SIGMA Zero

High efficiency water source chillers and heat pumps with natural refrigerant

20÷70 kW

BlueBox by Swegon

Sigma Zero

WATER SOURCE meets natural PROPANE refrigerant

Single circuit inverter compressors unit with plate heat exchangers:

- **Water cooled inverter heat pump and chiller with R290**
- **4 versions for different applications**
- **Hot water up to 75°C**
- **Installation flexibility** (indoor/outdoor version)
- **Compact footprint** (<1m²)
- **Eurovent certified performance**

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

C_3H_8

SUSTAINABLE CHOICE

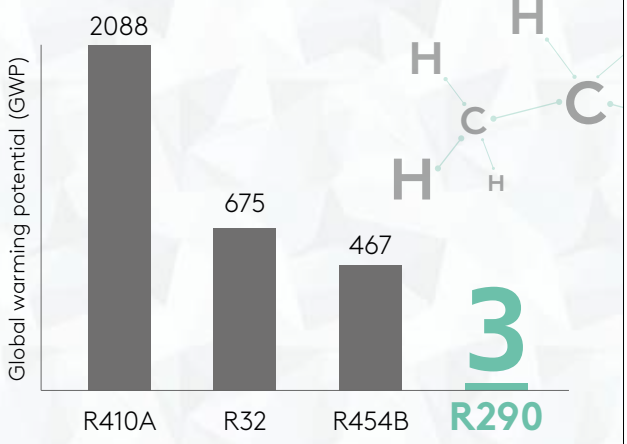
- Nearly zero Global Warming Potential (GWP=3)
- Natural fluid
- Natural non toxic refrigerant
- No Ozone Layer impact
- -40% gas charge compare to R410A

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



TEWI

TOTAL EQUIVALENT WARMING IMPACT

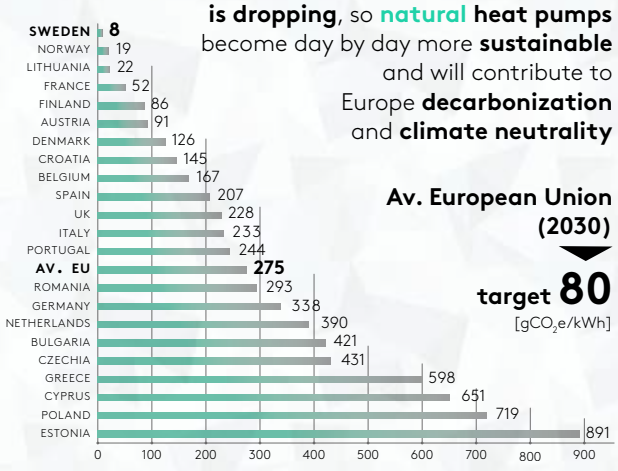
TEWI [tons CO_2 eq.]

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_2 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**



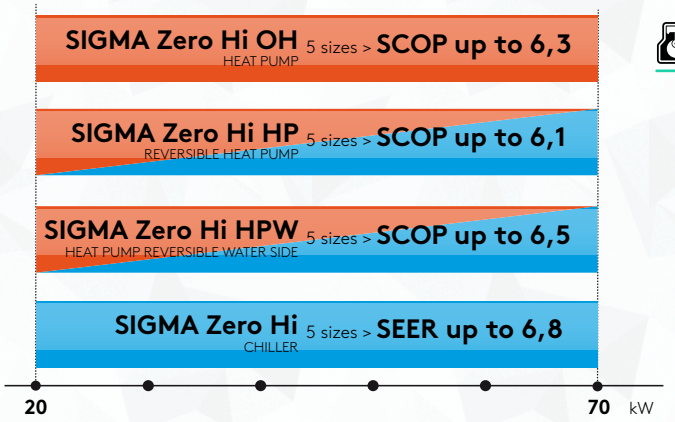
Av. European Union (2030)

target 80 [gCO_2e/kWh]

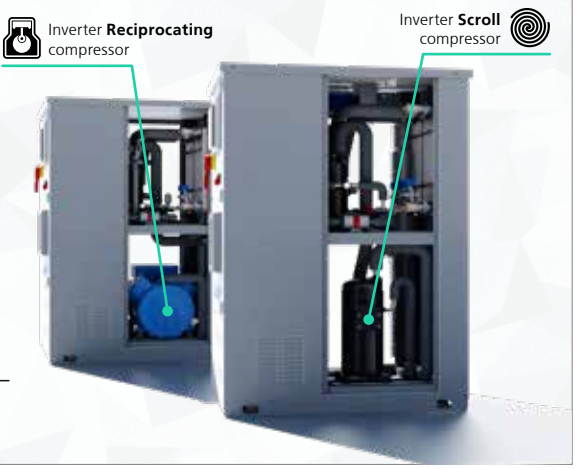
Electricity emission intensity [gCO_2e/kWh], 2019 data, Source EEA

SIGMA ZERO
HAS
MINIMUM CARBON FOOTPRINT
THANKS TO ITS
HIGH EFFICIENCY
AND
LOW CHARGE OF PROPANE

CAPACITY RANGE/VERSIONS



Net cooling capacity at A35 W 12-7 / according to EN14511



OPERATING LIMITS

Space heating and domestic domestic hot water production ▶ up to **75°C**

Comfort cooling and process applications ▶ cold water from **-10°÷20°C**

BOOSTERLINK

System Integration

- Optimal synergy between the Swegon units
- 3-way valve control of the SIGMA Zero source temperature
- A single-point of control and monitoring

BOOSTERLINK

SIGMA Zero Hi OH

Swegon Heat Pump
@ medium temperature

BLUEYE CONNECT

REMOTE ACCESS TO UNIT

SAVE MONEY
FAST SERVICE

BLUEYE CLOUD

CLOUD RECORDING DATAPOINTS

PREDICTIVE MAINTENANCE
CUSTOMER REPORTING
ANALYSIS

SYSTEM SCALABILITY

SIMULTANEOUS MANAGEMENT | **PLANT** management

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

TCA THERMOCLIMA

NOTRE PASSION POUR UN BON CLIMAT

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