RACK MOUNTED PRECISION COOLING SYSTEM

Norden's rack-mounted precision cooling system represents a new generation of rack-level temperature control solutions for data centers. It is primarily designed for single-cabinet and single in-row deployments, effectively supporting cabinet equipment, server systems, and communication devices.

FEATURES

- Features a large-area evaporator with optimized airflow distribution, ensuring superior heat transfer efficiency.
- The system delivers an efficient, continuous, and stable temperature and humidity environment to spoon critical operations.
- Provides infinitely variable cooling capacity to maximize energy savings and operational efficiency.
- Utilizes R410A refrigerant for efficient performance and environmental compliance.
- A precisely engineered system, combined with rigorous testing and verification, ensures safe and reliable operation.
- Frequent start-stop cycles of the air conditioning system.
- Compact structure.
- Rack mounted pull-out design.
- Support online expansion of cabinets.
- Support call auto start Support timed on/off and other functions.
- Standard RS485 interface, supports remote control

RACK MOUNTED PRECISION COOLING SYSTEM

SPECIFICATIONS

Indoor unit model	RC-ACS003 (Split Type)	RC-ACS007 (Split Type)	RC-ACS012 (Split Type)	RC-ACI 003 (Integrated Type)
Total Cooling Capacity (kW)	3.7	7.5	12.5	3.7
Sensible Cooling Capacity (kW)	3.7	7.5	12.5	3.7
Air volume m3/h	700	1350	2300	700
Air supply method	Three side air supply (up+left+right)			
Expansion valve type	Electronic expansion valve			
Fan type	EC Fan			AC fan/EC fan
Compressor type	DC frequency conversion			Fixed/variable frequency
Evaporator type	V-shaped			Type "/"
Refrigerant type	R410A			
Heating capacity (kW)	1.0	1.5	3.0	1.0
Humidification capacity (kg/h)	0.5	1.0	1.5	/
Power type	220V~50/60Hz			
Distribution parameter FLA(A)	13.6 (Constant Temp.) 13.7(Constant temp. & H)	27 (Constant Temp.) 27.5(Constant temp. & H)	30 (Constant Temp.) 30.5(Constant temp. & H)	13.6 (Constant Temp.)
Unit weight (kg)	26	35	47	58
Indoor unit dimensions: W x D x H (mm)	440×800×219(5U)	440×800×353(8U)	440×800×440(10U)	440×980×352(8U)/ 440×980×400(9U)
Supporting outdoor unit				
Outdoor unit model (Nominal conditions)	NOU-APM006	NOU-APM012	NOU-APM018	(No separate outdoor unit is required)
Power type	220V~50Hz			
Unit weight (kg)	38	43	65	/
Dimensions(external unit): L x W x H (mm)	880×340×605	880×380×720	990×440×1250	/

NOTE

- The above parameters are based on indoor return air conditions of 37 ℃, 24% RH, and outdoor ambient temperature of 35 ℃;
- The FLA parameter is the full load current of the standard model, which includes the outdoor unit current. The outdoor unit needs to be powered from the indoor unit;
- Constant temperature/constant temperature and humidity units are optional;

IN-ROW PRECISION COOLING SYSTEM

The In-Row Precision Cooling System Norden is an intelligent temperature control solution designed specifically for data centres. It offers easy scalability, high energy efficiency through variable frequency drives, intelligent output management, and safe, reliable operation. This system ensures a secure and controlled environment ideal for critical infrastructure and precision equipment..

FEATURES

- The efficient DCVF compressor and EC fan provide stepless, dynamic cooling output.
- Cooling efficiency is enhanced by a specially designed return air temperature configuration.
- Uses R410A refrigerant — environmentally friendly and compliant with international standards.
- 7-inch HMI colour touchscreen for easy operation and real-time information display.
- Supports communication protocol, enabling control of up to 64 units.
- The intelligent system automatically adjusts the cooling output.
- The system uses hierarchical password permissions to support effective operation and maintenance management.
- The high-strength structural frame is sturdy and durable.
- Strict component quality control ensures consistent product excellence.
- Comprehensive testing and validation processes guarantee operational safety.

