



Omega Sky



BORIS YELTSIN PRESIDENTIAL CENTER
Yekaterinburg - Russia
OMEGA REV/HE 137.3 Supply 3,6 MW



High efficiency water cooled
chillers and heat pumps.

436÷1564 kW





OMEGA SKY ECODESIGN^{ed}

General

High efficiency water-source chillers.
Screw compressors. Shell & tube heat exchangers.

Configurations

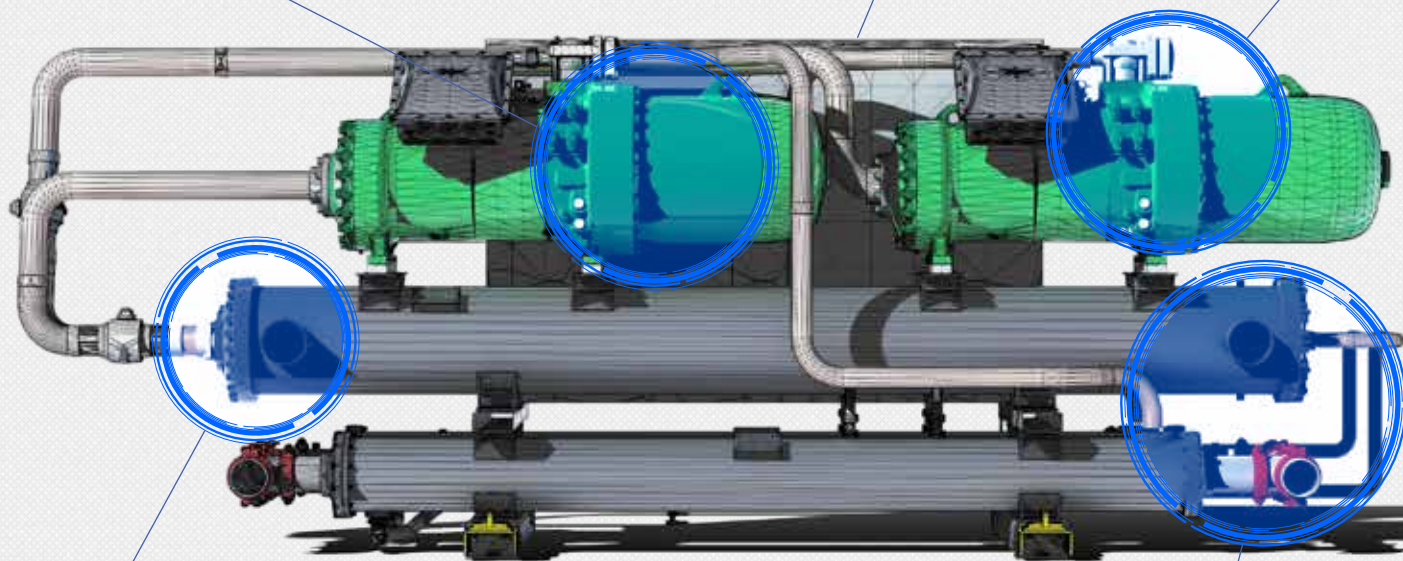
LN: low noise
XLN: super low noise
OH: heating-only heat pump
HPW: reversible heat pump (water side)
DC: total heat recovery
LC: condenser-less execution for split system

Bluethink advanced control

Web server
Blueye supervision
Multilogic function

**Environmentally
friendly refrigerants:
R513A default
& LGW R1234ze**

**Highest performances
on the market segment**



High-efficiency dry evaporator
low charge, low pressure drop

**Plug & Play
unit for easy
indoor installation**

ECODESIGN framework Directive (2009/125/EC)

ENERGY
RELATED
PRODUCTS

SEASONAL
EFFICIENCY

SEER | SEPR | SCOP

- The **ECODESIGN Directive**, with its Regulations, sets new challenging standards for a more efficient use of energy
- For the European market, all chillers and heat pumps must comply with related seasonal efficiency targets
- **SEER SEPR HT - Regulation 2281/2016: chillers and large heat pumps; mandatory since January 1st, 2018**

All OMEGA SKY models comply to tier 1 • SEER (LT, MT) and SEPR HT.

