



Thermal Management Solution for Data Centers in the AI Era

Guangdong Shenling Enviromental system Co,ltd

Stock Code: 301018

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DATA CENTER CLIMATE CONTROL EXPERT



\$595 mil.
Sales revenue



420,888m²
Production area



4000+
Staff



30+
laboratories



1000+
Engineers



1200+
Patents



2500+
Key projects

SHENLING Overview

Established in 2000, Guangdong Shenling Environmental System Co., Ltd. is a modern.

enterprise offering integrated cooling solutions for worldwide. Specializing in Internet Data.

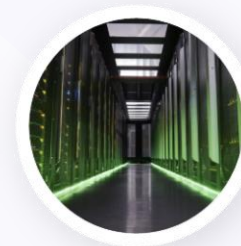
Center industry, industrial process research, specialized applications, and high-end public building environments.

VALUE

Openness and Pragmatism,
Boldness and Responsibility, Creative and Sharing.

MISSION

Creates excellent environment for all walks of life.



Data Center



Industrial and Public Construction

Nuclear energy and nuclear power, high-speed rail, metro systems, airports, hospitals, aerospace, and national defense projects.



High-end Public Building

Institutes and academic institutions, as well as cultural, educational, and media institutions



VOCs and Sludge Treatment

Power and chemical, food and pharmaceutical, metallurgy, photovoltaics, wind power generation, energy storage, and new energy vehicles

2024 IDC Total Sales Revenue

300 M USD+

No.1



AHU IDEC

No.1



CW+DXW FANWALL

No.1



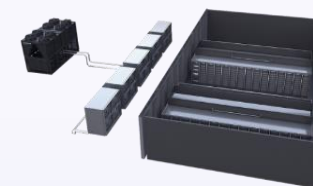
L2L CDU

No.1



DRY COOLER

TOP 2



Turbocol Multi-link unit

Milestones

1988

Shenling brand created
Keep serving for industries
with unitary AC chillers products

2000

Shenling corporation founded



2002

Three Gorges
Hydropower Project



2003

Shenling Research Institute
established

Guangdong Provincial
Engineering Research Center

Shenling Postdoctoral
Programme established

2005

Strategic cooperation
with ThyssenKrupp



2007

Joint-lab with Siemens
Beijing Capital
International Airport



2012

New headquarter launched

ICT/IDC solution launched

National Enterprise
Technology Center

Strategic cooperation with Huawei

2014

Production base II
launched

2016

National Technological
Invention Award



2017

China Patent Excellent
Enterprise Award

Beijing Daxing
International Airport



2018

National Technology
Innovation Model
Enterprise Award

2019

National Intellectual
Property Model
Enterprise Award

2021

I.P.O. in Shenzhen Stock Exchange
Production base III launched



2022

Zero emission building
launched

2023

Production base IV
(Tianjin) launched

2024

Production base II reconstructed & launched

Production base V (Gaozhou) construction
started

Shenling Germany(Frankfurt) launched

2025

Net zero emission factory
to be launched



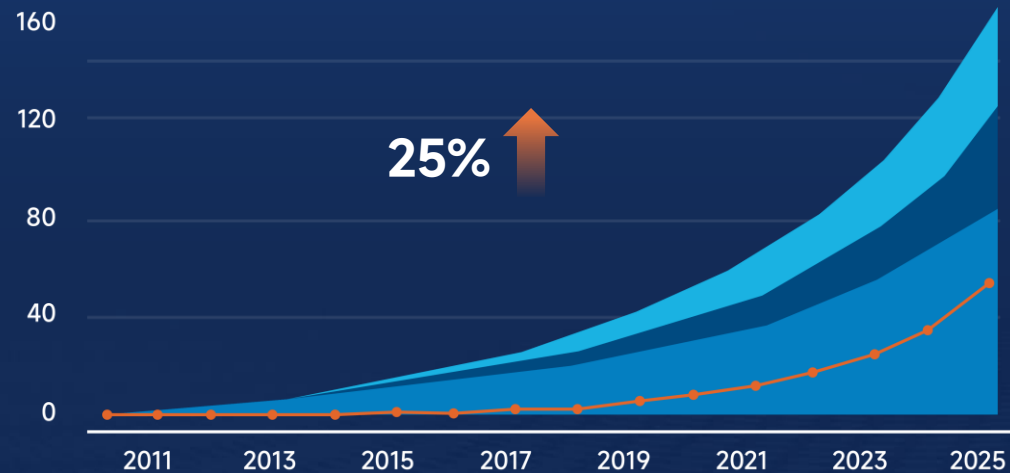
Shengling Intelligent Thermal Management System

