

Reimagine your solution

Hisense

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Hisense



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Commercial Air Conditioning Systems

Why Hisense VRF?

BECAUSE IT...

- ▶ Adopts newest technology.
- ▶ Owns comprehensive product lineup.
- ▶ Maintains high efficiency performance with reliable quality.
- ▶ Provides modular combination design.
- ▶ Assures convenient and fast transportation and installation.
- ▶ Meets intelligent control system.
- ▶ Serves as a local team of sale, technical supports and maintenance.
- ▶ Wins an excellent reputation all over the world.



COMPANY PROFILE

Hisense Group is a well-known large-scale electronic information industry group company. Supported by various technologies, Hisense's industrial pattern covers multimedia, home appliances, IT intelligent information system and modern real estate. Based on technology and focusing on innovation-oriented culture, its scientific and efficient technological innovation system makes Hisense always be at the forefront of the counterparts.

Jointly invested by Hisense Group and Hitachi Air Conditioning (changed to Johnson Controls-Hitachi in 2015), Qingdao Hisense Hitachi Air Conditioning Systems Co., Ltd. was established on January 8, 2003. It is a large joint venture integrating technology development for commercial and residential air conditioners, product manufacturing, marketing and after-sales service as a whole. With the full support of all the shareholders, Hisense VRF is committed to becoming the market leader in the industry.

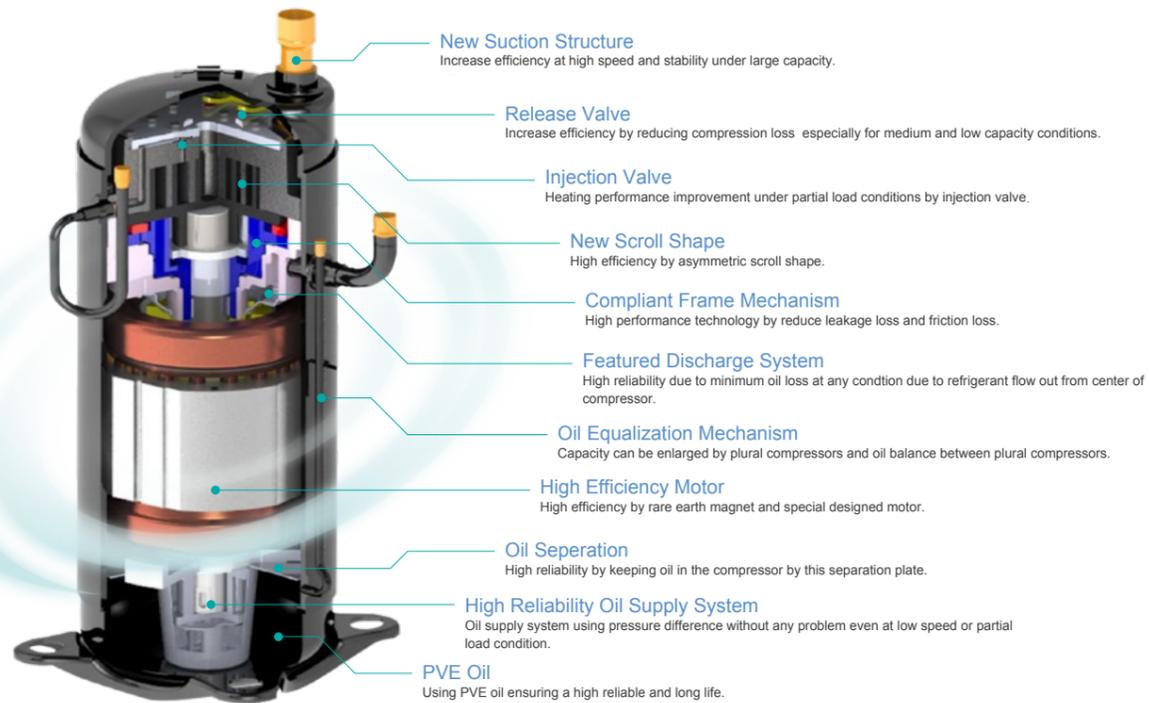
Core Technologies

Specialty because of dedication, Leading technology casting high quality products.

New Generation of Enhanced Vapor Injection Scroll Compressor

Hisense Hi-FLEXi S Series adopts a new generation of the high efficiency scroll compressor and the patented vapor injection technology*1. It can greatly enhance the heating performance and achieve high energy-saving efficiency. Powerful heating is guaranteed by Hi-FLEXi S Series, especially under low temperature with heating performance increased up to 25%, compared with the standard model.

