



## USING RENEWABLE ENERGIES FOR AIR CONDITIONING, DOMESTIC HOT WATER AND HEATING



HOTELS



# EXPERTISE IN HOSPITALITY APPLICATIONS

With over 80 years' experience in climatic engineering, we build our expertise on a close relationship with our customers.

We have consolidated our experience in the hotel trade into an extremely rich database. Using the textbook cases in it, we work together with you to find the best solutions for your particular project.



# EXPERTISE IN HOSPITALITY APPLICATIONS

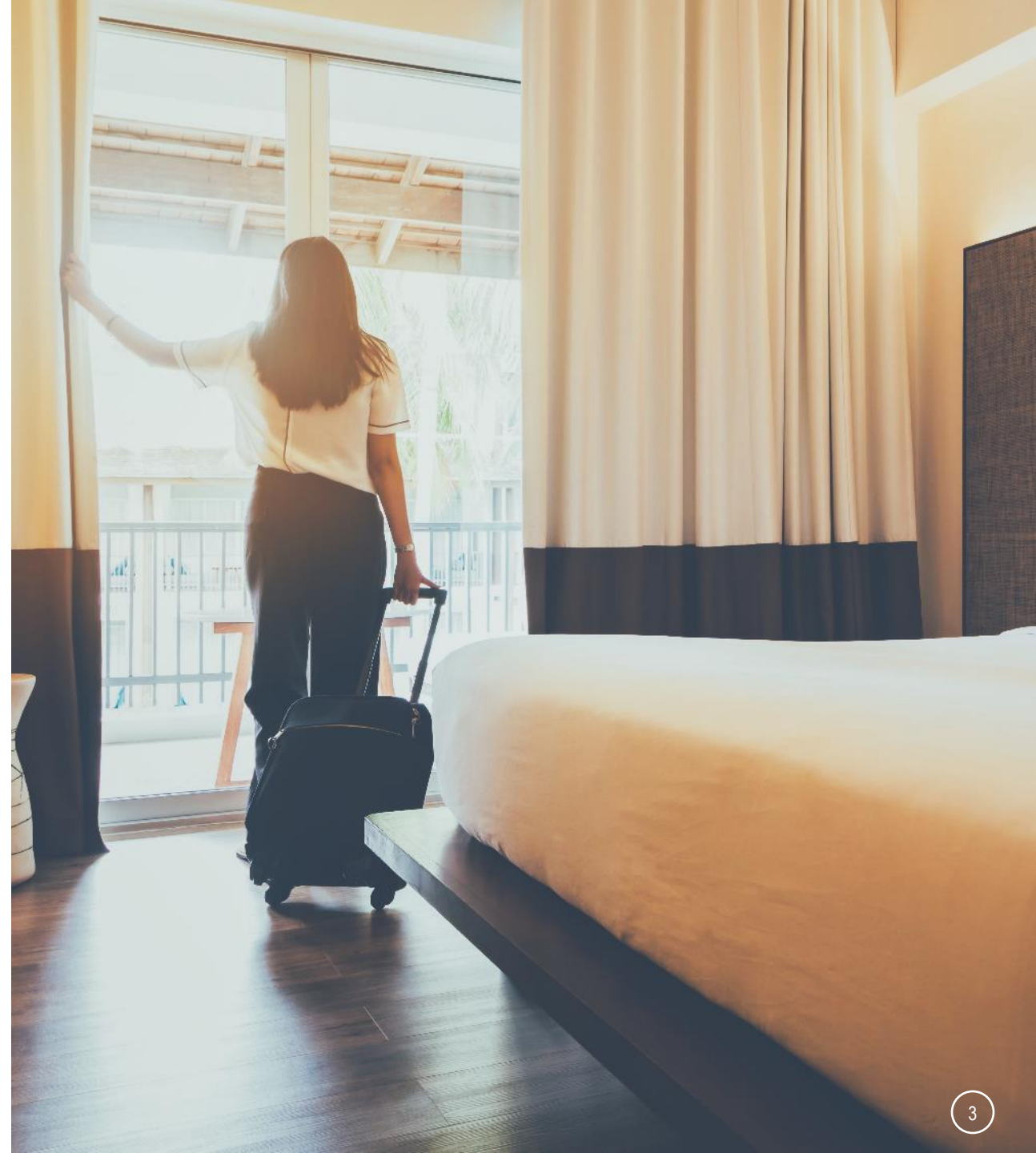
## Comfort

CIAT is recognized for the acoustic, thermal and air quality of the indoor environments created to ensure comfort of your customers.

## Energy optimization

We develop energy efficient solutions allowing substantial savings to be made without compromising on your customers' comfort.

With comfort and energy optimization in mind, we provide global solutions with a low carbon footprint that go beyond the simple notion of kW/h consumed and energy savings.





# GUIDING YOU RIGHT FROM THE START

With a team of hospitality experts eager to help you, CIAT is your partner in your success. We work with you right from the design phase to analyse your specific requirements and offer you solutions to optimise your hotel's air conditioning, heating and hot-water production capacities.



# WORLD-CLASS AIRSIDE FACILITIES

## Airside expertise

Our Research and Design Center and Laboratory has seven innovation platforms, equipped with state-of-the-art test and measurement tools, fully dedicated to airside applications.

Teams at this 3000m<sup>2</sup> facility in eastern France carry out prototyping and testing for our development teams and ultimately for our customers, who are looking for the best in innovation.

## Industrial Excellence

The skills and expertise of our teams are backed by completely integrated powerful production facilities resulting in a fully-mastered industrial procedure.

Our manufacturing sites are certified with ISO 9001, ISO 14000 and OSHAS 8001.

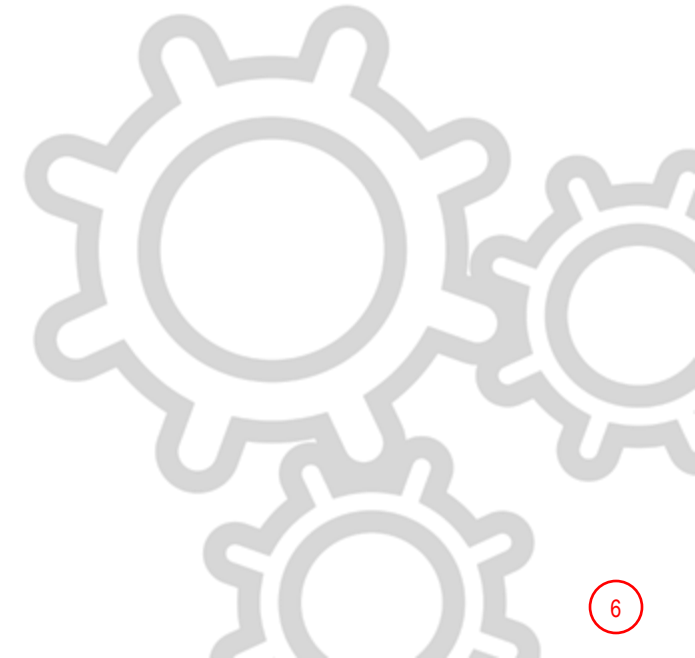




# YOUR CHALLENGES

## CUSTOMERS' SATISFACTION

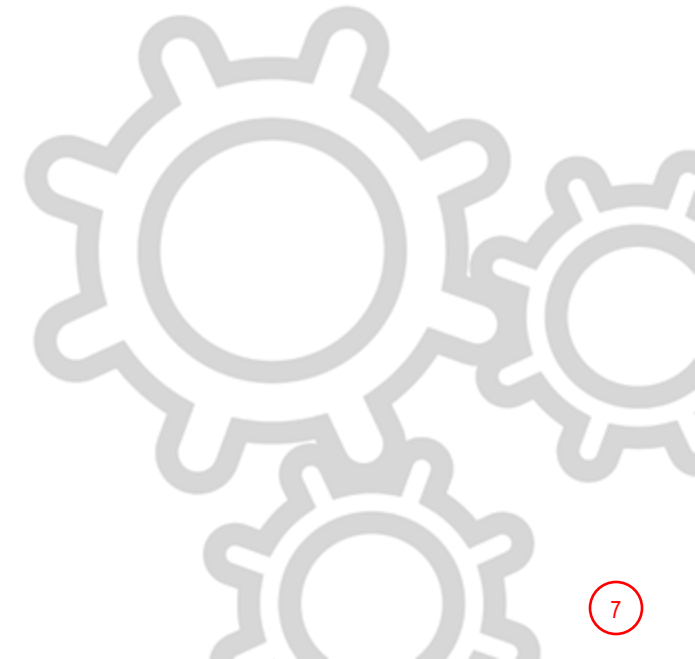
- ▶ Thermal comfort
- ▶ Acoustic comfort
- ▶ Indoor air quality



