



Unique Motor & Cooling Technologies

DBS Cooling Technology (Suzhou) Co., Ltd

www.dbsindustry.com

DBS
Unique Motor & Cooling Technologies



Our Vision

To deliver high-performance, dependable and eco-leading industrial electronic equipment, and fuel the advancement of sophisticated, premium manufacturing across China.

Core Values

Our Pursuit

We innovate, refine manufacturing processes and pioneer cutting-edge technologies, anchored by uncompromising quality. We strive to be your trusted global strategic partner.

Our Stakeholder Value

Customers stand at the core of our value chain. We grow hand in hand with devoted employees, collaborative partners and supportive investors.

Corporate Culture

- Integrity: Trust is built on integrity
- Perseverance: Diligent dedication shapes a brighter future
- Benevolence: Embrace profound care in all we do
- Rigor: Reject shortcuts, uphold superior craftsmanship

DBS Milestones

- 2011 - CHUYUAN MACHINERY founded in Wuzhong District, specializing in air-to-air heat exchanger production
- 2013 - Expanded capacity for precision sheet metal & aluminum/copper coil processing
- 2017 - Rebranded as DBS Cooling Technology (Suzhou) Co., Ltd
 - 12,000 m² new production base launched in Wujiang, full facility relocation completed
- 2019 - In-house R&D & production of full-range environmental control units initiated
- 2021 - Global shipments of environmental control units hit 30,000+ units
- 2025 - Annual output over 90,000 units, 120+ team members, annual revenue USD 20 million
- 2026 - To be continued...



Cooling Business Scope

Telecom	BTS Shelter	04
	ICT Rack	05
	Cabinet	06-09
BEES (Battery Energy Storage System)	Air Cooler	10
	Chiller	11
	Dehumidifier	12
Industrial		13-14
Medical	Chiller & Refrigerator	15
Others	Heat Exchanger Recuperator	16
	Condensate Evaporator Box	17
	Air cold CDU	18
OEM Custom Design Capability		19-22



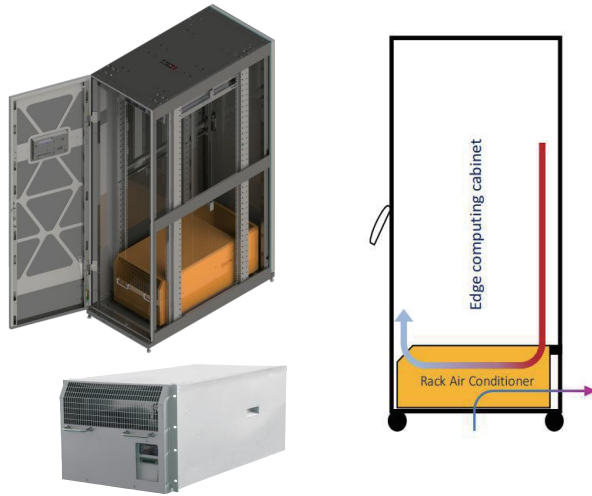


Key Features

- Pure 48V DC-powered design delivering industry-leading SEER energy-efficiency ratings.
- Widely deployed across high-temperature regions including India, Southeast Asia and Africa.
- Optimized for cooling applications within hybrid power systems, lowering operational expenditure while meeting stringent OPEX-targeted requirements.

Power Supply	P/N	Model No.	Capacity (W)	Dimension W/O flanges (mm)	Product Feature
48VDC	721010	ASZB-040-000-010	4000	1000*315*215 765*530*280	Split/wall type
	721012	ASZB-043-000-012	4350	1000*315*215 765*530*280	Split/wall type
	721011	ASZB-050-000-011	5000	1200*500*220 765*530*280	Split/ceiling type
	751010	AWZB-040-000-010	4000	880*660*450	Package type
	751011	AWZB-050-000-011	5000	880*660*450	Package type
	721080	ASZB-090-000-080	9000	1750*510*300	Split/floor type

