AQUACIAT & AQUACIAT^{POWER} R32

THE HIGH-PERFORMANCE
PACKAGED SOLUTIONS
FOR ALL APPLICATIONS
FROM 40 TO 940 KW

R-32

ErP READY 2021

CIAT

A Carrier Company

AQUACIAT & AQUACIAT^{POWER}: HARNESSING VERSATILITY FOR SUSTAINABLE COMFORT

Available in a cooling only version or with a reversible heat pump, the new AQUACIAT and AQUACIAT^{POWER} ranges with R32 offer you highly energy-efficient solutions which provide a whole host of benefits in a single compact system.

REASONS TO CHOOSE THE AQUACIAT / AQUACIAT^{POWER} R32 RANGE

- ENVIRONMENTALLY RESPONSIBLE
- ENERGY SAVINGS
- OCCUPANT COMFORT
- PLUG & PLAY SYSTEMS
- EASILY INTEGRATED
- GLOBAL SYSTEM SOLUTION

AQUACIAT / AQUACIAT^{POWER}: THE OPTIMAL SOLUTION FOR ALL SECTORS OF ACTIVITY

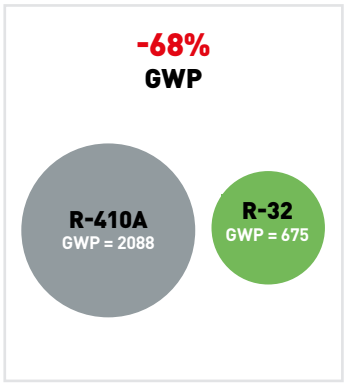
- OFFICES
- ADMINISTRATION
- HEALTHCARE
- SHOPPING CENTRES
- RESIDENTIAL DEVELOPMENTS

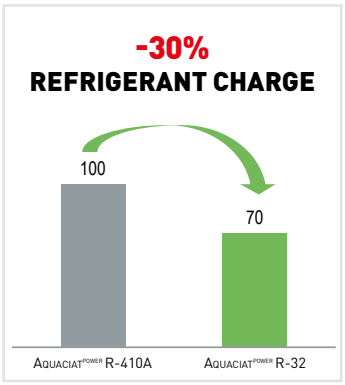
R-32: THE SUSTAINABLE AND GREEN SOLUTION

CHOOSING R-32 MEANS REDUCING YOUR CARBON FOOTPRINT

Reduction in the refrigerant's GWP (Global Warming Potential):
- reduced environmental impact
- anticipation of the HFC phase-down

Reduction in the refrigerant charge due to:
- the thermodynamic properties of R-32
- the optimised selection of components for R-32



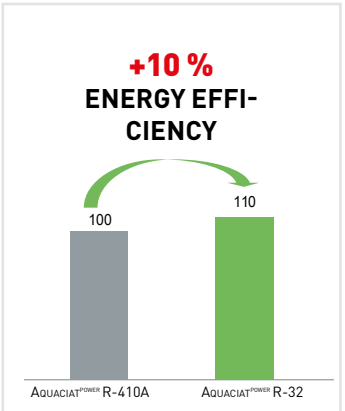


77 % LESS CO_2 EQUIVALENT THAN R-410A

CHOOSING R-32 MEANS BENEFITING FROM AN INCREASE IN ENERGY EFFICIENCY OF UP TO 10%

AQUACIAT & AQUACIAT POWER R-32 chillers exceed the SEER requirements of the 2021 Ecodesign regulations thanks to:

- the optimisation of all components for R-32 refrigerant (multiple scroll compressors and asymmetrical brazed-plate heat exchangers)
- a smart energy monitoring function



CHOOSING R-32 ALSO MEANS:

EASE OF USE

R-32 IS A RELIABLE, TRIED-AND-TESTED SOLUTION WHICH IS AVAILABLE FROM ALL REFRIGERANT DISTRIBUTORS.

COMPLETE SAFETY

EASY INSTALLATION, SYSTEM START-UP AND MAINTENANCE*.

** Special safety requirements may apply to the transportation, use and maintenance of the equipment.*

ENERGY SAVINGS

We develop the optimum solutions which enable substantial energy savings while guaranteeing user comfort and protecting the environment.

