



Huawei Energy Powering the Future  
**Huawei Precision Air Conditioner Solutions**



To meet increasing demands of data centers such as IT business integration, virtualization and cloud computing, Huawei introduces NetCol8000, in-room precision air conditioner and NetCol5000, in-row precision air conditioner to provide cooling solutions for various types of data centers, which ensures data centers work stably in constant temperature and humidity environment.



**H**uawei NetCol precision air conditioner is safe & reliable, and has features such as *high efficiency, high reliability, simple O & M*, which makes it your best choice for cooling solution.

# Contents

NetCol5000-A Air Cooled In-row Precision AC .....	01
NetCol5000-C Chilled Water In-row Precision AC.....	03
NetCol8000-A Air Cooled In-room Precision AC .....	05
NetCol8000-C Chilled Water In-room Precision AC.....	07
Global Applications .....	09

## In-row Precision AC



NetCol5000-A  
(20-35kW)



NetCol5000-C  
(30kW)

## In-room Precision AC



NetCol8000-A  
(50-100kW)



NetCol8000-C  
(50-150kW)

\*A: Air cooled  
C: Chilled water

# Air Cooled In-row Precision AC

## NetCol5000-A

### Introduction

NetCol5000-A is the air cooled in-row precision air conditioner developed by Huawei. It is configured with DC inverter compressor, EC fans, PTC electric heater and electrode humidifier. Cooling capacity is 20kW, 25kW, 35kW. It is usually installed between the IT racks, closely coupled with heat source so as to provide in-row cooling solution for medium-high density data centers. NetCol5000-A supports piping and cabling from both top and bottom side of the unit, and can be accessed from both front and back side. It is an efficient, reliable and simple solution, helps to build next generation green data center.

### Application Scenarios

- Modularized data center and container data center
- Equipment room with partial overheat, high thermal density room and room with high energy saving requirement
- Medium and small computer rooms and data center (IDC)
- Container data center

### Value & Features

#### Efficient

- DC inverter compressor: 20%~100% Stepless capacity regulation, high efficiency at partial load, especially suitable for data center cooling system
- EC fan: stepless modulation, precisely matches the IT device air flow, 30% energy saving

#### Reliable

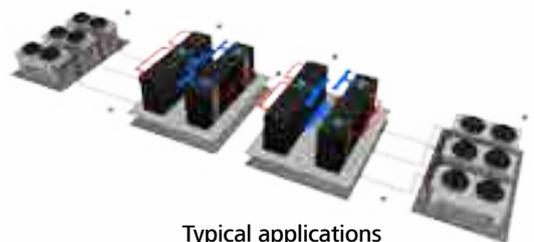
- Stable operation at -40~+55°C: Works stably at extremely high/low ambient temperature, with less cooling capacity derating than others
- CE certified, strictly complies with Europe EMC standards
- Dehumidifying at low load: Dehumidifying available at min. 10% IT load, ensures IT safety at extremely environment

#### Simple

- drawer type control & power module design, makes maintenance work less than 1 minute
- Compressor is connected by Rotalock(screw), supports on-site replacement without brazing work
- Visible group control function, maximum 32 units can be group controlled



NetCol5000-A



Typical applications



DC inverter scroll compressor



EC fan

## Technical Specification

### NetCol5000-A Technical Specification

Unit model	Unit	NetCol5000-A020H(300)	NetCol5000-A025H(300)	NetCol5000-A021H(300)	NetCol5000-A025H(600)	NetCol5000-A035H(600)
System type	–	Air cooled				
Air discharge direction	–	Horizontal				
Total cooling capacity	kW	20.0	25.0	21.0	25.0	35.0
	Btu/h	68240	85300	71652	85300	119420
Sensible cooling capacity	kW	20.0	25.0	21.0	25.0	35.0
	Btu/h	68240	85300	71652	85300	119420
Air flow	m <sup>3</sup> /h	4000	5000	4300	4,600	6,500
Power supply	V/Ph/Hz	380-415/3/50, 380/3/60		208/3/60	380-415/3/50, 380-415/3/60, 440-480/3/60	
Refrigerant	–	R410A				
Heating capacity	kW	3	4	4	6	6
Humidifier capacity	kg/h	2	1.5	1.5	3	3
Full load current <sup>①</sup>	A	23.0(16.5)	30.0(20.0)	48.0(28.0)	29.0(23.0)	32.0(26.0)
Dimensions: WxDxH	mm	300×1000×2000	300×1100×2000	300×1100×2000	600×1100×2000	600×1100×2000
Net weight	kg	230	230	260	350	350