# YOUR CHALLENGES

## PEACE OF MIND

- ▶ **Guaranteed maintenance and operation**
- ▶ **CIAT Services: ensuring quality and continual comfort**

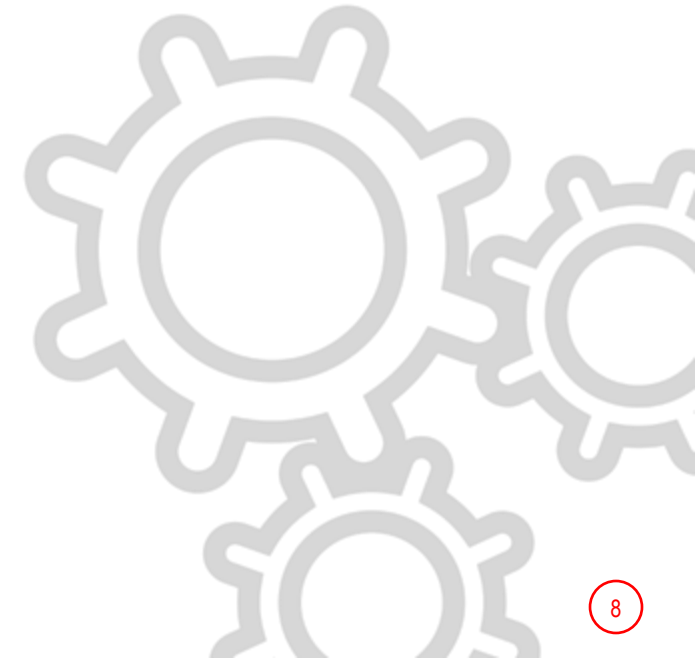




# YOUR CHALLENGES

## ENERGY OPTIMISATION

- ▶ Energy savings
- ▶ Installation, commissioning and maintenance cost reduction





# TAILOR-MADE SOLUTIONS FOR ALL YOUR CHALLENGES

## Customers' comfort



### CLIMACIAT AIRACCESS

Accessible and efficient air handling unit that is simple to install and use.



### MAJOR LINE

Versatile and highly efficient comfort unit providing improved comfort and very low sound level.



### COMFORT LINE

Comfort unit with high available static pressure, modular air discharge configurations, flexible installation and excellent acoustic comfort.

## Energy optimisation



### DYNACIAT

Compact and silent high energy efficiency Scroll compressors. High-efficiency brazed plate heat exchangers. Self-adjusting electronic control. Heat recovery option for domestic hot water production.



### OPERA

Drycooler range compatible with Dynaciat range for favourable all-round performance levels.



### AQUACIAT & AQUACIAT<sup>POWER</sup>

High efficiency air-cooled chiller and heat pump with scroll compressor and heat recovery option for domestic hot water production.



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# AQUACIAT & AQUACIAT<sup>POWER</sup> WITH R-32





# AQUACIAT & AQUACIAT<sup>POWER</sup> WITH R-32

## PERFECTLY SUITED FOR HOSPITALITY APPLICATIONS



ENVIRONMENTAL  
RESPONSIBILITY



CUSTOMERS' COMFORT



ENERGY SAVINGS



SIMPLICITY & DISCRETION



PLUG & PLAY SYSTEM



GLOBAL SYSTEM OFFERING





## Now available with R-32 refrigerant

The AQUACIAT & AQUACIAT<sup>POWER</sup> range is now available with R-32 refrigerant for a lower ecological footprint, **up to 77% less carbon footprint**, while improving even further its **energy performances +10%** and preserving its **acoustic level** and its **installation simplicity**.



# AQUACIAT RANGE OVERVIEW



CHILLER COOLING ONLY LD



HEAT PUMP ILD

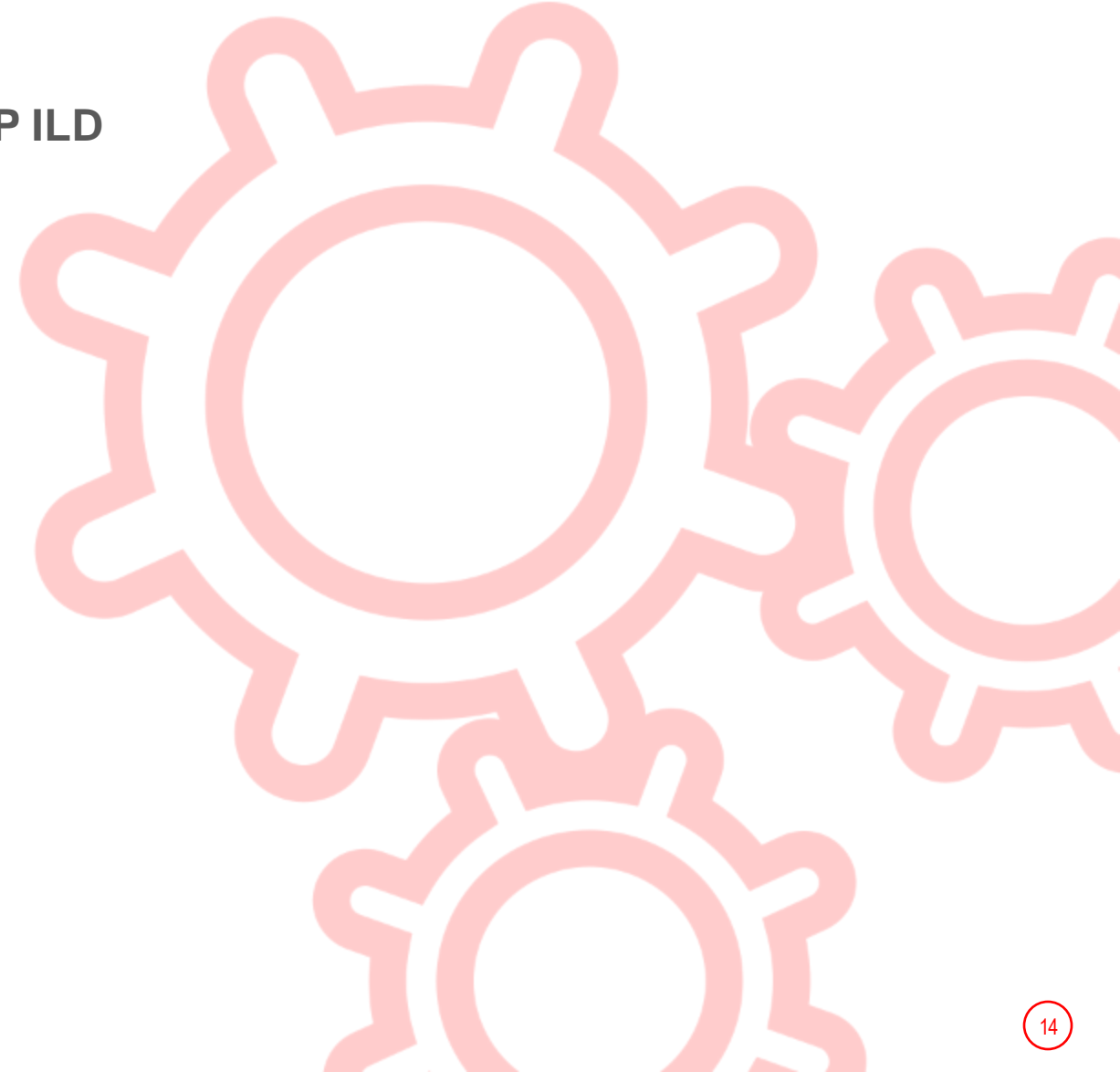
40 kW

160 kW

Variable speed Drive or EC fans motors option

All seasons, All climates, All applications options

Fixed speed scroll compressors, **AC** fans





# AQUACIAT<sup>POWER</sup> RANGE OVERVIEW



## CHILLER COOLING ONLY LD

170 kW

400 kW

940 kW

EC fans motors option (➤ Seasonal performances)

Variable speed fans option (➤ Seasonal performances)

High performance option / High temperature: High speed fans (➤ Nominal performances & Operating map)

Fixed speed scroll compressors, **AC** fans-low speed



## HEAT PUMP ILD

170 kW

530 kW

1040 kW

EC fans motors option (➤ Seasonal performances)

**Variable-speed AC motor fans option**  
+ drive (➤ Seasonal performance levels)

High performance option / High temperature: High speed fans  
(➤ Nominal performances & Operating map)

