ATTOM
SmoothAir Modular Precision Cooling

Specialist Support+

Flexible Customization+

Modular Precision Cooling for Smart, Reliable and Green MDC Solution

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SmoothAir Modular Precision Cooling

Designed and optimized for micro data center, and modular data center solutions.

1.0kW-40.9kW

Row Mount, Rack Mount, Top Mount and Wall Mount

Customize with Expert.

A simple, flexible, expandable, and intelligent modular data center solution is one of the keys to distributed edge computing success.

SmoothAir precision cooling system is a dedicated product specially designed and optimized for modular micro data center solutions to remove heat from IT equipments and create an ideal environment for mission critical assets.

SmoothAir precision cooling products designed and optimized with mechanical, air flow management, and smart control to fulfill the overall requirements of modular data center solution such as integration, modularity, and intelligent portal.

The standardized mechanical design matches common server cabinet size and structure. Built in monitoring port supporting integration into high level management systems to view, and control the cooling equipments. Designed for fully enclosed and cold/hot aisle applications. The cooling system runs at highly efficient level which consumes much less power comparing to traditional room cooling solutions.

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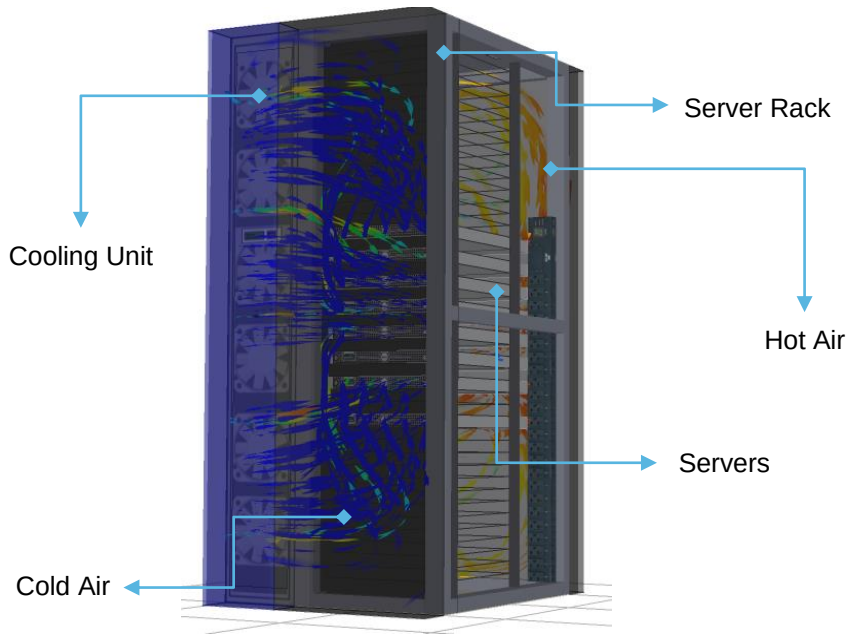
Application Schematic

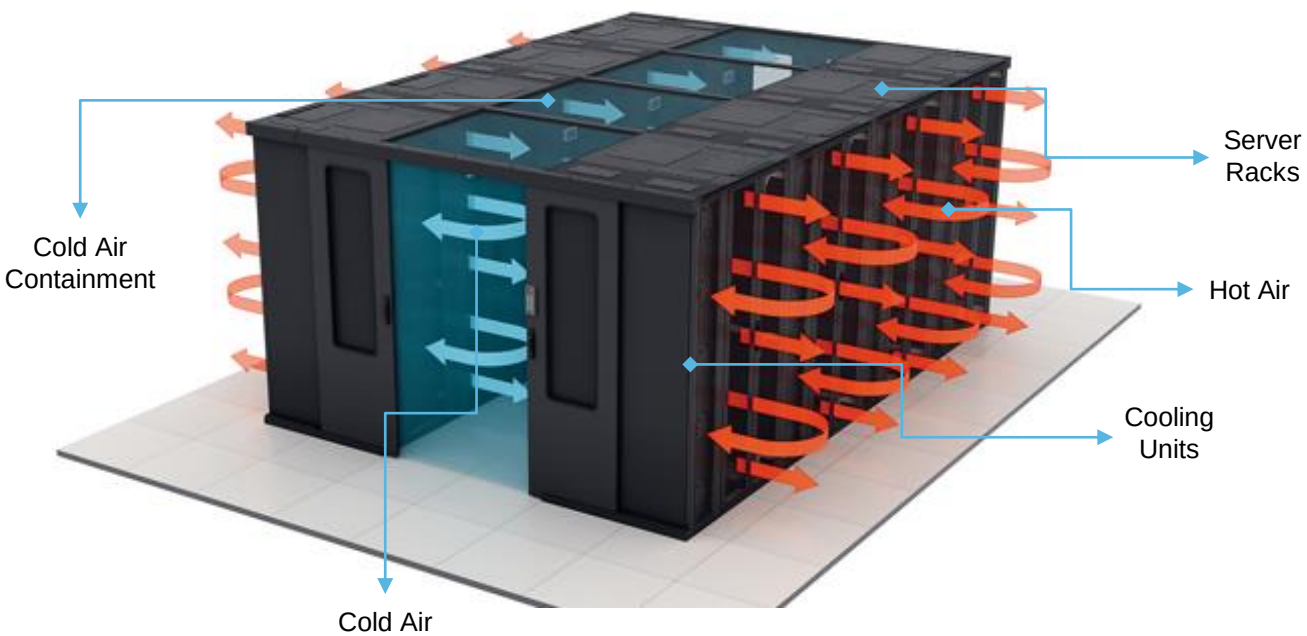
SmoothAir Precision Cooling for Micro Data Center

