TITAN SKY Hi R0 FC

Full inverter free cooling chiller
with natural refrigerant
35÷150 kW

WESTERN™
AIRCONDITIONING
WARMTEPOMPEN

BlueBox
by Swegon

TITAN SKY FC

THE NATURAL CHOICE

NATURAL FREE COOLING CHILLER

Inverter compressor
Natural refrigerant (R290)
Extended Free cooling coil surface

Unbeatable use of Primary energy thanks to Inverter technology and Free Cooling function • No Ozone Layer impact & Nearly Zero Global warming potential • Optimized Low Refrigerant Charge design • Meets the highest seasonal efficiency standard (European Ecodesign Erp) • Pure water on user side (NG glycol free version)

CHILLER
35÷150 kW • Min Cold water: **-15°C** • Max T_{air}: **52°C** • SEER: up to **4.6**

FREE COOLING
Full **Free Cooling at 5K** from delivery temperature

R 290
INVERTER
BLUE THINK

Natural refrigerant   **Inverter technology**   **Advanced control**

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
- Long run reciprocating compressor with inverter technology
- Implementation of the highest safety standard

SMART CHOICE
- No carbon tax
- Pushed by incentivation schemes
- Future-proof natural solution. On going HFC phase-out

Global warming potential (GWP)

2088	R410A
675	R32
467	R454B
3	**R290**
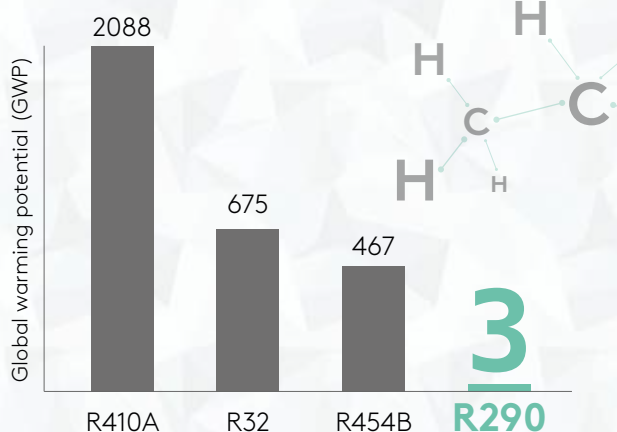
FREE COOLING
A STEP FORWARD SUSTAINABILITY

MODULAR COILS DESIGN
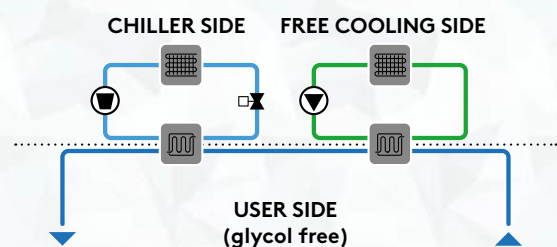Condensing and free cooling coils are completely independent:
- Each coil is designed independently
- Low air pressure drops, low power absorbed by fan
- Optimized Condensing and Free cooling control
- Easy coils maintenance
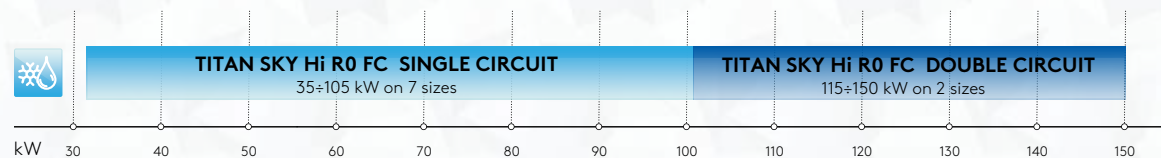
FREE COOLING SIDE

CHILLER SIDE

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
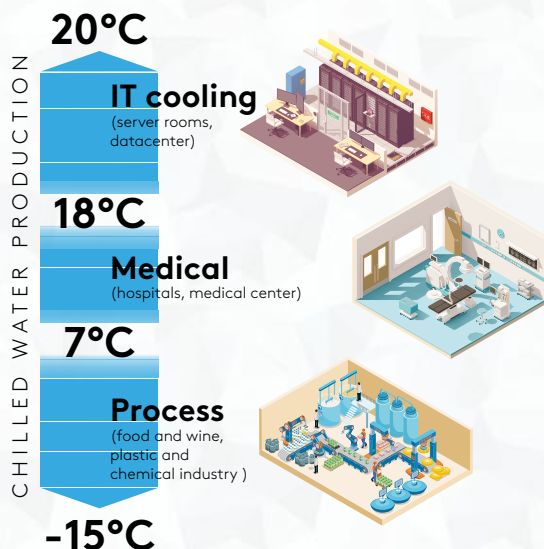- cost saving: circuit's filling and safety arrangements

