



KAPPA SKY

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

260÷1360 kW

KAPPA SKY

LET'S COOL THE PLANET

Environmentally friendly refrigerants: R513A default & LGW R1234ze

Cooling capacity range extended on the low end

Quiet operation & two low-noise versions

Dedicated combination of external **inverter** and **variable Vi** reserved screw compressor

Bluethink advanced control
Web server
Blueye supervision
Multilogic function
Flowzer

Performance vs compactness with 4 choices

BLUE BOX PROPRIETARY CONTROL STRATEGY



General

Modular air source chillers for large systems. Inverter-driven screw compressors. Wide capacity range with multiple versions. Free-cooling models available.

Configurations

Xi: high efficiency with full inverter compressors
Xh: high efficiency with hybrid compressors
Si: compact version with full inverter compressors
Sh: compact version with hybrid compressors
Xi LGW: R1234ze refrigerant full inverter compressors

/SLN: super low noise unit
/LN: low noise unit
/DS: with desuperheater
/DC: with total recovery



ECODESIGN framework Directive (2009/125/EC)

ENERGY RELATED PRODUCTS > SEASONAL EFFICIENCY > SEER | SEPR

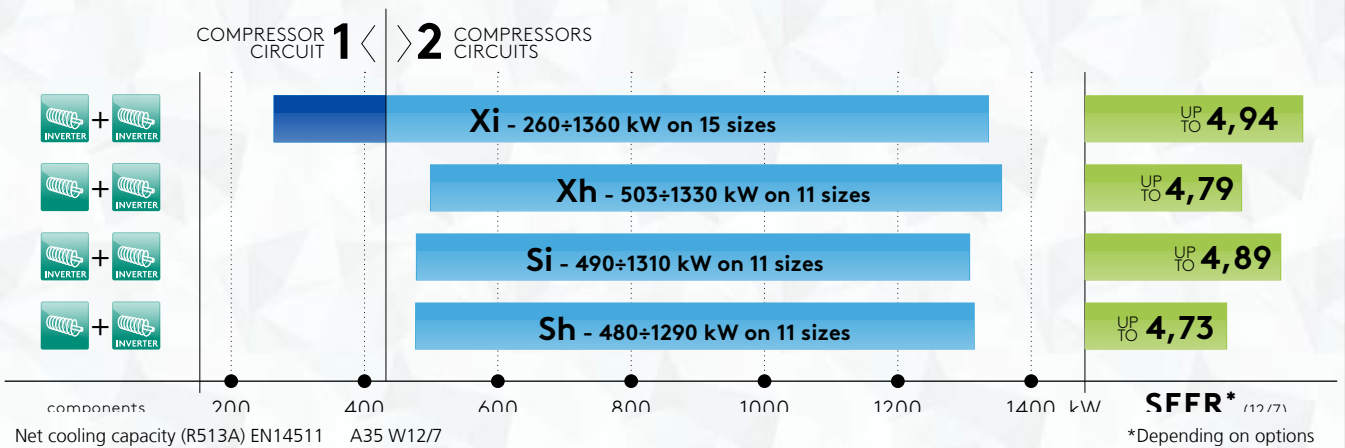
- The **ECODESIGN Directive**, with its Regulations, sets new challenging standards for a more efficient use of energy
- For the European market, all chillers and heat pumps must comply with related seasonal efficiency targets
- **SEER SEPR - Regulation 2281/2016: chillers and large heat pumps. Mandatory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

All models comply to tier 2* SEER (LT,MT) and SEPR HT.

2021 TIER 2 ECODESIGN COMPLIANT

*= selected sizes may require EC fans

CAPACITY RANGE | EFFICIENCY



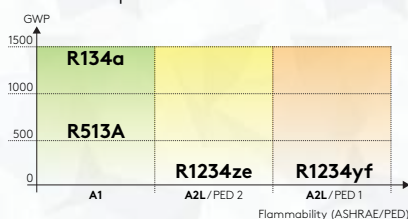
LOW GWP



- Default for full line-up
- **Smart GWP 573 (*)**
- Not subject to shortage or price hikes
- May be promoted by local incentive schemes
- R134a remains as option into pricelist



- **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.

SMART FOR ANY APPLICATIONS

WATER TEMPERATURE FROM **-8°C** TO **+23°C** ▼
IDEAL FOR PROCESS-TECHNOLOGICAL USES

+ 50°C*

Xi/Xh EFFICIENT VERSIONS ▼
MATCHING GREEN REQUISITES AS
LOWEST GWP & LOW NOISE

HIGH TEMPERATURE COOLING

COMFORT UP TO **46°C** OAT (WITH OPTIONS)

Si/Sh COMPACT VERSIONS ▼
UP TO **44°C** OAT > COMFORT APPLICATION
IDEAL FOR REFURBISHMENT PROJECTS

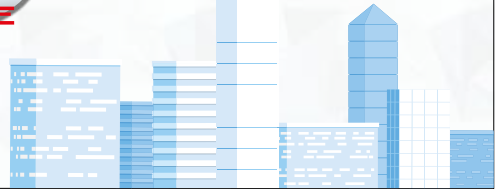
*Part load operation

ECO-FRIENDLY SOLUTION

LOWEST GWP
AVAILABLE FROM | **240** kW



EXTENDED OFFER OF
LOW NOISE VERSIONS
BASE/LN /SLN INCLUDING BUILT-IN LEAK DETECTOR

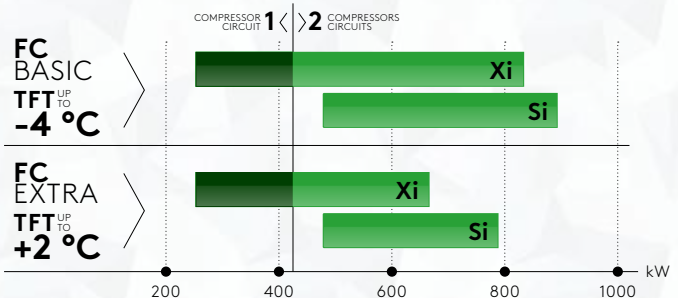


FREE COOLING VERSION

All free cooling units manufactured and shipped in a single assembly

GLYCOL FREE on user side also available

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



Net cooling capacity (R513A) EN14511 A30 W15/10 gl.30%

HIGH EFFICIENCY AT PART LOAD

Combined benefit of:

