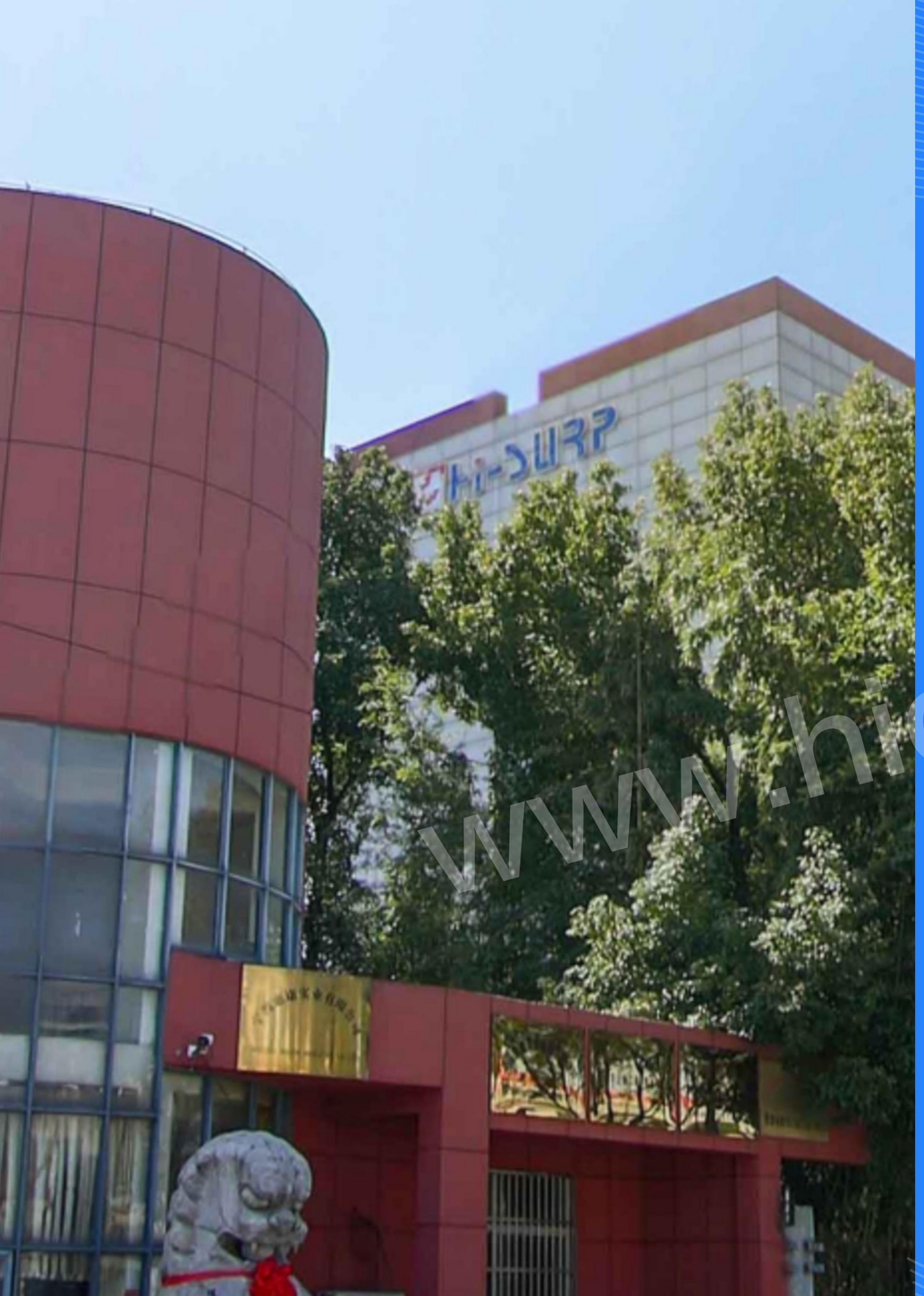


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Ultra-Efficient Variable Speed Integrated Chiller

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Ningbo Hicon Industry Co., Ltd.

Professional Industrial HVAC manufacturer

2026

HICON · Hi-SURP



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ABOUT HICON



Operates in the Industrial Air Conditioner

Over 50 years of expertise in refrigeration.

1972

Founded in 1972 (Hicon Group) specialised in industrial cooling since 2003.

Position: A leading provider of professional industrial refrigeration solutions in China.

Leading provider

150,000㎡

Scale: 150,000㎡ manufacturing base with 400+ professionals.

Quality: National-class (CNAS) labs, CCC and ISO certified.

