (800x 480) - curve tracking - Languages : french / english
Mode	Hot mode (heating resistance only) / Hot & Cold mode
Data	Data recording on USB key (.csv) Alarms historical
Regulation	Air or component
Operating mode	Manual : 3 sets of 4 parameters (T°C, q air, ramp, level time) Automatic : 20 programs of 32 steps with settings of : T°C, q air, ramp, level time Loopback : 0 to 999 cycles
Thermal protection	The head temperature is protected by an independent probe against temperatures above 260 ° C

Electrical data & connections	
Compressed air source	Flow : 12 l/s Supply pressure : from 6 to 10 bars Air temperature : from +15°C to +25°C
Types of power supply	230V +/-10%, 50Hz, circuit breaker 32A circuit breaker D curve (motor support) with differential 30mA
Electrical protection	Protection of power elements by fuse

Options & conformities	
Options	RS232 Board IEEE / 488.1 / GPIB Anti-static equipment (head, nozzle and mat) Specific nozzles and boxes on request Support service for adjusting the regulation parameters on request
Supplied with	Final test sheet (temperature drop curve made with fictitious load) Quality control sheet 2 technical notices: <ul style="list-style-type: none"> <li>• Implementation, installation, commissioning, use, preventive maintenance and communication</li> <li>• Refrigeration and electrical diagrams</li> <li>• Spare parts list</li> <li>• Regulator manufacturer's manual</li> </ul>
Certification / Conformity	Comply with the standard NF EN61010-1 Meets CE requirements 2014/35/UE – Low pressure directive 2014/30/UE – EMC directive, class A device 2014/68/UE – Under pressure device

Shipment	
Shipment size (H x W x D)	1750 x 1400 x 900 mm
Shipment weight	370 kg
Type of package	Delivered in a wooden case

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FROILABO air conditioners are designed and made in France.

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