



CLIMA  
PROCESSOR



MADE IN ITALY

COMPUTER ROOM PRECISION AIR CONDITIONING







The C.M.C. group began operations in 1963 with the production of steel structures, working since the 70's in the railway market. Since 1979 the company has specialized in the production of metal structures for locomotives, railway coaches, trams and metro.

In the 80's, in addition to the production of such structures, CMC has implemented its services offering also the design, carried out in co-design with customers, which includes both the industrialization of the product, made with 3D-CAD support and FEM calculation (Finished Element Method), focusing at the same time, on the achievement of quality standards like ISO 9001, UNI EN 15085, UNI 3834 and IRIS.

That allowed C.M.C., in the last two decades, to obtain numerous orders from the most important international players of the railway market.

What is really appreciated by our customers is the innovation that our company provides in the industrialization of the products, by means of techniques derived from the aviation field, using not only welding methodology, but also assembly technology with rivets and structural adhesives.

In the 90's, the company started selling products for the airport infrastructures, such as air conditioning units, telescopic air ducts, Spiral Hose Retriever (SHR), Drum flat Hose Retriever (DHR) and cable retriever for the airport infrastructure.

During the last decade many projects for structural parts of railway vehicles like metro, locomotives and high speed trains has been developed.

The proposal has been also improved with a complete product range of precision air conditioning system for data center and computers rooms with the brand "clima processor". A full range of specific units, direct expansion or chilled water are available in cabinet or rack configuration are available as well as specific custom solution can be developed

The company is certified according to: IRIS - EN ISO 9001 - EN ISO 3834-2 - EN 15085-2

## Product Range



Clicca la tipologia del Sistema desiderato



### CC

Close Control Air Conditioners **CHILLED WATER**

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**CC CLIMA PROCESSOR** is a **chilled water Close Control** air conditioning.

Designed for technical application like computers rooms, data centers, digital telephone exchangers, switch rooms, weather stations, museum, medical laboratories, diagnostic scanners as well as any other application with sensible heat to be dissipated.

Design criteria is to **minimize** the **footprint** and assure **full frontal access** for easy inspection and service.

Available with **up** or **down flow** version with a **complete range of accessories**.

**Reduced noise level** and fined tuned regulation by using the last generation of the **EC plug-in radial fans**.

**Customized solution available on request.**



- Painted galvanized steel cabinet
- EC "Plug-in" centrifugal fan backward blades
- Microprocessor control with LCD end user interface
- 3 ways modulating mixing valve
- EU 4 Air Filter
- Full front inspection

**Options:**

- Re-heating systems: hot water, electric
- Humidity and dehumidity systems
- Advanced microprocessor
- High ESP fans
- RS485 card Modbus, Ethernet, LON, BACnet
- Alarms: Water, Filter, Fire, Smoke
- Fresh air intake
- Air delivery plenum
- Adjustable basement
- Air filters F5, F7
- Special coils
- Sandwich panels
- Low noise insulation
- Special colour
- Customized solution on demand