Use SmoothAir Precision cooling to build micro data center which is low noise, dust proof and energy efficient.



SmoothAir Precision Cooling for Modular Data Center

ATTOM precision cooling is ideal for cold/hot containment modular data center solution with its target cooling, cold/hot air path, and highly efficient technology.



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Key Features

Seamless MDC Integration

> Designed for rack mount, row mount, wall mount or top mount to be seamlessly integrated into server racks. Customizable to match closed aisle or open aisle modular data center solution.

> Standard monitoring port to be integrated into higher level DCIM system easily.

> Front door and structure customizable to be built into MDC to keep uniform design style.

Reliability

> Developed by professional precision cooling team following proven R&D process and industry standards.

> Designed with recognized components and thorough testing to enhance reliability level.

> Full protection and alarm control system for quick diagnose and reactivate the unit.

Green & Efficient

> Cooling capacity and air flow automatically modulated to match the dynamic IT output.

> Dedicated cooling close to IT heating source saves more than 30% energy comparing to traditional room cooling solution.

Serviceability

> Unit level and components level modularity supports quick replacement and reduce MTTR.

> Swappable fans allow system to remain operational if a replacement is required. Easy electric box service operation with the slide-out design.

> Easy to change G4 air filter guarantees the cleanliness of MDC.

> Quick installation with coupled piping connection.

Monitoring Management

> Intelligent control comes with monitoring port and with standard protocol make it easy to real time view, control and adjust cooling units remotely.

> Full alarm and notification supports combined cooling and power logic .

> Team-work mode and backup mode between multiple units.

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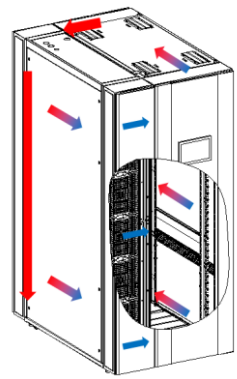
SmoothAir Row Mount

Air cooled, row mount, split type, ideal for micro data center, integrated modular data center solutions.

5.6kW-25.1kW 300mm Width



1. Dynamically modulated cooling capacity with inverter compressor maintains temperature within envelop and prevent compressor from cycling during low heat load period.
2. Air flow modulates with EC fans to match IT equipment requirements. Each fan module is easy to change with quick couple connections.
3. Precision cooling controller monitors and protects unit constantly. Easy to be integrated into BMS to display, control and manage the system.
4. R410A green refrigerant is highly efficient and no ODP.
5. Copper piping adopts quick connections and supports bottom and top connections.
6. Easy to change G4 air filter and sealed doors help to build a clean and quiet MDC.
7. Slide drawer style electric box makes service easier.
8. Optional with condensate pump, leaking kit and long piping kit for diverse applications.