CNAS labs

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GLOBAL CERTIFICATE









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PARTNERS & PROJECTS

01 Japan
Kouwakougyo Co., Ltd.

02 Korea
OEM for Century Corporation

03 Laos
Packaging paper project

04 South Africa
Mamba Cement EPC Project

05 Pakistan
Coal project of FFBL captive power plant

06 Indonesia
Grinding project in Pulau Taliabu II

07 Netherlands
Hyco4 project

08 Vietnam
Formosa Ha Tinh Steel Corporation

09 Algeria
Steel projects of Tosyali (Turkey)

10 Thailand
Zhongce Rubber Group Co., Ltd.

11 Saudi Arabia
Energy storage container cooling projects

12 Brazil
E-house projects



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Our industrial air conditioning projects have expanded globally.

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PARTNERS & PROJECTS

We have supplied precision refrigeration equipment to these international companies.

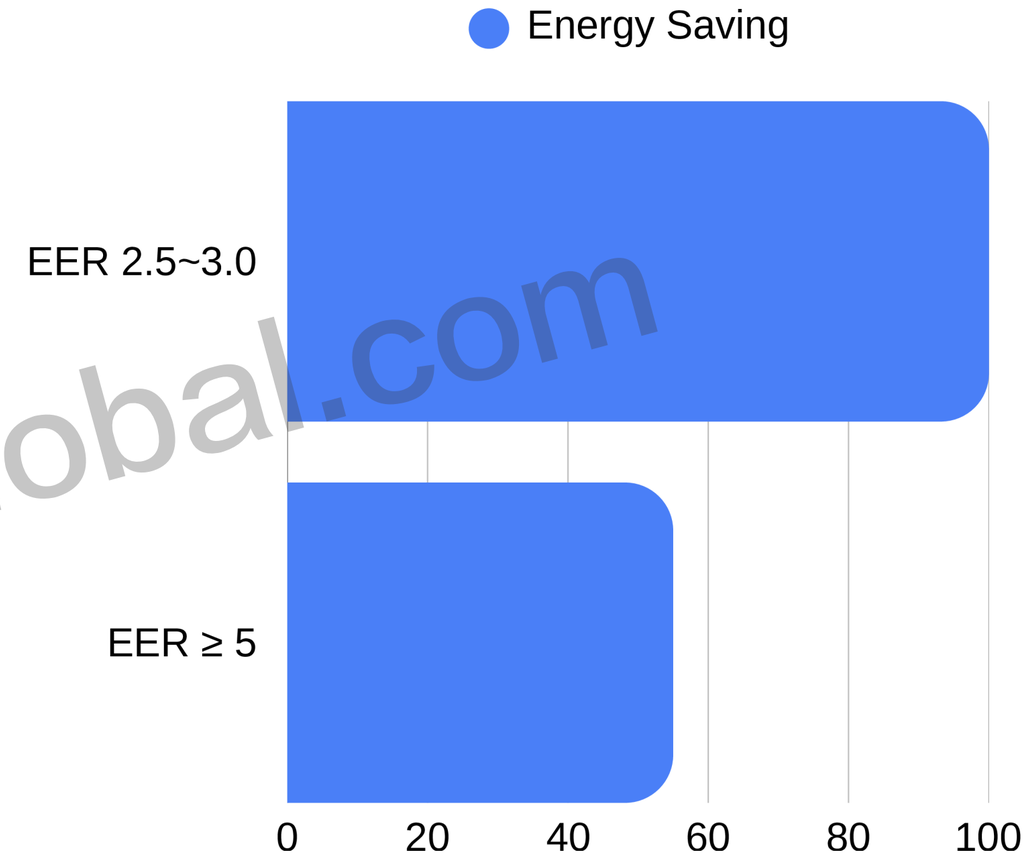


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CURRENT INDUSTRY CHALLENGES

- Currently, the average annual energy **efficiency ratio (EER)** of conventional air conditioning systems in China's computer rooms is between 2.5 and 3.0**.**
- Researching high-efficiency refrigeration systems with an average annual **EER ≥ 5** can achieve **energy savings of 45%**, reducing overall computer room energy consumption by more than 10%.



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THE SOLUTION: HICON INTEGRATED CHILLER