Also heat pump versions are compliant to Ecodesign.

COOLING | HIGH EFFICIENCY AT PART LOAD

Net value according to EN14511
Condition: W30/35 W12/7

up to
5.4



According to Regulation 2016/2281
and norm EN 14825.
SEER / ηsc reference: LT / low
temperature condition, user-side
temperature 12/7°C

up to
6.4

According to Ecodesign
Directive and Regulation
2281/2016

up to
8.0



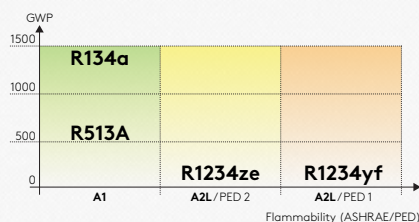
LOW GWP



- Non flammable – category A1
- **Smart GWP 573***
- Not subject to shortage or price hikes
- May be promoted by local incentive schemes
- R134a: option



- Category A2L, classified as PED group 2
- **Lowest GWP < 1***
- Not subject to shortage or price hikes
- Totally exempted by local taxation/bans
- Best future-proof choice



Performances related to all three refrigerants are
certified by Eurovent.

* GWP (AR5) according to IPCC V time horizon 100 years.

ENVIRONMENTALLY FRIENDLY HEATING

2

versions to satisfy different requirements
**HEATING ONLY
& REVERSIBLE**
compressor optimized for heating



**Leaving
water
temperature
up to**

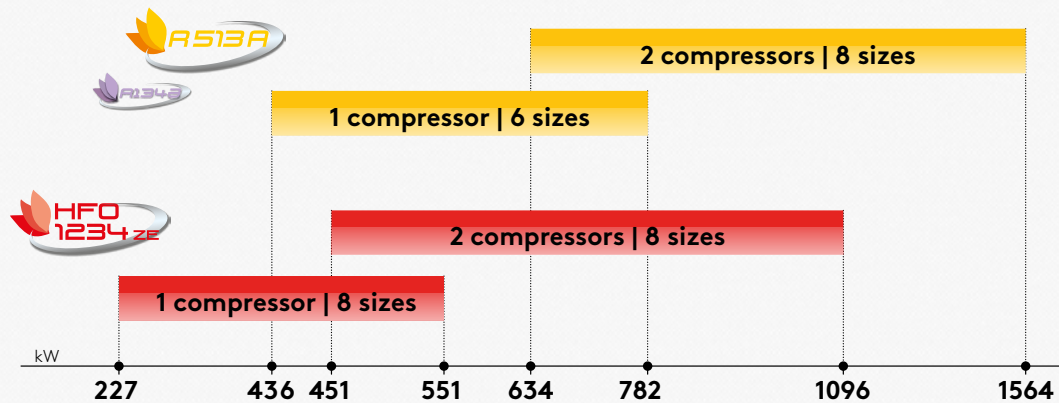
65°C*



**High performance heating
coupled with
LOW GWP refrigerants**

* applies to OMEGA SKY LGW OH.

CAPACITY RANGE



Cooling capacity: net value according to EN14511. Condition: source W30/35, user W12/7

EASY ON SITE HANDLING

- Depth 900 mm for sizes up to 800 kW (single compressor)
- Simple piping
- All connections on one side, with optional water manifold for condensers (sizes .2) or fittings
- Flanged connections (option)
- Ability to manage external pumps (1 or 2; on user-, source-side or also recovery)
- Control of condensation via different options, according to source-side layout, also suitable for external inverter-driven pumps



FREE COOLING APPLICATION

- Fully integrated management of all components by Bluethink
- Boost on yearly energy savings

Water-cooled indoor chillers = unique solution by Blue Box

- Ideal for systems with year-round cooling load, e.g. industrial applications, data centers
- Indoor installation allows to comply with architectural constraints.
- Selection of dry cooler easily matches noise requirements.





BLUE ● ● ● ●
● ● ● ● THINK
control platform

Integrated web server



Unit ON
ON / OFF unit



Mode
unit mode
(heating, cooling)



Unit
visual status of unit
(circuits, compressors..)



