

# Tetris FC

Air cooled modular freecooling chiller



97÷518 kW

## General

The Tetris FC range, with scroll compressors and free cooling system is characterized by a substantial energy saving, high performance and low noise emission

## Configurations

A: Energy efficiency class A  
A+: Energy efficiency class A+  
DS: Desuperheater  
DC: Recovery condenser  
LN: Low sound level  
SLN: Superlow sound level  
Pumps and integrated buffer tank available as option

## Bullet points

- Dedicated freecooling section
- Eurovent A Class Unit
- Eurovent certified chiller section
- Hybrid freecooling: capability, in the mid seasons, to operate in mixed mode freecooling/chiller
- SLN unit with Night Shift function
- 3 efficiency levels of the chiller section, combinable with 3 levels of TFT of freecooling section

# Modular Freecooling

without compromise

## freecooling sections available in 3 sizes

**100%**  
Mechanical cooling

**STD**  
▼  
up to  
**EER 3.5**

**2A**  
▼  
up to  
**EER 3.7**

**2A+**  
▼  
up to  
**EER 4.0**

**100%**  
freecooling  
(TFT: Total freecooling temperature)

**Basic**  
▼  
TFT up to **0°C**

**Custom**  
▼  
TFT up to **2°C**

**Extra**  
▼  
TFT up to **6°C**



CHILLER  
SECTION

FREECOOLING  
SECTION

# EFFICIENCY

## modular freecooling



modular freecooling uses  
less yearly energy

**up to -16%**

compared to common  
freecooling method

The common method of freecooling chillers is to use a close couple condenser and freecooling coil, which shares the same fans and air flow.

The result is a compromise of efficiency performance.

- Summertime EER is lower than non freecooling units.
- All fans need to operate all time.

**Tetris FC** have two dedicated sections that have their own fans and coils functioning independently, to ensure the optimum balance between mechanical cooling and free cooling

This means that:

- **Freecooling section** operates with fan speed control to maximise the freecooling mode, while fans are stopped in summer.
- **Chiller section** operate with fan speed control with condensing control function in hybrid freecooling mode, or stopped fans when 100% freecooling is achieved.
- **Designed structure** allows more configurations with 3 different freecooling levels.

# ENERGY SAVING

	Basic	Custom	Extra
<b>MILAN</b> (0,22 €/kW)	<b>13%</b> 29.000 €/y saving	<b>17%</b> 38.000 €/y saving	<b>20%</b> 45.000 €/y saving
<b>LONDON</b> (0,10 €/kW)	<b>17%</b> 16.000 €/y saving	<b>21%</b> 20.000 €/y saving	<b>23%</b> 22.000 €/y saving
<b>BERLIN</b> (0,11 €/kW)	<b>22%</b> 23.000 €/y saving	<b>26%</b> 17.000 €/y saving	<b>28%</b> 29.000 €/y saving
<b>MOSCOW</b> (0,06 €/kW)	<b>38%</b> 21.000 €/y saving	<b>41%</b> 23.000 €/y saving	<b>44%</b> 25.000 €/y saving

Energy saving achieved using TETRIS FC, in comparison to the correspondent standard unit

Tetris FC 47.6, nominal cooling capacity 518 kW -- inlet/outlet water temperature 15/10 °C; e.g. 30%

€/kW : Derived from the International Energy Agency publication, Energy Prices and Taxes; Prices include all taxes where not refundable on purchase.

# NOISE

STD  
LN  
SLN

noise  
versions



noise  
versions

STD  
SLN

All Tetris FC units are available with standard, low noise and super low noise version. For freecooling section is also available super low noise version.



## MICROCHANNEL ALUMINIUM COIL

**Tetris FC** units use this new generation of condensing coil on chiller section as standard.



### FEATURES & BENEFITS

- Extended life cycle
- 30% less refrigerant
- 10% overall chiller weight reduction
- less air side pressure drop

## NIGHT SHIFT SYSTEM



The unit can operate in high efficiency mode or super low noise mode according to day time setting.

Tetris 2A\* ↔ Tetris 2SLN

**up to 6 dB(A)**  
of sound power reduction

\*Tetris 2A-2A+ must be configured respectively as Tetris 2SLN-Tetris 2ASLN

## BUILT -IN HYDRAULIC MODULE

The unit can be equipped with an insulated inertial storage tank and circulation pumps (standard or oversized).

## EC AXIAL FANS

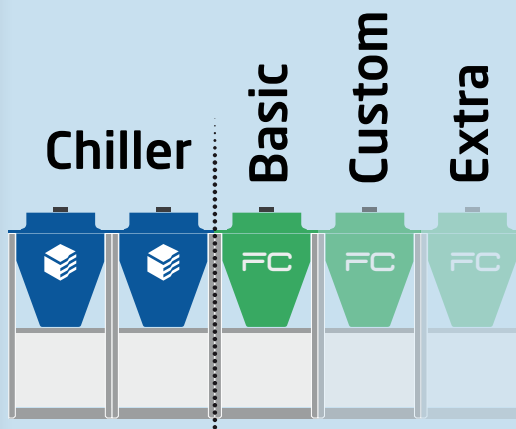
EC axial fans with electronically commutated brushless motor as option.

**15%** energy saving per fan  
**3.000\*** €/y saving

(\*unit with 12 fans; operating 8700 hours/year; 0,10€/kW)

## CHOOSE THE BEST EFFICIENCY

**Tetris FC** allow all combinations with 3 freecooling levels. Every chiller version can be couple with the different freecooling sections.



### ► 8 versions

of efficiency and noise emission on chiller section

### ► 6 versions

of efficiency and noise emission on freecooling section

**Deutsche Pension Fund (Datacenter)**

**Berlin - Germany**

Outdoor freecooling system -> Tetris A FC + 9 x Datatech

Supply -> 700 kW





# Blue Box technological product range

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



## Zeta Echos FC > 44÷143 kW

High efficiency air cooled freecooling chillers. Patented system.



## Tetris FC series > 97÷518 kW

High efficiency air cooled modular freecooling chillers.



## Kappa V Evo FC > 325÷1178 kW

High efficiency air cooled freecooling chillers.



## Kappa Rev HEi & XEi > 286÷1451 kW

Air cooled chillers and heat pumps with Inverter compressor.



## Tetris W FC/NG > 39÷634 kW

High efficiency water cooled freecooling chillers with integrated hydronic module.



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