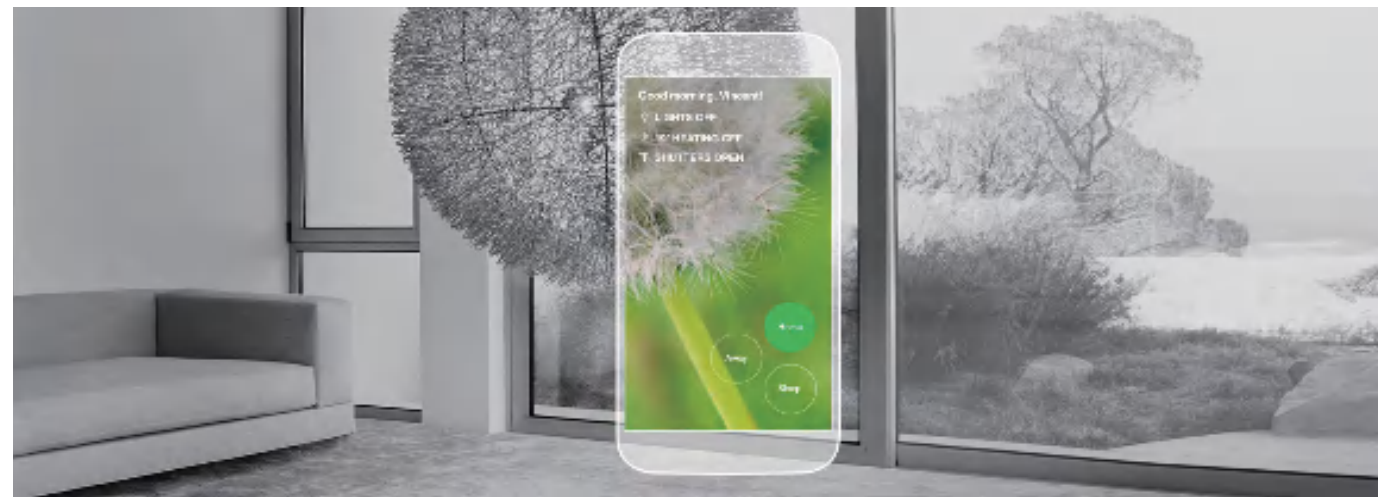




Key Features

- 230V AC power input, built-in inverter modulates compressor speed for top-tier SEER efficiency.
- Advanced humidity-control logic field-approved by customers in humid Southeast-Asian nations.
- Fully adapted to edge-computing cabinet cooling requirements.
- Precise temperature-humidity regulation eliminates cabinet-wall condensation.
- Packaged-type and split-type, bottom installation and top installation versions are optional.

Power Supply	P/N	Model No.	Capacity	Dimension W/O flanges (mm)	Product Feature
230 VAC	762010	ARYC-035-000-010	3500W	438*222*740	Split type/Bottom
	762310	ARYC-035-000-310	3500W	765*530*280 438*222*780 765*530*280	Split type/Bottom
	762510	ARYC-035-000-510	3500W	440*356*940	Package type/Bottom
	762520	ARYC-050-000-520	5000W	440*400*940	Package type/Bottom
	762810	ARYC-040-000-810	4000W	595*495*944	Package type/Top



Key Features

- 42-60 VDC rated power supply, automatic stop-and-restart triggered by out-of-range or recovered input voltage.
- R134A/R1234yf/R513A/R454B refrigerants available for T3 environments with maximum ambient temperature of 55°C.
- Smart control logic delivers alarm output, temperature adjustment and MODBUS-RTU-based communication.



Product Actual Installation

P/N	Model	Performance	Dimension W/O flanges(mm)	Product Feature
717017	ACSB-003-000-017	300W	350*300*110	24 VDC
717030	ACSB-004-000-030	400W		24 VDC
711010	ACZB-003-000-010	300W	400*240*150	CE
711014	ACZB-004-000-014	400W		
711017	ACZB-003-000-017	300W	350*300*110	
711020	ACZB-006-000-020	600W		CE
711021	ACZB-005-000-021	500W	546*315*175	CE
711022	ACZB-008-000-022	800W		CE
711030	ACZB-010-000-030	1000W	793*381*175	CE
711041	ACZB-015-000-041	1500W	1112*412*175	CE
711040	ACZB-020-000-040	2000W		CE
711093	ACZB-015-000-093	1500W		
711097	ACZB-020-000-097	2000W	745*445*200	
71109E	ACZB-015-000-09E	1500W		
711130	ACZB-025-000-130	2500W	745*445*275	CB
711059	ACZD-025-000-059	2500W	1150*485*225	UL(R1234yf)
711120	ACZB-030-000-120	3000W	745*445*300	CB
711122	ACZB-035-000-122	3500W		CB
711050	ACZB-030-000-050	3000W		
711057	ACZD-030-000-057	3000W	1150*485*225	UL(R1234yf)
711052	ACZB-035-000-052	3500W		
711181	ACZB-040-000-181	4000W	1100*505*325	
711070	ACZB-050-000-070	5000W	1300*600*300	CE
711280	ACZB-075-000-280	7500W	1500*750*400	Dual system
711281	ACZB-090-000-281	9000W	1680*614*360	Dual system