①: The data in brackets are applicable to the indoor unit without electric heater & humidifier

Notes:

- Nominal cooling condition:  
Return air dry bulb temperature 37.8°C/RH20%, condensing temperature 45°C
- Air conditioning NetCol5000-A020H only support down pipe, and other types support up and down pipe
- Data are subject to change without prior notice

### Out Door Condenser Technical Specification

Unit model	Unit	NetCol500-A026	NetCol500-A032	NetCol500-A036	NetCol500-A038	NetCol500-A072
Power supply	V/Ph/Hz	380-415/3/50, 380-415/3/60, 440-480/3/60				
Fan quantity	–	1	1	1	1	2
Liquid pipe diameter	in	5/8 in			5/8 in	
Gas pipe diameter	in	3/4 in			7/8 in	
Full load current	A	2.5	2.5	2.5	2.5	4.5
Dimensions: HxWxD	mm	922×1121×1094	1160×1370×1094	1160×1370×1094	1160×1370×1094	1100×2200×1094
Net weight	kg	158	110	130	130	185

Notes: Data are subject to change without prior notice; the pipe diameter only for reference and it may be changed for the actual configuration

# Chilled Water In-row Precision AC

## NetCol5000-C

### Introduction

---

NetCol5000-C is a chilled water precision air conditioner developed by Huawei. Basically, it is just a fan coil unit installed inside the data center, moreover, combined together with chiller, chilled water pump and piping etc.; it forms a complete cooling system. It is coupled with EC fan, and has the functions of cooling & dehumidification. Normally, it is installed between the IT racks, closely coupled with heat source so as to provide in-row cooling solution for medium to high density data centers. NetCol5000-C is an efficient, reliable and simple solution, helps to build next generation green data center. The full configuration "-FC" model has better reliability, the simple configuration has less investment and the same performance.

### Application Scenarios

---

- Medium-large exchange room and data room
- Computer room and data center (IDC)
- High-tech environment and lab
- Industry control room and precision processing equipment room
- Standard test room and calibration center
- Container data center

### Value & Features

---

#### Efficient

- High efficiency DC power module: Fans are powered by high efficiency self-developed DC power module, efficiency is up to 94%, unit's total rated power input is only 1.0kW
- High efficiency heat exchanger: CFD simulation and field synergy helps achieve optimum heat exchange, improves heat transfer efficiency by 10%

#### Reliable

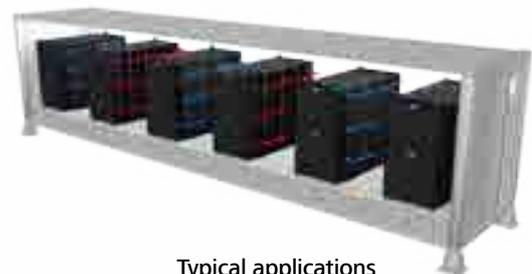
- Dual condensation pumps: Dual floats & dual condensation pumps, condensation drainage is not affected when one pump fails
- Dual power sources: automatically switches to the other power source in case of power failure
- Multi. EC fans: Mutual backup, ensures smooth air flow, performance is not affected when single fan is faulty

#### Simple

- On-line fan maintenance: No need to switch off power for fan replacement
- Water piping: high quality imported rubber hose; threaded connection makes installation easier and free of brazing work
- It supports piping and cabling from both top and bottom of the unit, and can be accessed from both front and rear
- Leading-edge 7-inch colored touch screen features innovative one-touch interface switch and provides temperature & humidity curves display of the last 30 days, bringing an excellent usage experience