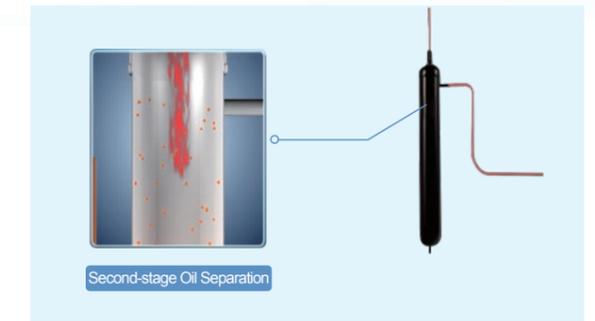
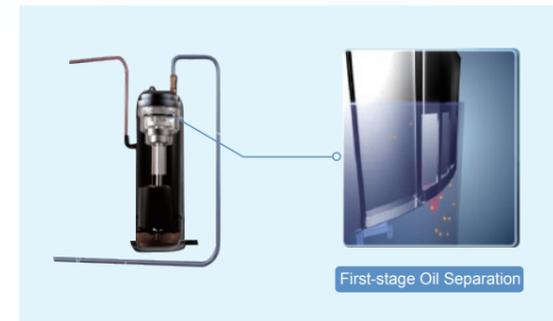
Note: *1. Patent number: a heat exchange cycle system and control methods and air conditioning, 201610909006.X



Oil Separation

First-stage oil separation is realized through efficient oil separation structure inside high-pressure-chamber compressor. Only a small amount of oil is brought out of the compressor.

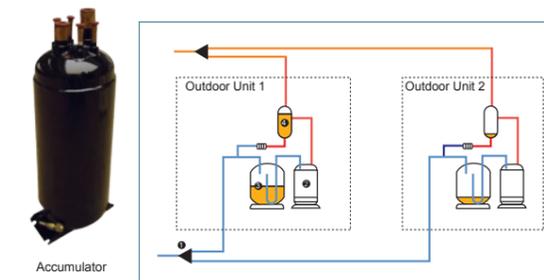
During second-stage oil separation, the small amount of oil discharged from compressor is separated by a large-capacity, high-efficiency centrifugal oil separator, with efficiency over 99%.



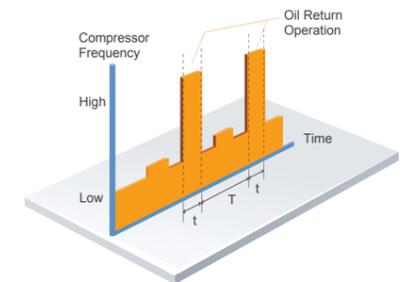
Oil Return

The accumulator adopts porous oil return technology with a built-in fine strainer, which not only ensures oil balance between compressors within one module, but also plays an important role in the oil balance between modules.

Except for this, the system implements oil-return operation based on compressor frequency and corresponding operation time. The oil-return operation takes 60 seconds, and can return to previous operation state when it's done.



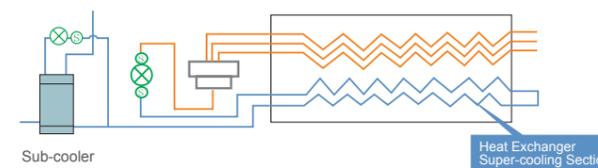
In winter under heating mode, this operation is implemented without changing to cooling, which guarantees heating effect.



Two-stage Subcooling

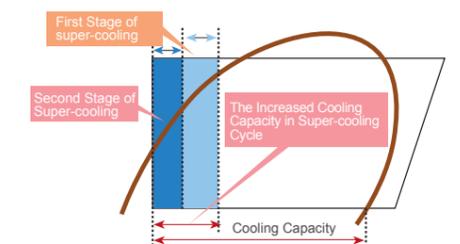
A subcooling section is designed in the heat exchanger of outdoor unit to realize the first-stage subcooling. Furthermore, a high efficient double pipe is applied to achieve the second-stage subcooling. The total subcooling degree is up to 27°C, which improves cooling capacity and increases the total piping length.

