



COOLBLADE



Climaveneta

Europe Company

Dedicated Products for Dedicated Industry

Climaveneta COOLBLADE series high efficiency constant temperature and humidity air conditioner is specialised by latest technology in the world. Its design fully consider the special request of data center and assure the reliability of the data center as always.



Global
efficiency

Outstanding
performances

Total
versatility

Intelligent
control

Total
compatibility

DEDICATED INDUSTRY

- Bank
- Medical service
- Transportation
- Mobile operator
- Museum and archive
- Large and medium enterprise

KEY CUSTOMERS

- Railways and expressway
- Internet provider
- Armed forces
- Public sector
- Radio and TV company
- TELECOM operator

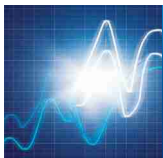
SPECIAL APPLICATION

- Equipment room
- Call center
- Data center
- Internet Data Center
- Cloud Computing Center

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Introduction



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| 2 | MAIN SWITCH |
| 3 | ELECTRIC HEATER |
| 4 | EC FANS |
| 5 | COMPRESSOR |
| 6 | DRY FILTER |
| 7 | LIQUID LINE VALVE |
| 8 | SIGHT GLASS |
| 9 | EXPANSION VALVE |
| 10 | HUMIDIFIER |
| 11 | DEHUMIDIFICATION VALVE |
| 13 | TEMP. & HUMIDITY SENSOR |
| 14 | CONTROL PANEL |

Coolblade means not only comply with the severest environmental request but also the specific requirement. Its design satisfies the request of EFFICIENCY, FLEXIBILITY, OPERATING RELIABILITY and RESPECT FOR THE ENVIRONMENT. COOLBLADE has been created shown the excellent performance which guarantees high air conditioning quality.

OUTSTANDING PERFORMANCE

Nowadays efficiency is no longer considered as just energy saving in respect of the single unit, but takes into account both the PERFORMANCE of the whole system and its COMPLETE RELIABILITY as well as the EXPANDABILITY.

COOLBLADE as a solution for data center cooling equipment, we insist to select high tier components and enhance the communication ability to BMS.

Standard Configuration

- SCROLL compressors
- Thermal expansion valve
- Electric expansion valve (OPT)
- EC fan
- Condenser control (for DX indoor unit)
- Electric heater
- Electrode humidifier
- Semi-graphic control display
- Communication to BMS

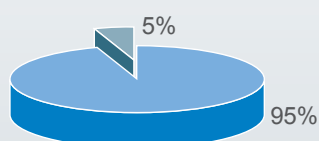
EXCELLENT SHR PERFORMANCE

As is known to all, electronic equipment generates huge amount of SENSIBLE heat loads and it needs dedicated air conditioning to deal with the heat load.

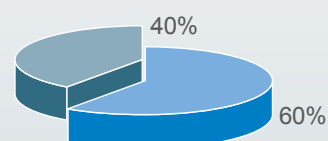
That is why COOLBLADE has been designed to ensure maximum SENSIBLE cooling capacity but to limit the LATENT capacity, which considered as large waste of energy.

The most important is to use all the energy for room temperature control.

The result is a high SHR, minimum 0.9 and maximum 1. In order to have the utmost SENSIBLE cooling capacity and no latent capacity.



SHR for Data Center



SHR for COMFORT Application



EC INVERTER FANS

The new technology with electronically commutated motor increases the efficiency of the COOLBLADE system, optimizing operation costs through state-of-the-art electronic controls, which are used to improve unit performance as below:

- Flow rate will be self-adjustable
- Higher cooling capacity
- External pressure is self-regulation
- Lower noise level

Therefore, the best operation performance can be ensured at any time.

Especially in below aspects :

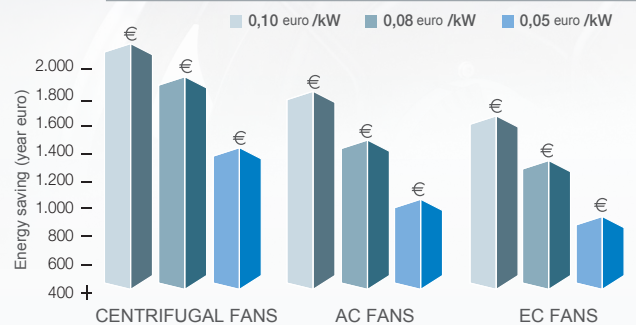
1. Continuous adjustment of air flow
2. Intelligent and low-noise system for air conveyance
3. Up to 45% energy saving in the chilled water units

THE MOST COMPACT DESIGN

As is known to all that the cooling loads (W/m^2) in technological applications keeps continuously increasing.



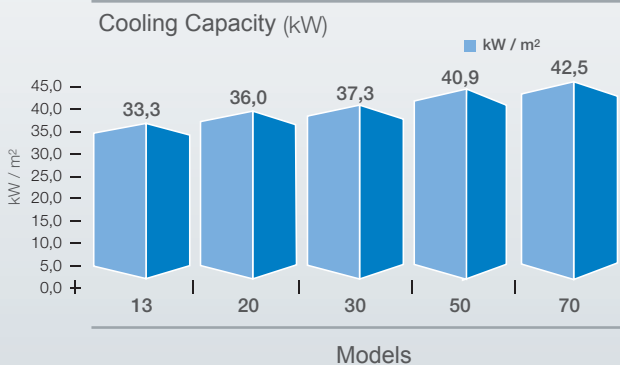
EC INVERTER FANS TECHNOLOGY The most advanced solution for energy saving



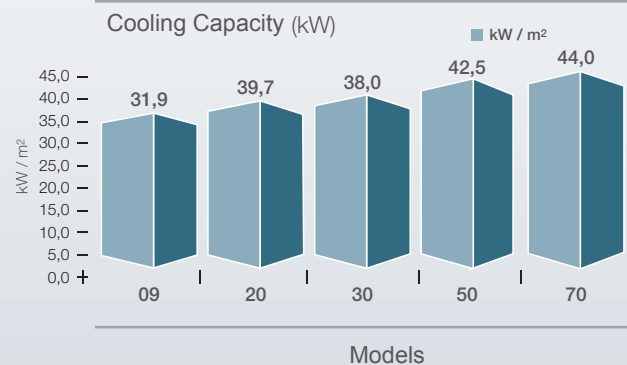
Energy saving by EC INVERTER Fans Vs. Traditional Fans

This requires the better performance from the air-conditioning system and taking as little space as possible, which provides more space for servers. Because space means value, COOLBLADE is the most energy-saving air conditioner in the market.