Fixed speed scroll compressors, **AC** fans motors-low speed

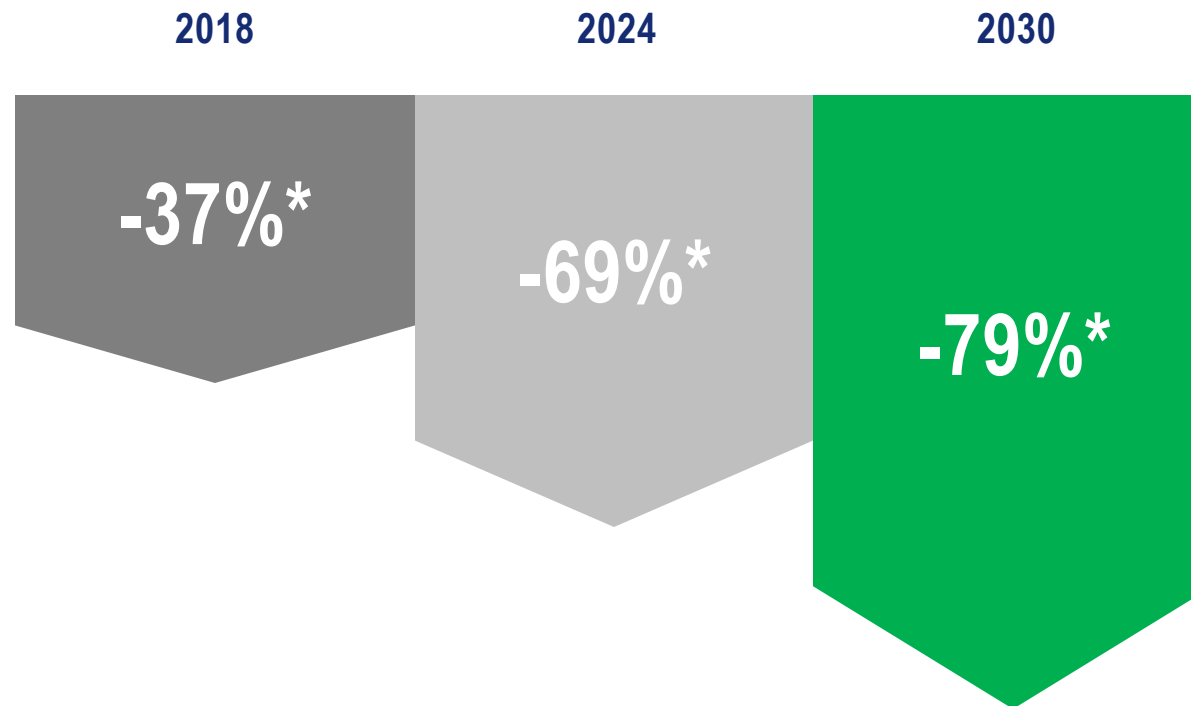
Fixed-speed scroll compressors, variable-speed **AC**  
**motors fans + Drive**

# R-32, THE BEST REFRIGERANT SOLUTION FOR SCROLL CHILLERS



# EU F-GAS REGULATION

## HFC PHASE DOWN



Note: EU F-Gas Regulation No. 517/2014  
\*Versus 2015 reference value



# WHY R-32?



**UP TO 77% LESS CO<sub>2</sub>  
EQUIVALENT THAN R-410A**



**USER FRIENDLY**



**UP TO 10% MORE ENERGY  
EFFICIENT**



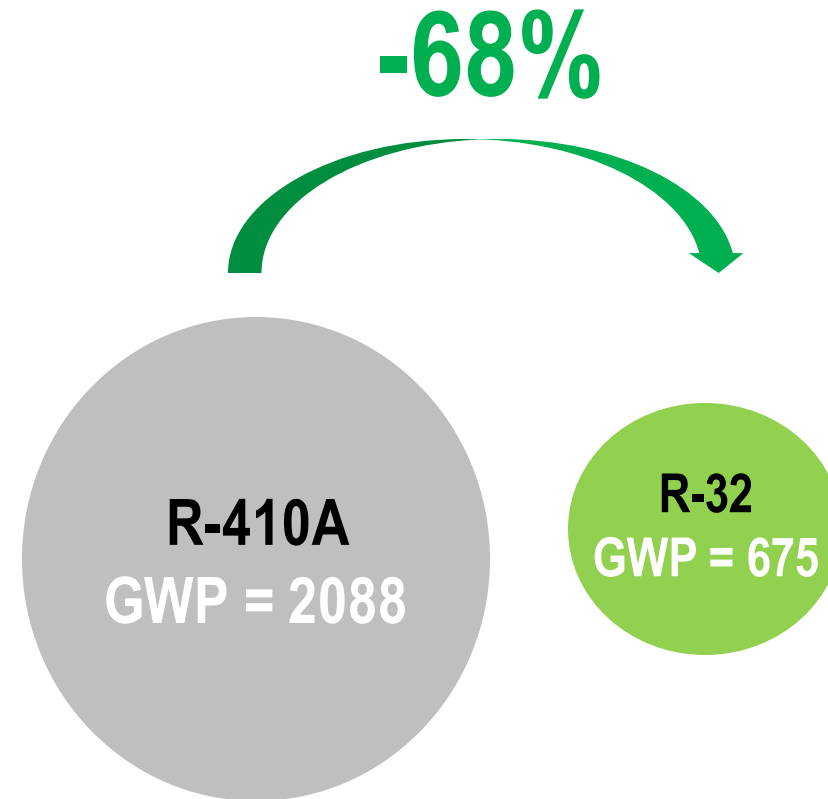
**SAFE**

# ENVIRONMENTALLY RESPONSIBLE

## LOWER GWP

Refrigerant global warming potential (GWP) reduction:

- ▶ Lower ecological impact
- ▶ Anticipating the HFC phase-down



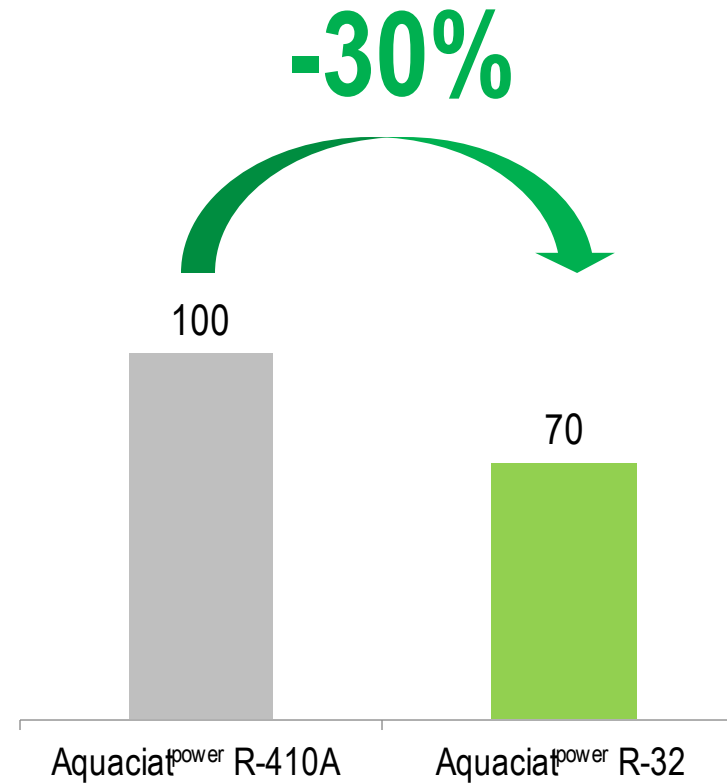
*Note: GWP according to IPCC AR4*

# ENVIRONMENTALLY RESPONSIBLE

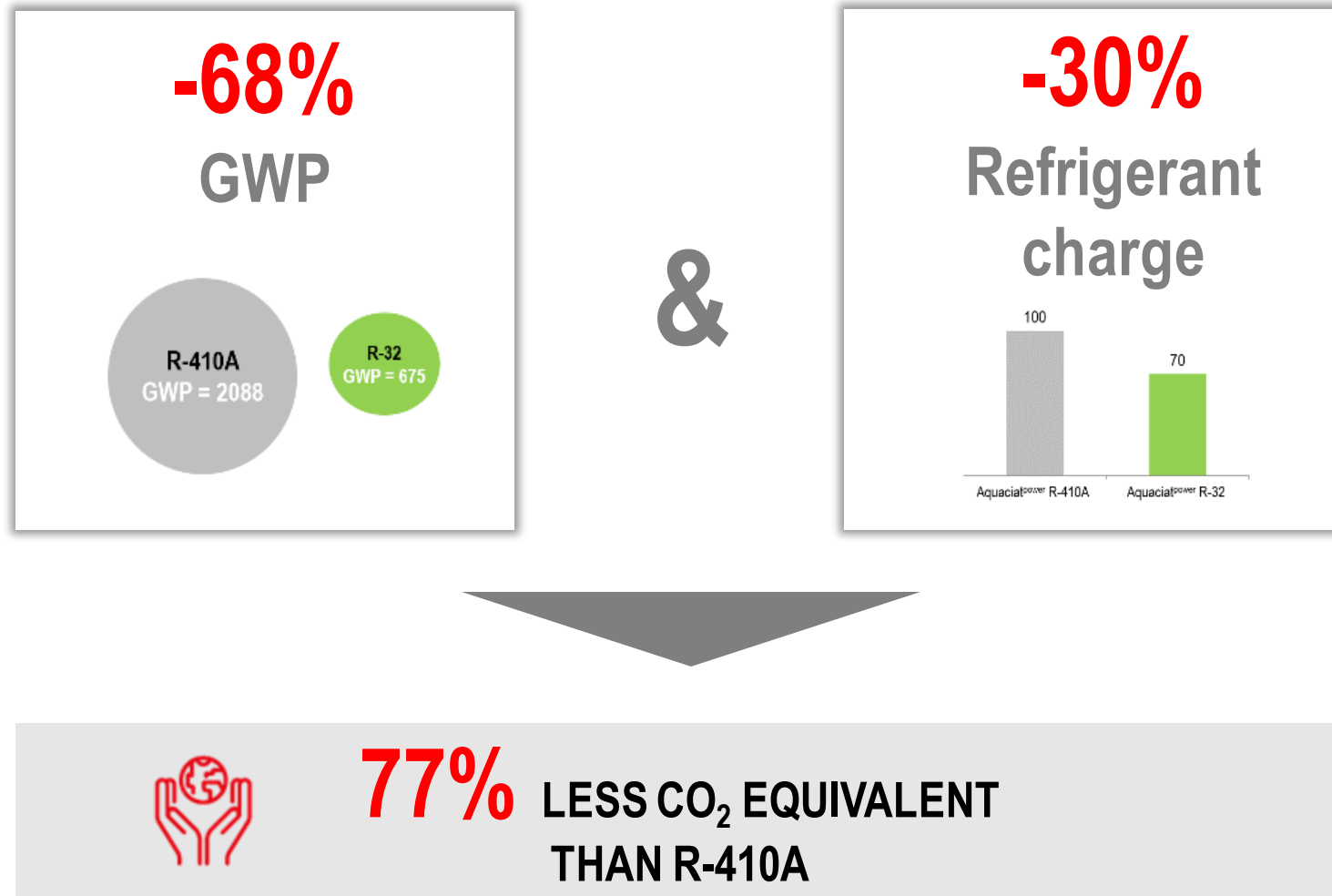
## REFRIGERANT CHARGE REDUCTION

**Refrigerant charge reduction due to:**

- ▶ R-32 thermodynamic properties
- ▶ Optimized component selection for R-32



# ENVIRONMENTALLY RESPONSIBLE



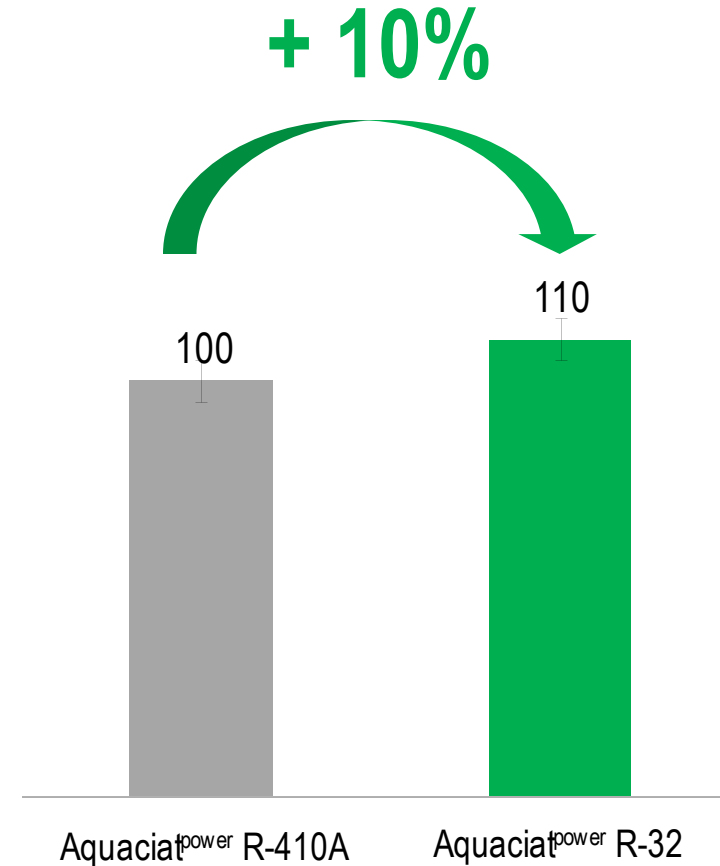


# ENERGY SEASONAL EFFICIENCY



**Aquaciat & Aquaciat<sup>power</sup> with R-32 chillers exceed Ecodesign 2021 SEER requirements due to:**

- ▶ Multiple scroll compressors
- ▶ Asymmetric brazed plate heat exchangers
- ▶ Smart energy monitoring function



*Note: ErP Ready 2021 according to EU Regulation No. 2016/2281*

# USER FRIENDLINESS

- ▶ R-32 is a **tried and trusted** solution already used in residential air conditioners (millions AC in use.)
- ▶ Easy refrigerant charge complement
- ▶ It is **available from all refrigerant distributors** in cylinders of 5, 10, 20 or 45 kg with top in red color.



# SAFETY



- ▶ Service tools must be **qualified for A2L** refrigerants according to ISO 817 or EN378
- ▶ Service engineers shall be **qualified for brazing** of components containing PED fluid group 2
- ▶ Specific safety rules for compliance with UN3358 for road transportation and DS291 IMDG for sea shipping:
  - **Road transportation:**
    - UN code: 3358 REFRIGERATING MACHINES containing flammable, non-toxic, liquified gas
    - Road tunnels class D & E not allowed
  - **Sea transportation:**
    - International Maritime Dangerous Goods (IMDG) code: DS 291
  - **Air transportation:**
    - Not allowed



# AQUACIAT & AQUACIAT<sup>POWER</sup> WITH R-32 PERFECTLY SUITED FOR HOSPITALITY APPLICATIONS





# AQUACIAT & AQUACIAT<sup>POWER</sup> WITH R-32

## PERFECTLY SUITED FOR HOSPITALITY APPLICATIONS



ENVIRONMENTAL  
RESPONSIBILITY



CUSTOMERS' COMFORT



ENERGY SAVINGS



SIMPLICITY & DISCRETION



PLUG & PLAY SYSTEM



GLOBAL SYSTEM OFFERING





## ENVIRONMENTAL RESPONSIBILITY

**We strive to conform to your highest environmental commitments.**

We concentrate our efforts on making our units more efficient and more environmentally friendly.

Aquaciat and Aquaciat<sup>power</sup> with R-32 goes beyond 2021 Ecodesign requirements.

R-32 



Product Life cycle assessment is certified with a Product Environmental Profile (PEP) performed following PEP ecopassport® criteria, following ISO 1402 international standard. Environmental analysis shall consider product manufacturing, distribution, installation and end of life. PEP document is published on [www.pep-ecopassport.org](http://www.pep-ecopassport.org).

# AQUACIAT & AQUACIAT<sup>POWER</sup> WITH R-32



## CUSTOMERS' COMFORT

**We take care of your customers' acoustic comfort.**

Thanks to low-speed fans in standard & the noise-reduction technologies used in the new Aquaciat and Aquaciat<sup>power</sup> ranges, you can guarantee a low noise level and no vibrations.

Optional variable-speed fans allow noise reduction in part load operation (night, mid-season...).

### VERY LOW NOISE



**-3 to -4 dB(A)**

thanks to the compressor enclosure

**AQUACIAT<sup>POWER</sup>**

### ULTRA LOW NOISE



**-5 to -6 dB(A)**

thanks to specific insulation on compressor enclosure and unit's panels

**AQUACIAT<sup>POWER</sup>**

### XTRA LOW NOISE



**-9 dB(A)**

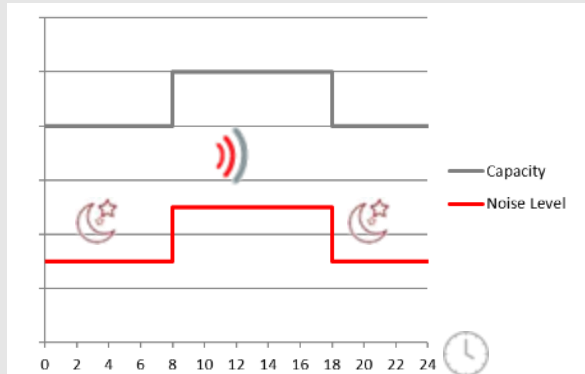
thanks to specific insulation on compressor enclosure

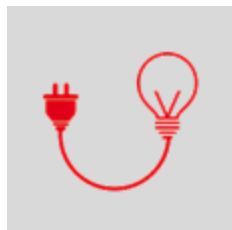
**AQUACIAT**

### NIGHT MODE



noise reduction in part load operation





## ENERGY SAVINGS

**We develop energy efficient solutions allowing substantial savings to be made without compromising on your customers' comfort nor your environmental impact.**

The recovery of the partial heating capacity supplied by the chiller enables the unit to produce free additional hot water up to 80°C. This free heat is used for domestic hot water or distributed to spaces where it is needed, such as swimming pools, spas and whirlpool baths.