		SIZE																		
		S013	S014	S023	S024	M013	M014	M023	M024	M033	M034	M043	M044	M053	M054	L023	L024	L033	L034	L043
Total Capacity	kW	8,6	10,1	10,7	12,9	14,5	17,9	21,9	23,9	32,2	36,0	45,0	51,8	51,8	65,6	31,1	34,7	50,5	61,0	60,3
Sensible Capacity	kW	7,1	8,1	8,8	10,1	12,0	14,4	16,9	19,6	24,6	28,2	34,8	40,7	41,9	50,3	27,6	32,2	42,5	49,8	48,8
Total Air Flow	m³/h	2.100	2.000	2.500	2.400	3.800	3.800	5.000	5.000	7.000	6.900	10.500	10.500	13.000	13.000	8.500	8.450	12.500	12.400	14.000
Sound pressure Level	dB(A)	47	48	48	50	51	51	52	52	55	55	57	58	59	60	58	58	59	60	60
Length	mm	650	650	850	850	650	650	850	850	1236	1236	1436	1436	1636	1636	850	850	1236	1236	1436
Width	mm	470				670										870				
Height	mm	1980																		
		SIZE																		
		L044	L053	L054	L063	L064	L073	L074	L083	L084	L093	L094	L113	L114	L123	L124	L133	L134	L143	L144
Total Capacity	kW	69,1	76,1	96,5	98,0	112,0	111,2	126,0	120,3	136,4	129,0	141,9	161,8	181,1	181,9	212,5	191,2	213,6	198,9	223,7
Sensible Capacity	kW	56,8	64,9	77,0	79,3	92,7	88,3	102,0	93,3	107,3	104,1	117,9	127,2	145,5	141,2	168,1	145,7	166,0	150,6	172,3
Total Air Flow	m³/h	14.000	19.700	19.700	24.400	24.400	26.800	26.450	27.700	27.200	28.500	28.000	36.000	35.500	40.000	41.400	40.700	40.000	41.200	41.000
Sound pressure Level	dB(A)	61	61	62	63	63	64	64	64	64	65	64	66	65	67	66	67	66	67	67
Length	mm	1436	1636	1636	1856	1856	2056	2056	2256	2256	2456	2456	2642	2642	2842	2842	3042	3042	3242	3242
Width	mm	870																		
Height	mm	1980																		

Room air conditions 24°C 50%RH, Chilled water temperature 7/12°C





**CA/W CLIMA PROCESSOR** is a **direct expansion Close Control** air conditioning air or water condensed.

Designed for technical application like computers rooms, data centers, digital telephone exchangers, switch rooms, weather stations, museum, medical laboratories, diagnostic scanners as well as any other application with sensible heat to be dissipated.

Design criteria is to **minimize** the **footprint** and assure **full frontal access** for easy inspection and service.

Available with **up** or **down flow** version with a **complete range of accessories**.

**Reduced noise level** and fined tuned regulation by using scroll compressors and last generation of the **EC plug-in radial fans**.

Available with **BLDC compressor**.

**Customized solution available on request.**



- Painted galvanized steel cabinet
- EC "Plug-in" centrifugal fan backward blades
- Microprocessor control with LCD end user interface
- Scroll or rotary Compressor
- R410A refrigerant
- EU 4 Air Filter
- Full front inspection
- Condensation: water cooled, remote air cooled

#### Options:

- Re-heating systems: hot water, electric, hot gas
- Humidity and dehumidity systems
- Advanced microprocessor
- High ESP fans
- RS485 card: Modbus, Ethernet, LON, BACnet
- Alarms: Water, Filter, Fire, Smoke
- Dampers: not return, insulation
- Fresh air intake
- Free cooling plenum
- Air delivery plenum
- Adjustable basement
- Air filters F5, F7
- Special coils
- Sandwich panels
- Low noise insulation
- Special colour
- R134a or R407C refrigerant
- Customized solution on demand

SIZE																						
		S011	S021	M031	M041	M051	M061	M071	M081	M082	M101	M102	M111	M121	M122	L142	L151	L162	L202	L222	L242	L302
CW																						
Total Capacity	kW	5,9	8,7	12,7	15	18,3	21,4	25,6	28,5	31	31,9	36,4	38,9	40,9	42,8	49,9	56,1	55,5	64,2	72,1	79,6	107,8
Sensible Capacity	kW	5,8	8,3	11,6	12,3	17,1	18,4	24,4	25,1	26,1	31,6	33,7	34,7	39	39,8	46,2	48,6	48,3	55,3	58,6	64,8	80,2
CA																						
Total Capacity	kW	5,4	8,1	10,8	13,2	15,9	18,8	22,1	25,7	27,7	29,2	31,5	34,9	35,8	36,4	42,6	48,6	50,2	58,9	65,2	72,2	95,2
Sensible Capacity	kW	5,4	8,1	10,8	11,8	15,7	17,3	21,9	24,0	24,8	29,0	31,2	33,1	35,5	36,1	42,3	45,6	46,2	53,2	55,7	61,8	74,8
CA/CW																						
Total Air Flow	m³/h	2,000	2,300	3,000	3,000	4,500	4,500	6,500	6,300	6,300	9,000	9,000	9,000	10,500	10,500	12,000	12,000	12,000	13,600	13,600	15,100	16,700
Sound pressure Level	dB(A)	46	47	49	49	51	51	52	52	53	54	56	55	56	57	59	59	60	62	63	63	65
Length	mm	650	850	650	650	850	850	1236	1236	1236	1436	1436	1436	1636	1636	1856	1856	1856	2056	2056	2256	2456
Width	mm	470		670														870				
Height	mm	1980																				

