

TITAN Zero



## TITAN Zero

Air source heat pump and chiller  
with refrigerant R290

**230÷420 kW**

**BlueBox**   
by Swegon

# TITAN Zero

THE POWER OF  
**NATURE**  
HAS NO  
**LIMITS**



Air source heat pump and chiller with reciprocating compressors and plate heat exchangers:

- Full Inverter Compressors
- Reliable and durable unit
- Heavy duty design philosophy
- Low Refrigerant Charge
- 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

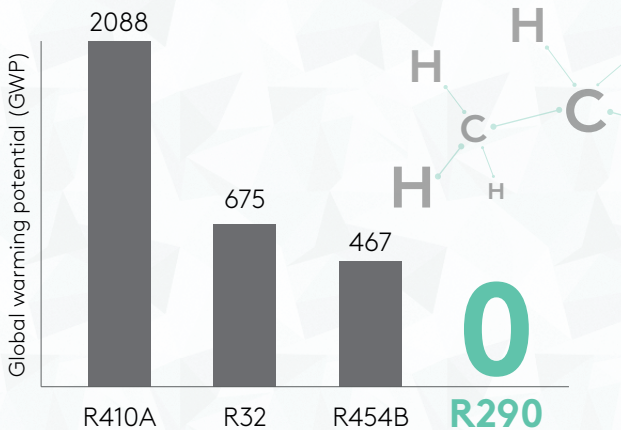
- Nearly zero Global Warming Potential (GWP≈0\*)
- No Ozone Layer impact
- Natural fluid
- Excellent thermodynamic properties
- 40% gas charge compare to R410A

## RELIABLE CHOICE

- Long lasting reciprocating compressor with inverter technology
- 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

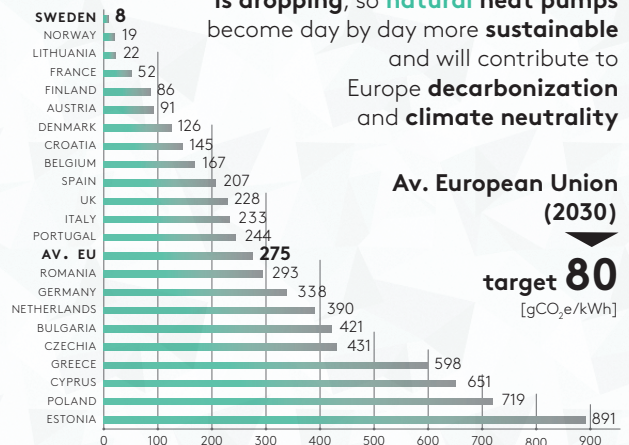
TEWI [tons CO<sub>2</sub> eq.]

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

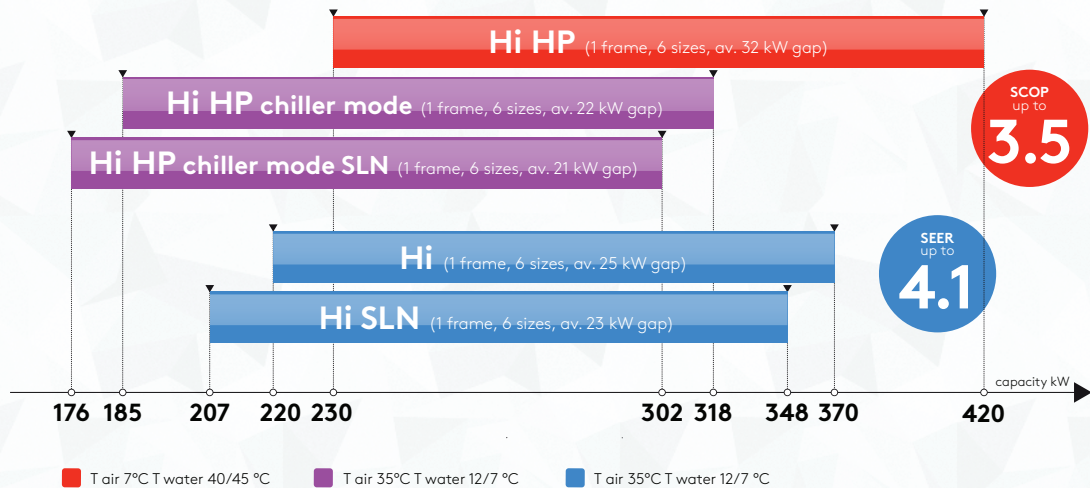


Av. European Union (2030) target **80** [gCO<sub>2</sub>e/kWh]

Electricity emission intensity [gCO<sub>2</sub>e/kWh], 2019 data, Source EEA

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

# CAPACITY RANGE/EFFICIENCY



■ T air 7°C T water 40/45 °C   
 ■ T air 35°C T water 12/7 °C   
 ■ T air 35°C T water 12/7 °C



