

# Coolblade

In Row cooler  
for IT applications

## General

The high value of the cooling power developed compared with the minimum floor area occupied makes these units especially suited to temperature control in data room and in contained server areas where high thermal load density IT equipment are gathered.

## Quick facts

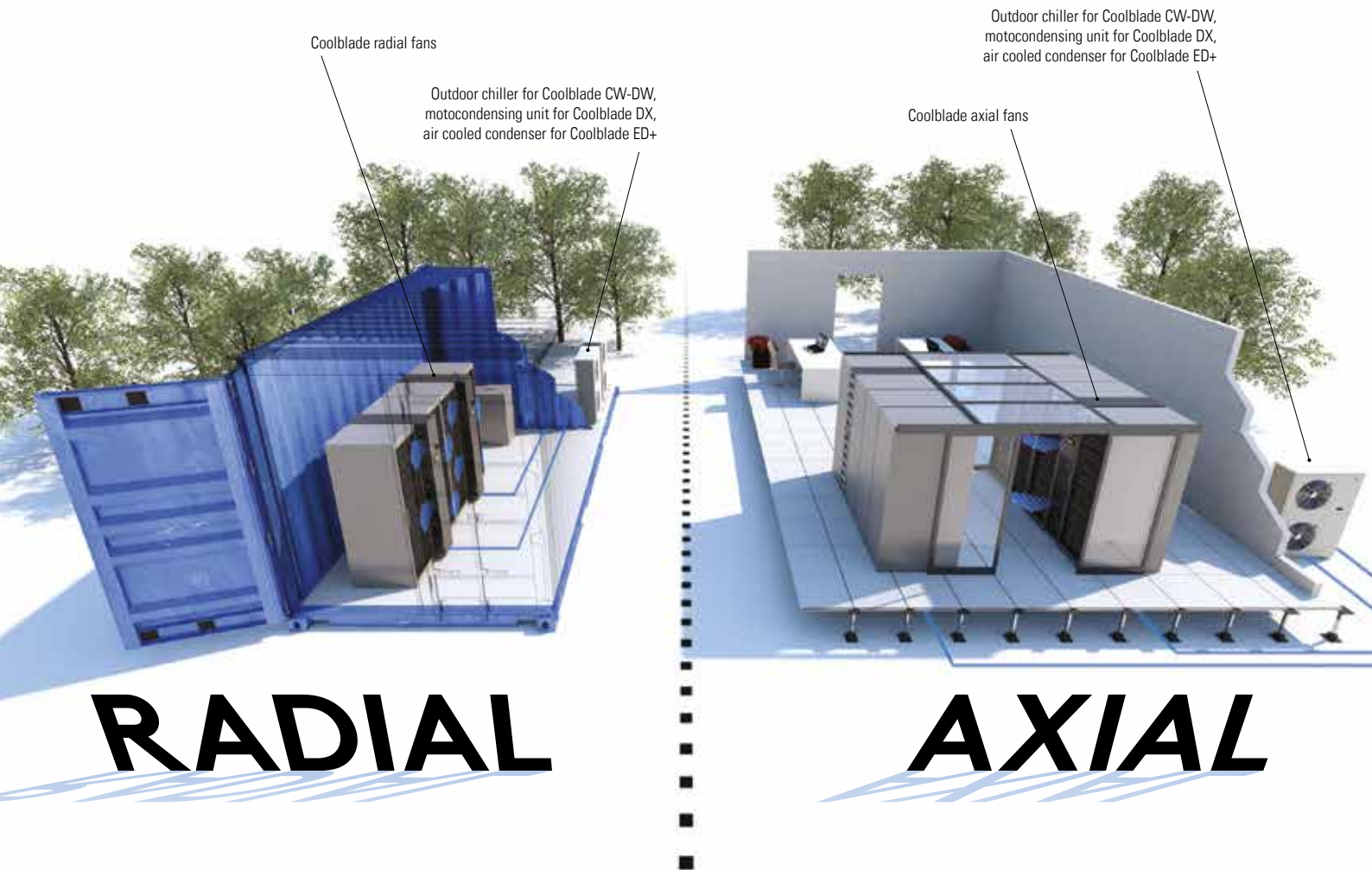
- ▶ High heat removal on small footprint
- ▶ Axial and radial fan configuration
- ▶ Very high efficiency (increased in axial fan configuration)
- ▶ High installation flexibility
- ▶ Full redundancy option for **Tier IV** datacenter (DW version)
- ▶ Available in chilled water (CW-DW), direct expansion version with (ED+) & without (DX) compressor