Cooling expert For AI

AI era challenge: Computing density grows exponentially: Single rack power evolves from 10kW to 50kW or even 120kW+

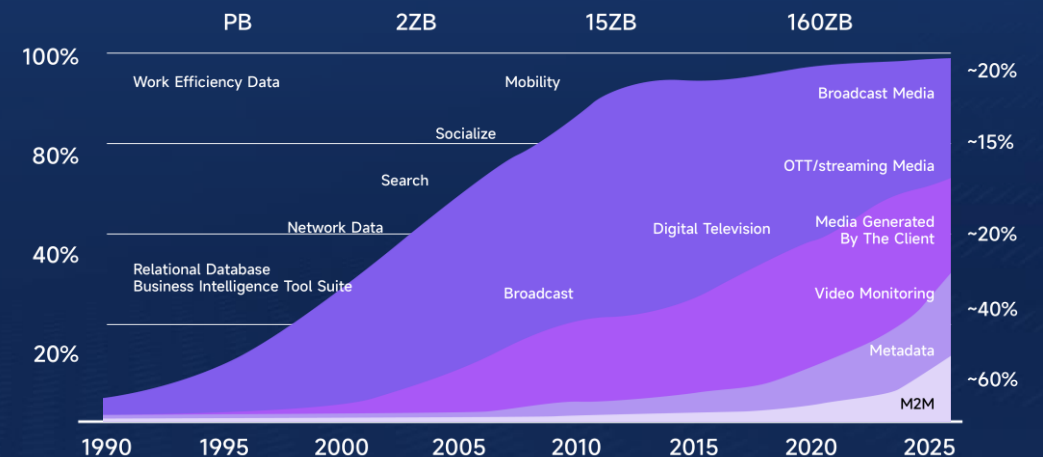
Data volume is growing exponentially.

- Requirements for lower PUE, lower WUE, lower CUE;
- High reliability: 24/7 uninterrupted operation year-round.
- The combination of air-cooling and liquid-cooling

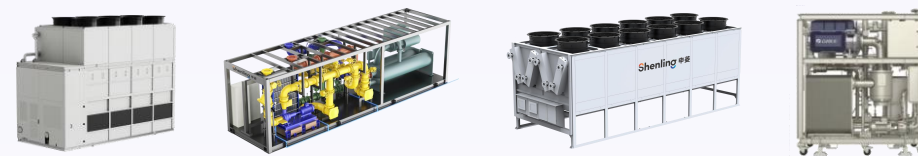
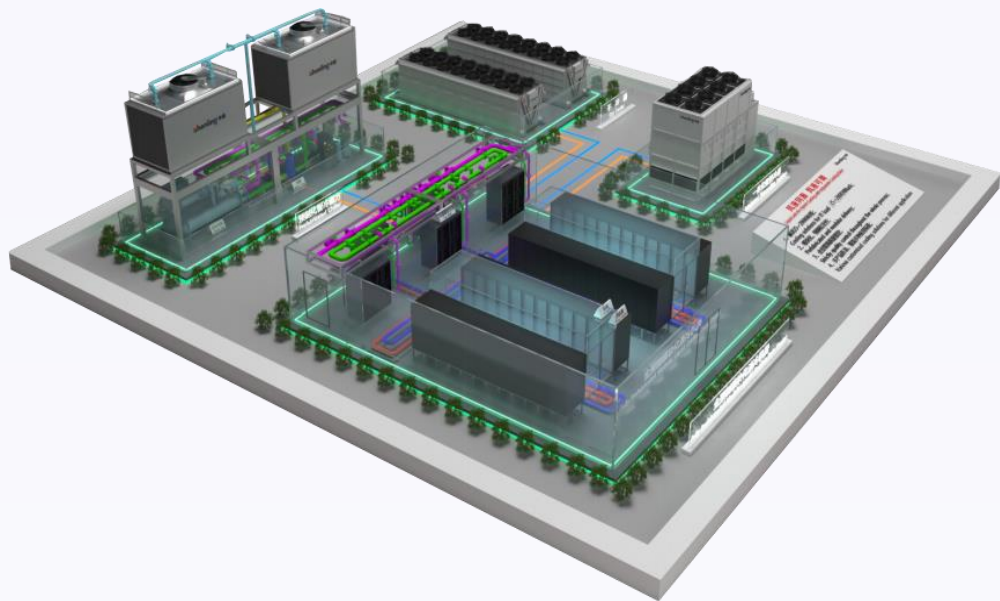


Data formats are becoming increasingly diversified.

