

COOLBLADE BTD



COOLBLADE BTD

In Row cooler
for IT applications
12÷27 kW

BlueBox 
by Swegon

IN ROW COOLING

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

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

Available in
chilled water
(CW-DW)
direct
expansion
version with
compressor
(ED+)
& without
compressor
(DX)

Very high
efficiency
(increased in
axial fan
configuration)

Full
redundancy
option
for Tier IV
datacenter
(DW version)

High
installation
flexibility

High heat
removal
on small
footprint

Outdoor chiller
for Coolblade
CW-DW,
motocondensing
unit for
Coolblade DX,
air cooled con-
denser for
Coolblade ED+

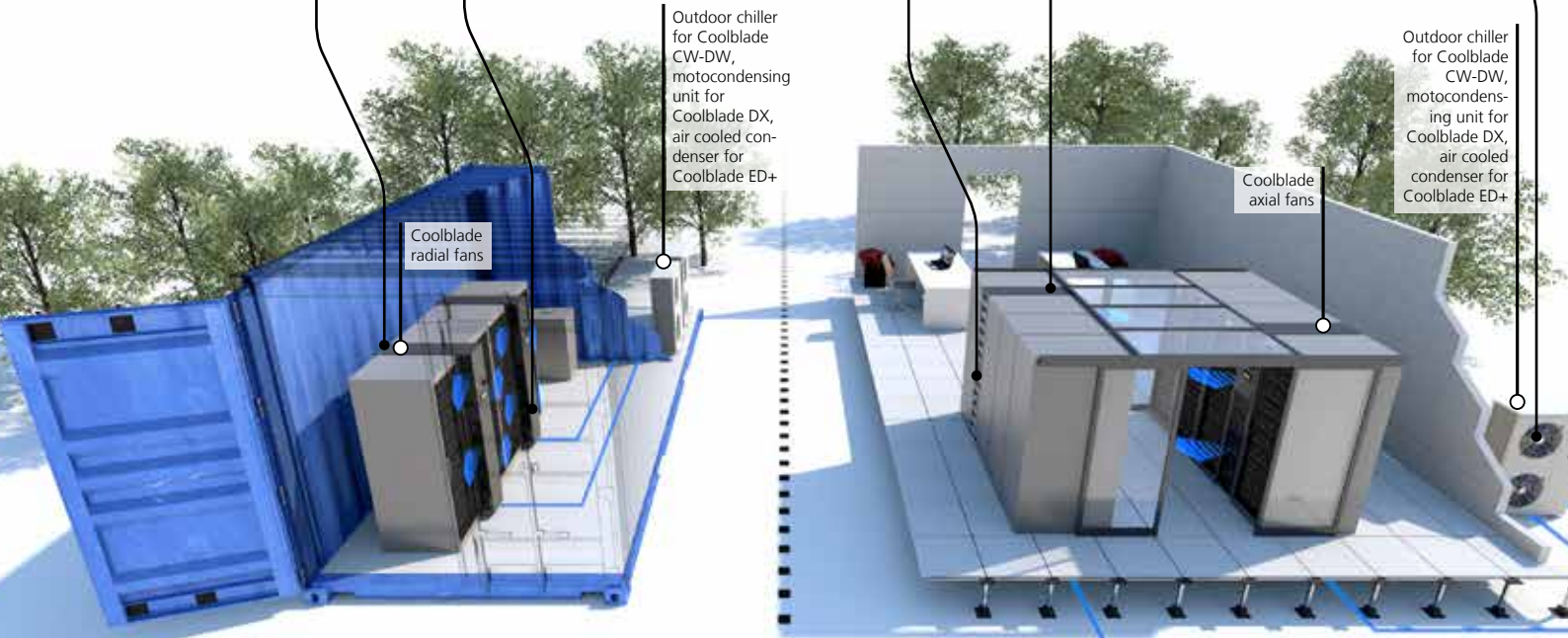
Outdoor chiller
for Coolblade
CW-DW,
motocondensing
unit for
Coolblade DX,
air cooled
condenser for
Coolblade ED+

Coolblade
radial fans

Coolblade
axial fans

RADIAL

AXIAL



COOLBLADE BTD ED+
DIRECT EXPANSION VERSION
(with compressor)