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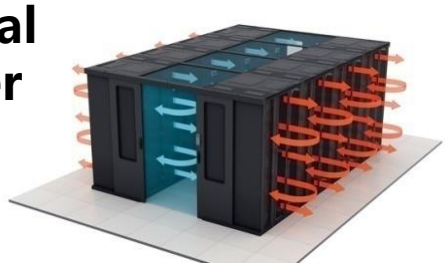
SmoothAir Row Mount

Air cooled, row mount, split type, ideal for modular data center and container data center solutions.



40.9kW 600mm Width

1. Dynamically modulated cooling capacity with inverter compressor maintains temperature within envelop and prevent compressor from cycling during low heat load period.
2. Air flow modulates with EC fans to match IT equipment requirements. Each fan module is easy to change with quick couple connections.
3. Precision cooling controller monitors and protects unit constantly. Easy to be integrated into BMS to display, control and manage the system.
4. R410A green refrigerant is highly efficient and no ODP.
5. Copper piping supports bottom and top connections.
6. Easy to change G4 air filter and sealed doors help to build a clean and quiet MDC.
7. Slide drawer style electric box makes service easier.
8. Optional with condensate pump, leaking kit and long piping kit for diverse applications.

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Technical Data- SmoothAir Row Mount DX

SmoothAir DX Type Row Mount							
Indoor Unit	S-005RA	S-007RA	S-012RA	S-017RA	S-020RA	S-025RA	S-040RA
Total Cooling-kW	5.6	7.6	12.8	17.6	21.2	25.1	40.9
SHR-%	100	100	100	100	100	100	100
Air Volume-m3/h	2000	2250	2400	4500	4920	5000	8000
Mount Type	Row	Row	Row	Row	Row	Row	Row
Cooling Type	DX	DX	DX	DX	DX	DX	DX
Height-mm	2000(42U)	2000(42U)	2000(42U)	2000(42U)	2000(42U)	2000(42U)	2000(42U)
Depth-mm	1100	1100	1100	1100	1100	1100	1100
Width-mm	300	300	300	300	300	300	600
Weight-kg	210	213	233	253	258	260	360
Reheat-kW	3.0	3.0	3.0	6.0	6.0	6.0	6.0
Hum.(optional)-kg/h	1.5	1.5	1.5	1.5	1.5	1.5	3
Power Input[1)]	220V/50-60Hz /1Ph	220V/50-60Hz /1Ph	380V/50-60Hz /3Ph	380V/50-60Hz /3Ph	380V/50-60Hz /3Ph	380V/50-60Hz /3Ph	380V/50-60Hz /3Ph
FLA-A[1)]with heating	28.2	37.3	20.9	27.0	26.7	27.9	37.7
FLA-A[1)]with hum.	33.3	42.4	22.0	32.1	31.8	33.0	47.9
Power Input[2)]	208V/50-60Hz /2Ph	208V/50-60Hz /2Ph	460V/60Hz /3Ph	460V/60Hz /3Ph	460V/60Hz /3Ph	460V/60Hz /3Ph	460V/60Hz /3Ph
FLA-A[2)]with heating	28.2	37.3	17.2	22.3	22.1	23.1	31.1
FLA-A[2)]with hum.	33.3	42.4	18.2	26.5	26.3	27.3	39.6
Power Input[3)]	-	-	208V/50-60Hz /3Ph	208V/50-60Hz /3Ph	208V/50-60Hz /3Ph	208V/50-60Hz /3Ph	208V/50-60Hz /3Ph
FLA-A[3)]with heating	-	-	39.2	49.4	48.8	51.1	68.9
FLA-A[3)]with hum.	-	-	42.3	52.5	52.0	54.2	75.1
Outdoor Unit	KSF08AN	KSF12AN	KSF18AN	KSF24AN	KSF32AN	KSF38AN	KSF52AN
Height-mm	790	790	1240	689	689	695	695
Depth-mm	420	420	420	990	990	990	1273
Width-mm	800	800	800	1407	1407	1407	1607
Leg Height-mm	-	-	-	450	450	450	450
Weight-kg	28	40	67	105	110	120	150
Power Input[1)]	220V/50-60Hz /1Ph	220V/50-60Hz /1Ph	220V/50-60Hz /1Ph	380V/50-60Hz /3Ph	380V/50-60Hz /3Ph	380V/50-60Hz /3Ph	380V/50-60Hz /3Ph
FLA-A[1)]	1.5	1.5	3.0	2.0	2.0	2.8	4.0
Power Input[2)]	208V/50-60Hz /2Ph	208V/50-60Hz /2Ph	277V/50-60Hz /1Ph	460V/50-60Hz /3Ph	460V/50-60Hz /3Ph	460V/50-60Hz /3Ph	460V/50-60Hz /3Ph
FLA-A[2)]	1.5	1.5	2.4	1.7	1.7	2.4	3.3
Power Input[3)]	-	-	208V/50-60Hz /2Ph	380V/50-60Hz /3Ph	380V/50-60Hz /3Ph	380V/50-60Hz /3Ph	380V/50-60Hz /3Ph
FLA-A[3)]	-	-	3.0	2.0	2.0	2.8	4.0