Room air conditions 24°C 50%RH, Outdoor air temperature 32°C, Condensing temperature 48°C, Water temperature +30/35°C





**CA/DCI CLIMA PROCESSOR** is a **direct expansion Close Control** air conditioning air or water condensed with inverter controlled BLDC compressor.

Designed for technical application like computers rooms, data centers, digital telephone exchangers, switch rooms, weather stations, museum, medical laboratories, diagnostic scanners as well as any other application with sensible heat to be dissipated.

Design criteria is to **minimize** the **footprint** and assure **full frontal access** for easy inspection and service.

Available with **up** or **down flow** version with a **complete range of accessories**.

**Reduced noise level** and fined tuned regulation by using scroll compressors and last generation of the **EC plug-in radial fans**.

**Customized solution available on request.**



- Painted galvanized steel cabinet
- EC "Plug-in" centrifugal fan backward blades
- Microprocessor control with LCD end user interface
- Scroll or rotary BLDC controller inverter compressor
- Electronic expansion valve
- R410A refrigerant
- EU 4 Air Filter
- Full front inspection
- Condensation: water cooled, remote air cooled

#### Options:

- Re-heating systems: hot water, electric, hot gas
- Humidity and dehumidity systems
- Advanced microprocessor
- High ESP fans
- Touch screen
- RS485 card: Modbus, Ethernet, LON, BACnet
- Alarms: Water, Filter, Fire, Smoke
- Dampers: not return, insulation
- Fresh air intake
- Free cooling plenum
- Air delivery plenum
- Adjustable basement
- Air filters F5, F7
- Special coils
- Sandwich panels
- Low noise insulation
- Special colour
- R134a or R407C refrigerant
- Customized solution on demand

		SIZE					
		S010	M013	M025	M035	L050	L070
Total Capacity	KW	2,8-10	3,5-13	7-25	11-35	15-51	20,5-70,8
Sensible Capacity	KW	2,8-9,7	3,4-12,8	7-24,8	10,9-34,7	14,8-50,6	20,3-70,4
Total Air Flow	m3/h	2400	3000	6700	10400	12000	13600
Sound Pressure Level	dB(A)	47	49	52	57	59	63
Lenght	mm	850	850	1235	1635	1855	2055
Width	mm	470	670			870	
Height	mm	1980					

Room air conditions 24°C 50%RH, Outdoor air temperature 32°C, Condensing temperature +48°C



# CD/CE/ CF/CT

## Close Control Air Conditioners DUAL FLUID

Computer Room Air Conditioning



TORNA ALL'INDICE



Technical data



**DUAL FLUID CLIMA PROCESSOR** series is designed for **Close Control** air conditioning application where **energy saving** approach and **redundancy criteria** are required by using different combination of heat exchangers.

Designed for technical application like computers rooms, data centers, digital telephone changers, swithc rooms, weather stations, museum, medical laboratories, diagnostic scanners as well as any other application where the sensible heat needs to be dissipated.