NetCol5000-C



Typical applications



7 inch LCD true color touch screen



EC fan

## Technical Specification

### NetCol5000-C Technical Specification

Unit model	Unit	NetCol5000-C030H-FC	NetCol5000-C030H-SC
System type	–	Chilled water	Chilled water
Air discharge direction	–	Horizontal	Horizontal
Total cooling capacity	kW	30.0	30.0
	Btu/h	102360	102360
Sensible cooling capacity	kW	30.0	30.0
	Btu/h	102360	102360
Air flow	m <sup>3</sup> /h	5,100	5,100
Power supply	V/Ph/Hz	200-240/1/50, 200-240/1/60	220-240/1/50, 220-240/1/60
Refrigerant	–	–	–
Water flow	l/s	1.4	1.4
Water pressure drop	kPa	55	55
Electric heating capacity	kW	–	3
Humidifier capacity	kg/h	–	2
Full load current <sup>①</sup>	A	5.5	5.5(23)
Dimensions: WxDxH	mm	300×1000/1200×2000	300×1000/1200×2000
Net weight <sup>②</sup>	kg	240	170(185)

①: The current data in brackets are applicable to the unit with electric heater & humidifier,;

②: The weight data in brackets are applicable to the unit with electric heater & humidifier, .

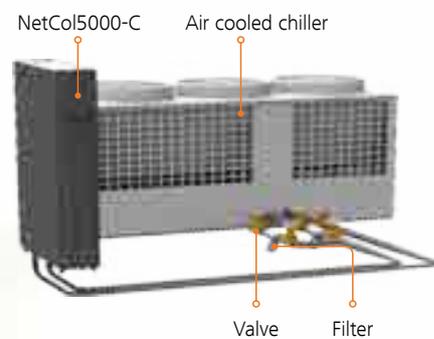
Notes:

• Nominal cooling condition:

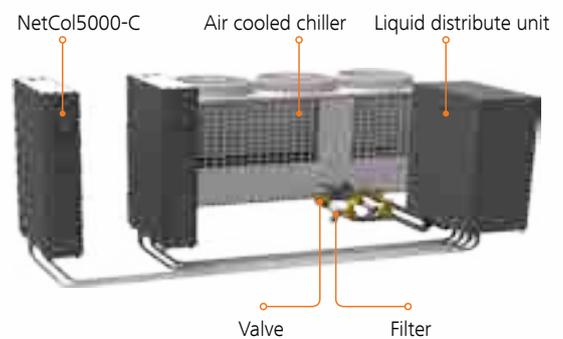
Return air dry bulb temperature 37.8°C/RH20%, Inlet/Outlet water temperature 10°C/15°C

### NetCol520 liquid distribute unit

Without NetCol520 (Liquid distribute unit)



With NetCol520 (liquid distribute unit)



Items	Parameter description
Unit model	NetCol520-12T(Upper water pipe) / NetCol520-12B(bottom water pipe)
Dimensions	1800x1200x600mm(HxVxD)
Unit weight	300kg
Water flow	43.2 m <sup>3</sup> /h

# Air Cooled In-room Precision AC

## NetCol8000-A

### Introduction

NetCol8000-A is the air cooled in-room precision air conditioner developed by Huawei. It is composed of indoor and outdoor unit. Indoor unit is configured with scroll compressor, large surface evaporator, EC fan, electric humidifier and electric heater. Cooling capacity is 50kW (down flow) and 100kW (down flow). The down flow unit is usually deployed around the white space of the data center, can be installed against the wall providing 100% front access maintenance, and the fan can be sunk under the floor to further improve air supply efficiency. NetCol8000-A is an efficient, reliable and simple solution, helps to build next generation green data center.

### Application Scenarios

- Medium-large exchange room and data room
- Computer room and data center (IDC)
- High-tech environment and lab
- Industry control room and precision processing equipment room
- Standard test room and calibration center
- UPS and battery room
- Biochemical culturing room Hospital and test room

### Value & Features

#### Efficient

- Energy saving logic: For single unit, unique energy-saving mode, partial load EER increased by 26%; For multi units, avoids competitive operation, collaborated efficiency optimization algorithm; energy saving by 30%+
- Group control: realizes an optimized alternative operation to avoid conflict within a multi-unit system, dynamically distributes cooling capacity and provides major control system backup

