
# SIGMA Zero

High efficiency water source chillers and heat pumps with natural refrigerant

**20÷70** kW

Versatile
Heating · Cooling · Ventilation

# 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

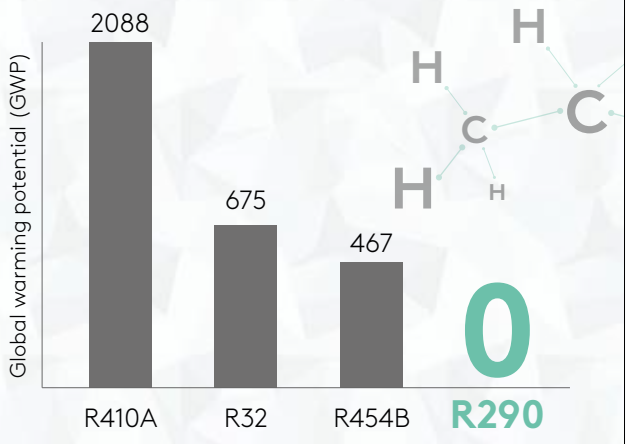
- Nearly zero Global Warming Potential (GWP≈0*)
- Natural fluid
- Natural non toxic refrigerant
- No Ozone Layer impact
- -40% gas charge compare to R410A

## 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

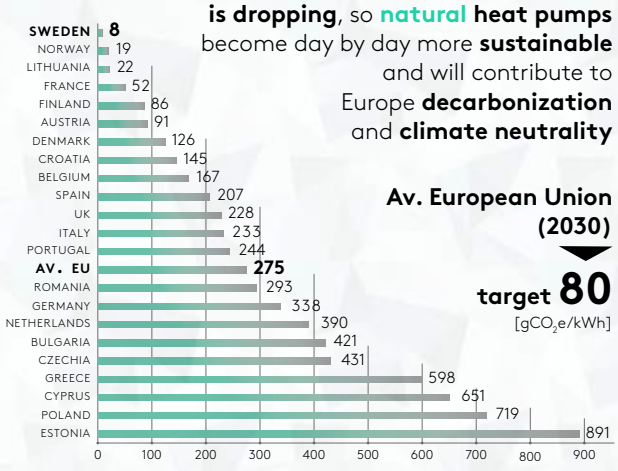
**TEWI** [tons $CO_2$ eq.]

**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**



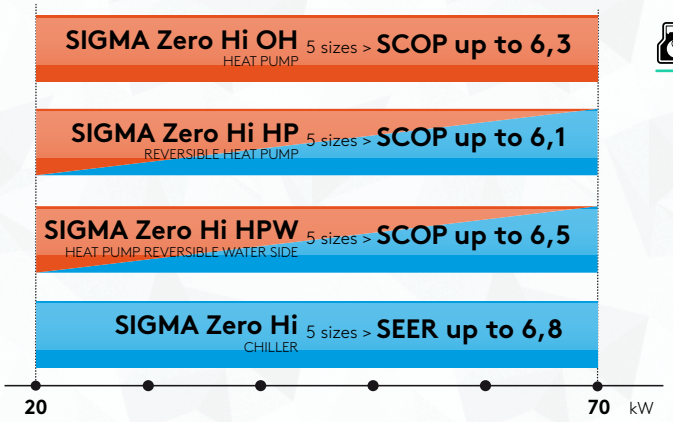

**Av. European Union (2030)**

**target 80** [$gCO_2e/kWh$]

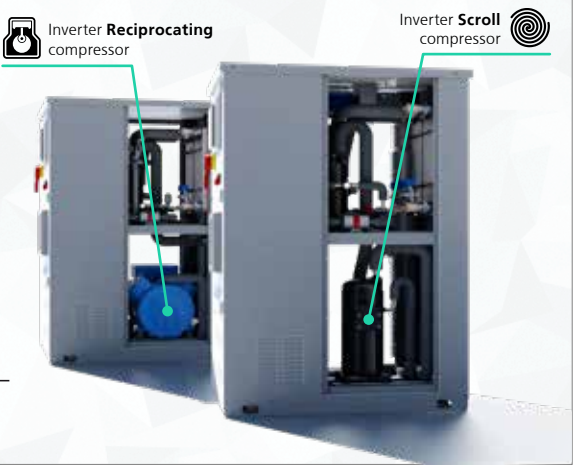
**Electricity emission intensity [$gCO_2e/kWh$],** 2019 data, Source EEA

**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**

# INSTALLATION FLEXIBILITY

## INDOOR INSTALLATION

**Ventilated enclosure class IV***

## OUTDOOR INSTALLATION

**Open space class III***

*UNI EN 378

# 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

versatile

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