DIRECT EXPANSION RANGE



CHILLED WATER RANGE

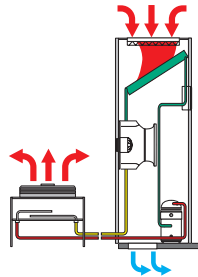




Total Flexibility

Flexibility is an important factor to judge the performance of the equipment. COOLBLADE provides customers with comprehensive modular design to meet various requirements.

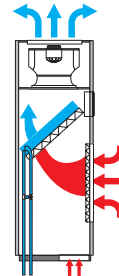
TYPES OF COOLING



DIRECT EXPANSION AIR COOLED

Cooling capacity: 7-100kW

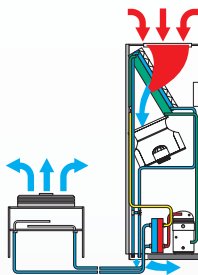
Out door unit: Remote condenser



SINGLE COIL CHILLED WATER DUAL COIL CHILLED WATER

Cooling capacity: 8-212kW

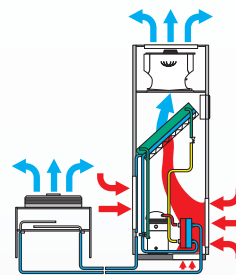
Chilled water from chiller
(Chilled water flow is adjusted by three-way valve (OPT) based on heating load)



AIR COOLED DUAL FLUID WATER COOLED DUAL FLUID

Cooling capacity: 24-101kW

Primary cooling coil: Chilled water coil
Secondary cooling coil: Direct expansion coil
It improves the reliability of the units sharply.



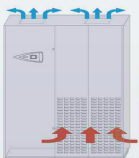
FREE COOLING

Cooling capacity: 24-103kW

Primary cooling coil: Direct expansion coil
Secondary cooling coil by free cooling:
Cooling water from dry cooler
(When the outdoor temperature is lower, the free cooling coil will fulfil all the cooling load without the compressor running)

AIRFLOW CONFIGURATION

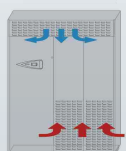
OVER



Front intake and top delivery is the normal type of OVER unit and it's available for all the COOLBLADE units.

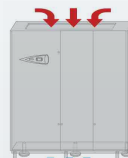


Front intake and top front delivery by built-in plenum is only available for SAF008-025.

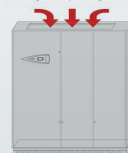


All the COOLBLADE can fulfill the front air outlet by extra plenum (The plenum is OPT and supplied by the factory)

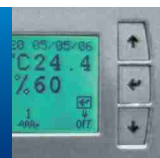
UNDER



Top intake and underfloor delivery is the normal type of UNDER unit and it's available for all the COOLBLADE units.



If need to control the air outlet direction, the grilles and panels can be installed at site. (Grills and panels supplied and installed by customer)



COOLBLADE has an intelligent microprocessor, allows it to keep a intelligent running over all the operating and environmental parameters of the site by PID control. The customer can set the parameters at site according to the specify environment request.



ELECTRONICS

STANDARD FUNCTIONS

- Semi-graphic display 132 x 64 pixel
- Programmable software
- ICONS Graphic Display
- General alarm
- Automatic reset after blackout
- Compressor FIFO management
- Integral LAN system
- Standby management
- Automatic rotation
- Fault alarms
- Clock card
- Emergency function
- Factory Password
- Delay restart

MAIN OPTIONS

- Serial cards for BMS interconnection
- Fire-smoke alarm
- Water leakage alarm
- Electronic expansion valve
- 7 inch touch screen

OPTIONS AND MAIN ACCESSORIES



STANDARD

Structure

- High tier EC fan
- High efficiency COPELAND scroll compressor
- High and low pressure switch
- G4 standard filter configuration
- R-410A refrigerant
- Electrode humidifier
- Electric heater
- Stepless speed regulation of outdoor fan