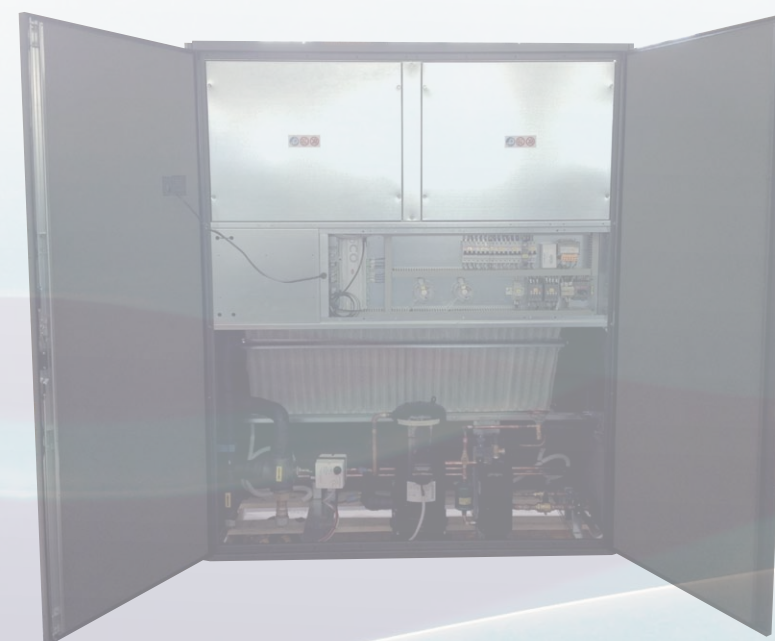
Design criteria is to **minimize** the **footprint** and to assure **full frontal access** for easy inspection and service.

Available with **up** and **down flow** version with a **complete range of accessories**.

**Reduced noise level** and fined tuned regulation by using scroll compressors and last generation of the **EC plug-in radial fans**.

Available with **BLDC compressor**.

**Customized solution available on request.**



- Painted galvanized steel cabinet
- EC "Plug-in" centrifugal fan backward blades
- Microprocessor control with LCD end user interface
- Scroll or rotary Compressor
- R410A refrigerant
- EU 4 Air Filter
- Full front inspection
- Condensation: water cooled, remote air cooled

### Options:

- Re-heating systems: hot water, electric, hot gas
- Humidity and dehumidity systems
- Advanced microprocessor
- Complete range of remote air cooled condensers
- High ESP fans
- BLDC compressor
- RS485 card: Modbus, Ethernet, LON, BACnet
- Alarms: Water, Filter, Fire, Smoke
- Dampers: not return, insulation
- Fresh air intake
- Touch screen
- Air delivery plenum
- Adjustable basement
- Air filters F5, F7
- Special coils
- Sandwich panels
- Low noise insulation
- Special colour
- R134a or R407C refrigerant
- Customized solution on demand

### AVAILABLE DUAL FLUID VERSIONS:

CT = 2 x CC (Twin CC) - twin chilled water
CD = CC + CA - chilled walter and direct expansion air condensed
CE = CC + CW - chilled walter and direct expansion water condensed
CF = CE Free cooling - chilled walter and direct expansion water condensed with indirect free cooling and dry cooling





**CM CLIMA PROCESSOR** is a **compact direct expansion Close Control** air conditioning air or water condensed.

Designed for technical application like computers rooms, data centers, digital telephone exchangers, switch rooms, weather stations, museum, medical laboratories, diagnostic scanners as well as any other application with sensible heat to be dissipated.

Design criteria is to **minimize** the **footprint** and assure **full frontal access** for easy inspection and service.

Available with **up** or **down flow** version with a **complete range of accessories**.

**Reduced noise level** and fined tuned regulation by using scroll compressors and last generation of the **EC plug-in radial fans**.  
Available with **BLDC compressor**.

**Customized solution available on request.**



- Painted galvanized steel cabinet
- EC "Plug-in" centrifugal fan backward blades
- Microprocessor control with LCD end user interface
- Scroll or rotary Compressor
- R410A refrigerant
- EU 4 Air Filter
- Full front inspection
- Condenser fan speed control

**Options:**

- Re-heating systems: hot water, electric, hot gas
- Humidity and dehumidity systems
- Advanced microprocessor
- High ESP fans
- RS485 card: Modbus, Ethernet, LON, BACnet
- Free cooling plenum
- Fresh air intake
- Adjustable basement
- Air filters F5, F7
- Special coils
- Sandwich panels
- Low noise insulation
- Special colour
- R134a or R407C refrigerant
- Customized solution on demand

