



## 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

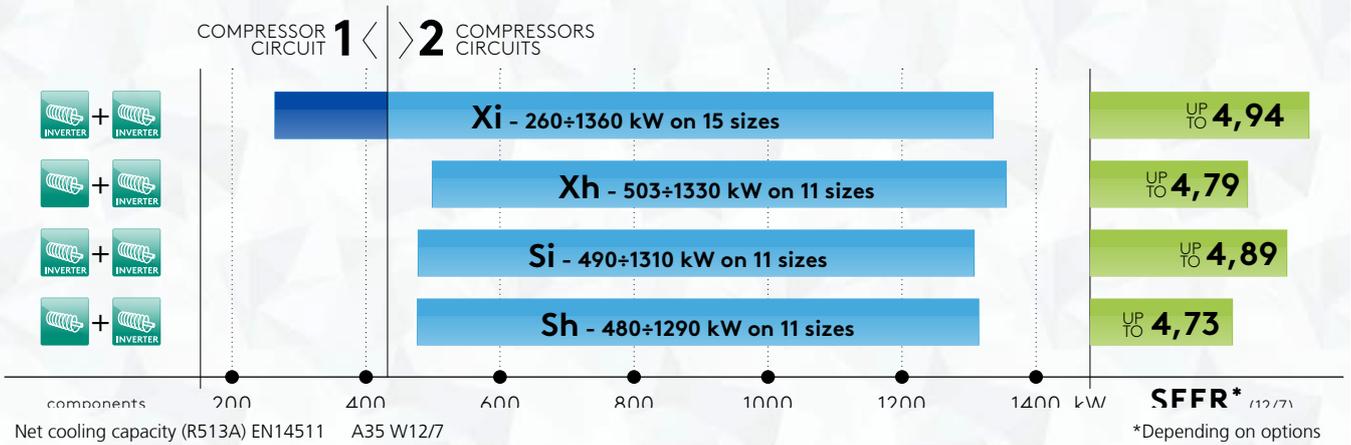
- The **ECODESIGN Directive**, with its Regulations, sets new challenging standards for a more efficient use of energy
- For the European market, all chillers and heat pumps must comply with related seasonal efficiency targets
- **SEER SEPR - Regulation 2281/2016: chillers and large heat pumps. Mandatory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



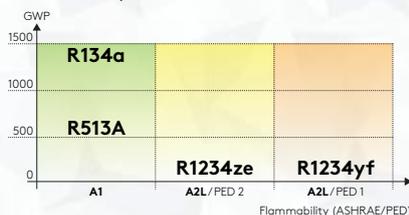
## LOW GWP



- 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

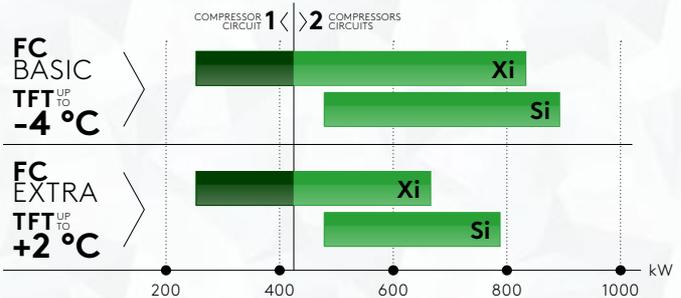


## FREE COOLING VERSION

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:

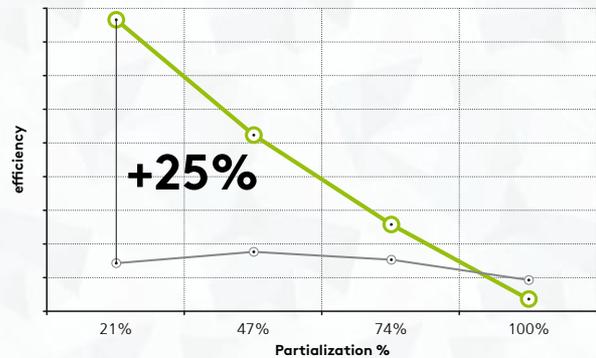
- **INVERTER COMPRESSOR** ▾  
high efficiency at part load
- **VARIABLE Vi FEATURE** ▾  
**Vi:** suction volume / discharge volume ratio  
**Variable:** automatically adapted based on operating conditions



