

ENERG Y OPT I M I S A T I O N

WATER - WATER

R410A



# DYNACIAT

Heat pumps & chillers from 35 to 180 kW

HIGH EFFICIENCY  
PERFORMANCE



A I R Q U A L I T Y  
C O M F O R T

# high-efficiency performance

# dynacIAT

A new technological leap forward with the DYNACIAT chilled water units and heat pumps. The ideal solution for every requirement : compact, efficient, respects the environment.



## High Performance, Comfort, respect for the environment

DYNACIAT is one of the first units to use R410A refrigerant and combine competitiveness, high performance, carefully planned acoustics, high technology and respect for the environment.

Moreover, the brazed plate heat exchangers and the latest generation Scroll compressors combined with the high volumetric output and heat transfer coefficient of R410A ensure energy performance levels never before achieved with this type of machine.

The refrigerant load and its overall effect on the atmosphere is therefore reduced.

The excellent EER and COP values attest the high performance level of Dynaciat. Users benefit directly from the increased efficiency, and a 17% reduction in power consumption improves the return on investment.

### HIGH ENERGY EFFICIENCY

EER ↑ COP ↑

**ENVIRONMENTALLY-FRIENDLY**  
ODP = 0  
Recyclable Refrigerant  
Reduced load



**SAFETY**  
Non-flammable  
Non toxic

**DISCREET**  
Sound level  
Inconspicuous



ISO9001 • ISO14001  
OHSAS 18001



CIAT actively participates in the EUROVENT certification programme.

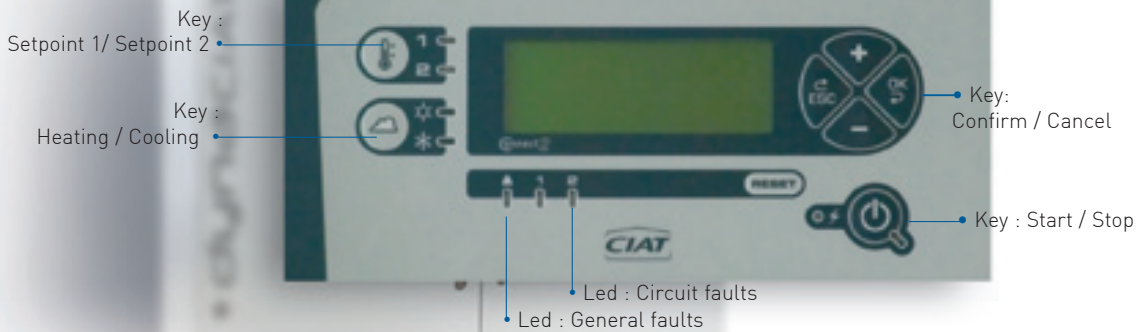
This is an independent body that tests and certifies the performance of HVAC equipment. EUROVENT certification is your guarantee, as a designer, installer or user, that DYNACIAT performs as specified

## High-performance interactive control

for greater versatility

The new generation of Connect 2 controllers ensures that the DYNACIAT water chiller continues to operate reliably and at optimum levels. The water temperature is controlled with unrivalled precision thanks to the automatic management of all the unit's components. An array of sensors and specific parameters optimise operating times and energy consumption. DYNACIAT ensures the durability and safety of the system by using specific corrective algorithms which offset any drift in operation.

- **Versatile control** adjusts to suit any system set-up (water inlet or outlet control, water formula according to climatic conditions) and manages two remote switchable setpoints.
- **Remote communication** All types of CMS (Centralised Management System) possible via the RS 485 serial port and MODBUS/JBUS open communication protocol, which is a standard feature on all the units of the range (Lonworks et Ethernet in option).
- **Numerous safety devices** Water flow control, antifreeze protection, phase inversion protection, discharge temperature control, high and low-pressure protection, and anti short cycle provide full protection of the installation and ensure long service life.
- **Free output contacts** provide general faults data at full capacity.
- **Free input contacts** Inputs for external control (clock, CMS, etc.), setpoint switching and load shedding on any DYNACIAT unit.



## A User-friendly interface

for easy operation

The user interface console located on the unit makes the system easier to use.

The wide LCD screen 4x24 provides comprehensive information relating to the unit's status in various languages:

- Operating readings on a single screen
- Parameter readings
- Temperature, pressure and operating time values
- 3 coded access levels

A log menu records and stores the last 20 faults that have occurred on the unit.

Lastly, the display panel may be installed remotely at a distance of up to 1000 m from the DYNACIAT for more convenient monitoring of the unit.



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## Easy installation saves time on sites

### Efficient and Compact :

up to 193 kW / m<sup>2</sup>

### DYNACIAT 's smaller footprint makes it a lot easier to install.

The reduced dimensions of the **DYNACIAT** range make it easy to install in even the smallest technical room.