Notes:

1. Air flow is based upon maximum setting. Fan modulates per real loads.
2. Cooling Capacity based on 37℃/24%RH return air and 35℃ outdoor temperature with the suggested condenser.
3. FLA of indoor unit includes FLA of outdoor unit. No including optional humidifier and heater.
4. Options including monitoring card, low temperature kit, pipe extension kit, dual power input, leaking detection.
5. Standard unit works -15℃ and above outdoor temperature. Select low temperature kit to work -35℃ and above outdoor temperature.
6. Customized design is negotiable.
7. Rights reserved to change parameters without prior notification.

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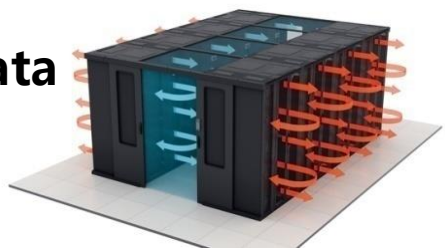
SmoothAir Row Mount

Chilled water, row mount, ideal for modular data center and container data center solutions.



28.9kW – 65.8kW
300mm / 600mm Width

1. Dynamically modulated cooling capacity with motorized ball valve maintains temperature within envelop and prevent water from cycling during low heat load period.
2. Air flow modulates with EC fans to match IT equipment requirements. Each fan module is easy to change with quick couple connections.
3. Precision cooling controller monitors and protects unit constantly. Easy to be integrated into BMS to display, control and manage the system.
4. Touch type color display panel to easily view and control the units.
5. Copper piping supports bottom and top connections.
6. Easy to change G4 air filter and sealed doors help to build a clean and quiet MDC.
7. Slide drawer style electric box makes service easier.
8. Optional with condensate pump, leaking kit and dual power supply for diverse applications.

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Technical Data- SmoothAir Row Mount CW

SmoothAir CW Type Row Mount			
Model	S-025RC	S-045RC	S-065RC
Total Capacity –kW	28.9	46.0	65.8
SHR -%	100	100	100
Air Volume -m3/h	4800	9000	11400
Mount Type	Row	Row	Row
Height –mm	2000(42U)	2000(42U)	2000(42U)
Depth –mm	1100	1100	1100
Width –mm	300	600	600
Weight –kg	190	330	400
Reheat-kW	3.0	3.0	3.0
Hum.(optional) -kg/h	1.5	1.5	1.5
Power Input[1)]	220V/50-60Hz/1Ph	380V/50-60Hz/3Ph	380V/50-60Hz/3Ph
FLA –A[1)with heating]	22.7	13.7	16.0
FLA –A[1)with hum.]	27.8	18.8	26.1
Power Input[2)]	208V/50-60Hz/2Ph	460V/50-60Hz/3Ph	460V/50-60Hz/3Ph
FLA –A[2)with heating]	22.7	11.3	13.2
FLA –A[2)with hum.]	27.8	15.5	21.5
Power Input[3)]	-	208V/50-60Hz/3Ph	208V/50-60Hz/3Ph
FLA –A[3)with heating]	-	25.1	29.2
FLA –A[3)with hum.]	-	28.1	35.5

Notes:

1. Air flow is based upon maximum setting. Fan modulates per real loads.
2. Cooling Capacity based on 37℃/24%RH return air and 13℃/18℃ water temperature.
3. FLA not including optional humidifier and heater.
4. Options including monitoring card, 3 way water valve, dual power input, leaking detection.
5. Customized design is negotiable.
6. Rights reserved to change parameters without prior notification.

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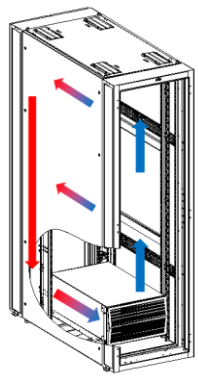
SmoothAir Rack Mount

Air cooled, rack mount, split type, suitable for micro data center, mini modular data center solutions.