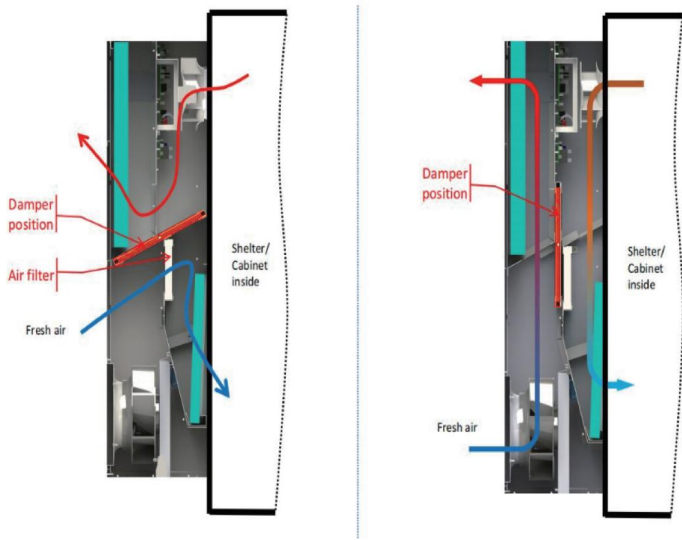


Key Features

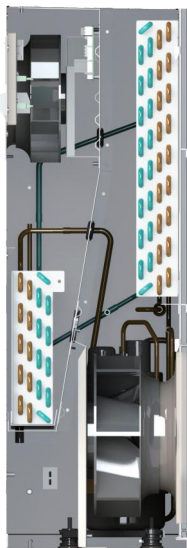
- Eco-friendly R513A, R454B and R1234yf refrigerants are available.
- Compact monoblock construction with plug-and-play functionality enables fast setup, flange design supports through-wall and cabinet-door mounting.
- Closed-loop cooling shields internal devices from outside environments, with configurable set-point temperature ranging from 20-40°C. It eliminates ventilation-dependent cooling and maximises system efficiency.
- Fully compliant with T3-grade standards for tropical environments with ambient temperatures as high as 55°C.



P/N	Model No.	Capacity	Dimension W/O flanges (mm)	Product Feature
732010	AIYB-006-000-010	600W	546*315*175	CB
732012	AIYB-005-000-012	500W		CE
732020	AIYB-010-000-020	1000W		CE
732030	AIYB-020-000-030	2000W	745*445*200	CE
732031	AIYB-015-000-031	1500W		CE
732231	AIYB-015-000-231	1500W		CE
732120	AIYB-020-020-120	2000W		UL
732121	AIYB-015-020-121	1500W	745*445*300	UL
732160	AIYB-030-000-160	3000W		
732040	AIYB-030-000-040	3000W	1150*485*225	CE
732042	AIYB-025-000-042	2500W		
73204J	AIYK-040-000-04J	4000W	1150*485*300	R513A
732051	AIYB-040-000-051	4000W		
732050	AIYB-050-000-050	5000W	1300*600*300	
73205E	AIYB-050-000-05E	5000W		
73205J	AIYK-060-000-05J	6000W		R513A
732110	AIYC-075-000-110	7500W	1400*650*400	
732311	AIYC-060-000-311	6000W	1150*485*435	



Aircon & Ventilation Sectional View



Aircon & Hex Sectional View

Key Features

- Integrating active cooling with passive HEX or ventilation modules, this system achieves high safety and prolonged service life. DC-powered emergency cooling is available via HEX or ventilation. Deploy HEX-ventilation during nighttime and low-dissipation-load conditions to reduce compressor operation and save energy by as much as 35%. The active-cooling compressor is compatible with 48VDC and 230VAC (50/60Hz) power inputs,
- passive cooling can be realized by heat pipes or ventilation.

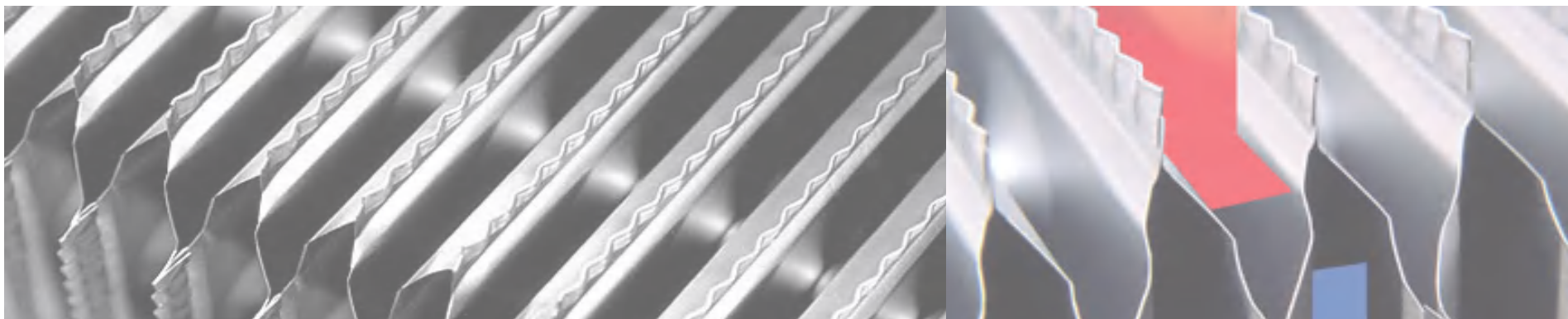
Power Supply	P/N	Model No.	Capacity	Dimension W/O flanges (mm)
48VDC AirCon&HEX	311010	CHZB-010-000-010	1000W & 50W/K	793*381*250
	311020	CHZB-020-000-020	2000W & 80W/K	1112*412*250
	311140	CHZB-020-000-140	2000W & 80 W/K	950*500*280
	311030	CHZB-030-000-030	3000W & 120W/K	1150*485*300
	311150	CHZB-050-000-150	5000W & 220W/K	1500*600*375
	311160	CHZB-030-000-160	3000W & 180W/K	1350*580*335
48VDC AirCon&Ventilation	321021	CVZB-020-000-021	2000W	1000*412*275
	321022	CVZB-015-000-022	1500W	
	321050	CVZK-040-000-050	4000W	1250*585*400(R513A)
230VAC & 48VDC AirCon&HEX	316100	CHUB-006-000-100	600W & 30W/K	546*315*200
	316010	CHUB-010-000-010	1000W & 50w/K	793*381*250
	316042	CHUB-020-000-042	2000W & 80W/K	745*445*250
	316040	CHUB-015-010-040	1500W & 70W/K	
	316031	CHUB-030-015-031	3000W & 110W/K	1150*485*300
	316060	CHUB-030-000-060	3000W & 120W/K	1300*500*250
230VAC & 48VDC AirCon&Ventilation	326010	CVUB-035-000-010	3500W	1350*420*325
	326021	CVUB-020-000-021	2000W	1000*412*275
	326030	CVUB-030-000-030	6000W	1500*520*375

