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HUAWEI TECHNOLOGIES CO., LTD.







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.

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



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## In-row Precision AC



NetCol5000-A  
(20-35kW)



NetCol5000-C  
(30kW)

## In-room Precision AC



NetCol8000-A  
(20-100kW)



NetCol8000-C  
(30-150kW)

\*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 supports features such as high efficiency, high reliability, is easy to install & maintain, and 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: Stepless cooling capacity output, high efficiency at partial load, suitable especially for data center heat load, IPLV is up to 4.0
- EC fan: 30%~100% stepless modulation, precisely matches the IT device air flow, 30% energy saving

#### Reliable

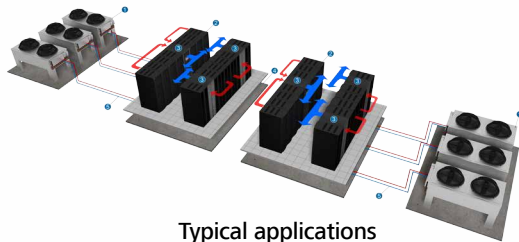
- Stable operation at +55°C: Works stably at high ambient temperature, cooling capacity derating is less
- CE certified, strictly complies with Europe EMC standards
- Anti-condensation design: Unit's anti-condensation logic and insulation helps reduce condensation, and ensures safety

#### Convenient

- 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	NetCol5000-A025H	NetCol5000-A035H
System type	–	Air cooled		
Air discharge direction	–	Horizontal		
Total cooling capacity	kW	20.0	25.0	35.0
Sensible cooling capacity	kW	20.0	25.0	35.0
Air flow	m³/h	4000	4,600	6,500
Power supply	V/Ph/Hz	380-415/3/50, 380/3/60		
Refrigerant	–	R410A		
Electric heating capacity	kW	3	6	
Humidifier capacity	kg/h	2	3	3
Full load current <sup>①</sup>	A	23.0(16.5)	29.0(23.0)	32.0(26.0)
Dimensions: WxDxH	mm	300×1000×2000		
Net weight	kg	230	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-A0324	NetCol500-A038R	NetCol500-A0384	NetCol500-A072R	NetCol500-A0724
Power supply	V/Ph/Hz	380-415/3/50, 380-415/3/60	440-480/3/60	380-415/3/50, 380-415/3/60	440-480/3/60	380-415/3/50, 380-415/3/60
Fan quantity	—	1			2	
Net weight	kg	110			150	
Liquid pipe diameter	in	5/8 in				
Gas pipe diameter	in	7/8in				
Full load current	A	2.5	2	2.5	4.0	4.5
Dimensions: W×D×H	mm	1350×1094×1160	1370×1094×1160	1350×1094×1160	2200×1094×1100	2180×1094×1100

Notes: Data are subject to change without prior notice

# 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 a highly reliable and efficient solution, which is simple & convenient to install and maintain, and 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
- 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

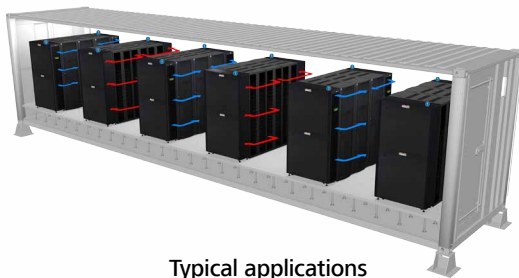
- Dual condensation pumps: Dual floats & dual condensation pumps, condensation drainage is not affected when one pump fails
- Dual power sources: Supports dual power sources, automatically switches to the other power source in case of power failure
- 8 EC fans: Mutual backup, ensures smooth air flow,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

