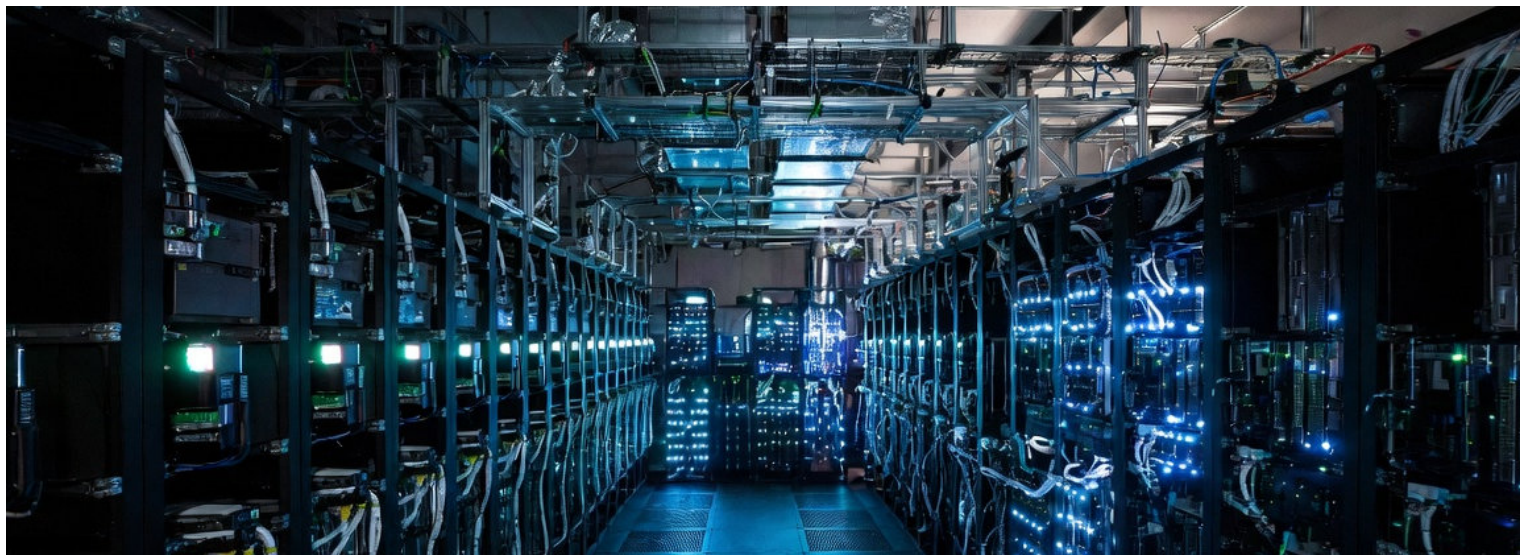


# DELTRONICS GENERAL CATALOGUE

Power & Cooling Solutions for Data Center



# DELTRONICS



## Aire de Precisión para Data Center

# DELTRONICS ROOM COOLING SA Series

Available in five models, Capacities from 5kW to 20kW and in three air flow systems (Downflow, UpFlow, & Displacement)



## Deltronics SA Room Cooling

### Small and Medium Data Center Room High-efficiency Precision cooling

Deltronics SA series precision cooling adopts the design of large air volume and high sensible heat ratio (SHR) to meet the needs of computer room; The precisely matched high-efficiency cooling system is designed for all-weather operation in full 24 hours of 365 days and is equipped with large-area evaporator to ensure the optimal energy-saving operation of the unit all the time.

## Features

### High Reliability

- Refrigerant leakage or insufficient detection function.
- Water leakage detection function (optional)
- Dual power supply and lightning protection functions Supported (optional)
- Wide input voltage design, optional phase loss and error protection, over-voltage and under-voltage protection functions.
- The unit is designed for uninterrupted, efficient and reliable operation 365 days×24 hours a day.
- The unit is suitable for severely cold areas, and can operate reliably at a low temperature of -40°C after optional low-temperature components.
- 7 inches display

### Stepless Speed Regulation Compressor

- The unit adopts inverter stepless speed regulation compressor, which can accurately control cooling capacity output by regulating the rotational speed of compressor, matching the heat load change operation.