3.9kW-12.0kW

1. Inverter compressor and EC fan works at high efficiency, maintains temperature within envelop and prevent compressor from cycling during low heat load period.
2. Standard rack mount structure fully compatible with server rack is flexible for future expansion.
3. Precision cooling controller monitors and protects unit constantly. Easy to be integrated into BMS to display, control and manage the system.
4. Slide drawer style electric box makes service easier.
5. Copper piping adopts quick connection and supports bottom and top connections.
6. Compressor locating in outdoor unit lowers the noise level then better suits customer expectation of mini data center application.
7. R410A green refrigerant is highly efficient and no ODP.
8. Front air outlet suitable for installation on flexible height in a rack.

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Technical Data - SmoothAir Rack Mount DX

SmoothAir Rack Mount DX				
Model	S-003KA	S-005KA	S-007KA	S-012KA
Total Capacity-kW	3.9	5.0	7.2	12.0
SHR -%	95	96	96	96
Air Volume -m3/h	700	1800	2000	2400
Mount Type	Rack	Rack	Rack	Rack
Height –mm	266(6U)	355(8U)	445(10U)	533(12U)
Depth –mm	828	828	828	828
Width –mm	483	483	483	483
Weight –kg	31	43	52	70
Reheat(optional) –kW	1.2	1.2	2.4	2.4
Hum.(optional) -kg/h	-	-	-	-
Power Input[1)]	220V/50-60Hz/1Ph	220V/50-60Hz/1Ph	220V/50-60Hz/1Ph	380V/50-60Hz/3Ph
FLA –A[1)]	13.9	15.2	21.6	18
Power Input[2)]	208-240V/50-60Hz/2Ph	208-240V/50-60Hz/2Ph	208-240V/50-60Hz/2Ph	460V/50-60Hz/3Ph
FLA –A[2)]	13.9	15.2	21.6	14.9
Power Input[3)]	-	-	-	208V/50-60Hz/3Ph
FLA –A[3)]	-	-	-	32.9
Outdoor Unit	KSF06AC	KSF08AC	KSF12AC	KSF18AC
Height -mm	632	790	790	1240
Depth -mm	395	420	420	420
Width -mm	800	820	820	820
Leg Height -mm	-	-	-	-
Weight -kg	35	38	50	77
Power Input[1)]	220V/50Hz-60Hz/1Ph	220V/50Hz-60Hz/1Ph	220V/50Hz-60Hz/1Ph	380V/50Hz-60Hz/3Ph
FLA –A[1)]	12.6	13.2	19.6	16
Power Input[2)]	208-240V/50Hz-60Hz/2Ph	208-240V/50Hz-60Hz/2Ph	208-240V/50Hz-60Hz/2Ph	460V/50-60Hz/3Ph
FLA –A[2)]	12.6	13.2	19.6	13.3
Power Input[3)]	-	-	-	208V/50-60Hz/3Ph
FLA –A[3)]	-	-	-	29.3

Notes:

1. Air flow is based upon maximum setting. Fan modulates per real loads.
2. Cooling capacity based on 37℃/24%RH return air and 35℃ outdoor temperature with the suggested condenser.
3. FLA of indoor unit includes FLA of outdoor unit. . No including optional humidifier and heater.
4. Options including monitoring card, low temperature kit, pipe extension kit, dual power input, leaking detection.
5. Standard unit works -15℃ and above outdoor temperature. Select low temperature kit to work -35℃ and above outdoor temperature.
6. Customized design is negotiable.
7. The right reserved to change parameters without prior notification.

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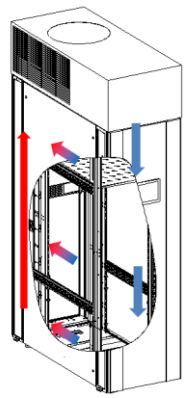
SmoothAir Top Mount

Air cooled, top mount, indoor and outdoor packaged, suitable for micro data center, mini modular data center solutions.



1.5kW – 3.5kW

1. Industry top brand compressor. Highly reliable and efficient.
2. Precision cooling controller monitors and protects unit constantly. Easy to be integrated into BMS to display, control and manage the system.
3. Compatible with standard rack size forms unified and integrated mdc solution.
4. Packaged design easy for installation, service and shipping.
5. Top mount means good air management of hot/cold stream and no occupying of IT space.
6. Green refrigerant is highly efficient and no ODP.