#### Convenient

- 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 rare
- 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
System type	—	Chilled water
Air discharge direction	—	Horizontal
Total cooling capacity	kW	30.0
Sensible cooling capacity	kW	30.0
Air flow	m <sup>3</sup> /h	5,100
Power supply	V/Ph/Hz	200-240/1/50, 200-240/1/60
Refrigerant	—	—
Water flow	l/s	1.4
Water pressure drop	kPa	55
Electric heating capacity	kW	—
Humidifier capacity	kg/h	—
Full load current	A	5.5
Dimensions: W×D×H <sup>①</sup>	mm	300×1000×2000 (300×1200×2000)
Net weight	kg	240

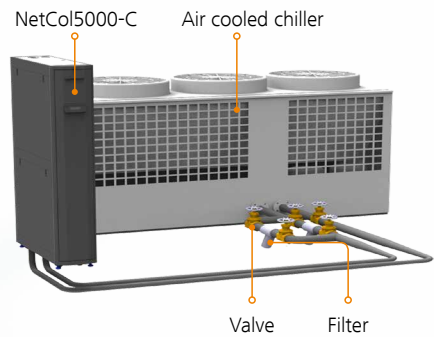
①: The data in brackets are applicable to the unit with 200mm-depth rear frame

#### Notes:

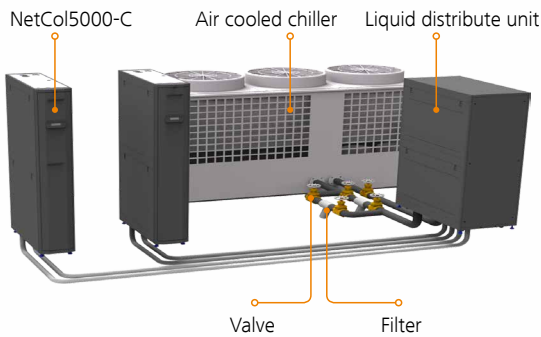
- Nominal cooling condition:  
Return air dry bulb temperature 37.8°C/RH20%, Inlet/Outlet water temperature 10°C/15°C
- Data are subject to change without prior notice

#### 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(HxWxD)
Unit weight	200kg
Water flow	43.2 m <sup>3</sup> /h



# Air Cooled In-room Precision AC

## NetCol8000-A(R410A Series)

### Introduction

NetCol8000-A is the air cooled in-room precision air conditioner of R410A series developed by Huawei. It is composed of indoor and outdoor unit. Indoor unit is configured with scroll compressor, large surface evaporator, EC fan (optional), infrared humidifier, PTC electric heater. Cooling capacity is 50kW (down flow) & 100kW (down flow). It is usually deployed around the white space of the data center, and can be installed against the wall providing 100% front access maintenance. The fan can be sunk under the floor to further improve air supply efficiency. NetCol8000-A is a highly efficient and reliable solution, which is simple & convenient to install and maintain, and 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

- Use efficient and environmentally friendly R410A refrigerant
- 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%+

#### Reliable

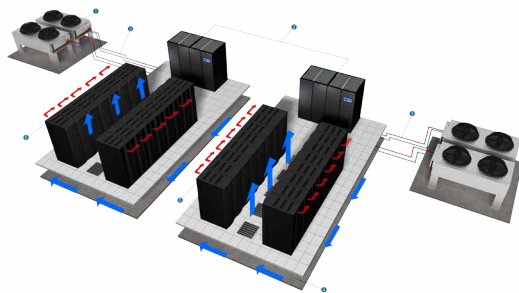
- Redundant design, mutual backup module, If one circuit is faulty, the operation of the other circuit is not affected
- 6kV lightning protection function
- Refrigerant leakage and anti-freeze protection: When refrigerant is leaked, unit automatically switched off, avoids freezing on evaporator

#### Convenient

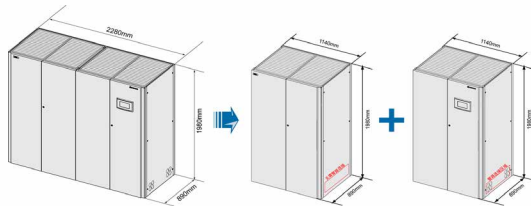
- Module design, eliminates brazing work for on-site unit disassembly, reduces the requirement on dimensions of elevator and doors
- Expert level fault management, clearly presents the cause of failure and maintenance countermeasure