Key Features

- Provides reliable, high-performance and budget-friendly cooling solutions.
- Keeps cabinet interior in clean, dry and stable conditions with IP55 ingress-protection rating.
- Minimizes maintenance requirements and lowers long-term operating costs.



Power Supply	P/N	Model No.	Capacity	Dimension W/O flanges (mm)	
48 VDC	511010	HCZA-050-000-010	50W/K	618*340*200	
	511020	HCZA-080-000-020	80W/K	900*400*155	
	511030	HCZA-120-000-030	120W/K	900*412*200	
	511031	HCZA-150-000-031	150W/K		
	511033	HCZA-100-000-033	100W/K		
	511480	HCZA-150-000-480	150W/K	745*445*275	
	511270	HCZA-180-000-270	180W/K	900*580*200	
	511040	HCZA-180-000-040	180W/K	1245*518*251	
	511042	HCZA-200-000-042	200W/K		
	511323	HCZA-260-000-323	260W/K	1400*610*251.5	
230 VAC	511330	HCZA-300-000-330	300W/K	1150*600*300	
	512160	HCYA-150-000-160	150W/K	1245*518*250	UL
	512170	HCYA-300-000-170	300W/K	1400*610*250	UL



Key Features

- Simplifies elaborate internal-cabinet air-duct design and cabinet-frame construction for expanded effective inner space.
- Station is cooled by forced air, doing away with complex liquid-cooling systems and coolant-replenishment maintenance to achieve cost advantages.
- On-site installation and after-sales maintenance of the air-conditioner are carried out externally without opening cabinet doors, protecting PACK cables and minimizing safety risks.

P/N	Model	Capacity	Dimension W/O flanges (mm)	Product Feature
73204A	AIYB-030-020-04A	3000W	1300*500*250	230 VAC, up air flow
73205A	AIYB-050-030-05A	5000W	1350*620*300	230 VAC, up air flow
73203P	AIYB-020-000-03P	2000W	745*445*200	230 VAC, down air flow
735060	AIVB-050-000-060	5000W	1300*600*300	380 VAC, down air flow
735140	AIVC-075-000-140	7500W	1400*650*400	380 VAC, down air flow
311131	CHZB-040-010-131	4000W&120W/K&1L/24H	1400*505*300	48 VDC, combo system
311132	CHZB-040-010-132	4000W&120W/K&1L/24H		48 VDC, combo system, CB, R513A
311133	CHZB-040-010-133	4000W&120W/K&1L/24H	1300*505*300	48 VDC, combo system, CB, R513A
312010	CHYK-030-000-010	3000W&120W/K&1L/24H	1150*485*300	Combo system, R513A , 230 VAC
511490	HCZA-070-000-490	70W/K&1L/24H	800*440*146	Combo hex& dehumify
511491	HCZA-100-000-491	100W/K&1L/24H		Combo hex& dehumify



BESS - Chiller

Key Features

- Features outstanding cooling performance.
- Supports integration of advanced energy-saving solutions such as natural free-cooling and heat-pump heating systems.

P/N	Model	Capacity	Dimension W/O flanges (mm)	Product Feature
382421	CTYB-060-020-421	6000W	275*690*1300	Door Mount
382711	CTYB-080-020-711	8000W	280*690*1330	Door Mount
785800	ATVM-300-120-800	30000W	440*1200*2000	Floor Stand Mount, R32
785810	ATVM-600-120-810	60000W	440*1200*2400	Floor Stand Mount, R32



Key Features



• Operational Mechanism

Hot-humid air condenses upon cooling. When cabinet-internal humid air flows across cooling fins, vapour condenses and drains away. It cuts down internal absolute humidity and eliminates condensation risks caused by temperature variation.

• Robust performance under volatile ambient temperature

Prevents condensation during drastic temperature changes and efficiently dehumidifies energy-storage cabinets.

• Plug-and-play intelligent control

Automatically starts dehumidification above the set humidity threshold and stops when humidity drops below the predefined value for effortless operation.

• Versatile mounting design

Quick installation available with hanging lugs or DIN-rail structure.