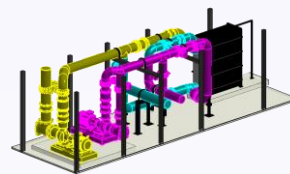
- Modular design enables rapid deployment within 72 hours.
- Energy-saving algorithm optimizes PUE in real-time.
- Full cycle implementation from manufacture to operation within 60-90 days.



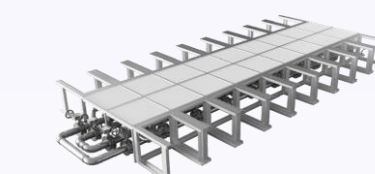
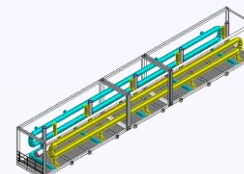
Direct to Chip: Hybrid cooling with Air & Liquid



Cold source: Dry cooler, Integrated cold source, Integrated chiller



Primary side: water treatment module, prefabricated piping



Secondary side: prefabricated piping and manifold



Manifold



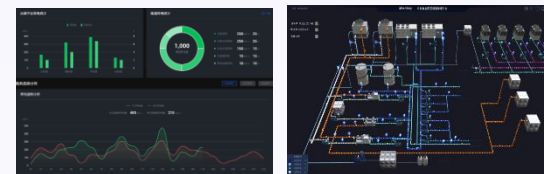
CDU: Floor standing, In-rack



FWU



FWU-Matrix



IOT: Smart analysis and control

CDU (cooling distribution unit)



Liquid-liquid Floor standing CDU



Liquid-liquid CDU(4U) 80kW



Air-liquid CDU (10U) 15kW
Air-liquid CDU (42U) 60kW

No.1

in China IDC industry

1.2 GW

total delivered

4000+

total delivered

SKY-DC Dry cooler



Air volume: 200000~350000m³/h
Cooling capacity: 500~1200kW

Adiabatic Cooling Dry Cooler

No.1

in the IDC industry

500+

2024 total delivered

- Adopt high efficiency heat exchanger, the approach temperature difference can reach Δt 4-7°C;
- High efficiency adiabatic cooling technology, the evaporative efficiency is higher than 90%;
- The annual leaving temperature is less than 35°C which can meet the liquid cooling request;
- 7" display touchpad

Products - ICT

Dry cooler

FC chiller



SKY series



Centrifugal Chiller

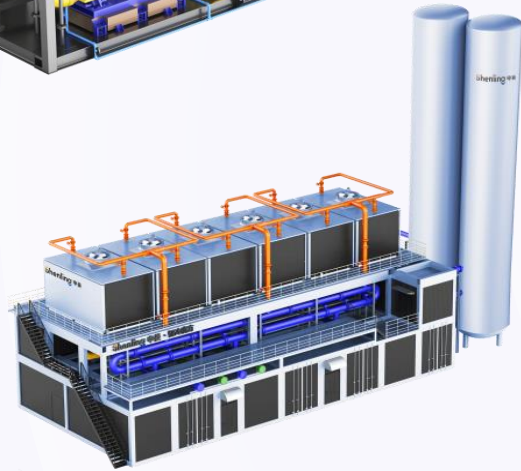
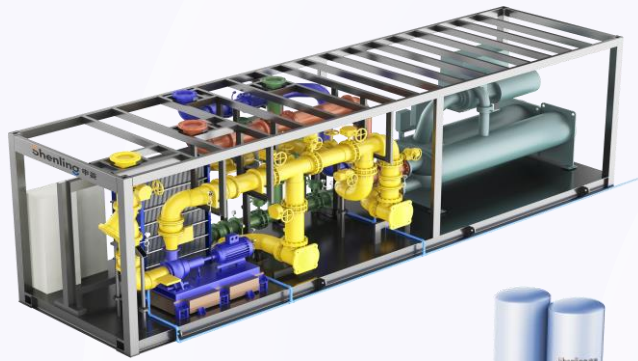