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	Down flow
EC Fan	Total cooling capacity	kW	50.0	100.0
	Sensible cooling capacity	kW	46.8	93.5
	Air flow	m³/h	14,000	28,000
AC Fan	Total cooling capacity	kW	50.0	100.0
	Sensible cooling capacity	kW	45.0	90.0
	Air flow	m³/h	13,250	26,500
Power supply		V/Ph/Hz	380-415/3/50	
Refrigerant		–	R410A	
Electric heating capacity		kW	6	12
Humidifier capacity		kg/h	7	10
Full load current	EC Fan	A	38.0	76.0
	AC Fan	A	42.0	84.0
Dimensions: W×D×H		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	
Net weight		kg	150	200
Liquid pipe diameter		in	5/8 in	
Gas pipe diameter		in	7/8 in	
Full load current		A	3.15	6.25
Dimensions: W×D×H		mm	2180×1094×1100	2410×1270×1265

Notes: Data are subject to change without prior notice

# Air Cooled In-room Precision AC

## NetCol8000-A(R407C Series)

### Introduction

NetCol8000-A is the air cooled in-room precision air conditioner of R407C series developed by HuaWei. It is composed of indoor and outdoor unit. Indoor unit is configured with scroll compressor, large surface evaporator, EC fan, Electrode humidification and stainless steel tube-fin electric heater. Colling capacity is 20KW、30KW、40KW and 60KW. It is usually deployed around the white space of the data center, and can be installed against the wall providing 100% front access maintenance. The fan can be sunk under the floor to further improve air supply efficiency. NetCol8000-A is a highly efficient and reliable solution, which is simple & convenient to install and maintain, and 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 operation management: the control system can intelligently manage operating conditions for an optimum energy-saving performance, and can count and record the run time of major components. Both general operating status and non-energy-saving operation status (cooling + heating, cooling + humidification, etc.) are monitored and recorded.
- 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

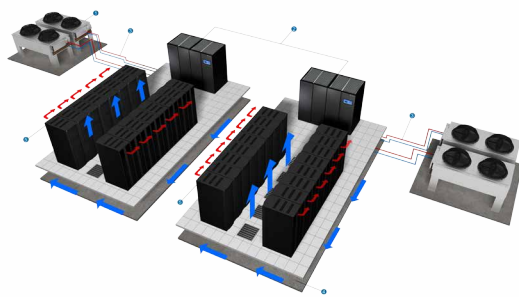
- Multiple system protections, including: compressor failure, insufficient airflow, high and low pressure protection of compressor, temperature/humidity out of limit alarm, etc..
- Steel frame structure; built-in double layered composite panels with flameproof and sound muffling cotton insulation
- High quality components: all are strictly tested under the most demanding conditions and certificated before adoption

#### Convenient

- 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



Scroll compressor



EC fan

### Technical Specification

#### NetCol8000-A Technical Specification

Unit model	Unit	NetCol8000-A020U	NetCol8000-A030U	NetCol8000-A040D	NetCol8000-A060D
Air discharge direction	—	Up flow	Up flow	Down flow	Down flow
Total cooling capacity	kw	20.0	30.0	40.0	60.0
Sensible cooling capacity	kw	18.1	27.1	36.1	54.1
Air flow	m³/h	6500	9000	12500	17500
Fan quantity	—	1	1	2	2
Power supply	V/Ph/Hz	380-415/3/50	380-415/3/50	380-415/3/50	380-415/3/50
Refrigerant	—	R407C	R407C	R407C	R407C
System quantity	—	1	1	2	2
Electric heating capacity	kW	6	6	9	9
Humidifier capacity	kg/h	4.5	4.5	4.5	9
Full load current	A	22	26	37	43
Dimensions:W*D*H	mm	850x890x1980	850x890x1980	1700x890x1980	1700x890x1980
Net weight	kg	325	355	524	567