PARTIAL AND TOTAL HEAT RECOVERY OPTIONS

These enable free, additional hot water to be produced at a high temperature level:

- Partial recovery option: up to 80 °C
- Total recovery option: up to 65 °C

This free heat is used for domestic hot water production or distributed to the areas where it is needed.

30% energy

100%
CHILLED OR HOT WATER PRODUCTION

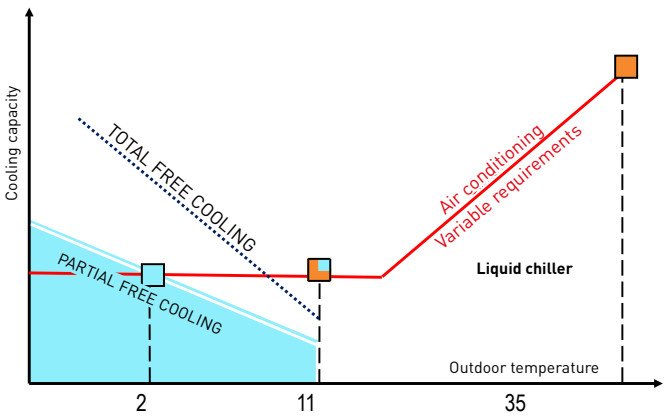
25% to 125%
DOMESTIC HOT WATER PRODUCTION

TOTAL AND PARTIAL FREE COOLING OPTION

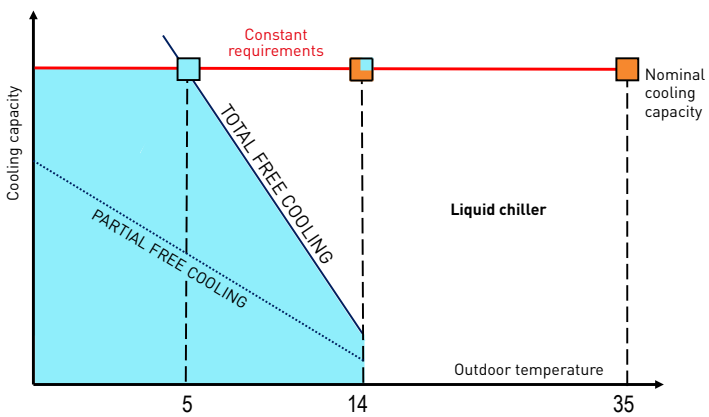
THE Free Cooling option allows significant energy savings to be made in all applications that require cooling throughout the year or during the night, particularly when used in regions with a suitable climate. This option is a highly economical, green way to meet a large proportion of cooling requirements.

FREE COOLING OPTION = ENERGY SAVINGS

HVAC APPLICATIONS - 12/7 °C



INDUSTRY APPLICATIONS - 15/10 °C



OCCUPANT COMFORT

We guarantee acoustic comfort for occupants.

Thanks to the low noise fans installed as standard and the noise reduction technologies built into the new AQUACIAT and AQUACIAT^{POWER} ranges, we can guarantee an acoustic comfort level which meets the expectation of occupants.
The optional variable speed fans reduce the sound level when running at part load (night, mid-season, etc.).

VERY LOW NOISE LEVEL

-3 TO -4 dB(A)

A low fan speed is combined with noise insulation on the compressors.

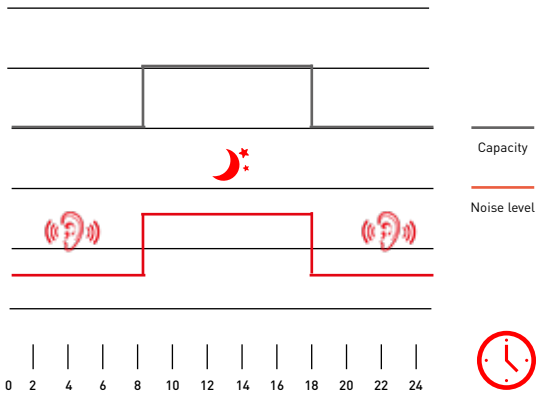
ULTRA LOW NOISE LEVEL

-5 TO -6 dB(A)

A low fan speed is combined with reinforced noise insulation on the compressors and all of the components which are sources of noise.

NIGHT MODE

Reduction in noise at part load.