P/N	Model No.	Power Supply	Dehumidification Capacity	Dimension W/O flanges (mm)
162010	N/A	230 VAC	400ml/24H	150*138*84.5
792020	ADYB-100-000-020	230 VAC	10L/24H	550*380*105
167010	N/A	24 VDC	400ml/24H	150*138*84.5
797020	ADSB-050-000-020	24 VDC	5L/24H	450*176*95



Industrial - Air Conditioner



Key Features

- For various industrial and mining enterprises indoor equipment cooling and heat dissipation applications, effective isolation: temperature changes, humidity changes, salt spray changes, high corrosion application scenarios, escort for high-value equipment
- The internal refrigeration devices and pipelines are all protected by high anti-corrosion electrophoresis or optional nano-specialized coating, anti-corrosion and self-cleaning function, which greatly improves the service life
- Absolute dehumidification and relative humidity control follow the trend intelligently, effectively controlling the relative humidity in the cabinet
- The inner/outer interface meets IP44+ protection level
- Outdoor side dustproof net plug-in design, easy to replace
- It has the function of self-starting when incoming calls, and provides a variety of alarm and protection functions. It adopts RS485 interface and passes international standards
- The MODBUS RTU protocol realizes the remote monitoring function of the upper computer, and the alarm dry contact supports DC220V, AC250V
- R134a or R1234yf environmentally friendly refrigerant, ambient operating temperature up to 55 degrees



Automotive



Buildings



Data Centers



EV Charging



Food & Beverage



Manufacturing



Marine & Ports

	Power Supply	P/N	Model No.	Capacity	Dimension W/O flanges (mm)
For General Cabinet	230VAC	732018	AIYB-006-000-018	600W	546*315*175
		732078	AIYB-010-000-078	1000W	793*381*175
		732039	AIYB-015-000-039	1500W	1112*412*175
		732038	AIYB-020-000-038	2000W	1150*485*225
		732049	AIYB-025-000-049	2500W	
		732048	AIYB-030-000-048	3000W	950*400*280
For offshore cabinet C4 C5 corrosion resistant level	230VAC	732210	AIYB-020-010-210	2000W	790*490*200
		732220	AIYB-015-010-210	1500W	1500*600*300
For food & corrosion application	230VAC	722010	ASYC-100-020-010	10000W	924*900*320
For super-precision termerature control in manufacturing process	230VAC	732330	AIYB-020-006-330	2000W	1240*618*586
	380VAC	735320	AIVC-100-045-320	10000W	/
Others	380VAC	735020	AIVB- 050-000-020	5000W	1300*500*300
		735030	AIVB-010-000-030	1000W	421*500*472
		735040	AIVB-007-000-040	700W	423*500*372
		735060	AIVB-050-000-060	5000W	1300*600*300



Mining, Metals & Cement



Oil, Gas & Chemicals



Power



Pulp & Paper



Renewables



Transportation



Water & Wastewater

Medical - Chiller & Refrigerator

Key Features

- **High-Speed Compressor Cooling**

Compressor-powered active cooling achieves far quicker temperature reduction for medical devices, outperforming standard Peltier semiconductor cooling by multiple times.

- **Centralized Multi-Point Cooling Design**

An internal circulation pump distributes refrigerant freely to different cooling units, realizing centralized liquid supply and flexible multi-point cooling.

- **Precise Thermal Control for Reagent Protection**

Adjustable coolant range: 2-10°C with $\pm 1.0^{\circ}\text{C}$ control precision. Uniform cooling prevents hot-spot impacts and preserves reagent safety.

- **Durable Eco-Friendly Performance**

Green refrigerant supports stable operation under high-temperature harsh environments, ideal for rural and off-grid medical facilities.

- **Remote-Enabled Safety System**

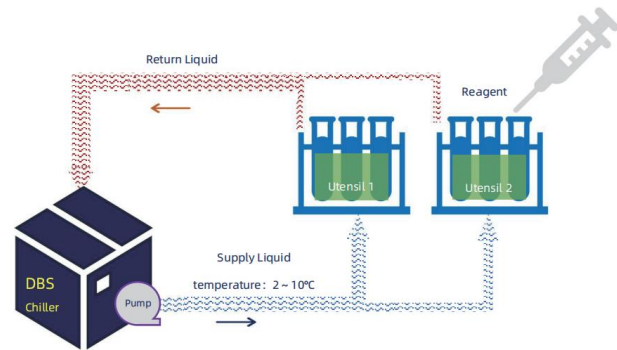
RS-485 interface supports remote setup, paired with full-range protection mechanisms and alarm-output functions.



(Medical Refrigerator)

Application Scenario

- * Various reagent tray cooling
- * Medical equipment cooling
- * Laboratory equipment cooling



(Medical Chiller)



P/N	Power Supply	Model No.	Capacity	Dimension W/O flanges (mm)
732621	230 VAC	AIYB-004-000-621	400W	270*236*352
737630	24 VDC	AISB-003-000-630	300W	240*300*280
737620		AISB-003-000-620		
737621 (R1234yf)		AISD-003-000-621		

Others - Heat Exchanger Recuperator

Plate heat exchangers designed for air flows up to 10,000 m³/h (60,00 CFM), achieve higher efficiency conforming to the European Ecodesign 2016 and 2018 standard.

