# Performance Specifications(R134a)

HJSLXxxxxxxMA-VA		010090	010200	010250	010400	010450			
Cooling Capacity k		kW	318	701	854	1408	1580		
Cooling Input Power		kW	49	104	126	206	230		
EER		kW/kW	6.49	6.74	6.77	6.83	6.86		
IPLV		kW/kW	8.63	9.73	9.81	9.92	9.96		
Compressor	Starting	Starting Method		Variable Frequency Drive Start					
	Quantity	Units	1	1	1	1	1		
Evaporator	Type / Water Side Design Pressure High - Efficiency Flooded - Type Heat Exchanger/1.0MPa								
	Water Flow Rate	m³/h	54.7	120.6	147	242.2	72		
	Water Pressure Drop	kPa	61	54	55	77	76		
	Pipe Connection Size	DN	100	150	150	200	200		
Condenser	Type / Water Side	e Design Pressure	Horizontal Shell - and - Tube Heat Exchanger/1.0MPa						
	Water Flow Rate	m³/h	68.4	150.8	183.6	302.7	340		
	Water Pressure Drop	kPa	65	64	64	86	82		
	Pipe Connection Size	DN	100	150	150	200	200		
Refrigerant	Туре		R134a						
	Refrigerant Charge	kg	125	300	326	520	536		

HJSLXxxxxxxMA-VA		020500	030600	030750	040800	040900		
Cooling Capacity		kW	1725	2126	2565	2815	3180	
Cooling Input Power		kW	252	310	377	412	466	
EER		kW/kW	6.84	6.85	6.80	6.83	6.82	
IPLV		kW/kW	9.96	10.01	10.03	10.3	10.3	
Compressor	Starting Method		Variable Frequency Drive Start					
	Quantity	Units	2	3	3	4	4	
Evaporator	Type / Water Side Design Pressure		High - Efficiency Flooded - Type Heat Exchanger/1.0MPa					
	Water Flow Rate	m³/h	297	366	441	484	547	
	Water Pressure Drop	kPa	78	86	83	83	87	
	Pipe Connection Size	DN	200	250	250	250	300	
Condenser	Type / Water Side	e Design Pressure	re Horizontal Shell - and - Tube Heat Exchanger/1.0MPa			er/1.0MPa		
	Water Flow Rate	m³/h	371	457	551	605	684	
	Water Pressure Drop	kPa	83	87	86	86	89	
	Pipe Connection Size	DN	200	250	250	250	300	
Refrigerant	Type		R134a					
	Refrigerant Charge	kg	550	625	670	780	820	

#### Notes:

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<sup>1.</sup>Rated cooling conditions: Chilled water inlet/outlet temperature 12/7°C; Cooling water inlet/outlet temperature 30/35°C. 2.The cooling capacity of the above models is based on chilled water outlet temperature of 7°C and cooling water inlet temperature of 3°C0. If there are significant deviations from the rated cooling conditions, please contact our company for relevant parameters.

<sup>3.</sup>The water connection direction of the unit is left-side when the facing control panel. Options for right-side connection and other water-side pressure requirements are available.