# IN ROW COOLING

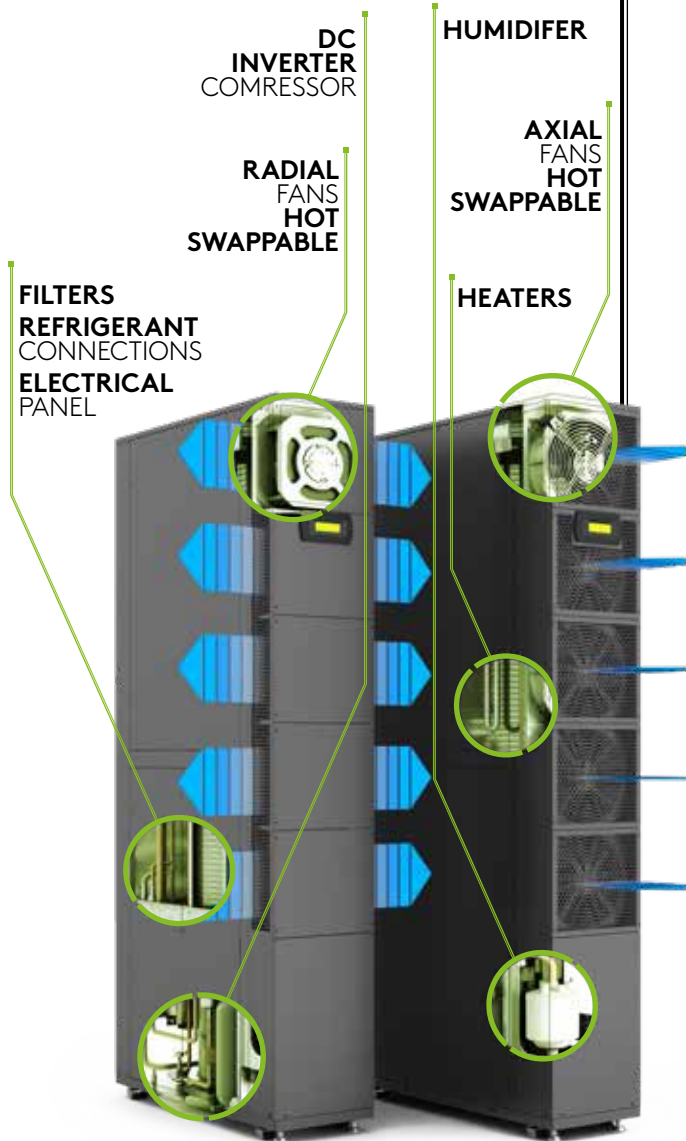
**Coolblade** units are In Row coolers, specifically designed to be placed between the racks in a typical hot aisle/cold aisle layout.

