

HAVA Modular Chiller

HHCM Series

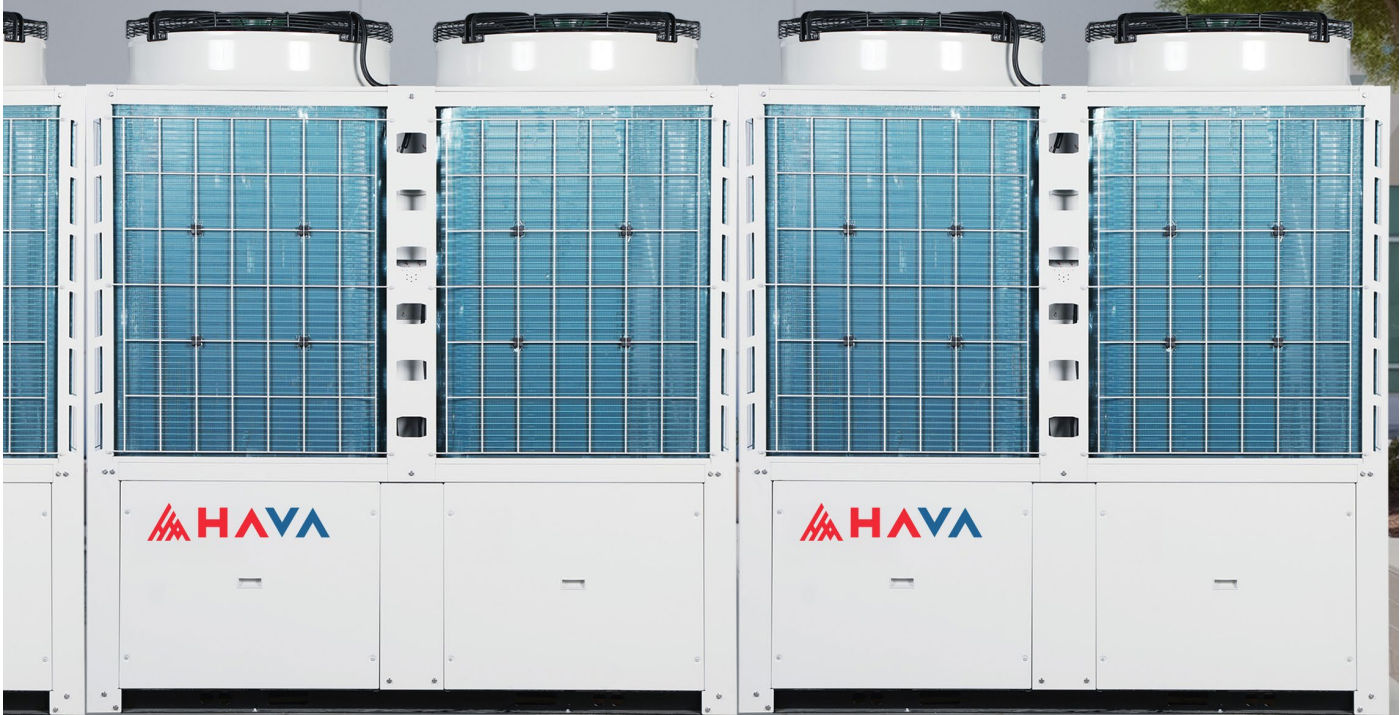


High-efficiency heating

The new generation of DC inverter scroll compressors with EVI (Enhanced Vapor Injection) technology ensures excellent heating performance even at low outdoor temperatures, significantly contributing to increased energy efficiency and overall system performance.