**30%**  
energy



**100%** Chilled or Hot Water Production



**25%** Domestic Hot Water Production

or



**100%** Domestic Hot Water Production





## SIMPLICITY & DISCRETION

**We ensure easy installation and space savings for the complete peace of mind of your technical teams:**

- ▶ No technical room required to house pumps and other accessories.
- ▶ Optimum use of the surface area for easy integration into an existing building.
- ▶ Quick, easy and cost-effective installation and commissioning.
- ▶ Packaged solution, which saves you time and increases your installation's reliability.
- ▶ The components in the hydraulic system are carefully selected, factory assembled and tested, limiting risks and facilitating installation on site.



## PLUG AND PLAY SYSTEM

**We provide all-in-one yet flexible solution.**

With the Aquaciat and the Aquaciat<sup>power</sup> ranges you can choose among a variety of versions:

- ▶ Integrated hydraulic module with or without buffer tank.
- ▶ Wide choice of pumps
- ▶ A wide selection of hydraulic couplings to fit site configuration.





## GLOBAL SYSTEM OFFERING

We offer a complete range of equipment designed to work together for the best possible results providing optimised energy efficiency and comfort for your customers.

### Customers' comfort



#### **CLIMACIAT AIRACCESS**

Accessible and efficient air handling unit that is simple to install and use.



#### **MAJOR LINE**

Versatile and highly efficient comfort unit providing improved comfort and very low sound level.



#### **COMFORT LINE**

Comfort unit with high available static pressure, modular air discharge configurations, flexible installation and excellent acoustic comfort.

### Energy optimisation



#### **DYNACIAT**

Compact and silent high energy efficiency Scroll compressors. High-efficiency brazed plate heat exchangers. Self-adjusting electronic control. Heat recovery option for domestic hot water production.



#### **OPERA**

Drycooler range compatible with Dynaciat range for favourable all-round performance levels.



#### **AQUACIAT & AQUACIAT<sup>POWER</sup>**

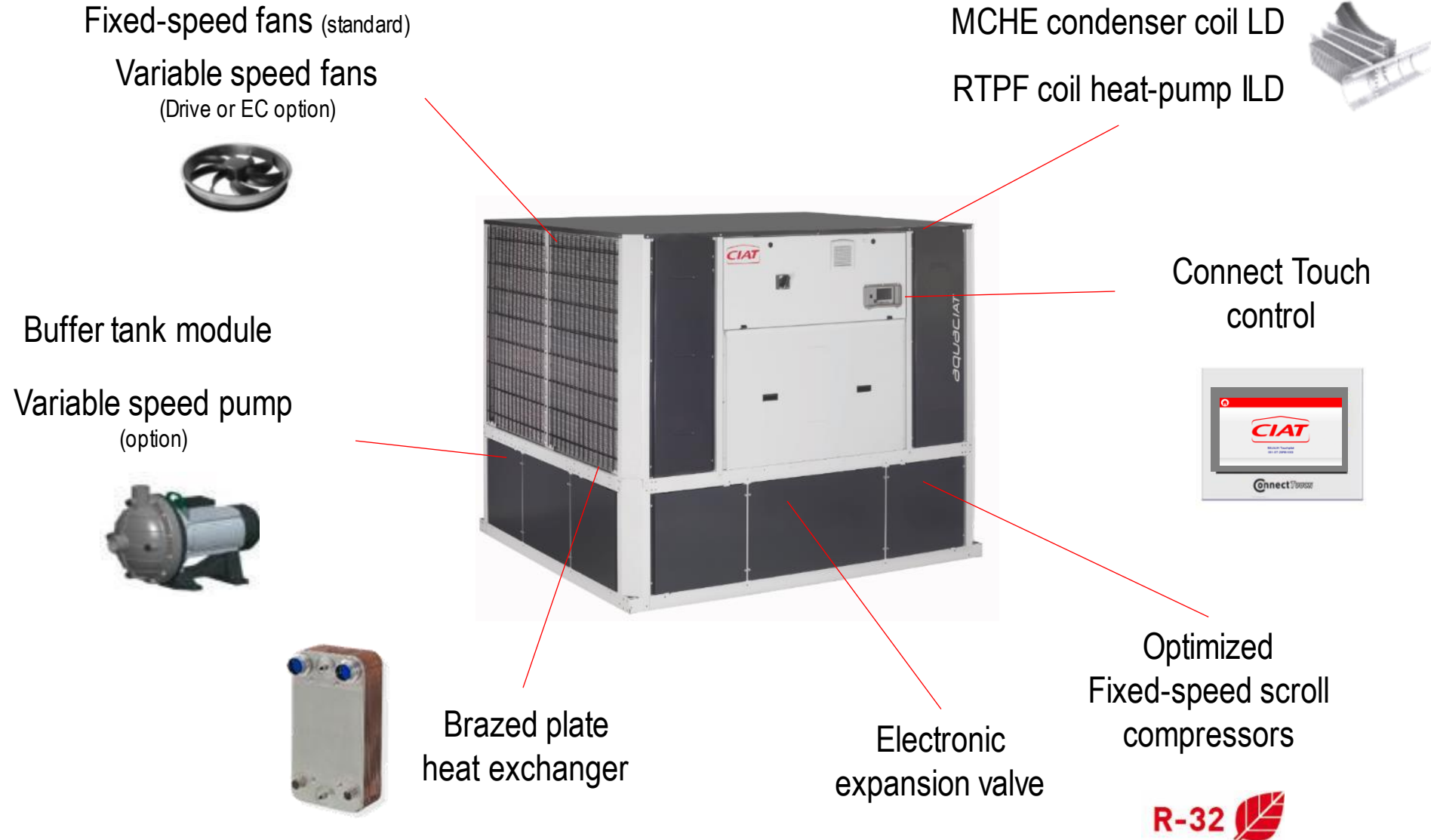
High efficiency air-cooled chiller and heat pump with scroll compressor and heat recovery option for domestic hot water production.

# A COMBINATION OF TECHNOLOGIES





# A COMBINATION OF TECHNOLOGIES



# A COMBINATION OF TECHNOLOGIES

Fixed-speed fans (standard)

Variable speed fans  
(Drive or EC option)



Composite fan stacks

MCHE condenser coil LD

RTPF coil heat-pump ILD



Connect Touch  
control



Buffer tank module

Variable speed pump  
(option)