**Coolblade** units take hot air exhausted by the racks, and deliver it, cooled down, into the cold aisle



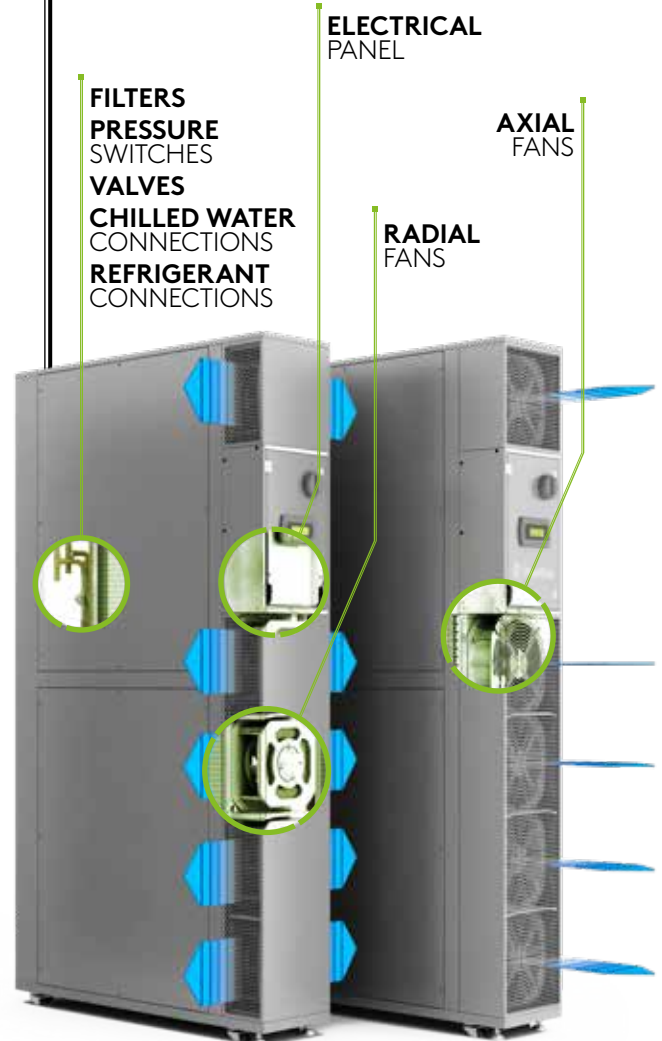
**COOLBLADE ED+**  
DIRECT EXPANSION VERSION  
(with compressor)

# FULL CONFIGURABILITY



**COOLBLADE DX/CW**  
CHILLED WATER &  
DIRECT EXPANSION VERSION  
(without compressor)

# FULL ACCESSIBILITY



# REDUNDANCY

## ELECTRICAL

Dual Power Supply with Automatic changeover

## COOLING SOURCE

Double heat exchanger with double modulating valve totally independent (DW version)

# INTAKE & DELIVERY

## TEMPERATURE CONTROL

Coolblade units can provide air temperature control both on intake and on delivery (for DX version control on delivery is available only if combined with inverter driven outdoor unit).

Fan speed control can be operated according to the intake air temperature to follow the heat load requirements.  
For ED+ unit with radial fans alternatively they can be managed to keep the right delta pressure within the aisles.



### Coolblade /DX

Unit size		/DX 12/12L	/DX 19/19L	/DX 25/25L
<b>Cooling</b>				
Cooling capacity	(1) (4) kW	12,5	19,1	24,4
Air flow	m³/h	3300	4200	4900

### Coolblade /CW /DW

Unit size		/CW 16/16L	/CW 27/27L	/DW 22/22L
<b>Cooling</b>				
Cooling capacity	(2) (4) kW	16.5	27.2	21.8
Air flow	m³/h	3200	4800	4800

# EFFICIENCY

**NSEER** <sup>ED</sup>/<sub>DX</sub> **3.3 TO 4.2** <sup>(1)</sup>  
net sensible cooling capacity  
unit fan power + compressor power

**NSEER** <sup>CW</sup>/<sub>DW</sub> **50 TO 125** <sup>(2)</sup>  
net sensible cooling capacity  
unit fan power

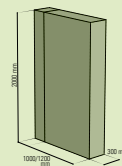
# FLEXIBILITY

The unit has been developed to provide maximum flexibility both during the dataroom design stage and during on site installation.

- Electrical connections, as well as refrigerant and water connections, are available either from above or below.
- Radial and axial fans available on the same structure.
- Different air flow delivery directions can be selected.
- With or without thermostatic valve (DX version).
- With or without valves for CW and DW version.
- Available with heaters and humidifier (ED+ version).

# COMPACTNESS

**0,3** **90**  
sqm per unit kW/sqm



### Coolblade /ED+

Unit size		13	21
<b>Cooling</b>			
Cooling capacity	(3) (4) kW	13.1	19.8
Air flow	m³/h	4000	4000

(1) Air inlet 35°C/30%RH; Ambient temperature 35°C with Blue Box condensing unit.