FULL CONFIGURABILITY

FILTERS
REFRIGERANT
CONNECTIONS
ELECTRICAL
PANEL

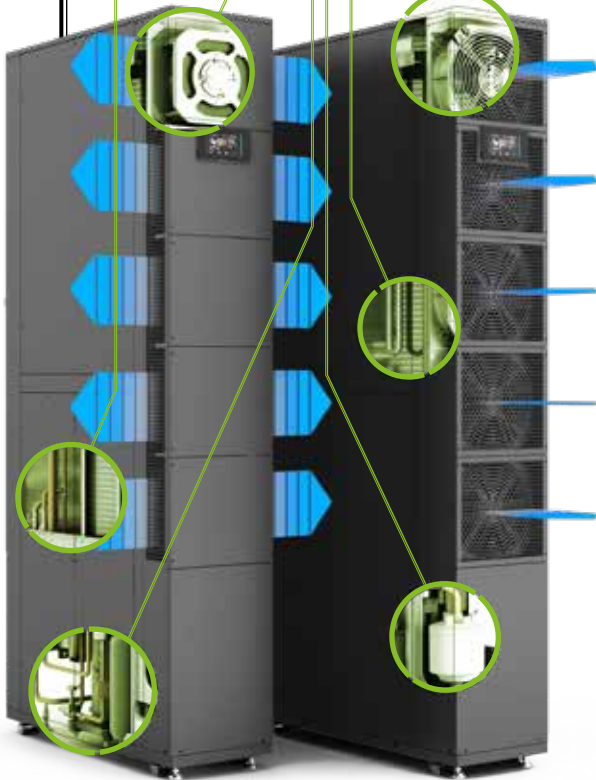
DC
INVERTER
COMPRESSOR

RADIAL
FANS
HOT
SWAPPABLE

HUMIDIFIER

HEATERS

AXIAL
FANS
HOT
SWAPPABLE



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

FULL ACCESSIBILITY

FILTERS
PRESSURE
SWITCHES
VALVES
CHILLED WATER
CONNECTIONS
REFRIGERANT
CONNECTIONS

RADIAL
FANS

AXIAL
FANS



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.

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 BTD 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 BTD /DX

| Unit size | /DX 12/12L | /DX 19/19L | /DX 25/25L |
|-----------------------------|------------|------------|------------|
| Cooling | | | |
| Cooling capacity (1) (4) kW | 12,5 | 19,1 | 24,4 |
| Air flow m ³ /h | 3300 | 4200 | 4900 |

Coolblade BTD /CW /DW

| Unit size | /CW 16/16L | /CW 27/27L | /DW 22/22L |
|-----------------------------|------------|------------|------------|
| Cooling | | | |
| Cooling capacity (2) (4) kW | 16.5 | 27.2 | 21.8 |
| Air flow m ³ /h | 3200 | 4800 | 4800 |

Coolblade BTD /ED+

| Unit size | 13 | 21 |
|-----------------------------|------|------|
| Cooling | | |
| Cooling capacity (3) (4) kW | 13.1 | 19.8 |
| Air flow m ³ /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.

EFFICIENCY

NSEER ^{ED}/_{DX} } **3.3** TO **4.2** ⁽¹⁾
net sensible cooling capacity
unit fan power + compressor power

NSEER ^{CW}/_{DW} } **50** TO **125** ⁽²⁾
net sensible cooling capacity
unit fan power

DC INVERTER SCROLL COMPRESSOR

- Higher efficiency at part load
- Continuous modulation according to the load
- Accurate temperature control and stability
- Minimum water volume

energy saving

up to **12% per year**

(compared with standard scroll compressor)

FLEXIBILITY

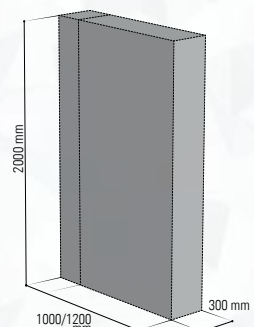
The unit has been developed to provide maximum flexibility both during the dataroom design stage and during on site installation.

- 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
sqm per unit

90
kW/sqm



The control platform for IT cooling applications, based on webserver.