A footprint of just 1.30 m<sup>2</sup> is sufficient for a heating capacity of 193 kW. This makes **DYNACIAT** the most compact range of its generation.



### Simplified connections

The hydraulic couplings at the top mean that the unit can be placed against a wall, in a corner, virtually anywhere.

The pipework routing makes any configuration possible (vertical, horizontal, left or right-hand).

**DYNACIAT** is space-saving: its floor space requirement is no greater than the dimensions of the unit itself. The plant room area is reduced, freeing up space for other equipment and maintenance.

**DYNACIAT** is delivered with a transformer for the control circuit. Its electrical connection requires just one cable without a neutral wire.

The performance tests and configuration are carried out in an ISO 9001 certified plant and guarantee rapid start-up.



### Compact yet accessible

It's when you use **DYNACIAT** that you'll really appreciate just how accessible it is.

The wide removable panels and the door provide fast easy access to all the parts for inspection and maintenance operations throughout the duration of your installation.



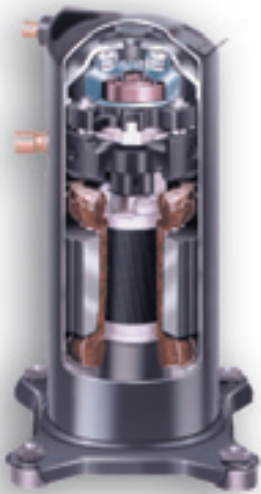
# dynaCIAT

## A new technological challenge in terms of performance

### Lower noise levels: a standard feature

«NOISELESS» assembly included

**DYNACIAT** offers the advantage of a particularly low noise level, a real breakthrough in this power range. The heat performance of the R410A means smaller SCROLL compressors whose rotary compression is pulsation-free. The NOISELESS assembly developed specially for **DYNACIAT** absorbs all the vibrations, doing away with the need to buy and fit additional antivibration mounts.



### Optimum output

#### R410A + Scroll Compressor + Plate Exchanger

The latest generation of compressors used in the **DYNACIAT** range has been specifically developed to benefit from the exceptional thermodynamic characteristics of R410A :

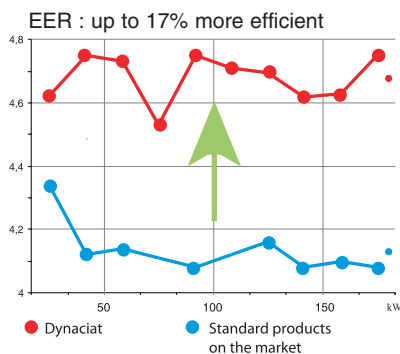
- High volumetric capacity = reduced compressor volume, dimensions of the unit and noise level.
- High energy performance levels = high efficiency (EER-COP).
- Lower pressure drops = smaller pipe diameters and reduced refrigerant load.

### Respect for the environment

Because it uses R410A, **DYNACIAT** is a long-term commitment to both environmental protection and user comfort.

Thanks to a considerable reduction in power consumption of up to 17%, it contributes to the fight against global warming.

It complies with current international regulations governing the protection of the ozone layer (ODP = 0).



The **CIAT system** offer compatibility right down the line

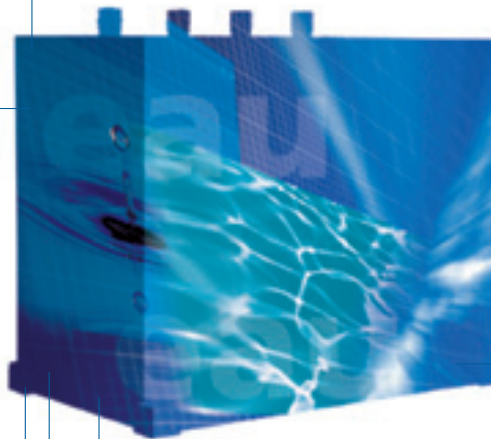


Ductable comfort units (Without casing, horizontal )

### Comfort Line



Cassette type chilled comfort units  
**Coadis Line 600**  
**Coadis Line 900**



Fan coil comfort units  
**Major Line**

Cased / without casing  
Horizontal/vertical casing



Industrial Processes



Air handling units  
**Climaciat Concept**

Drycoolers & Air-cooled Condensers

### OPERA

- Compatible with all water cooled chillers with or without condenser.
- Wide range of sizes and ventilation speeds to meet the dimensional or acoustic requirements of the site.
- To simplify operations, DYNACIAT manages the drycooler and ensures optimum all-round performance levels.

