# TITAN Zero Hi FC

Full inverter free cooling chiller
with natural refrigerant
**260÷450** kW

BlueBox
by Swegon

ZERO + ZERO = ZERO

FREE COOLING + NATURAL FLUID = ZERO EMISSION

# TITAN Zero Hi FC

NATURAL FREE COOLING CHILLER


Air cooled chiller with free cooling technology.

- **Full Inverter reciprocating Compressors .**
- **Durable Units for any Application.**
- **Heavy duty design philosophy.**
- **Low Refrigerant Charge.**
- **Top energy saving thanks to premium FC water coil.**
- **Glycol free on user side (option).**

MISSION ZERO EMISSION

# CLIMATE CHANGE FIGHT

# EUROPEAN CLIMATE STRATEGY

## 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

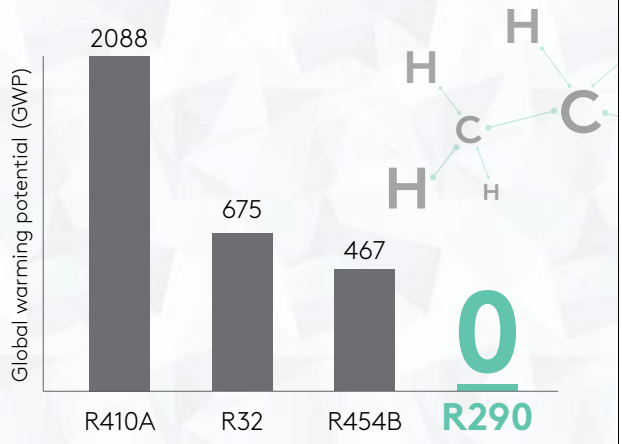
- Nearly zero Global Warming Potential (GWP≈0*)
- No Ozone Layer impact
- Natural fluid
- Excellent thermodynamic properties
- -40% gas charge compare to R410A

## 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.

# FREE COOLING

A STEP FORWARD SUSTAINABILITY

## MODULAR COILS DESIGN

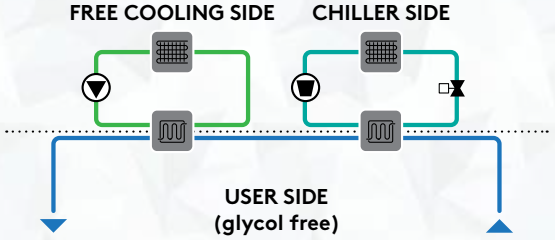
Condensing and free cooling coils are completely independent:

- Each coil is designed independently
- Low air pressure drops, low power absorbed by fan
- Optimized Condensing and Free cooling control
- Easy coils maintenance


## GLYCOL FREE VERSION

Allows to separate freecooling circuit, with glycol, from user side circuit:

- suitable for plant where glycol mixtures are not allowed
- safe operation e.g. in case of leakages
- cost saving: circuit's filling and safety arrangements



# CAPACITY RANGE

**TFT** Total Freecooling Temperature

| 1,5°C | 0,9°C | 0,6°C | 1,8°C | 1,4°C | 1,2°C |
|---|---|---|---|---|---|
| 257 kW | 288 kW | 329 kW | 373 kW | 402 kW | 450 kW |

**Titan ZERO Hi FC: 6 sizes, 2 frames sizes**

**Reciprocating full inverter compressors**
optimized for R290

INVERTER

EN14511 / EN14825
Temp. air 30°C Temp. Eth. Glyc. 30% 15/10°C

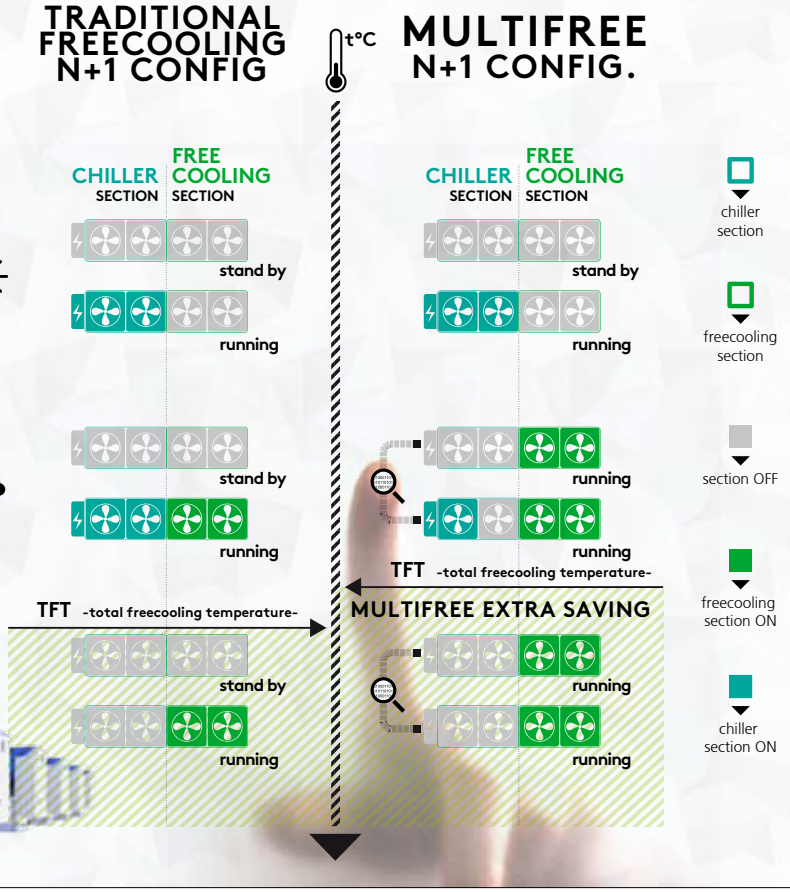
# FREE COOLING APPLICATIONS

CHILLED WATER PRODUCTION


CHILLER from **20°C** down to **-15°C** FREE COOLING

# MULTIFREE

is a specific **function designed to maximize free cooling operations** in multiunits plant.
It uses the **entire free cooling capacity of all units** before starting any compressors.
This means **higher TFT** and **energy saving.**



# BLUE BOX 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

## 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 **-55% savings**

in the energy consumption of the pumps compared to a traditional fixed flow system

## Chilled Water Dynamic Setpoint

System approach with the highest level optimization

**Link freecooling chiller operation to the real IT load requirements**

No point producing coldest water and then bypass it, if the load is not 100%

**Energy saving opportunities**

Increased water temperatures means higher evaporation in Chiller Mode, more Free Cooling, lower operating cost

## Swegon INSIDE

Digital services platform

- **Remote monitoring, control and diagnostic**
- **Machine learning models for predictive maintenance**
- **Performance reports generation**
- **Energy consumption monitoring**
- **Alarms subscription management**

**INSIDE Portal**

Monitor your Swegon products with real-time values and energy reports.

**INSIDE Connect**

Communication unit for mobile remote access to intelligent climate systems.

**INSIDE Manager**

Improve the performance and operational efficiency of units through remote diagnostics and preventive maintenance.

Feel good **inside**

Swegon

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