Asymmetric  
brazed plate  
heat exchanger



Electronic  
expansion valve

Optimized  
scroll compressors



# MAXIMUM EFFICIENCY

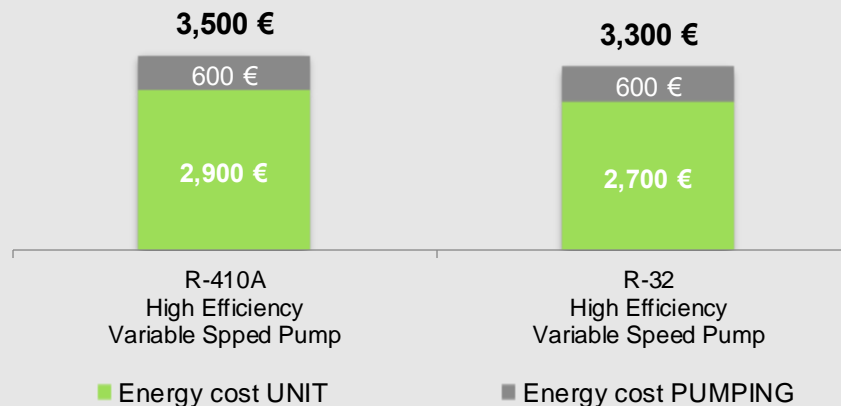


# MAXIMUM EFFICIENCY

## CASE STUDY

### Annual Energy Cost

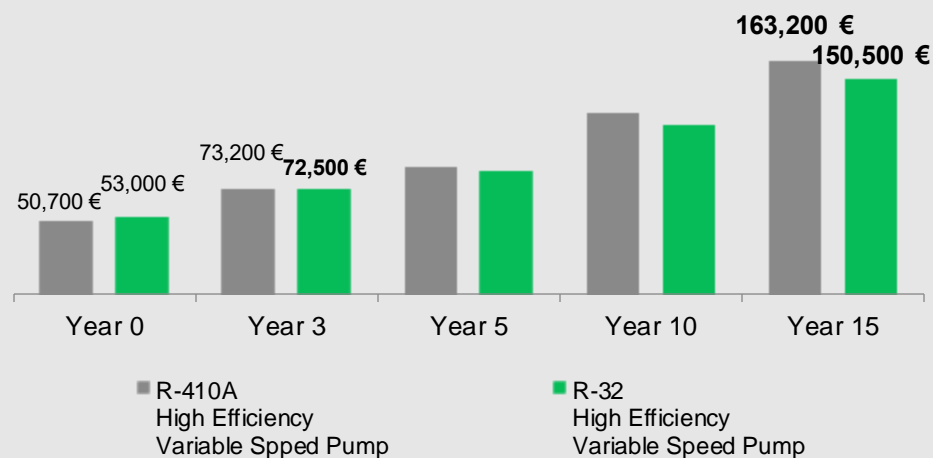
- ▶ Application: Air conditioning
- ▶ Capacity: 300kW
- ▶ Running conditions: 12/7°C/35°C
- ▶ Operating: unit 1800 h/year – pump 4300h/year
- ▶ Unit R410A: AQP LD HE 1100 + HP pump
- ▶ Unit R-32: AQP LD 1200R + Opt High Performance + Pump HP
- ▶ Electricity cost: 0.07€/kWh
- ▶ Simulation on BenchHVAC Tools



**- 7%**  
Annual unit energetic cost

### Total Cost of Ownership

- ▶ Device cost installed: R410A: 45000€ / R-32: 47500€ (+5%)
- ▶ Maintenance contract cost: R410A = R-32 = 2200€/year
- ▶ Cost of repair: R410A: 1800€/year / R-32: 1000€/year (difference due to refrigerant taxes)



**Payback  
< 3  
years**

**Gain  
€13k  
in 15  
years**

# MAXIMUM EFFICIENCY



## COOLING ONLY VERSIONS

| AQUACIAT <sup>POWER</sup> LD                             |                |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |
|--|----------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
|  |                | 0602R       | 0650R       | 0750R       | 0900R       | 1100R       | 1200R       | 1350R       | 1400R       | 1600R       | 1750R       | 1800R       | 2000R       | 2200R       | 2400R       | 2650R       | 2800R       | 2950R       | 3200R       | 3500R       |
| <b>UNIT + OPT HIGH NOMINAL &amp; SEASONAL EFFICIENCY</b> |                |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |
| NOMINAL CAPACITY *                                       | CA1 KW         | 172         | 187         | 206         | 227         | 270         | 311         | 346         | 380         | 416         | 451         | 484         | 553         | 616         | 677         | 726         | 782         | 807         | 882         | 944         |
| EER*   | KW/KW          | 3,20        | 3,36        | 3,21        | 3,16        | 3,03        | 3,15        | 3,09        | 3,14        | 3,10        | 3,15        | 3,09        | 3,08        | 3,16        | 3,14        | 3,06        | 3,07        | 3,04        | 3,00        | 2,92        |
| <b>SEER 12/7°C COMFORT LOW TEMP.</b>                     | <b>KWH/KWH</b> | <b>4,82</b> | <b>5,02</b> | <b>4,84</b> | <b>4,94</b> | <b>4,79</b> | <b>5,25</b> | <b>5,15</b> | <b>5,09</b> | <b>5,11</b> | <b>5,28</b> | <b>5,24</b> | <b>5,29</b> | <b>5,32</b> | <b>5,32</b> | <b>5,20</b> | <b>5,33</b> | <b>5,30</b> | <b>5,31</b> | <b>5,18</b> |
| <b>SEER 23/18°C COMFORT MEDIUM TEMP.</b>                 | <b>KWH/KWH</b> | <b>5,98</b> | <b>6,23</b> | <b>5,93</b> | <b>5,99</b> | <b>5,69</b> | <b>6,35</b> | <b>6,17</b> | <b>6,13</b> | <b>6,07</b> | <b>6,33</b> | <b>6,23</b> | <b>6,32</b> | <b>6,56</b> | <b>6,51</b> | <b>6,28</b> | <b>6,54</b> | <b>6,47</b> | <b>6,56</b> | <b>6,32</b> |
| SEPR -2/-8°C PROCESS MEDIUM TEMP.                        | KWH/KWH        | 3,48        | 3,60        | 3,54        | 3,41        | 3,41        | 3,51        | 3,56        | 3,50        | 3,57        | 3,55        | 3,55        | 3,55        | 3,91        | 3,82        | 3,83        | 3,79        | 3,80        | 3,74        | 3,74        |

Eurovent certified values



\*In accordance with standard EN14511-3:2018.

CA1 Cooling mode conditions: Evaporator water entering/leaving temperature 12°C/7°C, outside air temperature 35°C, evaporator frosting factor 0 m².K/W

SEER 12/7°C Values in bold comply with Ecodesign Regulation (EU) No. 2016/2281 for Comfort applications

SEER 23/18°C Values in bold comply with Ecodesign Regulation (EU) No. 2016/2281 for Comfort applications

SEPR -2/-8°C Applicable Ecodesign regulation: (EU) No 2015/1095.



# MAXIMUM EFFICIENCY



## COOLING ONLY VERSIONS

| AQUACIAT <sup>POWER</sup> LD                          |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |
|---|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
|   | 0602R                | 0650R                | 0750R                | 0900R                | 1100R                | 1200R                | 1350R                | 1400R                | 1600R                | 1750R                | 1800R                | 2000R                | 2200R                | 2400R                | 2650R                | 2800R                | 2950R                | 3200R                | 3500R                |
| <b>SOUND POWER LEVELS **</b>                          |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| STANDARD UNIT   | 88,5                 | 89,0                 | 89,0                 | 89,5                 | 89,5                 | 90,5                 | 90,5                 | 91,0                 | 91,0                 | 91,5                 | 91,5                 | 92,0                 | 96,5                 | 96,5                 | 97,0                 | 97,0                 | 97,5                 | 97,5                 | 98,0                 |
| UNIT + OPTION HIGH OAT / HIGH<br>NOMINAL PERFORMANCES | 91,0                 | 91,5                 | 91,5                 | 92,0                 | 92,0                 | 93,0                 | 93,0                 | 93,5                 | 93,5                 | 94,0                 | 94,0                 | 94,5                 | 97,5                 | 97,5                 | 98,0                 | 98,0                 | 98,5                 | 98,5                 | 99,0                 |
| UNIT + OPTION VERY LOW NOISE      dB(A)               | 85,5                 | 85,5                 | 85,5                 | 86,5                 | 86,5                 | 87,5                 | 87,5                 | 88,0                 | 88,0                 | 88,5                 | 88,5                 | 89,0                 | 92,5                 | 92,5                 | 93,0                 | 93,0                 | 93,5                 | 93,5                 | 94,5                 |
| UNIT + OPTION ULTRA LOW NOISE      dB(A)              | 83,5                 | 83,5                 | 83,5                 | 84,5                 | 84,5                 | 85,5                 | 85,5                 | 86,0                 | 86,0                 | 86,5                 | 86,5                 | 87,0                 | 90,0                 | 90,0                 | 90,5                 | 90,5                 | 90,5                 | 90,5                 | 91,0                 |
| <b>STANDARD UNIT</b>                                  |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| LENGTH - WIDTH - HEIGHT      mm                       | 2410<br>2253<br>2324 | 2410<br>2253<br>2324 | 2410<br>2253<br>2324 | 2410<br>2253<br>2324 | 2410<br>2253<br>2324 | 3604<br>2253<br>2324 | 3604<br>2253<br>2324 | 3604<br>2253<br>2324 | 3604<br>2253<br>2324 | 4798<br>2253<br>2324 | 4798<br>2253<br>2324 | 4798<br>2253<br>2324 | 5992<br>2253<br>2324 | 5992<br>2253<br>2324 | 5992<br>2253<br>2324 | 7186<br>2253<br>2324 | 7186<br>2253<br>2324 | 7186<br>2253<br>2324 | 7186<br>2253<br>2324 |
| <b>REFRIGERANT***</b>                                 |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| R32 / A2L / GWP=675 following AR4                     |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |

Eurovent certified values



\*\* In dB ref=10<sup>-12</sup> W, 'A' weighted. Declared dual-number noise emission values in accordance with ISO 4871 with an associated uncertainty of +/-3dB(A). Measured in accordance with ISO 9614-1 and certified by Eurovent.

\*\*\* Values are guidelines only. Refer to the unit name plate.