Two-stage Super-cooling Cycle Diagram



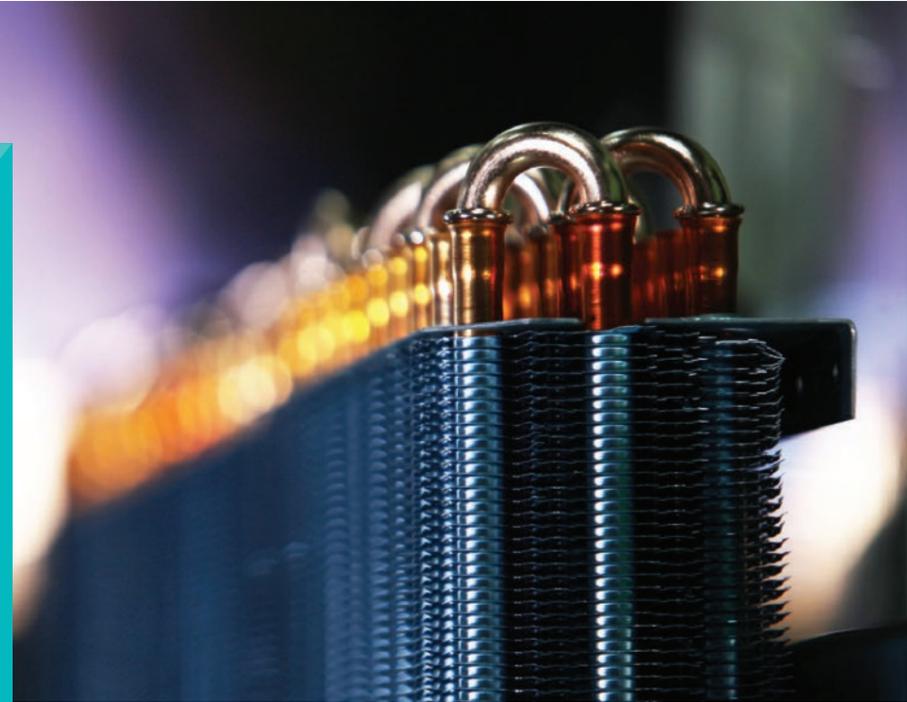
- The two-stage super-cooling cycle improves cooling capacity;
- The pressure loss of the refrigerant flow in the pipe is reduced;
- The increased super-cooling degree promotes the stable operation of the electronic expansion valve;
- The increased super-cooling degree increases the total piping length.

Two-stage Super-cooling Pressure Enthalpy Diagram



High Quality Guarantee

Details oriented,
Pursuing perfection.



Excellent User Experience

Provide a distinctive environment
quality due to excellent technology.

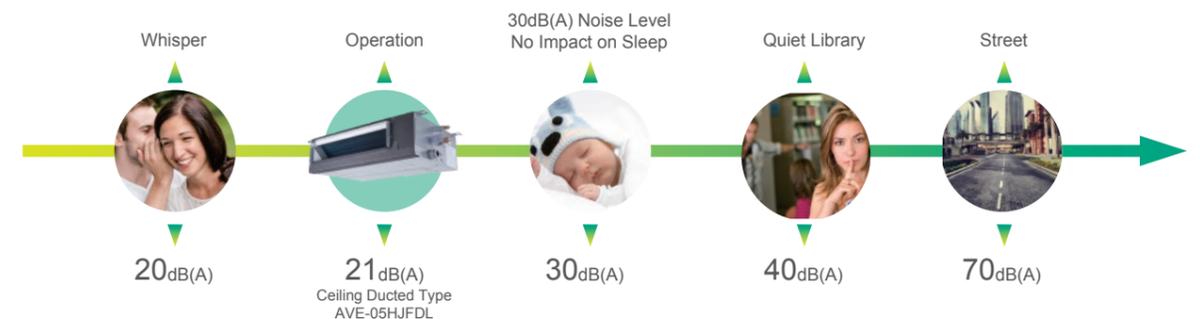
A modern manufacture base is located in Hisense Information Industry Park in Qingdao economic development zone, with 3 factories, occupying a total area of 250,000m².

Hisense VRF owns internationally advanced production equipment and quality assurance facilities. Based on a complete mastery of the world's leading core technologies, Hisense VRF has continuously developed pioneering new air conditioning products. Most of Hisense VRF products have obtained major regions safety & performance certification, such as AHRI, EUROVENT, MEW, MEPS, SAA, CB, CE etc., which are able to fulfil the requirements of some specific countries.



Top Class Low Noise Design

In accordance with application situation and structure, Hisense has been studying the technical and installation methods for noise reduction of indoor units from various aspects of fan motor, fan blade and air duct layout, which provides customers with the quietest air conditioned environment.



Outdoor Unit Noise Control

First-class scroll compressor ensures minimum vibration and noise.



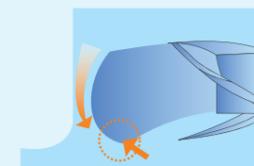
Aluminum-casted motor with nonresonant hanger structure provides stable motor performance and attenuates vibration noise.



The axial fan is made out of noise-absorbing material, which also has a shape that decreases turbulence around.

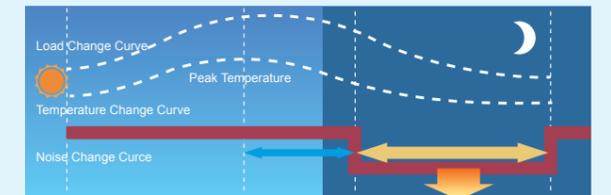


New Blade



Optimized Radial Airflow Angel

Aluminum-casted motor with nonresonant hanger structure provides stable motor performance and attenuates vibration noise.



Precise Temperature Control

Multiple temperature sensor in indoor unit to provide precise real-time temperature feedback.