SPECIFICATIONS

Indoor Unit Specification	IW-AC12	IW-AC25	IW-AC30	IW-AC40	IW-AC50	IW-AC60
Total Cooling Capacity(kW)	12.5	25.6	30.6	42.9	51.1	63.0
Sensible Cooling Capacity (kW)	12.5	25.6	30.6	42.9	51.1	63.0
Air Flow Rate m3 /h	5080	5250	8580	10600	11600	
Fan Type	EC Fan					
Quantity of Fans (Pcs)	4	6	6	2	3	3
Compressor Type	DC Variable Frequency Compressor					
Expansion Valve Type	Electronic Expansion Valve					
Refrigerant Type	R410A					
Heating Capacity (kW)	3.0	4.5	4.5	6.0	6.5	6.5
Humidifier Capacity (kg/h)	3.0	3.0	3.0	3.0	3.0	3.0
Power Supply	380V/3N~50Hz					
Single Cooling Power Supply FLA (A)	19.0	23.2	29.2	30.1	34.8	43.8
Constant Temperature and Humidity Power Supply FLA (A)	22.9	27.9	34.0	37.6	42.0	51.0
Net Weight (kg)	200	225	225	305	335	350
Dimension: W×D×H (mm)	300*1200*2000	300*1200*2000	300*1200*2000	600*1200*2000	600*1200*2000	600*1200*2000
Conventional Outdoor Unit						
Outdoor Unit Model (Nominal condition)	NOU-APN020	NOU-APN040	NOU-APN046	NOU-APN058	NOU-APN078	NOU-APN090
Quantity of Fans (pcs)	2	1	1	1	2	2
Net Weight (kg)	49	135	139	150	176	185
Dimension: W×D×H (mm)	830*330*1245	1376*980*738	1576*1274*748	1776*1274*748	2176*1274*738	2376*1274*748
Centralized Outdoor Unit (Not one-to-one correspondence)						
Outdoor Unit Model (Nominal condition)	NOU-AVN046	NOU-AVN058	NOU-AVN068	NOU-AVN078	NOU-AVN090	NOU-AVN098
Quantity of Fans (pcs)	1	1	1	1	1	1
Net Weight (kg)	140	150	166	176	186	196
Dimension: W×D×H (mm)	1098*1098*1684	1098*1098*1684	1098*1098*1774	1098*1098*1774	1298*1098*1774	1298*1098*1774

NOTE

- Nominal Nominal conditions: Indoor - return air temperature 37°C/RH 24%; Outdoor - 35°C.
- The FLA parameter represents the full load current of the standard model, including the current of the outdoor unit.
- Only the constant temperature and humidity model includes heating and humidification functions.

EcoAir SERIES
SMALL ROOM PRECISION COOLING

The EcoAir series by Norden offers an efficient and reliable solution for room-level temperature control in data center environments. Engineered for use in small to medium-sized data rooms, battery rooms, UPS rooms, base stations, and industrial equipment rooms, it ensures stable and consistent temperature and humidity management to support critical operations.

FEATURES

- Designed with a high sensible heat ratio and superior energy efficiency, it delivers high air volume with a low enthalpy difference.
- Equipped with a backward-inclined centrifugal fan, the system delivers high air volume with exceptional efficiency.
- Featuring a variable-speed outdoor unit, the system maintains consistent operation in high-efficiency mode.
- Utilizes R410A refrigerant, compliant with international standards and environmentally friendly.
- Equipped with a 4.3-inch HMI colour touchscreen, providing intuitive operation and real-time system information display.
- Standard RS485 interface with an optional SNMP interface, supporting the management of up to 64 units.
- Threaded quick-connect design enables on-site installation without the need for welding.
- Hierarchical password permissions enhance operation and maintenance management.
- High-strength structural frame designed for durability and robustness.
- Multi-voltage compatibility minimizes frequent start-stop cycles of the equipment.

EcoAir SERIES
SMALL ROOM PRECISION COOLING

SPECIFICATIONS

Indoor model (EA Series)	EA-AC05	EA-AC07	EA-AC12	EA-AC17	EA-AC20
Total Cooling Capacity (kW)	5.6	7.6	12.6	17.2	20.5
Sensible Heat Ratio (W/W)	0.9	0.9	0.9	0.9	0.9
Air Volume (m³/h)	2000	2300	3200	5000	5500
Fan Type	AC or EC Fans				
Air Supply	Top Front Supply/Downflow Supply				
EEV	High Efficiency EC Fans				
Refrigerant	R410A				
Heating Capacity(kW)	3	3	3	6	6
Humidification Capacity(kg/h)	3	3	3	3	3
Power Supply Type	220V~50Hz		380V/3N~50Hz		
Single Cooling FLA (A)	10.8	15	10.9	14.2	14.8
Constant Temp. and Humidity FLA (A)	23	25	22	25	26
Weight (kg)	60	64	99	120	128
Dimension W×D×H (mm)	520×420×1748	520×420×1748	600×520×1798	700×700×1898	700×700×1898
Outdoor Unit	**NOU-APN008**	**NOU-APN012**	**NOU-APN020**	**NOU-APN025**	**NOU-APN030**
Power Supply Type	220V~50Hz				
Outdoor Weight(kg)	28	32	49	88	88
Dimension W×D×H (mm)	840×285×605	830×310×720	830×330×1245	1050×400×1560	1050×400×1560

NOTE

- The above parameters are based on indoor return air working conditions of 24 °C, 50% RH, outdoor ambient temp. 35 °C;
- FLA parameters refer to the full load current of the standard model, including the current of the outdoor unit. The outdoor unit needs to be powered by the indoor unit.
- Single cooling/constant temperature and humidity units are optional. Only the constant temperature and humidity model has heating and humidification functions.
- For the downflow unit, it is recommended to have a minimum floor-to-ceiling height of 300mm. If the recessed fan option is selected, it is recommended to have a minimum floor-to-ceiling height of 400mm.