# MAXIMUM EFFICIENCY



## HEAT PUMP VERSIONS

| AQUACIAT <sup>POWER</sup> ILD                         |     |         |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|---|-----|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|   |     |         | 0602R | 0700R | 0800R | 0900R | 1000R | 1150R | 1250R | 1400R | 1500R | 1600R | 1750R | 2000R | 2300R | 2500R | 2800R | 3000R | 3200R | 3500R | 4000R |
| HEATING UNIT + OPT HIGH NOMINAL & SEASONAL EFFICIENCY |     |         |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| NOMINAL CAPACITY *                                    | HA1 | KW      | 178   | 197   | 237   | 256   | 275   | 317   | 336   | 387   | 406   | 441   | 467   | 537   | 635   | 673   | 774   | 812   | 883   | 935   | 1075  |
| COP*  |     | KW/KW   | 3,88  | 3,80  | 3,84  | 3,84  | 3,82  | 3,82  | 3,81  | 3,82  | 3,81  | 3,80  | 3,73  | 3,80  | 3,82  | 3,81  | 3,82  | 3,81  | 3,80  | 3,73  | 3,80  |
| SCOP30/35°C   |     | KWH/KWH | 3,67  | 3,66  | 3,74  | 3,77  | 3,80  | 3,87  | 3,86  | 3,90  | 3,91  | 3,92  | 3,89  | 3,96  | 3,87  | 3,86  | 3,90  | 3,91  | 3,92  | 3,89  | 3,96  |
| COOLING UNIT + OPT HIGH NOMINAL & SEASONAL EFFICIENCY |     |         |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| NOMINAL CAPACITY *                                    | CA1 | KW      | 164   | 181   | 215   | 236   | 254   | 302   | 324   | 362   | 381   | 413   | 439   | 500   | 604   | 648   | 723   | 761   | 825   | 878   | 999   |
| EER*  |     | KW/KW   | 2,92  | 2,78  | 2,91  | 2,85  | 2,76  | 2,85  | 2,80  | 2,82  | 2,76  | 2,81  | 2,74  | 2,73  | 2,85  | 2,80  | 2,82  | 2,76  | 2,81  | 2,74  | 2,73  |
| SEER 12/7°C COMFORT LOW TEMP.                         |     | KWH/KWH | 4,44  | 4,26  | 4,53  | 4,44  | 4,34  | 4,77  | 4,81  | 4,88  | 4,87  | 4,81  | 4,75  | 4,81  | 4,77  | 4,81  | 4,88  | 4,87  | 4,81  | 4,75  | 4,81  |

Eurovent certified values



\*In accordance with standard EN14511-3:2018.

HA1 Heating mode conditions: Water heat exchanger water entering/leaving temperature 30°C/35°C, outside air temperature tdb/twb = 7°C db/6°C wb, evaporator frosting factor 0 m².K/W

CA1 Cooling mode conditions: Evaporator water entering/leaving temperature 12°C/7°C, outside air temperature 35°C, evaporator frosting factor 0 m².K/W

**SCOP 30/35°C Bold values compliant to Ecodesign regulation: (EU) No 813/2013 for Heat Pump application**

SEER 12/7°C Applicable Ecodesign regulation: (EU) No 2016/2281

# MAXIMUM EFFICIENCY



## HEAT PUMP VERSIONS

| AQUACIAT <sup>POWER</sup> ILD                             |                                   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|---|-----------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|   | 0602R                             | 0700R | 0800R | 0900R | 1000R | 1150R | 1250R | 1400R | 1500R | 1600R | 1750R | 2000R | 2300R | 2500R | 2800R | 3000R | 3200R | 3500R | 4000R |
| <b>SOUND POWER LEVELS **</b>                              |                                   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| <b>STANDARD UNIT</b>                                      | 88,0                              | 88,5  | 89,0  | 89,5  | 89,5  | 90,5  | 91,0  | 91,5  | 91,5  | 92,0  | 92,5  | 93,0  | 93,5  | 94,0  | 94,5  | 94,5  | 95,0  | 95,5  | 96,0  |
| <b>UNIT + OPTION HIGH OAT / HIGH NOMINAL PERFORMANCES</b> | 90,5                              | 91,0  | 91,5  | 92,0  | 92,0  | 93,0  | 93,5  | 94,0  | 94,0  | 94,5  | 94,5  | 95,0  | 96,0  | 96,5  | 97,0  | 97,0  | 97,5  | 97,5  | 98,0  |
| <b>UNIT + OPTION VERY LOW NOISE</b> dB(A)                 | 85,0                              | 86,0  | 86,5  | 87,0  | 87,0  | 88,0  | 88,0  | 89,0  | 89,0  | 89,5  | 90,0  | 90,0  | 91,0  | 91,0  | 92,0  | 92,0  | 92,5  | 93,0  | 93,0  |
| <b>UNIT + OPTION ULTRA LOW NOISE</b> dB(A)                | 83,0                              | 84,0  | 84,5  | 85,0  | 85,0  | 86,0  | 86,0  | 86,5  | 87,0  | 87,5  | 87,5  | 88,0  | 89,0  | 89,0  | 89,5  | 90,0  | 90,5  | 90,5  | 91,0  |
| <b>STANDARD UNIT</b>                                      |                                   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| <b>LENGTH - WIDTH - HEIGHT</b> mm                         | 2410                              | 2410  | 2410  | 2410  | 2410  | 3604  | 3604  | 3604  | 3604  | 4798  | 4798  | 4798  | 7708  | 7708  | 7708  | 7708  | 10096 | 10096 | 10096 |
|   | 2253                              | 2253  | 2253  | 2253  | 2253  | 2253  | 2253  | 2253  | 2253  | 2253  | 2253  | 2253  | 2253  | 2253  | 2253  | 2253  | 2253  | 2253  | 2253  |
|   | 2324                              | 2324  | 2324  | 2324  | 2324  | 2324  | 2324  | 2324  | 2324  | 2324  | 2324  | 2324  | 2324  | 2324  | 2324  | 2324  | 2324  | 2324  | 2324  |
| <b>REFRIGERANT***</b>                                     | R32 / A2L / GWP=675 following AR4 |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |

Eurovent certified values



\*\* In dB ref=10<sup>-12</sup> W, 'A' weighted. Declared dual-number noise emission values in accordance with ISO 4871 with an associated uncertainty of +/-3dB(A). Measured in accordance with ISO 9614-1 and certified by Eurovent.

\*\*\* Values are guidelines only. Refer to the unit name plate.

# FEATURES AVAILABILITY



| AQUACIAT & AQUACIAT <sup>power</sup>                 |   |  |   |
|--|---|--|---|
| 4''3 user-friendly touch screen                      | ● | Compressors Soft starter   | ▲ |
| Multi-language controller                            | ● | Hydraulic pump high/Low pressure Single/twin Fixe/Variable speed | ▲ |
| Energy consumption measurement                       | ⑦ | Water buffer tank  | ▲ |
| WEB connectivity                                     | ● | Flanged connexion  | ▲ |
| Modbus BMS connectivity                              | ● | Flexible connexion   | ▲ |
| Lon / Bacnet protocol BMS connectivity               | ▲ | Antivibratil mounts  | ▲ |
| BluEdge monitoring                                   | ▲ | Ultra Fast capacity recovery                                     | ▲ |
| Acoustic options                                     | ▲ | IT Neutral   | ▲ |
| Variable speed fans (Drive or EC solutions)          | ▲ | Phase Control  | ▲ |
| All year round operations                            | ▲ | CEM C2 Class   | ▲ |
| Partial or total free cooling with or without glycol | ▲ |  |   |
| Partial or total heat recovery                       | ▲ |  |   |
| Coil Anti-corosion protection                        | ▲ | Supplied as standard   | ● |
| Anti-Intrusion Coil protective grille                | ▲ | Option   | ▲ |



**BLUEDGE® SERVICE PLATFORM**



# HVAC EXPERTS CLOSE AT HAND

## A COMBINATION OF KNOWLEDGE AND EXPERIENCE FOR BETTER TECHNICAL SUPPORT

Our qualified and responsive BluEdge teams of technicians are available to implement actions on site and ensure optimal operation of your equipment. Thanks to our expertise and experience in the fields of maintenance and technical service, our BluEdge service platform offers a wide range of services from pre-sales technical support and diagnostics right through to energy audits.

Our dedicated hotline for off-site support with our engineers and technicians on the field, work hand in hand to meet your expectations in terms of energy efficiency. Our priority, 24/7: to allow you to focus on your business whilst our BluEdge service platform provides you with the best possible level of service.



# A WHOLE WORD OF SERVICES

## A COMPLETE SERVICE OFFER

Our full spectrum service and maintenance offering gives total peace of mind for building owners and managers. Organisations both large and small trust us to look after their buildings and HVAC needs, ensuring reliable, efficient, cost-effective buildings that are comfortable to live and work in.

We have a choice of service levels, enabling you to tailor the level of cover exactly to your needs and budget.

We have a range of intelligent remote monitoring solutions, providing 24/7 alerts for potential problems. Our expert analysts constantly review any out of condition or alarm statuses, to diagnose issues and prioritize service calls to reduce costs and restore full operation in the shortest possible time.