Unique Design outlet air temperature sensor

2000-step electronic expansion valve to ensure precise flow adjustment based on actual load of Indoor Unit.



2000-step Electric Expansion Valve

Intelligent 3D Air Outlet for Comfort with Stylish Appearance

- Stylish appearance to fit interior decoration
- Intelligent 3D air flow with three air flow angle setting modes
- Temperature and humidity display



Various Controllers

Item	Wired Controller					Wireless Controller
Model	HYXE-J01H	HYXE-VA01	HYXE-S01H	HYXE-M01H	HYXM-VB01	HYE-W01
Appearance						

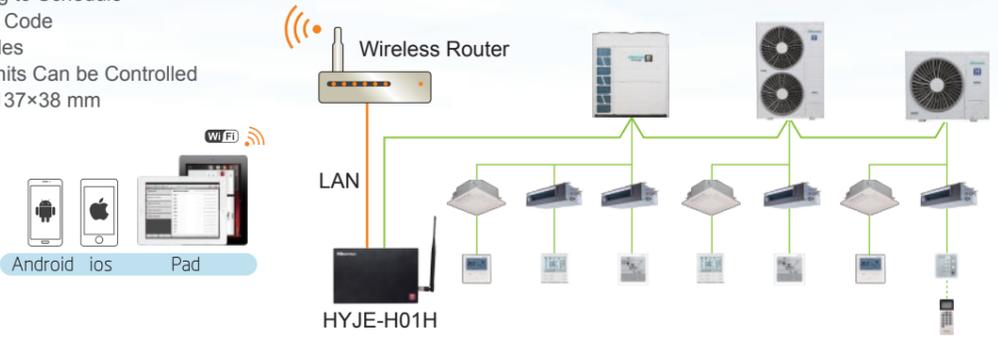
Item	Receiver Kit				Central Controller	ON/OFF
Model	HYRE-V02H	HYRE-Z01H	HYRE-T03H	HYRE-X01H	HYJM-S01H	HYJ-J01H
Appearance						

* The controller HYXE-M01H and HYE-W01 can support six levels air flow adjustment and humidity supervision and control.

Hi-Mit Control System

Main Functions

- ON/OFF Control, Operation Mode, Temperature Setting
- Operate According to Schedule
- Display the Alarm Code
- 16 Operation Modes
- Max. 32 Indoor Units Can be Controlled
- Dimension: 215×137×38 mm

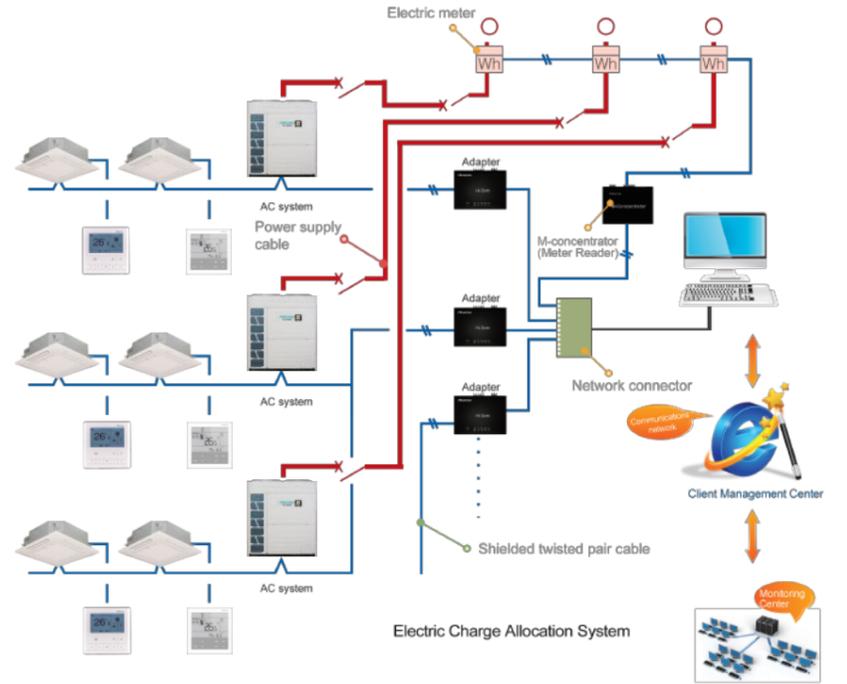


Hi-Dom Air Conditioning Management System

Hi-Dom air conditioning management system adopts communication bus connection, and air conditioners are connected to the computer through the adaptor. The system can be controlled automatically by the computer with powerful functions and simple operation.