Screw water-cooled Chiller

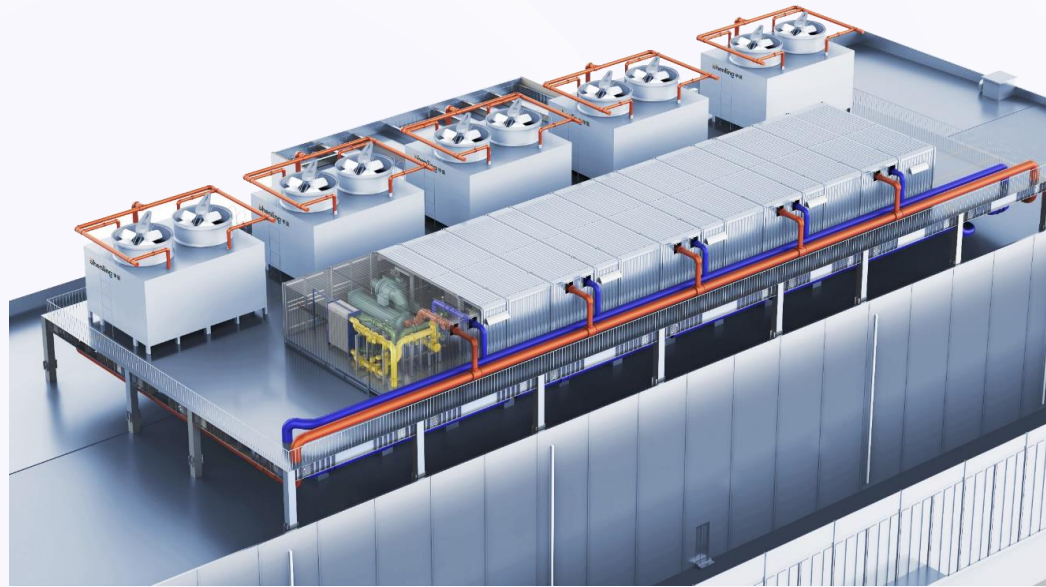


Magnetic Levitation Chiller



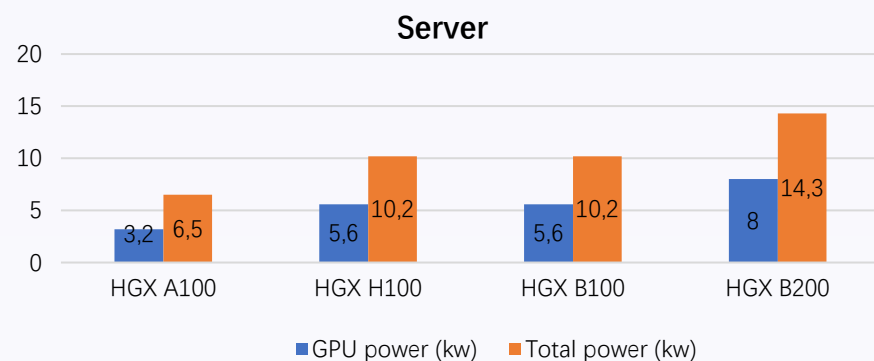
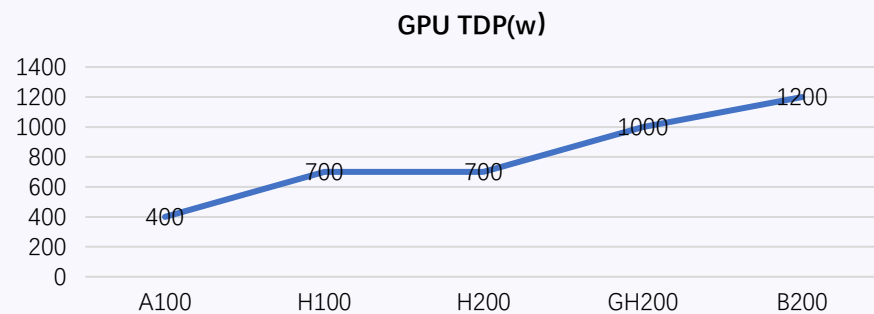


Skid-mounted
Chiller Station



Prefabricated Chiller Station

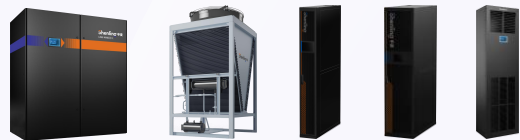
The IDC industry trend



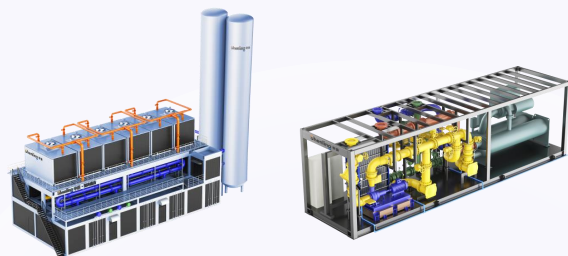
PUE of liquid-cooling technology is 1.02-1.05;