#### Reliable

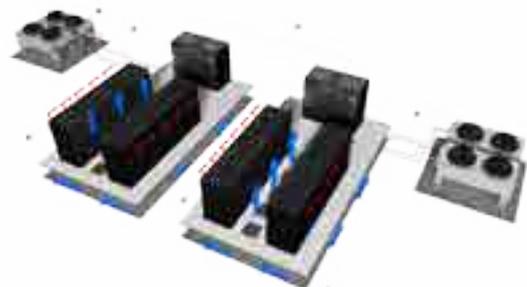
- Redundant design, mutual backup module, If one circuit is faulty, the operation of the other circuit is not affected
- Multiple system protections, including: compressor failure, insufficient airflow, high and low pressure protection of compressor, temperature/humidity out of limit alarm, etc.
- Refrigerant leakage and anti-freeze protection: When refrigerant is leaked, unit automatically switched off, avoids freezing on evaporator

#### Simple

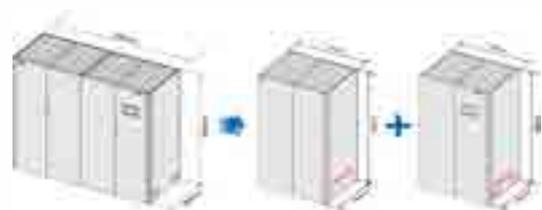
- Module design, eliminates brazing work for on-site unit disassembly, reduces the requirement on dimensions of elevator and doors
- 100% front access, supports side by side installation, smallest maintenance space in the industry
- The control system, featuring self-diagnosis and precaution functions, can provide pre-maintenance tips.



NetCol8000-A



Typical applications



Module design

## Technical Specification

### NetCol8000-A Technical Specification

Unit model	Unit	NetCol8000-A 050D	NetCol8000-A 100D
System type	–	Air cooled	
Air discharge direction	–	Down flow	
Total cooling capacity	kW	50.0	100.0
	Btu/h	170600	341200
Sensible cooling capacity	kW	46.8	93.5
	Btu/h	159681.6	319022
Air flow	m <sup>3</sup> /h	14,000	28,000
Power supply	V/Ph/Hz	380-415/3/50	380-415/3/50
Refrigerant	–	R410A	
Electric heating capacity	kW	6	12
Humidifier capacity	kg/h	7	10
Full load current	A	38.0	76.0
Dimensions: WxDxH	mm	1140×890×1980	2280×890×1980
Net weight	kg	415	830

**Notes:**

- Nominal cooling condition:  
Return air dry bulb temperature 24°C/RH50%,condensing temperature 45°C
- Data are subject to change without prior notice

### Out Door Condenser Technical Specification

Unit model	Unit	NetCol500-A072M	NetCol500-A088M
Power supply	V/Ph/Hz	380-415/3/50	
Fan quantity	-	2	
Liquid pipe diameter	in	5/8 in	
Gas pipe diameter	in	7/8 in	
Full load current	A	3.15	6.25
Dimensions: WxDxH	mm	2180×1094×1100	2410×1270×1265
Net weight	kg	185	200

Notes: Data are subject to change without prior notice

# Chilled Water In-room Precision AC

## NetCol8000-C

### Introduction

---

NetCol8000-C is the chilled water in-room precision air conditioner developed by Huawei. Normally combined together with chiller, chilled water pump and piping etc., it forms a complete cooling system. Cooling capacity range is from 56.5kW to 150kW. NetCol8000-C is an efficient, reliable and simple solution, helps to build next generation green data center.

### Application Scenarios

---

- Medium-large exchange room and data room
- Computer room and data center (IDC)
- High-tech environment and lab
- Industry control room and precision processing equipment room
- Standard test room and calibration center
- UPS and battery room
- Biochemical culturing room Hospital and test room

### Value & Features

---

#### Efficient

- EC fan: Sinking under floor, 30% energy saving than AC fan
- High efficiency heat transfer: Slotted blue hydrophilic fin, large surface heat exchanger, Heat exchange improves by 10%