Main Functions

- Running-state Monitoring
- Determine the Temperature Limit
- Running Records Display
- Controller Prohibition Function
- Access Control
- Electric Charge Allocation
- Multifunction Alarm
- Service Monitoring



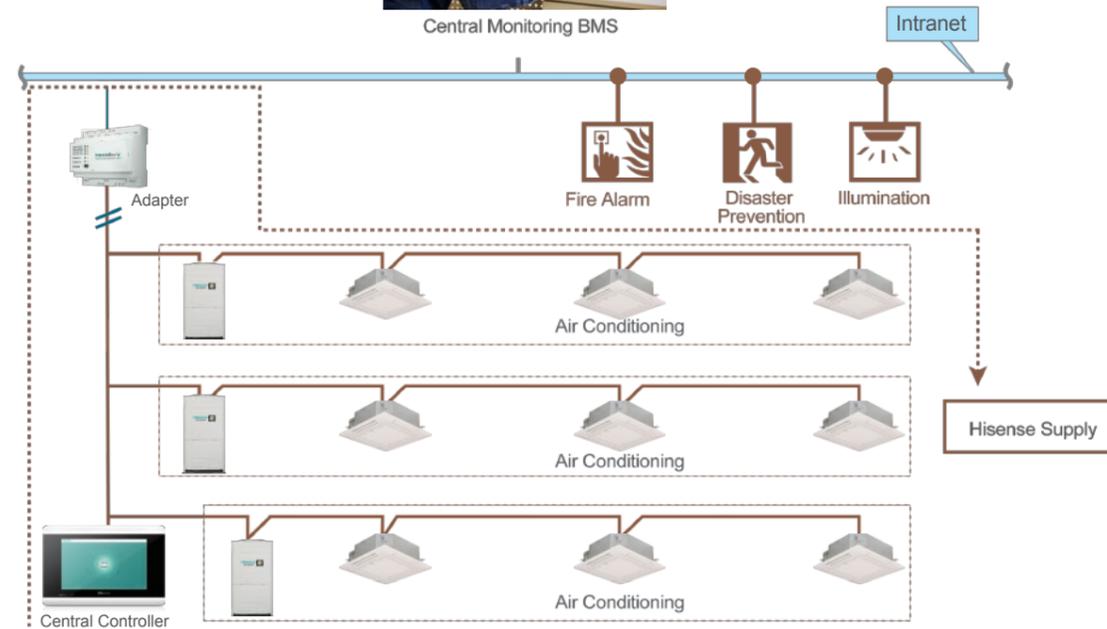
All the indoor units and outdoor units connected with one adaptor comprise one communication BUS system.
 Max.128 indoor units can be connected to an adaptor.
 Max.32 adaptors can be controlled by one computer.
 Max.4096 indoor units are under control.

Building Management System

Hisense VRF can be compatible to multiple communication protocol of BACnet, Modbus, KNX, and be connectible to BMS or Smart Home System.



Central Monitoring BMS



	Model	H(mm)	W(mm)	D(mm)	Max.number of connectable indoors units
KNX	HS-RC-KNX-1i	70	70	28	1
KNX	HS-AC-KNX-16	90	88	56	16
KNX	HS-AC-KNX-64	90	88	56	64
BACnet	HS-AC-BAC-16	90	88	56	16
BACnet	HS-AC-BAC-64	90	88	56	64
Modbus	HPCP-H2M1C	50	220	140	64

Product Lineup

Focus on space, fully satisfy market demand.

Hisense Hi-FLEXi and Hi-Smart series provide a wide selection of outdoor units for different cooling and heating requirements and spaces, creating complete VRF solution and personalized living space.

Hi-FLEXi S SERIES

Hi-FLEXi S series is the latest large combined module product, and its capacity ranges from 8HP to 112HP with 2HP increments. It adopts the new generation of enhanced vapor injection scroll compressor, which can output powerful heating performance and ensure high energy efficiency. Key characteristics include:

- Full DC large module design, max. 112HP combination
- G-type heat exchanger, more efficient
- EVI scroll compressor with rapid and strong heating performance
- Patented 360° fitting refrigerant cooling technology



Hi-FLEXi G+ SERIES

Hi-FLEXi G+ series is a combined module product with large capacity, with max. 22HP of single module, and max. 88HP of 4 modules combined.

It adopts 6-side low pressure-loss Σ type eat exchanger, which realizes more uniform distribution of heat exchanger's wind field gradient under the same air flow conditions, improving heat exchange efficiency. Key characteristics include:

- New appearance, with integrated high-strength structure
- 6-side Σ type heat exchanger
- Separation of machine room and electric room for convenient maintenance
- High static pressure of ODU 85Pa



Hi-FLEXi R SERIES

Hi-FLEXi R series can realize simultaneously cooling and heating operation within one system, which not only contributes to energy conservation but also meets the various requirements of customers.

- High efficiency scroll compressor
- Heat recovery, simultaneous cooling and heating
- Latest inverter control technology
- Intelligent control system



Hi-FLEXi W SERIES

Hi-FLEXi W series is water cooled combined module product, with max. 20HP of single module, and max. 60HP of 3 modules combined. Also it can realize simultaneously cooling and heating within one system. Besides, a new switch box is designed to connect with it, with convenient piping installation.