Alarms
alarm history



Set points
operating set point



Graphs
real time diagrams
of main variables
(temperatures, pressure..)



Input/Output
status of inputs / outputs
(digital and analogic)



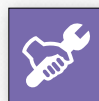
Multilogic
status of multiple
units



Tools
visual status of unit
(circuits, compressors..)



Logs
download and
analyze unit data history



Maintenance
service advanced log in



Sign Out

M Multilogic function

Management of multiple units of a system / hydraulic loop.

- > Specific operational logics to satisfy different installation requirements
- > Maximized energy efficiency
- > Fully embedded in the control resources and factory-preset
- > Fast commissioning. Simple LAN connection between units. No external devices required.



Blueeye

Remote supervision via web by Blue Box.

It offers, for one or more units / systems:

- > operation status monitoring
- > access to unit's settings and parameters
- > data recording via cloud, with options about data displaying, graphs, etc.
- > differentiated access profiles and privileges to ensure a safe and efficient interaction
- > also the status of system's additional components can be monitored, e.g. pumps, energy meters, valves



Connectivity

Default available

- > Modbus over TCP/IP, Modbus RTU (RS-485)

Options

- > LonWorks Gateway
- > BACnet
- > SNMP Gateway
- > Hot Spot Wi-Fi

Blue Box applied product range

find out the complete product range on our web site and catalogues



Zeta Rev > 40÷240 kW

Chillers and reversible units. Extensive range, versatile applications.



Zeta Rev HP XT > 40÷200 kW

Reversible heat pumps. Extreme heating envelope. Smart configuration options.



Tetris 2 > 84÷913 kW

Modular chillers and reversible units for large commercial systems. Wide range; multiple combinations of high-efficiency, low-noise versions.



Tetris W Rev > 32÷615 kW

Water-source chillers, with heating and reversible versions. Extensive range, versatile applications.



Omega Sky Xi > 260÷970 kW

High efficiency water source chillers and heat pumps. Inverter-driven screw compressor.



Kappa Rev > 296÷1983 kW

Modular air source chillers and reversible units.



Kappa Sky > 260÷1360 kW

Modular air source chillers for large systems. Inverter-driven screw compressors.



Omicron Rev S4 > 100÷860 kW

Modular multifunctional units for large 4-pipe systems. Smart configuration options.





Tetris W Rev



CITIZENM HOTEL
Paris - France
TETRIS W Rev
supply 350 kW



High efficiency water cooled
chillers and heat pumps.
32÷615 kW



THE BEST INDOOR SOLUTION FOR INSTALLATIONS

General

TETRIS W REV is a complete range of highly energy efficient water-source chillers and heat pumps. Scroll compressors and plate heat exchangers.

Configurations

STD: chiller
OH: heating only heat pump
HPW: heat pump, reversible on water side
HP: heat pump, reversible on refrigerant side
LC, LC/HP: units for split systems with remote source-side exchanger