MODULAR AIR-CONDITIONING SYSTEM WITH UP TO 16 UNITS

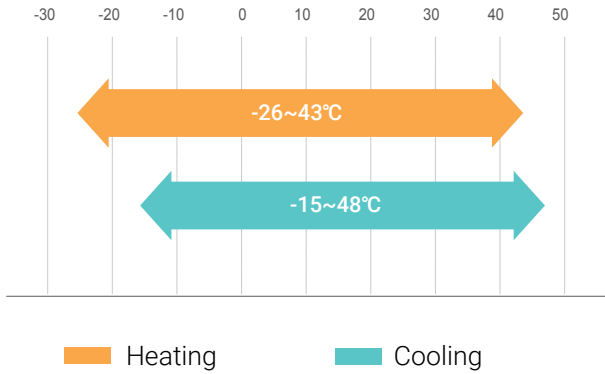
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MODULAR DESIGN, MULTIPLE POSSIBILITIES

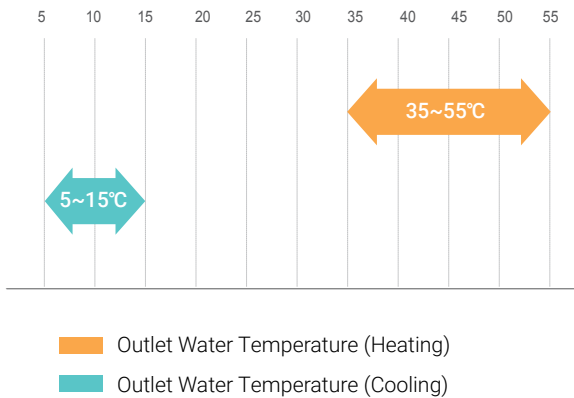
The main and secondary units are designed identically, allowing any unit to be configured as a master unit, which significantly simplifies the combination and installation process. Free combination of units with different specifications within the same system is possible. The hydraulic system allows parallel connection of up to 16 units, providing a total cooling capacity ranging from 65 kW to 2080 kW. The piping connection direction is standardized for all units, thus facilitating transportation, installation, and system commissioning.

Extended operating range and application versatility

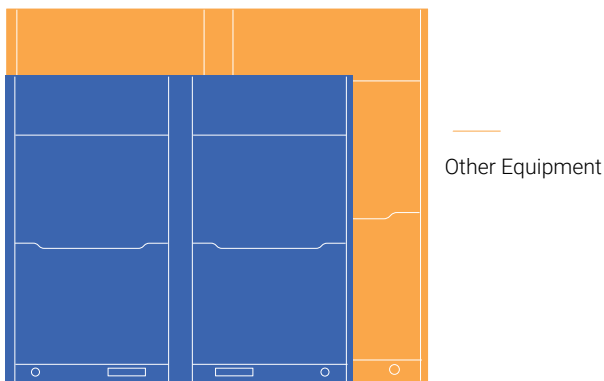


The HAVA HHCM series stands out through a wide hot-water temperature range and the ability to satisfy the requirements of various heating terminals, such as traditional cast-iron radiators, modern copper-aluminium radiators, fan coil units, underfloor heating systems, and others.

MULTIPLE HVAC applications



This series is widely used in data centers, electronics manufacturing plants, the pharmaceutical industry, the chemical industry, and in process cooling applications. It can also provide heating throughout the year for sectors such as animal breeding or flower cultivation.



The 63 kW unit covers an area of only 1.64 m²

Compact design and space saving

The system features a well-optimized structure, enabling significant reductions in occupied volume and footprint, facilitating transportation and installation, and considerably lowering the space required for installation and the associated costs.

Dual systems, independent operation

The condensers and fans of the two systems are completely separated and operate independently, without interference between them.

The two systems operate in mutual standby mode, ensuring a high level of reliability.

Under partial-load conditions, when one system is active, the controller of the cellular system can prioritize operation in order to reduce energy consumption and increase operating efficiency.



Intelligent operation through compressor rotation

Operating loads are intelligently balanced among modules, preventing overload and premature wear of individual units and thereby extending the service life of the entire system.





#performance

Efficient oil management

Equipped with a high-efficiency external oil separator, the system achieves an oil separation efficiency of up to 98%, significantly reducing incorrect oil circulation in the circuit (below 2%) and improving the unit's energy efficiency.

The compressors are fitted with an integrated oil filter that keeps the lubricating oil clean while ensuring optimal lubrication throughout the equipment's service life.

In addition, the compressor is equipped with an integrated positive-displacement gear oil pump, which supplies oil continuously regardless of speed, ensuring safe and continuous lubrication.



#quiet

Designed for quiet operation

The compressor is standard-equipped with a fully enclosed sound-insulating casing, designed to significantly reduce operating noise and ensure quiet operation of the entire unit.