#### Reliable

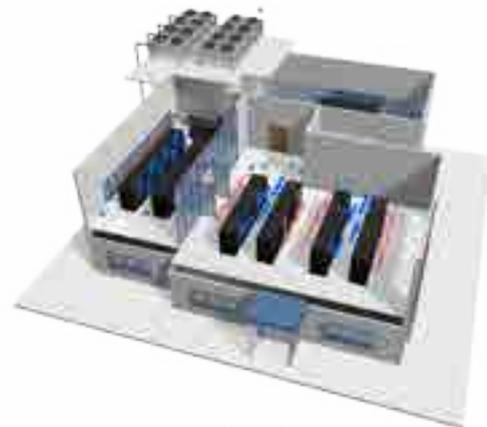
- Modular design, mutual backup, If one circuit is faulty, the operation of the other circuit is not affected
- Group control: realizes an optimized alternative operation to avoid conflict within a multi-unit system, dynamically distributes cooling capacity and provides major control system backup

#### Simple

- 100% front access, supports side by side installation, Smallest footprint and smallest maintenance space in the industry
- Module design, easier for on-site unit disassembly, reduces the requirement on dimensions of elevator and doors



NetCol8000-C



Typical applications



EC fan



A-type heat exchanger

## Technical Specification

### NetCol8000-C Technical Specification

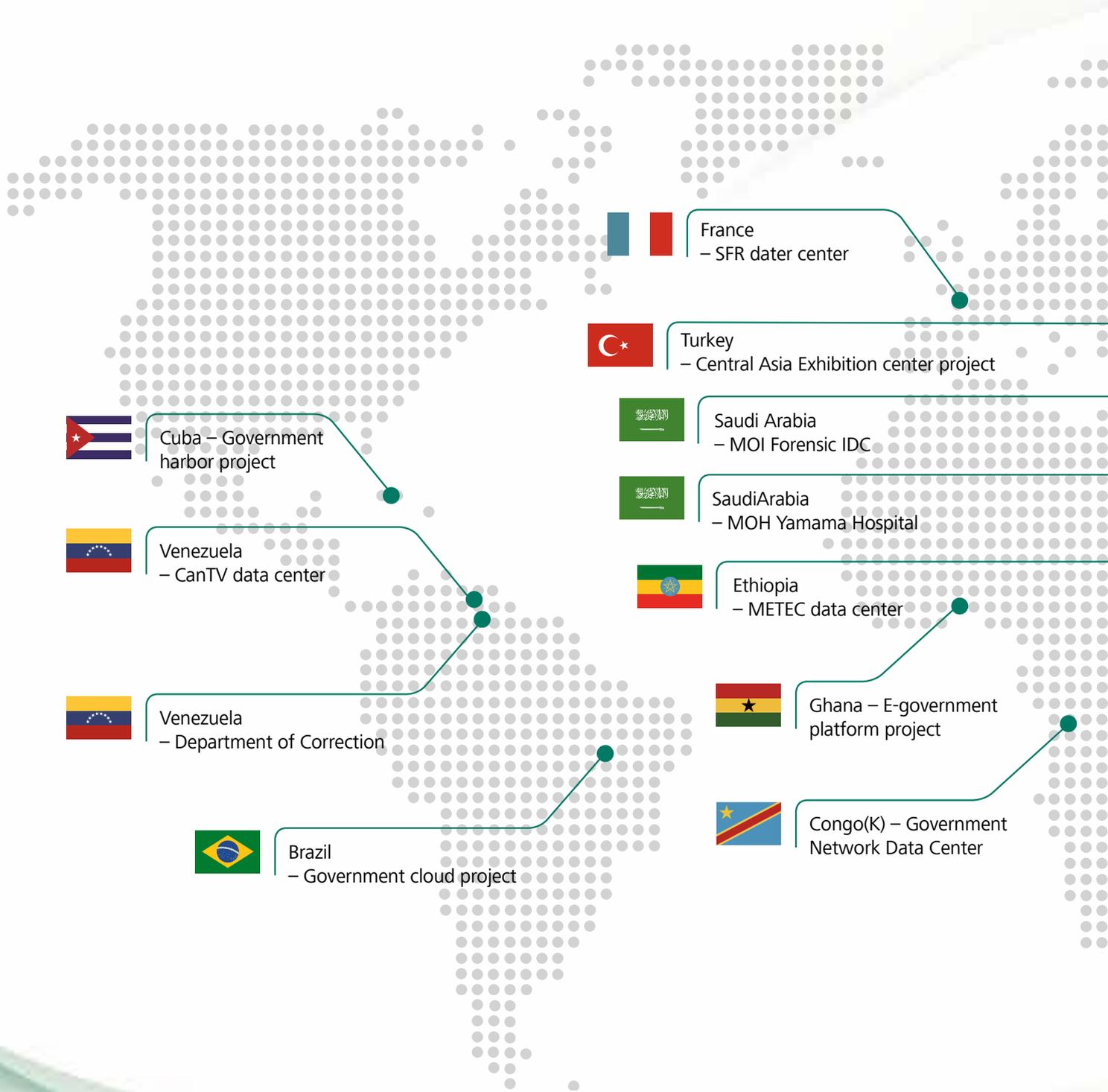
Unit model	Unit	NetCol8000-C050D	NetCol8000-C050U	NetCol8000-C070D	NetCol8000-C070U
Air discharge direction	—	Down flow	Up flow	Down flow	Up flow
Total cooling capacity	kW	57.5	56.5	75	74
	Btu/h	196190	192778	255900	252488
Sensible cooling capacity	kW	47.7	46.5	60	59.2
	Btu/h	162752.4	158658	204720	201990.4
Air flow	m <sup>3</sup> /h	12,600	12,350	14,000	13,750
Power supply	V/Ph/Hz	380-415/3/50, 380-415/3/60, 440-480/3/60			
Water flow	l/s	2.8	2.7	3.6	3.5
Water pressure drop	kPa	80	78	100	100
Electric heating capacity	kW	6	6	6	6
Humidifier capacity	kg/h	7	7	7	7
Full load current	A	20	19.8	21.3	21.1
Dimensions:W*D*H	mm	1140×890×1980	1140×890×1980	1140×890×1980	1140×890×1980
Net weight	kg	345	380	365	380