MaxAir SERIES
LARGE ROOM PRECISION COOLING

The MaxAir series is an advanced cooling solution designed for medium to large data centers, communication rooms, battery rooms, UPS rooms, and industrial equipment rooms. It delivers efficient and reliable temperature control, ensuring a secure and stable environment for critical infrastructure and precision equipment.

FEATURES

- Featuring a full frequency conversion system design, the solution offers a high sensible heat ratio and superior energy efficiency.
- The efficient DCVF compressor and EC fan deliver stepless, dynamic cooling output.
- Utilizes a V- or A-shaped evaporator to achieve high heat exchange efficiency.
- Equipped with a variable-speed outdoor unit, the system ensures consistent operation in high-efficiency mode.
- Uses R410A refrigerant, compliant with international standards and environmentally friendly.
- Equipped with a 7-inch HMI colour touchscreen, enabling easy operation and real-time information display.
- Standard RS485 interface with optional SNMP support, enabling management of up to 64 units.
- Hierarchical password permissions enhance the management of operations and maintenance.
- Modular design facilitates easy assembly and disassembly without the need to cut copper pipes.
- High-strength structural frame engineered for durability and robustness.
- Multi-voltage compatibility minimizes frequent start-stop cycles of the equipment.

MaxAir SERIES
LARGE ROOM PRECISION COOLING

SPECIFICATIONS

Indoor model (MX Series)	MX-AC025	MX-AC030	MX-AC035	MX-AC040	MX-AC045	MX-AC050	MX-AC060
Total Cooling Capacity (kW)	025	030	035	040	045	050	060
Sensible Cooling Capacity (kW)	27.1	30.6	36.3	41.2	45.3	51.2	60.2
Air Volume (m³/h)	8550	9550	11100	12100	12550	13100	14000
Compressor Type	DC Variable Frequency Compressor Single System						
Compressor Number (pcs)	1	1	1	1	1	1	1
Fan Type	High Efficiency EC Fans						
Fan Number (pcs)	1	1	1	1	1	1	1
EEV	High Efficiency Electronic Expansion Valve						
Refrigerant	R410A						
Heating Capacity (kW)	6	6	6	9	9	9	9
Humidification Capacity (kg/h)	5	5	5	10	10	10	10
Power Supply Type	380V/3N~50Hz						
FLA (A	36.5	40.8	41.6	45.7	50.0	54.5	64.6
Indoor Unit Weight (kg)	320	325	350	370	370	470	470
Dimension W×D×H (mm)	900*995*1975					1100*995*1975	
Outdoor Model (Nominal condition)	NOU-APN035	NOU-APN040	NOU-APN050	NOU-APN058	NOU-APN068	NOU-APN068	NOU-APN090
Power Supply Type	380V/3N~50Hz						
Outdoor Weight(kg)	126	135	140	150	166	166	185
Dimension W×D×H (mm)	1376×980×738		576×1274×748	776×1274×748	1976×1274×738		576×1274×748

Indoor model (MX Series)	MX-AC060	MX-AC070	MX-AC080	MX-AC090	MX-AC100	MX-AC110	MX-AC120
Total Cooling Capacity (kW)	60.9	72.2	82.1	90.5	102.1	110.2	120.0
Sensible Cooling Capacity (kW)	55.0	66.5	76.0	82.1	94.0	100.1	108.0
Air Volume (m³/h)	19000	22000	24000	25000	26000	27000	28000
Compressor Type	DC Variable Frequency Compressor Dual System						
Compressor Number (pcs)	2	2	2	2	2	2	2
Fan Type	High Efficiency EC Fans						
Fan Number (pcs)	2	2	2	2	2	2	2
EEV	High Efficiency Electronic Expansion Valve						
Refrigerant	R410A						
Heating Capacity (kW)	9	9	12	12	12	12	12
Humidification Capacity (kg/h)	10	10	10	10	10	10	10
Power Supply Type	380V/3N~50Hz						
FLA (A)	68.6	70.3	78.6	86.8	96.0	106.0	116.0
Indoor Unit Weight (kg)	600	650	690	690	880	880	880
Dimension W×D×H (mm)	1800*995*1975				2200*995*1975		
Outdoor Model (Nominal condition)	NOU-DPN090	NOU-APN050-2	NOU-APN058-2	NOU-APN068-2	NOU-APN068-2	NOU-APN078-2	NOU-APN090-2
Power Supply Type	380V/3N~50Hz						
Outdoor Weight(kg)	185	140*2	150*2	166*2	166*2	176*2	185*2
Dimension W×D×H (mm)	2576×1274×748	(1576×1274×748) *2	776×1274×748) *2	(1976×1274×738) *2		(2176×1274×738) *2	(2576×1274×748) *2

NOTE

- The above parameters are based on indoor return air working conditions of 24 °C, 50% RH, outdoor ambient temp. 35 °C;
- The upper air supply unit has two air supply methods: Upflow air supply and top front air supply;
- The default fan of the Downflow supply fan is sunken type, and the recommended net height of the floor is ≥ 400mm;