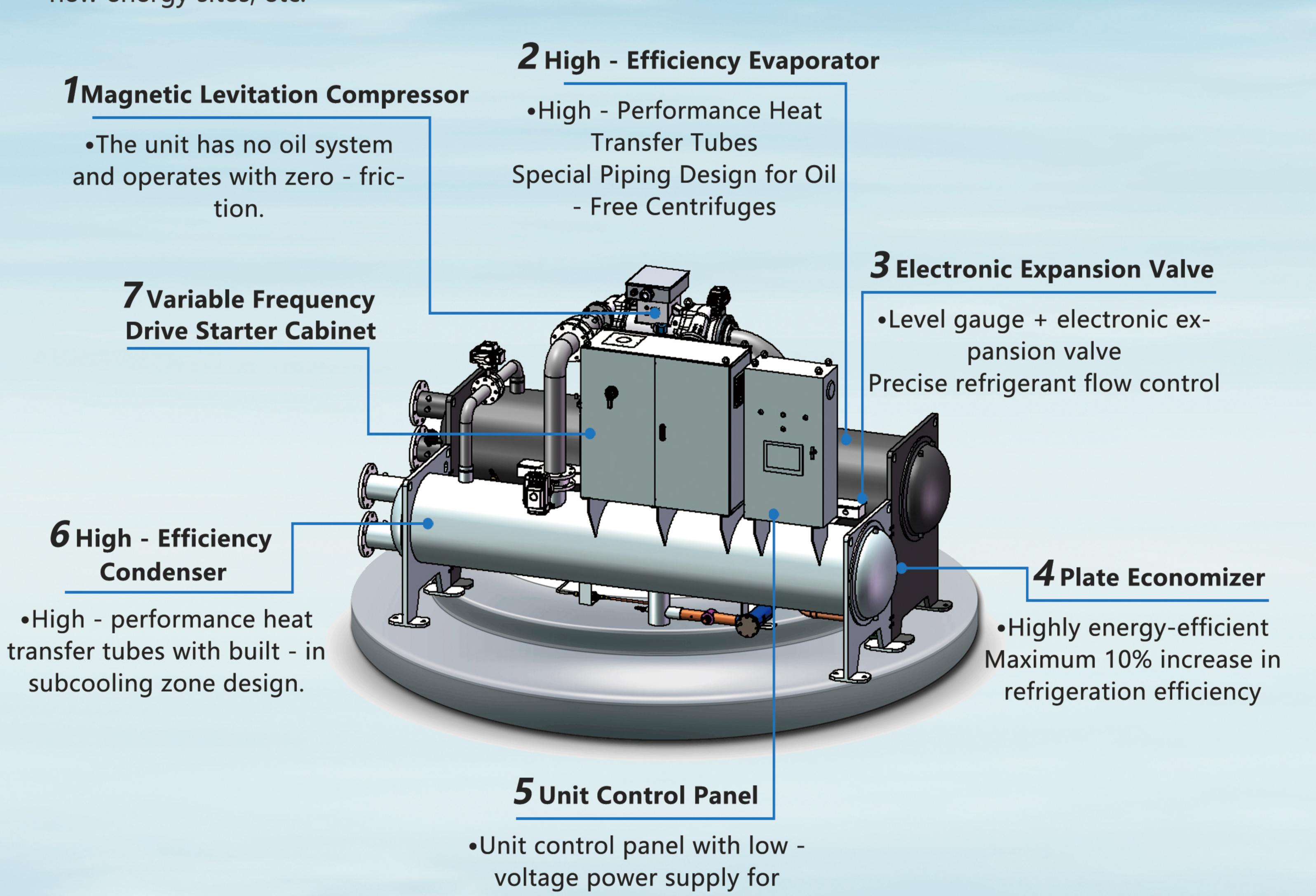
## Product Overview

The OBAIR Air suspension variable frequency centrifugal chiller uses a centrifugal compressor with gas bearings. During compressor rotation, the bearings are supported by gas buoyancy, eliminating metallic friction. This makes the unit energy - efficient, high - performing, and quiet, comparable to conventional magnetic levitation units but without the complex magnetic bearing system.

The condenser and evaporator use new - type domestic condenser and evaporator tubes as the heat exchange core. With optimized design, the heat exchange capacity is maximized.

Control is via a PLC and sensors from international brands. Every key parameter point has a sensor, ensuring long - term high - efficiency and safe operation.

These chillers are widely used in supermarkets, metros, medical facilities, cultural and sports venues, new energy sites, etc.



# Operating Range (Under Rated Water Flow Conditions)

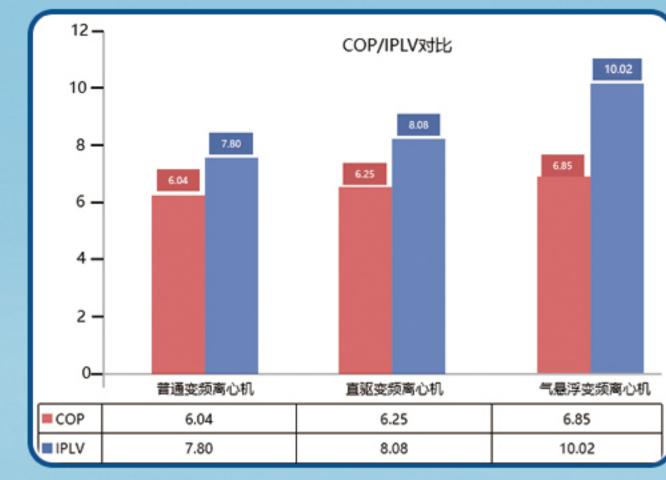
safer operation

Operating Conditions	Cooling	g Water	Chilled Water		
Operating Range	Inlet Temperature (°C)	Outlet Temperature (°C)	Inlet Temperature (°C)	Outlet Temperature (°C)	
	20~35	24~40	10~20	5~15	

