



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

M I S S I O N

**ZERO**

E M I S S I O N

# 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

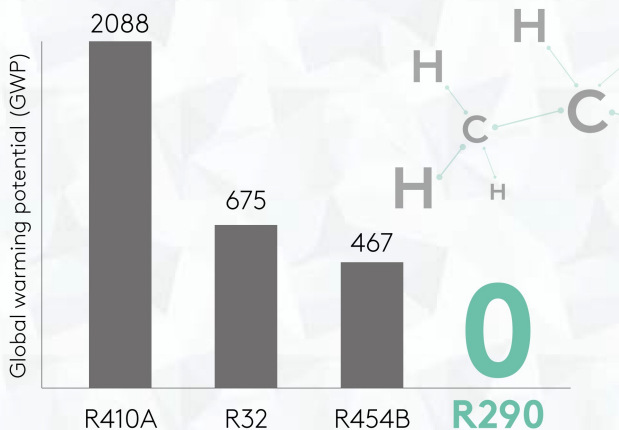
- Nearly zero Global Warming Potential (GWP≈0\*)
- Natural fluid
- Natural non toxic refrigerant
- No Ozone Layer impact
- 40% gas charge compare to R410A

## 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 CO<sub>2</sub> eq.]

Direct emissions + Indirect emissions

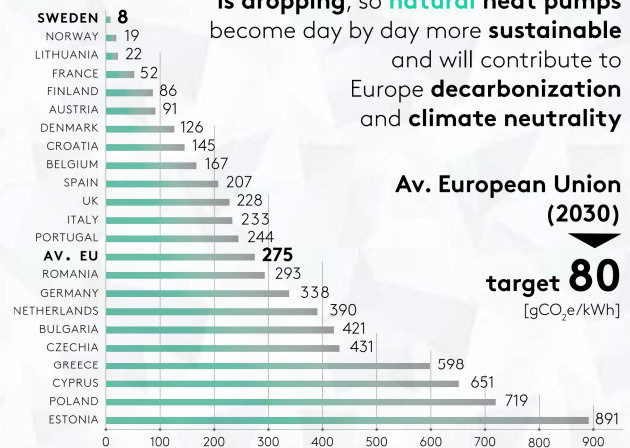
Leakage rate per year  
Service life (years)

Leftover refrigerant after disposal  
Global Warming Potential

Plant cooling / Heating load  
Efficiency

Electricity consumption  
CO<sub>2</sub> 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**



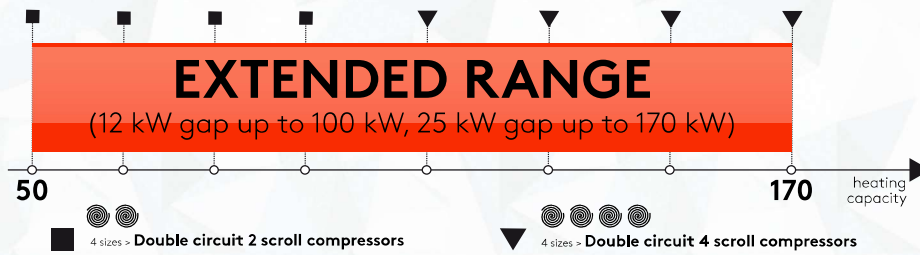
Av. European Union (2030)

target **80**  
[gCO<sub>2</sub>e/kWh]

Electricity emission intensity [gCO<sub>2</sub>e/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**

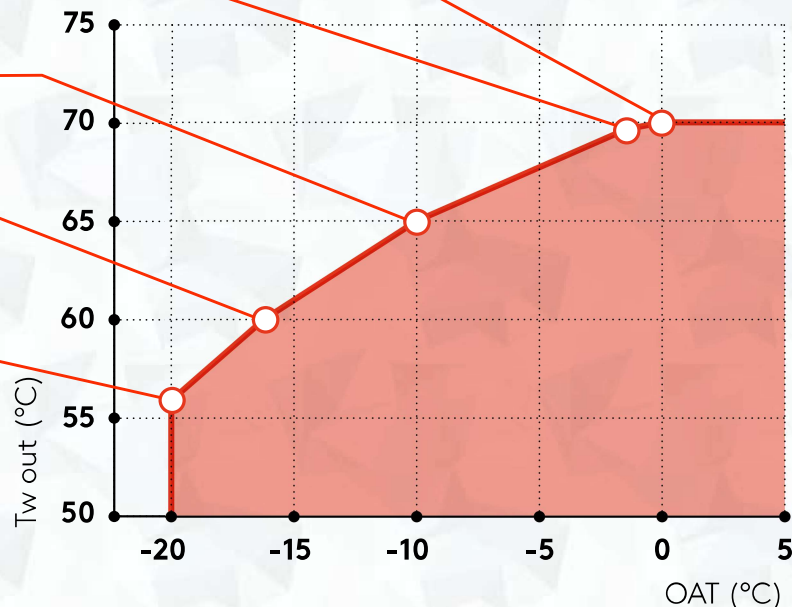
**69°C @ -2°C**

**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


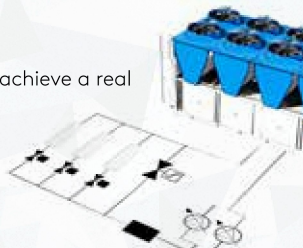
CLOUD RECORDING DATAPOINTS

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

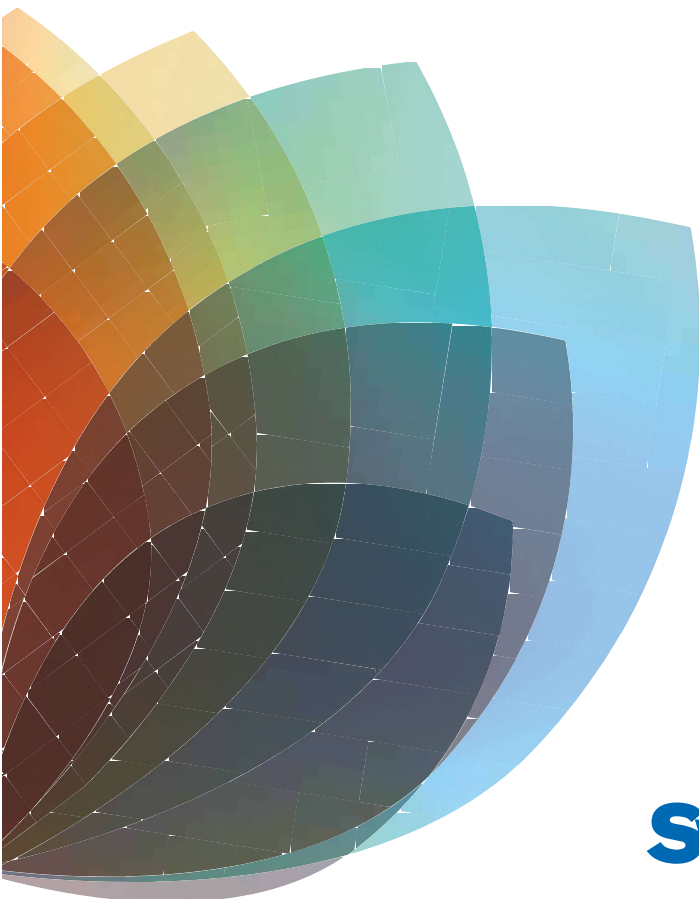
HYDRONIC OPTIMIZER

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



Feel good **inside**



**Swegon** 