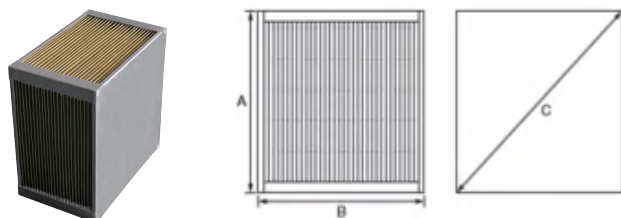
Design Feature

- Low pressure drop sheet profile
- In aluminum, acrylic protected aluminum or stainless steel
- Cross flow type mainly for ventilation, heat recovery, Counter flow type mainly for cabinet level cooling application
- Low installation and running costs, minimal maintenance

Cross Flow Type

Model	A(mm)	B(mm)	C(45 angle mm)	Plate distance(mm)
200	200	max.600	282	2.0/2.5/3.0
300	300	max.800	424	2.0/2.5/3.0/4.0
400	400	max.800	565	3.0/4.0/5.0/6.0
600	600	max.1000	850	3.0/4.0/5.0/6.0

For further option please contact DBS



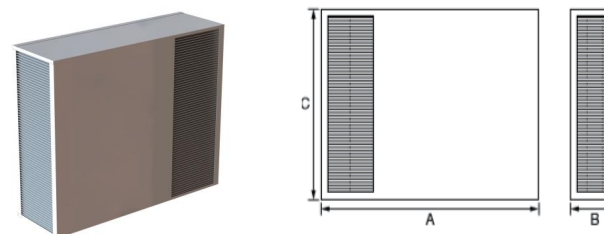
Application

- Swimming pool and Hospital and industry ventilation
- Air replacement with recovery
- Data Center non-contact evaporative cooling
- Heat recovery in very low energy consumption houses
- Pre-heating and pre-cooling in the air handling units
- Heatsink into Shelters and Cabinets of the telecom industry

Counter Flow Type

Model	A(mm)	B(mm)	C(mm)	Plate distance(mm)
300	300	100/140	200-800	2.0/2.5/3.0
400	400	100/140		2.0/2.5/3.0/4.0
460	460	190		3.0/4.0/5.0/6.0
500	500	140		3.0/4.0/5.0/6.0
600	600	140/190/235		3.0/4.0/5.0/6.0

For further option please contact DBS

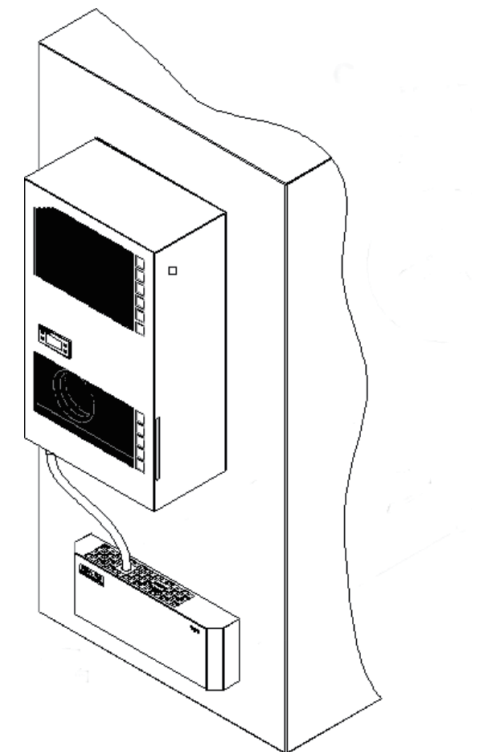


Others - Condensate Evaporator Box

Key Features

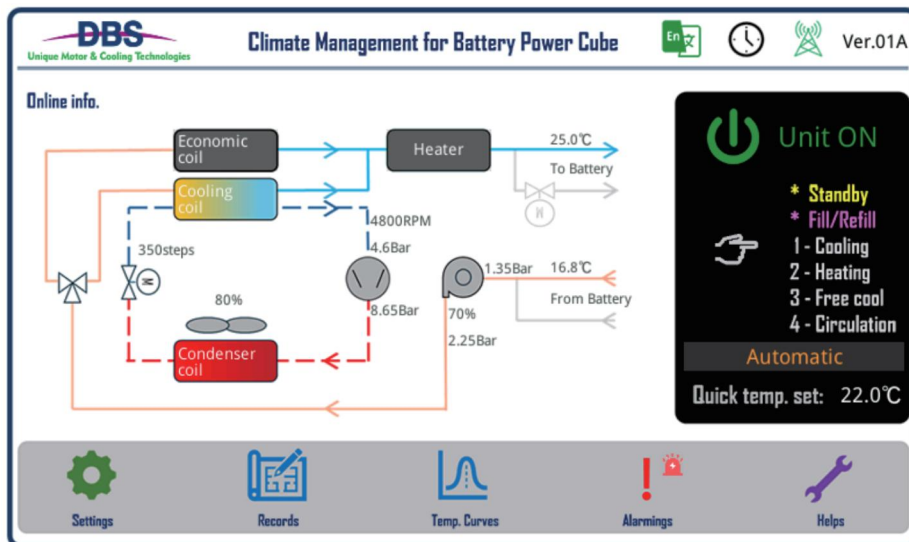
- Ideal for locations where condensed-water drainage piping is impractical. It evaporates condensed-water directly and releases water vapor into ambient air.
- Smart water-level management: the system activates evaporation automatically based on the actual water volume.
- Easy-to-mount structure; this evaporator is fully compatible with DBS air-conditioning units.
- Low power consumption paired with intelligent control. The design adheres strictly to energy-saving and emission-reduction principles.
- Visible operating-status indicators, with dedicated alarms for water overflow and heating-system malfunctions.