OPTION

Structure

- DC inverter compressor
- Plenum with frontal grills

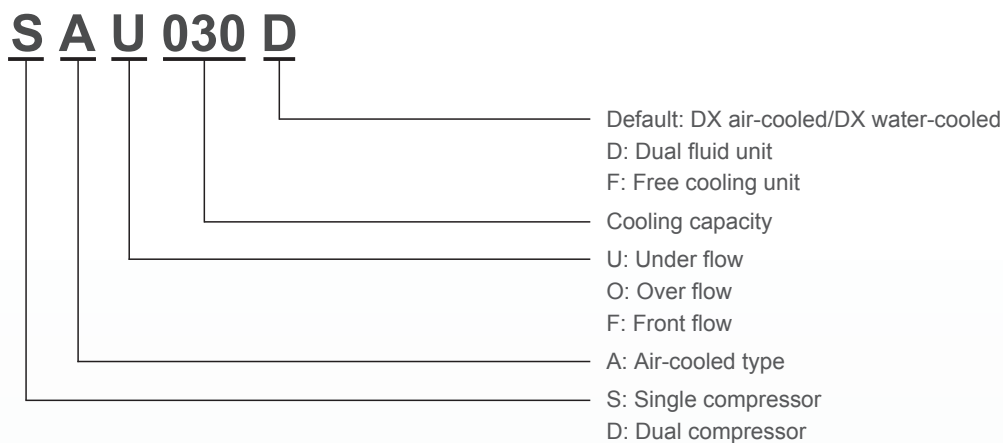


Excellent Compatibility

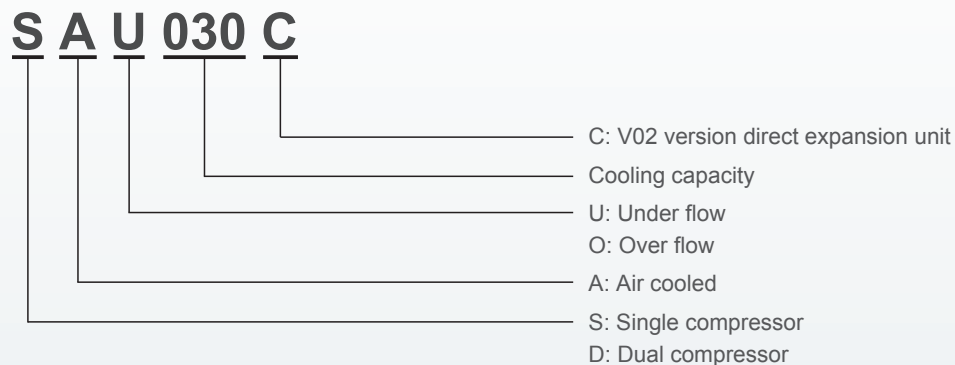
Nomenclature

CLIMAVENETA COOLBLADE products include several series according to different refrigeration types: direct expansion air cooled unit, single coil chilled water unit, dual coil chilled water unit, dual fluid air cooled unit, dual fluid water cooled unit and water-cooled unit with free cooling.

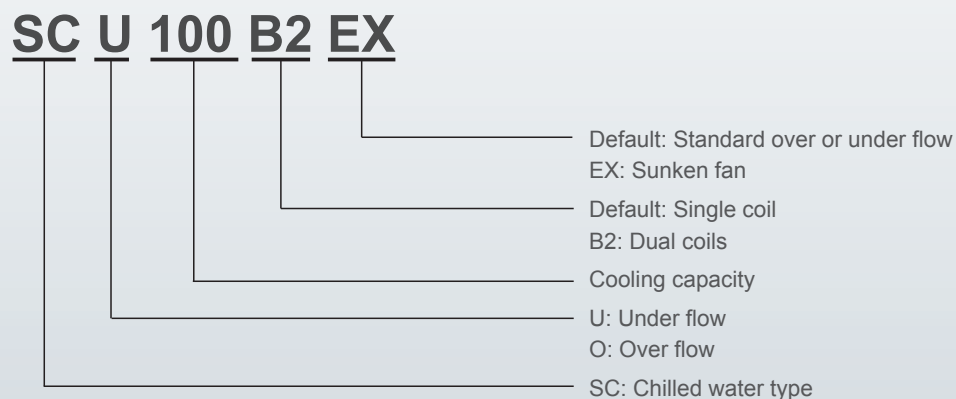
DIRECT EXPANSION UNIT



V02 DIRECT EXPANSION UNIT



CHILLED WATER UNIT



COOLBLADE IS TOTAL COMMUNICATION

COOLBLADE offers various solutions for interconnection to the most modern BMSs and devote to satisfy various needs in "intergrated communication system".

GLOBAL SUPERVISION

The unit controller can manage data through the built-in protocol, including:

- Monitor the unit operation state from remote controller
- Recording of data and alarms

All the monitoring is implemented by the dedicated serial cards and the monitoring system of LOCAL and REMOTE mode.

ADVANCED SUPERVISION

Available to all the most common BMSs in the market today, such as:

- MODBUS
- BACNET
- SNMP/TCPIP

It can satisfy every single customer's requirement and offer the possibility of communicating with the global network.



RESPECT FOR THE ENVIROMENT

COOLBLADE embodies the environmantal friendliness totally, which meets the latest environment policy of health and safety for humans. In this sense, the use of recyclable materials and eco-compatible refrigerants R410A according to current standards and regulations make COOLBLADE a state-of-the-art product.

LOW NOISE OPERATION

In order to satisfy increasingly requirements of lower noise pollution, COOLBLADE can customize its noise performance according to the customers' request and the site condition by:

- EC FANS (STD) with air flow modulation capability
- Panel with internal soundproofing material (STD)

MAINTENANCE

The design of the new COOLBLADE models was based on the need to simplify routine and extraordinary maintenance work during the lifetime of the products.

The refrigerant circuit is completely independent from the fan section, thereby allowing routine maintenance to be carried out also with the unit in operation.

All service work, even the most critical ones, can be accomplished by a full front access.

Because of the hinge joint, all the front panels are openable and can even be removed .



Type: DIRECT EXPANSION, AIR COOLED,
Over flow, front flow or underflow version



UNIT DESCRIPTION

Cooling capacity: 7~25kW

Particularly suitable for IDC, data centers and etc.

STANDARD CONFIGURATION

- Indoor unit and outdoor air-cooled condenser.
- Outstanding rust protection thanks to galvanized steel sheet and powder-coated painting.
The panels complete with internal soundproofing material.
- Compressors and other key components from world leading brand such as COPELAND compressor.
- Indoor fan adopts the high efficiency EC fan.
The fans can fulfill maximum efficiency and low noise.
- Electrical panel comply with IEC 204-1/EN60204-1.
- Standard G4 filter, F5 is optional which is in accordance with CEN-EN 779, 90.1% filter efficiency, conforming to ASHRAE standard.
- The microprocessor follows the FIFO to control the compressor's start-up times. The unit can convey the alarm and connect the customer's receiving equipment automatically.
- Other standard components: thermal expansion valve, high/low pressure safety switch, sight glass, dry filter, etc.

Direct Expansion Air Cooled (DXA) Unit (Model: 008-025)

Model	SAU/O/F				
	008	013	017	020	025
Power supply V/Ph/Hz	380/3N/50				
The refrigerant	R410A				
Cooling performances					
Total cooling capacity (1) kW	7.5	12.5	15.5	18.5	25.0
Sensible cooling capacity (1) kW	6.8	11.3	14.0	16.7	22.5
Sensible heat ratioSHR(1)	0.90	0.90	0.90	0.90	0.90
Compressor					
Quantity	1	1	1	1	1
Compressor power input (1) KW	1.79	3.35	4.09	4.88	6.44
EC Fan					
Air volume m³/h	3000	3000	4800	5000	5750
Quantity	1	1	1	1	1
EC fan power kW	0.32	0.32	0.55	0.63	0.82
External static pressure Pa	20-350				
Noise(2) dB(A)	52	53	56	56	56
Humidifier					
Humidification capacity kg/h	3	3	5	5	5
Power input kW	2.25	2.25	3.75	3.75	3.75
Electric heater					
Steps	3	3	3	3	3
Heating capacity kW	7	7	7	7	7
The outdoor unit					
Outdoor unit model	C17	C24	C24	C29	C33
Outdoor unit power kW	0.23	0.59	0.59	0.59	0.46
Indoor & outdoor unit					
Total power input kW	2.3	4.3	5.2	6.1	7.7
Energy efficiency rating	1	1	1	1	2

NOTE

- (1)- Working conditions: return air 24°C, relative humidity 50%, external static pressure 20Pa, outdoor 35°C.
- (2)- Measured at 2 meters in front of the unit, 1.5 meters height.
- (3)- The electric heating capacity and humidification capacity in the table are standard configuration. If the customer needs to increase the heating or humidification capacity of the unit, please consult the CLIMAVENETA factory.
- (4)- The unit design according to GB19413.
- (5)- If the project requires units with other energy efficiency levels, please consult the factory.