**Plug & Play
unit for easy
indoor installation**

**Flowzer: Inverter pump
control management**

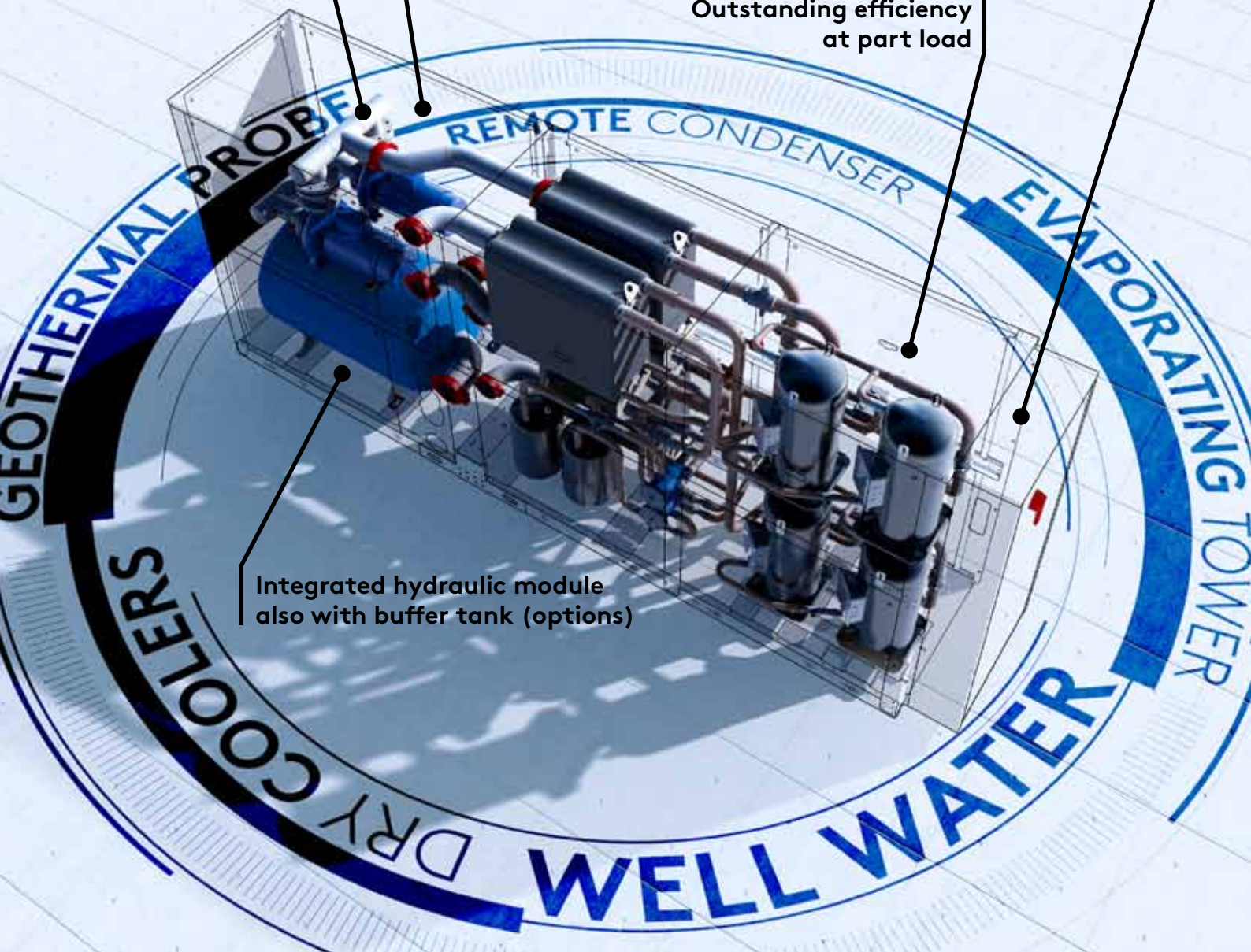
**Bluethink advanced control
with integrated web server**

**Blueeye supervision
system (option)**

**Multilogic function for
multiple units' system (option)**

**Outstanding efficiency
at part load**

**Integrated hydraulic module
also with buffer tank (options)**



ECODESIGN framework Directive (2009/125/EC)

ENERGY
RELATED
PRODUCTS

SEASONAL
EFFICIENCY

SEER | SCOP

- The **ECODESIGN Directive**, with its Regulations, sets new challenging standards for a more efficient use of energy
- For the European market, all chillers and heat pumps must comply with related seasonal efficiency targets
- **SCOP-Regulation 813/2013: heat pumps with Pdesign <400 kW effective since 2015. Second tier from September 2017**

All TETRIS W REV models (HP, HPW, OH) comply

- **SEER - Regulation 2281/2016: chillers and large heat pumps; becomes mandatory on January 1st, 2018**

All TETRIS W REV models comply

HEATING

OH

High efficiency non reversible heat pump, optimized to operate in heating mode only.

HPW

High efficiency heat pump, reversible on water side: designed for plant where user and source-side fluids can be exchanged each other.