AQUACIAT & AQUACIAT^{POWER} R-32: OVERVIEW OF THE RANGE

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EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

AQUACIAT

R-32

- **12 models**
- **Hydraulic module** across the full range with or without buffer tank
- **2 sound levels** (low noise level and very low noise level) + night mode

WATER CHILLER
COOLING ONLY LD VERSION
40 kW

HEAT PUMP
REVERSIBLE ILD VERSION
160 kW

Fixed speed scroll compressors, fixed speed **AC motor** fans with low noise level
Very low noise level option (low speed **AC motor** fans + inverter)
All-season (**AC motor** fans + inverter option)
Variable speed **EC motor** fan option

AQUACIAT POWER

R-32

- **19 models**
- **Hydraulic module** across the full range with or without buffer tank
- **3 sound levels** (low noise level, very low noise level, ultra low noise level) + night mode

WATER CHILLER

COOLING ONLY LD VERSION

170 kW — 400 kW — 940 kW

Fixed speed scroll compressors, fixed speed **AC motor** fans with low noise level	Fixed speed scroll compressors, variable speed **AC motor** fans + low noise level inverter

High performance/high temperature option: high speed fans (↗ Expanded operating range and performance at full load)

Variable speed AC motor fans + inverter option (↗ Seasonal performance levels)

Variable speed **EC motor** fan option (↗ Seasonal performance levels)

HEAT PUMP

REVERSIBLE ILD VERSION

170 kW — 530 kW

Fixed speed scroll compressors, fixed speed **AC motor** fans with low noise level

High performance/high temperature option: high speed fans (↗ Expanded operating range and performance at full load)

Variable speed AC motor fans + inverter option (↗ Seasonal performance levels)

Variable speed **EC motor** fan option (↗ Seasonal performance levels)

AQUACIAT RANGE
A COMBINATION OF TECHNOLOGIES

- Fixed speed fans (standard)
- Variable speed fans (EC motor or inverter option)

- Micro-channel coil, LD cooling only version
- Copper-aluminium coil, ILD heat pump version

Connect Touch control

- Hydraulic module option with or without buffer tank
- Fixed speed or variable speed pump

Brazed-plate heat exchanger

R-32

Optimised scroll compressors

AQUACIAT^{POWER} RANGE
A COMBINATION OF TECHNOLOGIES

- Micro-channel coil, LD cooling only version
- Copper-aluminium coil, ILD heat pump version

- Fixed speed fans (standard)
- Variable speed fans (EC motor or inverter option)

Fan spigot made from composite material

Connect Touch control

- Hydraulic module option with or without buffer tank
- Fixed speed or variable speed pump

R-32

Asymmetrical brazed-plate heat exchanger

Optimised scroll compressors

PLUG & PLAY SYSTEM

We supply all-in-one flexible solutions.

With the AQUACIAT and AQUACIAT^{POWER} ranges, you can choose from a number of different versions:

- Built-in hydraulic module with or without buffer tank up to 940 kW
- Wide selection of single or dual pumps, fixed speed or variable speed
- Wide selection of hydraulic couplings to fit the site configuration

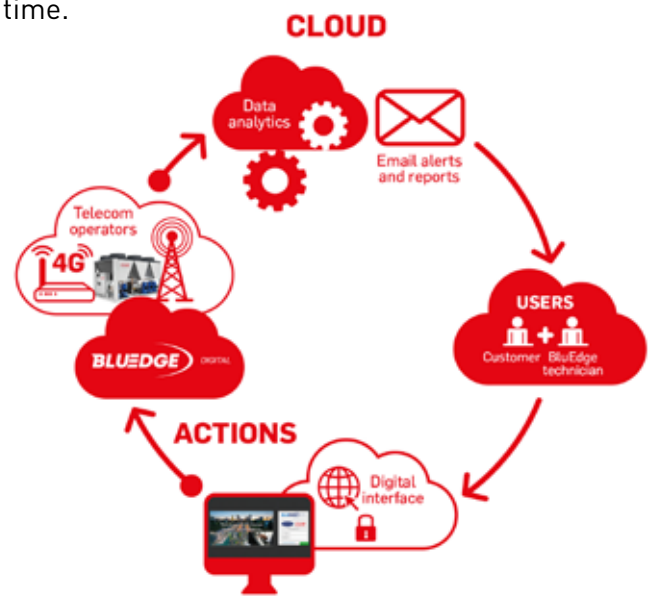
EASILY INTEGRATED

To save you time, we guarantee easy installation and integration in the building management system.