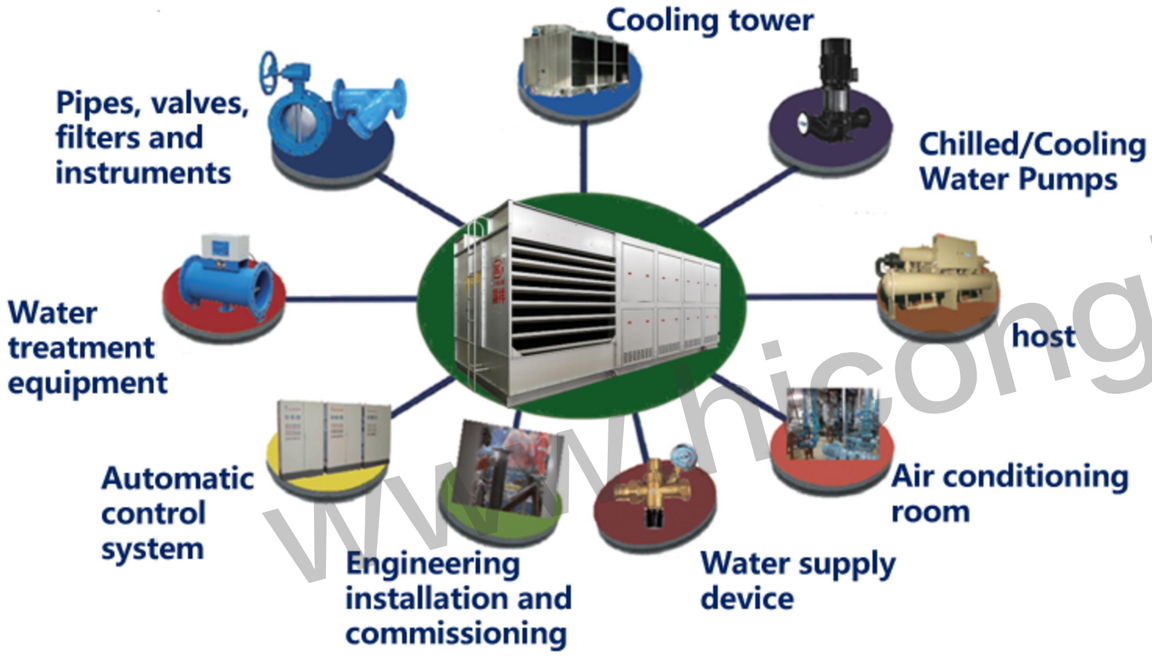
A "Plug & Play" cooling system designed for maximum efficiency.

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- **All-Variable Speed Technology:** Optimised performance across all components (compressor, pumps, and fans).
- **Integrated Design:** Combines chiller, water pumps, piping, and control systems into one compact unit.
- **Factory-Tested:** Pre-assembled and tested before shipment to ensure 100% reliability.

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HICON CHILLER ENERGY SAVING PRINCIPAL



1. **Variable frequency drive (VFD) control** is adopted for the compressor, chilled water pump, cooling water pump, and cooling tower.

2. Determine the **optimal cooling water flow rate and temperature difference** under full load conditions to achieve optimised balancing among the compressor, cooling water pump, and cooling tower.

3. **Optimise the combined control strategy** for cooling tower fans, cooling water pumps, chilled water pumps, and the compressor under varying inlet wet-bulb temperatures, outlet water temperatures, and air conditioning loads.

4. Ensure **uniform distribution of cooling water** under low flow rate conditions.

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OPERATING RANGE OF FULLY VARIABLE FREQUENCY INTEGRATED COOLING PLANT

project	chilled water		Ambient temperature
Nominal refrigeration conditions	Inlet water temperature /	Water outlet temperature /	Wet-bulb temperature / °C
	/	7	24
Safe operating range (normal temperature type)	Water outlet temperature /	Inlet and outlet water temperature difference /	Wet-bulb temperature range / °C
	5 ~ 15	2.5 ~ 8	15 ~ 30
Safe operating range (year-round cooling type)	Water outlet temperature /	Inlet and outlet water temperature difference /	Wet-bulb temperature range / °C
	5 ~ 15	2.5 ~ 8	-15 ~ 30

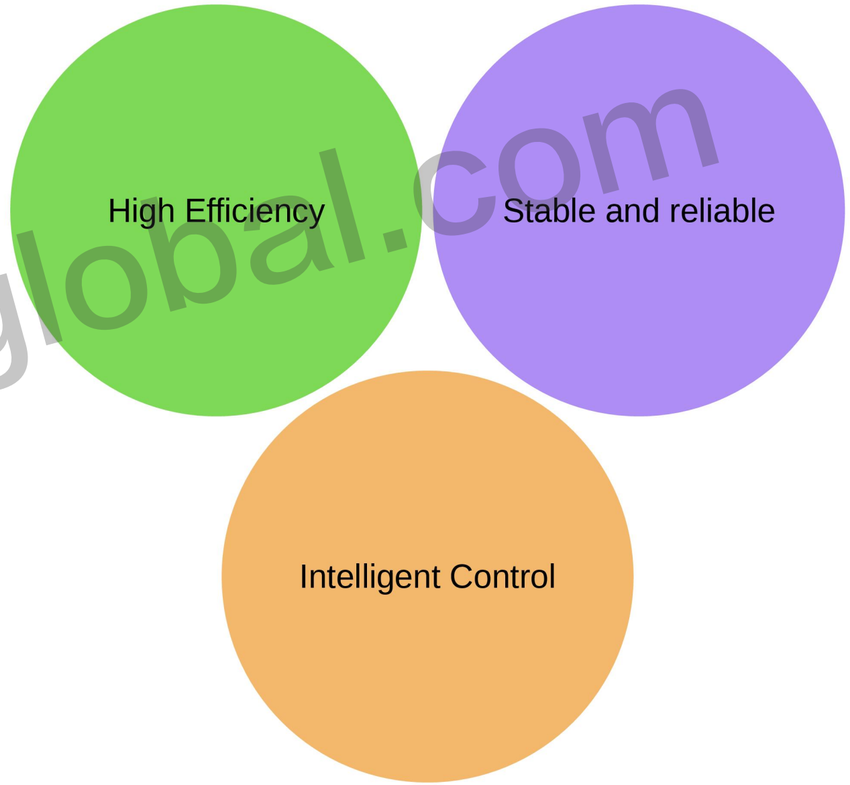
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CORE ADVANTAGES: EFFICIENCY MEETS SIMPLICITY