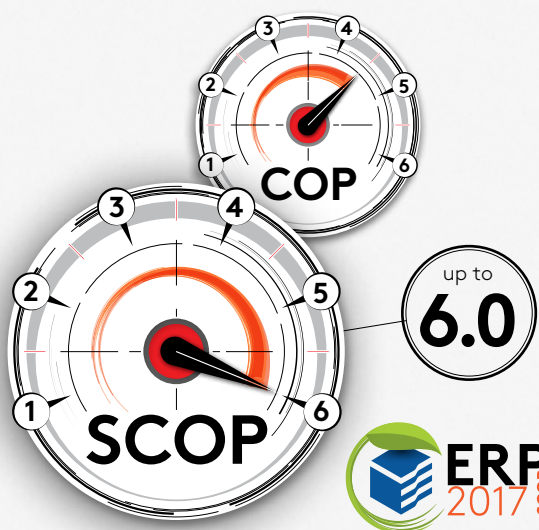
HP

High efficiency heat pump, reversible on refrigerant side: guarantees the separation between user and source-side fluids.

LC/HP

Reversible unit for split systems, with remote source-side exchanger: flexible use of space, smart selection of outdoor exchanger and its noise levels; no glycol on user side.

THE FOUR SHAPES OF HEAT PUMP



Values conform to EN 14511-3:2011

COOLING

HIGH EFFICIENCY AT PART LOAD

Tetris W Rev offers best-in-class efficiency at part load conditions. This leads to an outstanding reduction of the operational cost.



Eurovent

according to Ecodesign
Directive and Regulation
2281 effective from 2018



ENERGY SAVING

Tetris W Rev

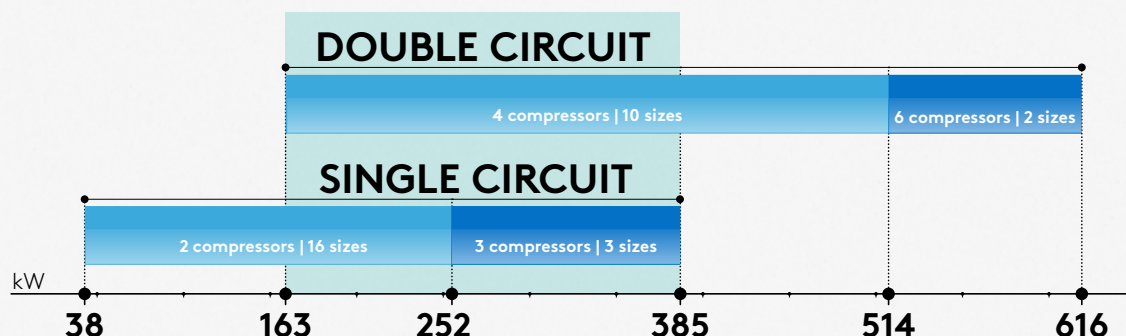
VS

Conventional water
cooled chiller

average **-19%**

average reduction of annual energy consumption for comfort application, calculated according to part-load efficiency indexes

CAPACITY RANGE



In the capacity range between 163 and 385kW, the customer can choose between dual circuit models, with the highest ESEER values, and single circuit units, which are more compact but still with top EER and COP levels.

Cooling: 30/35°C; water 12/7°C



EASY_{INSTALLATION}

Tetris W Rev provides a lot of options and pumping configurations to suit every requirements.

Double circuit models always use twin circuit plate exchangers for the evaporator, condenser and heat recovery.

This means:

- **Less design time**
- **Quicker and less cost for installation team**
- **Reduced refrigerant charge.**
- **Reduced unit footprint**
- **Less connections for easier installation**

BUILT-IN_{HYDRAULIC MODULE}

TETRIS W Rev can be fitted with different hydraulic modules:

- 1 or 2 pumps
- Useful head: standard, oversized or for high glycol concentrations
- selectable for user-, source- or heat recovery sides
- Selectable integrated buffer tank for the user-side circuit





BLUE ● ● ● ●
● ● ● ● THINK
control platform

Integrated web server main features



Set point
operating set point



Alarms
alarm history



Unit
visual status of unit
(circuits, compressors..)



Input/Output
status of inputs / outputs
(digital and analogic)



Graphs
real time diagrams
of main variables
(temperatures, pressure..)