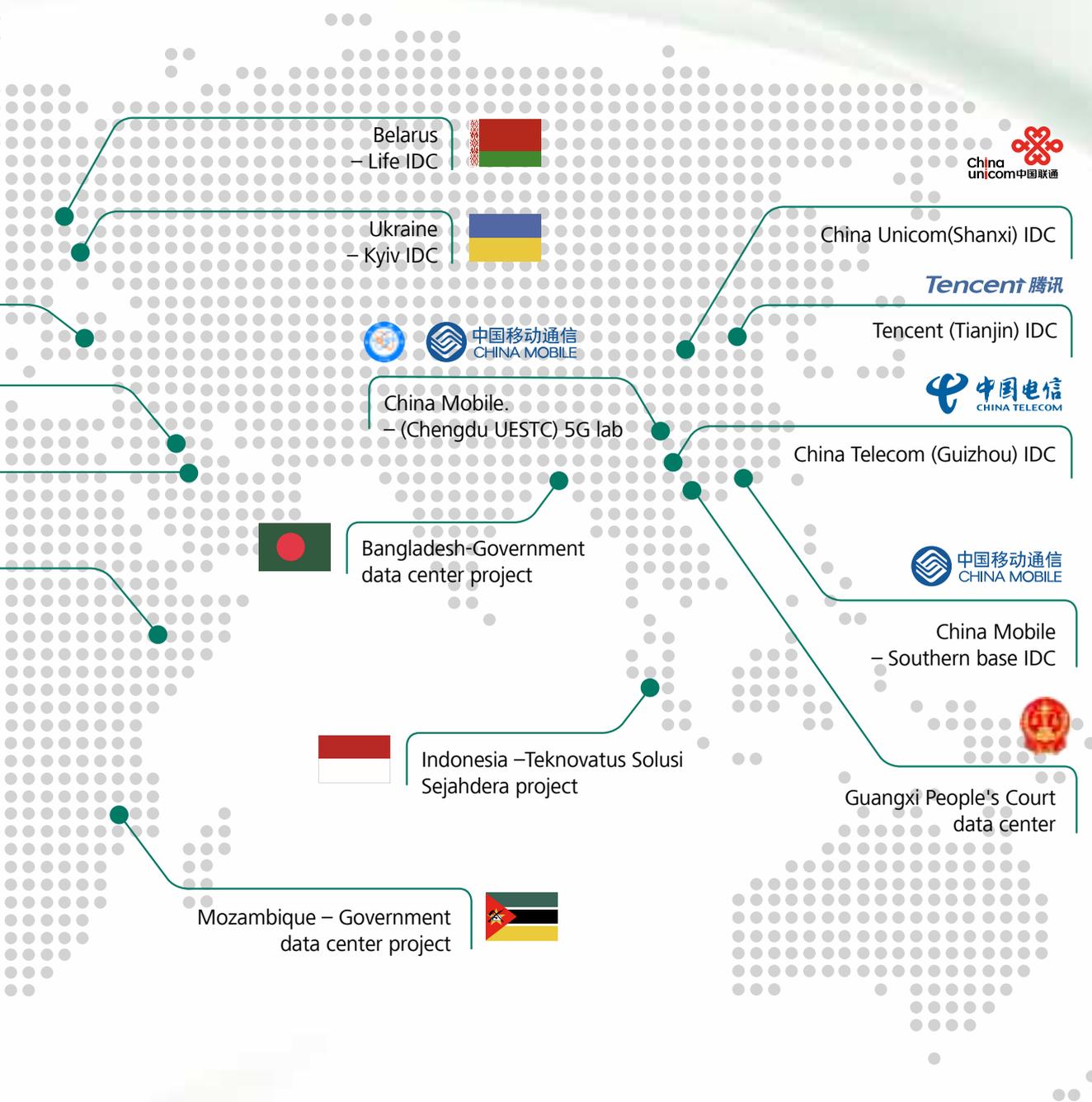
Unit model	Unit	NetCol8000-C120D	NetCol8000-C150D
Air discharge direction	—	Down flow	Down flow
Total cooling capacity	kW	124	150
	Btu/h	423088	511800
Sensible cooling capacity	kW	101.7	120
	Btu/h	347000.4	409440
Air flow	m <sup>3</sup> /h	26,600	28,000
Power supply	V/Ph/Hz	380-415/3/50, 380-415/3/60, 440-480/3/60	
Water flow	l/s	5.96	7.2
Water pressure drop	kPa	90	100
Electric heating capacity	kW	12	12
Humidifier capacity	kg/h	10	10
Full load current	A	38	39.4
Dimensions:W*D*H	mm	2280×890×1980	2280×890×1980
Net weight	kg	675	700