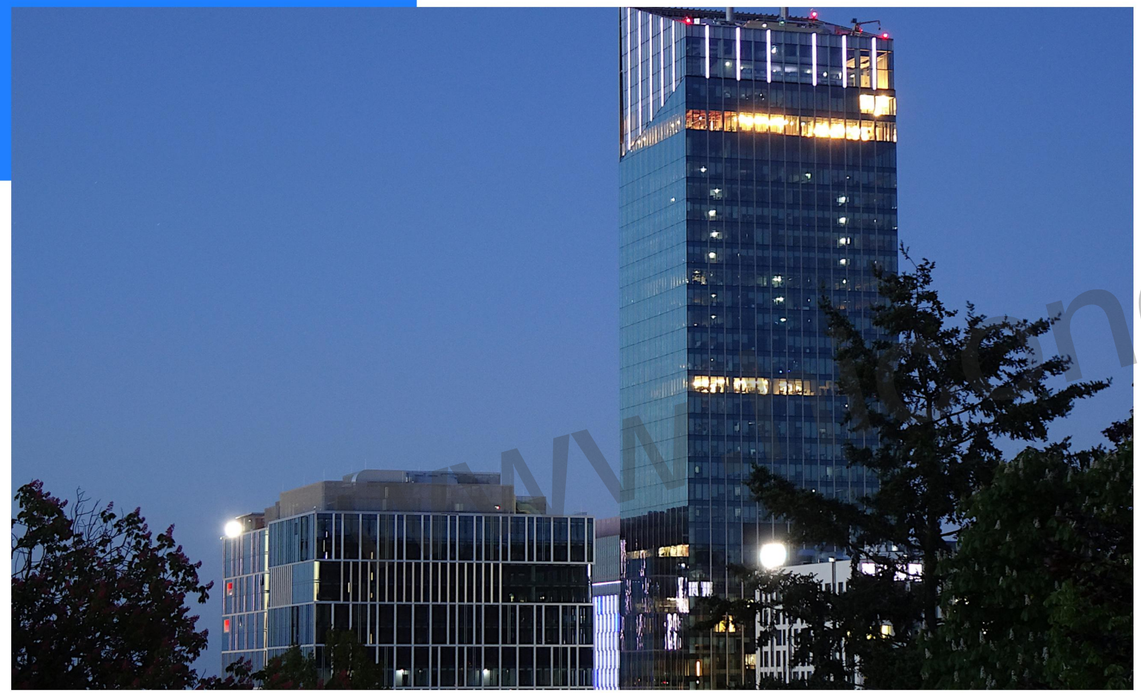
Lower energy bills, smaller footprint.

- **Superior Efficiency:** IPLV (Integrated Part Load Value) significantly exceeds industry standards.
- **Space Saving:** Reduces installation space by up to **30-50%** compared to traditional systems.
- **Easy Installation:** Minimal on-site piping and wiring required, reducing labour costs and setup time.
- **Smart Control:** Intelligent system for remote monitoring and automated energy management.



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FINANCIAL & ENVIRONMENTAL IMPACT

Fast payback and a greener future

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Cost Reduction: Significant annual electricity savings
Eco-Friendly: Lower carbon footprint and reduced SO_2 and NOx emissions through high-efficiency operation.
Typical ROI: Short payback period (e.g., 3.5 to 7.2 months based on specific project scales).

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APPLICATIONS & REFERENCES

Proven performance across diverse industries.

Suitable for Data Centres, Manufacturing Plants, Large Commercial Complexes, Hospitality & Healthcare Facilities, and Industrial Precision Cooling.

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