- > USB, RS485 and Ethernet ports as standard
- > Recording of unit parameters one month long



MULTILOGIC FUNCTION

Management of multiple units of a system / hydraulic loop.

- > Specific operational logics to satisfy different installation requirements
- > Maximized energy efficiency
- > Feature fully embedded in the control resources and factory-preset
- > Fast commissioning. Simple LAN connection between units. No external devices required.



BLUEYE

Remote supervision via web by Blue Box.

It offers, for one or more units / systems:

- > operation status monitoring
- > access to unit's settings and parameters
- > data recording via cloud, with options about data displaying, graphs, etc.
- > differentiated access profiles and privileges to ensure a safe and efficient interaction
- > also the status of system's additional components can be monitored, e.g. pumps, energy meters, valves



FLOWZER

HYDRAULIC MANAGEMENT OPTIONS
BASED ON INVERTER-DRIVEN PUMPS

The new family of scalable options associated to the wide range of built-in pump modules.

For each application layout, FLOWZER offers the best-fitting solution about the water distribution to the system:

- Pumping energy saving; minimized operational cost
- No external devices required.

> Flowzer VP

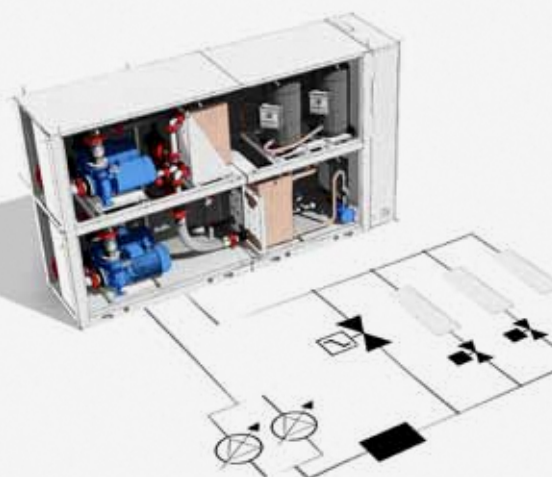
Operation at fixed speed setpoint

> Flowzer VD

Management of constant ΔP

> Flowzer VPS

Management of constant ΔT on Primary/Secondary pump circuit

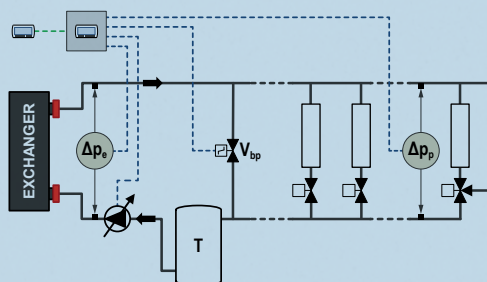


> Flowzer VFPP

Management of constant ΔT on primary pump circuit

Simplified system's circuit, as additional external pumps of secondary circuit are not required.

up to -80%
pumping energy consumption*



*Based on 4000 hours of operation in cooling mode (0,15 €/kWh).

Blue Box applied product range

find out the complete product range on our web site and catalogues



Zeta Rev > 40÷240 kW

Chillers and reversible units. Extensive range, versatile applications.



Zeta Rev HP XT > 40÷200 kW

Reversible heat pumps. Extreme heating envelope. Smart configuration options.



Beta Rev > 40÷240 kW

Chillers and reversible units for indoor installation. Extensive range, also with self-adaptive high-efficiency fans.



Tetris 2 > 84÷913 kW

Modular chillers and reversible units for large commercial systems. Wide range; multiple combinations of high-efficiency, low-noise versions.



Kappa Rev > 296÷1983 kW

Modular chillers and reversible units for large commercial systems. Wide range and versions available.



Omega Rev > 143÷1569 kW

Water-source chillers, with heating- and reversible versions. Wide range for large commercial systems.



Omicron Rev S4 > 100÷860 kW

Modular multifunctional units for large 4-pipe systems. Smart configuration options.



Blue Box Group S.r.l.
Via Valletta, 5 - 30010 Cantarana di Cona, (VE) Italy
www.blueboxcooling.com - info@swegon.it
Phone +39 0426 921111 - Fax +39 0426 302222