- No machine room required for the pumps and other accessories thanks to the hydraulic module option available across the entire range.
- Optimum use of the surface area for easy integration into an existing building.
- Quick, easy and economical installation and system start-up.
- Packaged solution for quick start-up and reliable installation.
- Communication with all types of building management system (BMS) via the Modbus protocol available as standard, or optional LON or BACNET protocols.

BLUEDGE DIGITAL

Remote monitoring solution, which enables several CIAT units to be monitored and controlled in real-time.



GLOBAL SYSTEM SOLUTION

We offer a complete range of equipment designed to work together for the best possible results providing first rate performance, optimised energy efficiency and acoustic and thermal comfort to occupants.

FOR OCCUPANT COMFORT

CLIMACIAT AIRACCESS

An air handling unit which is accessible and efficient, while remaining simple to install and easy to use.

COADIS LINE

Cassette with Coanda effect for enhanced occupant comfort.
High-efficiency Epure filtration on $PM_{2.5}$ fine particles for optimal indoor air quality.

COMFORT LINE

Ductable comfort units offering excellent acoustic comfort.
High-efficiency Epure filtration on $PM_{2.5}$ fine particles for optimal indoor air quality.

EPURE DYNAMICS®

HYSYS® system featuring a smart particulate air pollution control function for improved indoor air quality, particularly via purification of fine particles according to WHO guidelines.

ENERGY OPTIMISATION

AQUACIAT AQUACIAT^{POWER}

Water chiller and heat pump with air cooled condenser.
High efficiency Scroll compressor with low noise level.

DYNACIAT^{POWER}

Water chiller with water cooled condenser offering high energy performance levels with an optimal footprint.

ITEX

Gasketed plate heat exchanger with a high thermal transfer capacity.

SMART CIAT CONTROL

Energy management system enabling data centralisation, remote management of equipment, automatic changeover and enhanced energy optimisation.

AQUACIAT PERFORMANCES

WATER CHILLER

AQUACIAT LD R32									
Sizes	Standard version			Sound power level		Dimensions (mm)			Weight (kg)
				Lw dB(A)					
	Cc(1) kW	$SEER_{12/7\ °C}$ kWh/kWh	$SEPR_{12/7\ °C}$ kWh/kWh	Standard	Very low noise level	Length	Width	Height(*)	Standard unit
150R	42	4.41	6.30	81	78	2109	1090	1330	408
180R	47	4.47	6.23	82	79	2109	1090	1330	409
200R	53	4.50	6.23	84	80	2109	1090	1330	428
202R	56	4.62	6.21	84	80	2109	1090	1330	428
240R	64	4.41	5.92	89	80	2109	1090	1330	435
260R	71	4.31	5.46	89	80	2109	1090	1330	446
300R	81	4.24	5.21	89	80	2109	1090	1330	454
360R	93	4.38	5.45	92	83	2275	2125	1330	672
390R	107	4.51	5.19	92	83	2275	2125	1330	734
450R	124	4.57	5.24	92	83	2275	2125	1330	743
520R	140	4.46	5.37	92	83	2275	2125	1330	861
600R	160	4.37	5.15	92	83	2275	2125	1330	877

REVERSIBLE HEAT PUMP

AQUACIAT ILD R32											
Sizes	Standard version Cooling mode			Standard version Heating mode		Sound power level		Dimensions (mm)			Weight (kg)
						Lw dB(A)					
	Cc(1) kW	$SEER_{12/7\ °C}$ kWh/kWh	$SEPR_{12/7\ °C}$ kWh/kWh	Hc(2) kW	$SCOP_{30/35\ °C}$ kWh/kWh	Standard	Very low noise level	Length	Width	Height(*)	Standard unit
150R	41	4.19	6.01	43	3.82	82	79	2109	1090	1330	444
180R	43	4.23	5.85	47	3.85	83	79	2109	1090	1330	446
200R	50	4.18	5.62	54	3.81	84	81	2109	1090	1330	469
240R	60	4.34	6.06	60	3.57	89	81	2109	1090	1330	496
260R	65	4.25	5.81	67	3.67	90	81	2109	1090	1330	506
300R	74	4.03	5.34	76	3.64	90	81	2109	1090	1330	515
360R	87	4.48	5.74	92	3.60	92	84	2275	2125	1330	759
390R	100	4.86	5.71	105	3.55	92	84	2275	2125	1330	818
450R	114	4.88	5.76	118	3.79	92	84	2275	2125	1330	866
520R	132	4.20	5.41	135	3.76	93	84	2275	2125	1330	996
600R	147	4.09	5.15	150	3.78	92	84	2275	2125	1330	1000