### High-efficient and Reliable Cooling Solution

- Wet-film humidification, 0 power consumption.
- Stepless fan speed regulation, air volume adjusted as needed.
- Three-direction return air design to increase the return air area and improve the return air efficiency.
- The design of small enthalpy difference in large air volume ensures that the sensible heat ratio (SHR)  $\geq 90\%$ .
- Intelligent unit control avoids the competitive operation of multiple coolings and configures the cooling capacity as needed.
- High-efficiency and high-quality components match the well-designed refrigeration system, and annual energy efficiency ratio (AEER) is up to 4.19.
- Standard R410A environmentally friendly refrigerant.



## Intelligent Controller

- Precise microcomputer control system, large-screen display, with multi-level password protection and experts fault diagnosis function
- Equipped with the standard RS485 communication interface and supported the remote monitoring
- SNMP Monitoring
- Wide input voltage design, with self-recovery function after power resume, lack phase protection, faultphase protection and over or low voltage protection function is optional to ensure the unit uninterrupted working
- It can flexibly switch from the main unit to the backup unit automatically to achieve the automatic switch and rotation

## ◆ Technical Parameters

### ▼DX Unit (Air-cooled Type)

SA	Unit	005			007			012			017			020		
Unit configuration	-	Single cooling	Constant temperature	Constant temperature and humidity	Single cooling	Constant temperature	Constant temperature and humidity	Single cooling	Constant temperature	Constant temperature and humidity	Single cooling	Constant temperature	Constant temperature and humidity	Single cooling	Constant temperature	Constant temperature and humidity
Total cooling capacity <sup>1)</sup>	kW		5.5			7.5			12.5			17.5			20.5	
Sensible capacity <sup>2)</sup>	kW		5.2			6.8			11.3			16.1			19.1	
Air volume	m <sup>3</sup> /h		2000			2250			3000			5000			5000	
Heating capacity	kW	-	2	2	-	2	2	-	2	2	-	4	4	-	4	4
Humidification capacity (Wet film humidification)	kg/h	-	-	1.5	-	-	2	-	-	2	-	-	2.5	-	-	2.5
Number of compressor	pcs		1			1			1			1			1	
Number of fan	pcs		1			1			1			1			1	
Voltage	V		220			220			380			380			380	
Frequency	Hz		50/60			50/60			50/60			50/60			50/60	
Full load current	A	11.0	20.5	21.0	16.2	25.3	25.8	8.4	15.7	16.2	15.5	29.5	30.0	18.0	31.5	32.0
Unit weight	kg	94	96	107	104	106	108	134	136	138	158	160	162	167	168	170
Unit width	mm		600			600			600			750			750	
Unit depth	mm		500			500			500			650			650	
Unit height	mm		1850			1850			1850			1850			1850	

### ▼Outdoor unit

KSA	Unit	007		010		018		024		028	
Heat exchange capacity	kW		7.6		10.4		18.1		23.8		27.2
Full load current	A		0.5		0.7		1.4		1.7		1.7
Unit weight	kg		38		48		60		118		135
Unit width	mm		905		944		988		1118		1118
Unit depth	mm		346		420		440		480		480
Unit height	mm		611		803		1257		1560		1560

#### Notes:

1. The above parameters are based on indoor return air conditions of 24 °C, 50% RH, and outdoor ambient temperature of 35 °C;
2. The outdoor unit needs to be powered from the indoor unit;
3. The minimum working environment temperature for standard outdoor units is -20 °C, and with low-temperature kits, the minimum working environment temperature is -40 °C;
4. If there is a demand for customized products, please contact us.

1. Specifications are subject to change without prior notice
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# DELTRONICS ROOM COOLING MA Series

Available in eleven models, Capacities from 25kW to 120kW and in three air flow systems (Downflow, UpFlow, & Displacement)



## Deltronics MA Room Cooling

### Medium and Big Data Center Room High-efficiency Precision cooling

Deltronics MA series precision cooling adopts the design of large air volume and high sensible heat ratio (SHR) to meet the needs of computer room; The precisely matched high-efficiency cooling system is designed for all-weather operation in full 24 hours of 365 days and is equipped with large-area evaporator to ensure the optimal energy-saving operation of the unit all the time.

