

OMICRON Zero S4



OMICRON Zero S4

High efficiency polyvalent units for
4-pipes system with refrigerant R290
cooling **50÷170 kW**
heating **50÷170 kW**

BlueBox 
by Swegon

OMICRON Zero

ENERGY IN LOOP WITH NATURE



Multifunctional double circuits scroll compressors unit with plate heat exchangers:

- **PREMIUM** Efficiency in all working conditions
- New "XR" integrated function
- Extended working envelope
- Extreme efficiency in all working conditions
- Reduced footprint
- Eurovent certified

MISSION

ZERO

EMISSION

CLIMATE CHANGE FIGHT | EUROPEAN CLIMATE STRATEGY IS GOING TO BE UPDATED AND REINFORCED

TARGET

Reduction of **55%** Greenhouse Gas emission by **2030**

Increased **renewable energy** (above **32%**) by **2030**

Net-zero Greenhouse Gas Emission by **2050**

HOW?

F-gas regulation Regulation

Renewable Energy Directive

European Performance of Buildings Directive (**EPBD**)

Ecodesign **ERP** Directive



Keep temperature increase below **1.5°C**

Become a climate neutral economy

R290

NATURAL REFRIGERANT



SUSTAINABLE CHOICE

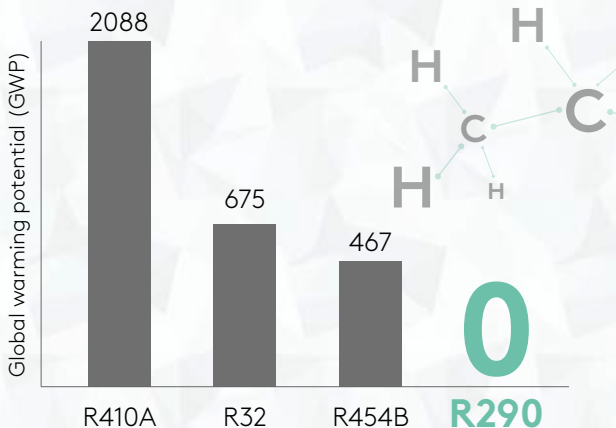
- Nearly zero Global Warming Potential (GWP≈0*)
- Natural fluid
- Natural non toxic refrigerant
- No Ozone Layer impact
- 40% gas charge compare to R410A

RELIABLE CHOICE

- Implementation of the highest safety standard

SMART CHOICE

- No carbon tax
- Pushed by incentivation schemes
- Future-proof natural solution. On going HFC phase-out



(*) GWP (AR6), pursuant to IPCC VI, evaluated over a span of 100 years.

TEWI

TOTAL EQUIVALENT WARMING IMPACT

TEWI [tons CO₂ eq.]

Direct emissions + Indirect emissions

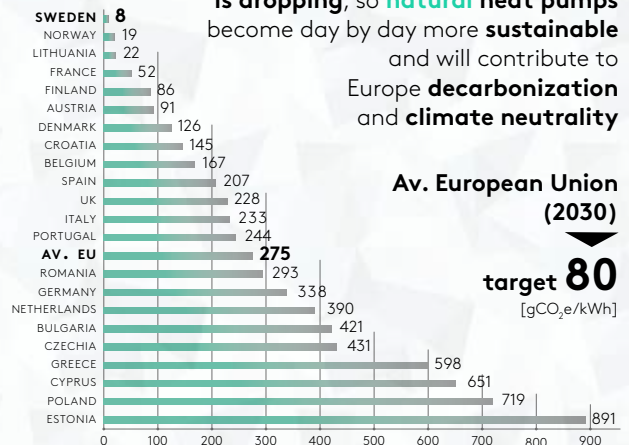
Leakage rate per year
Service life (years)

Leftover refrigerant after disposal
Global Warming Potential

Plant cooling / Heating load
Efficiency

Electricity consumption
CO₂ emission intensity

European electricity carbon intensity is dropping, so **natural** heat pumps become day by day more **sustainable** and will contribute to Europe **decarbonization** and **climate neutrality**



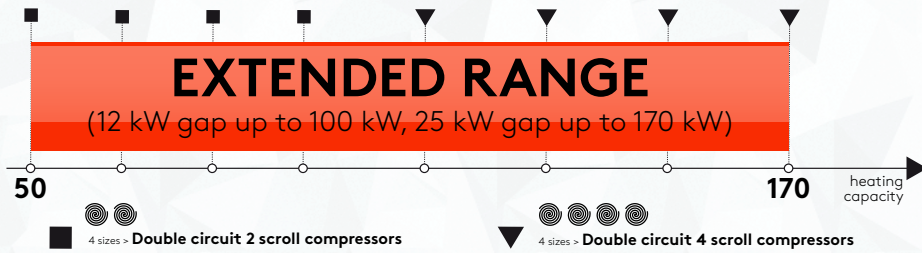
Av. European Union (2030)

target **80**
[gCO₂e/kWh]

Electricity emission intensity [gCO₂e/kWh], 2019 data, Source EEA

OMICRON Zero HAS **MINIMUM CARBON FOOTPRINT** THANKS TO ITS **HIGH EFFICIENCY** AND **LOW CHARGE OF PROPANE**

CAPACITY RANGE/EFFICIENCY



SCOP MT
up to

3.5

SCOP LT
up to

4.1

TER
up to

7.9

Excellent efficiency in all working conditions, especially in heating.
New **XR Function** (EXTRA RECOVERY) allow to achieve high efficiency in all possible working conditions, keeping high capacity and efficiency also with extremely low outside air temperature.
Combining High Efficiency version, heat recovery guaranteed from 4 pipes units and natural R290 refrigerant is possible to reduce Carbon Footprint of the unit and of the whole HVAC system providing really sustainable choice.