AQUACIAT^{POWER} PERFORMANCES

WATER CHILLER

AQUACIAT^{POWER} LD R32													
Sizes	Standard version Cooling mode			High performance version			Sound power level			Dimensions (mm)			Weight (kg)
							Lw dB(A)						
	Cc(1) kW	$SEER_{12/7\,°C}$ kWh/kWh	$SEPR_{12/7\,°C}$ kWh/kWh	Cc(1) kW	$SEER_{12/7\,°C}$ kWh/kWh	$SEPR_{12/7\,°C}$ kWh/kWh	Standard	Very low noise level	Ultra low noise level	Length(*)	Width	Height	Stand-ard unit
602R	165	4,49	5,27	172	4,82	6,30	89	86	84	2410	2253	2324	1349
650R	180	4,64	5,42	187	5,02	6,61	89	86	84	2410	2253	2324	1397
750R	198	4,45	5,34	206	4,84	6,42	89	86	84	2410	2253	2324	1397
900R	217	4,47	5,19	227	4,94	6,13	90	87	85	2410	2253	2324	1521
1100R	256	4,35	5,14	270	4,79	5,97	90	87	85	2410	2253	2324	1556
1200R	296	4,7	5,44	311	5,25	6,30	91	88	86	3604	2253	2324	1995
1350R	328	4,67	5,47	346	5,15	6,24	91	88	86	3604	2253	2324	2049
1400R	361	4,62	5,60	380	5,09	6,36	91	88	86	3604	2253	2324	2211
1600R	394	5,09	6,34	416	5,11	6,30	91	88	86	3604	2253	2324	2269
1750R	428	5,37	6,38	451	5,28	6,41	92	89	87	4798	2253	2324	2697
1800R	458	5,30	6,29	484	5,24	6,32	92	89	87	4798	2253	2324	2722
2000R	523	5,21	6,24	553	5,29	6,27	92	89	87	4798	2253	2324	2927
2200R	586	5,24	6,26	616	5,32	6,27	97	93	90	5992	2253	2324	3265
2400R	645	5,35	6,32	677	5,32	6,33	97	93	90	5992	2253	2324	3511
2650R	688	5,20	6,11	726	5,20	6,14	97	93	91	5992	2253	2324	3511
2800R	743	5,43	6,17	782	5,33	6,25	97	93	91	7186	2253	2324	4042
2950R	765	5,38	6,10	807	5,30	6,18	98	94	91	7186	2253	2324	4042
3200R	836	5,22	6,03	882	5,31	6,07	98	94	91	7186	2253	2324	4291
3500R	890	5,07	5,79	944	5,18	5,86	98	95	91	7186	2253	2324	4291

(1) As per EN 14511-2018 - Chilled water = 12 °C/7 °C Outdoor air = 35 °C
(2) As per EN 14511-2018 - Hot water = 40 °C/45 °C Outdoor air = 7 °C DB/ 6 °C WB
Cc = Cooling capacity
Hc = Heating capacity
SEER = Seasonal coefficient of performance from the Ecodesign (EU) regulation No. 2016/2281 for comfort applications
SEPR = Seasonal coefficient of performance from the Ecodesign (EU) regulation No. 2016/2281 for industrial applications
SCOP = Seasonal coefficient of performance from the Ecodesign (EU) regulation No. 813/2013
(*) +1194 mm if hydraulic module with buffer tank (AQUACIAT^{POWER})
(*) +600 mm if hydraulic module with buffer tank (AQUACIAT)