- Simultaneous cooling and heating
- Convenient installation
- 360° fitted refrigerant cooling technology



Hi-FLEXi X SERIES

Hi-FLEXi X series is a combined module product, and its capacity ranges from 8HP to 64HP with 2HP increments. Its broad capacity and compact design ensure its suitability in a variety of settings such as offices, shopping centers hospitals, schools and more. Key characteristics include:

- High efficiency and large capacity scroll compressor
- Latest DC inverter-driven technology
- Stepless fan speed regulation technology
- Smart and accurate unit capacity allocation technology



Hi-Smart H SERIES

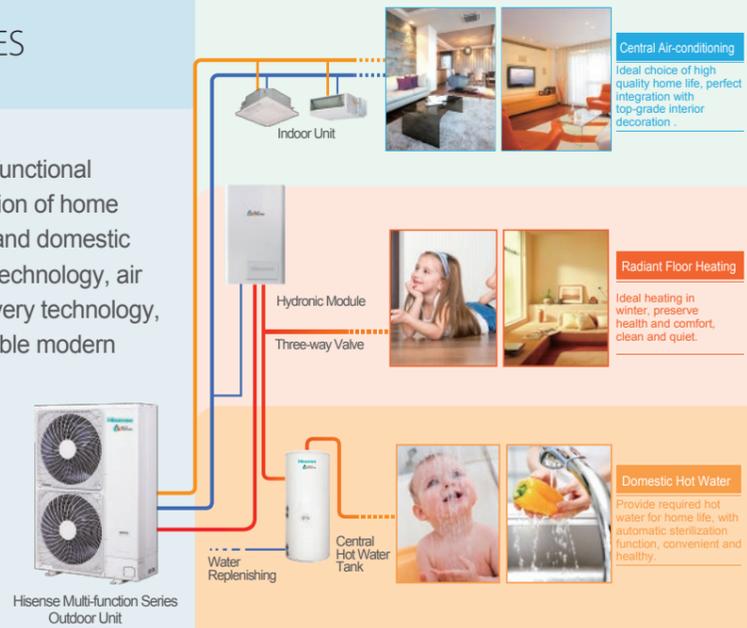
Hi-Smart H series, front flow product, is designed and developed with state-of-the art technologies. It's focusing on customers' various requirements and comfort.

- Aviation level design of grilling
- Electrical system insect-resistant design
- Optimized air duct system design, improving air supply distance



Multi-function SERIES

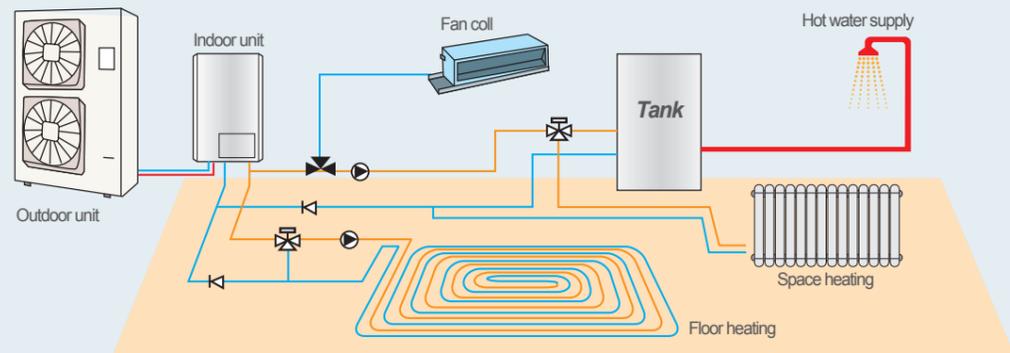
Hisense Multifunction VRF System is a multifunctional intelligent ecology home system with integration of home central air conditioning, radiant floor heating and domestic hot water. Utilizing high efficient DC inverter technology, air source heat pump technology and heat recovery technology, it builds a more intelligent and more comfortable modern home life.



Hi-AquaSmart SERIES

Hisense Hi-AquaSmart series can supply high efficient air to water heat pump 3 in 1 solution. And it adopts high efficient EVI technology, enhancing the heating capacity.

- Enhanced Vapor Injection, and strong heating capacity under low ambient
- Assemble with various heat sources, such as boiler and solar



Extensive Lineup of Indoor Units

Hisense Hi-FLEXi & Hi-Smart series provide a wide selection of indoor units for indoor decoration and create a personalized living space.