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## high-efficiency **performance**

2 series, 15 sizes to meet every requirement

DYNACIAT LG / LGP series								
Sizes	Cooling (1) kW		Heating (2) kW		Dimensions (mm)			Weight (kg)
	Pf	Pa	Pc	Pa	Length	Width	Height	
120 V	34,50	8	40,46	9,75	798	883	1201	230
150 V	45,30	10,30	53,45	12,50	798	883	1201	300
200 V	61,10	13,90	71,45	17,16	1492	883	1201	385
240 V	68,60	16,20	80,63	19,68	1492	883	1201	390
300 V	90,90	20,30	106,91	24,88	1492	883	1201	590
350 V	104,70	23,60	122,44	28,56	1492	883	1201	620
400 V	118,90	26,90	139,91	32,63	1492	883	1201	665
500 V	146,50	33,80	172,46	40,66	1492	883	1201	735
540 V	158,90	36,10	186,57	44,10	2380	883	1201	930
600 V	181,90	40,10	213,28	49,25	2380	883	1201	1125

(1) Chilled Water Outlet Temperature 7°C / Cooling Water Outlet Temperature 35°C  
 (2) Water Outlet Temperature 7°C / Heating Water Outlet Temperature 45°C

DYNACIAT Série ILG								
Sizes	Cooling (1) kW		Heating (2) kW		Dimensions (mm)			Weight (kg)
	Pf	Pa	Pc	Pa	Length	Width	Height	
120 V	28,90	8,50	38,1	9,6	798	883	1201	226
150 V	37,60	10,90	49,9	12,4	798	883	1201	289
200 V	50,30	14,70	66,6	16,9	1492	883	1201	379
240 V	58,80	16,40	76,8	18,8	1492	883	1201	452
300 V	76,60	20,90	100	24,1	1492	883	1201	595

(1) Chilled Water Outlet Temperature 7°C / Cooling Water Outlet Temperature 35°C  
 (2) Water Outlet Temperature 7°C / Heating Water Outlet Temperature 45°C

Pf : Net cooling capacity      Pc : Net heating capacity      Pa : Net power input

EQUIPEMENTS	
SCROLL Compressors	Standard
Blazed STAINLESS STEEL plate heat exchangers	Standard
«NOISELESS» assembly	Standard
SELF-ADAPTING Electronic control	Standard
Water formula according to outdoor conditions	Standard
Multilingual LCD	Standard
Wide range of applications	Standard
ENERGY STORAGE function	Standard
Anti-frost protection	Standard
Master switch	Standard
Water flow controller	Standard
MODBUS-JBUS RS 485 open communication protocol and ETHERNET	Standard
Soft start	Option
Phase controller	Option
LONWORKS protocol communication	Option
M2M - remote monitoring	Option
Remote control	Option
Relay board with dry contacts	Option
Flexible couplings	Option
Water filter	Option
Hydraulic module	Option
AQUATHERM module	Option

## A CIAT solution for each specific situation

With its wide range of refrigeration units, CIAT covers all fields of application to provide comprehensive solutions for cooling and heating alike.

<b>Water / Water</b>	<b>Ageo+</b> 6 to 36 kW	<b>Dynaciat</b> 35 to 182 kW	<b>Hydrociat</b> 420 to 1170 kW
	<b>Ageo Caleo</b> 16 to 25 kW	<b>Dynaciat Power</b> 210 to 700 kW	
<b>Air / Water</b>	<b>Aqualis 2+</b> 6 to 19 kW	<b>Aquaciat2</b> 20 to 180 kW	<b>Powerciat2</b> 660 to 1350 kW
	<b>Aqualis Caleo</b> 14 to 20 kW	<b>Aquaciat<sup>Power</sup></b> 190 to 650 kW	



With over 80 years' experience, more than 2,000 employees, and 6 production sites including a vast industrial complex in the Rhône-Alpes region, CIAT has obtained ISO 14001 certification and is renowned as a major player in the HVAC industry.



## The CIAT Group: European leader in heating, cooling and indoor air quality



### An environmentally-responsible company working towards a greener world

For many years, CIAT has been pursuing an industrial policy based on an ongoing strategy of continued sustainable development and eco-design in order to minimise the environmental impact of its equipment. The equipment integrated into Hysys system solutions benefit from this commitment.



### A Group resolutely focused on innovation

CIAT's Centre for Research and Innovation, one of the largest in Europe, brings engineers and technicians together around a simulation platform dedicated to well-being. As a team, they constantly improve the comfort, IndoorAir Quality and energy performance levels of CIAT solutions to meet the requirements of consumer sectors.

### An exclusive network of advisers



Industry

Offices

Healthcare

Hotels

Shopping Centres

Administration Education

Residential

To ensure customer satisfaction, at CIAT we have organised our teams into seven centres of expertise. Operating in France and in Europe, our experts listen to your needs and, because they speak your language, they provide you with the best solution to meet your requirements.



[www.ciat.com](http://www.ciat.com)