- Lower TCO, liquid-cooling needs less space of data centers;
- The liquid-cooling technology is more stable and reliable;
- 90% liquid-cooling applications are cold-plate types;
- PG liquid, EG liquid, DI water of secondary side are flexible;
- The combination of air-cooling and liquid-cooling is the trend;





CRAC



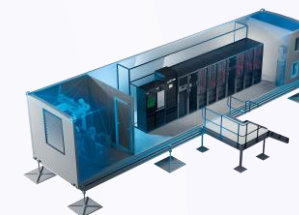
Modular Cold plant



Air Treatment Unit



AHU/PHU



Container Data Center

DataCenter Cooling Family



High Density



AI Liquid Cooling



Cabinet/Shelter Cooling



Chillers

CRAC



Application

Large / medium / small data center;
Electrical room
(UPS, control room, et)

Main features

EC fans ; Inverter scroll compressor ; R410a ; refrigeration ;
Full communication function ; Networking 32 units ; 7" touchpad ;
Explosion-proof optional ; Low-ambient kits optional ; -45°C ;

LINK-Wind: In-Room CRAC

Capacity(kW)	30	40	45	60	90	100	120	180	200
DXA	•		•	•	•		•		
CW		•		•		•	•	•	•
DXW+CW			•	•	•				



In-Row



Application

Modular data center;
Container data center

Main features

EC fans; Inverter scroll compressor; R410a refrigeration;
Full communication function; Networking 32 units; 7" touchpad;
Low-ambient kits optional: -45°C

LINK-Wind: In-Room CRAC

Capacity(kW)	25	30	35	40	50	60	80
DXA	•		•	•	•	•	
CW		•					•



Refrigerant Pump Free Cooling



Application

Large/medium/small data center;
Modular/Container data center;
Electrical room (UPS, control room, et)

Main features

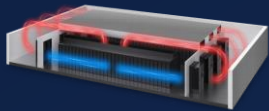
EC fans; Inverter scroll compressor; R410a refrigeration;
Full communication function; Networking 32 units; 7" touchpad;
Low-ambient kits optional: -45°C

LINK-Wind: In-Room CRAC

Capacity(kW)	25	30	35	40	45	50	60	90	120
In-Room		•			•		•	•	•
In-Row	•		•	•		•	•		