		SIZE				
		CM M011	CM M021	CM M031	CM M041	CM M051
Total Capacity (1)	kW	7	9,3	11,5	14,1	16,8
Sensible Capacity (1)	kW	6,8	7,8	10,8	12	14,9
Total Capacity (2)	kW	8,5	9,7	12,9	15,5	17,6
Sensible Capacity (2)	kW	8,3	9	12,5	14,7	16,9
Air inlet condition	°C	22÷30	22÷30	22÷30	22÷30	22÷30
Internal humidity	%	30÷80	30÷80	30÷80	30÷80	30÷80
Max external conditions	°C	48	48	48	48	48
Total Air Flow	m3/h	2000	2000	3000	3000	3600
Condenser air flow	m3/h	3000	3000	5000	5000	5700
sound pressure level	dB(A)	56	56	60	60	64
Length	mm	650	650	850	850	850
Width	mm	670	670	670	670	670
Height	mm	1980	1980	1980	1980	1980

(1) Room air conditions +27°C/ 47%UR External air temperature +35°C, Condensing temperature +52°C  
(2) Room air conditions +30°C/ 45%UR External air temperature +35°C, Condensing temperature +52°C



# CN/ CNC

## Close Control Air Conditioners CONDENSING UNITS

Computer Room Air Conditioning



Technical data



**CN/CNC CLIMA PROCESSOR** is air cooled condensing units.

Designed for vertical or horizontal application.

**Reduced noise level** and fan speed regulation.  
Available with standards **BLDC scroll compressor**.







**Customized solution available on request.**



- Painted aluminium casing
- Scroll or rotary Compressor
- R410A refrigerant
- Rotalock valves
- Nitrogen safety charge

#### Options:

- Low noise fans
- Low temperature function
- Condensing temperature control
- Special colour
- R134a or R407C refrigerant
- Customized solution on demand

SIZE															
															
CN		008	011	015	022	024	031	046	055	070	075	083	100	121	140
STANDARD															
Cooling power	kW	7,1	10,9	15,4	21,6	23,9	30,9	46	55,2	68	74,3	81,1	98	121	140
Air flow	m3/h	3000	3000	7000	7000	7000	6500	14000	14000	14500	14500	18000	21000	27000	28000
"Sound power level	dB(A)	47	49	52	57	59	57	59	57	59	57	59	57	59	63
(measured at 1m max. speed)"	dB(A)	71	71	73	74	73	73	77	77	77	77	83	83	84	84
LOW NOISE															
Cooling power	kW	5,8	8,3	11,8	15,8	19,8	23,6	36,8	42	50,7	53,6	69	82	90	103
Air flow	m3/h	1500	1500	4700	4500	4500	4500	9000	9000	9000	9000	12000	13500	18000	18000
"Sound power level	mm	850	650	1235	1635	1855	1635	1855	1635	1855	1635	1855	1635	1855	2055
(measured at 1m max. speed)"	dB(A)	61	61	63	64	66	66	73	73	73	73	75	75	76	77
DIMENSIONS															
Lenght	mm	730	730	1080	1080	1080	1080	1670	1670	1985	1985	2285	2285	2675	1985
Width	mm	470	470	470	470	470	470	470	470	470	470	470	470	470	555
Heigh	mm	650	650	850	850	850	850	850	850	850	850	1050	1050	1050	1650

SIZE															
CNC		005	008	010	015	017	024	034	044	054	060	065	075	090	
Compressor Cooling power (Kw) (1)		5	8	10,1	14,6	17,1	23	33,7	43,5	54	59	64,8	74,4	90	
Air flow (m3/h)		3000	3000	7000	7000	7000	6500	14000	14000	14500	14500	18000	21000	27000	
Number of refrigerant circuits		1	1	1	1	1	1	1	1	1 - 2	1 - 2	2	2	2	
"Sound power level (measured at 1m max. speed)"	dB(A)	73	73	75	76	75	75	79	79	79	79	85	85	86	
DIMENSIONS															
Lenght	mm	1000	1000	1550	1550	1550	1550	2130	2130	2430	2430	2830	2130	2830	3250
Width	mm	470	470	620	620	620	620	620	620	620	620	620	620	620	620
Heigh	mm	650	650	900	900	900	900	900	900	900	900	1100	1500	1100	1700

Evaporating temperature +7°C, External temperature +32°C, Condensing temperature +50°C





**RACK COOLERS CLIMA PROCESSOR** series is designed for **Close Control** air conditioning application where the needs is to cool directly the computer racks.