DIMENSION/WEIGHT

Direct Expansion Air Cooled (DXA) Unit

Mode	SAU/O/F				
	008	013	017	020	025
Width mm	600		800		
Depth mm	550		700		
Height mm	1980		1980		
Net Weight kg	130	145	210	215	225



Type: DIRECT EXPANSION, AIR COOLED
Over flow or under flow version



UNIT DESCRIPTION

Cooling capacity range: 30~110kW

Particularly suitable for IDC, data centers and etc.

STANDARD CONFIGURATION

- Indoor unit and outdoor air-cooled condenser.
- Outstanding rust protection thanks to galvanized steel sheet and powder-coated painting.
The panels complete with internal soundproofing material.
- Compressors and other key components from world leading brand such as COPELAND compressor.
- Indoor fan adopts the high efficiency EC fan.
The fans can fulfill maximum efficiency and low noise.
- Electrical panel comply with IEC 204-1/EN60204-1.
- Standard G4 filter, F5 is optional which is in accordance with CEN-EN 779, 90.1% filter efficiency, conforming to ASHRAE standard.
- The microprocessor follows the FIFO to control the compressor's start-up times. The unit can convey the alarm and connect the customer's receiving equipment automatically.
- Other standard components: thermal expansion valve, high/low pressure safety switch, sight glass, dry filter, etc.

Direct Expansion Air Cooled (DXA) Unit (Model: 030C-110C)

Model	SAU/O				DAU/O									
	030C	035C	040C	045C	035C	045C	050C	060C	070C	080C	090C	100C	110C	
Power supply V/Ph/Hz	380/3N/50													
The refrigerant	R410A													
Cooling performances														
Total cooling capacity(1) kW	30.3	35.2	40.3	43.4	35.6	45.7	50.2	60.7	70.4	80.2	87.6	101.0	110.0	
Sensible cooling capacity(1) kW	29.1	34.1	37.0	41.2	34.0	44.6	48.0	58.3	68.8	75.8	85.3	95.4	106.0	
Sensible heat ratioSHR(1)	0.96	0.97	0.92	0.95	0.96	0.98	0.96	0.96	0.98	0.95	0.97	0.94	0.96	
Compressor														
Quantity	1	1	1	1	2	2	2	2	2	2	2	2	2	
Compressor power input(1) kW	7.52	8.73	9.65	10.2	8.34	11.40	12.30	14.10	16.20	18.90	20.30	24.60	24.50	
EC Fan														
Air volume m³/h	9500	10500	10500	14200	10500	13500	14050	21000	20500	21500	27300	27500	31500	
Quantity	1	1	1	1	1	1	1	2	2	2	2	2	3	
EC fan power kW	1.95	2.20	2.20	3.31	2.20	3.15	3.34	4.73	4.95	5.43	6.50	6.70	7.50	
External static pressure Pa	20~350													
Noise(2) dB(A)	57	57	57	60	56	59	60	60	60	61	63	63	61	
Humidifier														
Humidification capacity kg/h	5	5	5	5	5	5	5	8	8	8	8	8	8	
Power input kW	3.75	3.75	3.75	3.75	3.75	3.75	3.75	6	6	6	6	6	6	
Electric heater														
Steps	3	3	3	3	3	3	3	3	3	3	3	3	3	
Heating capacity kW	9	9	9	9	9	9	9	18	18	18	18	18	18	
The outdoor unit														
Outdoor unit model	C42	C49	C58	C58	C24	C33	C33	C42	C49	C58	C58	C74	C82	
Outdoor unit power kW	1.18	1.18	1.18	1.18	0.59	0.46	0.46	1.18	1.18	1.18	1.18	1.77	1.77	
Indoor & outdoor unit														
Total power input kW	10.7	12.1	13.0	14.7	11.7	15.5	16.6	21.2	23.5	26.7	29.2	34.8	35.5	
Energy efficiency rating	2	2	1	2	1	1	1	2	1	1	1	1	1	

NOTE

- (1)- Working conditions: return air 24°C, relative humidity 50%, external static pressure 20Pa, outdoor 35°C.
- (2)- Measured at 2 meters in front of the unit, 1.5 meters height.
- (3)- The electric heating capacity and humidification capacity in the table are standard configuration. If the customer needs to increase the heating or humidification capacity of the unit, please consult the CLIMAVENETA factory.
- (4)- The unit design according to GB19413.
- (5)- If the project requires units with other energy efficiency levels, please consult the factory.



H

DIMENSION/WEIGHT

Direct Expansion Air Cooled (DXA) Unit

Model	SAU/O				DAU/O								
	030C	035C	040C	045C	035C	045C	050C	060C	070C	080C	090C	100C	110C
Width mm	890			1330				1740			2180		2590
Depth mm	990			990				990			990		990
Height mm	1990			1990				1990			1990		1990
Net Weight kg	325	330	335	380	390	390	400	565	605	620	650	665	925



Type: SINGLE COIL CHILLED WATER
Over flow or under flow, sunken fan version



UNIT DESCRIPTION

Cooling capacity: 8~206kW

Particularly suitable for IDC, data centers and etc.

STANDARD CONFIGURATION

- Indoor unit.
- Outstanding rust protection thanks to galvanized steel sheet and powder-coated painting.
The panels complete with internal soundproofing material.
- Key components from world leading brand such as 2-way or 3-way valve from JHONSON CONTROL or BELIMO , controller from CAREL.
- High efficient EC fan.
- Standard G4 filter, F5 is optional which is in accordance with CEN-EN 779, 90.1% filter efficiency, conforming to ASHRAE standard.
- Electrical panel comply with IEC 204-1/EN60204-1.