Fanwall



Application

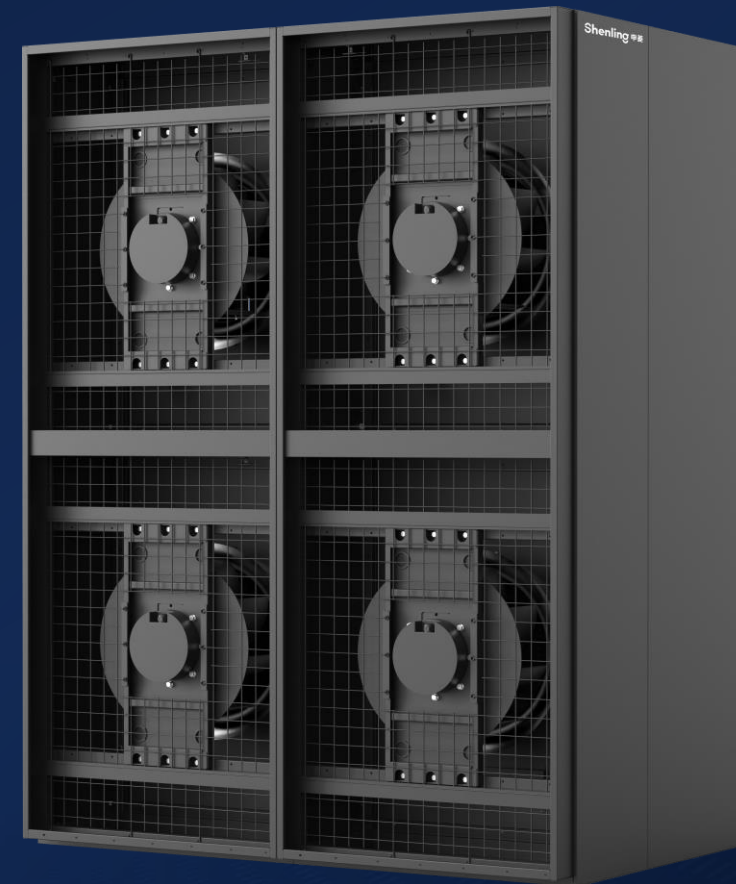
Large/medium data center

Main features

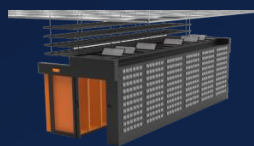
EC fans with redundant design; Inverter scroll compressors;
R410a; Full communication function; Networking 32 units;
Fluorine pump free cooling technology (optional); 7" touchpad

LINK-Wind: Fanwall

Capacity(kW)	30	40	45	60	90	100	120	180	200
DXA	•		•	•	•		•		
CW		•		•		•	•	•	•
DXW+CW			•	•	•				



Fanwall-Matrix



Application

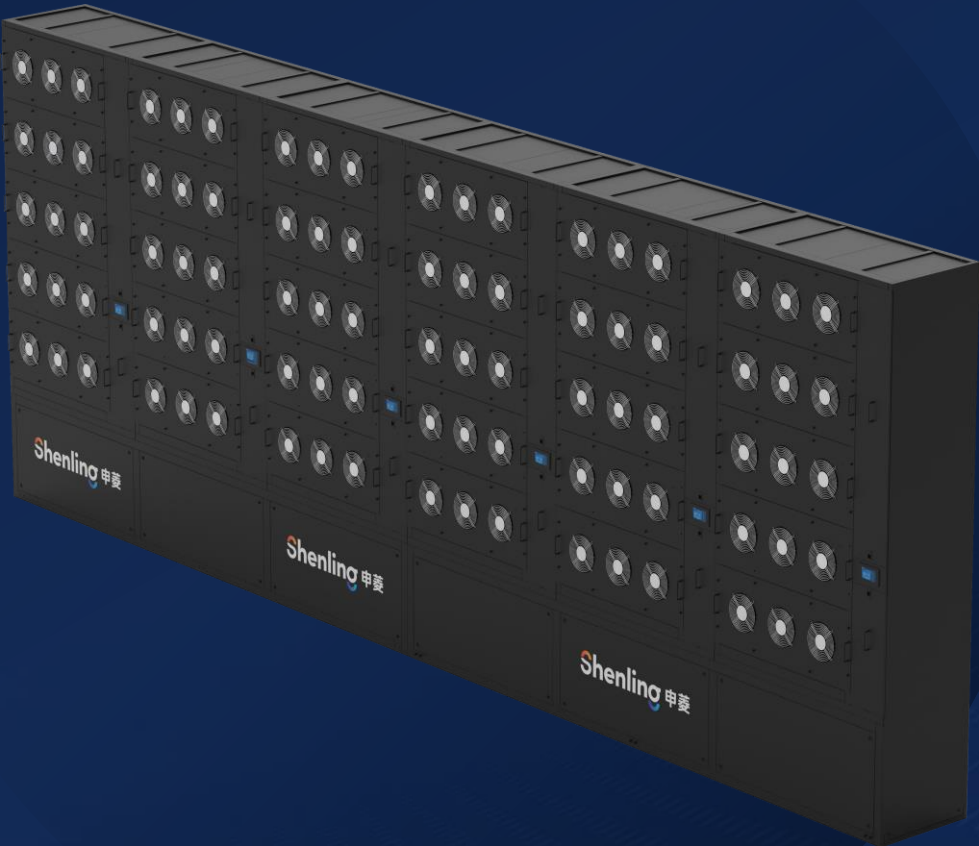
Large/medium data center

Main features

DC fans with redundant design; Inverter scroll compressors;
R410a; Full communication function; Networking 32 units;
Fluorine pump free cooling technology (optional); 7" touchpad

LINK-Wind: Fanwall-Matrix

Capacity(kW)	40	45	70	90
CW	•		•	
DXW+CW		•	•	•



AHU

SKY-IEC: 180~400kW



Application

Large flat floor data center

Main features

Unitary design, duct connection, plug and play; Multi installation types
Adiabatic evaporation with natural cooling technology; EC fans;
Inverter scroll compressor; R410a; Full communication function