AQUACIAT^{POWER} PERFORMANCES

REVERSIBLE HEAT PUMP

AQUACIAT^{POWER} ILD R32										
	Cooling mode						Heating mode			
Sizes	Standard version			High performance version			Standard version		High performance version	
	Cc(1) kW	SEER$_{12/7\,°C}$ kWh/kWh	SEPR$_{12/7\,°C}$ kWh/kWh	Cc(1) kW	SEER$_{12/7\,°C}$ kWh/kWh	SEPR$_{12/7\,°C}$ kWh/kWh	Hc(2) kW	SCOP$_{30/35\,°C}$ kWh/kWh	Hc(2) kW	SCOP$_{30/35\,°C}$ kWh/kWh
602R	155	4,17	4,68	164	4,41	5,47	173	3,44	178	3,67
700R	171	4,01	4,51	181	4,23	5,23	192	3,45	197	3,66
800R	204	4,18	4,64	215	4,48	5,41	231	3,39	237	3,74
900R	223	4,08	4,52	236	4,41	5,23	250	3,47	256	3,77
1000R	239	4,04	4,5	254	4,34	5,15	269	3,48	275	3,80
1150R	285	4,48	4,83	302	4,78	5,49	310	3,57	317	3,87
1250R	305	4,5	4,76	324	4,81	5,34	329	3,58	336	3,86
1400R	341	4,46	4,93	362	4,88	5,60	378	3,55	387	3,90
1500R	358	4,33	4,79	381	4,87	5,40	397	3,57	406	3,91
1600R	389	4,44	4,94	413	4,81	5,60	431	3,54	441	3,92
1750R	414	4,38	4,82	439	4,75	5,43	458	3,53	467	3,89
2000R	470	4,32	4,83	500	4,81	5,47	523	3,57	537	3,95

	Sound power level			Dimensions (mm)			Weight (kg)
Sizes	Lw dB(A)			Length(*)	Width	Height	Standard unit
	Standard	Very low noise level	Ultra low noise level				
602R	88	85	83	2410	2253	2324	1569
700R	89	86	84	2410	2253	2324	1575
800R	89	87	85	2410	2253	2324	1784
900R	90	87	85	2410	2253	2324	1811
1000R	90	87	85	2410	2253	2324	1817
1150R	91	88	86	3604	2253	2324	2394
1250R	91	88	86	3604	2253	2324	2452
1400R	92	89	87	3604	2253	2324	2672
1500R	92	89	87	3604	2253	2324	2678
1600R	92	90	88	4798	2253	2324	3154
1750R	93	90	88	4798	2253	2324	3180
2000R	93	90	88	4798	2253	2324	3430

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(*) +1194 mm if hydraulic module with buffer tank

OPTIONS

EQUIPMENT	AQUACIAT / AQUACIAT POWER	
	LD WATER CHILLER	ILD HEAT PUMP
Disconnect safety switch	•	•
Control circuit transformer	•	•
Water flow controller	•	•
Multilingual touch screen controller	•	•
Modbus-Jbus communication	•	•
Web server	•	•
Low noise level	•	•
Very low noise level	—	—
Ultra low noise level [1]	—	—
Soft Starter	—	—
Winter operation down to -20 °C	—	NA
Frost protection	—	—
Low-temperature brine solution down to -8 °C	—	NA
Partial heat recovery	—	—
Total heat recovery [1]	—	NA
Total or partial free cooling [1]	—	NA
Coil anti-corrosion treatment	—	—
Single or dual pump hydraulic module. Fixed or variable speed fan	—	—
Expansion tank	—	—
Buffer tank	—	—
Exchanger water filter	—	—
Exchanger flexible couplings	—	—
Anti-vibration mounts	—	—
Master/slave operation	—	—
Lon - BACnet / IP communication	—	—
Free cooling dry cooler management	—	NA
External management of boiler or electric heaters	NA	—
BluEdge Digital remote monitoring	—	—

• Supplied as standard — Option NA Not applicable [1]AQUACIAT POWER only

EFFICIENCY IS IN THE AIR

CIAT
AT YOUR SERVICE

At CIAT, our objective is to develop partnerships with you and provide high quality service throughout the life cycle of your HVAC system. We understand your changing needs, and develop smart services and energy solutions that optimise energy performance and enable savings.

We provide the support you need to get the most out of your solution:

- Preventive and corrective service maintenance.
- On-site inspection by experts close at hand.
- Online spare parts shop
- Dedicated hotline for off-site technical support

We also offer you a comprehensive range of smart services:

- Consulting on improving energy performance
- Advanced monitoring and plant system management solutions
- Equipment and system modernisation.

PRESENT IN OVER **50** countries

OVER **80** years OF EXPERIENCE

AVAILABLE **24/7**

www.ciat.fr

A Carrier Company

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