#### 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-A029S	NetCol500-A045S
Power supply	V/Ph/Hz	200-240/1/50	
Net weight	kg	73	87
Liquid pipe diameter	mm	7/8in	
Gas pipe diameter	mm	9/8in	
Full load current	A	2.9	2.9
Dimensions: WxDxH	mm	1240x1076x960	1300x1076x960

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 is 30, 50, 70, 120 and 150kW. NetCol8000-C is a highly efficient and reliable solution, which is simple and easy to use, and helps to build next generation green data center.

### Application Scenarios

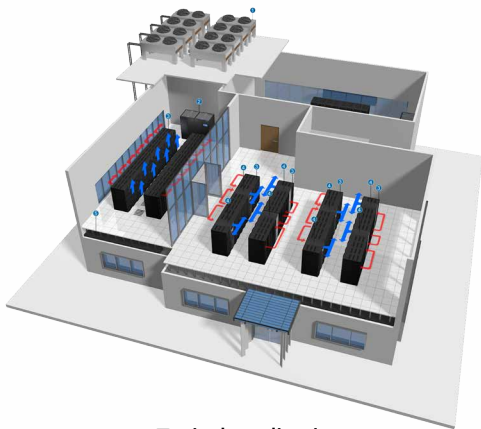
- Medium-large exchange room and data room
- Computer room and data center (IDC)
- High-tech environment and lab
- Industry control room and precision processing equipment room
- Standard test room and calibration center
- UPS and battery room
- Biochemical culturing room Hospital and test room

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



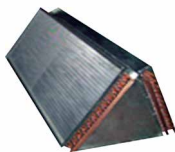
NetCol8000-C



Typical applications



EC fan



A-type heat exchanger

### Technical Specification

#### NetCol8000-C Technical Specification

Unit model	Unit	NetCol8000-C030U	NetCol8000-C050D	NetCol8000-C050U	NetCol8000-C070D
Air discharge direction	—	Up flow	Down flow	Up flow	Down flow
Total cooling capacity	kW	36.9	57.5	56.5	75
Sensible cooling capacity	kW	29.5	47.7	46.5	60
Air flow	m <sup>3</sup> /h	8800	12,600	12,350	14,000
Power supply	V/Ph/Hz	380-415/3/50	380-415/3/50, 380-415/3/60, 440-480/3/60		
Water flow	l/s	1.44	2.8	2.7	3.6
Water pressure drop	kPa	110	80	78	100
Electric heating capacity	kW	6	6	6	6
Humidifier capacity	kg/h	4.5	7	7	7
Full load current	A	14.8	20	19.8	21.3
Dimensions:W*D*H	mm	850×890×1980	1140×890×1980	1140×890×1980	1140×890×1980
Net weight	kg	335	345	380	365

Unit model	Unit	NetCol8000-C070U	NetCol8000-C120D	NetCol8000-C150D	NetCol8000-C150U
Air discharge direction	—	Up flow	Down flow	Down flow	Up flow
Total cooling capacity	kW	74	124	150	149.1
Sensible cooling capacity	kW	59.2	101.7	120	119.3
Air flow	m <sup>3</sup> /h	13,750	26,600	28,000	27,800
Power supply	V/Ph/Hz	380-415/3/50, 380-415/3/60, 440-480/3/60			380-415/3/50
Water flow	l/s	3.5	5.96	7.2	7.17
Water pressure drop	kPa	100	90	100	110
Electric heating capacity	kW	6	12	12	9
Humidifier capacity	kg/h	7	10	10	9
Full load current	A	21.1	38	39.4	39
Dimensions:W*D*H	mm	1140×890×1980	2280×890×1980	2280×890×1980	2550×890×1980
Net weight	kg	380	675	700	833

- 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