## Features

### High Reliability

- Refrigerant leakage or insufficient detection function.
- Water leakage detection function (optional)
- Dual power supply and lightning protection functions Supported (optional)
- Wide input voltage design, optional phase loss and error protection, over-voltage and under-voltage protection functions.
- The unit is designed for uninterrupted, efficient and reliable operation 365 days×24 hours a day.
- The unit is suitable for severely cold areas, and can operate reliably at a low temperature of -40°C after optional low-temperature components.
- Modular design

### Stepless Speed Regulation Compressor

- The unit adopts inverter stepless speed regulation compressor, which can accurately control cooling capacity output by regulating the rotational speed of compressor, matching the heat load change operation.

### High-efficient and Reliable Cooling Solution

- Wet-film humidification, 0 power consumption.
- Stepless fan speed regulation, air volume adjusted as needed.
- Electronic expansion valve
- The design of small enthalpy difference in large air volume ensures that the sensible heat ratio (SHR)  $\geq 90\%$ .
- Intelligent unit control avoids the competitive operation of multiple coolings and configures the cooling capacity as needed.
- High-efficiency and high-quality components match the well-designed refrigeration system, and annual energy efficiency ratio (AEER) is up to 4.19.
- Standard R410A environmentally friendly refrigerant.



EC FANS



INVERTER COMPRESSOR

## Intelligent Controller

- MA Series adopts powerful professional precision air conditioner intelligent control system to realize high-efficient, energy-saving, stable and reliable control of the unit with superior performance.
- Standard RS485 intelligent communication interface, SNMP optional
- Graphical state display and temperature & humidity curve display
- Alarm notification and it can record more than 3000 alarm logs
- Multi-level password protection
- Auto restart when mains recovers
- 7" color touch screen, friendly HMI on,
- Faultphase protection and over or low voltage protection function is optional to ensure the unit uninterrupted working
- It can flexibly switch from the main unit to the backup unit automatically to achieve the automatic switch and rotation

## Technical Parameters

### ▼DX Unit (Inverter Compressor)

SA	Unit	025	030	035	040 (Single)	050 (Single)	040 (Dual)	050 (Dual)	060	080	100	120
Total cooling capacity <sup>1)</sup>	kW	27.0	32.0	36.5	42.0	52.5	44.5	53.0	63.0	84.0	105.0	123.0
Sensible capacity <sup>1)</sup>	kW	27.0	32.0	36.5	42.0	52.5	44.5	53.0	63.0	84.0	105.0	123.0
Air volume	m <sup>3</sup> /h	8500	10000	11000	12000	13500	12500	13500	18700	21600	26000	26500
Heating capacity	kW	9	9	9	9	9	9	9	12	12	12	12
Number of compressors	pcs	1	1	1	1	1	2	2	2	2	2	2
Humidification capacity (Wet film humidification)	kg/h	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Humidification capacity (Electrode humidification)	kg/h	6.0	8.0	8.0	8.0	8.0	3.5	3.5	10.0	10.0	12.0	12.0
Number of fan	pcs	1	1	1	1	1	1	1	2	2	2	2
Fan type	/	EC fan										
Full load current (Cooling only)	A	23	25	32	36	42	37	40	50	72	84	86
Full load current (With heater and humidifier)	A	32.5	36.3	39.2	41.5	50.4	45.5	54.3	60.1	71.3	86.3	100.5
Unit weight	kg	350	370	380	390	410	490	510	680	700	790	800
Unit width	mm	1128	1128	1128	1128	1128	1178	1178	2228	2228	2228	2228
Unit depth	mm	995	995	995	995	995	995	995	995	995	995	995
Unit height	mm	1975	1975	1975	1975	1975	1975	1975	1975	1975	1975	1975
Condenser	KCS	032	042	048	054	064	028*2	032*2	042*2	054*2	064*2	084*2

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# DELTRONICS ROW COOLING RC

Available in three widths, 300mm, 400mm and 600mm, Capacities from 25 kW to 70 kW and in three system formats



## Features

### Real-time Monitoring of the Heat Load

- RC series unit is compatible with multiple temperature sensors, monitoring the heat load change real-time, and directly control the supply air temperature (the inlet air temperature of servers), that is safe, reliable, and energy saving, making sure that the inlet air temperature of servers conform to the requirements and the equipment running in the best state

### Stepless Speed Regulation Compressor

- The unit adopts inverter stepless speed regulation compressor, which can accurately control cooling capacity output by regulating the rotational speed of compressor, match the heat load change of heat source in real time, and achieve accurate cooling and high energy efficient operation.