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

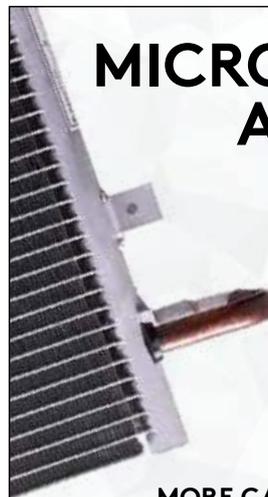
## MULTIPLE LOW NOISE OPTIONS



**/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



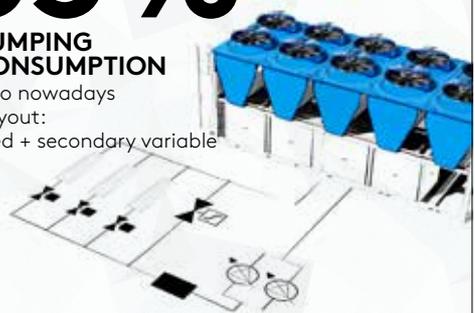
INVERTER-DRIVEN PUMPS CONTROL  
MANAGEMENT FOR DIFFERENT SYSTEM  
LAYOUTS

UP TO

# -53%

**PUMPING CONSUMPTION**

compared to nowadays  
common layout:  
primary fixed + secondary variable




## HYZER

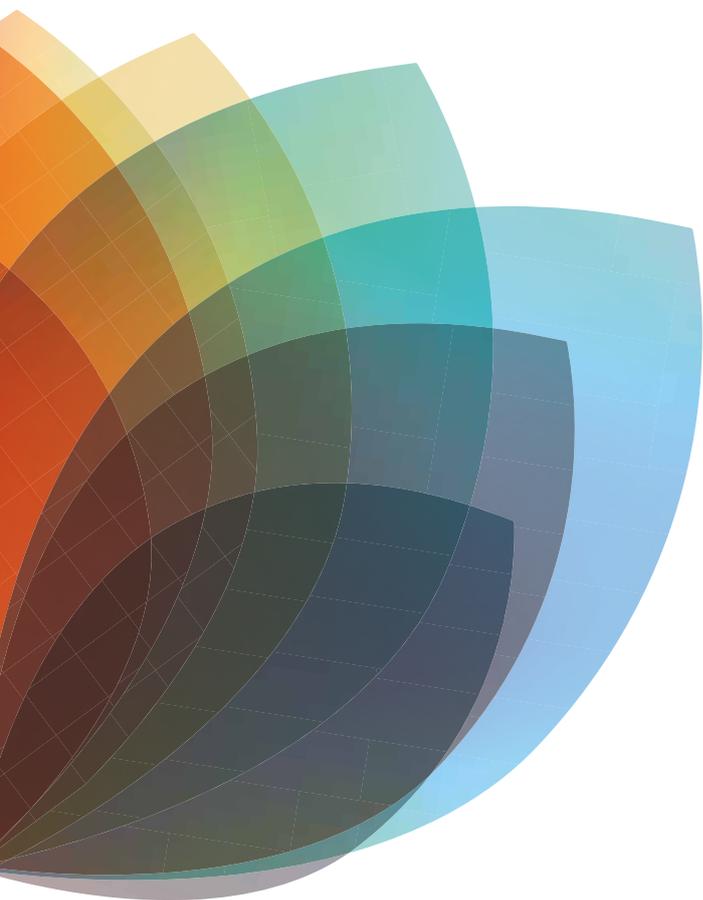
HYDRONIC OPTIMIZER

**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**



**WESTERN**<sup>TM</sup>  
AIRCONDITIONING  
WARMTEPOMPEN