

ZETA Zero HP



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Air source reversible heat pump with R290 refrigerant
30÷230 kW

BlueBox 
by Swegon

ZETA Zero

A NEW RANGE OF HEAT PUMPS



INVISIBLE TO ENVIRONMENT

Air source reversible heat pump with scroll compressors and plate heat exchangers:

- **Fixed speed (HP version) or inverter (Hi HP version) compressors**
- **Integrated XR Function**
- **Low refrigerant charge**
- **Hot water production up to 70°C @ -10°C ambient**

MISSION
ZERO
MISSION

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

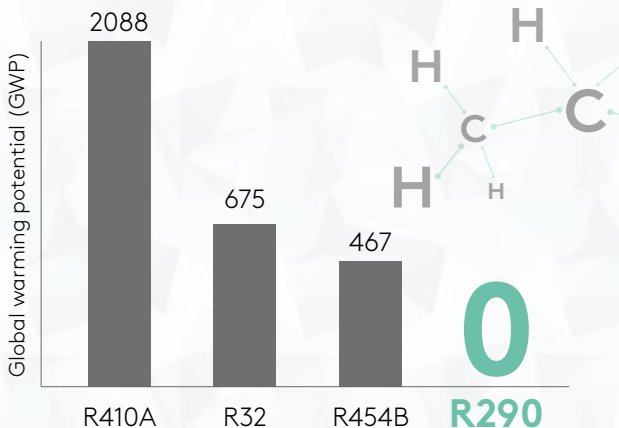
- Nearly zero Global Warming Potential (GWP≈0*)
- No Ozone Layer impact
- Natural fluid
- Excellent thermodynamic properties
- 40% gas charge compare to R410A

RELIABLE CHOICE

- Implementation of the highest safety standard

SMART CHOICE

- No carbon tax or refrigerant tax
- Pushed by incentive schemes
- Future-proof natural solution



(*) 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

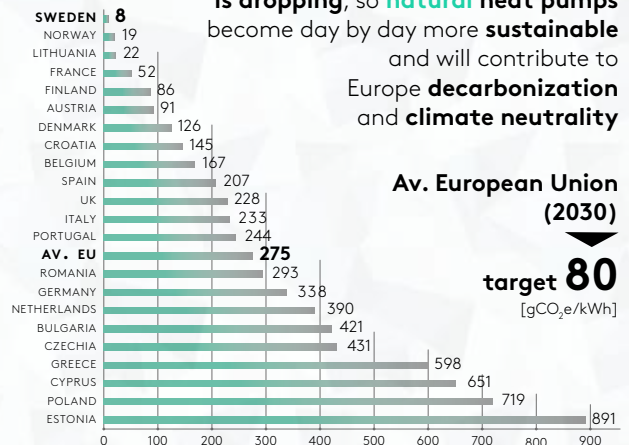
Leakage rate per year
Service life (years)

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**



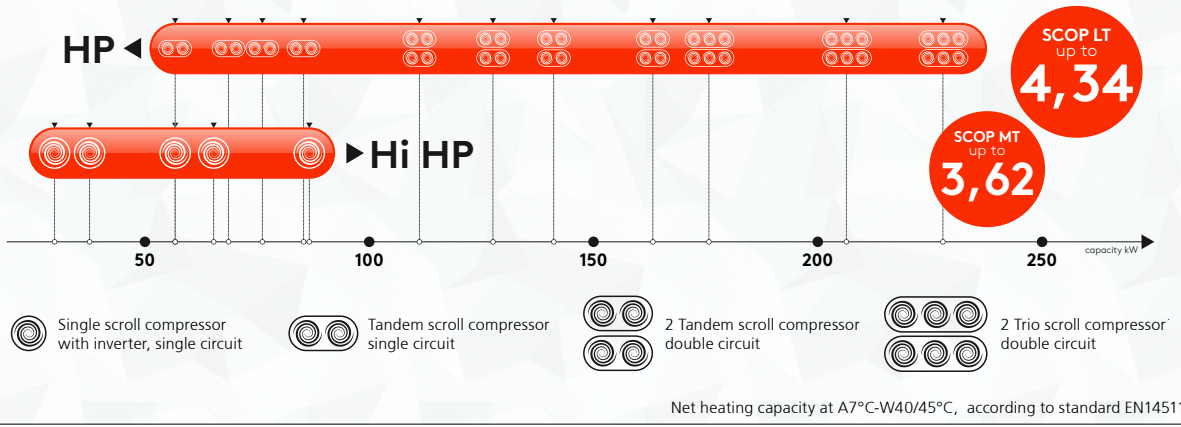
Av. European Union (2030)

target **80**
[gCO₂e/kWh]