## Deltronics RC Row Cooling

RC series precision row cooling is elaborately designed for the specific cooling needs of the new generation of high heat density data center racks.

The design is close to heat source application. It adopts brand-new airflow distribution method and serves the data center with high reliability, high efficiency, energy saving, accurate measurability and flexibility.

It solves intractable problems in practice with technologies such as real-time monitoring, dynamic coordinated output, cabinet size design and no need for raised floor to ensure the uninterrupted, high-efficient and reliable operation of key equipment for 24 hours of 365 days

### Redundant Fan Design

- RC series units are standard with the EC fan that can rapidly response to the output requirements; the effect of energy saving in the part load mode is remarkable, up to 30% higher than the conventional AC fan.

### Inverter Compressor

- RC series unit adopts inverter stepless speed regulation compressor, which can accurately control cooling capacity output by regulating the rotational speed.



▼DX Unit (Air-cooled Type)

FS***	Unit	007		012		007		012	
Compressor type	-	Fix speed compressor				Inverter compressor			
The unit configuration	/	Constant temperature	Constant temperature and humidity	Constant temperature	Constant temperature and humidity	Constant temperature	Constant temperature and humidity	Constant temperature	Constant temperature and humidity
Total cooling capacity <sup>1)</sup>	kW	7.5	7.5	12.5	12.5	7.5	7.5	12.5	12.5
Sensible capacity <sup>1)</sup>	kW	7.5	7.5	12.5	12.5	7.5	7.5	12.5	12.5
Air volume	m <sup>3</sup> /h	3400	3400	3600	3600	3400	3400	3600	3600
Number of fan	pcs	4	4	4	4	4	4	4	4
Fan type	-	AC Fan				EC Fan			
Direction of air supply	-	Side air supply/return				Side air supply/return			
Heating capacity	kW	2	2	2	2	2	2	2	2
Humidification capacity (Wet film humidification)	kg/h	-	2	-	2	-	2	-	2
Voltage	V	220	220	380	380	220	220	220	220
Full load current	A	23.5	24.0	19.5	20.0	32.8	33.3	40.5	41.0
Unit weight	kg	208	210	223	225	208	210	223	225
Unit width	mm	300	300	300	300	300	300	300	300
Unit depth	mm	1200/1400	1200/1400	1200/1400	1200/1400	1200/1400	1200/1400	1200/1400	1200/1400
Unit height	mm	2000	2000	2000	2000	2000	2000	2000	2000
Outdoor unit model	KCS	010		018		010		018	

▼DX Unit (Air-cooled Type)

FS***	Unit	025	025	030	030	040	050	060	070
Compressor type	-	Inverter Compressor							
Total cooling capacity <sup>1)</sup>	KW	25.5	25.5	30.5	30.5	42.8	52.0	65.0	70.0
Sensible capacity <sup>1)</sup>	KW	25.5	25.5	30.5	30.5	42.8	52.0	65.0	70.0
Air volume	m <sup>3</sup> /h	5050	7000	5050	8000	9500	11000	12500	14200
Fan type	-	EC Fan							
Heating capacity	kW	3.5	3.5	3.5	6.0	6.0	9.0	9.0	9.0
Humidification capacity (Wet film humidification)	kg/h	2.5	2.5	2.5	3.5	3.5	3.5	3.5	3.5
Number of compressors	pcs	1	1	1	1	1	1	1	1
Voltage	V	380	380	380	380	380	380	380	380
Frequency	Hz	50/60	50/60	50/60	50/60	50/60	50/60	50/60	50/60
Full load current (Cooling only)	A	20.0	20.0	30.0	30.0	32.0	35.0	46.0	50.0
Full load current (With heater and humidifier)	A	30.0	30.0	36.5	36.5	38.5	46.0	55.0	60.0
Unit width	mm	300	600	300	600	600	600	600	600
Unit depth	mm	1100/1200	1100/1200	1100/1200	1100/1200	1100/1200	1100/1200	1100/1200	1200
Unit height	mm	2000/2200	2000/2200	2000/2200	2000/2200	2000/2200	2000/2200	2000/2200	2000/2200
Unit weight	kg	230	265	240	290	290	345	360	375
Number of fans	pcs	6	2	6	2	3	3	3	3
Outdoor unit model	KCS	032	032	042	042	054	064	084	096

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