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Technical Data- SmoothAir Top Mount

SmoothAir Top Mount			
Unit	S-001TA	S-002TA	S-003TA
Total Cooling-kW	1.5	2.5	3.5
SHR-%	100	100	100
Air Volume-m3/h	500	800	1380
Mount Type	Top	Top	Top
Cooling Type	DX	DX	DX
Height-mm	390	390	390
Depth-mm	1100	1100	1100
Width-mm	600	600	600
Weight-kg	45	50	55
Power Input[1)]	220V/50Hz/60Hz/1Ph	220V/50Hz/60Hz/1Ph	220V/50hz/60Hz/1Ph
FLA-A[1)]	3.5	5.5	6.5
Power Input[2)]	208-240V/50Hz/60Hz/2Ph	208-240V/50Hz/60Hz/2Ph	208-240V/50Hz/60Hz/2Ph
FLA-A[2)]	3.5	5.5	6.5

Notes:

1. Cooling capacity based on 37℃/24%RH return air and 35℃ outdoor air.
2. Options including monitoring card, condensate evaporation kit.
3. The frequency 50Hz or 60Hz is choiceable upon order.
4. Customized design is negotiable.
5. The right reserved to change parameters without prior notification.

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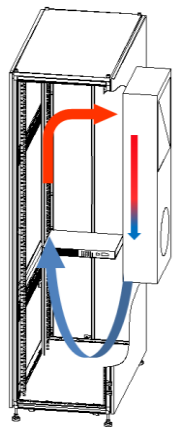
SmoothAir Wall Mount

Air cooled, wall mount, indoor and outdoor packaged, suitable for micro data center, mini modular data center solutions.

5.5kW–21.2kW



1. Industry top brand compressor. Highly reliable and efficient.
2. Precision cooling controller monitors and protects unit constantly. Easy to be integrated into BMS to display, control and manage the system.
3. Adopts high pressure/high air flow centrifugal blower suiting critical equipment cooling condition.
4. Packaged design easy for installation, service and shipping.
5. Wall mounting to side of cabinet no occupying of IT space.
6. Green refrigerant is highly efficient and no ODP.

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Technical Data- SmoothAir Wall Mount

SmoothAir Wall Mount					
Unit	S-005WA	S-007WA	S-012WA	S-017WA	S-020WA
Total Cooling-kW	5.5	7.5	12.5	17.5	21.2
SHR-%	100	100	100	100	100
Air Volume-m3/h	1850	2000	2400	3500	4000
Mount Type	Wall	Wall	Wall	Wall	Wall
Cooling Type	DX	DX	DX	DX	DX
Height-mm	1920	1920	2100	2100	2100
Depth-mm	650	650	650	650	650
Width-mm	900	900	1000	1000	1000
Weight-kg	180	230	285	320	355
Power Input[1)]	220V/50Hz/60Hz/1Ph	220V/50Hz/60Hz/1Ph	380V/50Hz/60Hz/3Ph	380V/50Hz/60Hz/3P	380V/50Hz/60Hz/3P
FLA-A[1)]	15.6	17.6	16.0	19.5	27.5
Power Input[2)]	208-240V/50Hz/60Hz/2Ph	208-240V/50Hz/60Hz/2Ph	460V/60Hz/3Ph	460V/60Hz/3Ph	460V/60Hz/3Ph
FLA-A[2)]	15.6	17.6	12.4	16.2	22.8
Power Input[3)]	-	-	-	-	-
FLA-A[3)]	-	-	-	-	-

Notes:

1. Cooling Capacity based on 26℃/40%RH return air and 35℃ outdoor air.
2. Options including monitoring card, condensate evaporation kit.
3. The frequency 50Hz or 60Hz is choiceable upon order.
4. The refrigerant R134a is used for the ambient temperature up to 55C maximum.
5. The 208V/60Hz/3Ph models utilize inverter compressor.
6. Customized design is negotiable.
7. The rights reserved to change parameters without prior notification.

ATTOM

We believe the world will be totally connected. The connections are creating intelligence and, a better future.

We design and deliver **precision cooling products optimized** for **edge data center** application to accelerate **connections and intelligence throughout to the edges**.

Contact

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