(2) Air inlet 35°C/30%rh, water temperature 13/18°C

(3) Air inlet 35°C/30%RH; Ambiente temperature 35°C with Blue Box air cooled condenser.

(4) Data with Axial fans, Radial fans allow a capacity booster

This datasheet contains datas referred to the basic and standard version of the products; they could be modified by the Constructor in any moment. For details please refer to the specific documentation.



DIRECTION RÉGIONALE DE LA POLICE JUDICIAIRE  
Paris- France  
Kappa V Evo, Datatech CW, Coolblade CW  
Supply - 640 kW



# IT cooling product range



## Datatech + > 7÷100 kW

Precision direct expansion air-conditioners, air cooled or water cooled for technological environments. Features all brushless DC inverter driven components.



## Datatech

### /ED > 6÷104 kW

Precision direct expansion air-conditioners, air cooled or water cooled for technological environments. Available also as DC/FC (Dual Cooling/Free Cooling) version.

### /CW > 6÷220 kW

Precision chilled water air-conditioners for technological environments. Available also as DW (Dual Water) version.



## Datatech /PFW > 70÷260 kW

Precision high capacity chilled water air-conditioners for technological environments with plenum fan.



## Coolblade

### /CW > 16÷27 kW

Chilled water In Row air conditioners for IT applications. Available also as DW (Dual Water) version.

### /DX > 12÷25 kW

In Row direct expansion cooler for IT applications



## Coolblade /DX & Epsilon Echos + /LE > 12÷25 kW

In Row direct expansion cooler for IT applications + external motocondensing unit inverter driven compressor



## Coolblade /ED+ & RC Green > 12÷24 kW

In Row direct expansion cooler for IT applications + external remote aircooled condenser



**Blue Box Group S.r.l.**

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12165000502 In Row cooling\_EN

# Datatech +

Precision air conditioners with inverter driven brushless DC compressor

## General

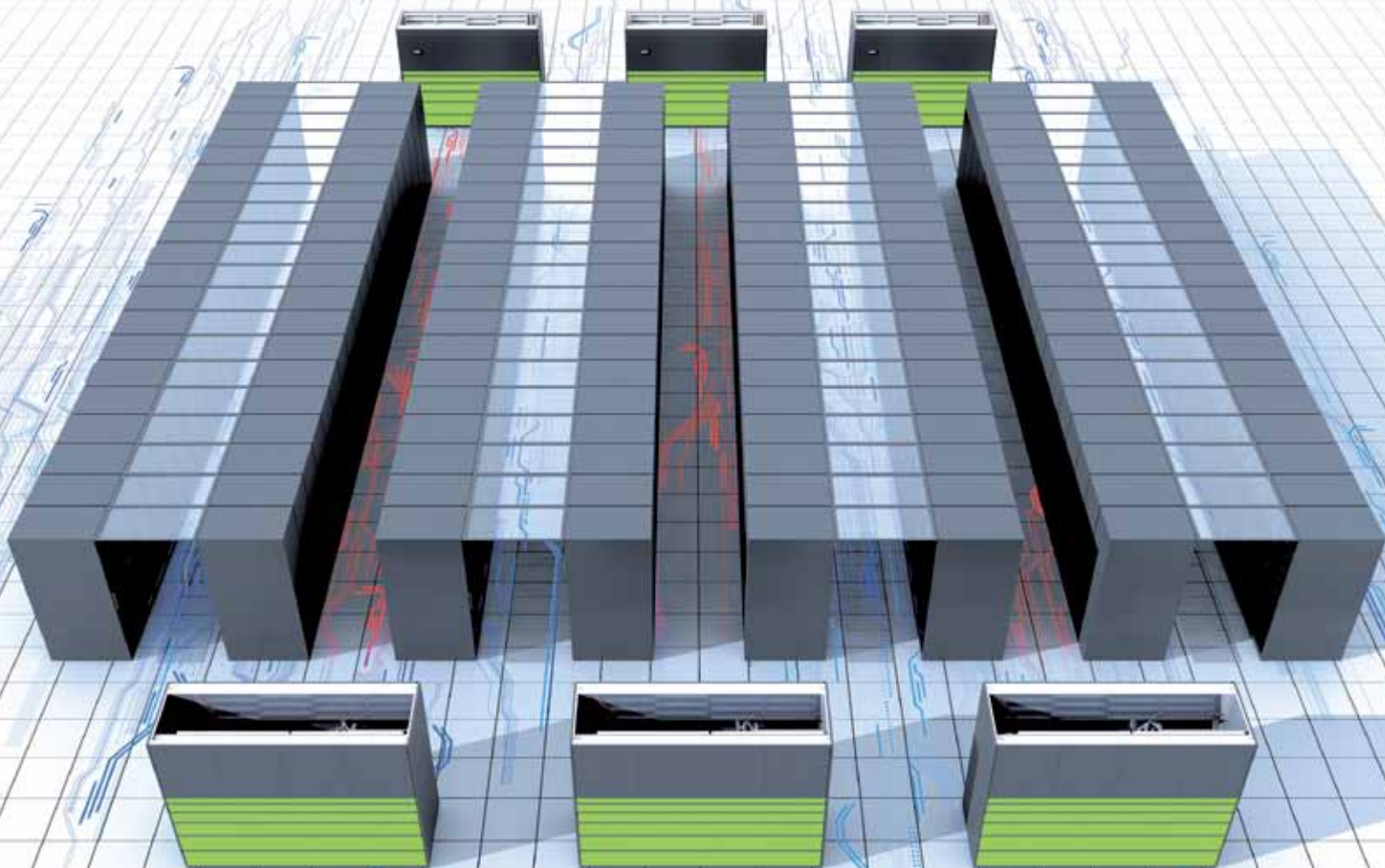
Datatech+ represents the state of the art as regards efficient, precise and reliable cooling of Data Processing Centres, small and medium-sized computer rooms, laboratories and technological environments in general. The combination of inverter-controlled brushless DC compressors, EC fans and electronic expansion valves together with a sophisticated control algorithm allows the highest performance to be achieved as required for the air conditioning of technological equipment.