Simple & Immediate
Human Machine
Interface

More than 20 years
Experience within Data
Cooling
Requirements



Unique Software
Features

A Control
Continuously Evolving
following the Latest
Industry
Requirements



AUTOMATIC AIR FLOW MODULATION BASED ON:



REMOTE TEMPERATURE

push the fresh air where is needed & control it with smooth and continuous adjustment



REMOTE DELTA PRESSURE

avoid any risk of hot spot optimizing the fan energy consumption

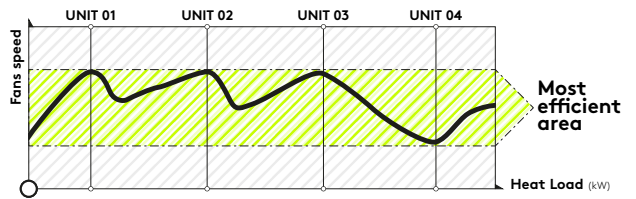


DELTA TEMPERATURE

treat, move and cool only the server's needed amount of air without any waste



**CONTINUOUS
DYNAMIC
OPTIMIZATION**



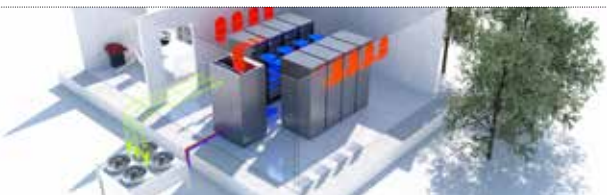
WORK ALWAYS WITH THE
RIGHT NUMBER OF NEEDED UNITS
IN THEIR
MOST EFFICIENCY WORKING POINT



CHILLED WATER SYSTEM

ONE TO ONE MULTISYSTEM

- direct high level communication
- scalable solution (TIER III / TIER IV design)
- variable water flow



INDIRECT FC SYSTEM

FLOATING WATER SET POINT

minimize the overall system consumption

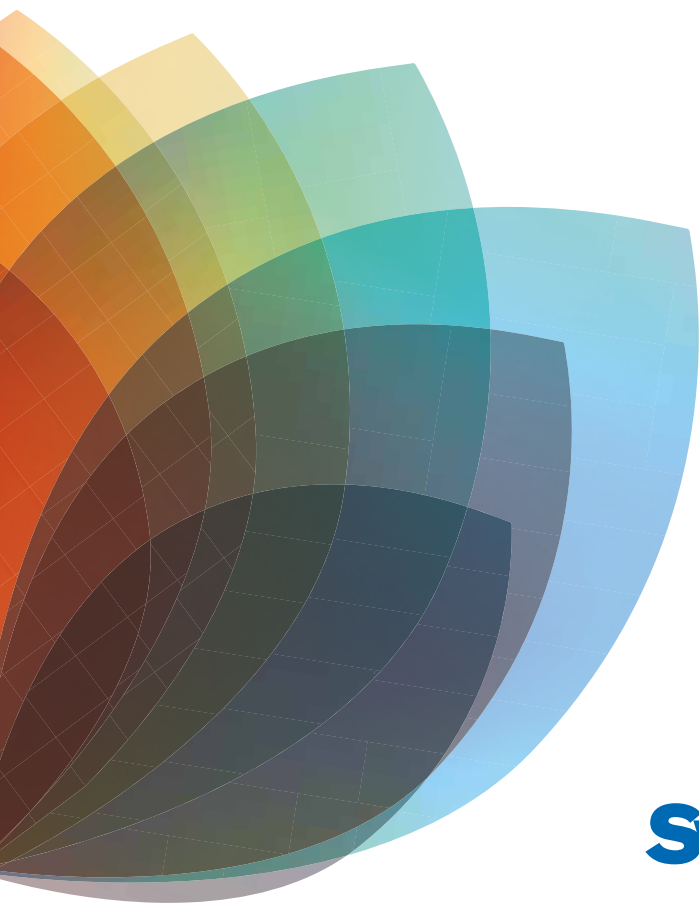


DIRECT EXPANSION SYSTEM

internal unit drive continuously condenser based on application requirements

- homogeneous control
- easier site operations
- adapt to site noise requirements

Feel good **inside**



Swegon 