Reciprocating full inverter compressors optimized for R290

Capacity according to standard EN14511

# DURABLE UNIT FOR ANY APPLICATIONS



chilled water production

from **20°C**  
down to **-15°C**

ideal for heating and hot water production

**63°C @ -7°C**  
**50°C @ -20°C**

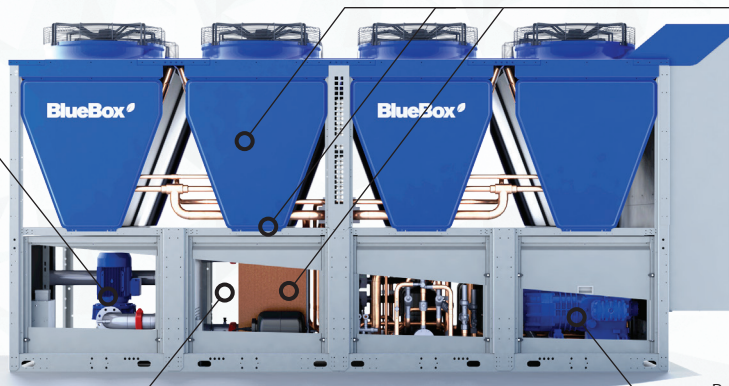
suitable for any climate condition

## PLUG-IN HYDRONIC MODULE OPTIONS

- 1P / 2P**  
1 / 2 standars pumps with or without tank
- 1Pr / 2Pr**  
1 / 2 downsized pumps with or without tank
- 1Pg / 2Pg**  
1 / 2 pumps for high glycol with or without tank

## R290 SAFETY CHAIN

- Refrigerant leak detector
- Extraction fan



## IDEAL FOR COLD CLIMATES

- Total aeraulic and refrigerant circuits separation (Redundancy)
- Smart Defrost Logic
- Anti-freeze options as standard

## RECIPROCATING FULL INVERTER COMPRESSORS


- Reliable and robust design
- Wide operating range
- Easy maintenance

# 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

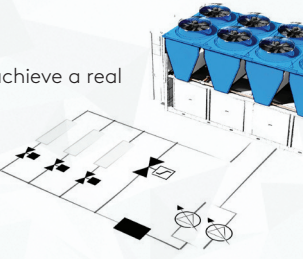


## FLOWZER




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

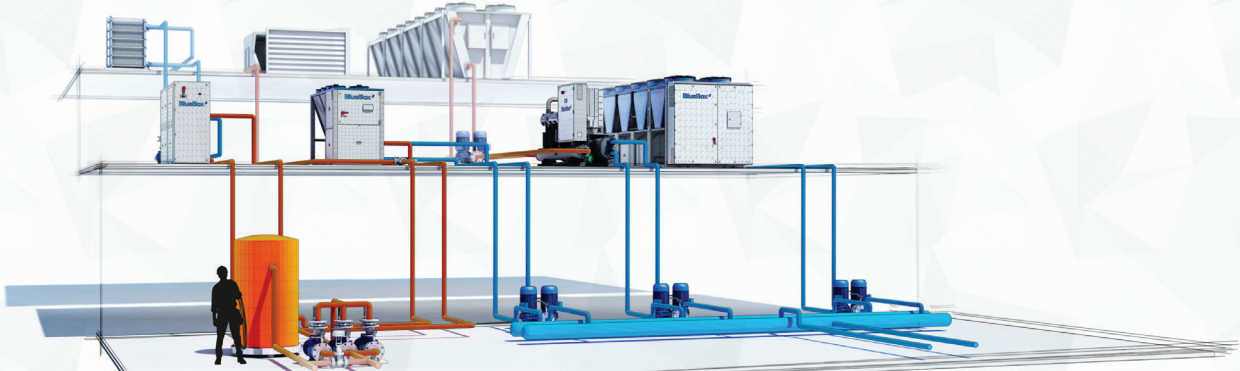


## HYZER

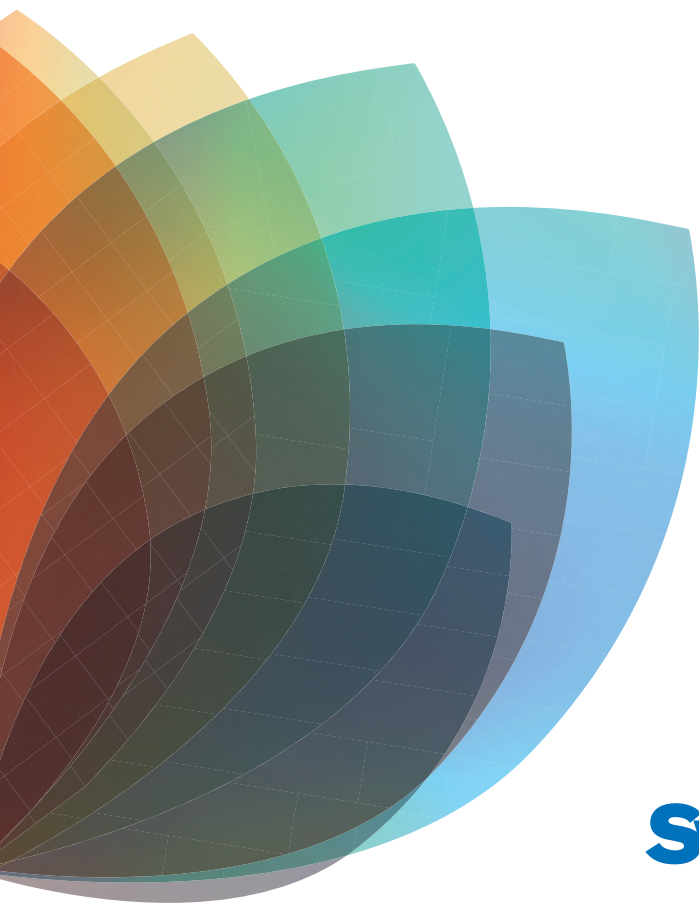
HYDRONIC OPTIMIZER

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** 