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

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

CAPACITY RANGE/EFFICIENCY



FIT FOR RETROFIT

ideal for heating and hot water production

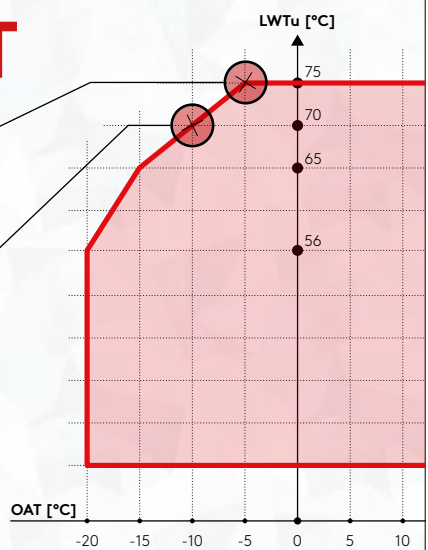
up to **75°C @ -5°C**

suitable for any climate condition

up to **70°C @ -10°C**



SURFING THE **RENOVATION WAVE**



UNIT AT A GLANCE

Compressors

Efficient scroll compressors, optimized for propane

XR Function (Extreme Recovery)

Allows to achieve high efficiency in all possible working conditions, reducing capacity and efficiency decrease at extremely low outside air temperature

Refrigerant

Low refrigerant charge
Av. 80 g/kW

Efficiency

High efficiency at partial load condition thanks to inverter driven scroll compressor



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

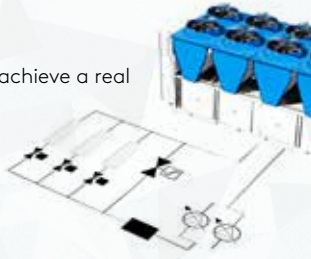


FLOWZER



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

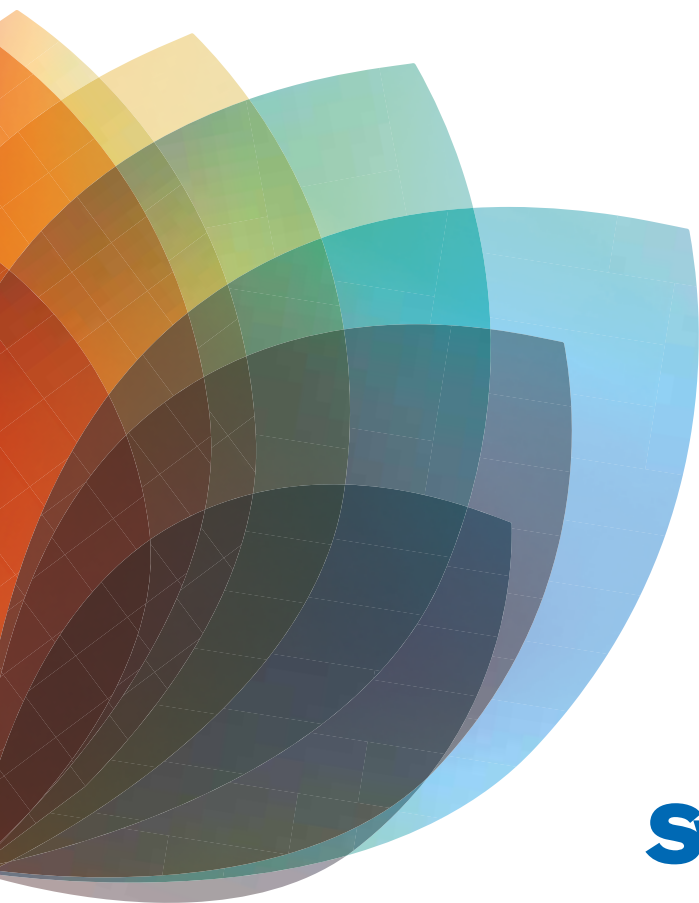
HYDRONIC OPTIMIZER

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 