Single Coil Chilled Water Unit

Model	SCU/O(EX)																			
	009	011	016	020	025	030	035	050	060	070	080	090	100	120	140	160	180	200	220	
Power supply	V/Ph/Hz	380/3N/50																		
Cooling performances(1)																				
Total cooling capacity(1)	kW	8.8	10.8	16.2	21.9	25.8	31.3	36.0	53.6	65.0	76.5	86.9	99.2	110.0	119.0	140.0	160.0	173.0	200.0	206.0
Sensible cooling capacity(1)	kW	8.8	10.8	16.2	21.9	25.8	31.3	36.0	53.6	65.0	76.5	86.9	99.2	110.0	119.0	140.0	160.0	173.0	200.0	206.0
SHR(1)		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Water side(1)																				
Water Flow(1)	m³/h	1.3	1.6	2.3	3.1	3.7	4.5	5.2	7.7	9.3	11.0	12.5	14.3	15.8	17.1	20.2	22.9	24.8	28.7	29.6
Total pressure drops(1)	kPa	20.61	23.53	22.15	45.79	29.30	43.60	50.80	85.40	77.30	76.80	68.80	71.80	86.50	80.00	79.30	66.60	63.80	67.90	74.00
Cooling performances(2)																				
Total cooling capacity(2)	kW	8.9	11.1	16.5	21.8	24.0	30.0	35.2	50.2	64.0	74.0	84.1	96.0	105.0	116.0	140.0	158.0	176.0	198.0	212.0
Sensible cooling capacity(2)	kW	8.9	10.6	16.5	20.6	21.2	26.2	30.4	43.9	54.1	64.6	72.8	83.1	92.4	98.2	116.0	132.0	142.0	164.0	170.0
SHR(2)		1.00	0.95	1.00	0.94	0.88	0.87	0.86	0.87	0.85	0.87	0.87	0.87	0.88	0.85	0.83	0.84	0.81	0.83	0.80
Water side(2)																				
Water flow(2)	m³/h	1.5	1.9	2.8	3.7	4.1	5.2	6.1	8.6	11.0	12.7	14.5	16.5	18.1	20.1	24.0	27.1	30.2	34.1	36.4
Total pressure drops(2)	kPa	30.0	34.7	32.6	64.3	37.5	56.7	69.0	105.0	105.0	100.0	90.3	94.7	112.0	108.0	110.0	91.0	92.8	93.0	108.0
EC Fan																				
Air flow		2750	2890	5390	5580	6000	7000	7600	13000	13000	16000	18000	20550	23500	23600	27000	31000	32500	38000	38000
Quantity		1	1	2	2	1	1	1	1	1	2	2	2	2	2	3	3	3	3	3
Over/under flow EC fan power input kW		0.34	0.41	0.64	0.74	0.90	1.33	1.89	1.80	1.90	2.98	4.20	3.37	4.20	4.40	4.40	6.30	7.16	7.49	7.49
Sunken EC fan power input	kW	/	/	/	/	0.77	1.10	1.55	1.47	1.56	2.58	3.67	2.92	3.30	3.53	3.71	5.25	6.04	6.20	6.23
ESP	Pa	20~350																		
Humidifier																				
Humidification capacity	kg/h	3	3	5	5	5	5	5	8	8	8	8	8	8	8	10	10	10	10	10
Power input	kW	2.25	2.25	3.75	3.75	3.75	3.75	3.75	6	6	6	6	6	6	6	7.5	7.5	7.5	7.5	7.5
Electric heater																				
Steps		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Heating capacity	kW	4	4	8	8	9	9	9	18	18	18	18	18	18	18	18	18	18	27	27
Water inlet/outlet connection																				
Connection size		F3/4"		F1"		F1"1/4			DN40	DN40	DN50	DN50	DN50	DN50	DN50	DN50	DN65	DN65	DN65	DN65

NOTE

- (1)-Working condition: return air 32°C,relative humidity 30%, chilled water inlet/outlet temp. 12°C/18°C
 (2)-Working condition: return air 24°C,relative humidity 50%, chilled water inlet/outlet temp. 7°C/12°C
 (3)-The electric heating capacity and humidification capacity in the table are standard configuration. If the customer needs to increase the heating or humidification capacity of the unit, please consult the CLIMAVENETA factory.



DIMENSION/WEIGHT

Single Coil Chilled Water Unit

Model		SCU/O(EX)																		
		009	011	016	020	025	030	035	050	060	070	080	090	100	120	140	160	180	200	220
Width	mm	600		1000		800			1490				1990			2490			2990	
Depth	mm	500		500		700			890				890			890			890	
Height	mm	1980		1980		1980			1980				1980			1980			1980	
Net Weight	kg	120	130	200	210	245	260	290	369	379	385	396	476	495	516	610	650	680	720	760

TECHNICAL FEATURES:

SCU/O-B2 | 030-150 (Traditional air supply)

SCU/O-B2EX | 035-155 (Sunken fan air supply)



Type: DUAL COIL CHILLED WATER
Over flow, under flow or sunken fan version



UNIT DESCRIPTION

Cooling capacity: 30~148kW

Particularly Suitable for IDC, data centers and etc.

STANDARD CONFIGURATION

- Indoor unit.
- Outstanding rust protection thanks to galvanized steel sheet and powder-coated painting.
The panels complete with internal soundproofing material.
- Key components from world leading brand such as 2-way or 3-way valve from SIEMENS or BELIMO, controller from CAREL.
- High efficient EC fan.
- Standard G4 filter, F5 is optional which is in accordance with CEN-EN 779, 90.1% filter efficiency, conforming to ASHRAE standard.
- Electrical panel comply with IEC 204-1/EN60204-1.