## Product Features

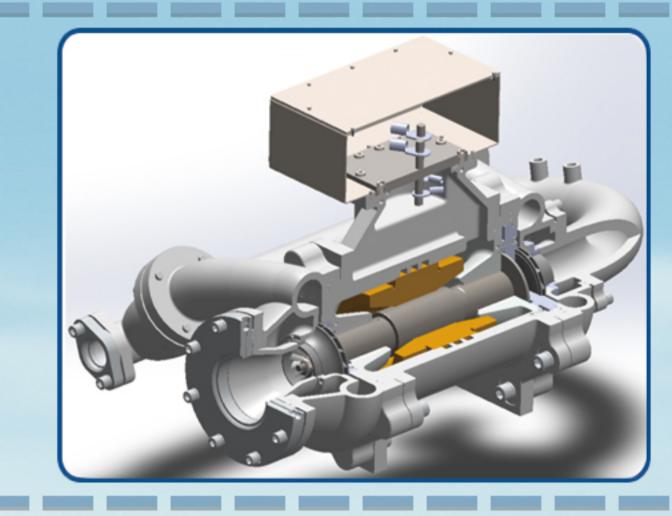
# •The unit meets the dual grade 1 energy efficiency of China National Standard.

The unit features an onboard inverter that's both efficient and low - maintenance. Via liquid level control and dual superheat control (suction/discharge), it ensures the compressor always runs optimal at speed, maintaining the best heat exchanger liquid level. This boosts IPLV and meets China's grade 1 energy efficiency standard, enhancing COP and IPLV and cutting operational costs.



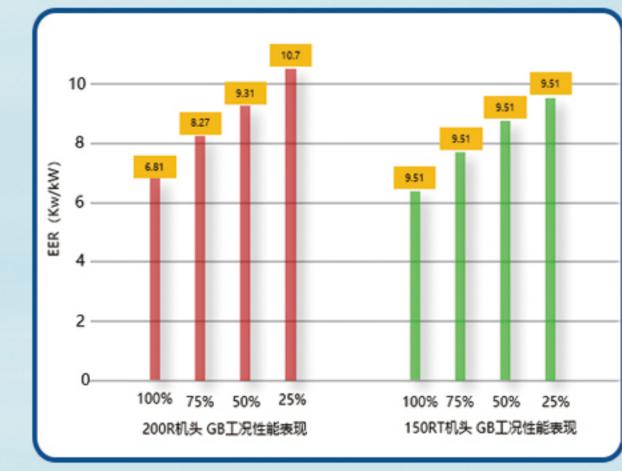
### •Ultra - Precision Hydrodynamic Gas Foil Bearing

Unique multi - simply - supported beam foil hydrodynamic gas bearing enables 300,000 start/stop cycles and 1,000,000 load - varying cycles.



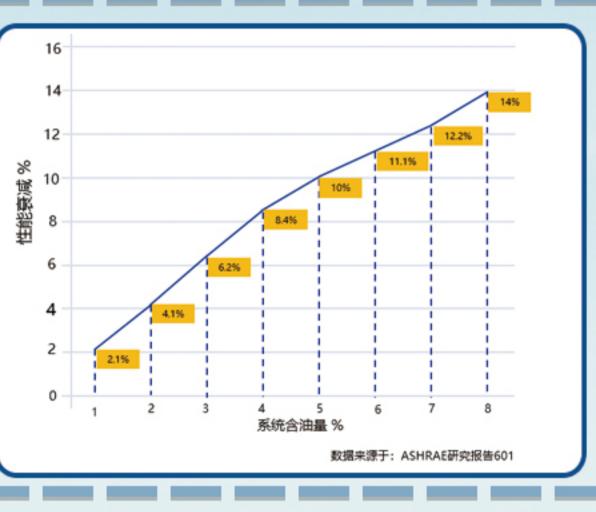
#### •Ultra-high Efficiency Compressor for Partial Load

The gas - bearing compressor has a high COP under partial - load conditions as per China National Standard, enabling the unit's IPLV to reach up to 11.