# A TIER FOR EVERY BUSINESS



From preventative to full coverage, our **CORE**, **ENHANCE**, **ELITE** tiers are designed to fit your needs.



An economical solution for customers with IoT-enabled equipment that collects real-time data to improve staff efficiency and reduce unplanned downtime.



Complete preventive maintenance and technical expertise including proactive monitoring on health, efficiency and performance with actionable insights to identify opportunities for reducing operating costs and avoiding failures.



Our Elite plan is the ultimate worry-free, peace-of-mind program for clients. Realizing building comfort, efficiency and operational goals with Carrier turn-key solutions powered by predictive analytics and OEM expertise.



# REAL-TIME DATA AND ANALYTICS



**Our portfolio** of remote connectivity offers within BluEdge service Platform are powered by IoT and cloud analytics. It is an advanced monitoring solution which enables customers for all applications to track and monitor their CIAT equipment.



24/7 remote monitoring.



Proactivity to anticipate breakdowns.



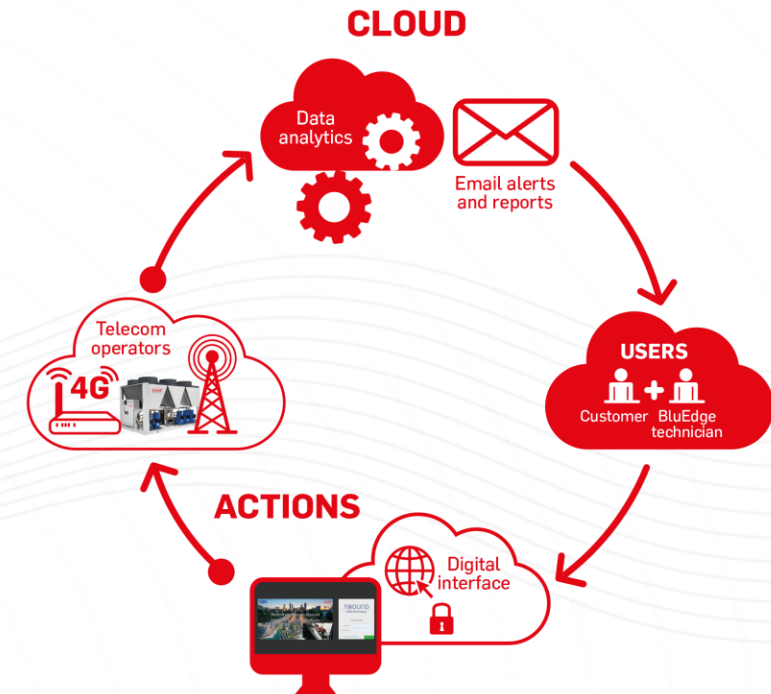
Real time data



Monthly and annual reports with analysis and recommendations from BluEdge CIAT experts.



Email alert for any event concerning the equipment.



# EUROPEAN SERVICE DIGITAL CENTER

Expert in Digital, IoT & Connected Services Solutions for HVAC equipment and in Controls Solutions for Plant Room and HVAC Systems.

At the European Service Digital Center (ESDC), our engineers focus on developing and deploying Connected Services and Controls solutions for HVAC equipment & systems. They provide technical support on smart service solutions to our customers and our service organizations in Europe. The team has a unique multi-disciplinary expertise in Digital/IoT/Controls and Cooling/Heating for HVAC systems.

## CONTROLS AND ENERGY OPTIMIZATION

- Monitoring of HVAC equipment
- Plant Room control system
- Thermal Energy Storage for HVAC applications
- HVAC system management
- Energy Optimization





# HVAC EUROPE PARTS CENTER

**DEDICATED TEAM & EXPERT ADVICES**

500 Suppliers

12,000 Items on stock

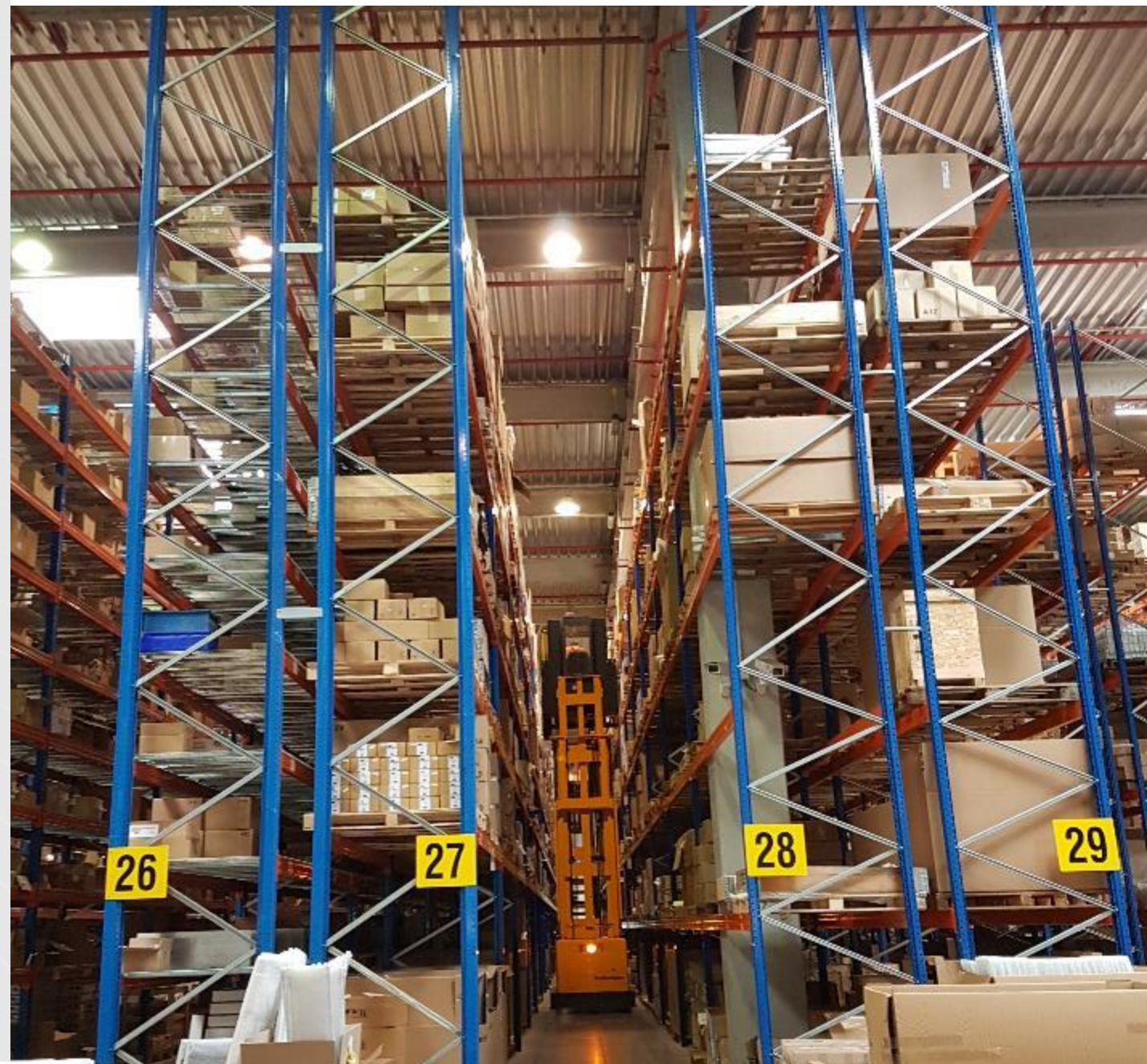
176,000 Order lines in 2019

1,000,000+ Parts sold in 2019

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**98%**  
Deliveries on  
time

**+90.000**  
Managed  
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# CIAT SERVICE SOLUTION

## Retrofit kit

The retrofit kit for the VECTIOS POWER range is available from 100 kW to 280 kW.

This kit makes it easy to retrofit a VECTIOS POWER R-410A unit to be compatible with R-454B refrigerant with only minor adaptations. This results in 80% savings on taxes when refilling is required.

## Conformity declaration

VECTIOS POWER range was designed to be compatible with this retrofit modification. The modifications must be completed as specified by the applicable instruction manual. This modification of the machine must be indicated in the maintenance book of the machine in compliance with local regulations. Also, a plate needs to be added with information about the new refrigerant R-454B.



COMPRESSORS



HEAT EXCHANGERS



OTHER COMPONENTS  
IN THE FRIGORIFIC  
CIRCUIT



ELECTRICAL  
BOX





**THANK YOU FOR YOUR ATTENTION**







#### A CARRIER COMPANY

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Aquaciat & Aquaciat<sup>power</sup> – English – 2023

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