Model	Capacity	Size (H*W*T)	Voltage
142010	10L/day	130*362*60 mm	220VAC, 50/60 Hz



Key Features

- Air flow: 20000~30000 m³/h
- Coolant flow rate: 150 ~ 300 L/Min
- Size: 2200 * 1100 * 500 mm
- Coolant type: PG/ EG / Water
- Cooling capacity: 60~120kw per Delta T variant



Other features:

- *Complicated protection functionality
- *CAN or TCP/IP or MODBUS 485 protocol
- *Automatic air discharge valve
- *Automatic coolant replenishment sets
- *Fully plug-in and play set
- *Wet cooled or Dry cooled option
- *Active cooling and passive cooling option
- *Customization design available

OEM Custom Design Capability

Philosophy To Follow

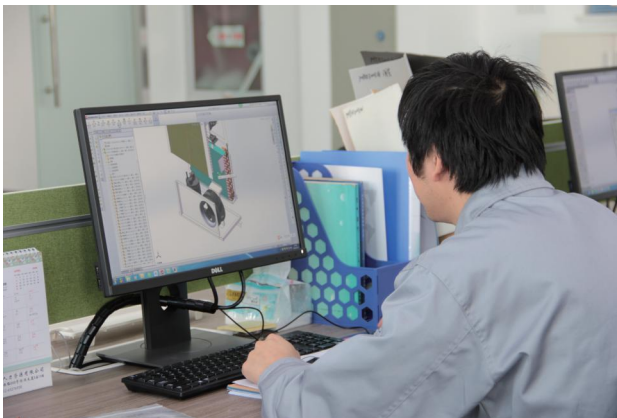
Follow:
Laws/ norms / Regulations / Rules

Using licensed:
Software /knowledge

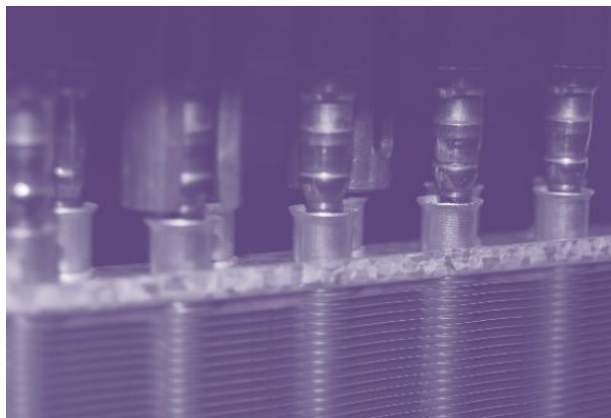
Respect to IPR

Respect to:
Quality technology/fact

Product Realization Capabilities



Product design



Tooling design and machinery design



Digital production capabilities

R&D & Production Equipment



Safety Testing Device
Fully Automatic
100% Testing



Data Logger for temperature/
current/voltage measurement
HP Inc. Lab.



Environmental Chamber
-20 ~ 80 degree
0 ~ 95% RH Lab.



Leaking detector Japan
FOSU He - H2 type
100% testing



Cooper pipes strength
testing Lab.



Refrigerant recycling device
for environment protection



Refrigerant Charging
Fully automatic
100% testing



Thermal shock Chamber
-45 ~ 120 degree
0 ~ 95% RH Lab.



Salt fog Chamber Lab.

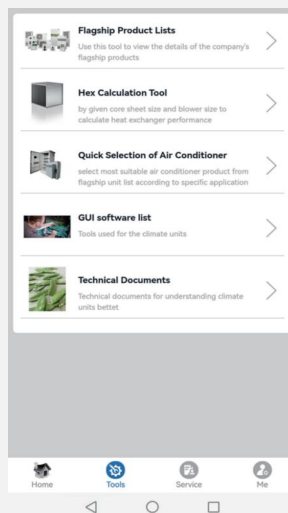


Vacuum Machine Fully
automatic 100% testing



R&D Strength

- The seasoned R&D team features well-grounded expertise accumulated across more than 20 years.
- Advanced thermal-design capability
- End-to-end electromechanical integration know-how
- Development of custom automated equipment and full-scale product realization for smart manufacturing
- Complete product-test and verification workflows
- Reliable production-organization support
- Mastery of industry-standard design-software platforms



Calculation Result			
Performances			
Heat transfer coefficient	W/K	47.5	
Total heat transfer coefficient	W/(m ² *K)	34.7	
Heat transfer area	m ²	2.3	
Heat exchange capacity	W	475.2	
Temp difference of heat exchange	K	10	
Internal (Hot Air Side)			
Std flow rate	m ³ /h	400.9	
Mass air flow rate	Kg/h	425	
Air temperature in	°C	60	
Relative humidity in	%	0	
Air temperature out	°C	56	
Relative humidity out	%	0	
Pressure drop	Pa	134	
Face velocity	m/s	6.6	
External (Cold Air Side)			
Std flow rate	m ³ /h	398.6	
Mass air flow rate	Kg/h	435.7	
Air temperature in	°C	50	