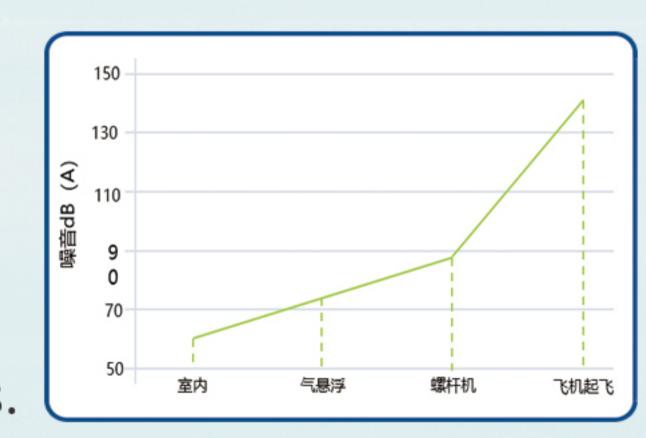
#### •Oil - free design and less efficiency decay

Conventional chillers with lubricating oil see increased power consumption as the oil film on heat exchanger surfaces hinders heat transfer. By contrast, gas - bearing chillers run oil - free, with almost no efficiency decay.



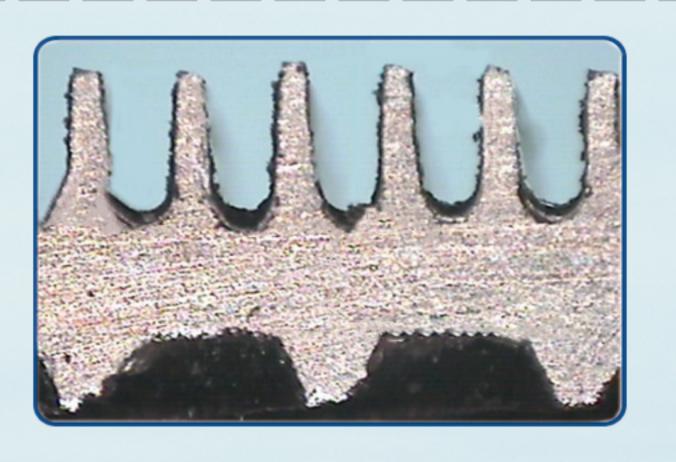
### Zero Friction, Low Noise

Noise, a key factor in assessing a chiller's environmental impact, is significantly reduced in gas - bearing chillers. The compressor's moving parts are completely suspended during operation, enabling friction - free and low - noise operation as low as 72 dB(A). This represents a 10 - 15 dB(A) reduction compared to typical screw chillers.



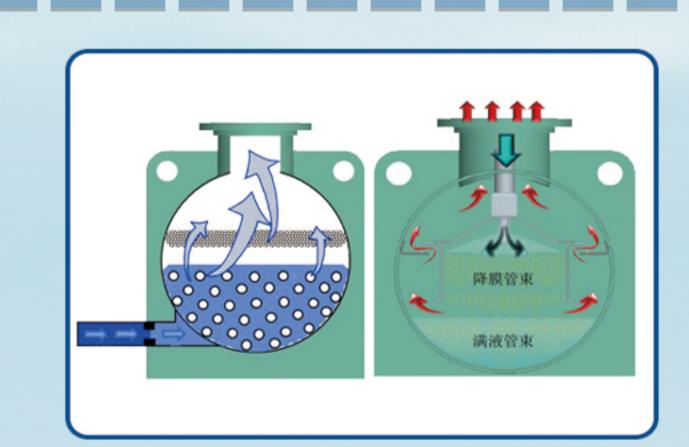
#### Condenser with High - Efficiency Heat Transfer Design

The condenser's heat transfer tubes have finned - tube outside - surface wings, disrupting the condensate film for a thinner liquid layer and less thermal resistance. With a specialized tube layout for oil - free systems and optimized condenser tube spacing and positioning, the condenser's heat transfer is further enhanced.



#### •Evaporator with special oil - free system piping

Flooded type (standard): The heat transfer tubes are fully immersed in the refrigerant to ensure uniform evaporation. With special oil - free piping and a distributor optimized for tube spacing and placement, heat transfer efficiency is enhanced. A falling - film evaporator is also optional.



#### Intelligent Control System

The control center features a 10 - inch color LCD touchscreen for easy operation. It displays the unit's process flow and operational data, and centralizes control over settings and status.

It has three access levels to meet the needs of manufacturers, maintenance crews, and users.