Rooftop installation



Stacks installation



Side installation



PHU

SKY-DPC: 270/300/340kW

Application

Large flat floor data center

Main features

Unitary design, duct connection, plug and play;
2 installation types; Inverter scroll compressor;
Refrigerant pump free cooling technology;
EC fans; R410a; Full communication function



The IDC products Sky Series

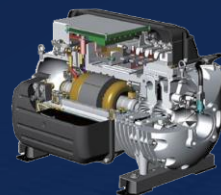
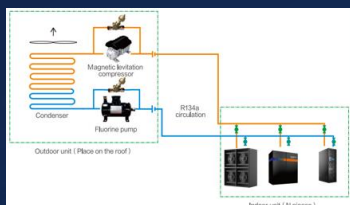
SKY-Tcol Turbocol Multi-link unit: 300-650kW

Application

Large flat floor data center

Main features

Oil-free magnetic levitation inverter centrifugal compressor;
Fluorine pump free cooling technology;
R134a; Multi-type indoor units can meet different scenarios;
Air-cooled, evaporation-cooled, water-cooled condensers are all available.



Air-cooled condenser

Rear Door Cooler Link Series

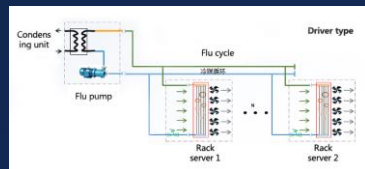
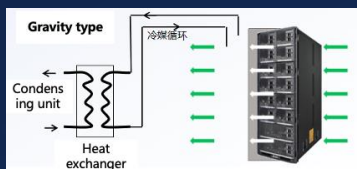
LINK-CLOUD: Rear-Door Cooler

Application

High density (15-30kW/rack) data center;
Modular data center;
Container data center;

Main features

DC fans; Inverter scroll compressor; R134a;
Full communication function; Networking 32 units
7" touchpad



Dehumidifier and Constant humidity controller



Dehumidifier

- Micro-chip controller automatically, timer on-off function
- Self-diagnose function
- **Built-in self leakage detector**
- Universal wheels foot breaks for convenient usage
- RS485 communication port, supports MODBUS-TRU

Dehumidifier Capacity:

3.75~13kg/h

Constant Humidity Controller

- Micro-chip controller automatically, timer on-off function
- Self-diagnose function
- **Built-in self leakage detector**
- Adopt the wet film humidifier
- RS485 communication port, supports MODBUS-TR

Dehumidifier Capacity:

3.15~10kg/h

Humidifier capacity:

10~30kg/h



Products - New energy

ICT Cabinet and shelter cooling



Built-in installation



Side-mounted



External installation

Air-cooled all-in-one



Hanging door semi
embedded installation

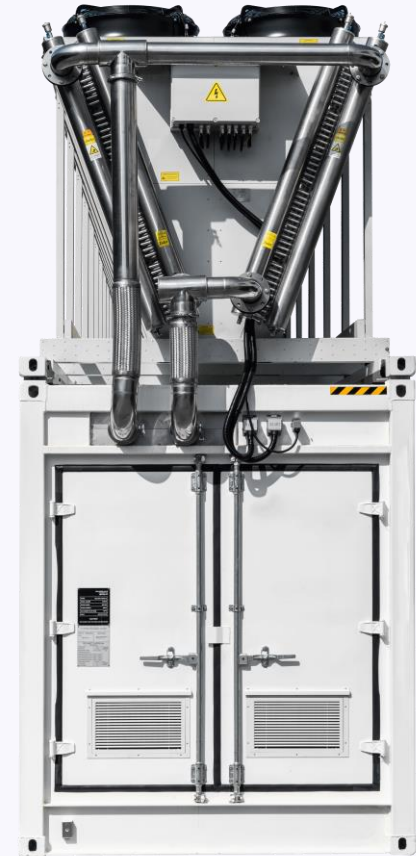


Wall hang embedded
installation

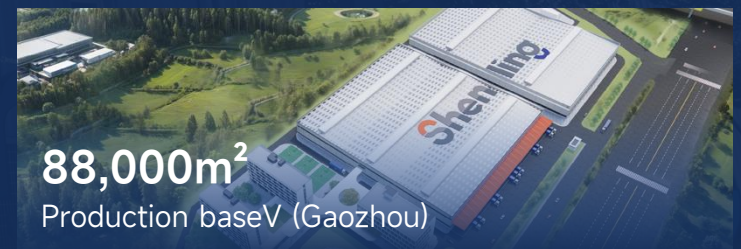


Built-in landing
installation

Products - Mining Box



Five production bases 400k+ SQM



NZE 1.0

Zero emission building

Shenling Production Base III , launched in may 2022

 **7,302,900 kW·h**
Green power generated

 **2,966 tons**
CO₂ emission reduced

 **611,799 kW·h**
Energy saved

 **€ 144,828**
Energy cost saved

*The above data represents annual benefits



NZE 2.0

Zero emission factory

Shenling Production Base II, launched in may 2025



3,000,000 kW·h

Green power generated



1,884 tons

CO₂ emission reduced



303,965 kW·h

Energy saved



€ 79,266

Energy cost saved

Production System

Shenling has leading technology and excellent management team, first-class production facilities, and IOT management system, which build up a solid foundation for Shenling's reputation in HVAC field. Currently, Shenling has over 420,888 m² research and manufacturing bases with modern equipments. The total production capacity exceeds 1 billion USD, which can meet the customers' demand with short lead time and good craftsmanship.

Glances in the workshop



Quality management system



Environmental management system



Occupational health & safety management system



Hazardous substance process management system



Certificated Measurement Assurance System

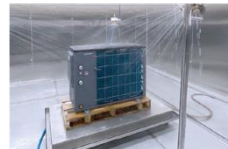


Explosion Safety Inspection Attestation for R290 production line

Testing center



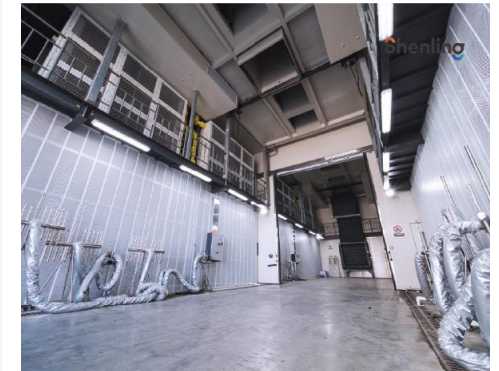
ETS Testing Center



HQ Testing Center



PB III Testing Center



Excellent case



Malaysia Johor MY06 Data Center



Shenzhen Baoan International airport



IKEA Shanghai/Beijing/Shenyang club



National Supercomputing Center at NUS
(Singapore)



International Cloud Fusion Port ICFZ Project



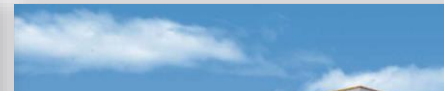
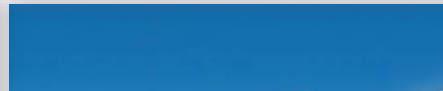
Huawei Technologies Co.Ltd.



ZTE corporation



Ningxia Cloud Computing Base Project





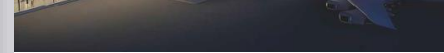
Anhui Guoxuan Aluminum Technology Co., Ltd.



Floripa Airport



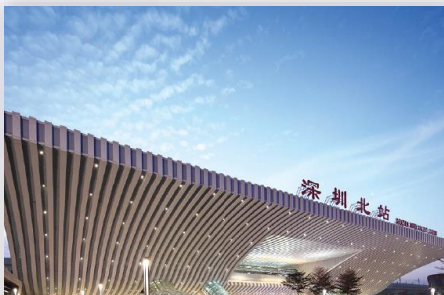
Shanghai Hongqiao International Airport



Thailand Phuket Airport



Changsha Huanghua International Airport



Shenzhen North Railway Station



Guangzhou South Railway Station



Guangzhou Tower



China National Centre for the Performing Arts



University of Macau Hengqin New Campus



CSPC Pharmaceutical Group



Shenzhen BGI Genomics Co., Ltd,



Coca-Cola (Shanghai Factory / Nanning Factory / Chongqing Factory)



P&G (Guangzhou) Co., Ltd.



BMW Brilliance Automotive Shenyang Production Base



China Aluminum Corporation Liancheng Branch



Angang Steel Group Limited



Daikin Chemical(China) Co., Ltd



Tianjin Bohua Chemical Co., Ltd. Chlor-Alkali Integration Project



Jingpin Hydro-power Station

Our partner



Global Footprint

- | | |
|---------|-------|
| Factory | 5 |
| Partner | 36 |
| Project | 2500+ |

Thank You

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