Dual Coil Chilled Water Unit

Model	SCU/O-B2											
	030	035	045	050	070	080	090	100	125	130	150	
Power supply	V/Ph/Hz	380/3N/50										
Cooling performance												
Total cooling capacity(1)	kW	31.1	36.3	45.5	52.6	71.2	82.3	89.6	103	125	131	148
Sensible cooling capacity(1)	kW	27.3	30.7	38.3	42.7	61.1	68	75.9	84.1	112	128	137
SHR		0.88	0.85	0.84	0.81	0.86	0.83	0.85	0.82	0.90	0.98	0.93
Water side												
Water flow(1)	l/h	5364	6264	7848	9072	12240	14184	15408	17748	21456	22608	25524
Total pressure drop(1)	kPa	74.3	69.2	92.9	71.8	119	116	151	122	81.6	54.6	55.6
EC Fan												
Air flow	m ³ /h	10000	10000	12500	12500	21000	21000	25000	25000	30000	36000	36000
Quantity		1	1	1	1	2	2	2	2	2	3	3
EC fans power input	kW	1.66	1.76	1.96	2.04	3.58	3.76	3.82	3.97	5.63	7.15	7.68
ESP	Pa	20~350										
Noise(2)	dB(A)	59	59	62	62	64	65	67	68	65	69	69
Humidifier												
Humidification capacity	kg/h	5	5	5	5	8	8	8	8	8	15	15
Power input	kW	3.75	3.75	3.75	3.75	6	6	6	6	6	11.25	11.25
Electric heater												
Steps		3	3	3	3	3	3	3	3	3	3	3
Heating capacity	kW	9	9	15	15	18	18	18	18	18	24	24

Note:

- (1)-Working condition: return air 24°C, relative humidity 50%, chilled water inlet/outlet temp. 7/12°C
- (2)-Measured at 2 meters in front of the unit, 1.5 meters height
- (3)-The humidification capacity and heating capacity showed in the table is standard configuration. If the customer needs to increase the humidification or heating capacity of the unit, please consult the CLIMAVENETA factory



DIMENSION/WEIGHT

Dual Coil Chilled Water Unit

Model		SCU/O-B2										
		030	035	045	050	070	080	090	100	125	130	150
Width	mm	1000	1000	1550	1550	2100	2100	2650	2650	2650	3200	3200
Depth	mm	890	890	890	890	890	890	890	890	890	890	890
Height	mm	2180	2180	2180	2180	2180	2180	2180	2180	2180	2180	2180
Net Weight	kg	419	434	596	611	750	765	895	910	915	944	954

Dual Coil Chilled Water Unit

Model		SCU-B2EX									
		035	045	050	058	060	085	100	120	140	155
Power supply	V/Ph/Hz	380/3N/50									
Cooling performance											
Total cooling capacity(1)	kW	36.6	45	47.6	57.3	58.4	86.5	101.9	117.1	139.7	153.2
Sensible cooling capacity(1)	kW	32.3	37.7	42.1	45.6	53.4	73.8	83.2	101.5	115.7	127.9
SHR		0.88	0.84	0.88	0.80	0.91	0.85	0.82	0.87	0.83	0.83
Water side											
Water flow(1)	l/h	6280	7710	8170	9830	10030	14870	17480	20090	23970	26290
Total pressure drop(1)	kPa	83	114	66	70	97	94	89	75	116	73
EC Fan											
Air flow	m³/h	12000	12000	14000	13000	19000	25000	25000	36000	36000	40000
Quantity		1	1	1	1	2	2	2	3	3	3
EC fans power input	kW	1.91	2.04	2.05	1.81	3.00	3.56	3.76	5.52	5.74	6.41
ESP	Pa	20~350									
Noise(2)	dB(A)	61	61	64	64	64	66	66	67	66	70
Humidifier											
Humidification capacity	kg/h	5	5	5	5	5	8	8	10	10	15
Power input	kW	3.75	3.75	3.75	3.75	3.75	6	6	7.5	7.5	11.25
Electric Heater											
Steps		3	3	3	3	3	3	3	3	3	3
Water inlet/outlet connection											
Connection size		F1"1/4	F1"1/2		DN50				DN65		

Note:

- (1)-Working condition: return air 24°C, relative humidity 50%, chilled water inlet/outlet temp. 7/12°C
- (2)-Measured at 2 meters in front of the unit, 1.5 meters height
- (3)-The humidification capacity and heating capacity showed in the table is standard configuration. If the customer needs to increase the humidification or heating capacity of the unit, please consult the CLIMAVENETA factory



DIMENSION/WEIGHT

Dual Coil Chilled Water Unit

Model		SCU-B2EX									
		035	045	050	058	060	085	100	120	140	155
Width	mm	1000	1000	1550	1550	1550	2100	2100	2650	2650	3200
Depth	mm	990	990	990	990	990	990	990	990	990	990
Height	mm	1980	1980	1980	1980	1980	1980	1980	1980	1980	1980
Net Weight	kg	486	501	717	717	717	931	946	1154	1169	1264

TECHNICAL FEATURES:

SAU/O-D DAU/O-D | 025-100

SWU/O-D DWU/O-D | 025-100



Type: DUAL FLUID

AIR COOLED+CHILLED WATER

WATER COOLED+CHILLED WATER

Over flow or under flow version



UNIT DESCRIPTION

Cooling capacity: 24 to 101kW.

Dual fluid unit has two different types: dual fluid air cooled unit and dual fluid water cooled unit. EC fan is used in dual fluid unit with highest efficiency. Unit will be running under chilled water mode normally, but it will also change to direct expansion mode automatically while failure of chilled water system happens. So dual fluid unit is the most reliable cooling solution for most applications.

STANDARD CONFIGURATION

- Indoor unit and outdoor air-cooled condenser/dry cooler.
- Outstanding rust protection thanks to galvanized steel sheet and powder-coated painting.
The panels complete with internal soundproofing material.
- Compressors and other key components from world leading brand such as COPELAND compressor, 2-way or 3-way valve from BELIMO or SIEMENS and etc.
- High efficiency EC fan.
- Standard G4 filter, F5 is optional which is in accordance with CEN-EN 779, 90.1% filter efficiency, conforming to ASHRAE standard.
- The microprocessor follows the FIFO to control the compressor's start-up times. The unit can automatically convey the alarm and connect the customer's receiving equipment.
- Electrical panel comply with IEC 204-1/EN60204-1.
- Other standard components: thermal expansion valve, high/low pressure safety switch, sight glass, dry filter and etc.