Cabinet wall plate type used	Single sheet metal
Heat transfer coefficient of cabinet (W/m ² .K)	9.0
Cabinet height (mm)	Please enter a value
Cabinet width (mm)	Please enter a value
Cabinet depth (mm)	Please enter a value
☒ Enable custom cabinet door	
Cabinet door height (mm)	Please enter a value
Cabinet door width (mm)	Please enter a value
Heat transfer coefficient of cabinet door (W/m ² .K)	Please enter a value
Number of cabinet doors	1
Cabinet installation area	Subtropical region
Approximate solar radiation coefficient (W/m ²)	940
Average temp. of outdoor hottest month (°C)	35.0
Cabinet surface color	Light color
Upper limit of temperature in cabinet (°C)	Please enter a value

In-House-Built HEX and Air-Conditioner Design Tools

Fully compatible with our proprietary product lineup.

Generates highly accurate, verifiable and traceable computation results.

Intuitive-operated interface supports rapid design iterations.



Product Application Case



European Telecom Project



Medical Chiller Project



European BESS project



Air-cooled CDU project



Telecom shelter project



China BESS project



Swapping Station Project



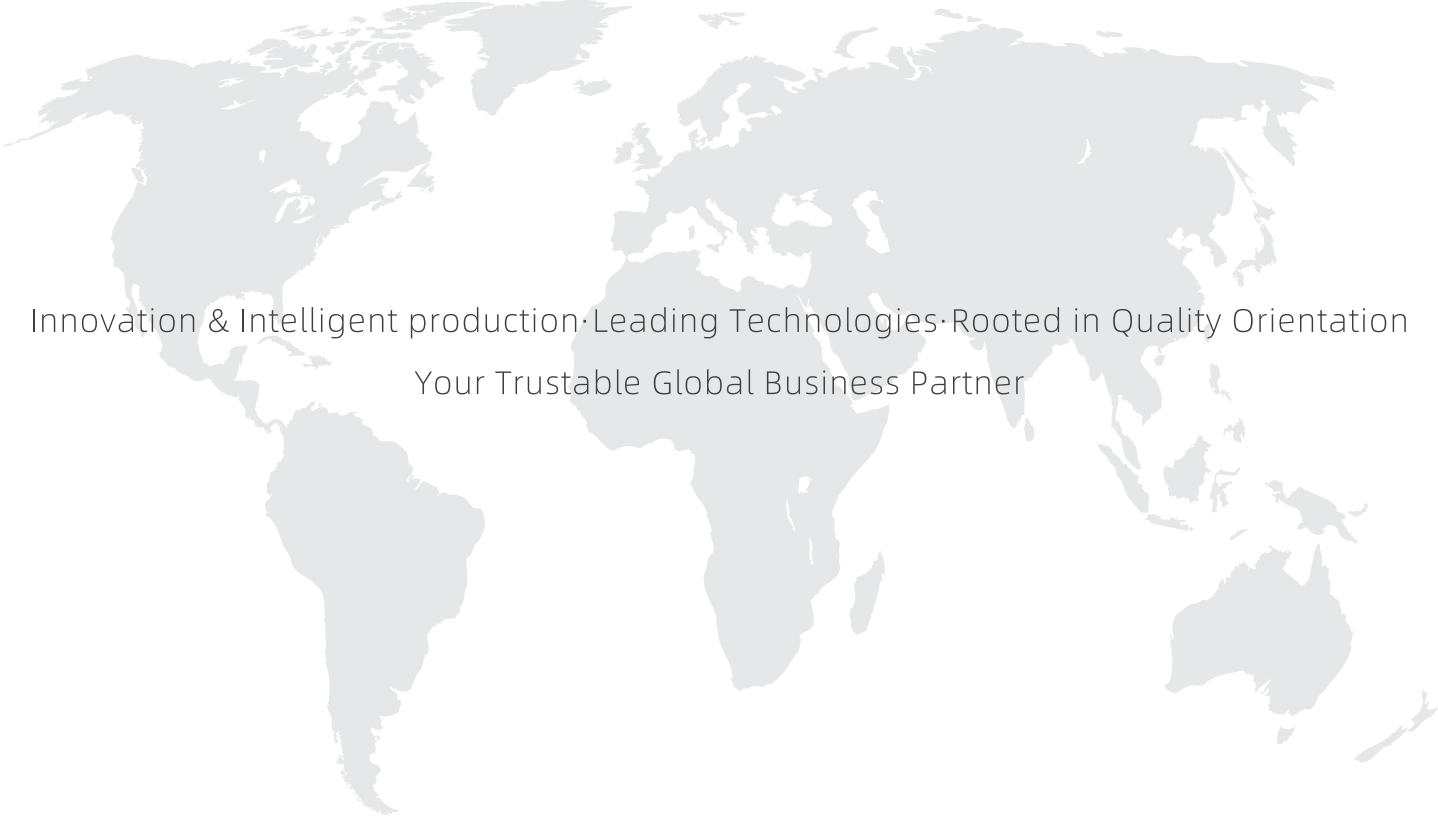
Americas Telecom Project



Southern Power Grid project



State Grid project



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