## Quick facts

- ▶ High sensible heat removal rate.
- ▶ Exceptional efficiency at partial loads
- ▶ Regulation of the inverter driven compressor between 30 and 120% of the rated value.
- ▶ Constant and precise control of thermo-hygrometric variables.
- ▶ Dual power supply available as option
- ▶ Hot gas re-heat available
- ▶ Wide capacity range

**DATATECH**  
 BlueBox





# WITH INVERTER

## Redundancy means more efficiency

The higher efficiency of the refrigerant circuit at part load conditions grants the maximum benefit in (n+1) redundancy applications

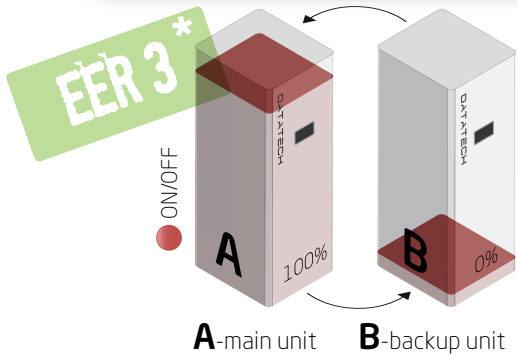


# REDUNDANCY

The higher efficiency of the refrigerant circuit at part load conditions grants the maximum benefit in (n+1) redundancy applications: instead of keeping one or more units in standby as a backup, all of them will work together each one at lower capacity, obtaining in this way a lower initial investment and a lower operating cost.