Dual Fluid Air Cooled Unit

Model		SAU/O-D				DAU/O-D						
		025	030	035	045	035	050	055	060	080	090	100
Power supply	V/Ph/Hz	380/3N/50										
Refrigerant		R410A										
Cooling performances												
Direct expansion total cooling capacity (1)	kW	24.15	29.98	33.55	43	37.32	48.33	55.84	63.21	76.77	88	100.33
Direct expansion sensible cooling capacity (1)	kW	23.17	29.28	33.04	40.35	37.08	48.12	54.15	61.49	74.79	87.72	97.41
Direct expansion SHR (1)		0.96	0.98	0.98	0.94	0.99	0.99	0.97	0.97	0.97	0.99	0.97
Chilled water total cooling capacity (2)	kW	25.46	30.09	33.56	53.55	42.85	53.55	55.03	69.34	72.02	97.47	99.35
Chilled water sensible cooling capacity (2)	kW	24.06	29.16	32.81	51.2	40.82	51.2	52.86	67.95	71.12	93.89	96.04
Chilled water SHR (2)		0.95	0.97	0.98	0.93	0.95	0.96	0.96	0.98	0.99	0.96	0.97
Compressors												
Quantity		1	1	1	1	2	2	2	2	2	2	2
Power input(1)	kW	4.93	6.01	6.75	7.87	7.15	9.87	11.70	12.02	15.40	17.68	21.38
EC Fan												
Air flow	m³/h	6600	8250	8800	14300	11000	14300	14850	19800	20900	26400	27120
Quantity		1	1	1	2	2	2	2	3	3	3	3
EC fan power input	kW	0.89	1.60	1.80	3.40	2.09	3.40	3.65	4.50	5.20	6.1	6.1
Noise(3)	dB(A)	56	60	60	64	59	64	64	67	67	67	67
Humidifier												
Humidification capacity	kg/h	5	5	5	5	5	5	5	8	8	8	8
Power input	kW	3.75	3.75	3.75	3.75	3.75	3.75	3.75	6	6	6	6
Electric heater												
Steps		3	3	3	3	3	3	3	3	3	3	3
Heating capacity	kW	9	9	9	15	15	15	15	18	18	18	18

NOTE

(1)-Working condition for DXA: return air 24°C, relative humidity 50%;

(2)-Working condition for CW: return air 24°C, relative humidity 50%, chilled water inlet/outlet temp. 7/12°C;

(3)-Measured at 2 meters in front of the unit, 1.5 meters height

(4)-The humidification capacity and heating capacity showed in the table is standard configuration. If the customer needs to increase the humidification or heating capacity of the unit, please consult the CLIMAVENETA factory



DIMENSION/WEIGHT

Dual Fluid Air Cooled Unit

Model		SAU/O-D				DAU/O-D						
		025	030	035	045	035	050	055	060	080	090	100
Width	mm	1000	1000	1000	1550	1550	1550	1550	2100	2100	2650	2650
Depth	mm	790	790	790	790	790	790	790	790	790	790	790
Height	mm	1980	1980	1980	1980	1980	1980	1980	1980	1980	1980	1980
Net Weight	kg	312	359	377	516	428	511	536	774	794	993	1023

Dual Fluid Water Cooled Unit

Model		SWU/O-D				DWU/O-D						
		025	030	035	045	035	050	055	070	080	090	100
Power supply	V/Ph/Hz	380/3N/50										
Refrigerant		R410A										
Cooling performances												
Direct expansion water cooled total cooling capacity (1)	kW	25.21	31.1	33.69	47.98	38.78	50.96	55.19	71.57	77.58	93.31	102.9
Direct expansion water cooled sensible cooling capacity (1)	kW	23.99	30.05	32.72	47.55	38.57	50.25	53.64	70.33	75.16	92.78	99.75
Direct expansion SHR (1)		0.93	0.97	0.97	0.99	0.99	0.99	0.97	0.98	0.97	0.99	0.97
Chilled water total cooling capacity (2)	kW	25.46	30.09	33.56	53.55	42.85	53.55	55.03	69.34	72.02	97.47	99.35
Chilled water sensible cooling capacity (2)	kW	24.06	29.16	32.51	51.2	40.82	51.2	52.86	67.95	71.12	93.89	96.04
Chilled water SHR(2)		0.95	0.97	0.97	0.96	0.95	0.96	0.96	0.98	0.99	0.96	0.97
Compressors												
Quantity		1	1	1	1	2	2	2	2	2	2	2
Power input(1)	kW	4.30	5.40	6.11	6.94	6.44	8.61	10.55	12.28	13.30	16.03	19.33
Plate heat exchanger												
Quantity		1	1	1	1	2	2	2	2	2	1	1
Water Flow(1)	l/h	4900	6330	7002	8430	7380	9810	11954	14360	16132	18120	20830
Water pressure drop in DX mode	kPa	24	32	28	31	27	21	32	30	28	33	41
Total pressure drops	kPa	26	35	35	46	30	46	46	26	26	53	53
EC Fan												
Air flow	m³/h	6600	8250	8800	14300	11000	14300	14850	19800	20900	26400	27120
Quantity		1	1	1	2	2	2	2	3	3	3	3
EC fan power input	kW	0.89	1.60	1.80	3.40	2.09	3.40	3.65	4.50	5.20	6.1	6.1
ESP	Pa	20-350										
Noise(3)	dB(A)	56	60	60	64	59	64	64	67	67	67	67
Humidifier												
Humidification capacity	kg/h	5	5	5	5	5	5	5	8	8	8	8
Power input	kW	3.75	3.75	3.75	3.75	3.75	3.75	3.75	6	6	6	6
Electric heater												
Steps		3	3	3	3	3	3	3	3	3	3	3
Heating capacity	kW	9	9	9	15	15	15	15	18	18	18	18

NOTE

(1)-Working condition for DXW: return air 24°C, relative humidity 50%, condenser water inlet/outlet temp. 30/35°C

(2)-Working condition for CW: return air 24°C, relative humidity 50%, chilled water inlet/outlet temp. 7/12°C;

(3)-Measured at 2 meters in front of the unit, 1.5 meters height

(4)-The humidification capacity and heating capacity showed in the table is standard configuration. If the customer needs to increase the humidification or heating capacity of the unit, please consult the CLIMAVENETA factory