Indoor Units

HP		0.6	0.8	1.0	1.3	1.5	1.8	2.0	2.3	2.5	3.0	3.3	4.0	5.0	6.0	8	10	
	kBtu/h	5	7	9	12	14	17	19	22	24	27	30	38	48	54	76	96	
1-Way Cassette Type			—————					—		—								
2-Way Cassette Type			—————					—	—————									
4-Way Cassette Type				—————				—————										
Mini 4-Way Cassette Type		—————																
Ceiling Ducted Type (High Static Pressure)		—————																
Ceiling Ducted Type (Low Static Pressure)		—————																
Ceiling Ducted Type (AC Low-height)		—————						—————										
Ceiling Ducted Type (DC Low-height)		—————						—————										
Ceiling & Floor Type								—————										
Wall Mounted Type		—————						—————										
Floor Concealed Type			—		—		—		—		—							
Console Type		—————																

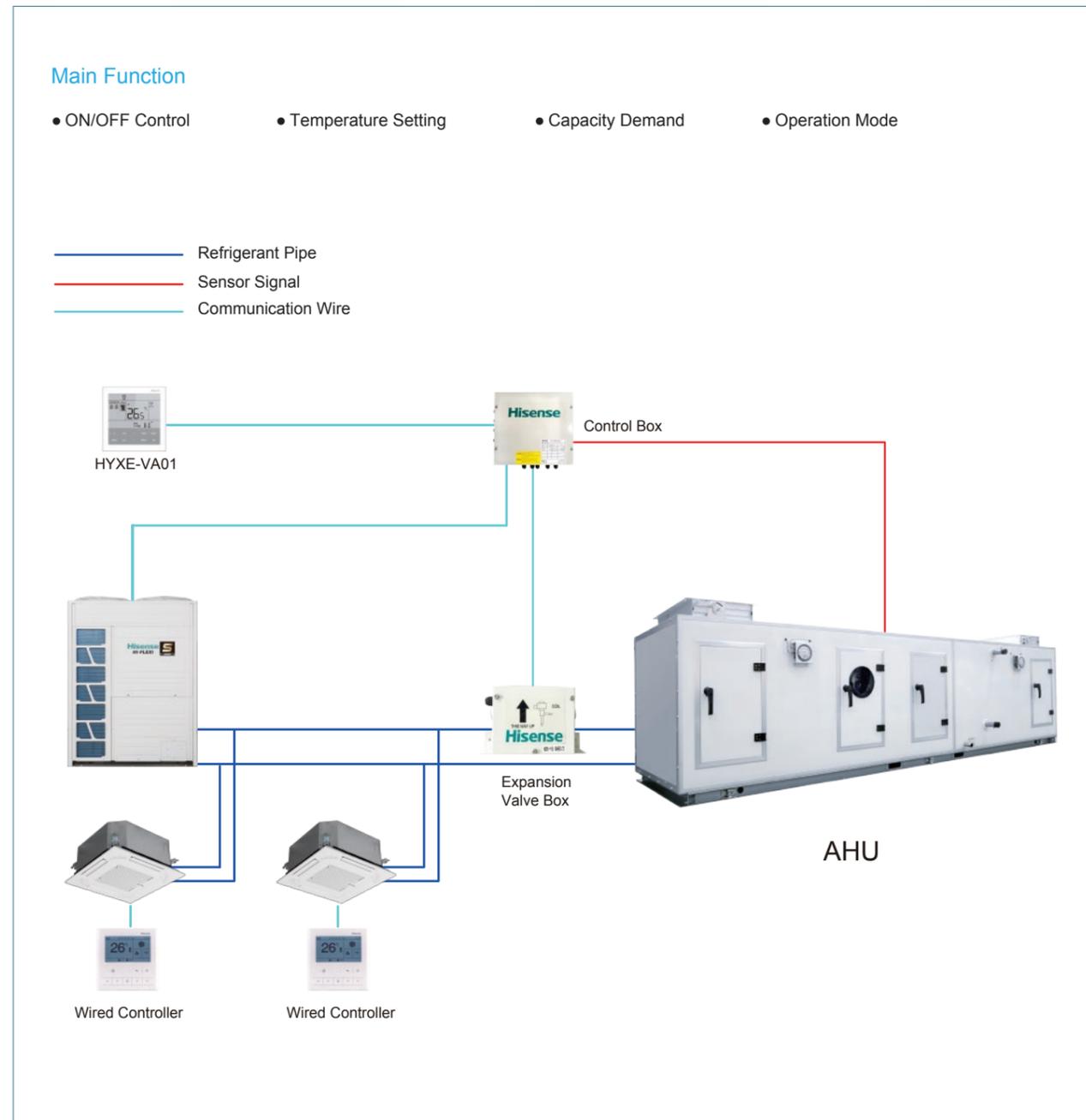
Fresh Air Indoor Unit

All Fresh Air Indoor Unit		Capacity (KW)	9.0	14.0	22.4	28.0	33.5	45.0	56.0	56.0
		Air Flow Rate (m³/h)	660	1080	1680	2100	3000	4000	5000	6000
Total Heat Exchanger		Air Flow Rate (m³/h)	150	250	350	500	650	800	1000	1500
			2000	2500	3000	4000	5000			

Reference Projects

AHU Connection KIT

The Hisense AHU-KIT can integrate external heat exchangers of Air-handling units (AHU) into a Hisense VRF system to be used for air conditioning, which can provide more flexible air conditioning solutions and save more cost in the building air conditioning renovation.