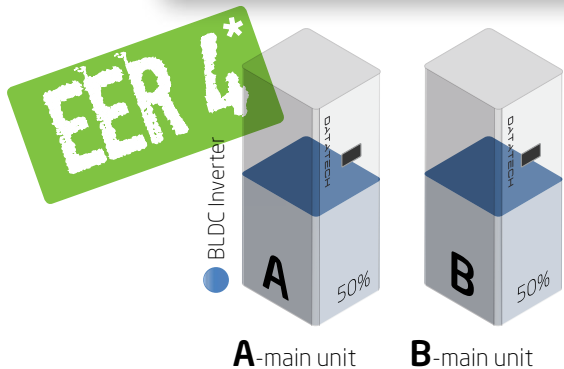
## RUNNING-STAND BY

primary with secondary unit used only as a backup



## SMART DUET

both units used at partial load

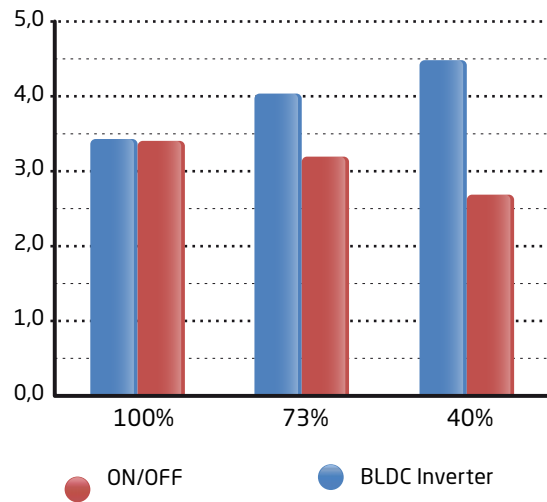


## BRUSHLESS DC

The brushless DC motor is inherently more efficient than an AC motor and is designed to be speed modulated.

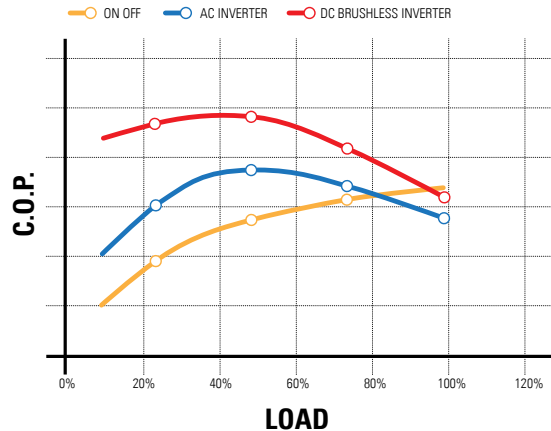
**ACCURACY**  
**+/- 0,5 °C**

## NET EFFICIENCY



The compressor can modulate between 30% and 120% of its nominal speed.

BLDC compressor is intrinsically more efficient of Digital Scroll® at reduced load.



## LOW NOISE EMISSION AT PARTIAL LOAD

At reduced load, compressor and fan operate at lower speed, ensuring lower sound emission 120 rps. Extra capacity is available for temporary peaks.

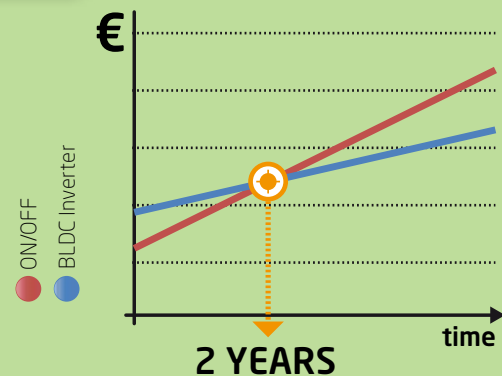


## PEAK LOAD MANAGEMENT

Inverter units are designed at 90 rps when maximum is 120 rps. Extra capacity is available for temporary peaks.



## RETURN OF INVESTMENT





# Datatech product range



## Datatech /ED > 6÷104 kW

Precision direct expansion air-conditioners, air cooled or water cooled for technological environments. Available also as DC/FC (Dual Cooling/Free Cooling) version.



## Datatech /CW > 6÷220 kW

Precision chilled water air-conditioners for technological environments. Available also as DW (Dual Water) version.



## Datatech + > 7÷100 kW

Precision direct expansion air-conditioners, air cooled or water cooled for technological environments. Available only with brushless DC inverter driven components.



## Coolblade & Coolmate > 16÷27 kW

Chilled water in-row air conditioners for high density IT applications.



A Svecon Group company

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