DIMENSION/WEIGHT

Dual Fluid Water Cooled Unit

Model		SWU/O-D				DWU/O-D						
		025	030	035	045	035	050	055	070	080	090	100
Width	mm	1000	1000	1000	1550	1550	1550	1550	2100	2100	2650	2650
Depth	mm	790	790	790	790	790	790	790	790	790	790	790
Height	mm	1980	1980	1980	1980	1980	1980	1980	1980	1980	1980	1980
Net Weight	kg	348	399	417	556	468	511	576	811	831	981	1061



Type:FREECOOLING
Over flow or under flow version



UNIT DESCRIPTION

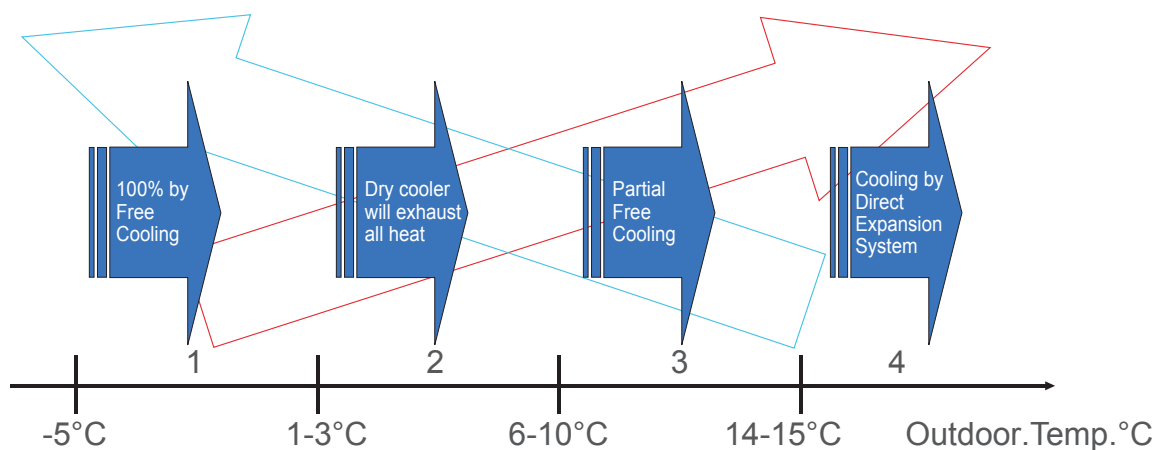
Cooling capacity: 24 to 103kW.

Free cooling unit consists of two coils: direct expansion water cooled coil and free cooling coil. Unit can switch working mode automatically according to outdoor temperature, so it can reach to the highest energy saving performance.

FREE COOLING CAPACITY

Free Cooling Capacity(kW)

Energy Consumption (kW)



Free Cooling Unit

Model		SWU/O-F				DWU/O-F						
		025	030	035	045	035	050	055	070	080	090	100
Power supply	V/Ph/Hz	380/3N/50										
Refrigerant		R410A										
Cooling performances												
Direct expansion total cooling capacity(1)	kW	25.21	31.1	33.69	47.88	38.78	50.96	55.19	71.57	77.58	93.31	102.9
Direct expansion sensible cooling capacity(1)	kW	23.55	30.05	32.72	47.55	38.57	50.25	53.64	70.33	75.16	92.78	99.75
Direct expansion SHR(1)		0.93	0.97	0.97	0.99	0.99	0.99	0.97	0.98	0.97	0.99	0.97
Freecooling total cooling capacity(1)	kW	24.9	30.6	32.3	47.3	38.1	50	54.5	70.3	76.7	91.8	102
Freecooling sensible cooling capacity(1)	kW	22.9	28.1	30	45.1	36.4	46.8	50.2	65.5	70	86.3	92.5
Freecooling SHR(1)		0.92	0.92	0.93	0.96	0.95	0.94	0.92	0.93	0.91	0.94	0.91
Compressors												
Quantity		1	1	1	1	2	2	2	2	2	2	2
Power input(1)	kW	4.40	5.40	6.11	8.00	6.44	8.41	10.96	12.28	13.30	16.03	19.33
Plate heat exchanger												
Quantity		1	1	1	1	2	2	2	2	2	1	1
Water Flow(1)	l/h	4900	6330	7002	8430	7380	9610	12313	14360	16133	18120	20830
Water pressure drop in DX mode	kPa	47	70	46	66	49	58	57	65	70	55	68
Water pressure drop in Freecooling mode	kPa	60	97	69	89	64	84	95	85	91	80	99
EC Fan												
Air flow	m³/h	6600	8250	8800	14300	11000	14300	14850	19800	20900	26400	27120
Quantity		1	1	1	2	2	2	2	3	3	3	3
Power input	kW	0.89	1.60	1.80	3.40	2.09	3.40	3.65	4.50	5.20	6.1	6.1
ESP	Pa	20-350										
Noise(2)	dB(A)	56	60	60	64	59	64	64	67	67	67	67
Humidifier												
Humidification capacity	kg/h	5	5	5	5	5	5	5	8	8	8	8
Power input	kW	3.75	3.75	3.75	3.75	3.75	3.75	3.75	6	6	6	6
Electric heater												
Steps		3	3	3	3	3	3	3	3	3	3	3
Heating capacity	kW	9	9	9	9	9	9	9	18	18	18	18

NOTE

(1)-Working condition: return air 24°C, relative humidity 50%;

Freecooling mode: cooling water inlet temp. 7°C;

DX mode: cooling water inlet/outlet temp. 30/35°C

(2)-Measured at 2 meters in front of the unit, 1.5 meters height

(3)-The humidification capacity and heating capacity showed in the table is standard configuration. If the customer needs to increase the humidification or heating capacity of the unit, please consult the CLIMAVENETA factory



DIMENSION/WEIGHT

Free Cooling Unit

Model		SWU/O-F				DWU/O-F						
		025	030	035	045	035	050	055	070	080	090	100
Width	mm	1000	1000	1000	1550	1550	1550	1550	2100	2100	2650	2650
Depth	mm	790	790	790	790	790	790	790	790	790	790	790
Height	mm	1980	1980	1980	1980	1980	1980	1980	1980	1980	1980	1980
Net Weight	kg	362	413	433	489	577	580	605	846	871	993	1123

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All specification and data are subject to change without notice

The products are in accordance with GB/T19413

B601 CCUVN/04-07-2024 EN-VN

COOLBLADE