The sound-insulation system uses galvanized steel sheet combined with a generous 20 mm layer of sound-absorbing wool, allowing compressor noise reduction of up to 3–4 dB(A).

In addition, the unit is equipped with a fan motor featuring reduced noise levels and specially profiled blades designed to attenuate aerodynamic noise. These improvements allow a further reduction of up to 5 dB(A), achieving sound levels as low as 63 dB(A) for the 65 model and 67 dB(A) for the 130 model, thus contributing to a quieter and more comfortable operating environment.

Intelligent defrosting

The heat exchanger is equipped with two temperature sensors that ensure precise detection of frost formation and rapidly initiate the defrost cycle, depending on ambient temperature, evaporation temperature, and operating duration. Defrosting time is intelligently automated to eliminate inefficient cycles, thereby optimizing heating performance and efficiency.

When MULTIPLE modules are combined, between one and sixteen defrosting systems can be configured to operate simultaneously, adapting to the specific requirements of the installation. Under standard conditions, the maximum interval between defrost cycles is set to two hours, with adjustment possible to further optimize performance. Each unit is designed with a dual system, with one water circuit and two refrigerant circuits (fluorinated), the air-side heat exchanger being common, while the water-side heat exchanger is separate. Heating load control is achieved by monitoring total inlet and outlet water temperatures. The dual fan systems operate independently and are completely separated, allowing alternating defrost cycles for maximum efficiency and extended equipment durability.

The variable-speed system achieves load control by regulating compressor frequency. In multi-module configurations, each system can automatically regulate its frequency. As a result, outlet water temperature fluctuates slightly, and the COP can increase by 15%–20%.



Technical specifications

HAVA Modular Chiller

HHCM-65/130SSA/DDA

Model		HHCM-65SSA	HHCM-130DDA	
Cooling capacity	kW	63	126	
Heating capacity	kW	68	136	
Cooling power input	kW	22,1	43,4	
Heating power input	kW	22,4	44,6	
Maximum power input	kW	26,5	53	
Cooling current	A	36	72	
Heating current	A	37	74	
Maximum current	A	48	96	
COPc/COPh	-	2,85/3,04	2,9/3,05	
SEER	-	4,71	4,61	
SCOP (45°C water outlet)	-	2,87	2,91	
Capacity regulation of single unit	-	Inverter stepless		
Power supply	-	AC 3 Φ , 380~415V/50Hz		
Rated water flow rate	m ³ /h	10,8	21,7	
Water resistance (without Filter)	kPa	35	35	
Water resistance (with Filter)	kPa	45	45	
Pipe diameter (Inlet / Outlet)	-	G2-1/2"external thread		
Max.pressure bearing of water side HEX	MPa	1,0		
Operation type	-	Automatic operation controlled by microcomputer		
Compressor type	-	DC Inverter Scroll Compressor		
Number of compressors	pcs	1	2	
Fan	Type	DC inverter axial low-noise blade		
	Total volume	m ³ /h	24400	43000
	Quantity	pcs	2	2
Refrigerant	Type	R410A		
	Total charge	kg	15,5	2x14,0
External dimension	L×W×H	mm	1950×765×1725	2190×1100×2360
Packaging dimensions	L×W×H	mm	2030×840×1860	2250×1160×2485
Weight	Net	kg	490	910
	Gross	kg	520	940
	Operation	kg	510	930
Sound power level	dB(A)	81	84	
Ambient temperature	Cooling	°C	-15~48	
	Heating	°C	-26~43	
Outlet water temperature	Cooling	°C	5~15	
	Heating	°C	35~55	

Note:

1. Cooling capacity and cooling power input are measured at the rated water flow rate, leaving water temperature of 7°C, and outdoor ambient dry-bulb temperature of 35°C. Heating capacity and heating power input are measured at the rated water flow rate, leaving water temperature of 45°C, outdoor ambient dry-bulb temperature of 7°C, and wet-bulb temperature of 6°C.
2. Operation in heating mode is prohibited when the ambient temperature is below -26°C.
3. The specifications and parameters of this product are subject to change due to product improvements without prior notice.
4. The above modules may be used in combination, and up to 16 modules can be combined.