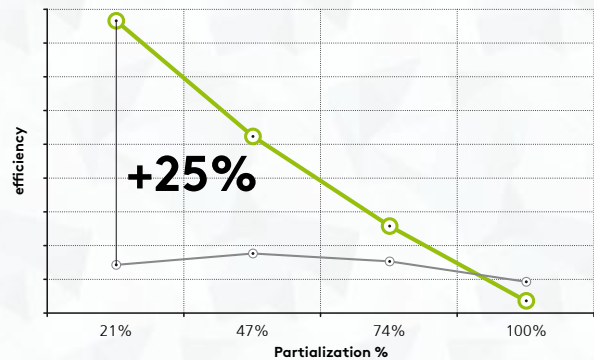
- **INVERTER COMPRESSOR** ▾
high efficiency at part load
- **VARIABLE Vi FEATURE** ▾
Vi: suction volume / discharge volume ratio
Variable: automatically adapted based on operating conditions



EXTRA HIGH EFFICIENCY

Partialization % associated to different conditions as per SEER calculation (reference: Regulation 2016/2281).

Benefit of variable Vi, part-load efficiency values (SEER)



● High efficiency chiller (steplless compressor)

● KAPPA SKY Xi (Smart control of inverter / variable Vi)

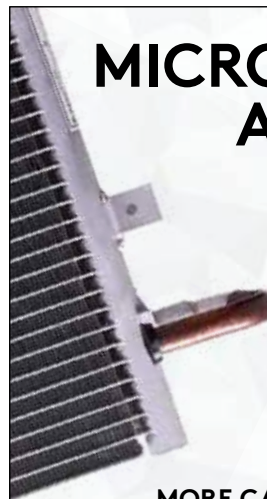
MULTIPLE LOW NOISE OPTIONS



/LN up to -4 dB(A)
sound power level

/XLN up to -7 dB(A)
sound power level (Xi-Xh model only)

MICROCHANNEL ALUMINIUM COIL



Kappa Sky chillers use the new generation of high performance microchannel aluminium coils as standard. Treatments for specific applications available.

**MORE CAPACITY / CROSS SECTION
SMART EFFICIENCY VS FOOTPRINT**

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



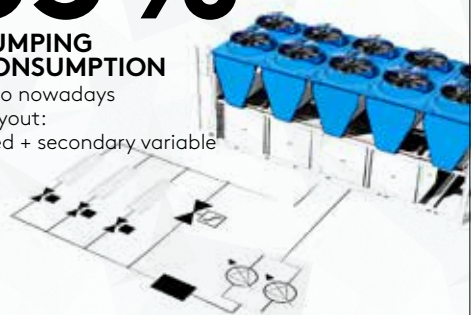
INVERTER-DRIVEN PUMPS CONTROL
MANAGEMENT FOR DIFFERENT SYSTEM
LAYOUTS

UP TO

-53%

PUMPING CONSUMPTION

compared to nowadays
common layout:
primary fixed + secondary variable




HYZER

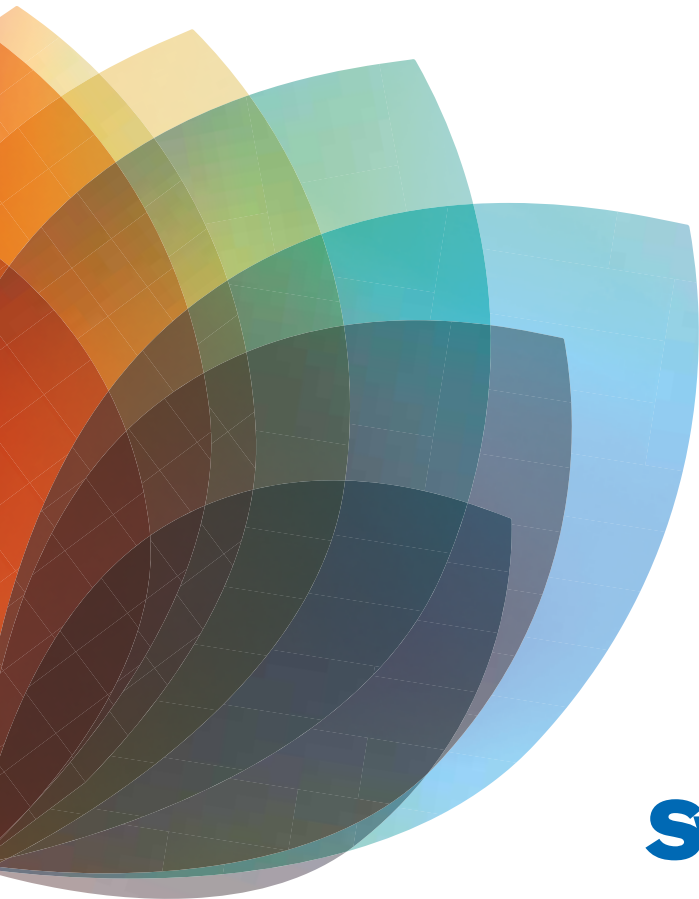
HYDRONIC OPTIMIZER

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



Feel good **inside**



Swegon 