CHILLER SIDE   FREE COOLING SIDE

USER SIDE
(glycol free)

CAPACITY RANGE

❄	**TITAN SKY Hi R0 FC SINGLE CIRCUIT** 35÷105 kW on 7 sizes	**TITAN SKY Hi R0 FC DOUBLE CIRCUIT** 115÷150 kW on 2 sizes

kW   30   40   50   60   70   80   90   100   110   120   130   140   150

Chiller with **reciprocating full inverter compressors** optimized for R290

INVERTER

EN14511 / EN14825

SEER up to **4.6** | **SEPR** up to **5.9**

FREE COOLING FOR ANY APPLICATIONS

CHILLED WATER PRODUCTION

20°C

IT cooling
(server rooms, datacenter)

18°C

Medical
(hospitals, medical center)

7°C

Process
(food and wine, plastic and chemical industry)
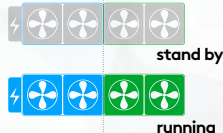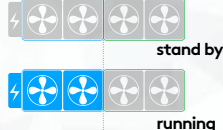
-15°C

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.**

TRADITIONAL FREECOOLING N+1 CONFIG

t°C

MULTIFREE N+1 CONFIG.

CHILLER SECTION | FREE COOLING SECTION

stand by

running

stand by

running

TFT -total freecooling temperature-

stand by

running

CHILLER SECTION | FREE COOLING SECTION

stand by

running

running

running
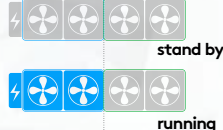
TFT -total freecooling temperature-

MULTIFREE EXTRA SAVING

running

running

☐ chiller section

☐ freecooling section

▢ section OFF

■ freecooling section ON

■ chiller section ON

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 **-55%** savings

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

---

CWDS
CHILLED **W**ATER **D**YNAMIC **S**ETPOINT
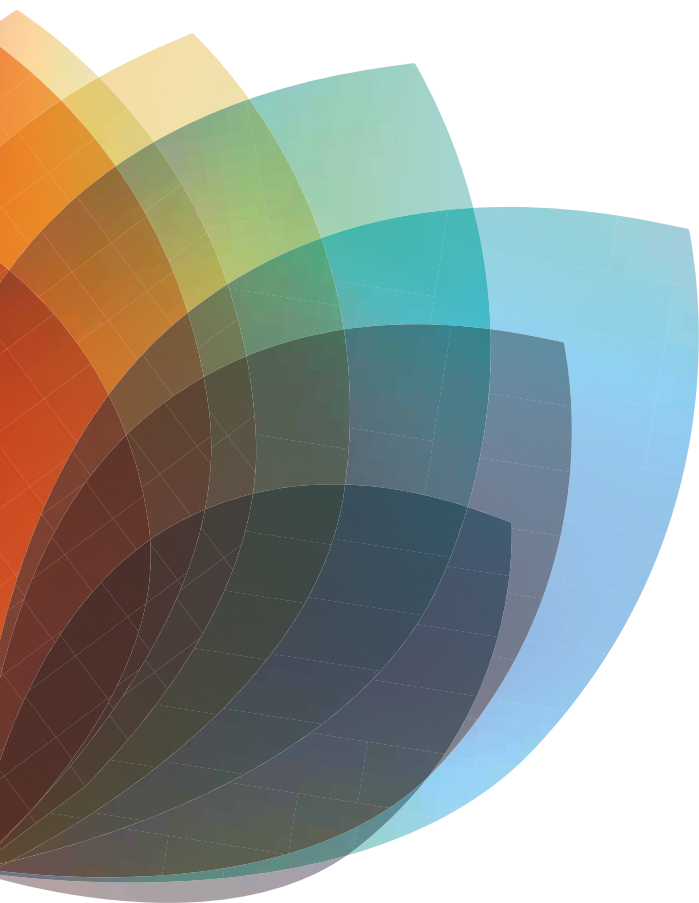System approach with the highest level optimization

**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

Feel good **inside**

WESTERN™
AIRCONDITIONING
WARMTEPOMPEN