GOVERNMENT

▲ Accra, Ghana
Parliament Offices
2400HP

▼ Jakarta, Indonesia
Tarakan Hospital
1100HP



HOSPITAL



OFFICE

◀ Phnom Penh, Cambodia
C7 Tower Office
2200HP



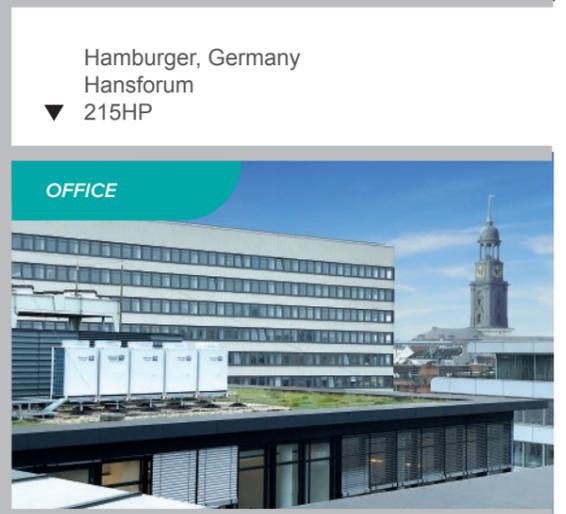
HOTEL

▼ Nadi, Fiji
Hilton
700HP



HOTEL

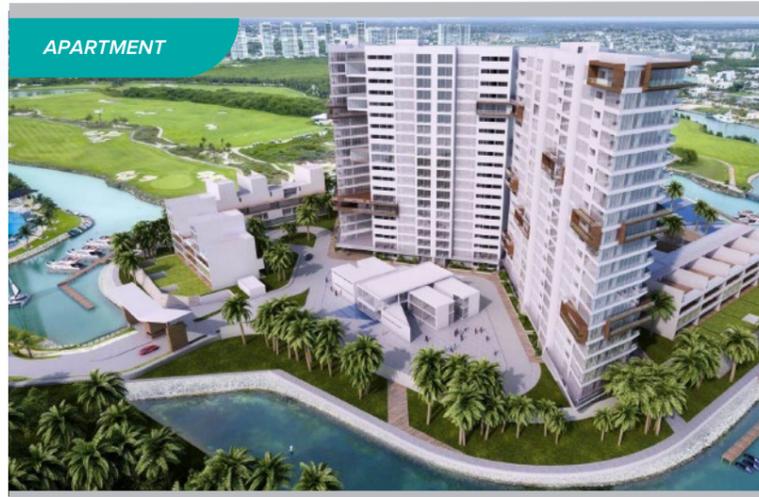
▼ Pattaya, Thailand
Marriott Courtyard
968HP



OFFICE

▼ Hamburger, Germany
Hansforum
215HP

Reference Projects



APARTMENT

▲ Cancun, Mexico
Elite Tower
1380HP

Istanbul, Turkey
Istanbul New Airport
500HP



AIRPORT

Lahore, Pakistan
Lahore Mall
828HP



APARTMENT

▼ Bukhara, Uzbekistan
Shopping mall
2000HP

▲ Kuala Lumpur, Malaysia
28 BLVD



SHOPPING MALL

Dar-es-Salaam, Tanzania
Palm Village
1016HP



SHOPPING MALL



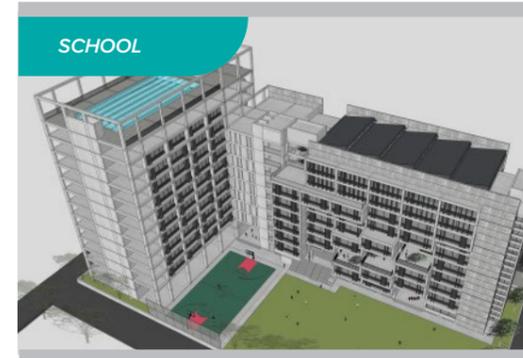
CITY COMPLEX



SCHOOL

▲ Ha Noi, Vietnam
Vinschool
3100 HP

▼ Dhaka, Bangladesh
Playpen School



SCHOOL

Ekaterinburg, Russia
Mercedes-Benz Showroom



SHOWROOM



GYM

▲ Zabrze, Poland
Just Gym Centers Net
840HP



FACTORY

▲ Binh Duong, Vietnam
Asuzac Factory
500HP

Napoli, Italy
Museo archeologico nazionale
▼ 100HP



MUSEUM