Available with **chilled water** and **direct expansion** version.

Designed to be **inrow installed** avoiding air ducting.

Suitable for **new and refurbishment projects**.

**Full frontal access** for easy inspection and service is an additional benefit as well as a **complete range of accessories**.

**Reduced noise level** and fined tuned regulation by using the last generation of the **EC plug-in radial fans**.

Available with **BLDC compressor too**.

**Customized solution available on request.**



- Painted galvanized steel cabinet
- EC "Plug-in" centrifugal fan backward blades
- Microprocessor control with LCD end user interface
- Scroll or rotary Compressor
- R410A refrigerant
- EU 4 Air Filter
- Full front inspection
- Condensation: water cooled, remote air cooled

**Options:**

- Re-heating systems: hot water, electric, hot gas
- Humidity and dehumidity systems
- Advanced microprocessor
- High ESP fans
- BLDC compressor
- RS485 card: Modbus, Ethernet, LON, BACnet
- Alarms: Water, Filter, Fire, Smoke
- Dampers: not return, insulation
- Fresh air intake
- Air delivery plenum
- Adjustable basement
- Air filters F5, F7
- Special coils
- Sandwich panels
- Low noise insulation
- Special colour
- R134a or R407C refrigerant
- Customized solution on demand

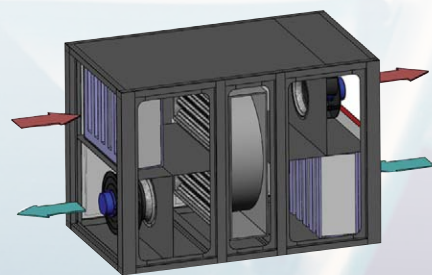
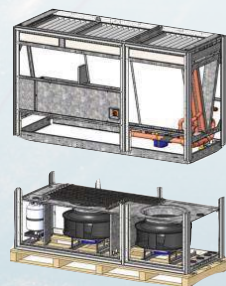
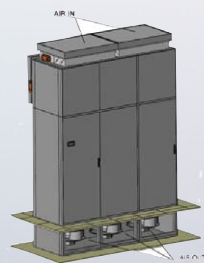
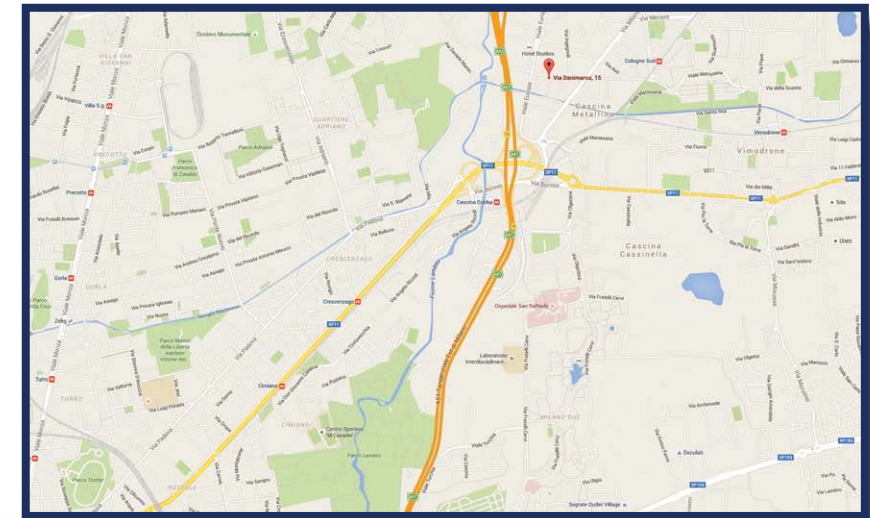
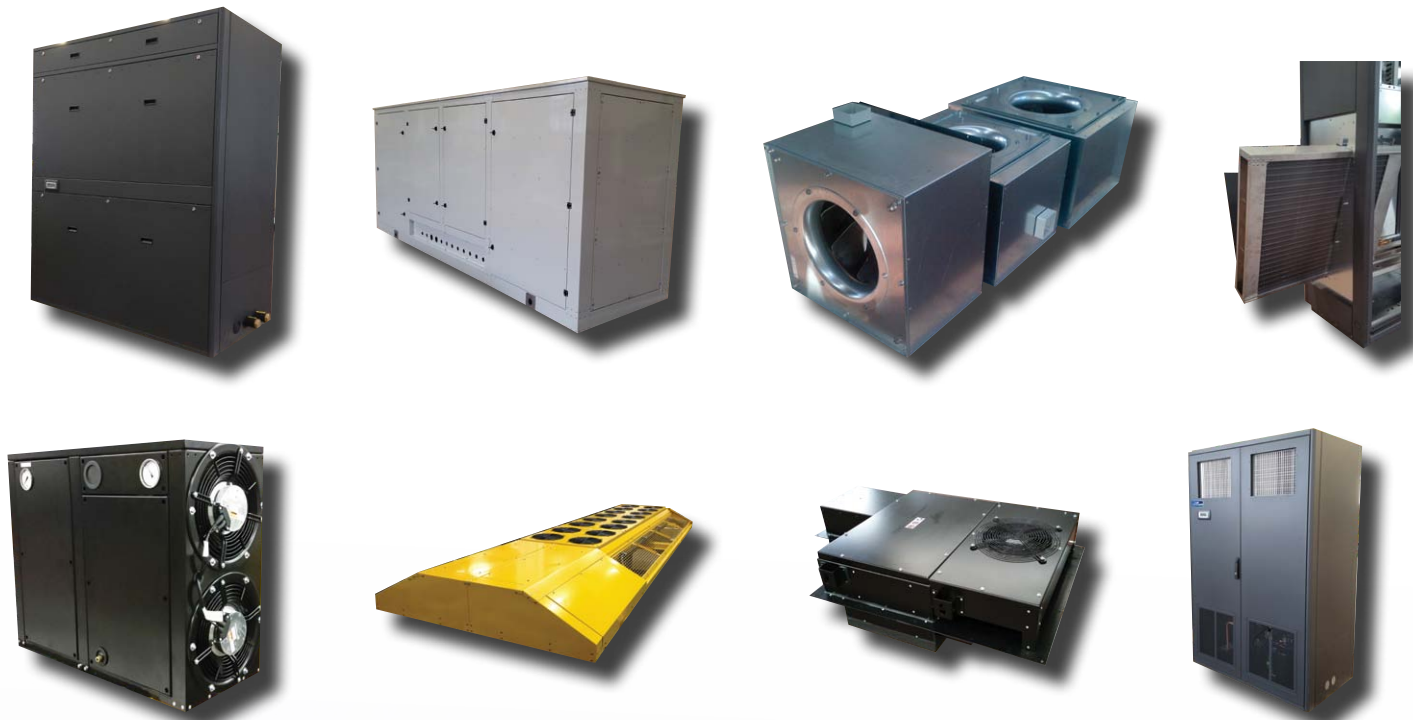
		SIZE			
		DC20W	DC40W	DC30X	DC60X
Total Capacity	KW	25	40	28	48,1
Sensible Capacity	KW	25	40	28	48
Total Air Flow	m3/h	4800	8400	4800	8400
Sound Pressure Level	dB(A)	67	70	67	70
Lenght	mm	300/400		300/400	400
Width	mm	1150		1150	
Height	mm	1950		1950	
Weight	mm	165	185	215	225

Room air conditions 35 °C



# Special solution

Development of special products for any market needs



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**WWW**





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**www**