Net cooling capacity at A7 W 40-45 / according to EN14511

DESIGNED FOR HEATING

70°C @ 0°C

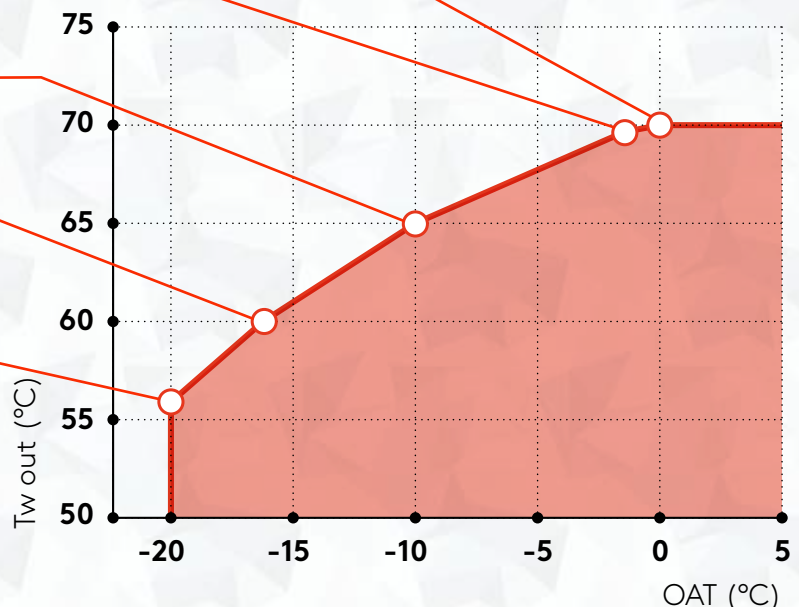
69°C @ -2°C

65°C @ -10°C

60°C @ -17°C

56°C @ -20°C

R290
GUARANTEE
PERFECT
THERMODYNAMIC
PARAMETERS
FOR HEATING




BLUE ●●●● ●●●● THINK

Monitoring, performance reports, full management.

Blue Box control platform allows a total access to the machine from any device, in complete autonomy.

Integrated web server



- SET POINT**
operating set point
- MODE**
unit mode (heating, cooling)
- UNIT**
visual status of unit (circuits, compressors..)
- GRAPHS**
real time diagrams of main variables (temperatures, pressure..)
- INPUT/OUTPUT**
status of inputs / outputs (digital and analogic)
- MULTILOGIC**
management of multiple units
- LOGS**
download and analyze unit data history



BLUEYE CONNECT

REMOTE ACCESS TO UNIT

SAVE MONEY
FAST SERVICE


BLUEYE CLOUD

CLOUD RECORDING DATAPOINTS

PREDICTIVE MAINTENANCE
CUSTOMER REPORTING
ANALYSIS

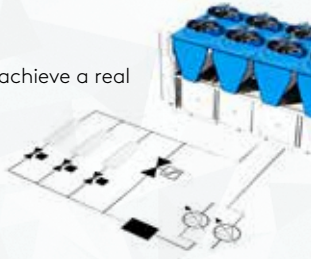


FLOWZER



INVERTER-DRIVEN PUMPS CONTROL
MANAGEMENT FOR DIFFERENT SYSTEM
LAYOUTS

- CONSTANT FLOW**
 - Simpler site's settings to achieve a real constant flow
- CONSTANT HEAD PRESSURE**
 - The right pressure to the users in any condition
- VARIABLE FLOW**
 - Full control of one unique hydraulic loop
 - Primary/Secondary Loop, the right solution for any layout



UP TO
-53%
compared to
nowadays common layout:
primary fixed + secondary variable



HYZER

HYDRONIC OPTIMIZER

BLUETHINK solution to manage several units, components and devices and build an optimized System.

- Advanced algorithms** to maximize system total efficiency
- Less Opex** thanks to lower energy consumption
- Flexible management** of multi units, variable water flow and external devices (drycoolers, cooling towers, boilers,..)
- Real time** energy consumption to obtain advanced structured data analysis
- Modular design** to perfectly suit any project requirements in terms of application, size and complexity



NOTRE PASSION POUR UN BON CLIMAT



www.clima-machine.ch

www.clima-configurateur.ch

TCA Thermoclima AG
Piccardstrasse 13
9015 St.Gallen
T +41 71 313 99 22

TCA Thermoclima AG
Industriestrasse 15
4554 Etziken (SO)
T +41 32 686 61 21

TCA Thermoclima SA
Suisse romande
T +41 21 634 57 50

TCA Thermoclima SA
Svizzera italiana
T +41 91 980 37 37

0840 822 822
info@tca.ch
www.tca.ch
CHE-105.807.588