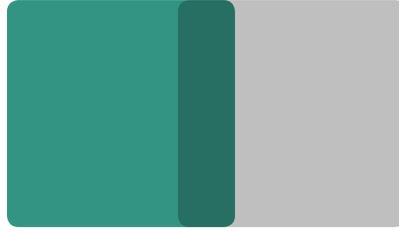
**Notes:**

- Cooling capacity condition:  
Return air dry bulb temperature 24°C/RH50%, Inlet/Outlet water temperature 7°C/12°C
- Data are subject to change without prior notice

# Global Applications







Copyright © Huawei Technologies Co., Ltd. 2016. All rights reserved.

No part of this document may be reproduced or transmitted in any form or by any means without prior written consent of Huawei Technologies Co., Ltd.

#### Trademark Notice

 , HUAWEI, and  are trademarks or registered trademarks of Huawei Technologies Co., Ltd.  
Other trademarks, product, service and company names mentioned are the property of their respective owners.

#### General Disclaimer

The information in this document may contain predictive statements including, without limitation, statements regarding the future financial and operating results, future product portfolio, new technology, etc. There are a number of factors that could cause actual results and developments to differ materially from those expressed or implied in the predictive statements. Therefore, such information is provided for reference purpose only and constitutes neither an offer nor an acceptance. Huawei may change the information at any time without notice.

**HUAWEI TECHNOLOGIES CO., LTD.**

Huawei Industrial Base  
Bantian Longgang  
Shenzhen 518129, P.R. China  
Tel: +86-755-28780808  
Version No.: M3-022333-20131224-C-1.0

[www.huawei.com](http://www.huawei.com)